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Engaging the Private Sector to Fortify Strategic Base and Port Community Resiliency in the Aftermath of a National Crisis

Rosalie J. Wyatt
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Walden University

College of Social and Behavioral Sciences

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Rosalie J. Wyatt

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Walden University
2017

Abstract

Engaging the Private Sector to Fortify Strategic Base and Port Community Resiliency in
the Aftermath of a National Crisis

by

Rosalie J. Wyatt

MBA, Nova Southeastern University, 1999

BS, Pepperdine University, 1979

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

May 2017

Abstract

The initial 72 hours after a large-scale crisis are critical in terms of preserving life and property, and the private sector and its critical infrastructure are often called upon to assist government organizations in such events. However, little research explores the unique circumstances surrounding the relationship between public-private partnerships and community resilience in strategic communities including military installations and ports. Using Bryson, Crosby, and Stone's conceptualization of cross-sector collaboration, the purpose of this grounded theory study was to develop a theory of private sector engagement and collaboration with military base and port community leaders in response to large scale crises. Data were collected through interviews with 43 public, private, and military sector leaders in six strategic communities of the East, Gulf, and West coasts. Data from ReadyCommunities Partnership symposia summaries were also considered. Data were coded and analyzed using Eisenhardt's grounded theory procedures. Findings resulted in the identification of emergent themes from which the mutual mission theory emerged. This theory acknowledges the key elements of tension between private sector incentives to collaborate and the undercurrent of sector-silo bias. Further, the findings of this study support collaboration through policy with incentives to institutionalize extraordinary community-based mutual missions while overcoming sector-silo bias. Positive social change may be achieved through utilization of the applied mutual mission theory by military base and port community leaders in order to better leverage private sector engagement in response to national crises.

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Dedication

This endeavor is dedicated to America's volunteer and professional first responders, to the few who have committed their lives to the protection of all of us, and to those who would help and support them.

Acknowledgments

With gratitude I acknowledge the leadership of my academic committee chairman, Morris Bidjerano, Ph.D., and committee members David Milen, Ph.D., and Tanya Settles, Ph.D.

Respectfully, I also acknowledge America's public, private, emergency response, law enforcement, and military sector leaders for their steadfast and unrelenting devotion to community resiliency and national security. Furthermore, I acknowledge those whom I met and with whom I collaborated over the past decade through the ReadyCommunities Partnership while continuing the work of the Gilmore Commission. Nearly 3,000 public, private and military sector stakeholders participated in one or more of the 30 ReadyCommunities Partnership symposia and pilot meetings held in at least 18 distinct locales across America. This effort to understand best practices and recommendations of community-based leaders culminated with ReadyCommunities Partnership's Strategic Military Base and Port Community Resiliency Initiative conducted between 2010 and 2014 in Washington, DC, and in several port and military base communities including Charleston, SC, Miami, FL; Doral, FL; New Orleans, LA; and Long Beach, CA. Through this initiative, gaps in community resiliency were identified and recommendations made to reinforce America's response capacity in the first 72 hours of a large-scale or national crisis.

My study through Walden University is rooted in these public-private stakeholder recommendations, seminal pieces of scholarly literature, and gaps in the literature. Inasmuch, my research purpose is to understand incentives and barriers to private sector

engagement and cross-sector collaboration in the face of a large-scale crisis so that this knowledge might be acted upon to reinforce if not augment the existing capacity for resiliency in America's strategic military base and port communities. Over the years, advisory board members and other public and private sector stakeholders in the ReadyCommunities Partnership whom I acknowledge for their leadership and devotion to America's resiliency include The Hon. W. Asa Hutchinson, II (former DHS under secretary), LTC Jeff Brady (U.S. Army, ret., and former FBI-national joint terrorism task force officer), The Hon. Byron W. Brown, II. (mayor, Buffalo, NY), Jennings I. Carney (former editor, national blueprint for secure communities), The Hon. Michael Chertoff (former DHS secretary), Dan Connole, Bill Donaldson (Priority5), The Hon. Alfonso Martinez-Fonts, Jr. (former assistant secretary, DHS private sector office), The Hon. George W. Foresman (former DHS under secretary), The Hon. James E. Geringer (ESRI, and former governor of WY), The Hon. James S. Gilmore, III (former governor of VA), Raymond Seth Greenberg, MD (former president, Medical University of SC), The Hon. Bonnie M. Hunter (chairman, American Red Cross), LTG Russel L. Honore' (U.S. Army, ret.), Harris L. (Shrub) Kempner, Jr. (president, Kempner Capital Management), The Hon. Mary L. Landrieu (former senator, LA), Tanya Lin-Jones (Sprint emergency response team), Chief Gregory G. Mullen (Charleston, SC police department), The Hon. Billy Nungesser (former president, Plaquemines Parish, LA), Antonio Oftelie, (Harvard fellow and executive director, Leadership for Networked World), Gen. Victor E. Renuart, Jr. (former commander, U.S. Northern Command; U.S. Air Force, ret.), The Hon. Tom Ridge (former DHS secretary), The Hon. Joseph P. Riley, Jr. (former mayor, Charleston,

SC), Lindy Rinaldi (former police chief, SC State Ports Authority), Michael F. Rogers (former alumni affairs director, Citadel Military College), Jacqueline Snelling (former senior policy advisor, Federal Emergency Management Agency), The Hon. Lyda Ann Thomas (former mayor, Galveston, TX), Charles Werner (former chief, Charlottesville, VA fire department), CDR Steve Ruggiero (Port of Long Beach, U.S. Navy Reserve), Sara K. Tays (formerly with ExxonMobil), and former captains of the port and sector commanders of the U.S. Coast Guard, Ari Vidali (Envisage Technologies), and *many* others.

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Chapter 1: Introduction to the Study

A Study to Inform Resiliency Experts

This study is unique in that it informs private, public, military, and community and sector leaders fully committed to policies and initiatives to foster the reinforcement if not augmentation of America's strategic military base and port community resiliency in the event of a large-scale or national crisis.

Research Topic and Social Implications

Through this study, perceived incentives and perceived barriers to private sector preparedness and collaboration with the public sector, military and nonprofit organizations were identified. The context for private sector engagement and cross-sector collaboration in this study is to reinforce and maintain if not augment the existing public-sector response capacity for community resiliency, particularly in America's strategic military base and port communities. Likewise, the overarching objective for the resilient military base and port community is to undergird national security and foster economic prosperity. Whether helping to ensure or optimize resiliency in the first 72 hours of a large-scale or national crisis, acting upon the knowledge of private sector incentives and barriers to cross-sector collaboration may foster resiliency in America's communities.

Gap in the literature. Given the gap in the literature, it was and remains perplexing as to why the private sector has not been more engaged or committed to varying degrees of cross-sector collaboration and public-private partnerships for preparedness for response to inevitable large-scale crises. Furthermore, in the wake of the September 11th attacks and other large-scale crises, an interest in crisis preparedness and

response resources and solutions resulted in increased attention to the private sector as a likely if not necessary collaborator. Unquestionably, private sector engagement and cross-sector collaboration is needed. Fundamental to the nation's survival are the private sector entities who own the majority of the critical infrastructure in the United States (Kapucu, Arslan, & Demiroz, 2010) and America's small businesses who serve our strategic communities. Also, without diminishing any prior private sector investments or commitments to resilient communities and businesses, it stands to reason that private sector entities, both small and large, might benefit from new or refreshed commitments to preparedness and cross-sector collaboration. The private sector at large and individual private sector actors and all other stakeholders in our nation's strategic military base and port communities have their own viability at stake. Furthermore, those who are crisis deniers may face unnecessary risks and consequences of sitting on the sidelines of preparedness.

Although the private sector has a track record for response by donating consumable supplies, services, and volunteer hours to people and communities victimized by natural disaster or other unforeseen crisis (Home Depot Foundation [as cited in McKnight & Linnenluecke, 2016]; Horwitz, 2008; Kapucu & Khosa, 2012; Oh, 2010), this type of support alone may be inadequate in the first hours of a large-scale crisis. Indeed, this study has explored additional incentives for private sector preparedness, engagement, and cross-sector collaboration to maintain and or augment a strategic community's existing response capacity.

Given the lack of widespread yet recognized potential for increased private sector engagement and cross-sector collaboration for community resiliency, the intent of this study was to identify perceived private sector incentives and barriers to the same for the first hours of a large-scale crisis. For example, this study sought to understand perceived incentives and barriers to private sector support for emergency responders, critical infrastructure and other critical sector employees to diminish conflict between duty to family and the job in the first 72 hours.

Ultimately, the positive social implications of the findings from this study may include a paradigm shift in the private sector's view of their plausible roles, potential commitments and responsibilities in support of strategic community resiliency. Equipped with the knowledge of perceived barriers and incentives, otherwise reluctant and risk avoidant private sector actors may embrace preparedness and cross-sector partnerships for community resiliency; voluntarily and with or without compensation. Furthermore, collaborative initiatives may help the private sector to realize a return on their investments in community and national resiliency versus a sole focus on business continuity and the bottom line. Ideally, stakeholders committed to cross-sector collaboration and partnerships may understand how working together can strengthen the capacity of our nation's strategic military base and port communities to withstand and or recover from large-scale and or national crises.

Moreover, the findings of this study may serve as a catalyst for private sector engagement in America's strategic military base and port communities to fill specific gaps in first 72-hour community resiliency. For example, collaborative partnerships

between the private sector and public sectors could result in the provision of critical support during the first few days of a large-scale crisis for responders and or critical infrastructure employees who are essential to survival. Inasmuch, the private sector might develop a program and or provide support through a vetted third party to enable America's first responders and critical sector employees to remain on duty during the first 72-hour response. Support of this nature might include identification of emergency shelter and or essential medical care for families and or other dependents of responders and or other critical sector employees.

Additionally, the findings from this study may interest public and private sector stakeholders in other areas of the world where preparedness for a large-scale crisis is prioritized.

Chapter Preview

In Chapter 1, a synopsis of the literature is provided to reveal the research problem together with an illustration of an array of factors that have contributed to the need for the study. Additionally, Chapter 1 covers the purpose of the study, the research questions, the conceptual framework, and relevant theories. A description of the research design and methodology, the multiple case qualitative study, and data analysis that led to the emergence of a grounded theory has also been provided in Chapter 1. Additionally, Chapter 1 includes definitions of key concepts, assumptions, scope and delimitations, and limitations. Finally, Chapter 1 also outlines the significance of the study relative to potential breakthrough constructs for achieving and maintaining strategic military base and port community resiliency.

Background

Brief Summary of Literature Regarding Topic Scope and Knowledge Gap

Building on the recommendations of the Gilmore Commission, which suggested increased private sector engagement through collaboration with state and local government for preparedness for a large-scale crisis as part of a national versus federal plan (Rand, 2003, p. ii, iii, iv, 29), this study was launched to address a gap in the knowledge about private sector barriers and incentives to cross-sector collaboration for resiliency from the perspectives of emergency response officials, military, nonprofit organization and private sector leaders in our nation's strategic military base and port communities. The Gilmore Commission further indicated that "America's New Normalcy in January 2009" should include homeland security standards based on actual needs (Rand, 2003, p. 14).

As illustrated in Figure 1, the scholarly literature summarized in this review includes factors contributing to the need for this study. Additionally, I found a few isolated references to a singular incentive or barrier and did not find any comprehensive study which addressed the need to understand private sector barriers or incentives for engagement through collaboration for preparedness for strategic community resiliency in the event of a large-scale crisis. Isolated references to a private sector barrier were provided by Barnett et al. (2011), and Hahn (2010). Similarly, Busch and Givens (2013) highlighted profit as an incentive for business to provide government with expertise and resources (p. 10). Additional information regarding these references can be found in Chapter 2.

Nearly a decade following the Gilmore Commission's recommendation that the private sector further invest in cross-sector preparedness (Rand, 2003, p. iv) and the importance of addressing the "national public-private deficiency" (Rand, 2003, p. 322) to counter community-level vulnerabilities to complex and catastrophic crises, Federal Emergency Management Agency (FEMA) administrator Fugate acknowledged sector interdependencies and encouraged private sector participation when addressing attendees of the first National Conference on Building Resilience Through Public-Private Partnerships (FEMA, 2011, *A Whole Community*, p. 11). Honore' (2008), also emphasized the importance of cultural preparedness through stakeholder engagement including government, nonprofit organizations and the private sector. Furthermore, Honore' stated that politicians should understand the art of preparedness including "how to access resources" just as business leaders should appreciate "corporate savings in preparedness" (p. 86). The importance of addressing this national public-private deficiency by integrating private sector leadership into crisis preparedness and planning with government leaders and responders was also illuminated by Armstrong (Rand, 2003, p. 322).

National public-private deficit. Presuming a public-private deficit in the first 72 hours of a large-scale crisis (Rand, 2003, p. 322), analysts and leaders intent to resolve this issue will likely approach this issue from a top-down or bottom-up perspective. However, within the context of this study and in accordance with the recommendations of the Gilmore Commission (H.R. 537, 2004, p. 3) the public-private deficit (Rand, 2003, p. 322) has been addressed from a community or local-level perspective by leveraging and

incorporating the private sector's extraordinary capacity to promote local-level resiliency (DHS, 2014c, Quadrennial homeland security, p. 91; Hayes & Ebinger, 2011; Foresman, 2009; Kapucu, Arslan & Demiroz, 2010; Rand, 2003, p. 9, 29) and presence of the private sector to promote local-level resiliency while undergirding national resiliency.

While both perspectives merit consideration, does a public-private deficit mean that the private sector has not made or should commit support to one degree or another to augment the local response capacity? Alternatively, does the deficit presume that the public sector does not have the resources to do its part? How or in what ways can the extraordinary capacity of the private sector help to maintain or augment the public-sector response? Has the private sector considered and planned for how both its institutions and communities might remain resilient during a large-scale crisis and the ensuing response?

Naturally, additional points of curiosity about the private sector's potential role in filling a public-private deficit could include how barriers might be removed or how the private sector might be incentivized to collaborate for resiliency. Answers to these questions about the public-private deficit are incorporated in the conclusions for this study, while considering the findings in response to the central question to understand private sector incentives and or barriers to preparedness for collaboration in our nation's strategic military base and port communities.

Grassroots approach to resiliency needed. In any case, this study presumed that local community leaders and citizens must take care of themselves in the first 72 hours of a large-scale or national crisis. In this context, the public-private deficit reflects the reality that the government does not have enough resources, including manpower and

funding, to be in all places at once in the first 72 hours of a large-scale crisis and by mandate must tend to its first priority, that being continuity of government.

However, as evident from prior instances and examples of crisis management, a grassroots collaborative approach to preparedness and response, inclusive of public and private sector investments and commitments, has yielded successful results. Barn raising took place in early American history and reflects the spirit of collaboration and personal investment for the benefit of one's community (Neem, 2011). Launched in a post-September 11th environment, Citizen Corps is an example of a community-based collaborative approach to homeland security inclusive of volunteers from various sectors including business, government and the community (FEMA, 2014, Engaging the whole, p. 3; FEMA, n.d.d, National partnership - Citizen). Corporations have also participated in the National Business Emergency Operations Center, which under the direction of FEMA, facilitates public-private sector information sharing for preparedness and response to disasters (FEMA, n.d.b., National business emergency).

Also in support of private sector engagement for local preparedness, former Governor of Virginia, James S. Gilmore III, stated "The private sector provision of resources for the first 72 hours of a large-scale crisis is important to local and national resiliency. Private sector resources can help to reinforce the public-sector response capacity and bridge any gaps." (James S. Gilmore, III, personal communication, October 21, 2014). Gilmore was also the chairman of the Gilmore Commission, formally known as the U.S. Congressional Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction (Rand, 2003, The fifth annual, p. 1).

Some of the Gilmore Commission's recommendations, particularly those that address state government, local, and private sector response capacity, are foundational to this dissertation. In collaboration with the Rand's national security research division, the Gilmore Commission produced five reports between 1999 and 2003 (Rand, n.d.). Within the first four reports to the president and the Congress, 144 recommendations were delineated of which 125 were since adopted for improvements in response capacity, particularly at the state and local levels (H.R. 537, 2004, p. 3). The commission was the first to evaluate preparedness at the federal, state and local levels and as a result, H.R. 537 (2004) was introduced to honor its contributions to homeland security. This same proposed bill recommended that Congress establish an advisory panel to determine the adequacy of the state government, local and private sector organizations to respond to a terror attack or other catastrophe in collaboration with the federal government, and to report on inadequacies in protecting critical infrastructure (Recognizing the exemplary, 2004, p. 4).

A few generally recognized incentives and barriers to engagement. On one hand, generally recognized private sector incentives have included tax credits and the public's perception of a corporation's value and goodwill as demonstrated by their participation in crisis response. At the same time, generally recognized barriers to private sector engagement have included concerns about confidentiality of data and resources to maintain a strong competitive stance, as well as avoidance of liabilities. Quigley (2013) cited corporate stumbling blocks to corporate engagement in preparedness as those related to competition, culture, logistics, the law and politics.

Outsourcing local response expectations to the government. An understated barrier to private sector engagement may be the public's outsourcing of unrealistic expectations to the government for community-level response in the first 72 hours following a large-scale crisis. Public perception about the government's role in the first 72 hours may be skewed when ignoring the government's first priority as continuity of government while relying on FEMA for any coordination of disaster relief. Together with physical threats and cyber threats, President William J. Clinton's Executive Order 13010 (1996) specified continuity of government as a component of America's critical infrastructure. Letten (2013) discussed government's responsibility to the people for continuity of government "during and after crisis." Continuity of government is necessary for the protection of people and facilitates "effective crisis management" (Letten, 2013).

Since 1979, FEMA has played a role in response to presidentially declared disasters (FEMA, 2008a, p.3) to fulfill its mission; "FEMA's mission is [to] reduce the loss of life and property and protect communities nationwide from all hazards, including natural disasters, acts of terrorism, and other man-made disasters" (p. 2) and through its expanded mission as detailed in the Post-Katrina Emergency Management Reform Act of 2006 (p. 6). However, disaster relief reform through public-private sector collaboration has been encouraged for local response (Leeson and Sobel, 2006, p. 71). When compared to the swift delivery of resources by Wal-Mart, Home Depot, and State Farm (Leeson & Sobel, 2006, p. 56), Leeson and Sobel described FEMA's response to Katrina as lackluster (p. 58). Likewise, as stated in the hearing before the committee on homeland security to examine FEMA's mission; "Hurricane Katrina revealed colossal inadequacy

at the federal, at the state, at the local government levels to prepare for, respond to, and recover from a large-scale incident” (PKEMRA implementation, 2009, p. 4). Using deductive reasoning, one can argue that the contrast between the performances of the public and private sectors in the initial response to Katrina is a perceived incentive for private sector engagement and public-private sector collaboration for community resiliency in the first 72 hours of a large-scale crisis.

Brief summary of the gap in the knowledge about incentives and barriers.

Filling a gap in the literature, this study was conducted to understand private sector incentives and barriers to cross-sector collaboration and preparedness to help maintain, if not augment, the public-sector response capacity for readiness and resiliency in the aftermath of a large-scale crisis. This cross-sector collaboration is especially vital in our nation’s strategic military base and port communities, with the ports described by former Senator Mary L. Landrieu (D-LA) as integral to national economic viability and resiliency:

The unencumbered operation of those (America’s 513) ports is . . . essential to our nation’s economy. Collectively they account for 13.3 million jobs . . . generate 649 billion in personal income annually. Each year, U.S. maritime commerce accounts for approx. 3.2 trillion in total economic activity. . . generates 212 billion in federal, state, and local taxes. The country has 136 military installations which are considered critical; so if ports and bases go off-line, our economy could suffer catastrophic results, and lives would be placed at risk. (ReadyCommunities, 2010, Senate, p. 6)

Why the study was needed. Although some have recognized the value of private sector capacity and commensurate call for private sector preparedness and collaboration at the community level for preparedness and response in the first 72 hours, an explicit and exhaustive study of stakeholder opinions had not, heretofore, been conducted to determine the primary incentives and or barriers to general or specific private sector commitments that could fill known gaps in community resiliency. Leveraging this actionable knowledge, local leaders and stakeholders can make a difference in the nation's capacity to survive a large-scale or national crisis. The results of this study can inform policy makers and private sector leadership who choose to address the "national public-private deficit" (Rand, 2003, p. 322) through increased private sector preparedness and cross-sector collaboration at the community-level to maintain if not augment strategic community resiliency.

Problem Statement

Research Problem

In response to community-level vulnerabilities and to mitigate the scope and scale of tragedies in the first 72 hours of a large-scale crisis, experts have called for a larger role for the private sector (Gilmore Commission Fifth Report as cited by Carney in ReadyCommunities Partnership, 2011, p. 9), through investments and cross-sector collaboration for preparedness and response to foster resiliency, thereby sustaining families, institutions, security and the economy. As stated in the abstract, the problem is underdeveloped private sector engagement and cross-sector collaboration to help reinforce if not augment the public-sector response capacity in the first 72 hours.

This problem has been underscored by the scarcity of literature about widespread private sector preparedness and engagement through cross-sector collaboration in support of local-level first 72-hour response capacity in the United States' strategic communities. Also, there is a void in the literature relative to a thorough study about perceived incentives or barriers to private sector preparedness through collaboration. This scarcity of literature reveals the need to understand incentives and barriers to large and small business preparedness and external collaboration for strategic community resiliency.

If unaddressed, this problem of limited or underdeveloped private sector engagement and the corresponding need to understand private sector incentives and barriers to cross-sector collaboration to fill gaps in resiliency, particularly in America's strategic military base and port communities that routinely support the national and international flows of goods and services, could be the Achilles heel of community and national security.

Relevancy of Problem

The recurring issue of vulnerabilities in America's local-level response capacity in the early hours of a large-scale or national crisis have included shortages of emergency response resources, interruptions in critical infrastructure services, and responders or critical infrastructure employees who have understandably distracted or conflicted between duty to work and duty to family or other dependents in need of care and evacuation and sheltering away from the crisis. All aspects of a community's preexisting response capacity are vital to survival and community resiliency in the first 72 hours of a large-scale crisis. The vulnerabilities within and risks associated with maintaining a

community's public-sector response capacity, together with the knowledge of extraordinary private sector capacity, have caused leaders and scholars to call for increased private sector engagement and collaboration to foster community-level resiliency.

Overall, the problem of the underdeveloped role of the private sector served as the basis for this study to understand the perspectives of private, public, military, and community sector leaders in America's strategic military base and port communities relative to perceived incentives and barriers to private sector engagement for preparedness through collaboration to reinforce if not augment the existing community-level response capacity in the first 72 hours.

In addition to an array of actionable knowledge for policymakers and practitioners, this study also explored to what extent incentives or barriers could encourage or restrict the private sector from developing a plan to arrange support for families and dependents of responders and critical infrastructure employees in our nation's strategic base and port communities to enable them to remain on the job during the first few hours or days of a large-scale crisis.

The importance of this study which examined barriers and incentives for cross-sector collaboration and for what purposes the private sector might collaborate to support emergency response support is clear. Public and private sector leaders share the same interest in maintaining the resiliency of strategic communities and the security of the nation.

Call for bottom-up community readiness plan. Further underscoring the problem, the Gilmore Commission called for a bottom-up, community-based preparedness plans (Rand, 2003) to mitigate the potential impact of a large-scale crisis, such as terrorism involving a weapon of mass destruction. This readiness plan was pivotal in that it proposed responses to the new normal of crises with a “new normalcy” of policy development with resource and process commitments from all sectors (Rand, 2003, p. iv). Comprised of an advisory panel to the U.S. Congress including the Secretary of Defense, the director of the Federal Emergency Management Agency (FEMA) and others, the commission assessed response capabilities at the federal, state and local levels and published five reports between 1999 and 2003 (Rand, n.d., Gilmore commission reports). Overall, the Gilmore Commission submitted 144 recommendations for a national strategy inclusive of engagement and collaboration between all levels of government, the private sector and citizenry for preparedness (Rand, 2003, Executive, p. iii). In a Gilmore Commission report it was noted that 125 of the commission’s recommendations have been implemented through Congressional legislation or adopted by government agencies (Rand, 2003, Fifth, p. ii).

Call for private sector engagement. The Gilmore Commission concluded that the “national, public-private deficiency” needed to be addressed through private sector integration and coordination with state and local-level preparedness (Rand, 2003, p. D-9) for terrorist attacks and to protect the nation’s critical infrastructure. According to the Rand (2003) report, knowledge of limited private sector collaboration was based on feedback that just one in three offices of emergency management or one in five other

types of organizations had a formal agreement with private companies to “share information or resources” (p. 29). Furthermore, with respect to the early calls for private sector engagement and collaboration, Raisch (2007) highlighted The Implementing Recommendations of the 9/11 Commission Act of 2007 (Pub. L. No. 110-53, Section 524) which including an emergency preparedness program through DHS. Thereafter, FEMA (2008b, Voluntary private sector) announced its launch of this private sector preparedness program for all-hazards to “enhance nationwide resilience.”

In a Hurricane Sandy after-action report published by the government of New York City (2013), approximately one decade following the Gilmore Commission’s fifth and final report about the nation’s preparedness to withstand an attack by a weapon of mass destruction (Rand, 2003), officials recommended private sector engagement and standards of responsibility for those providing critical services. Also, FEMA (2011) recommended that community leaders identify and embrace private sector capabilities (p. 8) and to plan for what is needed during an extreme event (p. 9).

Potential template for widespread private sector engagement.

Notwithstanding various preexisting and successful partnerships and campaigns for readiness involving private sector actors, what is missing is a template specific to America’s strategic military base and port communities outlining private sector participation and collaboration for resiliency. This template might include identification of a corporate designee(s) for local critical infrastructure including vendors or suppliers to the base or port, paid and volunteer responders, and a vetted third party organization

liaison to arrange shelter and or provide care for families and or vulnerable dependents in the first 72 hours.

The problem of underdeveloped private sector engagement for the first 72 hours of a large-scale or national crisis in our nation's strategic military base and port communities points to the potential value of public-private collaboration, networks, and partnerships in filling this gap.

Factors contributing to the problem and need for this study. There are many possible factors contributing to community resource and response capacity vulnerabilities and the corresponding need and call for private sector to proactively collaborate with the public sector for resiliency in the first 72 hours of a large-scale crisis. Eight factors are listed below in brief and portrayed in Figure 1, and are the reasons why this study to understand perceived incentives and barriers to private sector collaboration for resiliency was conducted. Additional detail regarding each factor is provided below Figure 1.

- The new normal exacerbated by the scale and frequency of crises described as extreme, complex and or of catastrophic proportions (Adams, Anderson, Turner, & Armstrong, 2011; Boin and t' Hart 2010; Rand, 2003; Howitt & Leonard (2006); Sharman, Rao, Kim & Uphadhyaya, 2008).
- Response is local, the local nature of response (Eversburg, 2002; FEMA, 2013a, Coffee break training; Menzel, 2006; Mintz & Gonzalez, 2013; Stewart, Kolluru, & Smith (2009, abstract); Takazawa & Williams, 2011).

- Government's first priority post-crisis is continuity of government versus first response (Executive Order 13010, 1996; FEMA, 2011, A Whole; Letten, 2013; Menzel, 2006, p. 810; PKEMRA implementation, 2009, p. 42).
- Insufficient and diminishing budgets for preparedness and response as well as critical infrastructure vulnerabilities and shortages of response resources (Bendett, 2015; DHS, 2014c, Quadrennial homeland security, p. 27; GAO, n.d.; GAO, n.d. Fiscal outlook and; Hayes & Ebinger, 2011; Holguin-Veras & Jaller, 2012); Oftelie, 2007; Painter, 2013).
- Mutual aid limitations, potential breakdown for the provision of mutual aid (Chang & Miles, 2011, Howitt & Leonard, 2006, p. 24; Kapucu, Augustin, & Garayev, 2009, p. 307).
- The majority of America's firefighters are volunteers (U. S. Fire Administration, 2015a, National fire department).
- Responder and or critical infrastructure employees with concerns for safety of family members or other dependents with disabilities or other special needs, may have competing obligations in the first 72 hours between duty to the job and concern for family members or vulnerable dependents (Takazawa & Williams, 2011).
- Private sector capacity is significant, in that it owns majority of the critical infrastructure in the United States (DHS, 2014c, Quadrennial homeland security, p. 91; Foresman, 2009; Hayes & Ebinger, 2011; Kapucu, Arslan &

Demiroz, 2010; Quigley, 2013; Rand, 2003, p. 29) and employs the majority of America's workforce (Rand, 2003, p. 29).

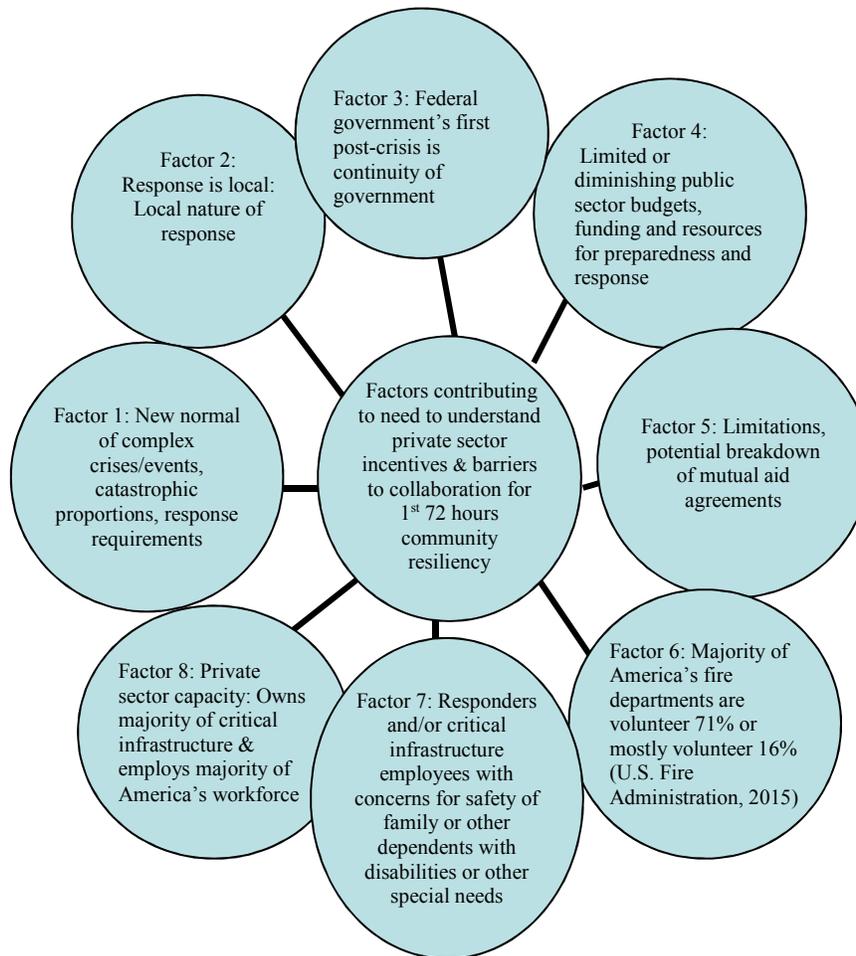


Figure 1. Factors contributing to the need for the study.

To reiterate, eight factors, as illustrated in Figure 1, contribute to the need for the study to understand private sector incentives and barriers for engagement and or collaboration for the first 72 hours of large-scale crisis and thus, underscore the need and potential opportunities for the private sector to invest in preparedness for resiliency. Altogether, these factors illuminate the need to understand the barriers and incentives for increased private sector engagement and collaboration to maintain, if not augment, the

public sector and volunteer response capacity in the first 72 hours to foster corporate, community, and national resiliency.

Factor 1: New normal of complex crises/events, catastrophic proportions, response requirements. The new normal of crises was introduced in the literature to describe crises that by all criteria have exceeded what has been experienced in the past including a letter posted within the Gilmore Commission reports; as cited in Rand (2003, p. 14) which stated that American citizens and interests in freedom have been under attack since 2004; Boin and t' Hart (2010) who discussed mega-disasters; and Adams, Anderson, Turner and Armstrong (2011) who discussed extreme crises as those that personally impact and therefore especially challenge responders.

American communities have been challenged by the impact of major crises in the last several decades, including Hurricane Katrina and Hurricane Sandy, especially when faced with insufficient resources including the capacity to maintain functionality of local critical infrastructure and or respond to avoid law enforcement crises and to preserve public health and safety. Amidst diminished federal, state and local budgets for preparedness and response; disruptions to the functionality of critical infrastructure, interruptions in the fuel supply and power sources, delay in the supply of food and water, and vulnerabilities in the emergency response capacity have contributed to the complexity of crises and local response.

Also, in a study of responder opinions of historical responses to Hurricanes Katrina and Rita; Sharman, Rao, Kim and Uphadhyaya (2008) concluded that preparedness of all citizens is required for communities to survive extreme crises (p. 24).

Likewise, upon a review of the responses to Gulf Coast Hurricanes Katrina, Rita, and Wilma, Howitt and Leonard (2006) concluded that adequate preparedness measures for a major crisis were not in place in time (p. 18).

Factor 2: Response is local, the local nature of response. Prior crises have revealed demands upon the local response capacity including responders, critical services and consumable items. Innumerable responses to crises have unveiled the local nature, circumstances, and demands upon the immediacy of response capacity for persons and resources. On September 11, 2001, members of the local Arlington County fire department first responded to the nearby attack on the Pentagon (Eversburg, 2002) and assumed responsibility for incident command (p. 3). Indeed, Mintz and Gonzalez (2013) advised that all disasters are local (p. 37) and thus, response is local. By virtue of the Incident Command System protocol, the first responder to the scene assumes the role of incident commander until such time that a transfer of this duty takes place (FEMA, 2013a, Coffee break training). Stewart, Kolluru and Smith (2009, abstract) presented the local nature of initial response as articulated in the National Response Framework. In a review of disaster studies, Takazawa and Williams (2011) produced 12 conclusions including one relative to local response being that those from within should respond before those from outside the community (p. 437). Local response is referenced by the Stafford Act, in that the governor of the impacted state may request resources from the federal government after resources at the state and local level have been used (Menzel, 2006).

Furthermore, with respect to community engagement, Vivacqua and Borges (2012) explained that citizens have expressed a desire to help with disaster response.

Factor 3: Federal government's first post-crisis priority is continuity of government versus local response. Further exacerbating the problem of resource management in the first 72 hours is the public's confusion or misunderstanding about the primary role and first responsibility of the federal government as continuity of government versus response. The federal government's priority in the aftermath of a large-scale crisis is continuity of government versus local disaster response (Letten, 2013; Executive Order 13010, 1996). In a personal account of the response to Hurricane Katrina, Letten (2013), a former U.S. Attorney of Louisiana, articulated the federal government's primary role in the first 72 hours as continuity of government. Letten (2013) stated:

Effective crisis management occurs when government has the will, assets, capacity, strategy, tactics, plans, and the overall ability to function efficiently and without breakdown or failure in support of the people it serves. The corollary to this is, of course, that the American public has the right to expect and demand a swift government response and continuity during and after crisis, where American citizens are served and protected. (Letten, 2013, pp. 1251-1252).

Furthermore, in President Clinton's Executive Order 13010 (1996), "continuity of government" was cited as a component of critical infrastructure, such that without it or marginalization thereof, the nation would be at risk.

Federal assistance is provided following declarations by the president; either an emergency declaration in response to a governor's request which is limited to five million dollars per emergency; or a major disaster declaration for which individual, public and or hazard mitigation assistance may be available (FEMA, n.d., Disaster Declaration). Additionally, FEMA (2011, A Whole) acknowledged government limitations in managing disasters (p. 1) and, therefore, challenged communities to leverage their full potential to remain resilient (p. 14). FEMA (2011) stated that communities must leverage local potential as government cannot solely be responsibility for disaster management (p. 14) and should plan for what is necessary during an extreme event (p. 9). In testimony before the U.S. House of Representatives, Daniel Kaniewski stated: "As shown by Hurricane Katrina and subsequent domestic incidents, Washington has a critical, but usually limited supporting role. The federal government cannot be a first responder, nor can it effectively manage an incident from inside the beltway." (PKEMRA implementation, 2009, p. 42). The federal response is now guided by the Stafford Act which outlines the protocol for a presidential unilateral action in the case of an emergency or a state governor's request for federal assistance in response to a major disaster (Menzel, 2006, p. 810). Inasmuch, Menzel (2006) concluded his review of the White House and the U.S. House Committee post-Katrina reports by recommending that individuals take measures of responsibility for preparedness in order to first count on themselves first rather than government in the face of crisis (p. 812).

Factor 4: Limited or diminishing public sector budgets, funding, resources for preparedness and response. When faced with resource issues in the first 72 hours this

study presumed that leaders must plan to optimize the potential for our nation's strategic communities to remain resilient to ensure that they can continue to operate during the first 72 hours. Diminished federal funding for state-level investment in resiliency (DHS, 2014c, Quadrennial homeland security, p. 27) has impacted the private sector's capacity to invest locally in resiliency (DHS, 2014c, Quadrennial homeland security, p. 27). In other words, the current economic environment and challenges will negatively impact investments in community resiliency. Likewise, Hayes and Ebinger (2011) stated that governments cannot unilaterally address counterterrorism threats and that they might provide incentives to for private sector investment in critical infrastructure protection. A summary of the national economic environment as it pertains to the needs of homeland security was provided within the Quadrennial Homeland Security Review (DHS, 2014, Quadrennial homeland security). The review highlighted the presumed negative impact of reduced federal grants on state budgets for homeland security (p. 27) including reduced revenues as compared to pre-recession revenues and commensurate reductions in public safety budgets for 30 of the nation's metropolitan areas (p. 26). The review also drew attention to the negative impact of the economy on the private sector's ability to invest in community resiliency (p. 27). In an environment of rising national debt and budgetary demands throughout government for limited funds, Painter (2013) reviewed current homeland security policies for the attention of the U.S. Congress and stated that the budgetary needs of DHS and its programs are in competition with those of other government programs (p. 5). Furthermore, policy changes were implied to arrest the runaway government debt. Federal simulations of the U.S. Government Accountability

Office (GAO, n.d., Fiscal outlook and) show that absent policy changes, the federal government faces a rapid and unsustainable growth in debt. Simulations of the state and local government sector show that not only the federal government faces fiscal challenges that will have a profound effect on government over the coming decades. (GAO, n.d. Fiscal outlook and). In response to the challenges of the current fiscal environment for the Department of Defense, Bendett (2015) discussed the value of potential collaboration between the public and private sectors for capacity-building and the common good through public-private, public-public partnerships, otherwise known as P4s, for delivering public services (p. 11).

Pandemic inoculation planning and rationing. When faced with a pandemic, not everyone can presume he or she will receive an inoculation in cases of insufficient supply or planning that prioritizes others. However, rather than viewing limited supply with a rationing lens, risk management, and resource allocation managers might pivot the telescope to review and consider the perspectives of local organizations when managing resources required at the local level. In an Oakland County case study about pandemic response conducted by Harvard's Leadership for a Networked World (Oftelie, 2007), it was suggested that the medical, law enforcement and emergency response professionals would need an inoculation to be counted on to work through the crisis (p. 3). Oakland County's health manager, George Miller, stated that collaboration is a means of enhancing surge capacity needed for large-scale crises (Oftelie, 2007, p. 6).

Resource requirements in the aftermath of a crisis. According to Holguin-Veras and Jaller (2012), resource requirements or relief supplies needed by responders and

civilians following a crisis has been insufficiently researched (p. 117). Holguin-Veras and Jaller (2012) focused on resources requirements for the immediate and long-term recovery. While data was captured about the federal response to Katrina, sufficient data about resource requirements by civilians and responders in the aftermath of Katrina and other crises has not been systematically tracked (Holguin-Veras & Jaller, 2012, p. 118). However, for purposes of this study, resource requirements that the private sector may fill included not only commodities but services, expertise or manpower.

Factor 5: Mutual aid limitations, potential breakdown of mutual aid agreements. Chang and Miles (2011) developed a community-based resiliency model and included the effectiveness of mutual aid in response to a disaster, as one of the integral factors for a high probability for resiliency. Following a large-scale crisis, that there could be a potential breakdown of mutual aid for a variety of reasons including that when the surrounding locales and potential contributors of the mutual aid are unable to respond or simply the need resources for themselves. While 65,929 responders (Kapucu, Augustin, & Garayev, 2009, p. 307) were deployed post-Katrina and Rita through Emergency Management Assistance Compacts (EMAC), implementation of the EMAC response yielded varying results or degrees of effectiveness as a function of the complexity of EMAC protocols and incompleteness of recommended training by responders (p. 305). Mutual aid agreements must be understood by personnel responsible for implementing the agreements for mutual aid to be an effective component of preparedness for resiliency (Howitt & Leonard, 2006, p. 24).

Factor 6: Majority of America's fire departments and firefighters are volunteer.

Residents and visitors alike have witnessed July 4th Independence Day parades in small towns across America with local firefighters and fire trucks leading the way. However, many of these observers may not realize America's dependency on its volunteer responders who represent the majority of the nation's firefighting force (U. S. Fire Administration, 2015a, National fire department). The majority of our nation's firefighters serve on a volunteer basis (U.S. Fire Administration, 2015a, National fire department). Furthermore, of the 50,500 fire departments with approximately 1,216,500 personnel who completed the 2015 National Fire Department Census (U. S. Fire Administration, 2015a, National fire department), 16% of the fire departments are mostly volunteer and 71% are volunteer (p. 11). Also, 96% of the fire departments who registered with the census are local versus state and federal or another type of fire department (U. S. Fire Administration, 2015a, National fire department). Additionally over one million individuals serve the nation as either "active career, volunteer and paid per call firefighters" (U. S. Fire Administration, 2015a, National fire department).

Factor 7: Responders and critical infrastructure employees with concerns for 1st 72-hour safety of family or other dependents with disabilities or other special needs.

Presumptions about preparedness are fraught with risk. In federal preparedness plans, state and local responders are presumed to be available in the early phase following of an attack by a radiological dispersal device (Medalia, 2012, p. 157). Due to various concerns and circumstances, responders have not always reported for duty when needed or expected during crisis response. For example, during the early hours of

Katrina, some police officers did not report for duty either due to victimization, personal crises or dereliction of duty (Landahl & Cox, 2009).

American society may over rely or mistakenly presume that responders, including volunteer responders, remain available for service to the community during the first hours of a crisis. Responders, both career and volunteer, and or critical sector employees may be challenged during the crisis response period when faced with the duty to work as well as duty to family members and or other dependents with vulnerabilities and or special needs including those who are disabled, frail or elderly. During a crisis, the paid and or volunteer responder may need to divert attention elsewhere to ensure the safety of family members or other dependents. While responders have committed to caring and sacrificing for the communities in which they live, responders must tend to personal demands, responsibilities and commitments of daily life. Using a variation of the Delphi method, Sharman, Rao, Jin Ki, and Upadhyaya (2008) reviewed 77 Western New York responder perspectives about post-Katrina lessons learned. When completing the study, Sharman et al. (2008) obtained perspectives from EMS personnel, emergency managers, fire chiefs, volunteer fire chiefs, firefighters, emergency managers and police on various issues and priorities which revealed dissimilar views (p. 2). The differences in priorities should be kept in mind for community leaders developing plans to support responders. Community leaders must factor America's reliance on its paid and volunteer responders in and about its strategic military base and port communities into emergency preparedness planning.

Responder and or local critical infrastructure employee resiliency or the availability of the individual to respond in the immediate aftermath of a large-scale crisis

is in part dependent upon advance planning and preparations to address any concerns, needs, limitations, challenges or risks, including the safety and security of his or her family or other dependents during the first 72 hours and through the recovery period. Takazawa and Williams (2011) stated that it is in the early moments of response that those impacted by the crisis make a decision between tending to the needs of family or the needs of others in the community (p. 431).

Aldrich and Benson (2008) stated that the vulnerabilities and commensurate demands of individuals with health concerns became especially evident during the 2005 Gulf Coast hurricanes. A White House report, as cited in Aldrich and Benson (2008), specified that 71% of the Katrina-related deaths involved individuals over 65 years of age (p. 1). Additionally, according to Nick et al. (2009), 12% of the U.S. population between the ages of 16 and 64, or approximately 23 million individuals, have a disability and thus have a special health-care need (p. 338). According to Aldrich and Benson (2008), 80% of aged persons living in the United States are challenged by one or more vulnerability. In as much, Aldrich and Benson (2008) stated that preplanning to address the needs of these individuals during a crisis must be addressed (p. 1).

Furthermore, Aldrich and Benson (2008) suggested that partnerships and volunteers might be leveraged to prepare a system to care for vulnerable individuals during crisis response (p. 4). Nick et al. (2009) recommended preparedness through collaboration to help evacuate and care for this vulnerable population during a crisis (p. 341, 342).

Similarly, Labaka, Hernantes, Rich, and Sarriegi (2013) explored a framework to assist crisis managers with critical infrastructure resiliency including helping first responders with impacted individuals (p. 307) through volunteerism (p. 294). As their foremost policy recommendation to mitigate the potential loss of life during a crisis, Takazawa and Williams (2011) recommended both disaster warning systems and a social means by which first responders can be supported in their community (p 438).

The vulnerability in the local national response capacity is somewhat proportional to or a function of the responders who may not be available for response given their need to tend to family or other dependents was also highlighted in the National Blueprint for Secure Communities (2007, Challenges). Scholars have advised that the private sector consider participation in a collaborative relationship to provide support for responders in the first 72 hours (Tompkins & Marcks, 2012; Aldrich & Benson, 2008). In an analysis of public-private collaboration in response to catastrophes, Tompkins and Marcks (2012) stated that “first responders simply are not equipped to meet all the needs of such large-scale events, requiring the assistance and support of the private sector” (p. 3).

Factor 8: Private sector capacity; majority owner of critical infrastructure and employer of the workforce in the United States. The private sector has employed the majority, nearly 85%, of America’s workforce (Rand, 2003, p. 29). Furthermore, the private sector has been attributed with majority ownership of the majority the nation’s critical infrastructure (DHS, 2014c, Quadrennial homeland security, p. 91; Foresman, 2009; Hayes & Ebinger, 2011; Kapucu, Arslan & Demiroz, 2010; Quigley, 2013; Rand,

2003, p. 29). Quigley (2013) concurred, that private sector has owned the majority of critical infrastructure in the West (p. 143).

Large retail firms including Home Depot and Wal-Mart provided support following Hurricane Katrina (Kapucu, Arslan & Demiroz, 2010). Nonetheless, widespread private sector engagement, by large and or small firms, through cross-sector collaboration for preparedness has not been the norm.

Problem Framed with Literature of Last Five Years

A review of the literature published in the last five years denoting the problem and purpose for the study revealed additional insights and recommendations for increased private sector participation and collaboration through public-private partnerships to promote community resiliency in the first 72 hours.

An increased private sector role to support local first response is particularly important in our nation's strategic military base and port communities. "We have to understand that ...looking at the resiliency of our ports and the bottom-up solution, where local communities, military installations and port complexes operate with great interdependence and independence, dependence on one another is absolutely essential (Hon. G. Foresman, former DHS Under Secretary, and Vice-Chairman of the Gilmore Commission, ReadyCommunities Partnership, 2010, Senate, Ch. 1, p. 4)."

Call for private sector engagement, public-private partnerships. A few recommendations for private sector engagement for community resiliency are listed as follows. The reasons cited by these authors include continuity of private sector services (New York City, 2013), protection of critical infrastructure (Wells & Bendett, 2012;

Hayes & Ebinger, 2011) and integration of private sector assets into the public-sector response (Tompkins & Marcks, 2012; FEMA, 2011; DHS, 2011).

In the aftermath of Hurricane Sandy, government officials recommended that the New York City partner at the federal and state levels to enforce standards of business continuity for those providing essential services to its residents (New York City, 2013).

Wells and Bendett (2012) drew attention to the 2010 National Security Strategy recommendation for incentives to strengthen public-private partnerships to protect critical infrastructure (p. 6).

The Department of Homeland Security and the United States Northern Command hosted its first public-private partnership conference in 2011 in Washington, DC about resilience through collaboration (FEMA, 2012, Progress Report).

In a summary of a focus group hosted by the Community Oriented Policing Services of the Department of Justice to understand how law enforcement and fusion centers communicate with the private sector, Tompkins and Marcks (2012) recommended combined “resources and expertise” of both the public and private sectors for crisis response (p. 3, 8).

FEMA Administrator Fugate (FEMA, 2011, A whole community) called for private sector engagement through public-private partnerships (p. 11). Likewise, when providing congressional testimony before the U.S. House Transportation and Infrastructure Committee, FEMA administrator Fugate (Improving the nation’s, 2011) stated that the private sector office was established in October 2007 to begin to integrate its capacity into emergency management.

Additional Early Literature about Scope of Topic

Earlier references published prior to the last five years, pertaining to the reason to study incentives for private sector collaboration including a plan to care for responders or critical sector employees are listed as follows. Collectively, these facts point to the need and or opportunity for private sector engagement and collaboration to foster community resiliency in the first 72 hours:

- Laycock (2010) conducted research and determined that response personnel of BC Hydro and Power Authority may not be on the job in the first hours following certain crises.
- Landahl and Cox (2009) revealed that responders have been concerned about the impact of their family preparedness on their ability to respond.
- Former Under-Secretary of Homeland Security George Foresman (ReadyCommunities Partnership mission, 2009) testified before Congress and recommended public-private collaboration to prepare for the first few days of a crisis including reinforcement of local critical infrastructure continuity.
- Section 902 of the Implementing Recommendations of the 9/11 Commission Act of 2007 (Pub. L. 110-53) outlined the responsibilities of the private sector office of the DHS, including advisory councils to advise the secretary in methods for encouraging private sector voluntary adoption of preparedness measures (p. 107).
- Upon review of White House and the U.S. House Committee post-Katrina reports, Menzel (2006) drew attention to Townsend's recommendation that

the federal government collaborate with the private sector to combine existing preparedness efforts for community-level resiliency (p. 809).

- Eckert (2005) evaluated resource shortages in the first 72 hours and recommended public-private collaboration to help ensure America's security at home (p. 1).

Additional literature related to the scope of the research topic of private sector engagement and collaboration to augment and reinforce community resiliency is provided in Chapter 2. Additionally, an overview of the conceptual framework elements including cross-sector collaboration, networks, and strategic military base and port community resiliency are also included in Chapter 2. Additionally, Chapter 2 introduces literature concerning the provision of care for families of responders and critical sector employees in the first 72 hours of a large-scale crisis.

Meaningful Gap in Current Research Literature

At the onset, the lack of knowledge or coverage in the research literature about private sector incentives or barriers to preparedness and public-private collaboration was identified. This study was conducted to fill this gap. Furthermore, the literature lacked definition or clarity as to how the private sector could systematically collaborate for resiliency (Rand, 2003, p. 321). Aside from instances of public-private sector collaboration serving as precedent over the last decade, more modes for engagement must be developed to further reinforce the existing first 72-hour response capacity.

Examples of private sector participation. Companies that have provided emergency relief in the early aftermath of a large-scale crisis, such as Katrina, have

included Verizon Wireless (Kapucu & Khosa, 2012) and Wal-Mart (Horwitz, 2008). Acting on lessons learned from Hurricane Katrina, Lowes, local stores and others who had pre-established contracts with local governments were an immediate source of supplies during the Hurricane Gustav response (Oh, 2010, p. 188). Additionally, as evident from various local news reports following various crises, local corporations have provided support of various types and to varying degrees in the early hours of response or recovery.

However, while the private sector has provided response resources in the aftermath of crises (FEMA, 2014, p. 91), in general, the private sector has not systematically addressed its full-blown potential role in fortifying the local response capacity through specific preparedness measures and collaboration to maintain if not augment the existing local public-sector response capacity.

Given scarce funding resources for local level preparedness and response (FEMA, 2014, Engaging the whole, p. 14), it behooves the private sector to collaborate to at least preserve each community's existing response capacity; including the functionality of local critical infrastructure and the capacity for emergency responders and critical sector employees to remain on the job. The full measure of a community's local response capacity prior to a crisis is needed to sustain the local economy and ensure a lawful and safe environment for citizens.

The aforesaid facts and recommendations begged the understanding as to why the private sector is not fully engaged in preparedness. Additionally, the aforesaid begged the understanding as to what would incentivize the private sector to collaborate and or what

barriers exist to make resources and capabilities available for the first 72 hours if only to reinforce if not augment the existing response capacity. Although private sector engagement or integration has been recommended for state and local preparedness (Rand, 2003, p. 29) prior to this study, there was a distinct gap in the literature or a lack of research in the area of private sector incentives or barriers to preparedness or engagement to augment the public sector capacity for community resiliency.

For purposes of this study, the private sector includes any for-profit business, whether it is categorized as large or small. While nonprofit organizations are not the focus of this study, nonprofit leaders were not been excluded as a data source.

Purpose of the Study

Research Paradigm

The beliefs on which this qualitative study were based include the commonly-held value of public-private collaboration in an axiological sense (Creswell, 2013, p. 20), which is supported by my conviction about the importance of collaboration for community-level resiliency. Of the four worldviews or research paradigms described by Creswell (2009), the ‘participatory’ paradigm is that which is most applicable to this study given that the research process involves collaboration, and implications for the research are ‘change-oriented’ (p. 6). The epistemological approach is the basis for this qualitative study in that the qualitative interviews were conducted by me on a one-on-one basis with those who possess knowledge about the topic; public and private sector leaders in their respective community (p. 20).

Research Purpose

The research purpose envisioned for this study was to gain deeper understanding of private sector incentives and barriers to cross-sector collaboration for the provisioning and integration of resources and or services, with the public sector, to reinforce if not augment the response capacity in the first 72 hours of a large-scale crisis. In part, the intent was to also understand the same with respect to ensuring that nearly all, if not, 100 percent of a strategic communities' existing first response capacity prior to crisis is available.

This response capacity entails a community's responders and its critical infrastructure employees. The intent of the study was to identify incentives that may motivate the private sector to collaborate and to understand barriers to cross-sector collaboration for preparedness through the provision of some type or degree of support such as volunteer support, financial resources, managerial consultation, goods, or services for the first 72 hours of a large-scale or national crisis.

Beyond a broad understanding of the incentives and barriers, the intent of the research was also to understand the incentives or barriers to private sector support of emergency responders and critical sector employees with families, or vulnerable, or special needs dependents so that the responders and critical sector employees are enabled to report for duty or remain on the job during the early hours of a crisis.

Phenomena of Interest

The underlying phenomena of interest are the private sector incentives or barriers to collaboration with public sector and or community sector entities.

Prior to the time of timing of this study, private sector attention to preparedness through private sector engagement in cross-sector collaboration for community resiliency may have been considered disruptive to the private sector's day-to-day focus on operations and revenue generation.

Anticipated Value of Research

Enhanced model for collaboration. The research results suggest an enhanced model for private-public sector collaboration to be shared with public and private sector leaders, including policy makers, lawmakers and political advisors. Ultimately, this public-private sector collaboration model can serve as a catalyst for solutions to fill gaps and sustain business continuity and community resiliency in our nation's' strategic military base and port communities in the early aftermath of crises. Also, findings and recommendations of this study may underscore ways in which the private sector can support the culture or practical needs of volunteer responders, who provide a significant percentage of America's response throw-weight, by helping volunteer responders care for their families.

Return-on-investment. Additionally, once the findings of this study have been absorbed by leaders and acted upon, the private sector may increasingly hold a positive view of preparedness and collaboration, with investments in community resiliency viewed as a tool for corporate risk management and worthy of investment with noticeable and various returns.

Research Questions

The key elements of the conceptual framework for this study, as described in the following pages, support this qualitative study in that community resiliency is a desired state to be maintained and sustained through public-private collaboration during the first 72 hours of a large-scale or national crisis. Based on this focal point, the central question and the interview questions have been posed.

Central Question

In a world of diminishing resources and increasing instances of complex catastrophes and with respect to the call for increased private sector engagement, this study was based on one central question to understand the incentives and barriers to private sector preparedness and collaboration with the public sector through a contribution of time, resources or services to reinforce if not augment the existing local emergency response capacity and local critical infrastructure continuity of operations.

RQ1: What are the perceived incentives and barriers to private sector collaboration with the public sector for preparedness and response to provide select services or resources for the first 72 hours of a large-scale or national crisis, thereby reinforcing if not augmenting the existing response capacity?

Subquestion 1 (SQ1): What are the perceived incentives and barriers to private sector collaboration with the public sector to develop a plan, program or system for caring for vulnerable or special needs family members or other dependents (i.e. frail elderly, those with access issues, disabilities) of responders and or critical sector employees so that the latter may remain on the job during the first 72 hours of crisis?

Subquestion 2 (SQ2): What, theoretically and or practically, would motivate the private sector to collaborate or serve as a barrier to collaboration with the public sector to foster resiliency in one's community during the first 72 hours? What is the greatest perceived incentive and greatest perceived barrier to public-private collaboration?

Theoretical and Conceptual Framework

Theoretical Framework

Cross-sector collaboration as presented by Bryson, Crosby, and Stone (2006) was chosen as the primary lens or theoretical model for this study. Cross-sector collaboration is also intrinsic to the conceptual framework for this study, as outlined below. Following a brief overview of cross-sector collaboration as the theoretical framework a few complementary and relevant theories for this study are listed.

Both the theoretical and conceptual frameworks are intrinsic to understanding private sector incentives and barriers to cross-sector collaboration for resiliency in the first 72 hours of a large-scale crisis.

Cross-sector collaboration. Bryson et al. (2006) provided a theoretical model and lens for cross-sector collaboration in a post-hurricane analysis of Hurricanes Katrina and Rita (p. 47); which also supports my research about private sector incentives and barriers to engagement. Bryson et al. (2006), as stated in Simo and Bies (2007), described the purpose of cross-sector collaboration as that which takes advantage of respective sector strengths (p. 137).

Additionally, within the framework of the Bryson et al. (2006) model, Simo and Bies (2007) stated that cross-sector collaboration has been positioned as fundamental to

emergency recovery (p. 140) and is that which should be developed for extreme events (p. 139). Simon and Bies (2007) attributed government failures in the Katrina response to coordination issues between government entities and nonprofit and for-profit organizations (p. 126). After a review of crises in Louisiana and Texas, Simon and Bies (2007) concluded that community capacity for collaboration between for-profit, nonprofit and public sector organizations should be addressed and also recommended support for augmentation of networks already focused on emergency preparedness (p. 139).

Complementary theories. A few additional theories that apply to this study to varying degrees include the cultural theory, dynamic network theory and complex adaptive systems theory, social networks theory, networking theory, resource dependency theory, and blame avoidance.

Cultural theory. Quigley (2013) acknowledged cultural theory, first introduced by Mary Douglas (1992), when stating that response to risk is a function of an organization's values and provides a lens through which to view and compare institutional behavior (p. 152). Cultural theory may apply to my research when considering, on the one hand, the private sector's primary focus on market success and whether or not, or to what degree, that priority is supported by investment in preparedness for crisis. With resiliency to gain, it is a conundrum when the private sector avoids or determines that preparedness is not justified. To the extent that the development of public and private sector collaboration can be considered an involved policy issue, a review of Ney and Verweij's (2014) use of cultural theory as a tool for deductive reasoning and the deliberative process, may prove to be useful for the myriad of

challenges associated with strengthening private sector engagement. Ney and Verweij (2014) summarized cultural theory based on social relations as one which dictates behavior (p. 624).

Dynamic network theory and complex adaptive systems theory. The dynamic network theory and complex adaptive systems theory, as cited in Kapucu (2005), were explained by Scott (2000); Axelrod and Cohen (1999); Comfort (1999), Charley (1999), Holland (1995), Wasserman and Faust (1994), Alter and Hage (1993), Nohria and Eccles (1992) as the relationships, both formal and informal, that develop as a function of complex situations for a common purpose or benefit (p. 35).

Kapucu (2005) conducted research based on the dynamic network and complex adaptive systems theories and found that efficient and trusted collaboration through government agency networks, as well as public-private partnerships, to respond and recover from extreme crises has continued to demonstrate value in mitigating problems for society (p. 33).

Social networks theory. As posited in the early 20th century (Hossain & Kuti, 2010), the social networks theory can serve as a basis for my study about the potential collaborative or cross-sector role of the private sector following a large-scale crisis to achieve community resilience.

According to Hossain and Kuti (2010), the social networks theory is a framework inclusive of individuals and links between them and how this structure can impact behavior (p. 756). Hossain and Kuti (2010) further explained that the social network theory purports that the probability for effective network coordination is a function of the

individual's efficiency for connectivity within the network (p. 756). Inasmuch, Hossain and Kuti (2010) analyzed survey data from 224 emergency response professionals and found that there is a positive relationship between the connectivity of a network and any viable collaboration (abstract).

Given the challenges of communicating through distributed networks during times of emergency, the social networks theory purports that connectivity prior to crisis, can serve as a logical basis for assessment of an organization's capacity for effective inclusion within an emergency response network (Hossain & Kuti, 2010, p. 766)

Based on a review and assessment of relative gaps in several coordination assessment models, including the Mintzberg model (1979), the coordination theory model by Malone and Crowston (1994), and the naïve model (p. 761); Hossain and Kuti (2010) presented a new pre-crisis coordination model for effective collaboration and readiness for extreme crises (pp. 763-764). Hossain and Kuti (2010) stated that this model, while in need of further study, is applicable for distributed networks and assesses the network's current capacity to coordinate to yield positive results (p. 764). In brief, network connectivity is a basis for assessment of a network's potential to collaborate and perform well during crisis response (Hossain & Kuti, 2010, p. 782). Ultimately, the new application of the social networks theory for distributed networks explores and encourages increased coordination for an effective emergency response (p. 764).

Networking theory. Peterson and Besserman (2010) evaluated community networks in the context of community resiliency and determined that informal external contacts may be more valuable during crisis response than official contacts. The theory of

networking can support the research should it serve to explain how the private sector might leverage informal external contacts to support partnerships with the public sector to increase community continuity if not continuity of business operations.

Resource dependence theory. Another theory for incorporation into the lens through which to analyze my research findings is the resource dependence theory, which, according to Nienhuser (2008), can help to explain behavior. The resource dependence theory could affirm the starting point for my research, by assuming that human dependence on critical resources has served as a driver for organizational behavior (p. 10).

Blame avoidance in networks. In the aftermath of Katrina, Moynihan (2012) discussed blame avoidance and organizational reputation, both external and internal to the network, as an incentive for participation in public service networks (p. 567). An aspect of this theory could be relevant to the data analysis and conclusions.

In summary, the overarching theoretical foundation for this research embodies cross-sector collaboration, complementary theories, and complementary key concepts of the conceptual framework including community resiliency based on citizen engagement, networks, public-private partnerships and cross-sector collaboration in the context of America's strategic military base and port communities.

Conceptual Framework

Maxwell (2013) taught that the researcher's conceptual framework is that which is constructed by the researcher (p. 41). Inasmuch, the conceptual framework or contextual lens that grounds this study is based on three primary areas of concern that

impact national resiliency. The first aspect of the conceptual framework is community resiliency. The other integral aspect of the conceptual framework is the collective activity and value of formal and informal networks and public-private partnerships or public-private collaboration. Additionally, both of these elements of the conceptual framework are set within the context of America's strategic military base and port communities, the third aspect for this framework. These three elements are illustrated below in Figure 2, followed by an introduction to each element. More elaborate definitions for each element as well as an overview of the current literature regarding the same are included in Chapter 2.

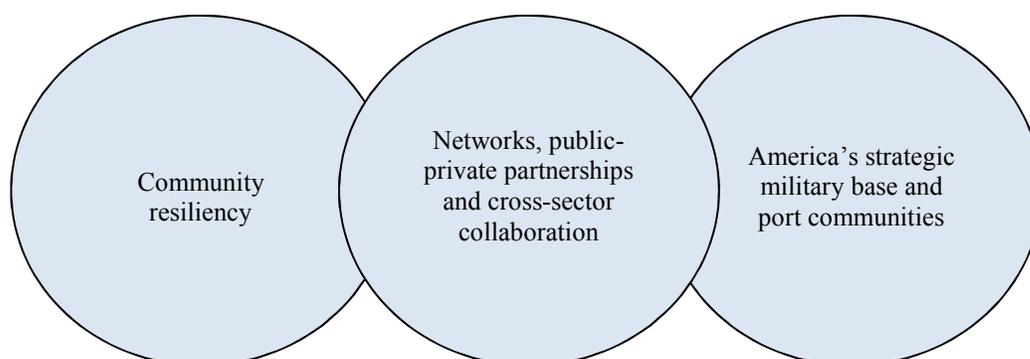


Figure 2. Conceptual framework.

Community resiliency. Community resiliency is appreciated by public and private sector leaders as a goal to which to aspire and maintain in the event of a crisis. However, articulation of its policies or implementation of its practices may lack definition (Brassett & Vaughan-Williams, 2015, p. 46). Chang and Miles (2011) defined resiliency in the context of a community that can recover readily to its starting point or better (p. 36).

Recovery to an improved point will undoubtedly involve partnerships and collaboration. Since its founding, America has been a nation of citizens who take care of themselves and volunteer to assist in crisis response. Chicago citizens helped to rebuild their city after the Great Chicago Fire in 1871. In 1900, Galveston citizens were engaged in the response to the devastation caused by the Great Storm. Private sector organizations have and continue to reinforce the volunteer responder model by allowing employees to take time from work to volunteer as responders. The American culture of preparedness and response remains strong with citizen volunteers who rise to the challenges and partner for survival in the face of a crisis.

Networks, public-private partnerships, and cross-sector collaboration.

Indeed, both the public and private sectors benefit from resiliency (Quigley, 2013, p. 159). In this vein, public and private sector leaders have embraced partnerships and collaborative relationships to accomplish a mutually beneficial goal. Brassett and Vaughan-Williams (2015) discussed how strategies for achievement of resiliency have become increasingly intertwined with risk management (p. 33).

Public-private partnerships and cross-sector collaboration undergird this study. As stated in the theoretical framework section of this chapter, cross-sector collaboration in the context of emergency preparedness, response, and recovery, also doubles as a theoretical foundation or lens for this study as laid out by various scholars.

As public-private partnerships for community and national resiliency are integral to homeland security discussions, further research and related policy and program planning in a world of increasing threats is merited (O'Toole, 1997; Robinson, 2006;

Bryson et al., 2006). O'Toole (1997) recommended further research about policy and public-private partnerships, as did Robinson (2006) about the development of networks. Bryson et al. (2006) concluded that cross-sector collaboration should be further studied in regard to response to extreme events and its strategic impact on rebuilding post-crisis (Bryson et al., 2006, p. 140).

Kapucu, Arslan and Demiroz (2010) stated that many experts have concurred that cross-sector collaboration between public, private and nonprofit entities is essential to emergency management (pp. 454, 464). In Presidential Policy Directive 8, preparedness for large-scale crises was described as a "shared responsibility" between citizens, public and private the sectors and citizens (White House, 2011, p. 1). As an example, under the administration of FEMA, Citizen Corps Councils have developed partnerships between all sectors at the community-level to drive emergency preparedness for resiliency (FEMA, 2011, p. 20, A whole community). Also, National Voluntary Organizations Active in Disaster (NVOAD) with over 110 voluntary organizations in all the states and territories, have been integrated into community-level response and recovery to disasters (Mintz & Gonzales, 2013, p. 35). Rand (2003) reported that collaboration is integral to preparedness and infrastructure protection (p. 29).

Bryson et al. (2006) studied the collaborative behavior and value of nonprofit organizations in the aftermath of Hurricanes Katrina and Rita (p. 125) which engaged in response due to government shortcomings (p. 125) and the public's perception of resource inadequacies (p. 139). Bryson et al. (2006) discussed the impact of extreme events on the demands or expectations of cross-sector collaboration (p. 139) and

recommended that strategic development thereof include an evaluation of resource issues and local-level plans (p. 140). Bryson et al. (2006) underlined the challenges about the development and maintenance of cross-sector collaboration while providing a summary of 22 keen observations and recommendations.

While the purpose of my study is to understand for-profit organization incentives and barriers to engagement for collaboration for resiliency versus those of the nonprofit organizations, the cross-sector perspectives for addressing gaps is nonetheless relevant.

America's strategic military base and port communities. America's economy and national security are dependent upon the continuity of America's strategic military base and port communities. Additional information about this element can be found in Chapter 2.

Nature of the Study

Qualitative Study

Through this qualitative study as a function of my central question, I interviewed leaders from the private, nonprofit, public, emergency response, community and military sectors across 6 strategic military base and communities to understand their respective views about perceived incentives and barriers to engagement of the private sector in collaboration with the public sector for community-level resiliency as part of a national plan.

The ultimate purpose of the findings from this study was to develop a bottom-up model for private sector engagement at the local level in collaboration with the public sector, to serve as a basis for practical applications and policy development to support

community resiliency in the first 72 hours of a large-scale or national crisis. I conducted open-ended and in-depth interviews to obtain rich, unbiased data.

Comparative multiple-case study. The case study approach to this research through in-depth interviews with public, private, nonprofit, emergency response and military leaders in strategic military base and port communities, namely Charleston, South Carolina; Doral, Florida; Miami, Florida, New Orleans, Louisiana; Long Beach, California and Washington, DC yielded data and recommendations for developing public-private partnerships, policy and programs in the context of the research objective. My post-doctoral work may include additional research in additional military base and port communities.

The data generated from this multiple case study, through the qualitative interviews as complemented by the symposia summaries, allowed for the comparison of stakeholders views in six strategic military base and port communities. However, an overall summary of all of the data best served the purpose to understand private sector incentives and barriers to collaboration for response in the context of large-scale crises, as differences between the stakeholder views from case to case did not differ in principle. Ultimately, stakeholder views differed only as a function of their geographic region and experiences.

Grounded theory development. Based on my central question, specific to understanding perceived private sector incentives and barriers to cross-sector collaboration to reinforce if not augment the first 72-hour response capacity, *I love/support collaboration but for sector-silo bias* emerged in this study from the predominant

themes as the grounded theory along with the applied mutual mission theory. Ultimately, the depth of the research results and recommendations from this study, across six cases with 43 interview participants and 6 symposia, has informed and can continue to serve as a foundation for the development of new levels and enhanced models for public-private collaboration to reinforce if not augment the existing local response capacity, thereby addressing gaps in the public-private deficit (Rand, 2003, p. 322) or cracks in community resiliency.

Possible Types and Sources of Information or Data

Key Informants

A well-rounded response to the central question was obtained through qualitative interviews with participants from all sectors; for-profit and nonprofit corporate executives, paid and volunteer responders, port executives military leaders from in the strategic military base and port communities of Charleston, South Carolina; Doral, Florida; Miami, Florida; New Orleans, Louisiana; Long Beach, California; and Washington, DC. For-profit participants included those representing both large and small businesses across critical sectors. Research results can be analyzed by case and sector as de-identified participant codes reflect the participant's case and sector.

One-On-One Interviews

The one-on-one in-depth interviews with leaders and stakeholders in community resiliency serve as the primary source of original data. The semi-structured one-on-one interviews were conducted with informed consent, either in-person or by telephone. I interviewed 43 individuals, an average of 7 in each of the 6 strategic military base and

port communities of Charleston, Doral, Long Beach, Miami, New Orleans, and Washington, DC. The interviews and de-identified participants are summarized in Table D1, Descriptive List of Interviewees (N = 43).

Private sector community-based participants of local critical infrastructure institutions and or other industries including oil and gas, communications, maritime transportation, logistics/supply chain, information technology, risk management, port management, public safety, emergency management and homeland security, Interviewees included those who worked for port authorities, police and firefighting organizations, homeland security, county offices of emergency management, state agency for disabled persons, the military and combatant command, and nonprofit organizations.

The name of the participants and their respective organizations remain undisclosed in the results. However, a de-identified participant code to reveal the case and sector is provided for each excerpt.

Initially, I contacted potential participants by email or by telephone to request and confirm an interview in-person and or by telephone as circumstances and preferences permit. Each interview invitation included the purpose of the interview and informed consent was obtained. Notes were taken during each interview and presented to the participant for review and edits or approval. I generated a transcript for each of the participant interviews, based on interview notes or a tape-recording, and submitted to the participant for review.

None of the interview participants were compensated for their participation.

Additional Data Sources

Additionally, data culled from summaries of symposia developed, convened and moderated by me as the pro bono national director of the ReadyCommunities Partnership in the six locales mentioned above; Charleston, South Carolina (2010), at the Fire Headquarters in Doral, Florida (2013); at the Senate Dirksen office building in Washington, DC (2010), PortMiami (2011), Port of New Orleans (2013) and the Port of Long Beach (2014); are incorporated in the results section of Chapter 4. Voluntary participants in these symposia included community-based public, private, military, and nonprofit organization leaders who shared best practices and or provided recommendations relative to various facets of community resiliency. Data were culled from the summaries when applicable to a research questions and includes best practices which may serve as models for collaboration and or implied barriers or incentives to collaboration. Additionally, symposia remarks which mirrored recurring themes of the dissertation interviews are included the in the results as summarized in Chapter 4.

In 2005, the ReadyCommunities Partnership was formed to continue the work of the Gilmore Commission to engage the private sector in preparedness through cross-sector collaboration for community resiliency. The ReadyCommunities Partnership is a public-private partnership represented by public, private, military, faith-based and other community-based non-governmental organization leaders who have shared best practices and recommendations for cross-sector collaboration to augment the local public-sector response capacity in the first 72 hours of a large-scale or national crisis (National Blueprint, n.d.). Many of these best practices have been posted online at the National

Blueprint for Secure Communities (2007, Challenges). Since 2005, the ReadyCommunities Partnership convened several thousand public and private sector stakeholders through at least 30 symposia and pilot meetings held in Washington, DC; Galveston, Texas; Charleston, South Carolina; Buffalo, New York and other communities across the nation to understand their best practices and recommendations for community-level resiliency as part of a national plan. ReadyCommunities Partnership is a public/private partnership and project of the nonprofit 501(c)3 organizations Corporate Crisis Response Officers Association (CCROA) and the Community Institute for Preparedness, Response and Recovery (CIPRR).

Analytical Strategies

Sole Researcher

As the sole researcher, I recorded the qualitative one-on-one interviews by taking hand-held notes, typing notes on my computer and or using a hand-held recorder. Following I generated a transcript, developed axial codes for the data and input the axial codes in a Microsoft Excel spreadsheet. I supplemented this data from the one-on-one interviews with any relevant data from the symposia summaries. Following, in the manner of content analysis, I reviewed the data to identify perceived barriers and incentives and summarize recurring themes. Additionally, I generated five tables and included them in the appendices to assist the reader in their understanding of integral aspects of the study. The cases were established, as each of the 6 strategic military base and port communities, when the symposia were convened between 2010 and 2014 by ReadyCommunities Partnership. The symposia summary data from these six cases

defined by the locale and symposia dates; served to reinforce results from the primary source of data gleaned from the qualitative interviews.

Operational Definitions

Key concepts or constructs. Within the context of crisis preparedness and response, key concepts of this study include preparedness to achieve or maintain national resiliency through community resiliency in the first 72 hours of a large-scale or national crisis (ReadyCommunities Partnership, 2010, p. 9) as distinct from a sole concern about local disaster management. Also, operational definitions for local critical infrastructure, public-private partnerships, responders, and the private sector are provided. Additionally, the federal frameworks by which responders abide for emergency management are provided.

Resiliency. Resiliency has been defined by many scholars, particularly in the context of one's discipline. In brief, resiliency has been defined as the ability to recover, with its etymological roots in the Latin word 'resilient' defined as 'leaping back' (Resilient, n.d.).

The definition provided by the White House (2013) in Presidential Policy Directive 21 is relevant to the context of this study as follows; "...the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resiliency includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents (p. 12)."

Community resiliency. Community resiliency or a community's capacity to continue to be vital in the face of crisis was defined by Cohen et al. (2013) within the

context of emergency preparedness (p. 1732). Community resiliency in this study is driven by a collaborative spirit between the public and private sectors. Further information about ‘community resiliency’ in the context of this study has been provided in the conceptual framework section of this document.

First 72 hours. When considering to the immediate aftermath of large-scale crises, history has continued to reveal how communities have suffered from compromised or insufficient response capacity. Since the inception of FEMA, laws have been implemented to fill gaps to saves lives and protect property. Under Sec. 102 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, FEMA has the authority to supplement state and local capacity in the aftermath of an emergency or major disaster when the President determines that assistance from the federal government is warranted (Pub. L. 93-288, 2013, The Stafford Act, p. 1, 2). In instances when federal assistance is granted, and due to the time involved in processing the request submitted by the governor of the impacted state, assistance may not be provided or arrive for 72 hours, thus the significance of the phrase, the first 72 hours.

Large-scale or national crisis. Heretofore, emergency preparedness planning and response discussions have been set in the context of local natural disasters alone. In some cases, the attention to all-hazards has excluded the demands and concerns associated with the magnitude of a large-scale or national crisis or large-scale. Large-scale or national crises include crippling of critical infrastructure by a cyber-attack, electromagnetic pulse as a result of a solar storm or attack by a rogue regime, pandemic, bioterrorism, or other terror attack with large-scale impact including simultaneous or sequential attacks by

bombings, improvised nuclear explosives or other means. The consequences of such crises include physical, psychological and economic devastation. It should also be noted that a crisis born out of disaster has been described in terms of time as either immediate or gradual; and in terms of scope either centralized (as cited by Carr, 1932) or spread out (Takazawa & Williams, 2011, p. 431).

Local critical infrastructure. The literature addressed the relationship between private sector-owned critical infrastructure and resiliency. However, critical infrastructure in the context of this study includes nationally based critical infrastructure as well as any local critical infrastructure inclusive of local vendors and suppliers to the base and port communities.

Local critical infrastructure services or goods demanded by the public and or private sectors during crisis can include power, fuel, banking services, food, pharmaceuticals, and response (U.S. Fire Administration, 2015b, Operational, p. 9). As stated in Executive Order 13010 (1996), the nation's critical infrastructure includes "telecommunications, electrical power systems, gas and oil storage and transportation, banking and finance, transportation, water supply systems, emergency services (including medical, police, fire, and rescue), and continuity of government" (p. 1). President William J. Clinton's Executive Order 13010 further elaborated by stating that the public and private sector must collaborate to ensure the continuity of our nation's critical infrastructure given that this infrastructure is largely private sector owned and operated (1996, p. 1). Critical national infrastructure assets were listed as those related to storing or delivering water, oil, electricity and telecommunications (Brassett & Vaughan-

Williams, 2015, p. 40). Furthermore, as cited in Brassett and Vaughan-Williams (2015), national infrastructure was described by the United Kingdom Cabinet Office as systems, networks and sites that provide both goods and services which are integral to society (p. 39).

Chang and Miles (2011) developed a model for community resiliency to mitigate impact from a disaster, based in part on fortifying its critical services (p. 36). Patton, as cited in Kapucu, Arslan and Demiroz (2010) stated that infrastructure companies are essential to emergency management (p. 458). During a crisis, a wide array of critical infrastructure may be damaged and become dysfunctional, causing outages, delays and disruptions in normal capacity and or delivery of services (Donahue, Godwin and Cunnion, 2012, p. 5).

Private sector. For purposes of this study, the private sector shall include for-profit and nonprofit corporations with for-profit organizations being the primary subject of the study for which their relevance to the findings and conclusions will be noted.

Public-private partnerships. For the purposes of this dissertation, a public-private partnership represents a collaborative relationship between a for-profit or nonprofit organization and the public sector for a specific mission. The parties involved define the terms of the partnership. This study presumed that both the public and private sectors collaborate to develop and maintain a mutually beneficial partnership(s).

In a report specific to public finance as published by the U.K. Treasury (2012), public-private partnerships are a vehicle through which the public sector may access distinguishing characteristics of private sector performance including “discipline, skills

and expertise” (p. 7). As demonstrated by the U.S. trend towards public-private partnerships for emergency preparedness, the application of the aforesaid private sector characteristics is also applicable to emergency management.

Busch and Givens (2013) simply defined public-private partnerships as a collaborative initiative, formalized by contracts and or information sharing sectors for disaster management (p. 3). However, Busch and Givens (2013) said the future holds many opportunities for public-private partners to achieve resiliency for the long-term while addressing shared challenges (p. 14).

This study also presumed that the private sector may take an active role in establishing a partnership for community resiliency that is embraced by the public sector. The aforesaid presumption can be inherently different from one in which the partnership is developed or driven by the public sector. According to Stewart, Kolloru and Smith (2009), national and community resiliency is a function of partnerships developed by the public sector with the private sector (p. 343).

Responders. Responders include firefighters, police, and emergency management personnel or emergency medical technicians. For purposes of this dissertation, responders also include both paid, volunteer and civilian responders as well as local critical infrastructure employees.

Emergency management federal frameworks. Stakeholders have addressed preparedness and response for resiliency through federal frameworks that recognize to varying degrees, the participation of all sectors (FEMA, 2013, Overview of the, p. 1). These frameworks are important as the nation’s emergency response professionals have

been trained and work on a daily basis within their context. These constructs include the National Prevention Framework, the National Mitigation Framework, the scalable National Response Framework (NRF) serving as a guide for response based on the National Incident Management System (NIMS), and the National Disaster Recovery Framework (NDRF) for recovery from large-scale crises (FEMA, 2013b, Overview of the, p. 2).

The responder's baseline or framework for resiliency is based on the protocols of the National Incident Management System (FEMA, n.d., National incident management) and the Incident Command System (FEMA, n.d., Incident command system).

Additionally, HDS policy makers have defined the national prevention, mitigation, response and disaster recovery frameworks (FEMA, 2013, Overview of the) within the context of Presidential Policy Directive 8 for National Preparedness (p. 1). These frameworks provide a foundation and context for the development of community-based initiatives and models for resiliency in the United States of America.

Scope, Context, and Limitations

Geographic scope. Based on the geographic location of participants and interviews planned for this study, the geographic scope of the research for this study includes the military base and or port communities of the United States of America, primarily Charleston, Long Beach, Miami, New Orleans, Doral, and Washington, DC.

Context. The context for this study is specific to large-scale or national crises versus a broad spectrum of minor natural or man-made crises.

Delimitations. Community resiliency through private sector engagement and cross-sector collaboration is the main focus of this study versus a focus on the private sector acting solely for the purpose of its business continuity or other acts of social responsibility. However, community resiliency is of course concerned with social resiliency. Labaka et al. (2013) referred to social resilience as the acts of others in lessening the potential devastation of a crisis (p. 294).

A focus on business continuity alone may ensure the continuity of the business in a post-crisis environment. However, business continuity plans may be developed in isolation without consideration of the broader context of the potential role of the business in fostering community resiliency. Corporate social responsibility is a noble cause involving altruistic commitments that may or may not be pertinent to resiliency of the community.

Also, while the findings from this study could contribute to how the private sector might interact with international aid organizations following a global crisis, the focus of this study is to understand private sector barriers and incentives to cross-sector collaboration for the sake of resiliency in America's strategic military base and port communities; which heretofore has not been systematically addressed in the literature.

Not a study about privatization. The intent or context of the public-private partnerships and collaboration in this study is to fill gaps that may impede or prevent community resiliency. This study is not about the transference of responsibility for a specific duty, service or responsibility to the private sector that is already the responsibility of the public sector. Furthermore, privatization of government services and

or centralization of private sector support for community resiliency are *not* part of the objectives of this study. Instead, a presumption for this study is that private sector capacity could in some way reinforce if not provide incremental capacity to the community-level public-sector response capacity already in place.

Bottom-up versus top-down focus. Also, for further clarification, the vantage point for this study is community resiliency driven by bottom-up investments by the private sector through cross-sector collaboration. This approach implies top-down support for community-driven engagement. Through the lens of cross-sector collaboration, one of the parameters for this study has been to understand what can be further accomplished at the community level through a grassroots versus top-down approach to resiliency. In this grassroots approach, the local private sector would proactively provide leadership, goods or management services, defined in private sector terms, to maintain if not augment the existing community response capacity. Ultimately, the grassroots approach assumes that the private sector could serve as a juggernaut for strategic community resiliency.

For those who have challenged the value of bottom-up resiliency by building a case for top-down management of private sector investments in resiliency, the case for community-driven engagement is included in the results in Chapter 4.

Focus on why versus how. Understanding how to form a network of public and private sector actors takes a back seat to the main purpose of this study to understand private sector incentives and barriers to cross-sector collaboration. That being said, there are many scholars who have advised how to build a network. For example, Chen, Chen,

Vertinsky, Yumagulova and Park (2013) discussed that cross-sector collaboration is most effective with a third-party mediator (p. 140). Chen et al. also explained that trust, an attribute of social capital, is paramount in forming sustainable public-private partnerships for resiliency (p. 140).

Significance of the Study

This study contributes to the understanding of specific private sector incentives and barriers to collaboration and preparedness for the first 72 hours. This actionable information can serve as a basis for program and policy development to reinforce the response capacity of America's strategic military base and port communities.

Practical Applications

Domestic model for private sector engagement. Ultimately, the data generated through this study can inform development of an effective model for private sector engagement through collaboration within the context of the first 72 hours of an extreme crisis. The findings from this study may also inform development of timely partnerships for community resiliency in that these partnerships between sectors, organizations and individuals essentially underpin the vitality of the national economy and serve as a bulwark for national security.

This domestic-based model for private sector engagement and collaboration can be leveraged by community, state and federal level public and private sector organizational leaders, as well as leaders of other community resiliency sensitive communities across the globe.

Incentives to reinforce existing response capacity. A subset of the findings can be included in the scholarly baseline body of knowledge about private sector incentives or barriers to the provision of support for responder preparedness and local critical infrastructure resiliency, and other applications.

Specific interview questions addressed the extent of the private sector's willingness to facilitate the arrangement of third party support for family members including vulnerable or special needs dependents to increase the probability that the preexisting response capacity can be maintained in the first 72 hours. As such, the findings from this study can facilitate those who define private sector standards and public-private partnerships in support of critical infrastructure employees and or first responders.

Sequential action research. Additionally, the research conclusions may organically call for sequential qualitative action research to define the most effective collaborative corporate roles for strategic community resiliency.

Social Change

New engagement, policies, and benefits. The data from this study can be leveraged to develop new policies and or legislation to support incentives to fortify the local response capacity through public-private sector collaboration for community-level preparedness and response.

Additional implications for social change may include new policy and practical measures for addressing the public-private deficit to strengthen a community's capacity for resiliency. Implications of this study for social change may also include new instances

of small and large business community-level engagement and collaboration for resiliency.

New models for resiliency. Resiliency practitioners and scholars have defined resiliency in numerous ways, including proactive versus reactive approaches to either ‘prevent, absorb or recover’ as suggested by Labaka et al. (2013, p. 292). Inasmuch, the grounded theory and companion applied theory which emerged from this study can also serve as a resource for those who wish to achieve optimal and effective cross-sector collaboration for community resiliency.

Sea change in corporate risk management. The most significant potential for social change, as a function of the grounded theory and companion applied mutual mission theory which emerged from this study, could be a sea change in the corporate chief executive’s prioritization and approach to corporate engagement and risk management for business continuity and strategic community resiliency. Armed with the findings of this study, corporate leaders may for the first time make concerted organizational investments in preparedness through cross-sector collaboration for community resiliency. At the same time, the executive’s perspectives and understanding about return-on-investment in cross-sector collaboration for resiliency may be enhanced.

Chapter 1 Summary

There is a clear and increasing call for private sector engagement and public-private sector collaboration to underpin and foster community resiliency juxtaposed with the increasing instances of complex catastrophes or extreme crises. This study is timely, if not overdue, in that community-based public and private sector leaders, once equipped

with knowledge of incentives and barriers, can develop policies and programs accordingly. Indeed, the knowledge gained from the interview and symposia participant leaders in America's strategic military base and port communities can be leveraged to develop and implement solutions to address specific gaps or vulnerabilities and or serve as a basis for further research.

The main points already covered in Chapter 1 are summarized as follows. The underdeveloped role of the private sector through collaboration for community resiliency in the first few hours following a large-scale crisis, as exemplified through a scarcity of literature regarding the same, was identified as the research problem. Inasmuch, stakeholders have recommended an expanded role for private sector actors (FEMA, 2011, A whole community; Rand, 2003, p. ii, iii, iv, 29), including local critical infrastructure and vendors and suppliers, to be realized proactively through through partnerships and collaboration. This problem is particularly relevant in our nation's strategic military base and port communities which serve as the bulwark and engine for America's security and economic vitality. Eight factors contributing to the need and purpose for the study to understand private sector incentives and barriers for collaboration are illustrated in Figure 1. The central question is couched around the study's purpose. The theoretical model is cross-sector collaboration along with a few complementary theories including the cultural theory, dynamic network theory and complex adaptive systems theory. The theoretical model is also intrinsic to the conceptual framework (Figure 2) comprised of three elements; community resiliency; networks, public-private partnerships or cross-sector collaboration, and America's strategic military base and port communities.

The qualitative multicase nature of the study with grounded theory, based on an average of seven interviews in each of the six cases, and cross-case analysis was introduced with each case represented by a strategic military base and port community. A secondary and complementary data set was culled from the six ReadyCommunities Partnership symposia summaries, representative of the perspectives of the stakeholders at the timing of each symposium in each of the 6 strategic military base and port communities. The potential impact of this study on social change is increased voluntary private sector engagement and cross-sector collaboration for resiliency and new policies or legislation to support the same for strategic military base and port communities.

The literature review in Chapter 2 includes additional current literature to further substantiate the relevancy of the problem statement, elements of the conceptual framework and theoretical lens for the study.

Chapter 2: Literature Review

Introduction

Preview of Major Sections of the Chapter

The problem statement and purpose of this study are outlined in this chapter. Additionally, this chapter includes current literature to further substantiate the relevancy of the issues and factors contributing to the problem statement and need for the study, an overview of the elements of the conceptual framework and the theoretical lens. Additionally, the literature search strategy, iterative search process, and literature pertaining to aspects of the topic and subquestion are covered.

In brief, this chapter underscores the void or paucity of scholarly literature that explicitly addresses the purpose of my study to understand the incentives or barriers to private sector engagement and collaboration for community resiliency in the first 72 hours of a large-scale or national crisis. This lack of literature is particularly noticeable given the private sector's significant capacity as the owner of the majority of the critical infrastructure and employer of the majority of the workforce in the United States of America (Kapucu, Arslan, & Demiroz, 2010, p. 459; Rand, 2003, p. 29). Literature which addresses the value of and or provides instructions for developing public-private partnerships for resiliency is not central to this study.

Problem and Purpose

A review of the literature revealed factors that underscored the challenges and vulnerabilities in the local response capacity during the first 72 hours of a large-scale or national crisis, coupled with the corresponding call by various leaders that the private

sector should be more engaged in cross-sector collaboration for preparedness to maintain community and national resiliency.

Given the problem of the underdeveloped role of the private sector to maintain if not augment the public-sector response capacity through cross-sector collaboration, there is a need to understand incentives or barriers to private sector engagement through partnerships and or cross-sector collaboration to maintain, if not augment, the public-sector response capacity. Given the importance of maintaining national security and economic resiliency, this understanding is vitally important to at least undergird the continuity of America's strategic military base and port communities. Therefore, this study pursued new knowledge through qualitative interviews with community-level public and private sector leaders in some of our nation's strategic military base and port communities. While the study focused on understanding private sector perspectives, public sector perspectives were also sought to generate a comprehensive view.

Public and private sector leaders may leverage the actionable results from this study to develop policy, legislation, and other practical means of engaging the private sector to augment if not optimize community resiliency. Also, while this study is primarily focused on maintaining and ensuring resiliency in America's strategic military base and port communities, it may also inform resiliency initiatives in other communities throughout the nation and or countries throughout the world.

Ultimately, there are opportunities for the private sector might contribute leadership, time, expertise, assets, and or goods or services for various initiatives to make a positive difference for resiliency of the nation during the first hours of a large-scale or

national crisis. Additionally, private sector participation in a collaborative context might include establishing arrangements and or providing financial support for a plan or third party organization to care for family members or dependents of responders or critical sector employees to enable the former to remain on the job during the first 72 hours.

To clarify, the objective of this study was to understand private sector incentives and or barriers specific to preparedness and collaboration for community resiliency in the first 72 hours of a large-scale crisis, versus processes or practices of business continuity planning and or corporate social responsibility.

Synopsis of Current Literature Establishing Relevance of Problem

For the reader's convenience, the eight factors contributing to the need for this study as first introduced in Chapter 1, are again illustrated as follows in Figure 1.

Eight contributing factors. The relevancy of the problem was established through current literature describing the factors and issues outlining and or contributing to the vulnerabilities and domestic response capacity issues at the community-level in the first 72 hours of a large-scale or national crisis. These eight factors and issues, as first illustrated in Figure 1 in Chapter 1, include what experts and commentators have referred to as the new normal of the frequency and scale of extreme threats and crises (FEMA, 2011, p. 1; Rand, 2003, p. 14), the immediate challenges and demands of local response on the local community (FEMA, n.d.; Stewart et al., 2009), the federal government's role and first priority in the initial hours of crisis as that of continuity of government versus response (Letten, 2013) along with other essential services was included as part of the nation's critical infrastructure (Executive Order 13010, 1996), limited or diminishing

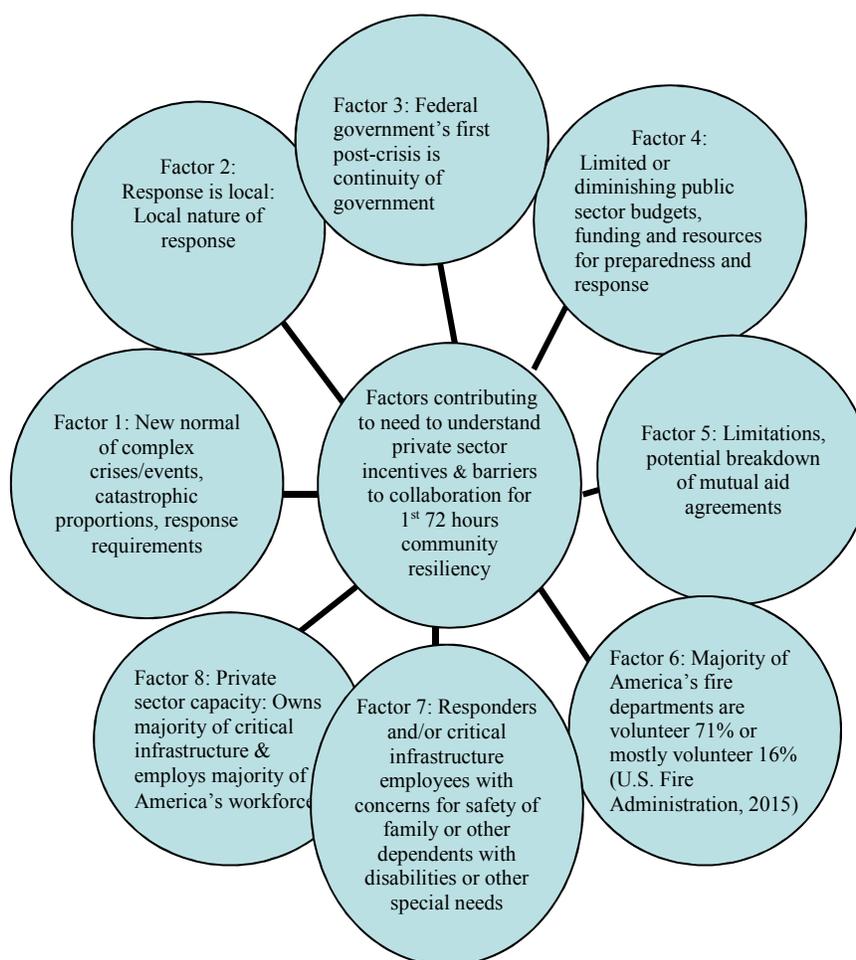


Figure 1. Factors contributing to the need for the study.

federal, state, and or local budgets for preparedness and response (FEMA, 2014; Painter, 2013, p. 5), other instances or patterns of vulnerabilities in the community response capacity in the first few hours or days following a large-scale crisis including that a large percentage of the nation's fire department are volunteer (71%) or mostly volunteer (16%) as stated by the United States Fire Administration (2015), reliance on mutual aid from neighboring jurisdictions (Chang & Miles, 2011) with the potential for breakdown, and the nation's dependency on emergency responders and or critical infrastructure employees who may have competing obligations including dependents or family

members who may need support or prearrangements for the first 72 hours (Hulings, 2013; Labaka et al., 2013).

Capacity and call for private sector engagement yet the problem of underdeveloped private sector roles and engagement. The majority of the critical infrastructure of the United States of America is owned by the private sector (Rand, 2003, p. 29) just as the private sector employs the majority of the workforce of the United States of America. When considering the depth of the private sector capacity coupled with the public sector call for private sector engagement, the underdeveloped role of the private sector to collaborate to fill gaps in the first 72 hours could be the Achilles heel of community and national resiliency as illustrated in Figure 3.

The value of and call for private sector cross-collaboration for preparedness, as illustrated in Figure 3, prodded me to study the problem of the underdeveloped role of the private sector through engagement and cross-sector collaboration to fill critical gaps in the first 72 hours of a crisis (Rand, 2003; Wolensky & Wolensky, 1990). Given the private sector's extraordinary capacity with its majority ownership of critical infrastructure and its role as the largest employer of the workforce in the United States of America (Kapucu, Arslan, & Demiroz, 2010, p. 459; Rand, 2003, p. 29) coupled with calls by public and scholarly leaders for the private sector to play a larger and collaborative role in preparedness for resiliency (Boin and t' Hart, 2010; FEMA, 2011; Gilmore Commission Fifth Report as cited by Carney in ReadyCommunities Partnership, 2011, May, p. 13; Grimm, 2014; Kapucu, Arslan, & Demiroz, 2010, p. 458; Myers,

Myers. & Grant, 2010; Quigley, 2013; Rand, 2003, p. 29; the need for the study to identify perceived incentives or barriers to private sector engagement was clear.

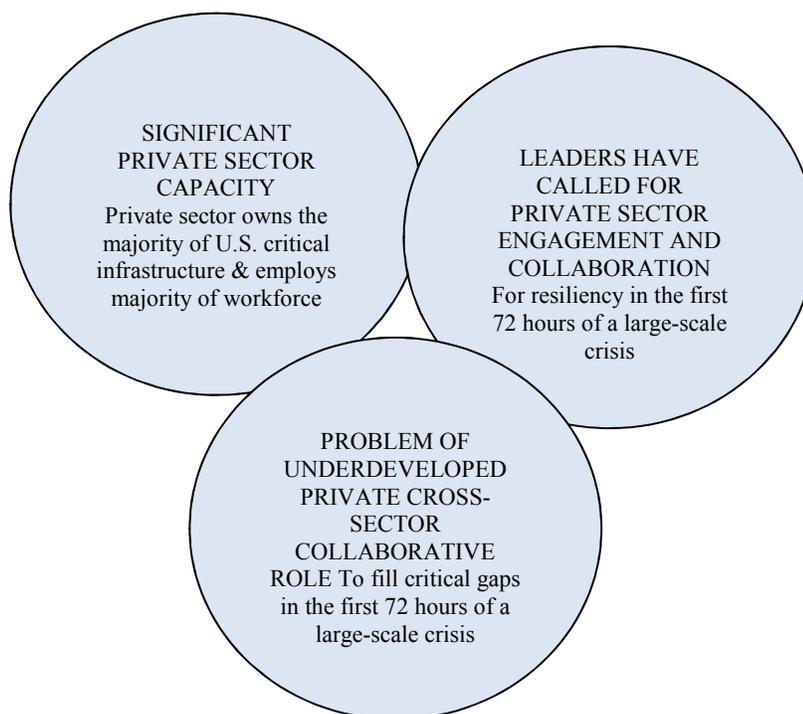


Figure 3. Achilles heel of community resiliency: Underdeveloped private sector role.

Furthermore, as stated in Chapter 1, attention to the private sector for its exceptional capacity for crisis preparedness and response is not new. Wolensky and Wolensky (1990) drew attention to potential for private sector efforts to weigh significantly in disaster management (p. 12) and thus the conundrum of limited private sector engagement through cross-sector collaboration for community resiliency in the first 72 hours.

Engaging the private sector for public-private program support of responders with disabled, vulnerable or special needs dependents. While the general

intent of this study was to understand perceived private sector incentives and barriers to collaboration for resiliency, a subset of the research objective was specific to understanding the extent to which the private sector might support responders and or critical infrastructure employees to enable those with family members or other dependents to remain on the job during the first 72 hours.

In this regard, best practices and recommendations by public and private sector stakeholders who participated in the ReadyCommunities Partnership (RCP) Military Base and Port Community Resiliency Initiative symposia as listed below are included in the results.

- “The Greater New Orleans Model: A Foundation for the Role of the Corporate Crisis Response Officer in Supporting First Responders in the First 72 hours - Providing Assistance for Family Members and Dependents with Disabilities or Access and Functional Needs” (Symposium and National Service or Sacrifice Awards). December 3, 2013. Port of New Orleans, LA.
- “Miami-Dade Model: Identifying Crisis Response Officers of the Local Critical Infrastructure and Their Vulnerable and Special Needs Dependents” (Roundtable). June 11, 2013. Doral Fire Headquarters, Fire-Rescue Training Facility, Doral, FL.

Overall Literature Search Strategy

When developing the prospectus and proposal, I conducted numerous searches using key terms and combinations across various databases to explore the extent to which any literature addressed my research intent.

Literature Review General Results

While the search results yielded literature specific to factors and issues underlying the problem statement as well as to the elements of the conceptual framework and theoretical lens, the literature review did not yield results showing that the central question had already been posed or answered. Although experts recommended private sector engagement and evidence exists about the success of public-private partnerships for crisis response efforts, the literature was void of discussion, research, or data about the purpose of my study to understand private sector incentives or barriers to engagement or collaboration with the public sector for resiliency in the first 72 hours of a large-scale or national crisis.

Inasmuch, my qualitative study is unique to the extent that it was the first to pursue a broad understanding of private sector incentives and or barriers for cross-sector collaboration to strengthen and or fortify the resiliency of America's strategic military base and port communities for the first hours following a large-scale crisis.

Most Significant Literature Regarding Research Topic: Incentives and Barriers

At the onset of this study, the literature was devoid of a comprehensive study to understand private sector incentives or barriers to collaboration for community resiliency, let alone in the strategic military base and port communities of the United States. However, in lieu of a comprehensive study, literature pertaining to isolated references to perceived incentives or barriers was identified. Additionally, literature regarding how to develop business continuity versus community resiliency, as well as literature regarding

how to develop a public-private partnership versus a study to understand incentives or barriers was identified. Examples of these isolated references are described below.

Isolated references to perceived barriers. For example, Barnett et al. (2011) indirectly revealed a barrier to be overcome when establishing cross-sector partnerships when stating that “business-related outcomes, however, don’t map neatly to public sector concerns” (p. 1581). Sourced from participants in a cross-sector seminar, Hahn (2010) provided a perceived list of challenges faced when forming public-private partnerships for resiliency (p. 277). Furthermore, Hahn (2010) stated that public-private partnerships are the basis for the development of social capital prior to a crisis (p. 282).

Gamboa-Maldonado, Marshak, Sinclair, Montgomery, and Dyjack (2012) conducted a qualitative study of 14 emergency health administrators and managers to understand barriers to local public and community collaboration to increase community capacity for environmental health emergency preparedness. However, the intent of this study was different than mine in that the focus was not to uncover private sector incentives or barriers to collaboration for resiliency to reinforce if not augment the public-sector response capacity in America’s strategic military base and port communities.

Isolated reference to perceived incentives. In the context of an evaluation of public-private partnerships for disaster management and resiliency, Busch and Givens (2013) stated that private sector incentives may include profits when providing “needed resources and expertise” to the government (p. 10). Busch and Givens (2013) described mutually beneficial incentives including two-way information through the NYPD Shield

program (p. 9), consideration of the negative consequences of choosing not to collaborate through a partnership (p. 11), and inclusion of the private sector in public policy development (p. 12). In addition to organizational incentives and penalties considered by organizations when deciding whether or not to participate in a public-private partnership, Tyler, as cited in Busch and Givens (2013), suggested that self-motivated cooperation of an individual leader is a social factor that can further develop a partnership in a positive way (p. 11).

Isolated references to how to develop a public-private partnership. Other literature leapfrogged over any exploration or research about private sector incentives or barriers to collaboration for community resiliency by suggesting how to successfully develop a public-private partnership (Myers, Myers, & Grant, 2010; Quigley, 2013). In my view, local development of the most significant and meaningful public-private partnerships and related how to develop lists will firstly be based on an understanding to overcome perceived barriers and establish necessary incentives.

For example, Myers, Myers, and Grant (2010) advised that early collaboration, prior to a crisis, between police and the private sector is important to understand the differences in priorities (p. 346). In an overseas context and with the government taking the lead in support of community-level engagement, Quigley (2013) recommended that the Canadian Public Administration address ways in which governments might collaborate with the private sector as part of its national strategy and action plan (abstract). Similarly, Wells and Bendett (2012) outlined recommendations for Department of Defense participation in public-private collaboration (p. 8).

Literature specific to business continuity versus community resiliency. Some of the literature addressed private sector interests in preparedness specific to business continuity for the sake of the business alone versus community and national resiliency in the first hours of a large-scale crisis (Kahan, 2015). For example, Kahan (2015) mentioned that DHS leadership planned to develop a program to incentivize both small and large business to engage in preparedness for business resiliency (p. 10). Hahn (2010) described a public-private partnership for community resiliency, wherein some of the business leaders interviewed requested specific guidance as to how to engage (p. 277).

Literature Regarding Subquestion: Collaboration for Vulnerable Populations

Nick et al. (2009) summarized the outcomes of a symposium that addressed preparedness for vulnerable populations during crisis response in Boston (p. 342). Additionally, a conceptual framework was generated for future research and practical work in this area (Nick et al., 2009, p. 339). The conceptual framework included barriers identified during the symposium including the absence of collaboration between groups or sectors to achieve preparedness levels required for individuals with special health-care needs (p. 339). Nick et al. (2009) stated that 12% of the U.S. population or 23 million individuals between the ages of 16 and 64 years had special needs due to a disability (p. 338). Nick et al. (2009) also stated that in spite of shortcomings for the care of vulnerable populations that were revealed in post-Katrina and Rita accounts (p. 338), very little scholarly literature to date dealt with preparedness for vulnerable populations. However, Mintz and Gonzalez (2013) stated that the Post-Katrina Emergency Management Reform Act (2009) includes a requirement that FEMA “provide care for people with disabilities

in all facets of disaster response and recovery” (p. 34). Accordingly, FEMA has worked with agencies, the American Red Cross and other nonprofit organizations to fulfill this requirement for those with “access and functional needs” (Mintz & Gonzalez, 2013, p. 34).

Tangential Literature Regarding Collaboration for International Aid

In contrast to my study which is specific to private sector capacity in a cross-sector collaborative manner in America’s strategic military base and port communities and in the event of a large-scale or national crisis; both Zyck and Kent (2014) and Thomas and Fritz (2006) highlighted private sector capacity to support aid agencies in the aftermath of catastrophic natural disaster. These two studies recognized the value of private sector engagement and opened the door for further study about incentives and obstacles to effective partnerships.

Zyck and Kent (2014) completed a qualitative study based overseas which addressed private sector capacity for crisis response (executive summary). The intent of the study by Zyck and Kent (2014) was in part to understand why the relationship between the private sector and the aid agencies has not been further developed (executive summary). Zyck and Kent (2014) explored private sector engagement with aid organizations for humanitarian and disaster response based on 203 stakeholder inputs documented in Kenya, Jordan, Indonesia and Haiti, and a workshop.

Similarly, Thomas and Fritz (2006) discussed partnerships between corporations and aid agencies for disaster response, and reviewed a few incentives and or obstacles to effective collaboration (pp. 116-117). Thomas and Fritz (2006) indicated that private

sector CEOs and employees demonstrated a capacity to respond with cash, employee matching contributions, in-kind donations and customer donations totaling \$565 million (p. 114). Furthermore, preestablished relationships enabled effective collaboration and response to the 2004 tsunami, as was the case between Coca-Cola and the Red Cross when delivering water (p. 116).

Results of Various Searches

In addition to the literature highlighted in Chapter 1, the factors illuminating the need for the study, the conceptual framework, and theoretical lens, research recommendations to understand private sector incentives or barriers to collaboration for community resiliency are noted below.

Additionally, relevant aspects of field research completed by me through RCP symposia held with public, private, military, and community sector stakeholders in strategic military base and port communities is introduced in this chapter and further summarized in Chapter 4.

Suggestions for Future Research Related to the Topic

Various authors and entities suggested research related to private sector engagement (Adams, 2012; National Research Council, 2011; Dunaway, 2010).

A National Research Council Committee on Private-Public Sector Collaboration to Enhance Community Disaster Resilience recommended research to understand private sector incentives for collaboration including partnership models, guidelines and corresponding views of private and public sector stakeholders (2011, p. 104).

In a master's thesis presented by Adams (2012) to understand the degree and quality of cross-sector collaboration in FEMA Region X, 28 responses to an online survey were received from public sector emergency management steering committee members and three interviews were conducted in person. After conducting an analysis of the findings, Adams (2012) recommended further research to capture opinions from private sector leaders and to understand incentives that may encourage emergency managers to collaborate with other sectors.

Also, in a dissertation identified in the ProQuest Dissertations and Theses database about the extent of business preparedness and continuity planning, the author recommended that future research include a qualitative study to understand business motivations for preparedness (Dunaway, 2010, p. 202). Through a quantitative online survey of public and private sector participants to understand aspects of preparedness and continuity planning of their respective organization, Dunaway (2010) identified four factors that impact private sector business continuity planning and preparedness. The survey posed 25 questions about the organization's preparedness and continuity planning versus community resiliency per se. The analysis and conclusions about private sector preparedness were grouped by relationships between the organization's exposure, experience, capability, and collaboration (Dunaway, 20120, p. vi).

Related recommendations. Several authors recommended research about the development of public-private partnerships for resiliency, underscoring the premise for my study (Robinson, 2006; O'Toole, 1997). As mentioned in Chapter 1 of this dissertation; O'Toole (1997) recommended further research for the development of

policy and public-private partnerships as did Robinson (2006) for the development of networks.

Subquestion research regarding public-private collaboration to support responder families. Scholars have recommended research to address the gap in collaboration and partnerships to support responder family resiliency (Hulings, 2013; Landahl & Cox, 2009). The lack of preparedness for responder families could be a crack or gap in national security. Indeed, as stated by Landahl and Cox (2009), lack of planning for personal and family preparedness of the critical sector employee and or the responder (p. 1) is a critical gap in both community and national resiliency (p. 20). Hulings (2013) recommended research to identify a plan to fill this preparedness gap (p. 2). Landahl and Cox (2009) advised that research has not been conducted to understand how preparedness could have mitigated instances of abandonment of duty by police officers following Hurricane Katrina (p. 2). Upon review of Homeland Security Presidential Policy Directive 8 regarding national preparedness which defined over three dozen requisite capabilities for resiliency, Landahl and Cox (2009) determined that preparedness of responders themselves and their families for the first 72 hours had not been addressed (p. 3). Landahl and Cox (2009) referred to this vulnerability as the post 9/11 “soft underbelly” of crisis preparedness. (p. 20). Notwithstanding those officers who were unable to leave their homes once Katrina hit, Landahl and Cox (2009) further stated that research had not been conducted to determine what type of preparedness might have minimized the other instances of police officers who did not report for duty following Katrina (p. 2). Landahl and Cox (2009) stated that this vulnerability or its impact on

whether or not a responder chooses to go to work or focus on family needs in the face of a crisis merits scholarly research (p. 13).

Also, upon completion of a phenomenological study, McKoy (2010) recommended research to identify how to minimize first responder stress (p. 118). Catalino (2015) recommended research to understand state-level preparedness for individuals who are at-risk or otherwise vulnerable (p. 112).

Field Symposia Summaries with Relevant Data

The summaries of ReadyCommunities Partnership field symposia attended by public, private and military sector leaders between 2010 and 2014 include best practices and recommendations relevant to the topic. This data is included in Chapter 4.

Community response capacity support. Public-private partnerships in community resiliency were recommended by public and private sector stakeholders to fill resiliency gaps in America's strategic military base and port communities (ReadyCommunities, 2014, Long Beach; ReadyCommunities, 2013, New Orleans; ReadyCommunities, 2013, Doral; ReadyCommunities, 2011, PortMiami; ReadyCommunities, 2010, Senate).

Support for first responders. ReadyCommunities Partnership (New Orleans, 2013; Doral, 2013) convened symposia at the Port of New Orleans (2013), and in Miami-Dade County at the Fire Headquarters in Doral (2013) where public and private sector stakeholders shared best practices and recommendations for supporting first responders with vulnerable and special needs dependents (2013).

Support for critical infrastructure employees. Additionally, ReadyCommunities Partnership convened symposia at PortMiami (2011) and the Port of Long Beach (2014) to explore and understand private sector engagement and collaboration to support the continuity of local critical infrastructure and resiliency of critical sector employees.

ReadyCommunities Partnership symposia also convened symposia at the Senate in Washington, DC (2010) and in Charleston, SC (2010) to address private sector engagement through cross-sector collaboration, partnerships, and communication to reinforce if not augment the response capacity in America's strategic military base and port communities.

Conceptual Framework

As provided in the conceptual framework section of this dissertation, the literature review for this study yielded scholarly articles that inform elements of the conceptual framework, as illustrated in Figure 1, including resiliency, networks, and public-private partnerships, and America's nation's strategic military base and port communities, and supporting theories about collaboration.

Literature Search Strategy

During the prospectus phase of this study, various literature searches were conducted using key search words and phrases within the realm of community resiliency and public-private partnerships to identify literature that introduced gaps or resource issues, which could potentially be addressed by the private sector.

During the proposal phase, a methodical approach to the literature review was conducted using many key search words and phrases across various databases. Some of these searches were captured in an Excel spreadsheet which is available upon request. Overall, these searches supported the problem statement and confirmed that the intent of this study is unique and supported by elements of the conceptual framework, theoretical lens, and research recommendations.

This literature review is largely grouped by key concepts to inform the study including emergency management as it pertains to complex or extreme crises, public-private partnerships, cross-sector collaboration, community resiliency, and emergency responder and or critical infrastructure employee concerns during the first 72 hours including family members, disabled and or otherwise vulnerable or special needs persons. Within the review of the key elements of the dissertation, any studies that addressed the private sector, particularly with respect to cross-sector collaboration or public-private partnerships for community resiliency have been highlighted.

Literature Map

Prior to commencing the literature review, I created a literature map inclusive of the following categories of interest within the context of emergency preparedness and response. The categories included public-private partnerships, federal resources and local response, continuity of government, crisis and disaster response mandates and legislation, crisis and disaster response history, resiliency, return on investment, and volunteer responder capacity.

Key Search Terms and Phrases

Additionally, I generated the following list of phrases or concepts to serve as a basis for the literature review. Searches across databases using varied search terms and permutations and combinations thereof are listed as follows.

Individual terms and phrases that were initially listed as those to be incorporated in one or more searches through various search engines and or databases included community resiliency, private sector incentives and barriers, public-private partnerships, federal resources and local response, continuity of government, sequestration and homeland security budgets, first 72-hour gaps, crisis and disaster response mandates and legislation, crisis and disaster response history, community resiliency, private sector risk management, critical infrastructure resiliency, vulnerable populations, responder families, extreme crisis, volunteer responders, response capacity, America, barriers, collaboration, corporate incentives, corporate preparedness, corporate return-on- investment, crisis, crisis management, crisis preparedness, crisis response, critical infrastructure, cross-sector collaboration, disabled, disaster response, elderly, emergency, extreme events, family, incentives, interorganizational coordination, large-scale crisis, liability, national debt, port resiliency, preparedness, private sector, public-private partnership, reduced funding, resiliency, resource shortages, responder, responder families, response organizations, return on investment, risk, special needs, United States, volunteer responders, and vulnerable populations.

The phrases “cross-sector collaboration” and “interorganizational coordination” consistently yielded useful results; whereas phrases such as “private sector incentives and

community resiliency” or “private sector barriers and community resiliency” yielded no results. Although some of the literature addressed an incentive or barrier or two to private sector engagement or cross-sector collaboration, this literature was not authored in the context of a larger discussion to widely understand incentives or barriers for the sake of resiliency in the first 72 hours in America’s strategic communities.

Databases, Websites, and Search Engines

In consultation with a Walden University librarian at one of the residencies, various databases were suggested to identify literature which addresses aspects of my study including Political Science Complete, Homeland Security Digital Library, and Business Source Complete, and Medline.

Searches were conducted in Academic Search Complete, ProQuest Dissertation and Thesis, ProQuest Central, Political Science Complete, Sage Premier, Homeland Security Digital Library, Thoreau, International Security and Counterterrorism Reference Center, and Google Scholar; a portion of which were tracked in an excel spreadsheet which is available upon request. Additional searches that are not reflected in the Excel spreadsheet are shown below and included in the reference list.

Federal government. Additionally, relevant literature about emergency management was identified at various government websites including Congressional Research Service, DHS, FEMA, and the White House.

Congressional Research Service (CRS). An analysis of Homeland Security issues was reviewed by Painter (2013) for the 113th Congress.

Department of Homeland Security (DHS). The DHS website was referenced in order to review the Quadrennial Homeland Security Review (DHS, 2014c, Quadrennial homeland security) and other direct links or additional information about general laws, emergency management laws, and maritime security laws (DHS, 2014b, DHS key laws) as cited in this dissertation:

- Implementing Recommendations of the 9-11 Commission Act of 2007, (Pub. L. 110-53) as cited by Raisch (2007).
- Post-Katrina Emergency Reform Act of 2006, Public Law 109-295; as cited in a PKEMRA hearing before the 111th Congress (2009).
- Robert T. Stafford Disaster Relief and Emergency Assistance Act and Related Authorities (Pub. L. 93-288, as amended, 2013a, The Stafford Act).
- Security and Accountability for Every Port Act of 2006 (SAFE Port Act), Public Law 109-347 (2006).

Google Scholar. Google Scholar was utilized as a complement to key word searches conducted within the Walden University Library either to ascertain the scope of available literature or to seek literature when other results did not yield any findings. For example, when seeking to identify literature about America's reliance on volunteer responders, a search in Google Scholar using the phrase "over rely on volunteer responders" yielded relevant journal articles including those by Waugh and Streib (2006) about collaboration and Trainor and Barsky (2011) about volunteer responders.

A search in Google Scholar on July 25, 2015 using the title of an article previously identified, "FEMA Region X: Cross-sector collaboration" by Adams (2012)

yielded 199 results since 2011 and 388 results with no date limitation. These search results were perused for relevancy to this study to identify whether or not consideration of incentives or barriers to private sector collaboration with other sectors were addressed. Search results included scholarly articles already cited including Simo and Bies (2007), Kapucu, Arslan, and Demiroz (2010), Dunaway (2010) and incremental scholarly work by Catalino (2015) and Busch and Givens (2013).

Naval Postgraduate School Calhoun Institutional Archive. Using the phrase “responder family,” a search within the Calhoun Institutional Archive of the Naval Postgraduate School online database revealed 230 results including a master’s thesis by Hulings (2013) who addressed responder family preparedness for the Delaware State Police in the event of a significant crisis (p. 7). Hulings (2013) made the point that family preparedness is distinct from citizen preparedness (abstract) and positioned responder family preparedness as an absolute necessity. The thesis by Hulings (2013) is relevant to my study in that I sought to understand incentives or barriers to private sector collaboration, such as to provide support through a third-party organization for responder family members and dependents by prearranging a secure place or evacuation destination for the response period.

Naval Postgraduate School Homeland Security and Digital Library. The Naval Postgraduate School Homeland Security Digital Library featured online links to executive orders, homeland security presidential directives (DHS, 2014b, Presidential directives) and other policy and strategy documents including:

- Presidential Policy Directive 8 (HSPD-8), National Preparedness (2011), National Preparedness replaced the 2003 version (Homeland Security Presidential Directive HSPD-8).
- Presidential Policy Directive 21 (HSPD-21), Critical Infrastructure Security and Resilience (2013).

Federal Emergency Management Agency (FEMA). Federal laws were also referenced from the FEMA website and as cited in this dissertation:

- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Pub. L. 93-288, as amended. 113th Cong., 2013).

Additionally, federal frameworks for collaborative emergency management as described in the conceptual framework of this dissertation were also sourced from the FEMA website:

- National Incident Management System (FEMA, n.d.c, National incident management).
- Incident Command Structure (FEMA, n.d.a, Incident command structure)

Additionally, conclusions and recommendations have been cited based upon FEMA's Public-Private Partnership initiative launched in 2011 (FEMA, 2011, A whole community).

United States Government Accountability Office. A U.S. Government Accountability Office (2013, Defense Logistics) report to Congress which referenced America's strategic ports program has been cited in this dissertation.

ProQuest. Another search using the key search phrase “responder and family preparedness” yielded a relevant article about responder family preparedness by Landahl and Cox (2009), archived at the institutional archive of the Naval Postgraduate School.

ProQuest Dissertations and Theses. Although outside the purview of peer-reviewed literature, the following searches within all doctoral dissertations of the ProQuest Dissertations and Theses database were conducted for insights or understanding as to the scope of any similar studies (on January 11, 2015, for the period of the past 5 years).

A search based on the following phrases in the abstract (AB); (public-private partnership) AND AB (private sector) yielded 70 results, notably a study by Dunaway (2010) who studied business preparedness and continuity planning through a quantitative survey and highlighted relationships between data gathered from respondents. Additionally, the search revealed a dissertation by Oh (2010) who researched interagency collaboration during disaster response as part of an overall objective to understand organizational adaptation. This search also yielded literature by Townsley (2014) who focused on cross-sector social partnerships as a new tact for societal change and Soher (2013) who focused on the importance of a partnership liaison or champion to develop one’s cause.

Additional searches within this database based on the following terms yielded results as follows:

AB (private sector) AND AB (resiliency) yielded three results.

AB (public-private partnership) AND AB (responder) OR AB (resiliency) yielded 0 results.

The ProQuest Dissertations and Theses full-text database was also searched for any dissertations in the last three years using the search terms and combinations thereof in the abstract (AB) including public-private partnership, private sector, and resiliency. Dissertations were not identified that directly address the intent of my study to understand private sector incentives for engagement with the public sector for resiliency.

A phenomenological dissertation by Carrico (2012) summarized responses to semistructured interviews with five firefighter families about the impact of firefighter trauma on the family experience. One of the emergent themes revealed a firefighter's commitment to one's job (Carrico, 2012, p. 187). However, the study did not directly address the gap in care for responder families or dependents.

Walden University dissertations. At the onset of this literature review, a search within the Walden University dissertations did not yield relevant results. However, as noted above in the Google Scholar search results, a qualitative dissertation written by a Walden University student was identified. Catalino (2015) studied the impact of FEMA's PKEMRA legislation on preparedness for vulnerable populations.

Sample Boolean Online Searches

Examples of Boolean searches conducted online for relevant peer-reviewed scholarly literature are as follows:

Private sector incentives. A search based on business resiliency AND incentives yielded an article by Raisch (2007) housed in the Business Source Complete database.

Raisch (2007) suggested an understanding of the relationship between business preparedness and incentives and referenced Public Law 110-53 mandating that DHS launch a voluntary private sector program for certification of preparedness for all-hazards (p. 4). However, Raisch's discussion did not address business resiliency in the larger arena of national and community resiliency.

A search (A) conducted using the keywords private sector AND collaboration AND community resiliency for peer-reviewed literature (January 2010-June 2015, all text) across the following databases; Academic Search Complete, Business Source Complete, Military and Government Collection, Political Science Complete, International Security and Counter Terrorism Reference Center; yielded 15 articles of which Grimm (2014), Franklin and Todt (2014), Stanley (2010), Hahn (2010), Kahan (2015), and Myers, Myers and Grant (2010) were cited as they pertained to community resiliency or public-private partnerships. While two of the articles, authored by Hahn (2010) and Myers, Myers and Grant (2010), mentioned private sector barrier(s) to engagement or collaboration, Hahn (2010) provided a list and Myers et al. (2010) suggested differing perspectives as one barrier. However, the studies were not specific to strategic military base and port communities for a large-scale or national crisis. The aforesaid result from Search A is a subset of two additional searches. Searches B and C across a wider set of databases yielded 45 and 18 results respectively but without any notable incremental literature relevant to my study.

Search B was conducted on June 22, 2015, using the keywords (private sector AND collaboration AND community resiliency) for peer-reviewed literature (January

2010-June 2015, all text) across the following databases; Academic Search Complete, Business Source Complete, Military and Government Collection, Political Science Complete, International Security and Counter Terrorism Reference Center. There were 45 results without significant relevance to my study.

Search C was conducted on June 22, 2015, using the keywords private sector AND collaboration AND community resiliency AND incentive for peer-reviewed literature (January 2010-June 2015, all text) across the following databases; Academic Search Complete, Business Source Complete, Military and Government Collection, Political Science Complete, International Security and Counter Terrorism Reference Center. There were 18 results without significant relevance to my study.

Search D was conducted on June 22, 2015, using the keywords private sector AND collaboration AND community resiliency AND barrier for peer-reviewed literature (January 2010-June 2015, all text) across the following databases; Academic Search Complete, Business Source Complete, Military and Government Collection, Political Science Complete, International Security and Counter Terrorism Reference Center. Two of 15 articles were relevant to my study. These results included Barnett et al. (2011) who suggested cross-sector collaboration to address petroleum supply (p. 1585) including scarcity issues to sustain the community when addressing public health concerns. Additionally Smith and Sutter (2013) attributed the successful response to the 2011 Joplin tornado, and recovery, to public-private partnerships and collaboration.

Search E was conducted on June 24, 2015, using the keywords private sector AND security AND port for peer-reviewed literature (January 2010-June 2015, all text)

yielded one result by Gopalakrishnan, Cochran, Unruh, and Kastner (2012) for which the relevance to my study is the conclusion that public-private partnerships are necessary for an aspect of security through the nation's ports (abstract). Further support for the importance of public-private partnerships to the security of America's ports was provided by Gopalakrishnan, Cochran, Unruh, and Kastner (2012) who highlighted initiatives that encourage public-private engagement; the Maritime Transportation and Security Act enacted in 2002 to encourage public and private collaboration for port security under the implementation of DHS and the U.S. Coast Guard (p. 7); and the C-TPAT initiative to fortify private sector supply chain security.

Literature Search Strategy Given Limited Prior Research

Iterative search process. Throughout the prospectus phase, I conducted many searches to establish the problem statement and to elaborate on the founding premise in the Gilmore Commission and the need for the study. For Chapter 2, I expanded the search to identify additional literature to support the need for the study as articulated in the eight factors as illustrated in Figure 1 and to substantiate the conceptual framework and theoretical lens.

Throughout the literature review, I conducted many searches for peer-reviewed literature of the last five years using various databases and search terms, phrases and combinations thereof which did not yield a comprehensive study precisely aligned with the one I intend to conduct. As stated above, I kept track of many of these searches in an Microsoft Excel spreadsheet using the following databases; Academic Search Complete, ProQuest Dissertation & Thesis, Political Science Complete, Sage Premier, Homeland

Security Digital Library, Thoreau, and Google Scholar. Search phrases which yielded results include “private sector and resiliency,” public-private partnership and private sector,” “private sector and crisis preparedness,” “private sector and crisis management,” “responders and crisis and America,” “cross-sector collaboration,” “responder and family” and “crisis and private sector”.

In the absence of scholarly research precisely related to the central question to understand private sector incentives or barriers to cross-sector collaboration for community resiliency in the first 72 hours of a large-scale or national crisis in the context of America’s strategic military base and port communities, the following approach was taken to identify related or supporting literature.

Firstly, the literature review of elements of my conceptual framework was productive when searching for “community resiliency,” “public-private partnerships, cross-sector collaboration and networks”; and “military base and port community resiliency.” Plus, these searches yielded tangential or partial results such as isolated references to a single incentive or barrier to collaboration.

Collectively, the literature review regarding elements of the conceptual framework yielded results which shed light on the relevancy of the central question and subquestions pertaining to private sector cross-sector collaboration to fill gaps; such as to provide care for family members or other dependents of responders and or critical sector employees in the first 72 hours.

Additionally, the literature review yielded articles with research recommendations that substantiated the central question of this study to understand private sector incentives

and barriers for collaboration for preparedness. Also, literature was identified to substantiate the significance of care for responders and or critical sector employees with family or other dependents including those who are disabled, vulnerable or have other special needs.

Also, scholarly literature that provided a context for the theory of cross-sector collaboration as well as dynamic network theory and the complex adaptive systems theory has also been included in this literature review.

Additionally, while the United States was the geographic context of most of the scholarly literature cited in this review, some of the literature was based on recommendations or interests in community resiliency by scholars in Canada, Israel, Jordan, Portugal and the United Kingdom.

Moreover, I reviewed the written summaries of the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative symposia held between 2010 and 2014 in six military base and port communities. Best practices and recommendations stated by symposia participants serve as a complementary data source to the primary research conducted via one-on-one qualitative interviews with public, private, and military sector stakeholders in the same communities. six ReadyCommunities Partnership symposia were convened by me as part of the “Military Base and Port Community Resiliency Initiative” at the Port of Long Beach, California (2014), Port of New Orleans, Louisiana (2013), Doral, Florida at the Fire Headquarters of the Miami-Dade Office of Emergency Management (2013), PortMiami, Florida (2011),

Charleston, South Carolina (2010) and at the Senate Dirksen office building in Washington, DC (2010).

In summary. The data from my one-on-one qualitative interviews and the symposia summaries together with the scholarly literature describing the conceptual framework and the theoretical basis for this study served the research intent.

Theoretical Foundation

This section covers the theory, source of the theory, assumptions applicable to the theoretical application, how the theory has been applied similarly to the current study, the rationale for the theory, and how the theory relates to the current study, and how the research questions build upon the theory.

Primary Theory

Cross-sector collaboration. The primary theoretical foundation or lens for this study is the perspective of cross-sector collaboration as described by Bryson et al. (2006). Relevant forms of cross-sector collaboration include collaboration between for-profit or nonprofit organizations of the private sector and public sector and or military organizations.

Additional theories found to be applicable to the basis for this dissertation and as listed in Chapter 1 are the cultural theory, social networks theory, dynamic network theory and complex adaptive systems theory, network theory, and resource dependence theory. Additionally, Berkes and Ross (2013) highlighted the resiliency theory for ecosystems which needs to be further developed from a social science point of view to address community resiliency (p. 6).

Source and application of the theory. Rethemeyer, as cited in Bryson et al. (2006), explained how research about the nuances of various types of cross-sector collaboration requires an applicable blending of perspectives and theories (p. 52). Bryson et al. (2006) explained that some scholars based their cross-sector collaboration research on network theory while other scholars based their research on cross-sector collaboration alone (p. 52).

To address the intricacies of cross-sector collaboration, Bryson et al. (2006) recommended that future researchers determine how to integrate perspective of cross-sector collaboration with network theory (p. 52). Later, Crosby and Bryson (2010) elaborated on this theory to explain when cross-sector collaboration is inevitable or likely (p. 218) and how cross-sector collaboration can be utilized to address challenging situations for the good of society (abstract). In a reference to Salamon, Crosby and Bryson (2010) also noted that for undefined reasons, partnerships between the public sector and the nonprofit entities were more readily forged as compared to partnerships between public sector and for-profit entities (p. 218).

Analysis of how theory has been applied in ways similar to the current study.

Analysis of public-private partnerships by Crosby and Bryson (2010), as articulated by twenty-four proposals as to when or how cross-collaboration is feasible, can be generally applied to this study of incentives or barriers to public and private sector collaboration for the first 72 hours of a large-scale or national crisis. For example, Crosby and Bryson (2010) indicated that partnerships developed from the bottom-up may be more probable than those developed from the top-down (p. 225).

Based on a social network framework as a function of “preexisting social cohesion,” Takazawa and Williams (2011) emphasized the value of community networks to disaster response and recovery (p. 429, 433).

Rationale for choice of this theory. Cross-sector collaboration has occurred for various purposes and in various contexts to fill gaps that cannot otherwise be filled by one sector alone. Typically, collaboration has been prompted by necessity or situations involving capacity or budget deficits. Cross-sector collaboration that has occurred organically and successfully may eventually be formalized. While Bryson and Crosby (2010) indicated that cross-sector collaboration can be difficult to develop and or maintain (p. 227), in my opinion, the perceived challenges must be addressed by the respective parties to realize perceived benefits to the community and society at large.

A prolific scholar in the resiliency space, Kapucu (2005), wrote about inter-organizational coordination based on the dynamic network theory and the complex adaptive systems theory (pp. 33, 35). Kapucu (2005) referenced other scholars, namely Scott (2000), Axelrod and Cohen (1999), Comfort (1999), Carley (1999), Holland, (1995), Wasserman and Faust (1994), Alter and Hage (1993) and Nohria and Eccless (1992) who agreed that inter-organizational collaboration has been pursued in the midst of crises to achieve a desired state (p. 35). While Kapucu (2005) stated that research abounds about the gains achieved by inter-organizational collaboration (p. 35), the theories, however, may or may not have addressed incentives or barriers to the same.

Kapucu and Garayev (2012) authored an article to contribute further to the network theory and to further address response reforms with an eye on collaboration

given the new normal of threats and to mitigate emergency response shortcomings of the past (p. 313).

How and why the selected theory relates to the study and how research questions build on the existing theory. The selected theory, rooted in cross-sector collaboration, is directly relevant to the central question of this study to understand private sector perceived incentives or barriers to cross-sector collaboration, to maintain if not augment the public-sector response capacity for community resiliency, particularly in America's strategic military base and port communities.

Synopsis of Current Literature about the Conceptual Framework

The conceptual framework for this study is illustrated in Figure 2 and is embodied by community resiliency; networks, public-private partnerships or cross-sector collaboration; and America's strategic military base and port communities in the context of the first 72 hours of a large-scale or national crisis.

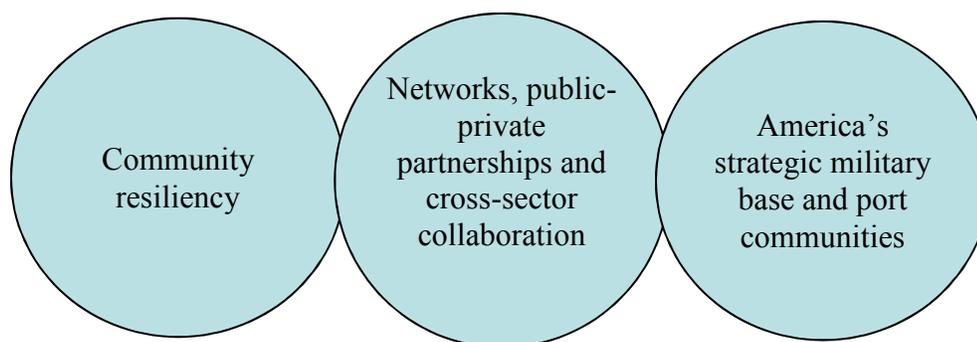


Figure 2. Conceptual framework.

Current literature for each of the three elements of the conceptual framework is provided as follows:

Resilience or resiliency has been introduced by many scholars and practitioners through a dictionary definition or a review of its etymology or explanation within the context of one's expertise or industry. Kapucu and Khosa (2012) referenced Britton and Lindsay, who defined resiliency as systems with the capacity to bounce back to either the starting or new level of resiliency (p. 7). The following section will introduce what is known in the literature about community resiliency.

Community resiliency. In the context of emergency preparedness, several scholars discussed how community resiliency can be obtained through practice and theory (Berkes & Ross, 2013; Brassett & Vaughan-Williams, 2015; Labaka et al., 2013). Berkes and Ross (2013) discussed how communities can develop resiliency through capacity building through social networks, collaboration and governance (p. 13). Berkes and Ross (2013) also posited integrative community resilience as that which embodies both theory and practice (p. 14). Labaka et al. (2013) defined resiliency primarily as a function of critical infrastructure resiliency (p. 292). Brassett and Vaughan-Williams

(2015) discussed resiliency with respect to the protection of critical infrastructure and emergency preparedness, yet further explained that theoretical discussions and applications thereof have otherwise remained relatively abstract (p. 46).

Shift to societal perspective. As cited in Busch and Givens (2013), emergency managers have transitioned their focus on disaster preparedness for the sake of societal resilience from a prior focus on disaster preparedness for the community alone (p. 2). Brassett and Vaughan-Williams (2015) stated that resiliency oriented policy discussions have been set in the context of communities and individual actors (2015, p. 36).

Drawing upon the aforesaid attributes of resiliency and within the context of this study, resiliency is best understood as a function of the capacity of a strategic military base and or port community to retain its continuity and stability of operations which in turn serves national economic and security interests. (ReadyCommunities Partnership, 2010, Senate). Likewise, as an isolated catastrophe such as 9/11 and or Katrina can or has triggered national consequences (DHS, 2010, Quadrennial homeland security, p. 31). Given that large-scale crises even have the potential to destabilize the economy and security of the nation, America's strategic military base and port communities must maintain their resiliency to defend against or mitigate such potential destabilization.

Four community resiliency models and a fifth regarding institutional resiliency. In the absence of a compendious qualitative study designed to understand incentives or barriers to private sector collaboration for resiliency in America's strategic military base and port communities in the event of a large-scale manmade or natural crisis; I identified several community resiliency models from distinct sources.

Just as various scholars have defined resiliency in various ways, various scholars have developed various models for defining and or developing community resiliency. These models have been briefly summarized as follows to reveal the strength and nuance of each. Additionally, these models serve as a backdrop and or contrast to my specific intent to understand incentives or barriers for collaboration between the private sector and other sectors for resiliency in America's strategic military base and port communities.

A brief synopsis of four unique models for community resiliency are provided as follows and include a Portuguese case study by Burnside-Lawry and Carvalho (2015) to define community resiliency; another by Cohen, Leykin, Lahad, Goldberg, and Aharonson-Daniel (2013) to develop a tool for perceived small or medium community resiliency in Israel; a framework defined by international participants to define critical infrastructure resiliency (Labaka et al., 2013); and ResilUS, a resiliency simulation model developed by Chang and Miles (2011). Two of the aforesaid four models were developed overseas, and curiously, O'Toole (1997) stated that network related research produced overseas had been largely ignored in the U.S. (p. 48).

Notably, other than instances of the private sector's ownership of critical infrastructure, there is an absence of an articulated collaborative role for the private sector within each of these models. Given the inherent capacity of the private sector, the absence of the private sector as a primary actor with its services or capabilities in these community resiliency models strengthens the intent of my study to understand U.S. based private sector incentives or barriers to private sector collaboration.

Community resiliency model 1: Case study about community resiliency

(Portuguese city) - Burnside-Lawry, and Carvalho (2015). Burnside-Lawry, and Carvalho (2015) noted a lack of a consistent approach to resiliency. However, based on the communication theory in a case study conducted in city in Portugal to understand factors that facilitate community resiliency and risk as a by-product of disaster, Burnside-Lawry, and Carvalho (2015) stated that a community's vulnerabilities impact its plans to achieve resiliency by building capacity (p. 81). To achieve community-level engagement for resiliency, community events were suggested as necessary, while the lack of national policies was cited as a barrier (Burnside-Lawry, and Carvalho, 2015, p. 92).

While coordination between emergency management and other local stakeholders was mentioned as important, the private sector was not specifically acknowledged as one of the stakeholder groups (Burnside-Lawry, and Carvalho, 2015, p. 83).

Community resiliency model 2: Perceived small or medium community

resiliency (Israel) – Cohen, Leykin, Lahad, Goldberg, and Aharonson-Daniel (2013).

Recognizing that any attempt to quantify community resiliency is difficult given the lack of a standard that applies to all communities, a statistical model was developed for assessing the perceived level of community resiliency in medium or smaller communities through interviews with participants in Israel, based on 6 factors influencing individual behavior in an emergency (Cohen et al., 2013. p. 1734, 1736). Notably, social trust and relationship were cited as some of the factors influencing behavior (Cohen et al., 2013, p. 1732). The tool by Cohen et al. (2013) is based on a current assessment that serves as a basis for the development of improved capacity for community resilience (p. 1736).

The survey appeared to have been largely void of an emphasis on the role of the private sector as having an influence on resiliency, however, augmentation of the statistical model by other models or networks could conceivably involve the private sector. Additionally, the tool was designed to be augmented by other models and social networks (Cohen et al., 2013, p. 1739).

Community resiliency model 3: Critical infrastructure resiliency - Labaka et al. (2013). Through cross-sector and international participation in a study based on the Delphi research method, Labaka et al. (2013) developed a framework of 16 factors that undergird resiliency, including internal factors about the resiliency of critical infrastructure and external factors for helping emergency managers to ensure resiliency (abstract, p. 297, 303). Indeed, the premise for the study conducted by Labaka et al. (2013) is the importance of resilient critical infrastructure to the security, economy and health of a viable society (p. 290). Their overarching research goal was to define a framework that would help to managers mitigate as well as respond effectively to crises (Labaka et al., 2013, p. 290) with a focus on critical infrastructure resilience (p. 292). One incremental value of the study was the conclusion about the need to focus on external policies for the resilience of the range of stakeholders including first responders and others (p. 314).

While the private sector was not specifically mentioned as a stakeholder group that would contribute to or be the target of resilience policies, it is my opinion that the framework could be expanded to highlight the participation of the private sector with respect to the internal and or external resilience policies.

Community resiliency model 4: ResilUS - Chang and Miles (2011). Chang and Miles (2011) developed ResilUS, a scalable model to measure a community's capacity to mitigate and recover from crises as defined by strength in critical services and community resources (p. 36). While the model was applied to the Northridge earthquake to compare simulated impact and recovery data with actual data (Chang & Miles, 2011, p. 7), the relevancy of the model for a wide range of disasters had not yet been tested (Chang & Miles, 2011, p. 50). Furthermore, Chang and Miles (2011) concluded that the model had been most useful for increasing public awareness about factors influencing resiliency (p. 50).

While private sector collaboration may be implicit in this model, the sector was not specifically recognized in the study. However, the capacity of a business to perform was mentioned as a variable in the simulation model (Chang & Miles, 2011, p. 37).

University resiliency model: Kapucu and Khosa (2012). In a synopsis of university resiliency, Kapucu and Khosa (2012) summarized the views of university respondents who stated that they have collaborated with other community partners for the sake of emergency management, yet, to the least extent with the private sector (p. 26). Once again, this lack of attention to or inclusion begs to understand why the private sector has not been a typical or standard partner.

Networks, Partnerships, and Cross-Sector Collaboration

To reiterate, the purpose of this study was to identify private sector incentives and barriers to cross-sector collaboration, enabling community stakeholders to draw inferences about ways in which to leverage private-public sector networks to reinforce if

not augment local response capacity. In line with the value of networks in potentially mitigating the impact of a crisis, my research in part explored how private sector entities or stakeholders might develop a program to provide support for emergency responders and or critical sector employees with family members, including those who are vulnerable, to enable the former to remain on the job in the first hours of a large-scale crisis. Support might entail identification of shelter out of harm's way and essential medical care.

Networks. With overall emergency management in mind, Peterson and Besserman (2010) discussed the importance of encouraging informal networks. Networks are an important component of the conceptual framework. As stated earlier in the delimitations portion of this dissertation, understanding how to form a network of public and private sector actors is not a component of this conceptual framework as is the fundamental recognition of the criticality of the need to initiate cross-sector collaboration and partnerships to reinforce if not augment the local response capacity.

Rather than first addressing barriers and incentives to moving forward to develop partnerships or networks, some of the literature revealed recommendations about 'how to' develop networks and partnerships. For example, Kapucu (2005) stated that networks and trust between entities, including public and private organizations, are integral to successful response and recovery.

In a charge that remains relevant today, O'Toole (1997) recommended network-oriented research to address policy issues pertaining to community and or public-private programs (p. 50) and how public-private networks might be utilized for public

administration program development (p. 45). O'Toole (1997) explained that the structure and purposes for public-private partnerships are various and that increasingly complex policy challenges and solutions would likely involve commensurate networks (p. 46) and result in institutionalization thereof (p. 47).

Robinson (2006) authored an article about policy networks to develop further O'Toole's (1997) charge to "treat networks seriously". Robinson (2006) drew attention to voluntary networks devoted to a mission, which may by virtue of being voluntary, present commitment issues (p. 596). With a theoretical foundation in place for networks Robinson, 2006, p. 598), Robinson suggested that future research analyze the formation of networks as a basis for influencing the life and sustainability of the network (p. 596).

Kapucu, Augustin, and Garayev (2009) discussed the importance of voluntary networks to emergency response with networks defined as "partnerships, networks and collaborations" (p. 298).

Social networks for preparedness, response, and recovery. Grimm (2014) stated that a conversion from dependence upon government to an understanding that community resiliency is dependent upon the role of local-level social networks in preparedness is necessary (p. 259). Grimm (2014) also stated that recovery from recent large-scale crises including Hurricane Katrina and Hurricane Sandy have demonstrated that networks are critical to recovery and community resiliency (p. 253). Based on information provided by 52 government, NGO and private sector emergency managers and responders, Peterson and Besserman (2010) concluded that informal networking, training and exercises within the emergency management framework should be encouraged, given the importance of

these contacts in the midst of the complexity of response (pp. 10, 12, 13). Balkundi and Kilduff, as cited in Peterson and Besserman (2010), stated that little empirical research has been conducted about the impact of social networks on emergency management (p. 1).

Public-private partnerships and cross-sector collaboration. Collaboration between the public and private sectors for community resiliency, versus a unilateral approach, has been recommended for its merits and various benefits by an array of scholars and practitioners (Burnside-Lawry & Carvalho, 2015; Boin & McConnell, 2015; Labaka et al., 2013; Quigley, 2013; Smith & Sutter, 2013; Chen et al., 2013; Kapucu, Arslan & Demiroz, 2010, and U.K. Cabinet Office, 2010).

Burnside-Lawry and Carvalho (2015) determined that there is a need for community-level collaboration during times of crisis (Burnside-Lawry & Carvalho, 2015, p 89). Also, Boin and McConnell as highlighted in Labaka et al. (2013), pointed to the value of collaboration for response, versus preparedness alone to diminish the severity of a crisis (p. 290). Smith and Sutter (2013) determined that public-private partnerships were instrumental in the relative success of the 2011 Joplin tornado response and recovery. Implying the value of collaboration, Quigley (2013) concluded that risk management through collaboration and relationship building has not been fully developed and provided a list of barriers (abstract, p. 143). Kapucu, Arslan and Demiroz (2010) reviewed the literature about collaboration for emergency management and deemed it to be vital (p. 464). Chen et al. (2013) listed attributes of public-private partnerships including increased efficiency and access to resources (p. 132). Overseas, the U.K.

Cabinet Office (2010) published its national security strategy and in it stated that in the context and scope of today's threats, that the government and the private sector must collaborate (p. 5).

Collaboration to support the supply chain. In a discussion about effective supply chain planning for resources required during a community's recovery, Franklin and Todt (2014) stated that collaboration between the private sector and local government entities is needed (p. 198). Within the context of a community's response capacity to large-scale health crises, Barnett et al. (2011) concluded that partnerships should be developed as necessary with others to resolve petroleum supply issues (p. 1585).

Role strains and support for responders and critical sector employees. Scholars have investigated responder role strains (Takazawa & Williams, 2011; Trainor and Barsky, 2011). One of the issues faced by local victims of disaster is the choice between helping one's family or others (Takazawa & Williams, 2011, p. 431). Undoubtedly, responders have been and will continue to be faced with this choice. In a study conducted at the University of Delaware, Trainor and Barsky (2011) reviewed more than 175 scholarly sources to understand a range of issues surrounding emergency responder role strains and conflicts and role abandonment during a crisis (p. 28). Their analysis showed that studies had been approached by a review of actual responder behavior based on past instances or potential perceived behavior given a particular scenario. Trainor and Barsky (2011) reviewed Alexander and Wynia, and Mackler, Wilkerson and Cinti as a basis for citing that a range of responders, between 20% and 68%, would not want to report for duty or would be unable to report for duty depending on the type of catastrophe (p. 15).

The context for the aforesaid range included studies to investigate perceived responder willingness to report for duty in the case of bioterrorism as discussed by Alexander and Wynia and a pandemic scenario as discussed by Mackler, Wilkerson and Cinti (Trainor & Barsky, 2011). In an analysis of the Hurricane Katrina response, Trainor & Barsky (2011) advised that roughly 3% to 16% or 240 of 1,450 officers did not report to work and that a complete understanding of the reasons for abandonment are pending further analysis (p.13). Moreover, the probability of increased responder abandonment was perceived for uncertain events (Trainor & Barsky, 2011, p. 15). However and in general, a responder's concern for family members has been noted as the primary reason for concern or conflict about performing one's professional duties during a crisis (Trainor & Barsky, 2011).

Partnerships to support responders and critical infrastructure employees.

Scholars have highlighted the potential for partnerships or training to provide support for responders and critical infrastructure employees (EMS, 2009, Dealing; Hulings, 2013; Labaka et al., 2013; Trainor & Barsky, 2011). Boin and McConnell, as cited in Labaka et al. (2013), emphasized the importance of engaging critical infrastructure personnel, responders and external stakeholders and forming networks to increase the potential to mitigate crises and devastation (p. 290). Hulings (2013) suggested that partnerships, as “an alternative to traditional government funding” (p. 61), may be a solution to the gap in support for responder families. Labaka et al. (2013) recommended that other members of society consider providing support for responders when caring for others impacted during crisis response (p. 307). Specifically, Labaka et al. (2013) recommended preparedness for both critical infrastructure personnel and first responders (p. 305). In this vein,

community leaders might consider and develop a way to provide support for responders with vulnerable family members (p. 305, 307). Trainor and Barsky (2011) recommended support for responder family preparedness (p. 21) and a means for harnessing the capacity of volunteers to reduce the potential for responder role abandonment (p. 5). The Gulf States Regional Community Policing Institute collaborated with DHS to offer an educational environment for agencies to generate policies and plans to facilitate critical employee and responder family care during periods of crisis response (EMS, 2009, Dealing).

Partnerships for response to a pandemic. Stanley (2010) stated that engagement of the public sector together with private business is needed for response to a pandemic or other catastrophe “without boundaries” (p 4).

America’s Strategic Military Base and Port Communities

The geographic framework for the literature review and research conducted for this study is the United States of America, and the conclusions and recommendations from this study are specific to America’s strategic military base and port communities

Twenty-two U.S. strategic seaports used by the military are administered through a program by the United States Maritime Administration (MARAD) and the Department of Defense (GAO, 2013, Defense Logistics, p. 8). The ports of Long Beach, Charleston, and New York and New Jersey are among those listed as strategic seaports (GAO, 2013, Defense logistics, p. 8). The U.S. Maritime Administration (n.d., Gateway) of the U.S. Department of Transportation has established gateway offices at the ten largest U.S.

ports; namely Seattle, San Francisco, Long Beach, Houston, New Orleans, Chicago, New York City, Norfolk and Miami, as well as St. Louis given the inland waterways.

In a symposium conducted by ReadyCommunities Partnership, Senator Mary L. Landrieu (ReadyCommunities, 2010, Senate, p. 7) stated that America's strategic port communities undergird the national economy with 13.3 million jobs and 649 billion dollars in annual personal income. Following the historical west coast ports disruptions, several U.S. senators introduced the Port Performance Act to the 114th Congress (S. 1298, 2015) to identify or anticipate port disruptions prior to any major impact on the U.S. economy. It was estimated that the nine-month disruption of 29 ports impacted the U.S. economy with daily losses of \$2.5 billion (U.S. Senate Committee on Health, Education, Labor & Pensions, 2015). It was during this symposium attended by nearly 60 public, private and military sector leaders from America's strategic military base and port communities that Senator Mary Landrieu, who was then the Chairman of Senate Homeland Security and Governmental Affairs Committee, Disaster Recovery Subcommittee, said that "If we are diligent and vigilant, building upon on what we know and can learn from each other, the next time we face crisis our strategic communities will be better prepared to keep our country moving and operating." (ReadyCommunities, 2010, Senate, p. 7).

The Security and Accountability for Every Port Act of 2006 (Pub. L. 109-347, Section 108, 2006) underscored the strategic importance of secure port operations to America as the U.S. government called for interagency operational centers for port security modeled after those piloted in Miami, Norfolk/Hampton Roads, Charleston and

San Diego and the virtual center in New York and New Jersey with participation by public and private sector stakeholders or “those affected by a transportation security incident or transportation disruption” (p. 10).

Synopsis of Current Literature

The central question was designed by me to understand local stakeholder views about perceived barriers or incentives for private sector engagement or collaboration for preparedness for strategic military base and port community resiliency. Inasmuch, stakeholder views were sought from community-based private sector leaders as well as a full complement of local leaders from the public, military and community sector.

Incentives or Barriers to Private Sector Engagement and Collaboration

In brief, given the capacity and call for private sector engagement, the intent of my study was to understand private sector incentives and barriers to embarking upon, forging, developing and or maintaining collaborative relationships for strategic military base and port community resiliency in the event of a large-scale crisis with local public sector leaders representing police, fire, emergency management, community organizations, military bases and or seaports.

General Void of Pertinent Studies

While the literature of the last 5 years generally ignored or was void of comprehensive studies to understand incentives and barriers for private sector engagement and collaboration, the literature did reveal studies that called for public-private partnerships or networks for emergency management. FEMA (2011) acknowledged the value and impact of community efforts through partnerships on

resiliency and national security (p. 2). Most importantly, FEMA administrator Fugate said:

We cannot separate out and segment one sector in isolation; the interdependencies are too great.... We want the private sector to be part of the team and we want to be in the situation where we work as a team and not compete with each other.

(Federal Emergency Management Agency, 2011, A whole community, p. 11)

Isolated references to incentives. Additionally, various and isolated references to incentives or reasons for private sector engagement or cross-sector collaboration have been included in the recent literature. Indeed, references in the literature to the perceived value of networks or public-private partnerships can be explored in that they could be relevant to engagement or collaboration for community resiliency.

Critical infrastructure protection. Several scholars suggested the importance of engaging the private sector for critical infrastructure protection (Quigley, 2013; Chen et al., 2013; Wells & Bendett, 2012; Barnet et al., 2011). Critical infrastructure protection was cited as important and therefore engagement of the critical infrastructure owners; namely the private sector at the community level to reduce risks (Chen et al., 2013, p. 133; others). Chen et al. (2013) described contractual as well as non-contractual relationships between the public and private sectors for critical infrastructure resiliency (pp. 133-134). Quigley (2013) suggested that the Canadian plan for secure critical infrastructure involve the private sector (abstract). Likewise, Wells and Bendett (2012) drew attention to the 2010 National Security Strategy recommendation for incentives to strengthen public-private partnerships to protect critical infrastructure (p. 6).

Fiscal benefits. For some, the perceived value of public-private collaboration is fiscal. In 2015, Bendett expanded upon the discussion of the value of collaboration between the public and private sectors or organizations, namely public-private, public-public partnerships (P4), particularly in response to the challenges of the current fiscal environment (p. 11) and proposed centralization of the Department of Defense's coordination of P4 projects, including humanitarian missions (p. 11).

Shared interest. Quigley (2013) explained that both the public and private sectors share a vested interest in resilience (p. 159). Dunaway (2010) recognized of the contributions of public-private partnerships that shield business and contribute to the community's defense against crises (p. 8).

Capacity building and risk reduction. Similarly, as cited in Kapucu and Khosa (2012), Kunreuther and Useem discussed how public-private partnerships are integral to capacity building and risk reduction.

Institutional resiliency. Kapucu and Khosa (2012) determined that partnerships within the community are vital to campus or institutional resiliency (abstract) and that these institutions were an integral to the support of Katrina survivors (p. 4). When asked to identify community partners with whom university and or college emergency management personnel collaborated, the 114 respondents from a university emergency management listserv indicated collaboration with police, fire and first responders (96.3%); other local emergency management (94%); nonprofit relief organizations (78%); medical or health service providers (84%); government relief and welfare

organizations (54.8%); followed by community religious organizations and business organizations (p. 26).

Curiously, despite the capacity of the private sector, the survey results which revealed business organizations in the least position, beg understanding as to why the private sector is not viewed or treated as an essential partner for community resiliency. What is the primary reason for this issue?

Isolated references to barriers. Various barriers, both known and unknown, have been referenced in the literature.

Private sector least popular partner for unknown reasons. As exemplified by Kapucu and Khosa (2012) and by Wolensky and Wolensky (1990), the literature has revealed instances where the private sector has been categorized as the least popular type of collaborative partner if at all, as also highlighted in the four community resiliency models described earlier in this chapter; Burnside-Lawry and Carvalho, 2015; Cohen, Leykin, Lahad, Goldberg, and Aharonson-Daniel, 2013; Labaka et al., 2013; and Chang and Miles, 2011. Drabek, as cited in an early relevant piece of relevant literature by Wolensky and Wolensky (1990), described a study of city emergency management plans and determined that local cross-boundary coordination was well established with all but private sector organizations (p. 11). Analysis of the aforesaid instances or cases for community resiliency with a lack of private sector engagement or prioritization thereof, may provide clues as to barriers to collaboration.

Additionally, other scholars have provided clues to barriers for public-private sector collaboration for community resiliency including those barriers which are born out

of the corporate culture and or individually-driven (Donahue et al. 2012; Kapucu & Khosa, 2012; Quigley, 2013; Peterson & Besserman, 2010; and Wolensky & Wolensky, 1990).

Denial and avoidance. However, despite the risks to business and the overall community associated with avoidance of investments in preparedness for unanticipated large-scale crises, some corporate executives routinely prioritize other business matters. Donahue et al. (2012) said that individual avoidance of preparedness or cases of disaster denial is unmistakable.

Perception exceeds performance. In a similar vein, Kapucu and Khosa (2012) cited a community resiliency study conducted by Citizen Corps which determined that citizen perception of their preparedness exceeded performance (p. 8).

Abstract understanding of benefits. In a review of critical infrastructure protection from the perspective of the Canadian government, Quigley (2013) discussed how corporate hesitation to invest in risk management can be attributed to an abstract sense of the benefits (p. 143). Peterson and Besserman (2010) also stated that the research is nearly void of data that describes what emergency managers think about public and private sector networks (abstract).

Competitive, cultural, legal, and political. Quigley (2013) wrote that that barriers to collaboration include competitive, cultural, legal, political facets (abstract, p. 143).

Aversion to government regulations. Wolensky and Wolensky (1990) conjectured that the private sector absence could have been attributed to the private sector's aversion to government regulations and or mitigation of hazards (p. 11).

Elements and Mechanics of Partnership Development: Not the Intent of this Study

‘How-to form’. As distinct from the objective of this study, some of the literature addressed ‘how to’ form a public-private partnership, and or stated elements of effective public-private partnerships, without an outright acknowledgment of any incentives or barriers that were needed or need to be addressed to engender collaboration for resiliency. However, from my perspective, efforts to expeditiously address ‘how to’ form a partnership run the risk of leapfrogging over an essential and prerequisite step to understand any underlying incentive(s) to be addressed or barrier(s) to be overcome.

The von Stamm model for collaboration was mentioned by Peterson and Besserman (2010) as that which addresses the reason for collaboration and how to develop and sustain networks (p. 11). Similarly Chen et al. (2013) penned a journal article to understand how to form partnerships and collaborative relationships for resiliency (p. 131).

New frameworks. A few authors suggested that partnerships be developed through national strategy or new frameworks (Quigley, 2013; Wells and Bendett, 2012). Quigley (2013) recommended that the Canadian Public Administration address ways in which governments might collaborate with the private sector, as part of its national strategy and action plan (abstract). Wells and Bendett (2012) acknowledged the Department of State’s and US Agency for International Development’s progress in developing public-private collaboration (p. 2). While delving into the perspectives of the Department of Defense (DoD) regarding the same, Wells and Bendett (2012) stated that DoD’s implementation of public-private partnerships has been faced with challenges, but

progress could be achieved through a new framework and certain steps (p. 1). Wells and Bendett (2012) also stated that future research might address various facets of the partnerships (p. 11). Similarly, Labaka et al. (2013) suggested that the influence of one resiliency policy on another be explored (p. 314).

Shared interests and trust. In an overview about a collaborative approach to emergency management, finding shared interests was described as a requisite step (FEMA, 2011, *A whole community*, p. 11). Several authors emphasized trust as fundamental to collaboration and partnerships (Cohen et al., 2013; Boin and t'Hart, 2010). Cohen et al. (2013) noted trust as a factor impacting the degree of formality in a public-private relationship in that with established trust, less formality in the relationship may be required (p. 1735). Conversely, with less trust, the relationship may require increased formality in the terms and manner of engagement (Cohen et al., 2013, p. 1735)

Boin and t' Hart (2010) stated that effective partnerships have been exemplified by trust (p. 366) and inasmuch, leaders operating within the context of the top-down Incident Command System have recognized the value of leveraging networks. Similarly, Boin and t' Hart (2010) stated that extreme crisis response capacity is dependent upon pre-established organizational and cross-boundary networks such as those bridging the public and private sectors (p. 365) and that policymakers should support these networks (p. 368). Also, as cited in Boin and t' Hart (2010), Barton, Rodriguez, Quarantelli and Dynes remarked that successful responses to extreme events rely on previously developed relationships (p. 362).

Individual responsibility. Grimm (2014) emphasized that social change happens once individuals take the necessary actions (p. 257) versus dependency upon government, other entities, or individuals.

Literature Review Related to Key Variables and Concepts

My view is that American community leaders are on the verge of discovery of the unparalleled value of private sector engagement through cross-sector collaboration to reinforce if not augment the public response capacity for resiliency in case of a large-scale or national crisis. In the foreseeable future, it is conceivable that the findings of this study, as they may pertain to overcoming risk avoidance or other barriers to private sector engagement and collaboration will one day become predominant themes in the literature.

Consistent Themes in the Literature

Private sector capacity. Many scholars highlighted the extraordinary capacity of the private sector (Kapucu, Arslan & Demiroz, 2010; Rand, 2003, Fifth). In spite of the extraordinary capacity of the private sector given its ownership of critical infrastructure (Kapucu et al., 2010, p. 459) and employment of the nation's workforce (Rand, 2003, Fifth, p. 29), business organizations were the least mentioned partner for collaboration with educational institutions (Kapucu & Khosa, 2012).

Why is the private sector not viewed or treated as an essential partner for community resiliency? The answer to this question is needed through this study to understand private sector incentives and or barriers for strategic community resiliency. In like manner, capacity through collaboration was defined by Dr. Salwaha (2014), the risk management director at American University in Jordan, as inclusive of three parts;

human, financial and infrastructure (p. 321).

Public-private partnerships. Partnerships and collaboration have been positioned as a means or vehicle for obtaining and or providing incremental value to overcome any unilateral shortcomings to fill a gap or solve a problem.

Community resiliency. Throughout the emergency management literature, the state of resiliency has been recognized by community inhabitants, business owners and public sector stakeholders as a desired state to maintain and or achieve through preparedness and cross-sector collaboration for continuity and survival following a large-scale crisis.

Response capacity vulnerabilities. In particular, two response capacity vulnerabilities were highlighted in the literature:

- Consequences of critical infrastructure devastation or attack.
- Responders and or critical sector employees may face a conflict between obligations in the first 72 hours between job duty and caring for family members or other dependents, including disabled individuals or others with special needs, who were without a plan for relocation.

Concise Summary of Major Themes in the Literature

Aside from the factors listed as those pointing to the need for the study as illustrated in Figure 1, and those listed on the prior page, prevalent themes in the literature include the following:

- The private sector has available capacity to support the public-sector response capacity, however, it has not yet been widely harnessed to fill gaps for the sake of community resiliency.
- Business continuity is embedded and more prevalent in the business culture as compared to community resiliency.
- Community resiliency is a state of being or goal to which local stakeholders aspire through preparedness and collaboration.
- The viability and value of public-private partnerships, cross-sector collaboration and networks for achieving goals and addressing gaps is recognized, if not sought, by most stakeholder groups, especially amidst given funding challenges or shortfalls.
- Leaders have called for increased levels of private sector engagement and collaboration to foster resiliency in the aftermath of crises.
- Public-private collaboration can be aligned with certain objectives, such as critical infrastructure operations and resiliency and or a program to ensure a plan for the safety of responder family members or other dependents
- The private sector has contributed various resources and services in the aftermath of crises, and continuity of critical infrastructure has also been considered essential to the survival of a community. Based on the repeated mention of the private sector's majority ownership of critical infrastructure protection in the literature, it stands to reason that critical infrastructure protection is an important basis for understanding why the private sector has

been or could be more engaged in preparedness and collaboration for resiliency.

- Some authors primarily addressed how to form a partnership, perhaps jumping over an initial understanding of barriers or incentives in order to develop the best possible collaborative relationship.

What is Known and Not Known

Large-scale crises have exposed response capacity vulnerabilities and needs at the community-level that, if unaddressed, could negatively impact the resiliency of the nation. Moreover, given the backdrop of diminishing budgets and vulnerabilities in response capacity, coupled with the extraordinary capacity and call for increased private sector engagement; there is room for the private sector to step up, explore and assume responsibility for additional levels of cross-sector collaboration to further reinforce if not augment the existing local public-sector response capacity in the first 72 hours.

Many public-private stakeholder best practices and recommendations have been identified through the Strategic Military Base and Port Community Resiliency Initiative symposia convened by the ReadyCommunities Partnership (2014, 2013, 2011, and 2010). In part, the intent of this initiative was to follow-up with the recommendation of the Gilmore Commission to engage the private sector in a bottom-up collaborative plan for preparedness for resiliency. Also, with the launch of the Federal Emergency Management Agency private sector office in 2007 (Improving the nations, 2011), the public sector has increasingly embraced public-private partnerships for resiliency. However, aside from instances of private sector engagement in collaboration for response, widespread private

sector preparedness through collaboration for preparedness and response in the first 72 hours of a large-scale crisis to maintain community resiliency is not the norm.

In spite of the call for private sector engagement, knowledge of incentives and or barriers and nuances thereof, what remains unknown are the private sector barriers and incentives to cross-sector collaboration to maintain if not augment a community's capacity for resiliency in the first 72 hours. In other words, this type of actionable knowledge is needed to serve public and private sector leaders as a sound basis for groundbreaking policy and program development.

How Present Study Will Fill Gap and Extend Knowledge in Discipline

Therefore, the goal of the present study is to identify private sector barrier(s) and or incentive(s) for private sector collaboration for community resiliency, and ultimately national resiliency, beginning in our nation's strategic military base and port communities. This knowledge can serve as the basis for program and policy development to fill gaps in the first 72 hours response for community resiliency.

For example, a subset of the present study will include an attempt to understand private and or public sector incentives or barriers to cross-sector collaboration to fill or address one gap or crack in community resiliency relative to ensuring a safe shelter plan and essential medical care for dependents of critical infrastructure and first response personnel. The gap might be filled by the development of viable program to prearrange first 72-hour care for family members and or dependents who are disabled or those with functional or access issues, responders and or critical sector employees.

Within the context and purpose of this study to understand private sector incentives for public and private collaboration, interview questions were posed to understand to incentives or barriers to moving forward to fill a gap and to what degree or how the private sector might embrace supporting this practical application.

The results of the study will be communicated to corporate executives, emergency response and public sector officials to encourage public-private partnerships to maintain if not augment the existing community-level response capacity for national resiliency.

The results of the study will inform public and private sector leaders as to how the private sector might augment the public sector's response capacity in broad or explicit terms to maintain or achieve community resiliency in the first 72 hours of a large-scale or national crisis.

The study findings could influence how corporate leaders perceive and or develop their potential role and impact on community-level and national resiliency. Inasmuch, corporate leaders may gain an increased understanding or appreciation for tangible or intangible returns on their investments in community and national resiliency, versus operating without a vision for preparedness or having a narrow focus on business continuity alone.

Connect Gap in Literature to Methods

Connecting the gap in the literature with the methodology, a qualitative study based on one-on-one interviews with public, private and military sector leaders in America's strategic military base and port communities was conducted to understand what barriers exist or incentives would be required for the private sector to partner

willingly with the public sector to varying degrees and for various purposes for resiliency. Open-ended questions in a semi-structured interview were presented to obtain meaningful yet unbiased data about incentives and barriers. Additionally, open-ended questions were presented to understand the feasibility and interest to support or co-develop a program(s) to fill a gap(s) in community resiliency.

Data for multicase comparison was generated from two sources; the one-on-one qualitative interviews with public and private sector stakeholders in Charleston, South Carolina; Doral, Florida; Long Beach, California; Miami, Florida; New Orleans, Louisiana and Washington, DC and from summaries of RCP symposia conducted between 2010 and 2014 in the same six communities.

Chapter Summary

The main points covered in Chapter 2 are delineated as follows. Literature establishing issues and factors contributing to the need for the study were provided. In the absence of an exhaustive study about incentives or barriers to private sector collaboration, literature was identified regarding isolated examples of a perceived incentive or a perceived barrier. Also, literature revealing the role of the private sector in ‘business continuity’ versus ‘community resiliency’ was provided. Several sources were identified in which research was recommended to address the purpose of my study. Literature describing four different community resiliency models is highlighted. However, each of models did not include a role for the private sector. Again, while the literature review did not reveal literature specific to the purpose of this study, the following themes were identified as prevalent in the literature. The themes include the

extraordinary capacity of the private sector, the value of public-private partnerships, the value of community resiliency, and response capacity vulnerabilities.

Chapter 3: Research Method

A Qualitative Multicase Study with Grounded Theory

A qualitative multicase study through one-on-one interviews with public, private, community, and military sector leaders in 6 of America's strategic military base and port communities was conducted to understand private sector incentives and or barriers to cross-sector collaboration for preparedness to maintain if not augment community and national resiliency in the first 72 hours of a large-scale or national crisis.

The qualitative data from the in-depth interviews was enriched by a backdrop of ReadyCommunities Partnership symposia conducted by me as the pro bono national director between 2010 and 2014 with public, private, military, and community sector stakeholders in the same six strategic military base and port communities in which the interviews were held. The interviews and the symposia were held in the communities of Washington, DC; Charleston, SC; Doral, Florida; Miami, FL; New Orleans, LA; Long Beach, CA; and Washington, DC. The six cases are defined by the locale and timing for each symposium followed by the one-on-one interviews in each of the same six communities.

Eisenhardt Approach to Theory Building from Case Studies

I followed the approach and steps to the development of grounded theory building as outlined by Eisenhardt (1989). In brief, I followed the Eisenhardt (1989) process for development of grounded theory which began with a priori specification of constructs, as outlined in the description of my conceptual framework, followed by within-case and cross-case analysis until theoretical saturation was achieved (p. 533). Under the umbrella

of the Eisenhardt approach to building grounded theory, I coded my data in the axial manner and observed the emergent themes and grounded theory through cross-case and cross-data analysis. In keeping with the Eisenhardt (1989) method, I observed a new grounded theory as a function of the qualitative data from my multicase analysis.

Eisenhardt (1989) explained that the development of grounded theory as a function of case study research in the social sciences is well suited to new topics (p. 532). Eisenhardt (1989) described “theory building research” to develop new theory (p. 548) as that which is based on case study evidence (p. 535), largely free of preconceived theoretical notions at the onset (p. 536). Overall, Eisenhardt’s flexible approach has tended to “unfreeze” any researcher bias and generate “novel theory” (1989, p. 546).

Eisenhardt (1989) and Strauss and Corbin (1998) introduced two different methodologies for generation of grounded theory through data collection and analysis. Rudestam and Newton (2007) summarized the differences between the approaches to development of grounded theory as a function of the degree of actual discovery of the theory by the researcher versus any preconception (p. 43). Procedurally, the Eisenhardt based grounded theory building method differs from the systematic, rigorous, and creative process of comparison outlined by Strauss and Corbin (Patton, 2002, p. 491; Strauss & Corbin, 1998, p. 13). Eisenhardt (1989) encouraged research through a dynamic process including addition of cases to achieve theoretical saturation (p. 545), even redefinition of the research question (p. 546). Eisenhardt also encouraged data analysis during the collection period through field notes (p. 539).

Presuming the Eisenhardt approach to grounded theory is mutually exclusive from Strauss and Corbin, I did not follow the procedural method of Strauss and Corbin, per se, which is inclusive of assumptions, conceptual ordering of data, theorizing to explain or predict phenomena (Strauss & Corbin, 1998, p. 15), and systematic comparison to “allow a theory to emerge from the data” (p. 12). Coding procedures outlined by Strauss and Corbin (1998) were developed to “build rather than test theory” and to facilitate processing and analysis of extraordinary amounts of data (p. 15).

Eisenhardt method in detail applied to my study. Based upon my analysis of the data gathered from each of the strategic military base and port communities of this multicase study, I posited a grounded theory along with a companion applied theory in the dynamic or iterative manner described by Eisenhardt (1989).

A priori constructs or building blocks for development of the grounded theory included, but were not limited to, the broad yet essential elements of my conceptual framework; community resiliency; networks, public-partnerships, and cross-sector collaboration and America’s strategic military base and port communities. In sync with Eisenhardt’s method, additional constructs can be added as necessary to undergird the eventual grounded theory.

The data analysis process provided by Eisenhardt (1989) includes selection of specified populations and theoretically useful cases that replicate or extend theory (p 533). Inasmuch, my selection of participants from the private, public, military, and community sectors in the 6 strategic military base and port communities is suited to this guideline.

To fortify the grounded theory building of this study, the rich data collection method served by the qualitative semistructured interviews of this study coupled with the data culled from the symposia summaries of views proffered by dozens of stakeholders. Overall, my data collection from the one-on-one qualitative interviews and the symposia summaries was aligned with Eisenhardt's encouragement of "divergent perspectives" (Eisenhardt, 1989, p. 532).

"Opportunistic data collection" suggested by Eisenhardt (1989) implied permission to add new cases and or participants during the field interview process (p. 532). The data analysis process delineated by Eisenhardt (1989) includes within-case analysis as well as cross-case analysis (p. 532). Theoretical saturation is a judgment call on the part of the researcher. According Glaser and Strauss as cited in Eisenhardt (1989), theoretical saturation is achieved when "researchers are observing phenomena seen before" (p. 585). Data generation and analysis from the six cases was sufficient to recognize predominant themes and the grounded theory. Data underpinning themes and the grounded theory is supported by references to interview transcript and symposia summary page numbers. Likewise, an explanation of how the grounded theory extends the knowledge is provided herein.

Introduction

Study Purpose

As stated in the abstract and Chapter 1, the purpose of this research was to understand private sector incentives and barriers to private sector engagement and cross-sector collaboration for preparedness and response in America's strategic military base

and port communities. Ultimately, my wish is that the actionable findings will facilitate plans and progress in the field and policy development to reinforce 100% if not augment the first response capacity in America's strategic communities in the first 72 hours of a large-scale or national crisis. In this context, the response capacity includes career and volunteer responders as well as local critical infrastructure vendors, suppliers and contractors to the base and port communities.

The findings and conclusions of this research will be provided to local public, private, military, and community sector leaders so that they might develop or support a national plan to undergird resiliency beginning with the strategic military base and port communities of the United States of America.

Furthermore, the research purpose will be fulfilled when private sector policymakers, and practitioners act upon the research results to develop and or tailor community resiliency oriented policies and programs for private sector engagement through cross-sector collaboration for preparedness and response in the first 72 hours. Overall, the data from this research may serve as a catalyst for private sector leadership, by its own choosing, to provide and or plan for the integration of its designated capacity or response resources with the public sector to fill any gaps. Response resources might include leadership on loan, private sector service, or assets including equipment and or technology loans, expertise needed to complement local responders in the first 72 hours, and/or charitable donations to support programs to ensure ability of a responders or critical sector employee to report for duty. As stated earlier, the study in part addressed incentives or barriers to private sector engagement to develop or support a plan to ensure

emergency shelter and essential care for family members and other dependents, including those who are disabled or have functional or access needs, of responders and or critical sector employees in the first 72 hours

Major Sections of the Chapter

Major sections of this chapter include the research design, the researcher's role, the methodology, and trustworthiness of the study.

Research Design and Rationale

Research Questions

The research questions were presented in Chapter 1 and are listed again as follows:

RQ1. What are the perceived incentives and barriers to private sector collaboration with the public sector for preparedness and response to provide select services or resources for the first 72 hours of a large-scale or national crisis, thereby reinforcing if not augmenting the existing response capacity?

SQ1. What are the perceived incentives and barriers to private sector collaboration with the public sector to develop a plan, program or system for caring for vulnerable or special needs family members or other dependents (i.e. frail elderly, those with access issues, disabilities) of responders and or critical sector employees so that the latter may remain on the job during the first 72 hours of crisis?

SQ2. What, theoretically and or practically, would motivate the private sector to collaborate or serve as a barrier to collaboration with the public sector to foster resiliency

in one's community during the first 72 hours? What is the greatest perceived incentive and greatest perceived barrier to public-private collaboration?

Central Concept(s)/Phenomena

Central concepts of the conceptual framework for the research, as described in Chapter 1, include community resiliency, public-private collaboration, and networks.

As stated in Chapter 1, the phenomena of interest from this research are the perceived private sector incentives or barriers to preparedness through cross-sector collaboration to fill any critical gaps in community resiliency in first 72 hours. Ultimately, private sector engagement at the community level for resiliency would be aligned with, rather than undermine, the private sector's primary goals and interests related to the bottom-line or return on investment. Private sector engagement could potentially enable responders and critical sector employees to remain on the job in the first 72 hours without personal conflict. Through this study, perceived incentives and barriers to the arrangement of such a program to arrange essential shelter and or care for their responder and or critical sector employee family members and or other dependents were explored.

Research Tradition and Rationale for Chosen Tradition

The qualitative research tradition allowed the questions to be posed without influencing the responses. The central question underlying this research was to understand the incentives and barriers to private sector preplanning and cross-sector collaboration to voluntarily contribute time, resources or services to reinforce if not augment the local response capacity. Newfound knowledge was pursued so that local

public, private, military, and community sector leaders may be able to leverage this knowledge and fill any critical gaps in community resiliency during the first 72 hours.

Through this qualitative study, open-ended questions were presented to public, private, military, and community sector participants. The open-ended questions engendered unprompted and rich responses from which the subtleties or nuances were analyzed to inform a grounded theory and model for public-private sector collaboration for resiliency beginning with the strategic military base and port communities of the United States of America. The findings can inform enlightened leaders about perspectives that influence the private sector's predisposition for preparedness and cross-sector collaboration to serve as the basis for policy development and business management.

Role of the Researcher

My Role

My role in this study was that of the researcher versus a participant or observer-participant, in that I conducted the one-on-one interviews in 6 strategic military base and port communities. Likewise, my role was that of the pro bono national director of the ReadyCommunities Partnership to develop and summarize 6 relevant symposia of the Strategic Military Base and Port Community Resiliency Initiative convened in the same six communities.

Relationships

Some of the one-on-one interview participants from the public, private, and military sectors were selected from those who participated in the ReadyCommunities Partnership symposia convened at the Senate Dirksen office building in Washington, DC

in 2010; Charleston, South Carolina in 2010; PortMiami in 2011; Doral, Florida in 2013; Port of New Orleans in 2013; and Port of Long Beach in 2014. I did not have power or authority over any of the symposia participants. Those who participated in one or more of the symposia were not paid to do so and were free to express their views including best practices and recommendations for community resiliency and or public-private collaboration in the first 72 hours.

Moreover, my capacity as the pro bono national director of the Ready Communities Partnership is and has been distinct from my professional role as a business woman and president of my own company.

Researcher Bias

The research purpose of this dissertation is based on gaps identified scholars and recommendations by public and private sector stakeholders devoted to community resiliency. Other than my passion for freedom and commitment to the security and resiliency of America's communities and the American people, I did not present any bias to influence the participant responses.

No Conflict of Interest

I did not nor do I possess any conflicts of interest, and no incentives were offered to the research participants.

Methodology

This qualitative study was based on data generated from one-on-one interviews with public and private sector leaders in 6 strategic military base and port communities

and a review and analysis of pertinent data culled from summaries of qualitative ReadyCommunities Partnership symposia convened between 2010 and 2014.

Population

Leaders from the public, private and military sectors of Charleston, South Carolina; Doral, Florida; Miami, Florida; Long Beach, California; New Orleans, Louisiana; and Washington, DC were identified as interviewees. The participants were selected from emergency response organizations, law-enforcement, military, for-profit, and nonprofit organizations.

Sampling Strategy

The sampling strategy was purposeful and allowed for snowball sampling (Patton, 2002, p. 237) through participant referral.

Criterion for Participant Selection and How Known to Meet Criterion

Each of the participants in the interviews are acknowledged as community leaders by virtue of their professional role with a public, private or military organization regardless of whether or not he or she had personally been responsible or had experience preparing, planning or responding to crises. In one sense, participants were self-selecting in that each had the opportunity to accept or reject the invitation to complete the interview.

Number of and Rationale for Participants

At the onset, the total number of participants was estimated to be approximately two to 6 per case and overall a total of approximately 12 to 36 participants for all 6 U.S. base and port communities. However, overall, a total of 43 participants were interviewed,

an average of 7 per case. These six cases allowed for comparison of the data generated in Washington, DC; Charleston, South Carolina; Doral, Florida; Miami, Florida; New Orleans, Louisiana and Long Beach, California. After completing interviews in each location, I had achieved reasonable data saturation as evident by the recurring predominant themes from the interview data which was further complemented by relevant symposia summary data.

Procedures for Identifying, Contacting, Recruiting Participants

An understanding of perceived private sector barriers and incentives to engagement and cross-sector collaboration for resiliency was obtained from the views of leaders from private sector for-profit organizations as well as leaders from community, nonprofit, public sector and or military organizations.

I identified participants from each of the six military base and port communities either based on my prior knowledge of them, whether or not I had met them and or by referral. I contacted each participant by phone and or email to request and confirm an interview.

Relationship Between Data Saturation and Sample Size

Prior to conducting the interviews, the relationship between data saturation and the sample size was unknown. However, after completing an average of seven interviews in each of the six communities, I sensed the quality and sufficiency of data to answer the research question and subquestions.

Instrumentation

Research Developed Instrument and Source

I developed an original list of qualitative interview questions for presentation in a semi-structured interview to last approximately one hour. As the participant's schedule permitted, I presented as many interview questions as was reasonable.

Content validity. A variety of qualitative questions were posed to elicit meaningful responses. Some of the questions were similar yet varied slightly to elicit a collection of rich yet nuanced responses for analysis.

Additional Research Data from Symposia Summaries and Transcripts

In addition to the qualitative one-one-one interviews I will completed with each participant, I reviewed the summaries of the s ReadyCommunities Partnership symposia held in Washington, DC; Charleston, South Carolina; Miami, Florida; Doral, Florida; New Orleans, Louisiana; and Long Beach, California between 2010 and 2014. These summaries were gleaned for data relevant to the research question and subquestions. Upon completion of the interviews, I coded the interview transcripts in the axial manner from which predominant themes were identified. Thereafter, I reviewed the symposia summaries and identified complementary data to support the predominant themes.

The title, date, and location for the six ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative Symposia titles are listed as follows, and the complete reference is included in the reference list of this dissertation:

- “Port of Long Beach Model: Best Practices and Recommendations and Using Existing (Commercial-Off-The-Shelf-Technology) Capability to Integrate Local Critical Infrastructure into a Surface and Subsurface Awareness,

Identification and Interdiction Network for Military, Port, Law Enforcement and First Response Partners” (Roundtable and National Service Awards). March 18, 2014, Port of Long Beach, CA.

- “The Greater New Orleans Model: A Foundation for the Role of the Corporate Crisis Response Officer in Supporting First Responders in the First 72 hours - Providing Assistance for Family Members and Dependents with Disabilities or Access and Functional Needs” (Symposium and National Service Awards). December 3, 2013, Port of New Orleans, LA.
- “Miami-Dade Model: Identifying Crisis Response Officers of the Local Critical Infrastructure and Their Vulnerable and Special Needs Dependents” (Roundtable). June 11, 2013, Doral Fire Headquarters, Fire-Rescue Training Facility, Doral, FL.
- “Atlantic and Gulf Coast Connectivity, Identifying Local Critical Infrastructure & Crisis Response Officers” (Symposium Pilot Meeting & Field Hearing). May 10, 2011, Port of Miami, Miami, FL.
- “Inter-Port Communications and Exercise Planning Session,” August 24, 2010, 82 Queen Street, Charleston, SC.
- “Mapping Local Critical Infrastructure, Vendors and Suppliers in America’s Strategic Communities to Prepare for a Large Scale or National Crisis” (Roundtable and Pilot Planning Session). March 24, 2010, Senate Dirksen Office Building, Washington, DC.

Sufficiency of Data Collection Instruments to Answer Research Questions

I developed the qualitative interview questions for the semi-structured interviews, anticipating that participant responses would serve as a sufficient source of data for analysis to answer the central question. While some of the questions were somewhat redundant, incremental data was produced when participants responded to interview questions phrased with slight variation.

The interviews coupled with the symposia summaries provided a rich set of data for analysis. For clarification of any interview participant data, participants were contacted and replied by phone or by email. Symposia data was generated based on best practices and or implied incentives or barriers as symposia participants participated in a

moderated discussion about an aspect of resiliency in contrast to a one-on-one interview specific to the research topic.

Additionally, the findings may serve as the basis for additional research to be pursued by other scholars if not this researcher's post-doctoral studies to further delve into a particular aspect of the study.

Interview questions. Sample interview questions have been listed in Appendix A. Due to the inductive nature of the qualitative study (Creswell, 2013, p. 22) additional clarifying questions were asked on an as needed basis during the semi-structured interview and or following the initial interview, either by email or by phone or in person.

Pilot Studies

An early assignment in a qualitative research course at Walden University required that students conduct a pilot interview of a few questions with a few family members or fellow students. Based upon a cursory analysis of the data obtained from this classroom exercise, I determined that to avoid irrelevant responses to questions posed during my qualitative interviews, I must emphasize the context of the interview questions as large-scale or a national crisis versus a local disaster.

Procedures for Recruitment, Participation, and Data Collection

Schedules permitting, interviews with participants were conducted in person at the participant's office or a coffee shop. In instances when face-to-face interviews are not possible for logistical reasons, the interviews were conducted by telephone or email. The average interview lasted approximately one hour.

During each interview, I took detailed notes and presented them the participant for review, edits, and approval. A recording of each interview was suggested as a complement to the note-taking by hand or by computer. However, if the participant declined to be recorded for any reason, then the final summary of the notes as approved by the participant was utilized as the primary source of data. In any case, the interviews were conducted with community leaders in their office or a coffee shop or restaurant.

Qualitative Interview Questions

Sample qualitative one-on-one interview questions are listed in Appendix A. Some of the interview questions were repeated with slight variation(s) to elicit useful data. The interview questions include those which established the frame of reference for the participants, including their geographic base, organization type and role, followed by other preliminary questions to understand their perceived or actual man-made or natural threats in their geographic region.

The core interview questions were posed to understand general and specific incentives or barriers to cross-sector collaboration to reinforce if not augment the local response capacity in the first 72 hours. Additional questions were posed to understand incentives or barriers to filling any first 72-hour community resiliency gaps such as to support a program to provide shelter or essential medical care for responders and or critical sector employees with families or dependents with disabilities or functional or access issues. Interview questions were also posed to understand perceived return on investment for cross-sector collaboration for resiliency. The interview questions were grouped, as shown in Table G1 to facilitate communication of the results in Chapter 4.

For All Research Questions

Data capture. As described above, I took thorough notes during each interview and when expression permission is granted, the interview was digitally recorded. Following the interview, the notes and or recording were transcribed and submitted to the participant for review and edits and or clarification of any points.

Follow-up plan if too few participants. After the initial data analysis, the number of participants was deemed to be sufficient so it was unnecessary to continue to recruit participants to achieving data saturation.

Participant Debriefing Procedures

Informed consent was obtained from each interview participant. Interview participants were advised that their responses would not be attributed to them personally or their organization. However, participants were advised that excerpts would be associated with personally de-identified codes which communicate the case, sector and industry of the participant. Participants were provided with a summary of their interview responses and or contacted in case of any need for clarification. Each participant was advised that they will be notified once the dissertation has been approved and posted online for public viewing. Also, each participant will be advised that they may receive invitations to attend future scheduled presentations of the findings and or receive links to published articles about the dissertation.

Follow-up Procedures for Interviews

In case of the need for contact with the participant to clarify any a portion of the interview responses, I contacted or will contact the participant.

Data Analysis Plan

Connection of data to question. Responses from all participants were coded in the axial manner and recorded in an Excel spreadsheet by each interview question, each case and each de-identified participant code.

Data analysis. The process of data analysis included a review of the one-on-one qualitative interview transcripts as well as the symposia summaries. The categories and subcategories and properties and dimensions of the axial coded data, as described in Chapter 4, were entered into an Excel spreadsheet for each interview question, case, and participant number. Additionally, where relevant and or complementary, references to symposia summary excerpt included a page number and were recorded in the spreadsheet.

Cross-data source was utilized to confirm predominant themes and recognize the grounded theory. Cross-case analysis was conducted but did not bear significant and predominant differences other than responses as a function of a geographic locale.

To the extent that the content analysis model does not override the value of or my reliance on axial coding or my cross-data and or cross-case analysis as described above and in detail in Chapter 4; the conventional qualitative content analysis model was used during data analysis based on the identification of key words or categories to interpret themes from the data in the naturalistic paradigm (Hsieh & Shannon, 2005, p. 1277).

Manual coding and capture. I exclusively utilized the manual approach to develop the axial coding categories and subcategories, record the data in a spreadsheet, and analyze the data, given the accuracy and flexibility of this methodology. Utilization

of qualitative software might unnecessarily contribute to incorrect data analysis, should the integrity of the data breakdown in the process of data interpretation and transfer from the participant interview summaries to software and then again to a final summary, conclusions and recommendations.

Treatment of discrepant cases. There were no discrepant cases or interviews.

Cross-case analysis. Data representing each of the six cases were compared and contrasted with the others. Ultimately, cross-case analysis revealed common themes rather, while cross-data analysis supported the cross-case analysis.

Trustworthiness of the Study

The credibility of the data generated by this qualitative study as well as the transferability of the study is described as follows.

Alternative Criteria for Qualitative Studies Credibility (Internal Validity)

Integrity of participant responses. The validity or integrity of the participant responses will be established based on the interviewer's perception of the sincerity of the participant during the interview, based on the tone, body language and the relevancy of responses. Also, each of the participants will be selected based upon their known standing in the community as an engaged leader within his or her area of expertise.

Avoidance of leading questions. Researcher bias was kept in check through the avoidance of any use of leading interview questions wherein an answer is suggested in the manner, tone or words with which the question was posed.

Triangulation. Within the context of qualitative research based on case studies, triangulation can be achieved through use of multiple data collection methods

(Eisenhardt, 1989, p. 538) as well as within-case, cross-case analysis, paired-cased analysis, analysis by data source, and analysis by data dimension (p. 540) when considering scholarly views across a wide scope of literature (p. 544). I utilized this approach to triangulation in my analysis of the data generated by the various cases in this study. Data comparison within and between each of the cases in this multicase study of Washington, DC, Charleston, Miami, Doral, New Orleans, and Long Beach underscored the findings. While the data from this study was not triangulated per se across participants and methods (Maxwell, 2013, p. 128), interviews with participants from 6 locations using the same set of interview questions strengthens the conclusions based on themes common to each of the cases and data sources.

Likewise, Maxwell (2013) recognized “rich data” as one contributing factor to internal validity (p. 126). This study was based on rich data obtained from the one-on-one qualitative interviews I conducted with public and private sector leaders in 6 strategic military base and port communities; coupled with data I culled from transcripts and summaries of ReadyCommunities Partnership symposia which I conducted and convened with public, private and military sector leaders in the same 6 cities.

Member checks. Another aspect to trustworthiness of the qualitative research is the process of member checking. Guba and Lincoln (as cited in Shenton, 2004), declared that member checks are perhaps the most important criterion of credible qualitative research (p. 68). Data generation errors were minimized by through participant reviews, edits and approval of the interview transcripts.

Peer review. Peer review for this study was achieved as a function of my dissertation committee and processes required by Walden University to complete and publish this dissertation.

Researcher bias. I am an advocate for community and national resiliency and resiliency is a component of the conceptual framework for this study. My dedication to community resiliency and national security over the last decade through my work in military base and port communities, as pro bono national director of the ReadyCommunities Partnership, served as an asset to this study versus any detriment.

Transferability

The study incorporated the following steps to optimize transferability.

Participant selection. Emergency responders and managers and other leaders from military, for-profit, and nonprofit organizations were invited to participate in the qualitative one-on-one interviews. In the manner of purposive sampling (Frankfort-Nachmias & Nachmias (2008, p. 169), some participants were be selected from those whom I have met in the course of my role as national director of the ReadyCommunities Partnership, a project and public-private partnership, devoted to community resiliency through collaboration, or those whom I called without having had prior contact, and or those to whom I was referred through the snowball sampling strategy (Patton, 2002, p. 237).

Each of the participants served in an executive capacity in their organization based in his or her local community. Participants were not selected based upon their time or experience in their role. However, participant responses to the first few interview

questions, such as to understand perceived large-scale threats to one's community, enabled me to understand the context of the participant responses. The group of participants from each of the military base and port communities for this multicase study included at least one professional from each of the public, private, military and community sectors.

Dependability

The qualitative study can be considered reliable for the following reasons. Data was obtained from the participant approved transcripts of one-on-one interviews in the field as well as the data culled from the symposia summaries. All data included in the dissertation includes a reference to the interview de-identified participant code or symposium summary page number. Additionally, the symposia summaries can be downloaded from the ReadyCommunities Partnership website and or are available upon request.

Confirmability

The qualitative interviews conducted for this study could be repeated in the future by other researchers as the sample interview questions and a descriptive list of interviewees in each locale including the de-identified participant code for each interviewee has been respectively provided in Appendices C and F.

Ethical Procedures

Participants or data access. No special agreements or institutional agreements were required to gain access to the participants selected for the qualitative interviews conducted in the six communities or the symposium summaries posted online.

Additionally, as noted in the symposia summaries, each symposium summary was previously distributed and reviewed by a respective editorial committee of symposium attendees and posted online.

Treatment of participants. All participants were treated with respect and commensurate sensitivities throughout the interview process, whether in person or by telephone.

Participant recruitment letter. Other than the interview invitation letter, no special recruitment materials were needed or provided for the participant interviews.

Interview intervention plans. In the case of a brief interview, I demonstrated respect and understanding for the participant's time and participation.

Data treatment. I transcribed all interviews and present them to the participants for review, edits and approval. Qualitative interview participants in each of the six cases provided written informed consent and understand that qualitative interview excerpts may be included in the dissertation and associated with a de-identified participant code. The de-identified participant code does not include the name of the participant nor the name of the participant's organization. The de-identified code includes the participant number, case, sector and industry.

Data storage, access, and destruction. Interview data has been stored on my hard drive and remotely backed up. Access to the interview data has not been nor will be provided to any other individual. Any data deemed to be confidential during the interviews will be destroyed after the dissertation upon request or as the dissertation is approved.

The symposium summaries were previously distributed to symposium participants in the normal course of sharing the findings with each respective community. These documents have been stored on my hard drive and or posted online for public viewing. Video coverage of each symposium is also available and available upon request.

Ethical concerns. The study was conducted with respect to the privacy of each participant.

Summary

The main points covered in Chapter 3 are as follows. In summary, the research method was described as a qualitative multicase study based on a theoretical framework of cross-sector collaboration. My role was that of the sole researcher of this study, having conducted an average of seven one-on-one semi-structured interviews in each of 6 select strategic military base and port communities of Washington, DC, Charleston, Doral, Miami, Long Beach and New Orleans. Participants were selected from the public, private (including for-profit, nonprofit) military sectors and community sectors. Member checks for transcript accuracy were conducted for each qualitative interview. Additionally, I convened the six ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative symposia, as listed in the references of this dissertation, in the same six locales between 2010 and 2014. The RCP symposia summaries were culled for relevant data. The data were coded in the axial manner and following, cross-case and cross-data analyses were conducted.

Chapter 4 will address the data collection and results including axial coding, predominant themes and grounded theory, and cross-case analysis.

The Walden IRB approval number for this study is 02-12-16-0325478.

Chapter 4: Results

Introduction

Purpose and Research Questions

Purpose. As stated in Chapter 1, the purpose of this study was to understand perceived private sector incentives and barriers to community-level engagement and collaboration for preparedness through public-private partnerships to reinforce the local first response capacity in America's strategic military base and port communities. As further elaborated in Chapter 3, the purpose for understanding incentives and barriers to private sector engagement and collaboration is in part to ensure that nearly if not 100% of the preexisting local first response capacity is reinforced for the first 72 hours of a large-scale or national crisis. The response capacity includes career and volunteer responders, local critical infrastructure providers, vendors, and contractors in America's strategic military base and port communities.

Research Questions. The research questions are listed as follows:

RQ1. What are the perceived incentives and barriers to private sector collaboration with the public sector for preparedness and response to provide select services or resources for the first 72 hours of a large-scale or national crisis, thereby reinforcing if not augmenting the existing response capacity?

SQ1. What are the perceived incentives and barriers to private sector collaboration with the public sector to develop a plan, program or system for caring for vulnerable or special needs family members or other dependents (i.e. frail elderly, those

with access issues, disabilities) of responders and or critical sector employees so that the latter may remain on the job during the first 72 hours of crisis?

SQ2. What, theoretically and or practically, would motivate the private sector to collaborate or serve as a barrier to collaboration with the public sector to foster resiliency in one's community during the first 72 hours? What is the greatest perceived incentive and greatest perceived barrier to public-private collaboration?

Chapter Preview

Chapter 4 includes an introduction to each of the six cases for this multicase study with grounded theory, as defined by elements of each of the six military base and port communities and the point in time in which the ReadyCommunities Partnership symposia were held between 2010 and 2014. Knowledge gained from the symposia served as a backdrop to the dissertation interviews conducted in 2016 the same six locales. Overall, I conducted 43 one-on-one dissertation interviews in the same six communities where approximately 300 public and private sector leaders participated in the symposia.

Chapter 4 also includes a de-identified coded list of each of the 43 qualitative one-on-one interview participants. An example of an interview participant code is as follows; (NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology): which stands for Participant number 3 in the national capital region case (NCR), who is a professional working with a large for-profit organization specializing in technology.

Additionally, predominant themes from the qualitative interviews and overall response to the research question and subquestions are summarized by properties and dimensions of axial codes along with select quotations. Given the rich texture of the

participant responses to the individual interview questions, summaries and excerpts of the participant responses to many of the individual interview questions are also provided.

Where relevant, supplemental data culled from the ReadyCommunities Partnership Military Base and Port Community symposia summaries is also provided to inform the answers to the research questions and to prove the predominant themes. Cross-case and cross-data analysis has also provided. Finally, evidence for trustworthiness is outlined, including the credibility and transferability strategies.

Multicase Study with Grounded Theory

Prior to conducting the one-on-one semistructured interviews for my research in each of the 6 locales, I developed and convened six Military Base and Port Community Resiliency Initiative symposia with a collective total of approximately 300 public and private sector leaders as pro bono national director of the ReadyCommunities Partnership.

The six cases, as labeled with an abbreviation to describe the locale; NCR (National Capital Region), CHS (Charleston), DOR (Doral), MIA (Miami), NOL (New Orleans), and PED (Long Beach) were selected in that each is a strategic military base and port community and integral to America's overall resiliency. Furthermore, each case is defined not only by its locale but by the point in time in which the research was conducted. A total of 43 one-one-one in-depth qualitative interviews were conducted by me with informed consent in 2016 within the six cases and communities.

A brief overview of each of the six symposia convened under the auspices of the ReadyCommunities Partnership Military Base and Port Community Initiative is provided

in Table B1, *ReadyCommunities Partnership Symposia/Roundtables*. Table B1 includes the symposia title, date, location and approximate number of participants.

Additionally, a brief overview of the timing and location of the six cases is summarized in Table C1, *Case Locations and Dates*. In brief, this table highlights the date and location for each of the six ReadyCommunities Partnership Military Base and Port Community Resiliency symposia and the date range for the one-on-one qualitative interviews in each of the same six communities.

Setting and Participant Selection

There were no perceived personal or organizational conditions at the time of each of the one-one-one qualitative interviews which otherwise influenced the participants.

Demographics were not used as a basis for selection of the dissertation interview participants for this study. Rather, participants were selected as those individuals working in a professional capacity for a for-profit, nonprofit, emergency response, military, or public sector organization in one of the strategic military base and or port communities of Washington, DC; Charleston, South Carolina; Doral, Florida; Miami, Florida; New Orleans, Louisiana; and Long Beach, California. Within each case or locale, I interviewed a blend of participants from the public and private sectors; an average of seven participants per case as shown in the coded list of participants.

Data Collection

Number of Interview Participants

In general, I strove to interview at least one participant from each of the four sectors or organization types; for-profit, nonprofit, emergency response, and military; in

each of the 6 locales; Charleston (CHS), Doral (DOR), Long Beach (PED), Miami (MIA), New Orleans (NOL) and Washington, DC (NCR).

The total number of participants per case is summarized in Table D1, Descriptive List of Interviewees ($N = 43$). Table D1 also includes the semistructured interview date, location, recorded interview length and de-identified participant code. Overall, 43 participants were interviewed between March 7 and June 3, 2016; with 7 interviews representing the Washington, DC (National Capital Region) case; 7 representing the Charleston, South Carolina case; 5 representing the Miami, Florida case; 6 representing the Doral, Florida case; 10 representing the New Orleans, Louisiana case and 8 representing the Long Beach, California (San Pedro Bay) case. A minimum of 5 with an average of 7 qualitative one-on-one interviews were conducted for each case.

Location, Frequency, and Duration

With informed consent, each qualitative semistructured interview was scheduled for 1 hour. The audio recordings ranged from 25 to 165 minutes, depending on the time and interests of the participants, with an average of 65 minutes for each of the 43 interview recordings. I used the sample interview questions I created to conduct each semi-structured interview. Thirty-five of the interviews took place in person, at the participant's office or a restaurant or coffee shop, and eight were conducted by teleconference. An average of nearly half of the participants, 17 of 35 participants, completed each of the 34 sample interview questions. Some of the interview questions were skipped due to participant time limitations.

Data Recording

With informed consent from each participant and using the sample interview questions generated by me, I conducted each one-on-one interview. I took notes during each interview either by writing them on paper or by typing them on my personal computer. Following each interview, I created a transcript based on the notes and or the audio recording. Each transcript was presented to the respective participant for review and any edits. Some of the participants were concerned about confidentiality and declined to be recorded. Participants who agreed to be recorded were advised that the recording was solely for my transcription purposes and not for distribution. Several interview participants spoke on behalf of their current and prior professional roles in two unique sectors to share varied or unique perspectives. As such, the participant inputs were noted in the interview notes and coding.

There were no variations in data collection nor were there any unusual circumstances encountered while collecting the data from the one-on-one qualitative interviews and the symposia summaries.

While several interview questions alone may have generated a de minimis set of data sufficient for analysis to answer the research questions (RQ1 and subquestions), I presented a variety of the sample interview questions to ensure generation of sufficient data for analysis and generation of themes and the grounded theory. The actual interview questions are listed in Table E1 in several groups to facilitate data analysis and presentation of results by each research question.

Introduction to Six Cases

The names of the six cases for this study are the strategic military base and port communities of the National Capital Region (including the Port of Baltimore); Charleston, SC (including the Port of Charleston), Miami, FL (including Port Miami); Doral, FL (with nearby Port Everglades); New Orleans, LA (including the Port of New Orleans and other ports along the Mississippi River); and San Pedro Bay, CA (including the Port of Long Beach and the adjacent Port of Los Angeles).

In brief, the six cases are defined by locale and the specific point in time in which the Military Base and Port Community Resiliency Initiative symposia were conducted (2010-2014) by me as national director of the ReadyCommunities Partnership, with the participation of public and private sector leaders. I then prepared a written summary of each symposium, including best practices and recommendations of each of the six communities, and posted them online.

To answer the research question, I conducted the qualitative one-on-one dissertation interviews, using the sample interview questions listed in Appendix A with participants in the same six military base and port communities. While the interview questions were not presented to the symposia attendees, the symposia summaries inform the dissertation research as a secondary or supplemental data source when a best practice may imply a perceived incentive or a recommendation may imply a perceived barrier.

During the first symposium of the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative (RCP, 2010, Senate, p. 16), Senator Mary L. Landrieu stated the significance of America's military base and port communities:

The port and military base communities employ thousands of people and contribute to the economy of the United States and trade with the world and support the US military presence overseas. America's 513 ports are absolutely essential. . .they account for 13.3 million jobs and generate 649 billion in personal income annually. (RCP, 2010, Senate, p. 16)

A dissertation participant in the Long Beach case defined the significance of strategic ports and other port types (IQ34, PED, 3: Pu. (Ci) Landlord Port):

A strategic port has water depth . . . and land to accommodate staging areas. . .from a military outload perspective all ports are not strategic. There are generally two types of ports; an operating port where a government entity operates the terminals or landlord port where space is leased to private entities. The Port of Long Beach, as a strategic port, supports Department of Defense requirements during the first 72 hours. (IQ34, PED, 3: Pu. (Ci) Landlord Port)

An interview participant in the National Capital Region case further described the military's reliance on ports (NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology):

The military depends on all ports, some ports more important than others. . .(with Naval Criminal Investigative Service (NCIS) agents in a port area – Miami, Cape Canaveral. . .Jacksonville, Orlando, Tampa for military purposes. But Charleston and Long Beach are (also) important to the military. Miami is important for Southern Command (SOCOM; NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology)

Further introduction to each of the six cases or military base and port communities is based on common knowledge and or as provided by the following *as is* remarks by dissertation interview or symposium participants. The remarks are as is in that they are provided without correction to the participant's grammar.

The military base and port community profiles provided below include a description of the community and or regional geography, the name of the port(s) within the community and or nearby port(s), respective port activity, value of the port defined by economic output or jobs, port governance, and perceived probable large-scale natural or man-made threats to the port and or the region.

Washington, DC/National Capital Region (NCR)

Port name: Port of Baltimore

Port location: Baltimore, Maryland

The US Coast Guard Sector Baltimore-National Capital Region was named as such in April 2016 to reflect the expansive area of responsibility (NCR, 7: Pu. (Mil.); Maritime/Transportation).

Port activity:

The Port of Baltimore is the number one exporter of automobiles, sugar, and paper products, the number two exporter of coal, and number one or two exporter of farm equipment. The port is shifting from an importer to exporter of liquid natural gas. (NCR, 7: Pu. (Mil.); Maritime/Transportation)

Economic value: "The Port of Baltimore holding 24, 000 jobs, that equates to over 200,000 families that are affected by the port" (RCP, 2010, Senate, p. 17).

Governance: “The Maryland Port Administration leases all the facilities to private entities . . . so we are able to bring best practices of economically competitive private industries into the public arena” (RCP, 2010, Senate, p. 17).

Military installations or entities: US Coast Guard Sector Maryland – National Capital Region, DC National Guard, The Pentagon, Joint Base Andrews.

Probable large-scale threats: Threats include attacks by foreign military or terrorism, natural disasters, and pandemic (IQ1, NCR: all participants).

Charleston, South Carolina (CHS)

Port name: Port of Charleston

Port location: “South Carolina State Ports Authority; (has) one primary location (five terminals in Charleston, one in Georgetown, and an inland port in Greer, SC” (CHS, 6: Pu. (State); Ports Authority).

Port activity:

- “South Carolina State Ports Authority is a strategic port and service provider; involved in military outloads and return to the warzone” (CHS, 6: Pu. (State); Ports Authority).
- “Charleston is also one of the most critical logistical hubs for the Department of Defense in the nation. We handle about 50% of war fighting cargo that's shipped by sea” (RCP, 2010, Charleston, p. 34).

Nearby port(s):

- “The Port of Savannah – is the third largest container port in US . . . the western most port on the east coast. North America’s largest container facility

yard with two railway facilities that feed into that – CSX and Norfolk Southern” (NCR, 7: Pu. (Mil.); Maritime/Transportation).

Military installations or entities: Charleston Naval Weapons Station, Beaufort Marine Corps Air Station.

Probable large-scale threats: Terrorism and waterway crises (as a function of spills, collisions and fires) are of greatest concern. Plus, Charleston is naturally vulnerable to hurricanes, earthquakes, and infectious diseases given its low country location (IQ1, CHS: 5 participants).

Miami, Florida (MIA)

Port name: PortMiami

Port location:

- “PortMiami is located at the nexus of North and South America” (RCP, 2011, PortMiami, p. 39).
- “We are part of Miami-Dade and part of Broward counties, close to each other 28-30 miles . . . but are two different organizations . . . competing ports . . . but reality is both serve the greater south Florida market region” (MIA, 3: Pu. (County); Landlord Port).

Port activity:

- “PortMiami is the largest container port in Florida and one of the leading container ports in America. As the world's busiest cruise port, PortMiami is a logical link to the Caribbean and really to all the Americas in terms of any type of crisis” (ReadyCommunities Partnership, 2013, PortMiami, p. 39).

- “The two largest cruise ship ports, Miami and Everglades, receive approximately eight million passengers annually” (MIA, 5: Pu. (Mil.); Maritime/Prevention).

Economic value:

- “PortMiami and Port Everglades, those two ports take in, from a revenue perspective, 31 billion dollars and they employ 300,000 people just in this region” (ReadyCommunities Partnership, 2013, PortMiami, p. 8).
- “PortMiami is an \$18 billion a year business . . . creates 180,000 jobs in my community and it's the second largest generator of jobs” (ReadyCommunities Partnership, 2010, Senate, p. 17).
- “Statistically, we are by revenue the number one seaport in Florida (Port Everglades); with \$153 million in gross operating revenue, versus PortMiami with \$109 million” (MIA, 3: Pu. (County); Landlord Port).

Nearby port:

Miami (PortMiami) could not assume Broward (Port Everglades) operations and vice versa, not enough space on either footprint . . . competitive, coexist, work on initiatives with each other. . . reality is we are not operating ports, we are landlord ports – lease to private sector operators that operate the business whether cargo goes to Broward or Miami-Dade, is a free market principle. . . the cargo owner is concerned about cost. (MIA, 3: Pu. (County); Landlord Port)

Military installations or entities: US Coast Guard Sector Miami, Homestead Air Reserve Base, US Southern Command (Doral).

Probable large-scale threats:

Threats include extreme weather and terrorism along with cruise ship attacks at the ports and waterways. Loss of the power grid from a cyber-attack and its impact on defense, government apparatus and hospitals could compromise public health/safety and devastate the economy. PortMiami area threats are like those cited by the Doral participants with the added exception of threats to the PortMiami complex and cruise ships (IQ1, MIA, 4 participants).

Doral, Florida (DOR)

Location: Doral is in Miami-Dade County.

Nearby ports: Port Everglades (Broward County) and PortMiami (Miami-Dade County).

Governance: “Miami-Dade County is located in southeastern Florida and is funded as part of the Urban Areas Security Initiative to prevent, mitigate and or respond to terrorism” (RCP, 2013, Doral, p. 6).

Activity: “Broward (Port Everglades) is the top containerized seaport in Florida by TEU (twenty-foot equivalent units). Broward is number two in cruise. Broward provides petroleum for southern 12 counties in Florida . . . of strategic importance . . . competitive environment . . . free market issue” (MIA, 3: Pu. (County); Landlord Port).

Economic value: “(Trade) interdependency between US and Caribbean . . . is significant to the U.S. economy; Florida state, Miami-Dade, Broward and Palm Beach County” (DOR, 1: Pr. (F-P, Lg.); Maritime/Transportation).

Military installations or entities: U.S. Southern Command (Doral, Florida), Homestead Air Reserve Base.

Probable large-scale threats: Threats to Doral (Miami-Dade County) include extreme weather, earthquakes, and terrorism (IQ1, DOR: 4 participants).

New Orleans, Louisiana (NOL)

Port name: Port of New Orleans

Port location: “(A consortium of) five ports (Baton Rouge, South Louisiana, New Orleans, Saint Bernard, and Plaquemines) over a 200-mile stretch of the Mississippi River constitute the largest port system in the world” (RCP, 2013, Port of New Orleans, p. 23).

Additional nearby port(s): Port Fourchon (LA), Port of Greater Baton Rouge (LA), Port of Vidalia (LA) and other ports and harbors along the Mississippi River.

Port activity/critical infrastructure:

- “The Port of New Orleans has an intermodal rail hub with five railroads, ships and barges” (IQ1, NOL, 1: Pr. (F-P); Maritime/Transportation).
- “(There is a) nuclear power plant located (here)” (IQ1, NOL, 1: Pr. (F-P); Maritime/Transportation).
- “We are the energy producing state that fuels the country, our geography with the Mississippi River, and our production of raw material to power the U.S. and the globe is not given its full merit” (NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).

- “You can go through different scenarios.... Every petrochemical plant ... uses that water for the cooling process, all the jet fuel for the fighter planes... is produced in ... Louisiana. The fiber optic link (is located in the region)” (NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).

Economic value:

- “Keeping the Mississippi River open saves \$293 million a year and the largest port system in the world” (RCP, 2013, Port of New Orleans, p. 31).
- “Each day the Port of New Orleans is closed, it costs the United States economy \$300 million per day ... and it grows exponentially after the fourth day” (RCP, 2010, Senate, p. 15).
- “62% of the consumer spending public of the United States is served through the Port of New Orleans and the lower Mississippi river ports” (RCP, 2010, Senate, p. 17).
- The Port of New Orleans is responsible for almost 400,000 jobs directly and indirectly. That's almost \$18 billion in earnings and \$37 billion in economic output, almost \$3 billion in economic tax revenue for the federal government. . . . 60% of the nation's grain and 20% of the petro chemicals in the United States come up and down the river to the Port of New Orleans. If the Port of New Orleans is closed, gas prices go up, food prices go up, and with the laws of supply and demand, our U.S. economy suffers. (RCP, 2013, Doral, p. 15).
- Governance:

- “Within these (five) ports, there are 160 regulated facilities that meet Maritime Transportation Security Act (MTSA) criteria” (NOL, 10: Pu. (State); Public Safety/Port Law Enforcement).
- “The Mississippi River is a federally regulated waterway. All ports and businesses related to the river are part of the area maritime security committee” (NOL, 10: Pu. (State); Public Safety/Port Law Enforcement).
- “New Orleans is an Urban Areas Security Initiative (UASI) city (recipient of federal grants)” (IQ1, NOL, 1: Pr. (F-P); Maritime/Transportation).
- “The City of New Orleans response is regional, with mutual aid agreements with all parishes” (RCP, 2013, Port of New Orleans, p. 29).

Nearby ports:

Port Fourchon: “When it comes to oil and gas service ports, we (Port Fourchon) have 75% more capacity to service Gulf of Mexico than all the other ports combined” (IQAC, NOL, 7: Pu. (Cit.); Landlord Port).

Port Vidalia:

(Port of Vidalia) is the only inland port – shallow draft – relative to the Port of New Orleans port community. Of the 31 ports in the state (LA), as of May 2016, 16 are classified as inland, 6 as deep draft, 9 as coastal – as of May 2016. Port Fourchon is in-between, a coastal port, with a 25’ draft. (IQAC, NOL, 8: Pu. (Cit.); Port Commission)

Port of South Louisiana: “The Port of Southern Louisiana is the largest tonnage port in the U.S.” (IQ1, NOL, 1: Pr. (F-P); Maritime/Transportation).

Military installations or entities:

US Coast Guard Sector New Orleans, Naval Air Station Joint Reserve Base in New Orleans, US Army National Guard, Louisiana Air National Guard

Probable large-scale threats:

Terrorism threats include those impacting critical infrastructure targets or people at events; natural disasters and commensurate destruction caused by wind and or flooding (including hurricanes, tornados); and catastrophes at chemical facilities or the nuclear reactor whether by attack or accident. (IQ1, NOL: 8 participants)

- “If you took the Mississippi River . . . it is a cataclysmic event whenever it changes its course” (NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).

Long Beach, California (PED)

Port name: Port of Long Beach

Port description: “The San Pedro Port complex is unique, a huge complex with no dividing line in the bay between two regulated entities, two jurisdictions - Port of Long Beach and Port of Los Angeles” (PED, 4: Pu. (Cit.); Law Enforcement).

Nearby ports: San Pedro Port complex (Port of Long Beach and Port of Los Angeles); Port Hueneme.

Activity/economic value:

We rank fifth internationally when we're combined with our partner of Los Angeles.... The Port of Long Beach is the second busiest container port in the nation, and we rank 17th internationally by ourselves. We're responsible for more

than 1.4 million jobs throughout the country . . . about \$140 billion of annual cargo travels through just our port. (RCP, 2010, Senate, p. 17)

40% of the U.S. goods shipped into our country . . . via the sea are shipped through the Ports of Long Beach and Los Angeles . . . for distribution throughout every congressional district in the U.S. A port closure could impact hundreds of millions of dollars of business activity. (RCP, 2014, Long Beach, p. 10)

- “San Pedro Bay is the busiest seaport in the nation. Long Beach alone moves more than \$180 billion jobs [regionally]. We serve over 140 shipping lines and we have connections with 217 seaports throughout the world” (RCP, 2014, Long Beach, p. 10).

Governance:

- “The Port of Long Beach includes fourteen different governmental jurisdictions, not including the private sector, NGOs or service organizations” (RCP, 2014, Long Beach, p. 35).
- “The port had a system and regional integration model; agreements with 187 entities including terminal operators, railroads. The basis for mutual aid was response, continuity, and domain awareness” (IQ4, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

Military installations and entities:

- The Marine Exchange of Southern California and Vessel Traffic Service, U.S. Coast Guard Base Los Angeles/Long Beach, Naval Base San Diego.

Probable large-scale threats: “Terror attacks and natural disasters, especially including fires and earthquakes, were cited as the most probable threats to the Los Angeles-Long Beach area with probable impact on port infrastructure, ships and power distribution” (IQ1, PED: 6 participant responses).

Coding and Data Analysis

The coding schema and data analysis across the six cases is based on Eisenhardt’s approach to the development of grounded theory. Eisenhardt’s (1989) approach, based on case study evidence, was described as distinct from Strauss and Corbin’s (1998) systematic approach (p. 13). However, my approach to coding of data for this study, including open, axial, and selective coding, has followed the coding norms described by Strauss and Corbin (as cited in Lewins & Silver, 2007, p. 82), with the axial coding process being unique to Straus and Corbin (Evans, 2013). Pandit (1996) defined axial coding as the process relating categories with subcategories and that selective coding, the integration of categories, serves as the basis for the theoretical framework (p. 5).

Coded Units to Categories and Themes

Data identification and capture. First, I perused the 43 interview transcripts and identified keywords, phrases, and sentences which captured the essence of the participant responses. For each participant response to each interview question, I inserted each select excerpt in one cell of the spreadsheet, adjacent to a cell with the interview question, and another cell with the unique de-identified participant code. This coded data is housed in an Excel spreadsheet that I generated and have stored on my computer with remote backup. Each participant code identifies the case, sector, and industry for each participant

while maintaining the participant's anonymity. Also, at the point of selective coding, I created another column to note any theme that appeared in a predominant way throughout the cases. Overall, the spreadsheet was structured to facilitate sorting of the data by one or more attributes of the coded data.

Coding schema. In brief, the coding schema includes two primary categories and 13 subcategories followed by descriptive words or phrases. In the iterative manner of axial coding, I developed a three-faceted code for each interview transcript excerpt. In sequential order and separated by an underscore, each code includes a primary category, a subcategory, and a string of descriptive words or phrase to illuminate properties and dimensions of the subcategory. A sample coded excerpt is as follows:

(category_subcategory_descriptivephrase). Given that the intent for the research is to understand perceived incentives and perceived barriers to private sector engagement and cross-sector collaboration, naturally, the code begins with the primary category, either (Inc_) or (Bar_) to facilitate data sorting and analysis.

Categories and subcategories. Two a priori primary coding categories; “Inc” (incentive) and “Bar” (barrier) were established to facilitate summarize perceived incentives and perceived barriers to private sector collaboration and engagement for resiliency in the first 72 hours of a large-scale or national crisis.

Additionally, 13 subcategories emerged and tag phrases were noted and refined to describe properties and dimensions. The thirteen subcategories are business continuity (BusCon); business resiliency (BusRes) = survival; business continuity and community resiliency (BusConComRes); community resiliency (ComRes); culture and behavior

(Cul); financial (Fin); human resources (HR); government resiliency (GovRes); knowledge and education (KE); leadership (Lead); liability and risk (LR); policy and law (PL); and scope, logistics and management (SLM). Throughout the axial coding process, these subcategories emerged with a large degree of clarity and were refined when necessary to facilitate identification of common participant responses. Moreover, the nuance of the participant's words was maintained rather than compromised by any rephrasing or rewording. Inasmuch, my approach to axial coding has reinforced rather than modified participant inputs.

De-identified participant codes. I developed a unique de-identified code for each interview participant and associated this code with each of the interview transcript excerpts. An example of a participant code is "(MIA, 2: Pr. (F-P, Lg.); Maritime/Transportation)." Each participant code begins with an abbreviation to indicate one of the six cases; CHS (Charleston); DOR (Doral); MIA (Miami); NCR (National Capital Region); NOL (New Orleans); or PED (Long Beach); followed by the participant number; and the participant sector and industry. All the deidentified participant codes are included in Table D1, Descriptive List of Interviewees.

Coding phases. During the first coding phase, described by Saldana (as cited in Miles, Huberman & Saldana, 2014, p. 73), I relied on both in vivo coding (p. 74) and subcoding (p. 80). For each coded excerpt, the subcategory was followed by a few words or a phrase in the manner of in vivo coding. the in vivo style extensions or phrases following the category and subcategory, serve to describe properties and dimensions of

the axial code. Without the in vivo descriptions, the codes would remain general and therefore an unworthy source or foundation for meaningful analysis.

Axial coding is generally understood to be the development of subcategories around axes with common properties. However, the axial coding process was defined by Lewins and Silver (2007) as abstract (p. 84); that is, through the researcher's interpretation of data, codes are established to define the categories. Nonetheless, throughout the axial coding process, I remained true to the participant's words to avoid stripping the nuance or precise meaning of the participant's words. Axial coded data that portrays these three themes are maintained in the coded Excel spreadsheet housed on my computer. These data include In Vivo words or extensions to describe properties and dimensions of the primary category and subcategory.

Process of Inductively Moving Codes to Categories or Themes

During the selective coding process (Lewins & Silver, 2007, p. 85), four predominant themes emerged from the data from the dissertation interview transcripts and were confirmed by data from the ReadyCommunities Partnership symposia summaries. The predominant themes are sector-silo bias, interdependency, return-on-investment, and mutual mission. In and of themselves, these themes and the emergent grounded theory are integral to the answer to the research question. Within the context of this study, sector-silo bias is perceived as a barrier, while interdependency, return-on-investment, and mutual mission are perceived as incentives for private sector engagement and cross-sector collaboration.

Transcript and symposium summary excerpts to substantiate each theme are listed below, along with a string of italicized words summarizing the properties and dimensions. Axial coded data which portrays these themes is maintained in a coded excel spreadsheet and includes In Vivo words or extensions to describe properties and dimensions of the primary category and subcategory. Collectively, the predominant themes are the foundation for and prelude to the grounded theory as described below.

In summary, my dissertation research through the one-on-one qualitative interviews is built on the literature review including the six ReadyCommunities Partnership (RCP) Military Base and Port Community Resiliency Initiative symposia summaries. The RCP symposia were convened in six of America's military base and port communities between 2010 and 2014 and represent the onset of the six cases for this study. The primary data were gathered from the 43 qualitative one-on-one interviews across the six cases and coded in the axial manner. Additionally, supplemental data was culled from the ReadyCommunities Partnership Military Base and Port Community Symposia summaries for analysis and comparison with the data produced from the participant interviews.

Predominant Themes and Grounded Theory

Following the introduction of the themes and the grounded theory, the answer to RQ1 is further provided through a comprehensive list of perceived incentives and perceived barriers to private sector engagement and cross-sector collaboration for strategic military base and port community resiliency in the first 72 hours of a large-scale or national crisis. The organization of the answer to RQ1 is provided by a summary of

responses to several groups of the most relevant interview questions. Lastly, insights and conclusions from cross-case analysis are provided.

Predominant Themes

Four predominant themes emerged from the dissertation interview transcripts and were further substantiated by excerpts from the ReadyCommunities Partnership (RCP) symposia summaries; sector-silo bias, interdependency, return on investment, and mutual mission.

To substantiate each theme; as is excerpts from the dissertation interviews and symposium summaries, without any correction to the participant's grammar and syntax are provided in the results. Additionally, the axial coded properties and dimensions from the excerpts are grouped together and shown below.

Sector-silo bias theme. Sector-silo bias is a predominant theme and perceived barrier which arose from both the dissertation interview participant responses and the RCP symposia summaries across the cases. One of the dissertation interview participants in the national capital region introduced the essence and importance of the theme when stating:

Leaders need to understand organizational bias (as it impacts effective collaboration) and to study collaboration (government to private sector, public to public) - leaders need to call it out, to say it exists and to say we need to overcome it in whatever the objective, otherwise the chances of failure in service are greater - the people we are serving will be less than our intent. (IQ33, NCR, 5: Pu. (County), Public Safety/Fire)

Sector-silo bias theme – perceived barriers. The properties and dimensions of the sector-silo bias theme which emerged from the barrier category and the culture and behavior subcategory (Bar_Cul) are listed as follows:

(Bar_Cul): (a) agency bias/aligned partisan/takes care of its own (fire department), (b) cultural pushback, avoid perception of favoritism, (c) distrust between private and public sectors, lack of a trust from the private sector...of a federal government system to keep their information confidential, (d) emergency responder silos (reticent to share vulnerability information (personal, family) including with trusted persons), (e) fire service tradition - a core value to take care of its own, (f) go-no-go decisions inhibited by culture, (g) group think, (h) organizational bias, (i) public sector favoritism, (j) private sector tribal behavior takes care of its own, (k) public and private sector motivations differ, (l) public sector silos, (m) lack of trust from private sector, do not provide information...bound by antitrust laws, private sector concern about disclosing proprietary information.

The sector-silo bias theme properties and dimensions of the barrier category and the culture and behavior subcategory (Bar_Cul) were extracted from the following participant interview and symposia summary excerpts:

- “Agency bias, aligned partisan resulting in distrust” (IQ33, NCR, 7: Pu. (Mil.); Maritime/Transportation).
- “Cultural pushback, avoid perception of favoritism” (IQ9, NOL, 4: Pu. (Cit.); Public Safety/Emergency Communications).

- “Distrust between private and public sectors” (3): (IQ34, NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement), (IQ34, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software), (IQ12, NOL, 1: Pr. (F-P); Maritime/Transportation).
- “Distrust bureaucracy, recommend private-private sector solutions with tie to public sector” (IQ12, NCR, 3: Pr. (F-P, Lg.). Secure Communications Technology).
- “Private sector distrust of public sector relative to proprietary information disclosure” (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “Emergency responder silos, reticent to share vulnerability information with others included trusted persons” (IQ9b, NCR, 5: Pu. (County); Public Safety/Fire).
- “Fire service tradition, a core value to take care of its own people” (IQ8, PED, 6: Pu. (Cit.); Public Safety/Fire).
- “Go-no-go decisions inhibited by (national) culture” (IQ13, DOR, 1: Pr. (F-P, Lg.); Maritime/Transportation).
- “Group think” (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “Organizational bias” (IQ33, NCR, 5: Pu. (County); Public Safety/Fire).
- “Public sector favoritism” (IQ12, NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology).
- “Private sector tribal behavior takes care of its own” (IQ16, MIA, 2: Pr. (F-P, Lg.); Maritime/Transportation).

- “Public and private sector motivations differ” (5): (IQ11, CHS, 2: Pr. (F-P, Sm.); Maritime/Transportation), (IQ12, NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology), (IQ33, NCR, 5: Pu. (County); Public Safety/Fire), (IQ34, NCR, 4: Pr. (N-P, Sm.); Logistics/Supply Chain), (IQ34, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software), (IQ34, PED, 6: Pu. (Cit.); Public Safety/Fire).
- “Public sector perceived resistance to private sector” (3): (IQ14, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aero); (IQ33, CHS, 1: Pr. (F-P, Sm.); Emergency Response/Supplies), (IQ33, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).
- “Public sector silos” (2); (IQ33, PED, 4: Pu. (Cit.); Law Enforcement), (IQ14, CHS, 3: Pr. (N-P, Sm.); Chaplaincy/Family).
- “Sector bias, agency takes care of its own” (2): Thin blue line (IQ29, CHS, 3: Pr. (N-P, Sm.); Chaplaincy/Family); Fire department (IQ8) PED, 6: Pu. (Cit.); Public Safety/Fire.
- “Lack of a trust from the private sector...of a federal government system to keep their information confidential...So maybe there's value to a nonprofit...like ReadyCommunities Partnership . . . crisis response officer initiative . . . to securely share this info” (ReadyCommunities Partnership, 2010, Senate, p. 23).
- “We do not provide information into the collaborative federal or state models. . . not just because of privacy issues and proprietary issues, but it’s also

because we are bound by the antitrust laws” (ReadyCommunities Partnership, 2010, Senate, p. 24).

- “There's a legitimate issue associated with the private sector about proprietary information” (ReadyCommunities Partnership, 2010, Senate, p. 45).

Similarly, the properties and dimensions for additional subcategories under the barrier (Bar) category for the sector-silo bias theme are provided for the following subcategories with excerpts from the dissertation interviews; financial (Bar_Fin); knowledge and education (Bar_KE); liability and risk (Bar_LR); policy and law (Bar_PL); and scope, logistics and management (Bar_SLM);

(Bar_Fin): “Will never have the funding needed”:

- “Cannot work in silos thinking 100% effective. We will never have the funding needed to serve the population 100% . . . rely on community resources and supports . . . always trying to develop community resources” (IQ11, DOR, 6: Pu. (State); Disabled Persons).

(Bar_KE): “Lack of trust . . .relates to lack of knowledge” (2):

- “Public sector lack of knowledge about private sector resources/capabilities available/needed, private sector incident command system training needed” (IQ33, PED, 4: Pu. (Cit.); Law Enforcement).
- “The greatest barrier - a lack of trust, really relates to lack of knowledge regarding capabilities and intentions of the private sector in working with the general public and government in helping to prepare for and respond to critical events. Longstanding” (IQ34G).

(Bar_LR): The properties and dimensions of the ‘liability and risk’ subcategory are listed as follows from the excerpts shown below: (a) to remain unbiased and avoid collusion, (b) (instances of sensitive classified information) desire for both entities to stand apart, (c) avoid perception of collusion or compromising of relationship with any regulatory authorities.

- “Law enforcement classified information sharing with private sector and vice versa, public sector to remain unbiased and avoid collusion” (IQ12, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “For law enforcement; a huge barrier to private sector engagement occurs in instances of sensitive classified information (there is a desire for both entities to stand apart)” (IQ12, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “Perception of collusion or compromising of relationship with any regulatory authorities” (IQ12, PED, 6: Pu. (Cit.); Public Safety/Fire).

(Bar_PL): The properties and dimensions of the policy and law subcategory are listed as follows with the corresponding excerpts shown below: (a) this jurisdictional gerrymandering... smaller than the regional interest, (b) agreements between organizations tend to be between like organizations.

- “Now we are cut in this jurisdictional gerrymandering... smaller than the regional interest...everybody is concerned about that ceiling tile, not the room, so the port is based on an economic footprint” (IQAC; NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).

- “Agreements between organizations tend to be between like organizations; such as police: police; fire: fire; and chaplain: chaplain rather than between different types of organizations; i.e. police; fire, fire: chaplain, etc.” (IQ14, CHS, 3: Pr. (N-P, Sm.); Chaplaincy/Family).

(Bar_SLM): The properties and dimensions of the scope, logistics and management subcategory are listed as follows with the corresponding excerpts shown below: (a) Port (X) is a business within a public agency. Tenants are private companies that wanted to help, but was not effective; (b) public sector structural issue (not designed to share information in a timely manner to private sector; (c) with the government bureaucracy, it’s a systemic structural problem; wireless and cyber, and physical silos.

- “Corporation would initiate contact with public agency but did not work. Port (X) is a business within a public agency. Tenants are private companies that wanted to help, but was not effective” (IQ4, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “Corporate and public agency silos (collaboration did not work although port tenants wanted to help), public sector structural issue (not designed to share information in a timely manner to private sector” (IQ12, NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology).
- “With the government bureaucracy, it’s a systemic structural problem – they are not designed to share information in a timely manner back to the private sector which is actionable” (NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology).

- “But cyber, we define and separate the wireless component from cyber so that you think of them in those silos, because the equipment, both that we use to help and then our enemy uses to attack, are different than in those two domains, wireless and cyber, and then as separate from physical. So we look at that in sort of separately and then in an integrated fashion. And really the magic or the real vulnerabilities are usually in the gaps and seams of those two areas” (ReadyCommunities Partnership, 2014, Long Beach, p. 57).

Sector-silo bias theme – perceived incentives. Excerpts from both data sources are shown below to substantiate the sector-silo bias theme by what can be achieved when bias is overcome. A few participant remarks were coded as incentives of the community resiliency (Inc_ComRes), culture and behavior (Inc_Cul), and the scope, logistics, and management (Inc_SLM) subcategories with the following properties and dimensions as italicized in the following excerpts:

(Inc_ComRes): “speed of things getting done”:

- “Trust impacts speed of things getting done” (IQ19, NOL, 2: Pr. (F-P, Lg.); Oil Refining).

(Inc_Cul): “maintain public trust, avoid collusion”:

- “Maintain public trust, avoid collusion” (IQ19, PED, 6: Pu. (Cit.); Public Safety/Fire).

(Inc_SLM): “management by unbiased private sector members”:

- “Third party NGO management of donated assets by unbiased private sector members” (IQ27, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software).

Interdependency theme. Interdependency between organizations, between sectors, organizations and systems is a predominant theme which emerged from both the participant interview responses and the symposia summaries across the cases. The interdependency theme especially arose from the incentive category and the business continuity and community resiliency subcategory (Inc_BusConComRes):

An interview participant from the national capital region summarized the essence of interdependency between sectors:

It is their employees, their clients and customers affected by the disaster. If they want to keep themselves in business, they have to take action to ensure that the infrastructure is backed up and running so employees can get to work, take action so power is restored...anything they can do to support public sector activities – whether life safety, infrastructure protection, making sure those things are safe...it is in the business community’s best interests to provide support to the public sector so the business can function. It is their employees, it is all those things affected in a disaster...whatever we call it public-private partnership or acknowledge it at whatever level, there is interdependence. (IQ33, NCR, 4: Pr. (N-P, Sm.); Logistics/Supply Chain)

Interdependency theme – perceived incentives. The properties and dimensions of the interdependency theme, born primarily out of the business continuity and

community resiliency subcategory of the incentive category (Inc_BusConComRes) are italicized as follows:

(Inc_BusConComRes): (a) Business needs to be up and running, and be profitable again – for business and community; (b) we live and work where we take care of those that take care of us; (c) if employees cannot get to work, the business would suffer; (d) helps us get back to business as usual, then she helps me get my business back to business - ecosystems – interdependent resiliency; (e) interdependency between my company and the community; and (f) two way street...if they can influence politics then private sector should influence community in right way.

The aforesaid properties and dimensions of the incentive and business continuity and community resiliency subcategory to substantiate the interdependency theme were culled from the following participant interview excerpts:

- “Business needs to be up and running, and be profitable again – for business and community. And their people need to start making money again, it’s all symbiotic” (IQ12, NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology).
- “Resiliency; both business and community; because we live and work where we take care of those that take care of us” (IQ19, NOL, 2: Pr. (F-P, Lg.); Oil Refining).
- “Part of the community, self-interest, ulterior motives - of business that needs to operate locally and internationally; for if employees cannot get to work, the

business would suffer” (IQ19, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

- “If she helps us get back to business as usual, then she helps me get my business back to business - ecosystems – interdependent resiliency” (IQ21, DOR, 2: Pr. (N-P (Edu), Lg.); Public Safety/Emergency Management).
- “Interdependency between my company and the community” (IQ31, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).
- “Moral obligation: It’s a two-way street...if they can influence politics then private sector should influence community in right way” (IQ32, CHS, 7: Pu. (State); University/Research).

Additional references from both data sources to substantiate the interdependency theme are listed below. Properties and dimensions for each of category and subcategory (*Inc_BusCon*, *Inc_BusRes*, *Inc_ComRes*, *Inc_Cul*, and *Inc_SLM*) are italicized as follows:

(*Inc_BusCon*): “Business partner interdependency” (IQ19, PED, 8: Mil./Pr. (N-P); Marine Transportation).

(*Inc_BusRes*): “Business survivability of industry and adjoining industry” (2): (IQ32, DOR, 2: Pr. (N-P (Edu), Lg.); Public Safety/Emergency Management), (IQ33, PED, 6: Pu. (Cit.); Public Safety/Fire).

(*Inc_ComRes*): “Sector interdependence in community (port) resiliency” (2):

- “We have to understand that ...looking at the resiliency of our ports and the bottom-up solution, where local communities, military installations and port

complexes operate with great interdependence and independence, dependence on one another is absolutely essential” (IQ11, NCR, 5: Pu. (County); Public Safety/Fire), (ReadyCommunities Partnership, 2010, Senate, p. 12).

(Inc_ComRes_ROI): “*Return on investment for community resiliency (ROI)*” (3): (IQ24, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness), (IQ24, NCR, 4: Pr. (N-P, Sm.); Logistics/Supply Chain), (IQ24, PED, 7: Pu. (County.); Emergency Operations).

(Inc_Cul): “Interdependency of friends and neighbors” (2):

- “If you only think about yourself and put your own house in order first does not do any good if your friend and neighbors are not put back together” (IQ24, CHS, 7: Pu. (State); University/Research).
- “You learn the interdependency as quick as anything, because the neighbor you fought with one day may be the one that pulls you out of a snow bank the next” (ReadyCommunities Partnership, 2011, Miami, p. 13).

(Inc_SLM): (a) every petrochemical plant along the river uses the water to cool the plant; (b) coordination between government and the private sector; (c) information sharing and readiness; (d) supply chains have to be interdependent; (e) walk through the interdependencies, you'll begin to uncover a lot of things most people don't consider; (f) it's about that interdependency”:

The aforesaid properties and dimensions of the scope, logistics, and management subcategory to substantiate the interdependency theme as a perceive incentive were culled from the following excerpts:

- “Every petrochemical plant along the river uses the water to cool the plant, use that water for the cooling process, all the jet fuel for the fighter planes... (if) the fiber optic link . . . shut down, could crash the entire global system” (NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).
- “Have we had . . . coordination between the Department of Energy with our domestic energy suppliers . . . ensuring the continuity with the prioritization of restoration/resiliency/recovery” (ReadyCommunities Partnership, 2010, Senate, p. 20).
- “Information sharing goes along with interdependencies... In a pre-event... understand the capabilities . . . if and then after the event occurs, that info has . . . to be readily available” (ReadyCommunities Partnership, 2010, Senate, p. 23).
- “International, national, regional, local supply chains have to be interdependent, Maritime Transportation Security across all modes” (ReadyCommunities Partnership, 2010, Senate, p. 28).
- “Interdependencies . . . what the Coast Guard does . . . critical infrastructure, key resource assessments. We do the same thing in the (National) Guard. There are synergies there that could be used . . . as you walk through the interdependencies, you'll begin to uncover a lot of things most people don't consider” (ReadyCommunities Partnership, 2010, Senate, p. 28).
- “Haiti . . . great example. The ability of the U.S. military. The Air Force went in . . . to get the airfield open . . . needed the Coast Guard to help lead the way

. . . to open the port, Navy ships, but also private sector ships. So, it's about that interdependency” (ReadyCommunities Partnership, 2010, Senate, p. 32).

Interdependency theme – perceived barriers. References from both data sources to substantiate the ‘interdependency’ theme, as a perceived barrier under the (Bar_HR) and (Bar_SLM) subcategories, are shown with properties and dimensions as italicized:

(Bar_HR): “Specialists and politicians needed who understand interdependency of supply chain” (2): (IQ14, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace), (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace)

(Bar_SLM): “Interagency communications and coordination for actionable information”:

- “Interdependency, interagency communications and coordination. That gets to the heart of our major challenge, and that is obtaining and disseminating actionable information” (ReadyCommunities Partnership, 2010, Senate, p. 23).

Return on investment (ROI) theme. Return on investment is one of the perceived incentives that was explored with the dissertation interview participants and was also highlighted, without prompting by the moderator, by participants in the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative symposia. The ROI theme is reflected in the following properties and dimensions from the following excerpts. The excerpts are provided in their entirety to not diminish the context and relevance of what each participant wished to convey. Additionally, ROI in engagement and collaboration for community resiliency is one which merits further

consideration by private and public sector leaders responsible for risk management, security, finance, and operations.

ROI theme – perceived incentives. Excerpts from both data sources to substantiate the ROI theme, as a perceived incentive under the (Inc_Fin_ROI) subcategory are revealed with the following properties and dimensions: (a) *economic consequences of (Mississippi) river closure for one day is \$293 billion to the United States of America;* (b) *highly leveraged benefit for society - practical, social, financial;* (c) *ROI is cumulative value of what San Pedro Bay would lose if shut down (Los Angeles (#1 port), and Long Beach (#2 port) . . . the downside of a shutdown of this port for Tny period of time;* (d) *4:1 return for every dollar government invests in pre-disaster mitigation, 10:1 return for every dollar business invests in pre-disaster mitigation, 60:1 return on investment for social programs for preparedness;* (e) *it is insurance, will cost more later than now;* (f) *an ounce of prevention = four pounds of cure;* and (g) *the sooner you can return to normal, the less likely the disaster will have an impact on your bottom line;* (h) *for every dollar we spend pre-disaster, we save \$12 post-disaster:*

- “Over a 290-mile stretch of the Mississippi River constitute the largest port system in the world. . . .The economic consequences of (Mississippi) river closure for one day is \$293 billion to the United States of America. And that number grows exponentially after the fourth day due to the law of supply and demand” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 23).
- “They waived all ATM fees in the affected area (IQ12) in Japan . . . a great example of doing the right thing, did not ask for anything back. . . . The idea is

to illustrate why the corporations can come up with in-kind donations that have a highly leveraged benefit for society - practical, social, financial” (IQ12, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software).

- We are a major economic engine in this region. Have 10s of billions of dollars of cargo moving through here every year, employees and ripple effect, 30,000 folks tied to port for jobs, expand out even more, have calculated that about \$1 billion a day lost for every day that the Port of Long Beach is out of commission . . . according to five year old study by a school of policy that looks at supply chain, economic impact of complex down . . . so ROI is cumulative value of what San Pedro Bay would lose if shut down (Los Angeles (#1 port), and Long Beach (#2 port) . . . the downside of a shutdown of this port for any period of time. (IQ24, PED, 3: Pu. (Ci) - Landlord Port)
- In the Congressional Study published in 2005 on the benefits of investing in pre-disaster mitigation . . . for every dollar that government invests in pre-disaster mitigation there is a \$4 return. But in business, we know initially that the ratio is 10:1 – pre-disaster mitigation. When we did our research about preparing for structural mitigation (building codes) and nonstructural mitigation (education, people buying into community program), we found the benefit ratio on these programs 60:1 (benefit/cost ratio – for social programs structured for preparedness. (IQ23, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software)

- “Cost of not doing their own security, causing death and damage, the costs of providing one’s own security will far outweigh the impact of not investing. If this goes wrong... it is insurance, will cost more later than now” (IQ19, NCR, 7: Pu. (Mil.); Maritime/Transportation).
- When doing preparedness measures inside (major corporation), instituted new ways of looking at risk within our own company, getting a better handle on vulnerability, better plan on mitigating risk...our savings were in the \$10-20 million range per year . . . The number of insurance claims went down, and the dollar amount of the claim went down, huge win for insurance underwriter, corporation, and customers. In doing risk assessment of the port, are there areas which could be more enforced – storm surge, power outages, etc. Look at those risks, decide what you can do to mitigate those risks . . . not just the structure, but how to prepare the people. Are there policies and practices that can be implemented to reduce risk and improve efficiency the exact same thing. An ounce of prevention = four pounds of cure. (IQ30) PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software)
- “Really powerful question, the sooner you can return to normal, the less likely the disaster will have an impact on your bottom line. That is the trick, to figure out the how and they why so that you don’t have a negative impact” (IQ30, CHS, 7: Pu. (State); University/Research).

- “Disasters are inevitable. We need to consider this challenge given that we save approximately \$12 post-disaster for every dollar we spend pre-disaster” (ReadyCommunities Partnership, 2013, New Orleans, p. 9).

Two additional excerpts to substantiate the ROI theme, as a perceived incentive under the (Inc_BusCon) subcategory are shown below with the following properties and dimensions: (a) Each party’s return on investment is the ability to keep the business model going (public agency’s is to deliver their service), (b) Can you accept a shut down in the port?, (c) The real driver, each party’s return on investment is the ability to keep business model going (public agency’s is to deliver their service).

- “We are a critical element in the American model...so how critical to keep operating; *each party’s return on investment is the ability to keep the business model going (public agency’s is to deliver their service)*” (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “Comes down to a business model...*can you accept a shut down in the port?*. . . . 40% of the American economy as its customer . . . shutting down two ports (Long Beach, Los Angeles) . . . we are critical element in American model . . . so how critical to keep operating” (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “One more example in its initial creation 2007, the California Maritime Security Council under (former governor) looked at business continuity models; to understand how can California work together among ports, terminal operators, and so forth to continue to move business as quickly as

possible . . . the real driver, each party's return on investment is the ability to keep business model going (public agency's is to deliver their service) . . . that's what is required and that is what drives each organization to participate/collaborate with the other" (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

Within the liability and risk subcategory (Inc_LR); one participant remarked about a perceived incentive with the following property and dimension; (a) Our decisions have consequences... be willing to invest:

- "Our decisions have consequences and that is what leadership is about and you have to be willing to invest" (IQ33, CHS, 7: Pu. (State); University/Research).

Finally, one excerpt to substantiate the ROI theme through a perceived barrier in the (Bar_Cul) subcategory is as follows with the following properties and dimensions; (a) hard for the private sector to grasp because ROI is intangible:

- "Viruses change so rapidly, deforestation impacting on habitat... (truly the butterfly effect)... hard for the private sector to grasp because it (ROI) is intangible" (IQ20, CHS, 7: Pu. (State); University/Research).

Grounded Theory

The emergent grounded theory from this study; I love/support cross-sector collaboration but for sector-silo bias emerged from four predominant themes; interdependency, return-on-investment, mutual mission, and sector-silo bias. As a

function of the grounded theory, I propose the companion applied mutual mission theory as described below.

Within the context of the grounded theory and companion applied mutual mission theory, the public and private sector's community and regional-level interest in cross-sector collaboration is fueled by various perceived incentives including interdependency between sectors and between organizations for resources and resiliency if not survival. The study also revealed the interdependency between business continuity and community resiliency. Additionally, return-on-investment in military base and port community resiliency is a function of time, resources and enlightened leadership applied to cross-sector collaboration for military base and port community resiliency.

All the while, interdependency between sectors must be viewed with respect to the greatest perceived barrier, sector-silo bias, as it undermines the potential for steadfast commitments to cross-sector collaboration and implementation of mutual mission(s). The importance of addressing the greatest perceived barrier to cross-sector collaboration; sector-silo bias; is underscored by this interview participant remark:

Leaders need to understand organizational bias (cultural) (as it impacts effective collaboration) and to study collaboration (government to private sector, public to public) - leaders need to call it out, to say it exists and to say we need to overcome it in whatever the objective otherwise the chances of failure in service, are greater - (for the people we are serving), will be less than our intent. (IQ33; NCR, 5: Pu. (County); Public Safety/Fire)

While distrust commonly surfaces as the impediment to cross-sector collaboration, lack of knowledge and fear may be at the root of the bias and any associated and perceived distrust. As noted below, an interview participant in the Long Beach case stated, “The greatest barrier - a lack of trust, really relates to lack of knowledge regarding capabilities and intentions of the private sector in working with the general public and government in helping to prepare for and respond to critical events” (IQ34G, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software).

Indeed, overcoming sector-silo bias at the sector, institutional and or organizational level is important as “trust impacts speed things getting done” (NOL, 2: Pr. (F-P, Lg.); Oil Refining). Also, as stated by another interview participant, “There is skill and a tolerance to collaborating. . . . you have to say, I cannot do this by myself . . . better collaboration will result in better outcomes” (IQ33, NCR, 5: Pu. (County); Public Safety/Fire).

Applied mutual mission theory. I posit the mutual mission theory as a companion applied theory to the grounded theory from this study; I love/support collaboration but for sector-silo bias. Based on the mutual mission theory, mutually valued initiatives are intentionally developed through cross-sector collaboration while overcoming degrees of sector-silo bias at the community or regional level and are acknowledged for their positive impact in reinforcing the response capacity and fortifying the resiliency of the strategic military base and port community. Existing mutual missions can be further implemented and institutionalized through cross-sector collaboration with incentives. Incentives will include necessary funding to foster existing

mutual missions or set-asides to discover and incubate new mutual missions along with supporting policy and administrative measures to support said mutual missions.

Application of incentives under the guise of the mutual mission theory applies to both existing and new collaborative initiatives. Without the incentives, the probability of institutionalizing and replicating the mutual mission beyond its first and local phase may be difficult if not impossible. Institutionalization may involve replicating the mission in another region, after first building the prototype, establishing the network, or conducting a pilot initiative.

I define a mutual mission in its literal sense as a specific initiative for which community or regional-level private and public sector leaders have agreed to collaborate for mutual benefit and in so doing may fill a gap(s) in strategic military base and port community resiliency while working around or through obstacles to overcome degrees of sector-silo bias. Indeed, as highlighted below, the interview participants and symposia participants discussed collaborative initiatives, encapsulated in this study as examples as mutual missions.

Based on the mutual mission theory, existing and or new extraordinary community-level mutual missions are developed through cross-sector collaboration with incentives, and integrated in to the plans of local public, private, military, and community sector decision-makers, policymakers and operations managers. In the process of collaborating to develop the extraordinary mutual mission(s), shades of sector-silo bias and other obstacles may be overcome. Ultimately, the response capacity of the strategic

military base and port communities can be proactively reinforced proactively through mutual missions, leveraging and in the context of the applied mutual mission theory.

Local leaders and policy makers might ensure the successful development and or replication of mutual missions, by first acknowledging extraordinary mutual missions with a consistent track record and then provide or develop incentives, such as public-private funding or public grants, to institutionalize if not replicate the mutual mission.

In summary, the applied mutual mission theory acknowledges and encourages collaboration between sectors, organizations, and leaders in the community while overcoming degrees of sector-silo bias to develop existing or incubate new extraordinary mutual missions, by providing incentives to institutionalize those that reinforce the response capacity and fortify the resiliency of America's strategic military base and port communities.

Pointing to the conceptual similarity, Swartz, as cited by Austin (2000), presented the notion of "mutual mission relationships". In a journal article about collaboration between nonprofit organizations and business, Austin (2000) provided context for mutual mission relationships wherein "the partners reached new levels of integration of their missions, organizations, and activities" (p. 79). In comparison, the context for the applied mutual mission theory is a strategic military base and port community's capacity and potential for resiliency and how that community might best prepare for a large-scale or national crisis by acknowledging extraordinary and mutually valued missions and providing incentives to institutionalize if not replicate the mutual mission(s) while overcoming degrees of sector-silo bias.

Examples of mutual missions from each of the six cases, with the potential to become extraordinary are cited herein. Mutual missions have the potential to become extraordinary when local public, military, private, and community sector stakeholders collaborate to stand them up out of vision and need to reinforce if not enhance strategic military base and port community resiliency and when incentives are provided to institutionalize them and as a means of overcoming sector-silo bias. Incentives may include law, policy, administration, and financial set-asides.

Extraordinary mutual missions identified within this study may have been a subconscious or deliberate workaround to existing sector-silo bias at the sector or other silo level including institutional, organizational, or situational.

Examples of mutual missions in each of the six cases are cited below.

Mutual mission theme. Mutual mission is a theme and perceived incentive which arose from both the participant interview responses and the RCP symposia summaries across the cases within the perceived incentive category and various subcategories. An interview participant in the New Orleans case described the objective of a public and private sector mutual mission:

(Inc_ComRes):

The federal government, state agencies, port authorities and private industry work together. All operations in this mix network to ensure their individual mission is incorporated into the overall mission. Each organization checks to see what resources it has, what resources it does not have and prioritizes . . . for the benefit of all organizations, to maximize achievement of the mutual goals and objectives

of the (respective) agencies. (NOL, 10: Pu. (State); Public Safety/Port Law Enforcement)

Mutual mission theme - properties and dimensions. In the manner of axial coding, properties and dimensions of the mutual mission theme are as follows:

Properties and dimensions of mutual mission perceived incentives are italicized as follows: (a) role (incentive) for the private sector with a public entity ...to bring resources quickly to help rebuilding process . . . to get port back up and running; (b) Building relationships at area of operation that is manageable . . . building those trustful relationships to lessen burden and increase effectiveness of whatever private sector is providing; (c) The only way we will get this done is if we work with everybody...we cannot do it by ourselves; (d) Function as integrated team... accomplish the task in a seamless manner; (e) Federal grant enabled the prototype design for the fireboat;

Properties and dimensions of the mutual mission theme, in the context of perceived barriers or what must be done in the process, are shown as follows: (a) Determine how to maintain collaborative relationships through a mission or training/exercises, (b) Meet with defined activity and agenda to get to know each other; (c) practice using assets . . . it should be an ongoing effort rather than on/off . . . private sector should run it.

Mutual mission theme excerpts – concept and examples. The mutual mission concept and examples were referenced by dissertation interview participants and ReadyCommunities Partnership Strategic Military Base and Port Community Resiliency Initiative symposia participants.

The following excerpts from participant interviews are listed and coded as perceived barriers or perceived incentives within various subcategories:

- (Bar_KE): “Preparedness and collaboration is ongoing. Determine how to maintain collaborative relationships through a mission or training/exercises” (IQ11, PED, 4: Pu. (Cit.); Law Enforcement).
- (Bar_SLM): “Meet quarterly for a day to develop trust: Best way to stand up cadre of crisis response officers (CROs) – need to meet quarterly basis for a day with an agenda and an activity, defined activity/agenda where the leadership get to know each other, the team leaders get to know and trust each other” (IQ35, CHS, 7: Pu. (State); University/Research).
- (Bar_SLM): “Practice using assets . . . it should be an ongoing effort rather than on/off . . . private sector should run it” (IQ13), NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology.
- (Inc_ComResPorts): “A role (incentive) for the private sector with a public entity, it is a role to bring resources quickly to help rebuilding process . . . to get port back up and running” (IQ12, MIA, 3: Pu. (County); Landlord Port).
- (Inc_Cul): “Building relationships at area of operation that is manageable, building those trustful relationships to lessen burden and increase effectiveness of whatever private sector is providing” (IQ12, NCR, 5: Pu. (County); Public Safety/Fire).
- (Inc_Cul): “In order to function as integrated team, must trust each other and trust that when actions are required by individuals they will be able to

accomplish the task in a seamless manner” (IQ14, CHS, 7: Pu. (State); University/Research).

- (Inc_Cul): “We tend to be those collaborators and innovators...if we did not, we would be disaster as an agency...the only way we will get this done is if we work with everybody...we cannot do it by ourselves” (IQ19, NCR, 7: Pu. (Mil.); Maritime/Transportation).
- (Inc_Fin): (Inc_Fin_Funding_FedGrantEnabledPrototype). “A federal grant enabled the prototype design for the fireboat, brought to production with private sector funding” (IQ21, CHS, 2: Pr. (F-P, Sm.); Maritime/Transportation).

Mutual mission examples from RCP symposia. Examples of successful mutual missions as described in the ReadyCommunities Partnership symposia summaries are listed as follows; with the properties and dimensions of the perceived incentives listed as follows: (a) Provide for the planning, the preparation, the prevention, the protection and responsive recovery of major incidents; (b) Enhance public safety for other ports across the United States; (c) Ensuring that the region is best prepared for the immediate post-storm response operations; (d) Work together (to) provide resources; (e) Info-sharing; (f) Talk over issues affecting the port; (g) Enhance port readiness;

- All Partners Access Network (APAN System): “We’re trying to do is replicate that model where we bring folks from the federal, state, local, private sector together in a shared mission space similar to the APAN type of system used at Department of Defense (DOD) to provide for the planning, the preparation,

the prevention, the protection, response and recovery of major incidents”

(ReadyCommunities Partnership, 2010, Charleston, p. 10).

- Joint Task Force Seven (JTF7): “JTF7 is a maritime law enforcement task force created by the seven Louisiana Sheriffs surrounding the Greater Baton Rouge Area. JTF7 has partnered with the Port of Greater Baton Rouge, the Coast Guard, and the private sector industry to protect the lives and the vital infrastructure of the Greater Baton Rouge area . . . JTF7 hopes to serve as a model of how cooperation, communications, and collaboration can enhance public safety for other ports across the United States” (ReadyCommunities Partnership, 2013, New Orleans, p. 11).
- Port Coordination Team (PCT): “The PCT serves as the eyes and ears of the port community. Their guidance is essential to the preparation and response for major weather events, ensuring that the region is best prepared for the immediate post-storm response operations” (ReadyCommunities Partnership, 2013, New Orleans, p. 13).
- Miss-Lou Cross-River Regional Initiative: “In 2011, we had the flood of the Mississippi River. And we were able to join together on both sides of the river to bring in the appropriate leaders to talk about how we (Miss-Lou Initiative) could work together (to) provide resources. So, because we had this alliance, we were able to build up enough trust among each other to successfully fight the flood” (ReadyCommunities Partnership, 2013, New Orleans, p. 28).

- Project SeaHawk: “We are establishing a link with the State Fusion Center System...info-sharing” (ReadyCommunities Partnership, 2010, Senate, p. 25).
- Baltimore Port Alliance: “Business administrators meet every second Friday of the month, just to talk over issues that are affecting the port” (ReadyCommunities Partnership, 2010, Senate, p. 24).
- Savannah Readiness Council: “All hazard preparedness, not stovepipe plans. ...enhances port readiness” (ReadyCommunities Partnership, 2010, Senate, p. 25).

Additionally, properties and dimensions of tabletop and field exercises as a type of a mutual mission are shown as follows, followed by the corresponding symposia excerpts: (a) better prepares us if the real thing happens, you're ready to quickly respond, recover and, reconstitute the port; (b) plan for natural and manmade disasters; (c) find out your interdependencies... what data could be gathered; (d) understanding of how the process really works, and keep talking are the most important things to remove barriers:

- “Conducting tabletop exercises, knowing your partners’ capabilities and strengths better prepares us if the real thing happens, you're ready to quickly respond, recover, and reconstitute the port” (ReadyCommunities Partnership, 2011, Miami, p. 21).
- “Customs and border patrol, we conduct yearly conferences to plan for hurricanes and all natural and manmade disasters. Throughout the year, we conduct tabletops and field exercises for hurricanes, mass migration,

radiological threats, and terrorist threats” (ReadyCommunities Partnership, 2011, Miami, p. 24).

- “And from a governor’s perspective, the least done is that tabletop and actual demonstration exercise where you go through a scenario... You find out your interdependencies... what data could be gathered... put it into a system to analyze and model. So, you can say if this happens then that would be the result and here’s where we’ll intervene” (ReadyCommunities Partnership, Miami, 2011, p. 31).
- “So I think that the education and the understanding of how the process really works, and just keep talking are the most important things to remove barriers” (ReadyCommunities Partnership, 2010, Senate, p. 19).

Participant Interview Results

In and of themselves, the predominant themes and grounded theory provide a clear and pronounced outcome for this study. However, additional results produced from the qualitative one-on-one interviews and supplemented by the symposia summaries is also provided to answer the research question (RQ1) and subquestions.

Research Questions

RQ1 and subquestions are stated again as follows:

RQ1. What are the perceived incentives and barriers to private sector collaboration with the public sector for preparedness and response to provide select services or resources for the first 72 hours of a large-scale or national crisis, thereby reinforcing if not augmenting the existing response capacity?

SQ1. “What are the perceived incentives and barriers to private sector collaboration with the public sector to develop a plan, program or system for caring for vulnerable or special needs family members or other dependents (i.e. frail elderly, those with access issues, disabilities) of responders and or critical sector employees so that the latter may remain on the job during the first 72 hours of crisis?”

SQ2. “What, theoretically and or practically, would motivate the private sector to collaborate or serve as a barrier to collaboration with the public sector to foster resiliency in one’s community during the first 72 hours? What is the greatest perceived incentive and greatest perceived barrier to public-private collaboration?”

Organization of the Results

In response to RQ1 and subquestions, the results are presented through responses to five groups of relevant interview questions as shown below and summarized in Table G1, *Interview Questions Posed to Answer Research Questions*:

- RQ1 preliminary information. Perceived threats, resource limitations, response capacity concerns, other ways private sector assets or expertise might support the first 72-hour response (IQ1, IQ7, IQ14, IQ17).
- RQ1 perceived incentives and perceived barriers. Perceived incentives and perceived barriers relative to the private sector’s reinforcement of the local response capacity in the first 72-hour response through the provision and incorporation of assets, expertise and or other private sector contributions (IQ11, IQ12, IQ13, IQ19, IQ20, IQ21, IQ27, IQ31, IQ32).

- SQ1. Two interview questions were posed after each interview to review or understand the participant's greatest perceived incentive (IQ33) and greatest perceived barrier (IQ34) to private sector engagement and collaboration for strategic military base and port community resiliency.
- SQ2. Interview questions within this group were posed to understand perceived barriers and perceived incentives or extent of willingness to care for family or dependents (including vulnerable/special needs/disabled individuals) of emergency responders (ER) and critical sector employees (CSEs) (IQ8, IQ9, IQ9B, IQ9C, IQ10, IQ15, IQ16, IQ28, IQ29 and IQ35).
- Return on investment (ROI). Interview questions within this group were posed to understand perceived incentives to invest in cross-sector collaboration and private sector engagement (IQ23, IQ24, IQ25, IQ26, IQ30 and IQ31).

Axial Coded Data

Data resulting from participant responses to RQ1 and subquestions were coded in the axial manner as reflected throughout the results. I developed and maintain an excel sheet on my computer with the axial coded data for all interview questions and responses. In brief, the coding categories and subcategories were developed to summarize perceived incentives and perceived barriers. The data is organized by interview question and coded participant response (category, subcategory, properties and dimensions), case and participant number and sector.

Finally, relevant data from the six ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative symposia summaries is provided as a

supplement to RQ1 and RQ1 subquestion results as well as to validate the predominant themes identified from the interview participant responses.

Additionally, symposia excerpts were identified for cross-case analysis including the symposia participant remarks about the impact of large-scale crises, the September 11, 2001 attacks and Hurricane Katrina, on emergency planning and collaboration.

Results: RQ1 Preliminary Information (Threats, Limitations, Concerns)

Probable threats (IQ1), resource limitations (IQ7) and response capacity concerns (IQ14). Participant responses to four preliminary interview questions serve to set the stage for further understanding of the perspectives of the participants. A summary of the responses to IQ1 (probable large scale threats), IQ7 (resource limitations in the first 72 hours) and IQ14 (response capacity concerns in the first 72 hours and IQ27 (other ways in which private sector assets/capabilities could support the first 72-hour response) is provided as follows.

Probable large-scale threats (IQ1). Interview Question 1 (IQ1) was posed to participants as follows: “What types of large-scale natural or man-made crises has your community experienced or do you anticipate that your community might experience?”

Participants from all six cases replied to the interview question (IQ1) about their perception of the most probable large-scale threats in their geographic locale. Precisely, 31 participants replied; (CHS:5 participant responses; DOR:4 participant responses; MIA:4 participant responses; NCR:4 participant responses; NOL:8 participant responses; PED:6 participant responses); citing probable threats including terror attacks (on people at events, buildings, waterways, critical infrastructure including the electrical grid) and or

natural disasters (including extreme weather (hurricanes, and or other), earthquakes, fires, and or oil spills; impact to the port critical infrastructure, waterways, roads, and power distribution. Primary categories which emerged for this interview question include natural disasters, attacks, and other catastrophes.

Resource limitations in the first 72 hours (IQ7). Interview Question 7 (IQ7) was posed as follows: “What type of resource limitation(s) in the first 72 hours concern you the most?”

IQ7 results. A total of 39 participants from all six cases replied to the interview question (IQ7) about most concerning resource limitations (CHS:7 participant responses; DOR:5 participant responses; MIA:3 participant responses; NCR:7 participant responses; NOL:9 participant responses; PED:8 participant responses); citing the following resource limitations or concerns in the first 72 hours following a large-scale crisis.

Notably, interview participants from all six cases cited the need for highly specialized individuals with knowledge of the incident command system to support responders and or the work of critical infrastructure employees:

- “Trained people in the first 72 hours - under Incident Command System, need trained people in the first 72 hours” (IQ7, CHS, 3: Pr. (N-P, Sm.); Chaplaincy/Family).
- “Trained people, subject matter experts who are willing to engage in response (which is not necessarily part of what they already know): Hazmat teams and resources, highly specialized architects such as naval architects, structural

engineers with knowledge of casualty mitigation, and attorneys who specialize in maritime law” (IQ7 PED, 6: Pu. (Cit.); Public Safety/Fire).

Overall, in response to IQ7, the first 72-hour concerns cited include personnel (sufficient numbers of essential personnel as some may not be able to report to work), trained responders (normally 2/3 are off duty), and highly specialized/trained people to support responders (with knowledge of Incident Command System; communications experts/operators, medical providers, architects, engineers, attorneys (maritime law), hazmat teams, logistics management (for food, water, lodging), vehicle/equipment operators, trainers, etc.), essential personnel/responders potentially conflicted with duty to family, and care for critical infrastructure families.

Primary subcategories of the concerns (perceived barriers) which emerged in the response to this interview question include consumables (water, food); provisions (fuel, lodging); equipment (generators, other); infrastructure (transportation, communications technology, power); and people, trained in the Incident Command System; with subject matter expertise needed during response including maritime law, architecture, engineering, equipment operators, caregiving for critical sector employees, security, logistics management (food, water, lodging), and trauma and hazmat.

Aside from water (potable and for air conditioning), food, power and fuel, trained people with specific areas of subject matter expertise required for response and business continuity was cited as the greatest resource limitation or concern in the first 72 hours following a large-scale or national crisis.

Other resource concerns cited include sole reliance on one vendor, local vendor impact, scarcity of resources, resource issues born out of two or more major concurrent crises, the federal government's inability to respond everywhere at once, knowledge of where to go for help, recovery only versus a preparedness and response mindset, and the necessity of trust and cross-cultural understanding. Indeed, the concern and need for trained people during response, including responder support, points to and underscores the need and opportunities for increased private sector collaboration and engagement.

Response capacity concerns in the first 72 hours (IQ14). Interview Question 14 (IQ14) was posed as follows: "What concerns do you, your organization or community have about ensuring that the existing local first response capacity can be sustained in the first 72 hours?"

IQ14 results. Across the six cases, a total of 30 participants across all six cases replied (CHS:5 participant responses; DOR:4 participant responses; MIA:3 participant responses; NCR:3 participant responses; NOL:8 participant responses; PED:7 participant responses); citing response capacity concerns in the first 72 hours following a large-scale crisis.

Most participant responses to the interview question (IQ14) were presented as concerns and are therefore were coded as barriers rather than incentives. Primary coding subcategories which emerged from participant responses to this interview question (IQ14), given two or more responses in at least one case, include culture (post 9/11 complacency, integrated teams); finance (funding); human resources (individual stamina,

emergency responder resiliency, emergency responder support), and knowledge and education (training).

Emergency responder resiliency and emergency responder support were cited the most by participants in the New Orleans (9) and San Pedro (8) cases. The concern for responder resiliency includes the period just following the first 72 hours of a large-scale crisis, family safety, and responder victimization as a function of the crisis on the responder's geographical area. The concern for responder support is rooted in the need for subcontractor redundancy and trained specialists in a variety of disciplines including supply chain, power sources and interdependencies, single points of failure, logistics, and bio-chemical response. Crisis response training concerns include training for politicians, the responder's ability to operate buses for evacuation, civilian and critical sector employee crisis response, and restarting training with the military. Participants in the San Pedro response community discussed the tipping point based on the number of responders and trained specialists in both the public and private sectors who are needed to reinforce and or augment the existing response capacity.

The need for private sector expertise to support or augment the local response capacity during crisis response and the importance of avoiding sole reliance on a single vendor are reflected in these "as is" remarks by IQ7 interview participants:

- "Private sector (solution example) – make your homes available to first responders (now possible with Good Samaritan law" (IQ14) DOR, 1: Pr. (F-P, Lg.); Maritime/Transportation).

- “Here at (X), there are contracts in place . . . we may have 3 contracts in place (for Y), so if one company cannot supply service . . . we have alternatives . . . (redundancy on redundancy)” (IQ14, DOR, 2: Pr. (N-P (Edu), Lg.); Public Safety/Emergency Management).
- The private sector probably employs 500,000 National Guardsmen (NG) nationwide (air/army); – of that - 400K of those are part time guardsmen weekend warriors – working in community with full-time jobs – private sector has tie to guard that they may not know – is your chief of security also a guardsmen who has to leave. . . . Has the employer thought through what to do without the employee who is also a National Guardsman? (IQ14, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness)
- “Lose large numbers of responders if a large-scale crisis, but with regional response concept, (but) can shore up local response capacity drawing support from surrounding areas or become victims. A regional response would include the private sector” (IQ13 for IQ14, NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).
- “*Responders may need expertise of private sector to respond – understand risks, that’s always the case*” (IQ14, PED, 3: Pu. (Ci) Landlord Port).
- “*Responders are not logistics experts. A great failure in response is the failure to understand logistics systems and their associated interdependencies, especially with politicians and agencies*” (IQ14, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

- “Need people who understand interdependency of supply chain, power systems. Understanding (every) single point of failure never done. For example; “power,” what drives power – numerous layers – do you have alternatives?” (IQ14, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).
- “External expertise shortage (number of trained specialists); need sufficient number of trained specialists who cannot be replaced by volunteers” (IQ14, PED, 6: Pu. (Cit.); Public Safety/Fire).
- “We don’t have enough first responders for the population of 10 million people. I am not sure of the tipping point (responders needed per population). In part, the tipping point depends upon personal preparedness” (IQ14, PED, 7: Pu. (County.); Emergency Operations).

Other ways private sector could support the first 72 hours (IQ17). Interview

Question 17 was posed to participants as follows: “Aside from caring for responder and or critical sector employee vulnerable special needs family member and other dependents, are there any other ways in which you envision that private sector or community organization assets and capabilities could support the public-sector response in the first 72 hours?”

Twenty-four participants across the six cases provided responses to this question. Participants highlighted ways in which the private sector that might provide to augment the public-sector response capacity in the first 72 hours: CHS (5 participants): The private sector provision of manpower for outreach and leadership, and for activating the crisis response officer (CRO)/private sector liaison role upon conducting the port damage

assessment; DOR (2 participants): The provision of hurricane resistant spaces and gas station fueling lanes; MIA (2 participants): The provision of water to cool network infrastructure, and sites for first 72-hour command and control operations; NCR (3 participants): Participation in response training, and care for critical sector employees; NOL (7 participants): Provisions (food, water, fuel, warehouse space, transportation), and expertise (visibility of maritime assets for evacuation); PED (5 participants): Fuel and lodging, technology (engagement of small and medium companies and providers) and critical infrastructure expertise.

Results: RQ1 (IQ11-IQ32); & SQ2 (IQ33/IQ34) – Incentives and Barriers

The results are provided in this order; RQ1 and subquestion 2 (SQ2) to understand perceived incentives and perceived barriers, RQ1 results relative to return-on-investment as a perceived incentive, and RQ1 SQ1.

Results for RQ1 SQ1 are shown as follows; revealing the private sector's interest in developing a plan to ensure that families and dependents of responders and critical sector employees are out of harm's way and have their basic needs met, thereby reducing conflict between duty to work and family in the first 72 hours.

Results RQ1. The answer to RQ1 is in part provided as a collective summary of the responses to the following group of interview questions (IQ11, IQ12, IQ13, IQ19, IQ20, IQ21, IQ27, IQ31 and IQ32). The overarching answer to RQ1 is shown below as a collective summary of all perceived barriers and perceived incentives for these nine questions. Following, each of these interview questions and their respective results are listed below.

RQ1 perceived barriers. Collectively, the following perceived barriers were cited by participants across the six cases in response to interview questions IQ11, IQ12, IQ13, IQ20, IQ27, IQ31 and IQ32. This summary of perceived barriers (Bar_) is based on 149 coded responses in the following eight subcategories (Cul, Fin, HR, KE, Lead, LR, PL, SLM), with counts shown given three or more instances of a property or dimension unless otherwise noted;

- Culture (12) - sector-silo bias (distrust between sectors (4), different sector motivations (3)
- Finance (19) – (documentation and contracts required for FEMA reimbursements (4), funding (9) – availability and who pays (7), funding architecture needed for collaborative requests
- Human resources (2) – responder support needed
- Knowledge and education (15) – don’t know whom to call (5), don’t know private sector available resources (3); tension between information-sharing and critical infrastructure security; private sector does not know how to fit into the incident command system; training and exercises needed (4)
- Leadership (4) – private sector and agency seats needed in emergency operations center, support from private sector management needed
- Liability and risk (27) – pre-crisis contracts needed (8); memorandums of understanding needed (6); protection from liability (8); including Good Samaritan laws needed; public sector use of private sector equipment;

indemnification without onerous paperwork; public sector to remain unbiased
avoid collusion

- Policy and law (16) – responses were singular and are listed as follows:
communities lack emergency powers provisions allowing emergency responders to operate in non-standard mode; federal impediment to using private sector resources in conjunction with federally funded assets, federal incentive lacking for private sector participation in strategic security task force; governance two legally separate jurisdictions; legal counterintuitive legal restrictions – need to shortcut contracting for critical supplies; martial law a private sector deterrent as in operational freedom; informal policy when lack of attention to resiliency until crisis happens, port TWIC (transportation working identification credential) prohibits private sector access of large retailer without an escort; private sector resources under unified command - state agency may use private sector resources whereas federal agency may be disallowed; fear of regulatory constraints; lack of understanding of legal restrictions
- Scope, logistics and management (50) – public sector leadership turnover (6); outside organization’s mission (3); public-private sector pre-coordination (4); and an array of other singular responses.

RQ1 perceived incentives. Collectively, the following perceived incentives were cited by participants across the six cases in response to interview questions IQ11, IQ12, IQ13, IQ20, IQ27, IQ31 and IQ32. This summary of perceived incentives (Inc_) is based

on 184 coded responses in the following eight subcategories (BusCon, BusRes, Cul, Fin, HR, KE, Lead, LR, PL, SLM) with counts shown for two or more instances of a property or dimension unless otherwise noted.

Perceived incentives within the subcategories of community resiliency (34), finance (38), liability and risk (18), and scope, logistics, and management (27) were cited more than the other subcategories as listed below:

- Business continuity (Inc_BusCon) (17) – Properties and dimensions for this subcategory include get commerce moving again; new revenue generation (3), get up and running (2); business continuity and community resiliency interdependency (4).
- Business resiliency (Inc_BusRes) – Properties and dimensions for this subcategory include ‘survival (4)’.
- Community resiliency (Inc_ComRes) (34) – Properties and dimensions for this subcategory include community duty/corporate good citizen/right thing (13); faster recovery (5); preserve tax base.

One participant stated that public-private collaboration facilitates port community resiliency through the quick provision of resources to support the response and recovery (IQ12, MIA, 3: Pu. (County); Landlord Port).

- Culture (Inc_Cul) (10) – Properties and dimensions for this subcategory include interdependency between resilient sectors; effectiveness of established partnerships and collaboration through unity of effort and purpose (5).

- Finance (Inc_Fin) (38) - Properties and dimensions for this subcategory include new business model based on customer revenue or government contracting (4); fill funding needs/gaps (6); reduced insurance premiums; public-private funding a critical port asset; tax deductions (15) for time served as private sector liaison or for participation in a public-private partnership, asset sharing through public-private partnership (2) or in-kind donations (2); and tax incentives (2).
- Human resources (Inc_HR) (1) - Properties and dimensions for this subcategory include emergency responder support (1).
- Knowledge and education (Inc_KE) (7) – Properties and dimensions for this subcategory include knowing who is in charge prior to a crisis; and training (4).
- Leadership (Inc_Lead) (9) – Properties and dimensions for this subcategory include public and private sector management support needed for public-private collaboration and engagement (7).
- Liability and risk (Inc_LR) (19) – Properties and dimensions for this subcategory include protection through Good Samaritan laws (4); private sector indemnification, hold harmless memorandums of understanding (5); insurance premium reduction for critical infrastructure owners when meeting security standards; risk mitigation (3).
- Policy and law (Inc_PL) (10) – Properties and dimensions for this subcategory include penalties for non-compliance with CFATS (Chemical Facility Anti-

Terrorism Standards); MTSA (Maritime Transportation Security Act) mandated drills; private sector participation could influence FEMA response policy.

- Scope, logistics and management (Inc_SLM) (27) – Properties and dimensions for this subcategory include mass rescue; best or better results achieved with private sector support (3); every resource needed during response; incremental expertise for response through the private sector; and limited government (city, tribal, local) capabilities.

Results SQ2 (IQ33/IQ34). The answer to SQ2 is provided by the responses to IQ33 and IQ34. Interview Questions 33 (IQ33) and 34 (IQ34) were posed as the final questions during the interview and in as much are a final statement about their “greatest” perceived incentive and perceived barrier for private sector engagement and cross-sector collaboration for strategic port community resiliency. The responses to IQ33 and IQ34 were perhaps the most revealing and or offer a concise summary in that the interviewee was prompted to state the greatest perceived barrier and the greatest perceived incentive.

While IQ33 and IQ34 alone may have sufficed to answer RQ1, the results for additional RQ1 interview questions are summarized to provide a broader and deeper set of data. Most of the RQ1 interview questions are variations of one basic question to understand perceived barriers and perceived incentives; and were posed to elicit any incremental responses. Participants positioned their response as a perceived incentive or perceived barrier even if they did not draw a distinction between the two questions, and thus the responses have been reported collectively. In response to IQ33 and IQ34, the

following perceived incentives and perceived barriers were highlighted by 22 and seven dissertation participants respectively across the six cases.

IQ33: “What would be the greatest perceived motivation (incentive) for your organization and or its leaders to collaborate with the public sector to foster community resiliency, particular in our nation’s strategic military base and port communities during the first 72 hours?”

IQ33 (perceived incentives). In response to IQ33, the following incentives were highlighted by 22 participants across six cases; within nine subcategories including business continuity, business continuity of the ports, business resiliency, community resiliency, finance, knowledge and education, leadership, liability and risk, and scope, logistics, and management:

Business Continuity (Inc_BusCon): Properties and dimensions of this incentive subcategory include (a) new revenue generation, (b) get up and running quickly, (c) sector interdependency (2), (d) enhanced continuity from community support, and (e) each sector realizes its return-on-investment (ROI) in collaboration for continuity, to keep the business models going.

In the words of an interview participant;

In its initial creation, in 2007, the California Maritime Security Council under the governor (Arnold Schwarzenegger), looked at business continuity models to understand how can California work together among ports, terminal operators, and so forth to move business as quickly as possible . . . *the real driver, each party’s return on investment is the ability to keep business model going* (public

agency's also to deliver their service) . . . that's what is required and that is what drives each organization to participate/collaborate with other. (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

Business Resiliency (Inc_BusRes): Properties and dimensions of this incentive subcategory include (a) survival (3), (b) survival of industry and adjoining industry, and (c) preservation of the organization's good reputation.

Community resiliency (Inc_ComRes): Properties and dimensions of this incentive subcategory include (a) being a corporate good citizen (3), (b) greater good (2), (c) good long-term reputation, and (d) greater efficiencies through public and private sector collaboration.

In the words of one participant who described greater efficiencies as an incentive:

- “Whole of community –strength of the synergy, potential for greater efficiencies and effectiveness through awareness, relationships, trust, and potential to share resources” (IQ33, NCR, 5: Pu. (County); Public Safety/Fire).

Finance (Inc_Fin): Properties and dimensions of this incentive subcategory include (a) monetary gain, and (b) return-on-investment.

Knowledge and Education (Inc_KE): Properties and dimensions of this incentive subcategory include (a) sharing of information and situational awareness, and (b) knowing who is in charge during a crisis.

Leadership (Inc_Lead): Properties and dimensions of this incentive subcategory include leading from the community with top-down support (pyramid approach to engagement).

In the words of one participant, “Government should promote and expect community assets rather than create another bureaucracy” (NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).

Liability and Risk (Inc_LR): Properties and dimensions of this incentive subcategory include indemnification of the private sector through streamlined MOUs, and risk mitigation through partner resiliency.

In the words of one interview participant, “Collaboration results in risk mitigation, a net positive if we) can prevent something from happening that would negatively influence my business. . . . and happy if we can help to keep the partner businesses going” (Q33, PED, 8: Pu. (Mil.)/Pr. (N-P); Marine Transportation).

Scope, Logistics and Management (Inc_SLM): Properties and dimensions of this incentive subcategory include a future wherein the government would promote community engagement versus establish a new bureaucracy, and to support Department of Defense (DoD) requirements in the first 72 hours with equipment outloads.

IQ34: “What would be the greatest perceived barrier for your organization to cross-sector collaboration for community resiliency in our nation’s strategic military base and port communities?”

IQ34 results (perceived barriers). The following perceived barriers were described by seven interview participants across three cases; as coded with properties and dimensions of ten subcategories.

Culture (Bar_Cul): Properties and dimensions of the barrier subcategory, culture; include (a) agency bias, (b) organizational bias, (c) group think, (d) crisis denial (2), (e)

distrust between sectors, (f) public sector silos, (g) public sector perceived resistance of private sector (2), (h) partnership complacency, and (i) different sector motivations (4).

In the words of an interview participant,

The private sector would love to help government – government frequently looks down at private sector – even though private sector has more capacity and capability. Government wants to own and fix problems. But communities should be working together with collective assets – instead pull alarm and wait for government to fix. (IQ33, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).

Financial (Bar_Fin): Properties and dimensions of the financial barrier subcategory include (a) concern with costs versus consideration for return-on-investment, and financial restraints without reimbursement; and (b) no incentive for competition, no profit-making in the interagency sphere.

In the words of one participant, “There is no incentive for competition, no profit-making in the interagency sphere (IQ33, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).”

Human Resources (Bar_HR): Properties and dimensions of the barrier subcategory, human resources, include (a) leadership turnover; and (b) lack of necessary emergency management experience.

Knowledge and Education (Bar_KE): Properties and dimensions of the barrier subcategory, knowledge and education; include (a) lack of knowledge regarding available private sector resources, capabilities, intentions, and programs; (b) the private sector’s

lack of knowledge regarding public sector protocols and how to fit within them (national incident management system (NIMs), incident command system (ICS) and multi-agency coordinating system (MACS)); (c) lack of relationships; and (d) lack of knowledge regarding who is in charge and whom to call during a disaster, and lack of knowledge regarding logistics chain interdependencies.

In response to IQ33, one of the dissertation participants described the barrier ‘not knowing who is in charge’:

Knowing who is in charge post disaster and pre-disaster, related to incident command (IC)... Nobody knows IC, nobody knows who is in charge – go to Sandy, Katrina – any major disaster, only the Carolinas came through with a robust response when they had the flooding – who is charge – local, state - really in charge, not theoretically. ...the issue is people do not know that they are in charge and do not know they are in charge to execute resources ...end up in spiral of indecision - look at Sandy, Katrina. (IQ33, DOR, 1: Pr. (F-P, Lg.); Maritime/Transportation).”

Leadership (Bar_Lead): Properties and dimensions of this barrier subcategory, leadership, include (a) lack of enlightened leadership and advanced planning, (b) need bottom-up, community-level engagement versus top-down management; and (c) need industry coordinating committees.

In the words of one participant, “The barrier is that we do not have a government that says let’s *promote collaboration between private-public starting at community level*

versus top-down. Guess what, disasters start at local level. Regional disaster will have local responders” (IQ33, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).

Liability and Risk (Bar_LR): Properties and dimensions of the barrier subcategory, liability and risk; include (a) the public-sector fear that the private sector will gain too much information; (b) private sector liability concerns in their interest to protect proprietary information and competitive advantage; and (c) public sector use of proprietary equipment and willingness or lack thereof to invest in collaboration while realizing that decisions have consequences.

One participant explained a perceived fear or risk which inhibits effective implementation of policy,

All policy; federal, state and local is supposed to incentivize. But it stops short of getting the private organization’s involved; due to *fear that private entities would gain too much knowledge* - so there needs to be a (perceived) benefit. (IQ33, PED, 5: Pu. (City); Landlord Port & (F-P) Aerospace).

Another interview participant stated, “*Our decisions have consequences* and that is what leadership is about and you have to be willing to invest” (IQ33, CHS, 7: Pu. (State); University/Research). Return-on-investment in the private sector’s engagement and collaboration for strategic military base and port community resiliency underlies the aforesaid remark.

Policy and Law (Bar_PL): Properties and dimensions of the perceived barrier subcategory, policy and law; include (a) the federal governance model in that confederation applications may be suitable for community resiliency; (b) regulatory

requirements for doing business with the Department of Defense; (c) regulatory impediments; (d) interagency doesn't exist; and (e) the lack of interagency laws and regulations.

In the words of one participant; *“Interagency doesn't exist, it is not an entity and most rules written severely limit or inhibit interagency”* (IQ33, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).

Another participant stated:

Politicians and lawmakers let interagency roll off their tongues – what they don't know is that interagency doesn't exist, it is not an entity and most rules written severely limit or inhibit interagency. There is no incentive for competition, no profit-making in the interagency sphere. *To allow interagency to work together freely seems natural to members, only thing holding back are laws/regulations”* (IQ33, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).

Scope, Logistics and Management (Bar_SLM): Properties and dimensions of the barrier subcategory, scope, logistics, and management, include (a) administrative barriers to receiving private sector resources or support, (b) that the organization has limited time and resources for external missions, or (c) is too small to compete for military contracts or support emergency responders (3) or (d) has just enough resources to sustain its own critical mission.

Results SQ2 – list version. Interview participant responses to IQ33 and IQ34 are summarized as follows. This coded list of perceived barriers and perceived incentives is also included in Table H1, *Greatest Perceived Barriers and Incentives*.

Perceived barriers and perceived incentives list (IQ33/IQ34). The greatest perceived barriers to cross-sector collaboration, according to participant responses to IQ33 and IQ34 include (a) crisis complacency or denial (3); (b) sector-silo bias (12); (c) financial (2); (d) human resources (2); (e) lack of knowledge about private sector resources available for response, (f) lack of relationships and knowledge of whom to call in the first 72 hours, and (g) lack of knowledge about public sector protocols (14); (h) need for enlightened leadership (8); (i) liability concerns (6); (j) governance model (1); (k) laws and regulations (5); and (m) scope and management (6).

Sector-silo bias and lack of knowledge about available resources and the right person to call during the first hours of a crisis were cited the most as the greatest barriers to collaboration between the public and private sectors.

The specific barriers and respective participant codes for each of the aforesaid responses to IQ33 and IQ34 are listed as follows:

- Laws/Regulations (5)
 - Appropriations law – 1 (NCR2)
 - Lack of interagency laws and regulations – 1 (NCR2)
 - Limitations on military help post crisis – 1 (NCR1)
- Crisis denial/partnership complacency (3):
 - Crisis denial – 2 (MIA1, CHS3)
 - *Partnership complacency – 1 (DOR2)*
- Financial (2):
 - *Lack of interagency incentive, competition or profit making - 1 (NCR2)*

- *Financial constraints especially if no reimbursements - 1 (NOL10)*
- Governance (1):
 - *Confederation vs. federal model may be suitable for some resiliency applications - 1 (NCR2)*
- Human Resources (2):
 - *Emergency management planners lack experience - 1 (NCR1)*
 - *Leadership turnover diminishes capacity to develop expertise - 1 (PED5)*
- Knowledge (14):
 - *Lack of knowledge regarding available private sector resources - 5 (CHS3, NCR5, PED2, PED3, PED4)*
 - *Politicians lack knowledge about logistics/supply chain interdependencies – 1 (PED5)*
 - *Lack of knowledge about public sector protocols (ICS) - 2 (PED4, PED6)*
 - *Lack of relationships and do not know whom to call during crisis – 6 (CHS1, CHS5, DOR1, MIA1, NCR6, NOL8)*
- Laws/Regulations (5):
 - *Appropriations law – 1 (NCR2)*
 - *Lack of interagency laws and regulations – 1 (NCR2)*
 - *Limitations on military help post crisis – 1 (NCR1)*
 - *Regulatory requirements for doing business with department of defense – 1 (NCR3)*
 - *Regulatory impediments – 1 (NCR2)*

- Leadership (8):
 - *Need community-level approach to cross-sector collaboration with government support – 2 (MIA1, NCR2)*
 - *Need to work more than one project at a time – 1 (CHS7)*
 - *Advance planning needed -1 (DOR3)*
 - *Enlightened leadership needed to support partnerships, investments – 3 (CHS7, NCR5, NOL8)*
 - *Industry coordinating committees needed – 1 (PED5)*
 - *Liability concerns (6):*
 - *Interest to protect private sector proprietary information – 3 (DOR3, PED7, PED8)*
 - *Public sector concerns when using private sector equipment -1 (PED5)*
 - *Public sector fear private sector will gain too much information -1 (PED5)*
 - *Uninvited volunteers can create problems – 1 (PED3)*
- Scope/Management (6):
 - *Ensure no administrative barriers to receiving private sector support – 1 (PED3)*
 - *Organization too small to compete for contracts – 1 (NCR3)*
 - *Organization too small, although critical, to allocate resources/time – 1 (MIA4)*
 - *Organization may not have resources for external support - 1 (NOL10)*

- *Time and resources are a concern - 1 (CHS7)*
- *Supply chain disruptions are a concern – 1 (PED4)*
- Sector-silo bias (12):
 - *Agency bias when aligned partisan - 1 (NCR7)*
 - *Group think – 1 (PED5)*
 - *Organizational bias - 1(NCR5)*
 - *Public sector bias - 1(PED4)*
 - *Distrust between sectors - 4 (CHS1, NCR2, NOL6, PED5)*
 - *Public and private sector motivations differ - 4 (NCR4, NCR5, PED2, PED6)*

The greatest perceived incentives to cross-sector collaboration, according to participant responses to IQ33 and IQ34 include (a) business continuity/port community resiliency (6), (b) business resiliency (3), (c) community resiliency (6), (d) financial (ROI) (1), (e) knowledge (2), (f) leadership (1), (g) logistics (1), and (h) risk management (2). Business continuity and port community resiliency were cited the most.

The specific incentives and respective participant codes for each of the aforesaid responses to IQ33 and IQ34 are listed as follows:

- Business continuity/community resiliency (6):
 - *40% of American economy is the customer of the port (PED5)*
 - *New revenue generation (NOL10)*
 - *Get up and running quickly, public-private sector interdependency (PED2)*

- *Enhanced continuity from community support (PED5)*
- *Public-private sector interdependency (NCR4)*
- *Each sector's realization of ROI in collaboration for continuity (PED5)*
- *Business resiliency (3)*
- *Survival - (1) DOR1:*
 - *Survival, good reputation – 2 (NCR1, PED2)*
- *Community resiliency (6):*
 - *Community duty, corporate good citizen – 3 (NCR2, PED2, NCR3)*
 - *Greater good – 2 (CHS3, NOL10)*
 - *Greater efficiencies through public-private collaboration (NCR5)*
 - *Financial (1):*
 - *Industry financial gain (ROI) (NOL6)*
- *Knowledge (2):*
 - *Situational awareness/information sharing - resources (1) (PED7)*
 - *Know the response leadership or take charge (1) (NCR6)*
- *Leadership (1):*
 - *Lead from the bottom-up with top-down/government support (1) (NCR2)*
 - *Logistics (1)*
 - *Support DoD requirements for military outloads first 72 hours (PED3)*
- *Risk management (2):*
 - *Private sector indemnification/streamline MOUs (NCR6)*
 - *Risk mitigation, partner resiliency (PED8)*

In summary, for the sake of community resiliency as it impacts security, safety, and the economy; the two greatest incentives for private sector engagement and cross-sector collaboration; business continuity and community resiliency along with the two greatest perceived barriers; sector-silo bias and lack of knowledge about available private sector resources and whom to call in a crisis merit consideration by risk and crisis managers.

Results: Comparison RQ1 and SQ2 (IQ33/IQ34)

RQ1 overall incentives with IQ33 greatest incentives. When comparing the overall perceived incentives as summarized for RQ1 (BusCon, BusRes, ComRes, Cul, Fin, HR, KE, Lead, LR, PL, SLM) to the perceived incentives cited by the IQ33 participants alone (BusCon, BusRes, ComRes, Fin, KE, Lead, LR, SLM); the results differ to the extent that the greatest incentives cited in response to RQ1 SQ2 did not include responses in three subcategories; culture, human resources, and policy and law.

It is curious that participants who responded to IQ33 did not cite perceived incentives in the policy and law subcategory. This may, but not necessarily, imply that knowledge, leadership and management are more fundamental to collaboration than policy.

RQ1 overall barriers with IQ34 greatest barrier. When comparing the overall perceived barriers as summarized for RQ1 (Cul, Fin, HR, KE, Lead, LR, PL) to the perceived incentives cited by the IQ34 participants alone (Cul, Fin, HR, KE, Lead, LR, PL, SLM); the results differed to the extent that the greatest perceived barriers cited in response to RQ1 did not include responses in the scope, logistics, and management

subcategory. Accordingly, participants did not view perceived barriers in the scope, logistics, and management subcategory as the greatest of all perceived barriers.

RQ1 results (IQ11-IQ32). Aside from the interview participant response to IQ33 and IQ34 about greatest perceived incentives and greatest perceived barriers, additional perspectives were provided through the responses to the additional nine interview questions; IQ11, IQ12, IQ13, IQ19, IQ20, IQ21, IQ27, IQ31 and IQ32.

The results are as follows:

IQ11. “What would incentivize you or your organization to further to engage in preparedness by collaborating with other entities and or sectors, to reinforce the local response capacity in the first 72 hours?”

IQ11 results. A total of 29 participants responded across six cases with perceived incentive and a few responded with perceived barriers. The following perceived incentives across the subcategories and cases were cited by interview participants:

(Inc_BusCon): Two participants provided responses in the business continuity subcategory including CHS, DOR (get commerce moving); DOR (*public-private* partnership infrastructure financing) and CHS (ongoing revenue generation).

(Inc_ComRes): Seven participants provided responses in the community resiliency subcategory including: CHS (get back faster, port community resiliency); DOR (economic recovery, get up and running); NCR (good business, survival; community duty, return to normal faster (2) and economic recovery).

(Inc_Cul): Four participants provided responses in the culture and behavior subcategory including: NCR (sector interdependency); MIA (unity of effort and purpose); PED (right thing and good business).

(Inc_Fin): Three participants provided responses in the finance subcategory including CHS (new business model based on revenue); CHS (address funding needs/gaps for security/fireboats); and DOR (port P5 financing option paid back through user fees, tax deductions for in-kind donations).

(Inc_KE): Five participants provided responses in the knowledge and education subcategory including CHS, PED (training and collaboration); NCR (institutionalize public-private partnerships); (NOL) invitations and environment for engagement.

(Inc_Lead): 6 participants provided responses in the leadership subcategory including DOR (public-private partnerships (P3) way of future solutions, P3 needed to mitigate health hazards); NOL (leadership support of stakeholder engagement, community planning, engagement and collaboration); PED (business continuity and elastic resiliency business model based on consequences versus threats and responsibility to the organization's business model);

In the words of one participant;

Resiliency model needs to have same elasticity.... maybe just my own personal experiences, feel too focused. Final comment...too many people look at threat or risk.... a resiliency model starts with consequences – which ones would hurt my business model – work backwards.... why spend money on security concepts....business continuity...will stress. people should look at consequences,

a bridge could go down...does not matter what caused it or how...business continuity don't worry about what caused, but that you have a gap in your business model. (IQ11, PED, 5: Pu. (City); Landlord Port & (F-P) Aerospace).

(Inc_PL): CHS (Maritime Transportation Security Act (MTSA) mandated drills, regulations); DOR (private sector participation to influence FEMA response policy); NOL (regulatory environment (CFAT; chemical facility anti-terrorism standards, which drive private sector engagement and penalties for non-compliance); and PED (regulatory environment (i.e. firefighting regulations).

(Inc_SLM): CHS (critical sector employee and responder ability to respond when private sector supports care for critical sector employee family); DOR (augment limited capacity of city, tribal and local governments); MIA (magnitude of private sector capacity), NCR (fix issues through committees, revenue generation mission); NOL (commodity flow diagram to facilitate decisions, every resource needed during response); and PED (care for own employees, to minimize burden on response community).

Perceived barriers were also cited by participants who responded to IQ11 and include the following, listed by category and subcategory:

(Bar_Cul): Public and private sector motivations differ.

(Bar_Fin): Funding architecture for collaborative requests needed no federal incentive for private sector participation in security task force (NOL).

(Bar_KE): Don't know whom to call (2, DOR).

(Bar_Lead): State agency and private sector requests for seats in the emergency operations center (2, DOR).

(Bar_PL): Public sector fears private sector will gain too much knowledge (PED).

IQ12. “What do you perceive to be a perceived incentive to incorporating private sector assets and capabilities into the local public sector’s first 72-hour response capacity?”

IQ12 results. 35 participants across six cases replied to IQ12 to describe perceived incentives as a function of the following subcategories:

Six interview participants described cultural barriers (Bar_Cul); including (a) cross cultural, (b) distrust between public and private sectors (2), (c) public and private sector motivational differences (2), (d) generational differences in the workforce, and (e) collaboration challenges such as the federal government tendency to promote one size fits all.

Twelve interview participants describe financial barriers (Bar_Fin); including (a) the need for contracts to protect both parties and documentation required in order to obtain FEMA reimbursements (3), (b) funding availability and or ‘who pays’ (7), (c) incentive needed for private sector investment in ‘ready communities’, and (d) efficient pricing for private sector trained specialists.

In the words of one interview participant; “One of the biggest barriers is that there is no monetary incentive for private sector to gain a *ready communities* status. (IQ12, NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).”

Another participant explained:

Inefficiently priced or available assets or capabilities – for example, if the fire department needs to bring in structural engineers who don’t understand the

emergency nature of the operation and are inclined to over-engineer the mitigation, they just are not helpful. In contrast, firefighters operate on a bricolage basis (creation from a diverse range of available things – think and do on the fly. (IQ12, PED, 6: Pu. (Cit.); Public Safety/Fire).

Two interview participants provided responses in the human resources subcategory (Bar_HR); (a) concerns for emergency responder resiliency (when geographic victims) and (b) emergency responder support with trained specialists.

Four participants provided responses in the knowledge and education subcategory (Bar_KE); in that (a) one does not know whom to call or does not have the relationships needed during a crisis (3) and that (b) the public sector needs training for the operation of loaned private sector equipment.

One participant provided a response in the leadership subcategory (Bar_Lead); (a) that collaboration is needed between the sectors and across vertical markets.

Fifteen participants provided responses in the liability and risk subcategory (Bar_LR) of which six of the respondents discussed (a) the need for contracts and or MOUs in place to define commitments and protect private sector assets, and (b) liability concerns (8) including instances of damage or other concerns related to the public sector's use of private sector equipment, and the private sector's interest in protection through Good Samaritan Laws.

Nine interview participants provided responses in the policy and law subcategory (Bar_PL); including (a) concerns about informal policies or lack of attention to crisis until it strikes; (b) within the context of unified command, instances when the private

sector resources may be used by the state but not by the federal government; (c) under Martial Law the private sector would have no operational freedom; and (d) the federal impediment to using private sector resources in conjunction with federally funded assets.

In the words of one interview participant;

“Under unified command, the federal agency and state has responsibility for oversight, so federal agency might not be able to use the private sector resources, but that state agency might be able to – the state agency responsible for responding to the event” (IQ12, MIA, 5: Pu. (Mil.); Maritime/Prevention).

16 interview participants provided responses in the scope, logistics, and management subcategory (Bar_SLM); including (a) leadership turnover (5), (b) public-private sector pre-coordination (3); (c) public sector structural issue in that not designed to share information in a timely manner; (d) public sector guidelines for accepting private sector support; and (e) pre-plan the private sector’s role for the first 72 hours. In the words of two private sector participants, there are perceived barriers on the public-sector side which can inhibit private sector engagement and collaboration:

- “With the government bureaucracy, it’s a systemic structural problem – they are not designed to share information in a timely manner back to the private sector which is actionable” (IQ12, NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology).
- “Most barriers I believe come more from the public-sector side in terms of how and where they can accept help from the private sector based on local, state, federal guidelines” (IQ12, PED, 1: Pr. (F-P, Lg.); Entertainment).

One participant recommended a solution for private sector engagement and collaboration:

“We have to think about what the private sector can and will do...and those jobs and activities must be delineated ahead of time. Cannot figure out what to do in first 72 hours providing help (rather than) figuring out what to do” (IQ12, CHS, 7: Pu. (State); University/Research).

IQ13. “Relative to your organization, what type(s) of perceived barriers, if any, do you think need to be overcome in order to incorporate private sector assets and capabilities in the first 72-hour response?”

IQ13 results. Five participants across four cases replied to this question. Interview participants described perceived barriers including (a) culture, (b) responders don't know what resources are available, (c) port TWIC (transportation worker identification credential) requirements prohibit private sector access to the port without an escort, and (d) need practice using private sector assets. One participant replied that there is a process or perceived incentive to request private sector assets through county mutual aid.

IQ19. “If your organization has already collaborated with the public sector to prepare for crises, what incentivized your organization to collaborate relative to local preparedness for the first 72 hours?”

IQ19 results. Fourteen participants across six cases replied to IQ19. Most responses to IQ19 were coded in the business continuity, business continuity/community resiliency, business resiliency and community resiliency subcategories of perceived incentives; with two or three responses in the culture, and scope, logistics, and

management categories, and one response in the human resources, knowledge and education, liability and risk, and policy and law subcategories:

(Inc_BusCon): Seven participants replied by stating the following incentives with the business continuity subcategory; (a) partner independency, (b) reliance on commerce, (c) new revenue generation (3), (d) security protection, (e) sustainability, and (f) to get up and running (especially for small business in the first week).

(Inc_BusConComRes): Two participants replied by stating the following incentives with the business continuity and community resiliency subcategory; (a) employee resiliency is the first priority, and (b) interdependency (business and community).

In the words of one participant who described interdependency as the incentive within the business continuity and community resiliency subcategory; “The incentive is resiliency; both business and community; because we live and work where we take care of those that take care of us (IQ19, NOL, 2: Pr. (F-P, Lg.); Oil Refining).”

(Inc_BusRes): Within the business resiliency subcategory, two participants replied by describing business resiliency and survival as the incentive.

In the words of one participant who described offsite office spaces as an incentive within the business resiliency subcategory; “Post 9/11, we see companies spend a fortune on resiliency . . . after 9/11 the big companies have office space offsite” (IQ19, NOL, 5: Pu. (Cit.); Public Safety/Fire). This response to the question about the reason or perceived incentive for collaboration is that the private sector leaders have witnessed the devastation caused by a large-scale crisis.

(Inc_ComRes): Nine participants replied by stating the following incentives with the community resiliency subcategory; (a) civic duty and corporate good citizen; (b) employees first priority and good corporate citizen second priority; (c) get up and running faster and reduce recovery time (2); (d) recognition; and (e) trust impacting the speed of things getting done.

(Inc_Cul): One participant described maintaining public trust and avoiding collusion as an incentive within the culture and behavior subcategory. In this case the incentive is akin to necessity.

(Inc_Fin): Two participants replied by stating the following incentives within the finance subcategory; (a) revenue generation, (b) funding for maritime port security, and (c) private sector return on investment in security as a form of insurance against death and damages.

In the words of one participant; “The cost of not doing their own security, causing death and damage ...the costs of providing one’s own security will far outweigh the impact of not investing. It is insurance, will cost more later than now” (Q19, NCR, 7: Pu. (Mil.); Maritime/Transportation). In this example of a perceived incentive for collaboration, the private sector has assumed responsibility for security rather than complete dependence upon the government. In essence, the private sector’s assumption of responsibility is a form of collaboration.

(Inc_HR): One participant replied that the incentive in the human resources subcategory was to provide support for emergency responders in instances of traumatic stress.

(Inc_KE): One participant replied that the incentive in the knowledge and education subcategory is the optimized results during crisis response when knowing who is in charge prior to the crisis.

(Inc_LR): One participant replied that the incentive in the liability and risk subcategory was to provide security support for private sector cruise ships and liquid natural gas shipments. Another participant described the importance of legislative affairs updates including understanding the risks and grant opportunities associated with the port or lose out and fall behind.

Understanding the latest regulations could impact their (private sector) ability to be resilient) We have . . . 100 million dollars in FEMA maritime grants, last year this area got about, for our private partners – got about four million in grants for maritime – all 35 sector commanders/areas (competing for the same 100 million dollars) covering major ports . . . from port level, need to understand greatest risk in port community, do it collaboratively . . . try to find impartial members . . . who understand maritime climate, maritime security to help impartially grade out those submissions for grants . . . Private sector loses out or falls behind. . . .risk in the national capital region (NCR) is different from risk 100 miles off-shore, the risk differs from risks in Port of Baltimore. (IQ19, NCR, 7: Pu. (Mil.); Maritime/Transportation)

(Inc_PL): One participant replied that an incentive in the policy and law subcategory is to stay apprised of legislative affairs updates.

(Inc_SLM): Two participants responded with the following incentives in the scope, logistics and management subcategory; (a) mass rescue and (b) separate funding with parallel missions for response.

IQ20. “If your organization is not or has not been engaged by providing resources (assets or capabilities) or making resources available to reinforce the local response capacity in the first 72 hours, why not? As such, what are the perceived barriers to you and or your organization’s engagement?”

IQ20 results. A total of 16 interview participants across the six cases responded to IQ20 with perceived barriers within the subcategories of finance, knowledge and education, liability and risk, policy and law, and scope, logistics, and management. Within the finance category (Bar_Fin), responses included (a) reimbursement challenges, and (b) a corporation’s focus on the bottom line. Within the knowledge and education subcategory; the participants stated the following barriers (Bar_KE); (a) preparedness training, (b) lack of knowledge regarding private sector resources available and potential collaborative roles; and (c) the tension between maintaining security and sharing information with the public.

- In the words of one participant; “Tension between security with information shared and insecurity without information shared . . . cannot have threats be public knowledge . . . manufacturing, retail, stadiums . . . electric, nuclear, water, railroad, air transportation,16 DHS critical infrastructure sectors now” (IQ20, NCR, 6: Pu. (Fed.); Security/Response).

Two participants provided responses within the liability and risk category (Bar_LR); including (a) the public-sector concern for vetting private sector entities. Two participants provided responses within the policy and law category (Bar_PL); including that (a) legal restrictions are counterintuitive and cause hardship on the population. In the words of one participant;

Contracting issues during disaster is a challenge as there are legal restrictions that cities, states and counties operate under that are often counterintuitive to what is needed in a crisis. A lot of communities lack ‘emergency powers provisions’ that allow the responders to operate in nonstandard mode so they can cut down on the bottlenecks and the bureaucracy that slows down the response. In a disaster you need things now. And governments are set up to bid . . . critical supplies, medicine, info needed. Need to shortcut that. (IQ20, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software)

Eleven participants provided responses within the scope, logistics and management category (Bar_SLM); including (a) the perception that the organization size is too small or that collaboration is outside the scope of the organization’s mission, (b) instances of small public sector budgets for contracting with the private sector, (d) limited time and capacity for unfunded mandates, and (e) the need for pre-disaster contracts (7). In the words of one participant;

- “The downfall of an informal agreement are the faulty assumptions” (IQ20, NOL, 1: Pr. (F-P); Maritime/Transportation.

Lastly, one participant replied by stating the following perceived incentive rather than a perceived barrier in the liability and risk subcategory (Inc_LR); collaboration between similar companies. The participant's words are as follows:

- “From a supply chain perspective, starting to hear more conversations about working together . . . power companies who are sharing their, putting together warehouse of spare parts, working together . . . recognition of the risk” (IQ20, NCR, 4: Pr. (N-P, Sm.); Logistics/Supply Chain).

IQ21. “What would your organizational leadership require in order to provide resources (goods and or services) to help reinforce or augment the local public-sector response in the first 72 hours?”

IQ21 results. Eighteen participants across six cases replied to IQ21 as follows:

(Inc_BusConComRes): One participant replied by describing a perceived incentive in the subcategory of business continuity and community resiliency; interdependent resiliency. The phrase, interdependent resiliency reflects the interdependency theme, a predominant theme of the overall results of this dissertation.

The interdependency is exemplified by this remark;

One may be helping their own family member by getting the community business back up as usual. For example; my wife runs sandwich shop, if she helps us get back to business as usual, then she helps me get my business back to business - ecosystems - interdependent resiliency. (IQ21, DOR, 2: Pr. (N-P (Edu), Lg.); Public Safety/Emergency Management)

(Inc_ComRes): Two participants replied with an incentive in the subcategory of community resiliency; (a) corporate good citizen, and (b) good for business and customers.

(Inc_Cul): Two participants replied with a perceived incentive in the subcategory of culture; (a) established relationships, and (b) partnerships.

(Inc_Fin): Nine participants replied by stating a perceived incentive in the subcategory of finance with the following properties and dimensions; (a) funded NGO, (b) funding such as a federal grant to enable a prototype; (c) funding to support external collaboration; (d) compensation for dedicating resources to response; (e) remuneration for large contributions of goods and services; (f) revenue generation for profit; (g) revenue generation through government contracting; and (h) tax deductions for asset sharing through a public-private partnership.

(Inc_Lead): One participant replied by stating a perceived incentive in the subcategory of leadership; (a) private sector top-down support needed.

(Inc_LR): Two participants replied by describing a perceived incentive in the subcategory of liability and risk with these properties and dimensions; (a) liability protection through Good Samaritan laws; and (b) risk mitigation.

(Inc_PL): One participant replied by stating a perceived incentive in the subcategory of policy and law with the following property and dimension; (a) new tax laws.

(Inc_SLM): Five participants replied with perceived incentives in the subcategory of scope, logistics, and management with the following properties and dimensions; (a)

contribute leadership services to response solution; (b) private sector response a function of the scale required; (c) private sector engagement in response through the incident command system, and (d) a private sector resources tracking mechanism.

IQ27. “How readily could your assets or capabilities be made available to the public sector in the first 72 hours? What prearrangements would be needed?”

IQ27 results. Sixteen participants across five cases replied to IQ27 stating that there is a role for the private sector liaison/CRO (corporate crisis response officer) in coordinating assets to augment the public-sector response capacity. The private sector also requires MOUs to mitigate liability, when sharing assets. Other responses to the question about the readiness of private sector assets for inclusion in the first 72-hour response included various needs or perceived barriers including training to fill roles; assets ready through mutual aid agreements; private sector liaison and 24X7 access required. Also, a network model with individual links as the basis for building partnerships between single points of contact was described as a perceived incentive or vehicle for readiness.

IQ31. “What would incentive you as a leader of your business/organization to invest 2% (for example) of your corporate profits for your community’s continuity of operations in the first 72 hours of a large-scale crisis?”

IQ31 results. Sixteen participants replied across four cases with wide-ranging responses:

(Inc_CHS): (a) Survival, (b) tax deduction, (c) precedent of public-private investment (75%-25%) in port critical asset, and (d) avoid risk;

(Inc_NCR): (a) Community partner otherwise a negative image would cost you more than 2%, (b) understanding of interdependency between corporation and the community (2);

(Inc_NOL): (a) Reduced insurance premiums, (b) corporate good citizen (3), (c) publicity;

(Inc_PED): (a) Depends upon cost/benefit analysis; what is the anticipated ROI? (b) Self-interest/onus on volunteers.

IQ32. “To what extent do you perceive that an established incentive (i.e. tax credits, assurance of limited or no liability) might overcome any other perceived barriers to cross-sector collaboration?”

IQ32 results. Fourteen participants across five cases replied to IQ32 as follows:

(Inc_BusCon): Two participants described a perceived incentive in the subcategory of business continuity as (a) ensuring that business continuity plans are part of emergency response management and to (b) avoid negligence.

(Inc_BusConComRes): One participant described a perceived incentive subcategory of business continuity and community resiliency as interdependency.

(Inc_BusRes): Two participants described a perceived incentive in the subcategory of business resiliency as survival.

(Inc_ComRes): Five participants described perceived incentives in the subcategory of community resiliency with the following properties and dimensions: (a) community duty and corporate good citizenship (2); (b) investment in special programs, (c) collaboration firstly to accomplish private sector interests in preparedness and

response and then engage the government; and (d) agency collaboration with a large corporation and the community.

(Inc_Fin): Eight participants provided responses to the question about perceived incentives within the subcategory of finance with the following properties and dimensions: (a) tax deductions for time served as a private sector liaison (CRO); (b) disaster specific tax deductions; (c) regionally specific tax deductions; (d) tax deductions not as important as community duty; (e) tax deductions not a primary driver for collaboration compared to community resiliency; and (f) importance of understanding federal agency (FEMA, SBA) reimbursement process.

(Inc_LR): Ten participants described perceived incentives within in the subcategory of liability and risk with the following properties and dimensions; (a) liability protection through Good Samaritan laws (2); (b) private sector indemnification through a funded insurance pool at the federal, state and local levels, (c) private sector indemnification by piggybacking a federal entity self-insured process; and (d) hold harmless memorandums of understanding for equipment damage and other situations (5).

(Inc_PL): Two participants described perceived incentives within the subcategory of policy and law with the following properties and dimensions; (a) look for incentives that do not infringe on the maritime transportation security act; and (b) self-regulation as a less costly option to the costs associated with adherence to the regulations of the port environment.

Results: RQ1 SQ1 (IQ8-IQ35) Support for Responder/CSE Families)

Perceived barriers and incentives. Interview Questions IQ8, IQ9, IQ10, IQ15,

IQ16, IQ28, IQ29 and IQ35 were posed to understand private sector willingness to provide or support a third-party organization to care for emergency responder and or critical sector employee families or other dependents including those who are disabled or who have functional or access needs. This topic was also addressed in the ReadyCommunities Partnership Miami, Doral and the New Orleans symposia to the degree that participants highlighted best practices as summarized later in this chapter.

Based upon the interview participant responses to this group of interview questions, there is a potential role for the private sector to support a third-party organization which might adopt this mission and or become directly involved in order to reinforce the existing response capacity in the strategic military base and port communities of the United States of America. With return on investment (ROI) as a basis for analysis, I recommend that corporate risk managers compare and contrast financial investment in a program for responder and critical sector employee families and dependents; with the potential cost of situations whereby responders and or critical sectors employees are unable to report to work in the first 72 hours given their personal need and priority to care for family or vulnerable or disabled dependents.

IQ8 and IQ9. Interview question 8 and interview question 9 were posed to understand how the private sector might reinforce the existing response capacity by arranging or providing care for families or disabled dependents of local responders and or critical sector employees:

Responses in common to both IQ8 and IQ9 to the question about willingness to collaborate to care for emergency responders, and critical sector employees respectively

include that the (a) private sector may be willing to sponsor or fund this project as an initiative of a third party organization, or that (b) CERT (community emergency response team) or the American Red Cross might participate in the solution, that (c) organizations with non-critical employees are best suited to this initiative, and that (d) employee assistance programs and or private sector meal service or evacuation service during crises could serve as a model for this initiative.

Interview questions 8 and 9 were posed to the interview participants as follows:

IQ8. Interview question 8 (IQ8) was presented as follows: “Theoretically, to what extent would your organization/leadership be willing to make a commitment to make plans, potentially through collaboration, to provide or arrange care for a vulnerable/special needs family member or dependent of a local emergency responder (paid and/or volunteer) thereby enabling this/these individuals to remain on the job during the first 72 hours?”

Across the six cases, 28 participants provided an array of responses including yes; yes with caveats or concerns; not sure - without financial analysis; and no. According to the participant responses, aside from personal responsibility, a third-party organization program does not exist which would facilitate or care for family and or other dependents of responders in the first 72 hours. One interview participant representing an agency in the MIA case suggested tagging registries of special needs individuals who depend on an emergency responder; to alert caregivers about the relationship so that concerns can be addressed. In the NOL case, one participant suggested that the initiative to ensure emergency responders are able to work without concern for shelter or basic care for

families and or dependents might not be supported unless local citizens were provided the same service. Overall, there is room for private sector engagement and collaboration through support of a third-party organization and or utilization of internal resources to support families and or dependents of emergency responders during the first 72 hours.

IQ8 perceived incentives. Overall, perceived business incentives include (a) ensuring that critical sector employees (CSEs) are available for work, (b) organizational culture and precedent, and (c) ensuring the local response capacity. Overall, perceived incentives to collaborate for organizations other than business include (a) ensuring response capacity by caring for CSE/emergency responder families including those who are disabled or vulnerable with special needs; (b) third party support; and (c) utilizing the tradition of sector to sector support. Some of the aforesaid incentives can be viewed as recommendations.

IQ8 perceived barriers. Overall, perceived barriers for organizations other than for-profit businesses include (a) internal priorities, (b) small organizations with limited abilities to share, (c) agency rules, and a (d) predisposition to say no. Finally, based on the participant responses, there may be differences in cultural approaches from one case to another as to whether this program is embraced. For example, in the NOL case, one participant suggested that the proposed initiative for emergency responders may not be accepted unless the system was developed for all citizens.

IQ8 results by case. Participant responses to IQ8 from the Charleston (CHS) case include the following: no; not set-up to directly provide this type of service, third party should handle, outside of mission, no policy yet and responders would need to contact the

agency providing the support given concerns about medical privacy (Health Insurance Portability and Accountability Act (HIPAA), and not sure, would need to conduct financial analysis. Participant responses for the Doral (DOR) case include yes, almost critical to community survival; no, handled by unions or benevolence associations; and state agency already handles needs of vulnerable, special needs and disabled individuals, but it is unknown whether the state is aware of the relationship between responders and vulnerable special needs or disabled dependents (plus, some vulnerable special/disabled individuals have never applied for state service). Participant responses from the National Capital Region (NCR) case included yes with caveats; including (a) yes, would facilitate but no manpower to handle internally; (b) yes, with liability concerns; and (c) yes, with CEO approval may allow employees to volunteer and or would support a third-party organization. I recommend that return on investment be calculated to contrast investment in this program with neglecting vulnerabilities in the emergency responder force should responders be are unable to report to work in the first 72 hours given little or no planning to arrange emergency shelter and or provide basic health care for dependents (family, vulnerable/special needs/disabled).

Participant responses to IQ8 from the New Orleans case (NOL) responded to the question relative to critical sector employees in addition to the subject of the interview question; emergency responders. Both critical sector employees and emergency responders are needed on the job during crisis response. Participant responses were prefaced by no; yes; or yes, with recommendations. Given the expectation by some local residents that a plan to care for dependents of responders should be provided for all

residents rather than exclusive to emergency responders; education and an awareness campaign about society's dependence on emergency first responders should be developed.

Awareness of special needs individuals exists within a variety of organizations including the responder's employing organization, parish response organizations, home health services, and fire departments. A role for the private sector in facilitating care for responder families or dependents; or critical sector employee families including families of evacuation bus drivers during the first 72 hours also merits consideration. Likewise, there may be a role for friends and family and or a third-party organization in a feasible plan to care for dependents of emergency responders or critical sector employees.

Participant responses from the PED case included yes and no with the following explanations: (a) Currently there is no such system as proposed, nor is there a mechanism for getting law enforcement families out of harm's way; (b) nothing is in place right now to care for first responder families or dependents; and (c) although fire families take care of their own, the fire department would probably be receptive to arranging outside support with tight scrutiny. Human resources rules of the city and agencies may present barriers to making this assistance for emergency responders difficult if not impossible. Organizations such as the American Red Cross were mentioned as likely partners for this initiative.

Additionally, IQ8 participant responses revealed an awareness of special needs individuals through various formal and informal registries within a variety of

organizations including the responder's employing organization, parish response organizations, home health services, and fire departments.

IQ8 participant recommendations. The private sector could play a role in partnership with third party organizations to facilitate care for responder dependents or critical sector employees during the first 72 hours. Critical sector employees include a range of individuals including managers, engineers, technicians and bus evacuation drivers. Participant recommendations included leveraging internal resources for this initiative, and to address any liability concerns and the impact of HIPAA regulations.

IQ9. Interview question 9 (IQ9) was presented as follows: “Theoretically, to what extent would your organization/leadership be willing to make a commitment to make plans, potentially through collaboration, to provide or arrange care for a vulnerable/special needs family member or dependent of a critical sector employee during the first 72 hours thereby enabling this/these individual(s) to remain on the job?”

This question is largely the same as IQ8, except that the subject of the family support is the critical sector employee versus an emergency responder. The participant responses to IQ9 are noted as follows. Across the six cases, 20 participants provided responses to interview question 9 (IQ9); (CHS: 4 participant responses; DOR: 2 participant responses; MIA: 1 participant response; NCR: 2 participant responses; NOL: 6 participant responses; and PED: 5 participant responses); from which three primary responses emerged with explanations; yes, maybe, and no.

Participant responses from the Charleston (CHS) case include the following: no; (a) would compromise effectiveness of small team, recommend that this be the

responsibility of the individual employee; and yes; (b) can give charitable donation to qualified organizations, (b) would provide its own professional capacity/expertise as backup, (c) private sector can be involved [but] need licensed people/health care provider. Participant responses to IQ9 for the Doral (DOR) case include yes; (a) the private sector is the most important resource to the first 72 hours recovery, and (b) non-critical private sector employees may be best suited to providing this support and maybe; (a) perhaps a role for a program like CERT, and the (b) private sector has [can lean on] federal law enforcement professionals during recovery. Participant responses to IQ9 for Miami (MIA) case include yes; would be helpful for elderly parents of critical sector employees. Participant responses to IQ9 for the National Capital Region (NCR) case included yes; (a) the private sector could help in the planning phase, and (b) the county employee assistance program might serve as a model. Participant responses to IQ9 for the New Orleans (NOL) case included yes; (a) willing to evaluate, (b) already do, and (c) would support evacuation of the elderly, and maybe; (a) depends on funding, and no; (a) there is cultural pushback . . . don't want to give perception that one is better, and yes; (a) could do so, and yes, (b) some employees might volunteer. Participant responses to IQ9 for the San Pedro Bay (PED) case include yes; would require an MOU, maybe; not sure how to support other than suggest American Red Cross could provide shelter; and no; fire department depends upon its own team, and organizations with 100% critical employees are unable to provide support. Also, one PED participant advised that the Los Angeles registry of special needs person exists and is accurate when updated.

IQ9 perceived barriers. Interview participants replied to IQ9 with the following perceived barriers: Critical sector employees (CSEs) are not available externally, contract or memorandum of understanding, organization too small or unable to provide support, program subject to agency approval and rules, and or that the official response would probably be no. Interview participants replied to IQ9 with the following perceived incentives: Ensure community resiliency and response capacity by (a) ensuring that CSEs available to work (3); (b) pre-established relationships; and or (c) partner or refer or donate to a qualified third party organization to take responsibility for this initiative (2) or (d) continue to allow fire department to care for their own.

IQ9 responses by case are as follows and while the interview question posed sought perceived willingness to collaborate for the initiative, some of the replies can be positioned as perceived incentives and or perceived barriers.

IQ9, CHS: A perceived barrier to private sector corporate level engagement is the (a) capacity of an organization, those that are too small, and in those cases, individual employees might take responsibility. Perceived incentives or options for collaboration include (a) charitable donations to a qualified third party organization, and or (b) provision of expertise where plausible to augment the local response capacity.

IQ9, DOR: Business incentives for collaboration include making sure that the business-critical sector employee is available by ensuring safety for his or her family and or vulnerable or special needs (VSN) dependents. A perceived incentive for collaboration and support, potentially from non-critical private sector organizations is community resiliency. Also, third party engagement with organizations such as CERT was

recommended to address a concern or problem. The unavailability of critical sector employees during the first 72 hours is a barrier to private sector engagement.

IQ9, NCR: One perceived incentive to business collaboration for business continuity is to ensure the availability of CSEs, but with third party implementation. One perceived incentive for public sector CSE availability is the overall response capacity, for which a county employee assistance model might be leveraged.

IQ9, NOL: Ensuring local response capacity is an implied incentive for a (large international) business entity which already collaborates through dedicated private sector liaisons/crisis response officer (CROs) for evacuation of vulnerable special needs individuals; and another large business entity is willing to evaluate and engage through a CRO. One small private sector firm thought that their participation in the CRO role depends on available funding. A participant from city law enforcement thought that the organization would collaborate for this purpose and a participant from the federal government thought that some employees might volunteer. One city government organization participant replied no, stating the perceived barrier as their wish to avoid perception of showing favoritism, and another federal organization participant presumed the response to collaborate in this regard would be no.

IQ9, PED: One perceived barrier and perceived incentive for private sector engagement is the degree to which the organizational culture supports or hinders engagement. For example, the fire community's culture to take care of its own, whereas some corporations may fully support engagement for the business or community's resiliency. Another perceived barrier to cross-sector collaboration is the pre-established

contractual agreement or memorandum of understanding. Perceived private sector incentives to participation include the public sector's need for certain types of expertise to augment the local response capacity. Some organizations do not know how the organization might support or engage, such as the county organization cited by the interview participant. Another perceived barrier is the unavailability of CSEs; however, the CSEs are those who stand to gain from the initiative; so, the concern is relevant to the extent that it informs the purpose of the initiative. Other perceived barriers involve logistics, such as the need for an updated special needs persons registry for the public-private collaboration to succeed.

One participant in the New Orleans case uniquely provided the response to both IQ8 and IQ9 about potential cultural pushback as civilians may view this service as that which should be provided for civilians if provided for emergency responders and or critical sector employees. Another response common to both IQ8 and IQ9 is that the fire service tends to manage its own affairs without external help. Additionally, registries of special needs persons exist which could serve as a starting point for initiative planning and discussion with other potential stakeholders.

IQ9 recommendation. There is an opportunity for responders with vulnerable/special needs or disabled dependents to notify state agencies/other agencies who already care for vulnerable special needs/disabled dependents - so the agency might assist in the first 72 hours to help ensure the responder can remain on the job.

IQ9b. Interview question 9b was presented as follows: “What kind of plan does your organization already have to ensure care for the families or dependents of

responders and or critical sector/infrastructure employees during the first hours or recovery period of a large-scale or national crisis; including the disabled, vulnerable and or those with special needs?”

One participant response from the national capital region (NCR) included both yes and no to having a plan to ensure care for families or dependents of responders or critical sector employees. Responders may have informal plans for personal resilience. Public safety personnel, firefighters and police offers are reticent to share vulnerabilities including those whom they trust. This interview question was not posed to participants in all cases.

IQ9c. Interview question 9 (IQ9c) was presented as follows: “To what extent does your organization already mandate or require a plan for your family or other dependents (including those with vulnerable/special needs) for their safety in first 72 hours (I9c).”

Four participants across two cases responded in the national capital region (NCR) including no and yes to an organization mandate or plan for family or dependents (including those with vulnerable/special needs) during the first 72 hours; no; to the extent that insurance might cover the need, yes; to the extent that a plan is encouraged but not systematic; informal support systems with families and local neighborhoods; federal agency encouragement that mission essential personnel have a self-directed plan; and new employee training at the landlord port includes an assessment of vulnerable dependents. The aforesaid non-mandatory suggestions could be models for integration into planning across the sectors. This question was not posed to participants in all cases.

IQ10. Interview question 10 (IQ10) was presented as follows: “What perceived internal or external barriers exist that would prevent your organization from developing a plan to providing care for a vulnerable or special needs family member or dependent of a local emergency responder and or critical sector employee during the first 72 hours – thereby enabling this/these individual(s) to remain on the job?”

Interview question 10 (IQ10) was phrased to understand the participant organization’s interest to prearrange care, including emergency shelter and or essential medical care, for family and or any vulnerable special needs or disabled dependents of emergency responders. Across the six cases, 24 participants provided responses to (IQ10) from which perceived barriers were identified. The participant responses included internal and external influences on the organization's behavior to embrace a buddy type system or plan to provide support to care for families or other dependents of local emergency responders or critical sector employees.

Participant responses from the Charleston (CHS) case included: (a) (perceived) liability; (b) for-profit focus; (c) time constraints in that critical employees unavailable for other duties; (d) lack of awareness of this type of support (explore the extent to which CERT or medical reserve corps may be involved), (e) could participate to support dependents of first responders; and (f) could support to the extent that the public and stockholders influence decisions regarding such a program.

Participant responses from the Doral (DOR) case included (a) legal barriers and (b) that it would be best for a third party to manage.

There were no participant responses from the Miami (MIA) case as the interview question was skipped. Participant responses from the national capital region (NCR) case included (a) trust and geographic location of responders would impact the success of a private sector led while in collaboration with the public sector program. Other participant responses included (a) corporate revenue generating focus with the implication that nonprofit organizations may be best suited to providing this type of support for dependents of first responders. Also, (b) companies may be involved according to what the bottom-line would allow, (c) would support volunteers who wish to participate, and (d) companies are also concerned about pre-planning, and minimizing or mitigating liability.

Participant responses from the New Orleans case (NOL) include that (a) the not-invented here syndrome could serve as a barrier to standing up this program. However, (a) risk mitigation is a perceived incentive for participating in this collaborative program, (b) funding, fluid contracts, MOUs, and vetting of organizations and persons could enable the implementation this program, and (c) the American Red Cross or other nonprofit organization was suggested as a likely partner for public sector responders and corporations with critical sector employees as program recipients.

Participant responses from the San Pedro Bay (PED) case included the following perceived barriers; (a) private sector focus on revenue generation, (b) fire department cultural issues, (c) internally focused, (d) county need for registry of vulnerable dependents including addresses; (e) funding, vetting, and logistics planning for program implementation; and (f) employee limitations (rules, legal issues, privacy concerns set by

unions, agencies, and corporations). Participant responses from the San Pedro Bay (PED) case included the following suggestions; (a) increased staffing demands during crises results in increased number of dependents in need of support during crisis; (b) leverage insurance model for funding, (c) utilize the American Red Cross or other non-governmental organization as the driver for implementation, and or (d) leverage an employee assistance program as a model for implementation.

IQ10 results. A nonprofit organization with non-critical employees is suggested as a likely partner to corporations or local public-sector response organizations who have not already implemented a plan to care for families or dependents of their own critical sector employees or emergency responders. Insurance or an employee assistance programs may be models for implementation. Privacy and other liability concerns must be addressed. Program funding, if not through charitable donations or as a corporate expense, must also be addressed. A registry of disabled individuals or those with vulnerabilities or special needs would be required for implementation. Volunteer responders should be included in the program.

Differences between participant responses to IQ10 were less apparent than responses differentiated by sector. For example, fire departments would or should have the option to participate whereas the private sector would choose to participate based on the availability of funding, time, and or non-critical employees for involvement.

IQ15. Interview question 15 was presented as follows: “To what extent would your organization be willing to dedicate resources to support an organization that could provide care for vulnerable/special needs (disabled, or those with access or functional

needs) family members of responders or critical sector employees in the first 72 hours – so that the responder and/or critical sector employees can remain on the job?”

Fifteen interview participants across five cases responded to IQ15. Overall, most participants thought that their organization would provide support for a third-party organization (such as the United Way), including charitable donations, emergency supplies, employee volunteerism or networking support to care for families and or dependents of responders or critical sector employees. The core responses before explanations were yes (8); no (3); and perhaps (4) based on (a) the required resources, (b) a cost/benefit analysis, (c) a complete understanding of the return on investment (ROI) for this initiative, or (d) an agency legal test before moving forward to provide support for a third party. A large corporation would review whether the support could be provided internally or externally.

IQ16. Interview question 16 (IQ16) was presented as follows: “To what degree or how would your organization be willing to support a volunteer responder buddy network or program so that a responder and/or critical sector employee can remain on the job during a large-scale crisis?”

Overall, 24 dissertation interview participants across each of the six cases provided a response to IQ16. Recommendations included a business-to-business approach to a buddy network and or management by an NGO third party organization; and screening, training, and credentialing of buddies who would directly provide care for dependents. Companies with locations in port communities may be best suited to participation. Some companies may support employee participation if the employee

engages on a volunteer basis. Cultural factors that inhibit or control how the buddy program could be defined include trust and tribal behavior. Some organization leadership may view the buddy program as work rather than realize the benefits including risk mitigation as a function of critical sector employees or responders who are enabled to remain on the job due to the support of a buddy. This question was largely answered by leaders who envisioned a hands-on approach rather than financial support for a third party to do the work of a buddy to a dependent of a responder or critical sector employee. Understanding the financial implications would include an analysis of the return on investment in the buddy program for port stakeholders. Unanimous support was expressed for critical sector employees who augment responder capacity with expertise needed to address a critical situation.

IQ28. Interview question (IQ28) was presented as follows: “To what extent would your organization be willing to dedicate time of one employee to identify organizational assets and or capabilities that could be incorporated into the first 72-hour response through collaboration with the local public sector?”

Twenty-four participants across six cases provided responses to IQ28. CHS: Responses included that (a) a small company would dedicate 2-3 hours per week to a crisis response officer (CRO) position; (b) that this role is already part of port risk management/accounting position to identify assets, or that (c) the CRO should be part of someone's job even if virtually. Also, CROs are needed to identify building supplies, equipment, expertise; and shelter and food to support response. DOR: Those willing to dedicate time to a CRO position stated that this role is already part of emergency support

function (ESF) 18 for large organizations. Likewise, another participant stated that some large companies, such as Target and WalMart, have a CRO designated for internal emergency management and to serve as a liaison to the local emergency operations center (EOC). A public-sector participant advised that private sector rotation of the EOC seat designee representing for-profit businesses is important, and should include small business. A public-sector participant advised that the CRO should be available 24 hours a day and seven days a week. MIA: One corporate participant suggested meeting once per quarter to identify assets and develop relationships. NCR: Overall, the for-profit and nonprofit participants are willing to dedicate time to a CRO position. However, one for-profit participant stated that the challenge is to determine how to keep the CRO engaged. A participant suggested that the CRO role would be best suited to an employee working in a business development role. Another nonprofit participant stated that staying in touch with the public-private counterparts is critical. Another participant advised that the CRO should not be a critical sector employee, that the CRO must be available during a crisis. NOL: The CRO role currently utilized by oil companies which identify assets for response through mutual aid program. A for-profit participant stated that his or her organization would be willing to dedicate time of one employee to the CRO role. A public-sector participant representing a landlord port stated that his or her organization would be willing to dedicate a partial headcount to liaise with the private sector CROs; especially with the objective to care for families of emergency responders and critical sector employees. PED: All four PED participants are willing to dedicate time to implement the CRO or have done so already through the large corporation's crisis

management department, and public sector participants described access to corporate resources/services/manpower given MOUs. One public sector perceived barrier is the need to understand which party would finance the CRO (private sector liaison) to support the public sector's critical sector employees.

IQ29. This interview question was presented as follows: “To what extent would your organization be willing to contribute a portion of a headcount/employee to pre-coordinate/collaborate with the public sector to arrange care for vulnerable/special needs family members of a responder(s) or critical sector employee(s) in the first 72 hours?”

Seventeen participants responded across five cases. Responses were yes and no with explanations as follows. CHS: Participants replied (a) no due to liability concerns yet they would sponsor a third party, and another replied (b) no in that the CRO role was deemed to be outside of the state organization’s area of expertise. One participant replied (a) yes, but presumed third party barriers to be distrust of outside support and or (b) that most response agencies will take care of their own; DOR: All three participants replied yes and one participant remarked that there is a private sector precedent for information sharing with the military and Red Cross. One participant also described HIPAA (federal law that protects continuity of health) as a barrier given the mandate to protect individual information otherwise the private sector could face liability concerns; MIA: Skipped due to time constraints; NCR: Yes (1) for the sake of business continuity and community resiliency; no (1); given the perception of no direct line to revenue, and or limited funds, time, and or people to support a CRO; and perhaps; based upon willingness and ability (1); NOL: Four participants replied yes; (a) with the requirement to plan ahead; (b)

already in place; (c) limited basis given existing resources; and or (d) precedent for corporate giving through United Way; PED: Four participants replied yes and one participant replied not likely. Those who replied yes (one corporate participant) indicated (a) a willingness to donate to a third party for this role; (b) another participant with landlord port and corporate experience stated that arranging care with a third party would be best for the role providing the other party receiving the support is agreeable to participation; (c) another participant representing the landlord port and who replied yes indicated that the incentive is community resiliency; and (d) another replied yes affirmatively without explanation. One large corporate participant replied not likely given that this task is out of the organization's scope of familiarity.

IQ35. Interview question (IQ35) was presented as follows: "What steps would be required, or issues would have to be addressed, in order to ideally implement a private sector liaison role with the public sector to augment the local sector response capacity in the first 72 hours?"

Seventeen participants across six cases replied to IQ35 with suggested steps for implementation of a private sector liaison (crisis response officer (CRO)) to serve in a collaborative role with the local public sector to reinforce the local response capacity. The answers to this question are significant in that they are rooted in reality as opposed to a theoretical notion. The participant responses are listed as follows and are potentially of value to a field practitioner. The field practitioner might treat each of the steps as a barrier to fully implement the step. Finally, a few perceived incentives for the crisis response officer (CRO) are listed following the perceived barriers:

CHS: (Bar_HR) (a) A portion of a job or a full head count should be designated as a private sector crisis response officer (CRO) to facilitate commitment to the role;

(Bar_SLM) Perceived barriers or implementation steps include (a) early involvement, (b) private organization assignment of an emergency operations center (EOC) seat per ESF8 stipulations, (c) identification of CROs from critical sectors, (d) involvement before a crisis happens; (e) identification of public sector community outreach personnel to liaise with the private sector; (f) identification of CROs from critical sectors including longshoreman who offload containers and port security; (g) quarterly meetings for a day with a defined agenda and an activity whereby leadership may get to know each other;

(Bar_KE) Perceived barriers or implementation steps include (a) the need for port outreach to the community, (b) planning and training including offsite training over small periods of time, and (c) creation of a simulation game involving CROs;

DOR: To stand-up a cadre of CROs, the following perceived barriers or steps should be addressed to optimize program success: (KE) knowing who is in charge;

(SLM) (a) have all agencies agree before an event; (b) identify CROs in advance; and (c) establish a virtual business recovery center in lieu of a seat in the emergency operations center;

MIA: To stand-up a cadre of CROs, the following perceived barriers or steps should be addressed to optimize program success: (HR) identify company security officers and facility security officers to serve as CROs;

NCR: To stand-up a cadre of CROs, the following perceived barriers or steps should be addressed to optimize program success: (Bar_SLM) (a) include CROs in the

EOC to liaise with FEMA; (b) hold frequently scheduled local meetings with leaders and CROs; (c) plan exercises and prepared list of roles and responsibilities by individual; (d) preplan to realize jurisdictional barriers are meaningless during crisis response; (e) utilize a third party organization to manage the relationship between private sector CROs and public sector responders (firefighters, police) supported by private sector leadership and financial investment; (Bar_SLM/HR) (a) identify critical infrastructure and critical sector employees (CSEs) as CROs to know where infrastructure shutoffs are located; (b) include local planners to know points of failure; (Bar_SLM/PL) incorporate attorneys in process of codifying CRO process and relationships to ensure CRO sustainability in spite of leadership turnover;

Relative to identifying crisis response officers as mentioned above; one participant remarked:

Identify critical infrastructure and critical sector employees as CROs. I saw the effect of not being organized in first 72 hours [post Hurricane Andrew]. There is an expectation that people will know where infrastructure shutoffs are – water, electric, gas – who knows – just one or two people...need to know who Joe is and where is Joe? (IQ35, NCR, 1: Pr. (F-P, Sm.); Crisis/Risk Management)

NOL: To stand-up a cadre of CROs, the following perceived barriers or steps should be addressed to optimize program success: Assign CROs to bus drivers for evacuations to ensure their families have the requisite support in the first 72 hours;

PED: To stand-up a cadre of CROs, the following perceived barriers or steps should be addressed to optimize program success: (Bar_Fin) Fund CROs through

insurance premiums for services; (Bar_HR) Non-critical employees could serve as on-call staff (volunteers); (Bar_Lead) Companies with a 501c6 organization within their corporate structure could be ready to provide a service thereby a surge capacity during an emergency; (Bar_SLM, HR) (a) Involve industry associations in process of identifying CROs; and (b) establish relationships between CROs and public safety officials and emergency responders; (Bar_SLM, KE) (a) Understand decision-making protocols in both sectors (public safety, and private); (b) Integrate CROs in to the NIMS model for the incident command system (ICS) under the appropriate unified command group; (b) understand public sector protocols including the national incident management system (NIMS) and MACS (multiagency coordination system to provide support to the incident); (c) meet and drill to know private sector capabilities; and (Bar_SLM, PL) (a) consider industry standards, industry liability, regulatory standards, and decision-making strategies; (b) pre-establish public-private relationships along with financial and contractual instruments on an interagency basis. Perceived incentives for the CRO were described by interview participants as follows: CHS: (a) County EOC team's interest to know private sector resources, (b) large companies likely to appoint a CRO for emergencies; DOR: Early recovery by early coordination and communication to remove impediments; NCR: Help to protect the bottom line and the brand; and PED: Wide-ranging support to critical sector employees.

Results: RQ1 (IQ23-IQ31) Return on Investment (ROI)

In addition to the aforesaid results, RQ1 is in part answered by the responses to eight interview questions (IQ23, IQ24, IQ25, IQ26, IQ30, IQ31) about return-on-

investment as a perceived incentive for collaboration and engagement for preparedness and response in the first 72 hours. Given revenue generation and profit-making priorities of the private sector, the results from this set of questions can inform chief executive officers, chief operating officers, chief risk officers as well as public safety and emergency management leaders. Results included the following:

- The costs associated with any loss of corporate reputation or diminished brand value for inaction can be more costly than hard costs associated with cross-sector engagement and collaboration for the first 72 hours.
- ROI in engagement and collaboration is the overall value of what the port community would lose if shut-down for a day.
- Participants acknowledged the interdependency between business continuity and community resiliency.

Additional references to return-on-investment in community resiliency calculations are highlighted earlier in this chapter wherein ROI is introduced as a theme.

IQ23. “What type or level of return-on-investment would your organization expect or want for pre-designation of a portion of your organization’s assets and/or capabilities for local preparedness and response in the first 72 hours of a large-scale or national crisis?”

Sixteen participants across six cases provided a response to IQ23. Large corporations expect business continuity and a good reputation for investing in preparedness and response. A medium sized company would hope to at least be able to absorb the cost. A few of the interview participant responses to IQ23, positioned as

perceived incentives (Inc_Fin/BusCon/ComRes) in the finance, business continuity, and community resiliency subcategories are listed as follows: (a) big organization - would expect participation would enhance good name, (b) no ROI expected, a cost – not an investment, (c) profitability or breakeven (d) corporation’s desired ROI is to operate (business continuity) as soon as possible following the crisis without requirement of return on investment and be done under the understanding that what is good for the community is good for the company, (e) for every dollar that government invests in pre-disaster mitigation there is a \$4 return. But in business, we know initially that the ratio is 10/1 – pre-disaster mitigation, (f) if the actions the company is taking, will that reflect on my reputation in a positive way, is it the right thing to do...what is the short-term and the long-term benefit...what is the cost to do that? More progressive companies are looking at this...chief risk officer...more companies have, and look more seriously at these areas, and (g) loss of reputation even more expensive, how to get it back.

- “*Big organization - would expect participation would enhance good name - but if come out with reputation of being in the fight – this is sufficient (IQ23, NCR, 1: Pr. (F-P, Sm.); Crisis/Risk Management).*”
- “*No ROI expected, a cost – not an investment. This is where issue of liquidity comes in; can the company absorb the cost ...so the investment by the company might involve other things ...employee serving as National Guardsman*” (IQ23, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness).

- “*Profitability or breakeven*” (IQ23, NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology).
- “*The corporation’s desired ROI is to operate (business continuity) as soon as possible following the crisis*” (IQ23, NOL, 2: Pr. (F-P, Lg.); Oil Refining).
- “*Any actions taken by the company would most likely be done without requirement of return on investment and be done under the understanding that what is good for the community is good for the company*” (IQ23, PED, 1: Pr. (F-P, Lg.); Entertainment).
- “*In the Congressional Study published in 2005 on the benefits of investing in pre-disaster mitigation...for every dollar that government invests in pre-disaster mitigation there is a \$4 return. But in business, we know initially that the ratio is 10/1 – pre-disaster mitigation*” (IQ23, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software).
- “*If the actions the company is taking, will that reflect on my reputation in a positive way, is it the right thing to do...what is the short-term and the long-term benefit...what is the cost to do that? More progressive companies are looking at this...chief risk officer...more companies have, and look more seriously at these areas*” (IQ23, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software).
- “*Loss of reputation even more expensive, how to get it back*” (IQ23, PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software).

IQ24. “Please explain if the desired return-on-investment (ROI) your organization expects for cross-sector collaboration for resiliency is specific to the *business alone and/or the community?*”

Fourteen participants across five cases responded to IQ24. For most participants, the ROI expected for cross-sector collaboration is both business and community resiliency while acknowledging their interdependency.

The implication for businesses which prioritize their bottom-line alone to remain viable while excluding collaboration to augment the local community response capacity, is that they may risk falling behind when crisis strikes and lose their foothold in the market and the community. Recognition of the interdependency between business and community resiliency is inescapable. In the words of one participant from the port community of Long Beach:

(Inc_FinBusConComRes_ROI) – business continuity and community resiliency subcategory with the following properties and dimensions: (a) *about \$1 billion a day lost for every day that the Port of Long Beach is out of commission, and (b) ROI is cumulative value of what San Pedro Bay would lose if shut down (Los Angeles (#1 port), and Long Beach (#2 port) . . . the downside of a shutdown of this port for any period of time:*

We are a major economic engine in this region. Have tens of billions of dollars of cargo moving through here every year, employees and ripple effect, 30,000 folks tied to port for jobs, expand out even more, have calculated that *about \$1 billion a day lost for every day that the Port of Long Beach is out of commission, felt a little bit last year with work slow-down...so ROI is cumulative value of what San*

Pedro Bay would lose if shut down (Los Angeles (#1 port), and Long Beach (#2 port) . . . the downside of a shutdown of this port for any period of time. (IQ24, PED, 3: Pu. (Ci) - Landlord Port).

Here are a few additional perspectives by the interview participants, providing properties and dimensions of ROI as an incentive in the following subcategories:

(Inc_FinBusConComRes_ROI): (a) ROI is cumulative value of what San Pedro Bay would lose if shut down (Los Angeles (#1 port), and Long Beach (#2 port), (b) if not capable of withstanding a particular type of disaster....your reputation suffers...short-term thinking, (c) making a long-term investment to protect your market, your employees, rather than a short-term investment in your company, (d) for collaboration would take less, and would be scale dependent, how much does the well-being of the community impact the bottom line:

- *“In normal business, try to get 15-20%. For collaboration, would take less, and would be scale dependent, ROI is cumulative value of what San Pedro Bay would lose if shut down (Los Angeles (#1 port), and Long Beach (#2 port) . . . the downside of a shutdown of this port for any period of time, How much does the well-being of the community impact the bottom line” (PED, 3: Pu. (Ci) - Landlord Port).*
- *“The challenge with business insurance – doesn’t take care of that loss, impact to your brand; if not capable of withstanding a particular type of disaster.... your reputation suffers...short-term thinking” (IQ24, NCR, 4: Pr. (N-P, Sm.); Logistics/Supply Chain).*

- “Return on their investment in this space...it really is a philosophical point of view, *making a long-term investment to protect your market, your employees, rather than a short-term investment in your company*” (IQ24, NCR, 4: Pr. (N-P, Sm.); Logistics/Supply Chain).
- “*In normal business, try to get 15-20%. For collaboration, would take less, and would be scale dependent*” (IQ24, NOL, 1: Pr. (F-P); Maritime/Transportation).
- “*ROI is cumulative value of what San Pedro Bay would lose if shut down (Los Angeles (#1 port), and Long Beach (#2 port)) . . . the downside of a shutdown of this port for any period of time*” (IQ24, PED, 3: Pu. (Cit.) - Landlord Port).
- “The question for both sectors is *how much does the well-being of the community impact the bottom line*” (IQ24, PED, 6: Pu. (Cit.); Public Safety/Fire)?

IQ25. Interview Question 25 was presented as follows: “What type of contribution(s) or provisions beyond those already designated within a corporate continuity or corporate social responsibility plan can or might your organization make to realize a return-on-investment relative to community-level resiliency?”

Seven participants across four cases replied to this question with a perceived incentive rather than a type of contribution. Participant responses included (a) corporate goodwill, (b) corporate reputation to attract future employees, and (c) the interdependency between business continuity and community resiliency.

IQ26. Interview Question 26 was presented as follows: “To what extent and on what basis would your organization be willing to make its assets and/or capabilities available to the local public sector in the first 72 hours? Which assets or capabilities?”

Nine participants across three cases replied to this question. Overall, the participants explained their willingness to share assets and capabilities with the public sector to augment the response capacity; providing the sharing/loan is not overly burdensome to the company and with various stipulations. Participants who are willing are (a) interested to preserve if not enhance their reputation, (b) receive a tax benefit, (c) stay apprised of threats, (d) mitigate liability and manage risk, and (e) have confidence that their company and or community will return to normal as soon as possible to minimize impact to the bottom-line.

IQ30. Interview Question 30 was presented as follows: “What would incentive you as a leader of your business/organization to invest 2% of your corporate profits for *your business*’ continuity of operations in the first 72 hours of a large-scale crisis?”

Twelve participants across four cases, CHS, NCR, NOL, and PED, replied to this question by describing various incentives. Properties and dimensions of replies for each case are shown below. Responses included (a) the sooner they can return to normal, the organization will experience less impact on the bottom line, (b) but would just absorb it – pay your person for committing half a day to it – good business to be a community partner, (c) (company) has already dedicated assets, boards of large corporations are considered negligent if they do not participate in continuity of operations plans; and (d) would first look at cost/benefit analysis of this investment:

(CHS): (Inc_BusCon_ROI) (a) The organization would not designate a portion of its budget per se for business continuity and the port already has continuity plan, continuity is within its scope of responsibilities; (b) Really powerful question, the sooner you can return to normal, the less likely the disaster will have an impact on your bottom line. . . . That is the trick, to figure out the how and the why so that you don't have a negative impact; (c) the CEOs of the private sector have to realize that the natural and unnatural events are not forecastable and the sooner they can return to normal, the organization will experience less impact on the bottom line.

(NCR): (Inc_ComRes_GoodCommunityPartner): (a) For preparedness/small and large companies – would not invest a percentage, but would just absorb it – pay your person for committing half a day to it – good business to be a community partner.

(NOL): (Inc_ComRes): (a) [Company] has already dedicated assets including manpower, equipment maintenance, training, exercises.

(PED): (Inc_FinLR_ROI): (a) An ounce of prevention = four pounds of cure; (b) boards of large corporations are considered negligent if they do not participate in continuity of operations plans; and (c) would first look at cost/benefit analysis of this investment.

IQ31. Interview Question 31 was presented as follows: “What would incentive you as a leader of your business/organization to invest 2% of your corporate profits for your *community's* continuity of operations in the first 72 hours of a large-scale crisis?”

Sixteen participants across four cases replied to this question by describing a wide range of incentives to invest a percentage of profits in community continuity and resiliency in the first 72 hours:

(CHS): (a) Survival (Inc_BusRes), (b) tax deduction (Inc_Fin), (c) precedent of public-private investment (75%-25%) in port critical asset (Inc_Fin), and (d) avoid risk (Inc_LR);

(NCR): (a) Community partner otherwise a negative image would cost you more than 2% (Inc_ComResROI_GoodCorpPartner), and (b) understanding of interdependency between corporation and the community (2) (Inc_BusConComRes_Interdependency);

(NOL): (a) Reduced insurance premiums (Inc_Fin), (b) corporate good citizen (3) (Inc_ComResROI_GoodCorpCitizen), and (c) publicity (Inc_BusCon);

(PED) (a) Depends upon the cost/benefit analysis, what is the anticipated ROI? (Inc_BusConROI).

RQ1 Cross-Case Analysis

Various yet similar interview questions to understand perceived incentives and barriers were posed directly to the dissertation interview participants (IQ11, IQ12, IQ13, IQ19, IQ20, IQ21, IQ27, IQ32, and IQ33/IQ34). Cross-case analysis revealed a shared understanding of many perceived incentives and perceived barriers and four predominant themes. Additionally, references to two large-scale crises, the 9/11 attacks and Hurricane Katrina, were common threads to participant remarks throughout the cases. These three shared perspectives across the incentives and barriers, themes, and references to large-scale crises are described as follows.

Perceived Barriers and Perceived Incentives

Firstly, the IQ33 and IQ34 results provide a snapshot of the interview participant perspectives across the cases regarding the greatest perceived incentives and greatest perceived barriers to private sector engagement and cross-sector collaboration.

Ultimately, business continuity and community resiliency are the greatest perceived incentives that have the potential to overcome the greatest perceived barriers; sector-silo bias, lack of knowledge about whom to contact, and liability and risk concerns.

Perceived barriers (IQ33). The sector-silo bias, lack of knowledge, and liability and risk barriers were cited by participants in all six cases:

(Bar_Cul): Bias was cited by interview participants listed below in all six cases (CHS, DOR, MIA, NCR, NOL, PED) with the following properties and dimensions: (a) agency bias; (b) public sector silos; (c) organizational bias; (d) crisis denier; (e) distrust between public and private sectors; (f) public sector resistance to private sector; (g) public-private partnership complacency; (h) group think; and (i) different motivations of private and public sectors: NCR, 4: Pr. (N-P, Sm.); Logistics/Supply Chain; NCR, 5: Pu. (County); Public Safety/Fire; PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software; and PED, 6: Pu. (Cit.); Public Safety/Fire.

(Bar_KE): Lack of knowledge was cited by one or more public and private sector interview participants listed below in all six cases (CHS, DOR, MIA, NCR, NOL, PED) with the following properties and dimensions: (a) do not know private sector capabilities, resources, programs and intentions; (b) do not know whom to call; (c) don't know who is in charge; (d) do not know what we do not know; (e) do not have the relationships; (f)

politicians need to know logistics chain interdependencies, and (g) private sector does not know public sector protocols; CHS, 1: Pr. (F-P, Sm.); Emergency Response/Supplies; CHS, 3: Pr. (N-P, Sm.); Chaplaincy/Family; CHS, 5: Pu. (Cit.); Public Safety/Fire; DOR, 1: Pr. (F-P, Lg.); Maritime/Transportation; MIA, 1: Pr. (F-P, Sm.); Consulting/Retired Military; NCR, 5: Pu. (County); Public Safety/Fire; NCR, 6: Pu. (Fed.); Security/Response; NOL, 8: Pu. (Cit.); Port Commission; PED, 3: Pu. (Ci) - Landlord Port; PED, 4: Pu. (Cit.); Law Enforcement; PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace; PED, 6: Pu. (Cit.); Public Safety/Fire.

(Bar_LR): Liability and risk was cited as a perceived barrier by public and private sector interview participants listed below from the CHS, DOR, and PED cases; with the following properties and dimensions: (a) decisions have consequences, be willing to invest; (b) protect private sector proprietary information and competitive advantage; (c) public sector use of private sector equipment; (d) public sector fear private sector will gain too much information; and (e) uninvited volunteers can be problematic; CHS, 7: Pu. (State); University/Research; DOR, 3: Pu. (County); Public Safety/Emergency Management; PED, 3: Pu. (Ci) - Landlord Port; PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace; PED, 7: Pu. (County.); Emergency Operations; and PED, 8: Pu. (Mil.)/Pr. (N-P); Marine Transportation.

Perceived incentives (IQ33). Business continuity and community resiliency were cited as perceived incentives by participants in all six cases:

(Inc_BusCon, Inc_BusRes) Business continuity and business resiliency were cited as perceived incentives by participants listed below from the CHS, NCR, NOL and PED

cases with the following properties and dimensions: (a) can port accept a shut down when 40% of American economy is its customer; (b) enhanced continuity from community support, new revenue generation, get up and running quickly; (c) interdependency between public and private sectors; (d) business continuity of the ports is based on each sector realizing return on investment for collaboration for continuity; (e) survivability of industry and adjoining industry; (f) survival, and good reputation; as stated by interview participants; CHS, 3: Pr. (N-P, Sm.); Chaplaincy/Family; NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness; NCR, 3: Pr. (F-P, Lg.); Secure Communications Technology; NCR, 5: Pu. (County); Public Safety/Fire; NOL, 10: Pu. (State); Public Safety/Port Law Enforcement; PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software.

(Inc_ComRes) 'Community resiliency' was cited by participants listed below from the CHS, NCR, NOL and PED cases as a perceived incentive with the following properties and dimensions: (a) community duty, (b) corporate good citizen, profitability, right thing, good reputation; (c) greater good; and (d) greater efficiencies through public-private collaboration: stated by participants; CHS, 3: Pr. (N-P, Sm.); Chaplaincy/Family; NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency Preparedness; NOL, 10: Pu. (State); Public Safety/Port Law Enforcement; PED, 2: Pr. (N-P); Emergency Management & (F-P, Lg.) Software.

In response to IQ33, perceived barriers were expressed as needs including:

(Bar_KE) (a) private sector training in order to understand how to participate in the context of the incident command system, and (b) understanding who is in charge during a crisis including recognition of routine turnover in public sector leadership;

(Bar_SLM) the need for private sector and or agency seats in the local emergency operations center;

(Bar_LR) the need for contracts or memorandums of understanding with emergency provisions between the public agencies and private sector organizations;

(Bar_SLM) the concern about sufficient resources or time to implement a collaborative mission while sustaining one's existing mission which may continue to be an obstacle without renewed perspectives or approaches to management.

Predominant Themes

Secondly, the predominant themes sector-silo bias, interdependency, return-on-investment, and mutual mission clearly emerged from each of the cases based on data analysis from the participant interviews. Additionally, these four themes were mirrored by symposia excerpts. Each of these themes may also be categorized as a perceived barrier or a perceived incentive to collaboration. Moreover, the perceived predominant barrier to private engagement and cross-sector collaboration; sector-silo bias, might be overcome through concerted local-level effort of local public and private sector stakeholders working together through a mutual mission(s), a perceived incentive, to overcome an obstacle(s) and achieve a goal with mutual benefit in the strategic community.

Through local visionary leadership, mutual missions were developed in each of the six strategic military base and port communities and are highlighted as follows:

- CHS: Project SeaHawk, Port Emergency Information Center Group
- DOR: Local Mitigation Strategy Workgroup, Business Recovery Program, Communities Organized to Respond in Emergencies, Flood Mitigation State Partnership Model, Local Mitigation Strategy Workgroup
- MIA: Hurricane Liaison Team with Embedded Partners
- NCR: Baltimore Port Alliance, Regional Catastrophic Planning Program
- NOL: Port Coordination Team, Miss-Lou Cross-River Regional Initiative, Joint Task Force Seven
- PED: Long Beach, California Area Maritime Security Committee

Impact of Large-Scale Crises

Thirdly, participants across the cases were united in that they were impacted by experiences and lessons learned from Hurricane Katrina and or the September 11, 2001 (9/11) terror attacks. Given that the context for this study is collaboration for resiliency in the aftermath of a large-scale or national crisis, this analysis merits attention. In the context of responses to interview questions, participants interviewed in 2016 revealed their sensitivity to the loss of human life and economic disruption caused by the manmade terrorist attacks of 9/11 and the large-scale natural crisis, Hurricane Katrina (2005). The following interview excerpts reveal the gravity and significance of the 9/11 attacks and Hurricane Katrina on emergency management policy, planning, training, risk management and emergency responder resiliency. To the extent that these remarks reveal

gaps which may be filled by the private sector at the local-level in collaboration with the public sector, the purpose for this dissertation is further substantiated.

Hurricane Katrina. Hurricane Katrina, a large-scale crisis of 2005, was a point of reference that connected the participants. At least one participant from four of the six cases, DOR, NCR, NOL, and PED, mentioned Katrina during the one-on-one interviews. Likewise, the impact and lessons learned from the Katrina response, given its magnitude, remained at the forefront of discussion during the symposium held in New Orleans in 2013, eight years after Katrina.

In the liability and risk subcategory (Inc_LR); “Making it easy on companies to want to do it versus regulatory, paper signing...onerous memorandums of understanding...where hiring a lawyer is necessary. And to avoid liability.... all I want to do is help in the simplest way without it being difficult...we all go back to our roots in Katrina, Sandy” (IQ33, NCR, 6: Pu. (Fed.); Security/Response). This remark echoes that of other dissertation interview participants who highlighted onerous paperwork for reimbursements as a barrier to collaboration.

In the knowledge and education subcategory (Bar_KE), the following statement echoed that of other dissertation interview participants who described the necessity of private sector training in order that private sector leaders might understand their opportunities and precisely how to fit in to the incident command system:

“Nobody knows – the incident command system (ICS), nobody knows who is in charge – go to Sandy, Katrina – any major disaster, only the Carolinas came through with

a robust response when they had the flooding – *who is charge - local; state; - really in charge, not theoretically*” (IQ33, DOR, 1: Pr. (F-P, Lg.); Maritime/Transportation).

The following two dissertation interview excerpts emphasize the importance and opportunity for community including private sector support for emergency responders in the first 72 hours of a large-scale crisis:

In the culture and behavior subcategory (Bar_Cul); “Cultural breakdown, in the aftermath of Katrina (police officers) became victims, disconnected with the community” (IQ12, NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement).

In the human resources subcategory (Bar_HR); “30-40% of the New Orleans Police Department and emergency responders were impacted by Katrina’s storm and flooding and long working hours. There were responders who committed suicide during Katrina (two police officers and one fireman)” (IQ14, NOL, 10: Pu. (State); Public Safety/Port Law Enforcement).

In the leadership subcategory, two participants described corporate leadership in the aftermath of Katrina and a holistic approach to emergency management:

(Inc_Lead): “After Katrina, (company) helped to bring back/restore New Orleans” (IQ25, NOL, 2: Pr. (F-P, Lg.); Oil Refining).

In the scope, logistics, and management subcategory, one participant described a shift to comprehensive emergency management; which by definition includes the public and private sectors:

(Inc_SLM): “One of the charts – taken from the presentation made after Katrina, the totality of the program ...to *urge all segments to create a uniform and comprehensive*

emergency management program, not just preparedness and response” (IQ34, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

September 11, 2001 attacks. Similarly, the 9/11 terror attacks were referenced by many of the interview participants from four of the six cases (CHS, NCR, NOL and PED). September 11, 2001 was a point in time by which some of the interview participants marked increased awareness and changes in priorities and investments to address threats and response plans associated with large-scale crises.

Three participants described complacency and loss of caliber of experience gained during the response and recovery to the 9/11 attacks as a current barrier to engagement and collaboration needed to fortify the local response capacity:

(Bar_Cul): “Augmenting this is desensitization and complacency since 9/11” (Q14, CHS, 6: Pu. (State); Ports Authority).

(Bar_SLM): “Scientific inverse square law – further away from problem, the less you remember and appreciate significance of problem. 9/11, now 15 years ago, and *lessons that we learned from 9/11 where people willing to volunteer are beginning to be lost simply from a generational function. 9/11 generation today not alive*” (IQ14, CHS, 7: Pu. (State); University/Research).

(Bar_HR): “Over last few decades, now FEMA is subordinate to DHS along with 22 other agencies – more bureaucratic now – now NORTHCOM does what (participant) did as the Department of Defense (DoD) liaison to FEMA. Then ...Northern Command; *all this created after 9/11 in conjunction with creation of DHS*. Everything got much bigger, needed a more robust organization. (Participant) witnessed what it took – the

planning – sees value of planning. *Today planners don't have the experience*” (IQ34, NCR, 1: Pr. (F-P, Sm.); Crisis/Risk Management).

However, one participant described an example of post 9/11 increased investment in risk mitigation:

(Inc_LR): “Post 9/11, we see companies spend a fortune on resiliency . . . after 9/11 the big companies have office space offsite” (IQ19, NOL, 5: Pu. (Cit.); Public Safety/Fire).

Three participants described security as the cost of doing business since 9/11 and how technological solutions need to be practical or that the private sector might further step up their commitment and investment in security to fortify America’s strategic port communities:

(Inc_ComRes): “Since 9-11, port has TWIC requirements. Trucks have unrestricted access with TWIC card. However, (large retail organization) does not have TWIC card – therefore, port cannot receive resources from (large retail organization) during crisis response without escorts” (IQ13, CHS, 6: Pu. (State); Ports Authority).

In the following example, a military leader suggested that since security has become a post 9/11 cost of doing business, why not shift the burden or responsibility for cruise ship security at the ports from the US Coast Guard to the private sector?

(Inc_LR):

The USCG charged with maritime security of the cruise ships . . . why not have the burden of security go on the cruise ship industry – multibillion dollar – to take on security coverage themselves – so in any port around the world, they provide

their own security, with the US Coast Guard as the backup versus the primary. Why is not that burden shifted to private industry – so that they provided their own security, protection as it is cost of doing business. We live in a new world now...*front line security is the cost of doing business* ...as a business practice, security is a line item now for all businesses (post 9/11), so why are they not doing it... they need continuity as well. (IQ19, NCR, 7: Pu. (Mil.); Maritime/Transportation)

Emergency responder resilience was described a priority prior to 9/11 and that it was, in part, achieved through a collaborative internal program:

(Inc_SLM): “We have a plan – not a document/formal – *however we have gone to great lengths predating 9/11 to reinforce the idea of personal resilience*. We did that through initially a relationship with our employee assistance program which is very unique” (IQ9b, NCR, 5: Pu. (County); Public Safety/Fire).

In the following example, a military leader suggested that since security has become a post 9/11 cost of doing business, why not shift the primary responsibility for cruise ship security at the ports from the US Coast Guard to the private sector?

The US Coast Guard charged with maritime security of the cruise ships . . . why not have the burden of security go on the cruise ship industry – multibillion dollar – to take on security coverage themselves – so in any port around the world, they provide their own security, with the US Coast Guard as the backup versus the primary. Why is not that burden shifted to private industry – so that they provided their own security, protection as it is cost of doing business. . . . We live in a new

world now. . . . front line security is the cost of doing business . . . as a business practice, security is a line item now for all businesses (post 9/11), so why are they not doing it . . . they need continuity as well. (IQ19, NCR, 7: Pu. (Mil.); Maritime/Transportation)

Two participants described ways in which private and community sector organizations might augment the local response capacity. The first quotation describes the provision of a building during a crisis for continuity operations:

(Inc_ComRes): Building was designed to be a place with dual capacity, purpose; with its oversized conference room with phone lines, post 9/11, Navy was there, used it, oversized generator, two kitchens, shower, that other organizations could use to work out of building. The [organization] can be used as an active continuity of operations site in Long Beach. (IQ22, PED, 8: Pu. (Mil.)/Pr. (N-P); Marine Transportation)

The second quotation describes how private community organizations can support the local response capacity:

(Inc_ComRes):

All hands on deck, including the crisis response officer (CRO), the private sector liaison – need to pull every resource that you can . . . during Katrina with massive flooding, wildlife and fisheries had boats could check these people . . . private bass clubs, fisherman . . . salt water fisherman have boats available to augment search and rescue. (IQ11, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace)

Results from ReadyCommunities Partnership Symposia Summary Data

Each of the six ReadyCommunities Partnership Strategic Military Base and Port Community Resiliency Initiative symposia in the 6 distinct communities, were convened by me as national director and are posted online. Each symposium addressed a particular aspect of the initiative in order to understand best practices and explore recommendations of the public and private sector leaders to fortify if not augment the local response capacity in the face of a large-scale crisis.

In particular, the initiative encouraged each community's understanding of its local and critical infrastructure and their interdependencies and the role of a private sector liaison in this process (Washington, DC; Miami). As a result of the initiative, various best practices and recommendations were identified and included caring for families and dependents of responders, military personnel, and critical sector employees (Doral, Miami, New Orleans); inter-port communications (Charleston); and the integration of existing commercial technology with local critical infrastructure to increase situational awareness for law enforcement and first responders (Long Beach).

The titles of the ReadyCommunities Partnership Military Base and Port Community military base and port community resiliency initiative symposia held in each of the six communities are listed as follows. The complete reference for each symposium is included in the reference list.

- Long Beach, CA (2014): "Best Practices and Recommendations and Using Existing Commercial-Off-The-Shelf-Technology and Capability to Integrate Local Critical Infrastructure into a Surface and Subsurface Awareness,

Identification and Interdiction Network for Military, Port, Law Enforcement and First Response Partners”

- New Orleans, LA (2013): “The Greater New Orleans Model: A Foundation for the Role of the Corporate Crisis Response Officer in Supporting First Responders in the First 72 hours - Providing Assistance for Family Members and Dependents with Disabilities or Access and Functional Needs”
- Doral, FL (2011): “The Miami-Dade Model: Identifying Crisis Response Officers of the Local Critical Infrastructure and their Vulnerable-Special Needs Dependents”
- Miami, FL (2011): “Atlantic and Gulf Coast Connectivity, Identifying Local Critical Infrastructure & Crisis Response Officers Base and Port Community Resiliency Initiative Roundtable: Miami-Dade Model: Identifying Crisis Response Officers of the Local Critical Infrastructure and Their Vulnerable and Special Needs Dependents”
- Charleston, SC (2010): “Inter-Port Communications and Exercise Planning Session”
- Washington, DC (2010): “Mapping Local Critical Infrastructure, Vendors and Suppliers in America’s Strategic Communities to Prepare for a Large Scale or National Crisis”

Relevance of Symposia Summary Data to Results

In brief, the relevance of the symposia summary data to understanding the answers to RQ1 and subquestions are provided through excerpts and analysis throughout the remainder of this chapter.

RQ1 (symposia): While symposia participants were not presented with interview questions to understand perceived incentives and or perceived barriers, an analysis of symposia participant remarks has revealed implied incentives and or implied barriers to private sector engagement and cross-sector collaboration.

SQ1 (symposia): The symposia data is not relevant to the RQ1 subquestion as IQ33 was only posed directly to the interview participants and not directly to the symposia participants.

SQ2 (symposia). Participants highlighted best practices and recommendations for caring for families and or vulnerable-special needs dependents of emergency responders, military and critical sector employees in the Miami, Doral and New Orleans symposia. While the symposia data does not directly answer SQ2 which seeks to understand the private sector's willingness to support a plan to care for families and dependents of emergency responders and critical sector employees, the best practices and recommendations of the public and private sector symposia attendees can serve to inform implied incentives and implied barriers for collaboration to institute plan to care for responder families and dependents in the first hours of a crisis.

Additionally, and as highlighted earlier in this chapter; the symposia summaries were gleaned for references to substantiate the predominant themes which emerged from

the participant interview data; including sector-silo bias (perceived barrier), interdependency (perceived incentive), mutual mission (perceived incentive), and return on investment (perceived incentive).

Indeed, the complexity of the port environment is another reason or call to action for early cross-sector collaboration to reinforce our response capacity for resiliency in the face of a large-scale crisis. In the words of one of the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative symposium participant:

Each port environment is both complex and unique in that a port is where police, firefighters, interagency, intergovernmental (entities operate). Some of the vessels . . . are either under your control, under port control, under their own sovereign control . . . have equities with international heads of state and nation states as well as, our local community, our state agencies, our federal agencies.

(ReadyCommunities Partnership, 2011, PortMiami, p. 35)

Recognition of the complex environment of each port is a fitting introduction to each of the six cases, defined by the locale and date for each symposium in the ReadyCommunities Partnership in the Strategic Military Base and Port Community Resiliency Initiative series (2010-2014). With the foundation of best practices and recommendations gained from the symposia in these six communities; the one-on-one dissertation interviews were then conducted in 2016 in these same six communities to answer the research questions.

In the context of the six symposia held to develop the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative, participant remarks

informed the answer to RQ1 to understand perceived private sector incentives and or barriers to cross-sector engagement and collaboration. The symposia participants represented the public, private (for-profit), nonprofit, and military organizations.

RQ1 Results: ReadyCommunities Partnership Symposia

RQ1. “What are the perceived barriers and incentives to private sector collaboration with the public sector for preparedness and response to provide select services or resources for the first 72 hours of a large-scale or national crisis, thereby reinforcing if not augmenting the existing response capacity?”

Symposium participants were not asked to describe perceived incentives or perceived barriers to collaboration. However, perceived incentives and or perceived barriers were implied by their various remarks. The perceived incentives and perceived barriers as extracted from the ReadyCommunities Partnership symposia summaries are listed below by subcategory.

RCP Symposium, Washington, DC

RQ1 implied incentives. Incentives were implied by ReadyCommunities Partnership (2010, Senate) symposia participants in Washington, DC as summarized below:

(Inc_ComRes): ‘Community resiliency’ subcategory - Properties and dimensions are listed as follows with excerpts listed below: (a) *whole system is going to work much smoother; (b) keep our port up and running and maintaining resiliency; (c) your corporate partner ...your liaison...to the company; and (d) gap today is bringing along our corporate partners and breaking old paradigms . . . at some governmental levels with*

how we interact . . . share intelligence and information with those very private operators, whom we're going to depend;

- “But if a local community and . . . private enterprise . . . get together on a routine basis . . . the *whole system is going to work much smoother*. . . . The bottom . . . has got to start pushing up stronger.” (ReadyCommunities Partnership, 2010, Senate, p. 12)
- “Established in 2008 a commercial salvage and recovery team . . . of qualified welders, inspectors, certified salvage experts, and dive medical technicians along with hyperbaric chamber operators. . . . *to keep our port up and running and maintaining resiliency*.” (ReadyCommunities Partnership, 2010, Senate, p. 17)
- “Write your public-sector partners into them (your plans) . . . if you've an interagency/emergency operations center, have a seat for your corporate partner . . . *your liaison . . . to the company*.” (ReadyCommunities Partnership, 2010, Senate, p. 24)

We do a great job and we're a very mature on the local, state, and federal level in terms of preparing our first responders. The gap today is *bringing along our corporate partners. . . and breaking old paradigms*, which exist . . . *at some governmental levels with how we interact . . . share intelligence and information with those very private operators, whom we're going to depend on*.

(ReadyCommunities Partnership, 2010, Senate, p. 28)

(Inc_Fin): ‘Finance’ subcategory – Properties and dimensions are italicized as follows with excerpts listed below: detrimental impact when the oil spill happened in

2008 of roughly \$300 million a day; 62 percent of the consumer spending public of the United States is served through the Port of New Orleans and the lower Mississippi river ports; (port) is the second largest generator of jobs; (port) is responsible for more than 1.4 million jobs throughout the country; bring best practices of economically competitive private industries into the public arena;

- We looked at a *detrimental impact when the oil spill happened in 2008 of roughly \$300 million a day*... that number begins to grow exponentially after the fourth day, because of the law of supply and demand.”
(ReadyCommunities Partnership, 2010, Senate, p. 15)
- “62 percent of the consumer spending public of the United States is served through the Port of New Orleans and the lower Mississippi river ports.
(ReadyCommunities Partnership, 2010, Senate, p. 17)
- “The Port of Miami is an \$18 billion a year business...creates 180,000 jobs in my community and it’s the *second largest generator of jobs*”
(ReadyCommunities Partnership, 2010, Senate, p. 17).
- We rank fifth internationally when we're combined with our partner of Los Angeles. Alone, the Port of Long Beach is the second busiest container port in the nation, and we rank 17th internationally by ourselves. We're *responsible for more than 1.4 million jobs throughout the country*. ...about \$140 billion of annual cargo travels through just our port. (ReadyCommunities Partnership, 2010, Senate, p. 17)

- “Port administration.... They lease all the facilities to private entities... so we are able to *bring best practices of economically competitive private industries into the public arena . . .* (ReadyCommunities Partnership, 2010, Senate, p. 17).”

(Inc_Lead): ‘Leadership’ subcategory – Properties and dimensions are listed as follows with the corresponding excerpts listed below: (a) *unprecedented challenges today in our seaports... underpinning of our ability to establish resiliency;*

“We’re facing some unprecedented challenges today in our seaports. Aging infrastructure, lack of technology investment, depth in our channels, and loss of revenue...they are the *underpinning of our ability to establish resiliency.*”

(ReadyCommunities Partnership, 2010, Senate, p. 15)

(Inc_SLM): ‘Scope, logistics and management’ subcategory - Properties and dimensions are listed as follows with the corresponding excerpts listed below: (a) Eighty-five percent of all critical infrastructure is in private hands; (b) supply chain was simply lacking; (c) ensuring the continuity with the prioritization of restoration, resiliency, and recovery; (d) make sure that they’re working with their local communities to provide fuel; (e) continually updated in the concept of operations; (f) improve the way we [U.S. Coast Guard] share information with the private sector; (g) include the people in the private sector...meet your needs; and (h) commercial port serves the military very well;

- “*Eighty-five percent of all critical infrastructure is in private hands. We have to recognize that and we have to engage appropriately*” (ReadyCommunities Partnership, 2010, Senate, p. 16).

- “Louisiana provides 30 % of the energy for the entire port, the rest of the country...yet it was days/weeks before we could ever find diesel...*supply chain was simply lacking*...Generators could not be operated” (ReadyCommunities Partnership, 2010, Senate, p. 20).
- “Have we had ...coordination between the Department of Energy with our domestic energy suppliers... *ensuring the continuity with the prioritization of restoration/resiliency/recovery* (ReadyCommunities Partnership, 2010, Senate, p. 20)?”
- “Over 90 % of all the fuel distributors and dealers are...small businesses... we’re working with their trade associations to make sure that they’re *working with their local communities to provide fuel*” (ReadyCommunities Partnership, 2010, Senate, p. 21).
- “Just like having private enterprise in the meetings, you also have to have them (private enterprise) included and *continually updated in the concept of operations*” (ReadyCommunities Partnership, 2010, Senate, p. 22).
- “We need to improve the way we share information with the private sector” (ReadyCommunities Partnership, 2010, Senate, p. 22).
- “If you don’t *include the people in the private sector*, your collaboration is not going to *meet your needs*” (ReadyCommunities Partnership, 2010, Senate, p. 23).

- “Why we believe that *commercial port serves the military very well*. And it's through the cooperation of our federal, state, local partners that we're able to do so” (ReadyCommunities Partnership, 2010, Senate, p. 33).

RQ1 implied barriers. Barriers were for implied by symposia participants as summarized below:

(Bar_SLM): Scope, logistics, and management subcategory – Properties and dimensions are listed as follows with the respective excerpt shown below: (a) hasn't been a requirement up to this point:

Even the most concerted and dedicated EOC (emergency operations center) director and mayor, when you ask them who constitutes the local critical infrastructure, and do they know who that is for military, and for some of the key institutions - there's a gap. It's not because they failed to know. It *hasn't been a requirement up to this point* because most institutions so far have been able to take care of themselves. (ReadyCommunities Partnership, 2010, Senate, p. 16)

(Bar_LR): Liability and risk subcategory - Properties and dimensions are listed as follows with excerpts listed below: (a) legitimate issue associated with the private sector about proprietary information;

- “Government looks at information sharing, it’s transparency...but there’s a *legitimate issue associated with the private sector about proprietary information.*” (ReadyCommunities Partnership, 2010, Senate, p. 23)

RCP Symposium, Charleston

RQ1 implied incentives. Incentives were implied by ReadyCommunities Partnership (2010) symposia participants in Charleston as summarized below:

(Inc_ComRes): Community resiliency subcategory - Properties and dimensions of implied incentives are italicized as follows with excerpts listed below: (a) prevention, the protection, response and recovery of major incidents; (b) plan, prepare, protect, respond; (c) increase and enhance the efficiency for port security and the resiliency of the port:

- (Function of shared mission space): “For the planning, the preparation, the prevention, the protection, response and recovery of major incidents”
(ReadyCommunities Partnership, 2010, Charleston, p. 10).
- (Function of project SeaHawk): “Baseline level of awareness...*to plan, prepare, protect, respond*” (ReadyCommunities Partnership, 2010, Charleston, p. 12).
- (Function of partners at the federal, state, local level): “*Increase and enhance the efficiency for port security and the resiliency of the port*”
(ReadyCommunities Partnership, 2010, Charleston, p. 14).

(Inc_Cul): Culture and behavior subcategory (interdependency theme) - Properties and dimensions of implied incentives are listed as follows with the corresponding excerpts: *help out, partnership when things go sour*;

- “What we can do to *help out* because we have our problems and vice versa”
(ReadyCommunities Partnership, 2010, Charleston, p. 16).

- Perceived incentive (function of group, partnership): “We will *be a partnership when things do go sour*” (ReadyCommunities Partnership, 2010, Charleston, p. 16).

(Inc_KE): Knowledge and education subcategory – Properties and dimensions of implied incentives are italicized as follows with excerpts listed below: (a) *figure out who we can draw from (network) for this; and (b) notify different people in the community;*

- (Function of All Partners Access Network): “I have a need...*figure out who we can draw from for this*” (ReadyCommunities Partnership, 2010, Charleston, p. 10).
- (Function of homeowner’s association): “*Notify...different people in the community...what streets are closed, where to go*” (ReadyCommunities Partnership, 2010, Charleston, p. 14).

(Inc_LR): ‘Liability and risk’ subcategory - Properties and dimensions of implied incentives are listed as follows with corresponding excerpts: (a) *information-sharing mechanism; (b) identify risk zones and emerging threats more rapidly and ahead of time; (c) solve potential problems; and (d) enhance and diminish the threat picture at the ports;*

- (Function of fusion centers at the state level): “All-hazard type of *information-sharing mechanism (preparation, response and recovery)*” (ReadyCommunities Partnership, 2010, Charleston, p. 9).
- (Function of disaster response teams): “*Identify risk zones and emerging threats more rapidly and ahead of time*” (ReadyCommunities Partnership, 2010, Charleston, p. 11).

- (Function of the partnership): “Identify weaknesses and...*solve potential problems*” (ReadyCommunities Partnership, 2010, Charleston, p. 12).
- (Function of “Bringing together disparate organizations from the private sector, the state, local, public sector, law enforcement, federal sector, the U.S. Coast Guard, DoD, Navy, NCIS and so on.”): “*Enhance and diminish the threat picture at the ports*” (ReadyCommunities Partnership, 2010, Charleston, p. 19).

(Inc_SLM): Scope, Logistics, and Management subcategory properties and dimensions of implied incentives with the excerpt shown below: (a) *show up . . . with the (right) gear when you need to be able to:*

- Implied incentive (function of responder communities): “*Show up . . . with the (right) gear when you need to be able to. . .*” (ReadyCommunities Partnership, 2010, Charleston, p. 16).

RQ1 implied barriers. Barriers were implied by ReadyCommunities Partnership (2010) symposia participants in Charleston, SC as summarized below:

(Bar_KE): Knowledge and education subcategory – Properties and dimensions of implied barriers are listed as follows with respective excerpts; (a) deciding what information can be shared:

- “The problem. *What information can we share?*” (ReadyCommunities Partnership, 2010, Charleston, p. 16).

RCP Symposium, Miami

RQ1 implied incentives. Barriers were implied by ReadyCommunities Partnership (2012) symposia participants in Miami as summarized below:

(Inc_BusCon): Business continuity subcategory - Properties and dimensions of implied incentives are listed as follows with the corresponding excerpts: (a) business continuity; (b) so businesses can get back up and running, both large and small; (c) reconstitute the Port of Charleston; and (d) reliance on critical communications during emergencies:

- “Business continuity information network . . . (How - having representation from the private sector in the emergency operations center (EOC) is one of the keys that allows us to do that.” (ReadyCommunities Partnership, 2012, PortMiami, p. 15).
- “Our Business Recovery Program . . . identified by FEMA as a model practice . . . government doesn’t do a fantastic job at things like opening up points of distribution and water and ice . . . not as good as . . . private sector. . . let’s start restoring infrastructure so businesses can get back up and running” (ReadyCommunities Partnership, 2012, PortMiami, p. 23).
- (Function of engage all sectors): “Want the economy to come back strong . . . by getting those businesses up and running, both large and small . . . viability of this community” (ReadyCommunities Partnership, 2012, PortMiami, p. 23).

(Inc_ComRes): Community resiliency subcategory – Properties and dimensions of implied incentives are listed as follows with corresponding excerpts: (a) *reconstitute the port, and (b) help bring infrastructure back to you:*

- (Function of “Port Emergency Information Center Group”): “Working with a combination of our federal partners, our state partners, and then local industry...*reconstitute the Port of Charleston*” (ReadyCommunities Partnership, 2012, PortMiami, p. 15).
- “As you look at your port security... and hurricane preparedness throughout the state and how we work together, make sure that you identify those private sector partners that really can help bring infrastructure back to you, can help bring fueling stations back to you” (ReadyCommunities Partnership, 2011, Miami, 2011, p. 32).

(Inc_Cul): Culture and behavior subcategory (interdependency theme) – Properties and dimensions of implied incentives are listed as follows with respective excerpts: (a) *interdependency/rescue; and (b) importance of that first 72 hours:*

- “*Interdependency*...because the neighbor you fought with one day may be the one that pulls you out of a snow bank (rescue) the next” (ReadyCommunities Partnership, 2011, Miami, p. 13).
- “We understand the importance of the crisis response officer. We understand the *importance of that first 72 hours* after an incident. And we also understand that it’s about collaboration” (ReadyCommunities Partnership, 2011, Miami, p. 41).

(Inc_Fin): Finance subcategory – Properties and dimensions of implied incentives are italicized as follows with the respective excerpts: (a) *hardened things like hospitals, police stations, fire stations, shelters*:

- (Function of “Local Mitigation Strategy Work Group ...partnership between emergency management, our colleges and universities, our other local government agencies and our private sector partners”): “brought in ...hazard mitigation grant, that’s hardened things like hospitals, police stations, fire stations, shelters. Addressed flood-prone areas” (ReadyCommunities Partnership, 2012, PortMiami, p. 16).

(Inc_KE): Knowledge and education’ ubcategory – Properties and dimensions of implied incentives are listed as follows with corresponding excerpts: (a) expeditious response and recovery, (b) know one another’s capabilities, fill the gap when crisis hits . . . ready to quickly respond, recover and reconstitute the port; (c) knowledge of a critical initiative; (d) not going to have your first available resource; (e) successful disaster response at the port; (f) train with all partners at the port; (g) critical to providing disaster relief; (h) provide the most current . . . information (related to the Maritime Transportation System); and (i) understanding the whole ecosystem . . . and then dealing with the crisis:

- “So the local responder community knows who’s allowed on site into the building first for *expeditious response and recovery*” (ReadyCommunities Partnership, 2012, PortMiami, p. 20).

- “By communicating, we *know each other’s capabilities* for each agency...and how we address casualties” (ReadyCommunities Partnership, 2012, PortMiami, p. 20).
- “There will be drilling off the coast of Cuba . . . a very critical thing . . . that we’re looking at why we have these partnerships” (ReadyCommunities Partnership, 2012, PortMiami, p. 20).
- “*Know everybody’s capabilities so that we can fill the gap when the crisis hits* . . . ready to quickly respond, recover, and reconstitute the port” (ReadyCommunities Partnership, 2012, PortMiami, p. 21).
- “Identify those vendors, have *redundant* vendors . . . when a terrorist event happens . . . emergency or disaster happens, *you’re not going to have your first available resource*” (ReadyCommunities Partnership, 2012, PortMiami, p. 21).
- “*Have our own desk in the county EOC . . . have training with the county, with the EOC*” (ReadyCommunities Partnership, 2012, PortMiami, p. 24).
- “Keys to successful disaster response at the port” (ReadyCommunities Partnership, 2012, PortMiami, p. 24).
- “Continually *train here at the port with all our partners*” (ReadyCommunities Partnership, 2012, PortMiami, p. 24).
- “*Critical to providing disaster relief*” (ReadyCommunities Partnership, 2012, PortMiami p. 26).

- (Function of Port Emergency Information Center with preexisting relationships): “*Provide the most current . . . information* [related to the Maritime Transportation System], today the center is incorporated into exercises” (ReadyCommunities Partnership, 2012, PortMiami p. 26).
- “*Understanding the whole ecosystem . . . and then dealing with the crisis*” (ReadyCommunities Partnership, 2012, PortMiami p. 26).

(Inc_SLM): Scope, logistics, and management subcategory – with properties and dimensions of implied incentives listed as follows with excerpts shown below: (a) resolve that issue; (b) helped the Department of Defense’s ability to respond to a crisis more effectively; (c) organized to respond; (d) coordination in the event of a crisis; and (e) reliance on critical communications during emergencies:

- “Collaborative effort to resolve that issue” (ReadyCommunities Partnership, 2012, PortMiami, p. 14).
- “Early and continuous collaboration with the private sector, that is nongovernmental organizations and academia during steady state, really helped the Department of Defense’s ability to respond to a crisis more effectively” (ReadyCommunities Partnership, 2012, PortMiami, p. 15).
- (Function of initiative called “Communities Organization to Respond in Emergencies – partnership with FEMA to identify community-based and faith-based organizations”): “Organized to respond” (ReadyCommunities Partnership, 2012, PortMiami, p. 16).

- (Function of “Cross-boundary model for collaboration - 209 participants from various sectors communicating...through a portal): “Coordination in the event of a crisis” (ReadyCommunities Partnership, 2012, PortMiami, p. 19).
- (Function of “emergency response team; bringing the federal, state, local and private sector together): “Reliance on critical communications during emergencies” (ReadyCommunities Partnership, 2012, PortMiami, p. 19).

RQ1 implied barriers. Barriers were implied by ReadyCommunities Partnership (2012) symposia participants in Miami as summarized below:

(Bar_KE): Knowledge and education subcategory – Properties and dimensions of implied incentives are listed as follows with excerpts shown below: (a) we often overlook, particularly if we’re in a formally organized organization; and (b) don’t know who else has the capacity that you lack:

- “The private sector holds the key to a lot of the solutions that we often overlook, particularly if we’re in a formally organized organization such as the military or the (U.S.) Coast Guard” (ReadyCommunities Partnership, 2012, PortMiami, p. 13).
- “You don’t know who else has the capacity that you lack, the gap analysis . . . then how do you pull them in” (ReadyCommunities Partnership, 2012, PortMiami, p. 14)?

(Bar_SLM): ‘Scope, logistics and management’ subcategory – properties and dimensions are as follows with the respective excerpt shown below: (a) going to work:

- “If you do not have that partnership . . . bring those stakeholders together . . . don’t build that relationship based on trust . . . admiration . . . mutual respect, it’s not going to work (ReadyCommunities Partnership, 2012, PortMiami, p. 14).”

RQ1 Symposium, Doral

RQ1 implied incentives. Incentives were implied by ReadyCommunities Partnership (2013) symposia participants in Doral as summarized below:

(Inc_ComRes): Community resiliency’ subcategory – Properties and dimensions of implied incentives are listed as follows with respective excerpts: (a) *engaging the private sector so we can ensure we are resilient after a disaster; and (b) desperate need to find other sectors of the community:*

- “We’ve been engaging the private sector, so we can *ensure that we are resilient after a disaster* (ReadyCommunities Partnership, 2013, Doral, p. 10).”
- “It was almost a *desperate need to really start going out and finding the other sectors of the community* that we had not been engaging, and making sure that we were bringing them into the whole disaster framework; emergency management framework, here in Miami-Dade County (ReadyCommunities Partnership, 2013, Doral, p. 10).”

(Inc_ComRes_Interdependency); (Inc_LR_MOU) – Properties and dimensions of implied incentives are listed as follows with the respective excerpt: (a) overall partners meeting where we bring in the private sector group, and (b) get the MOU for what services they can potentially provide, what resources they have:

- We're trying to draw towards is this *overall partners meeting where we bring in the private sector group*, we bring the faith-based and community-based group and volunteer organizations we work with. We bring in those who are part of our Citizen Corps and... get them all in a room together and talk about those topics that are common to all of us. We need to get that cross-pollination going where the private sector is reaching out and talking to those folks in the faith based that we've already established and made partnerships with to *get the MOU for what services they can potentially provide, what resources they have*. We've already actually started to map a lot of those things. Where these organizations are, what resources they have, what they can provide, what areas of the community they're already in and supporting (ReadyCommunities Partnership, 2013, Doral, p. 21).

(Inc_Fin): 'Finance' subcategory – properties and dimensions of implied incentives are italicized as follows with the respective excerpt: *(a) starting to see some of the grants that were sustaining a lot of the programs, and the office starting to shrink; and (b) both at the federal and the state level:*

- We were starting to see the budget impacts of the economic downturn here locally. We're *starting to see some of the grants that were sustaining a lot of the programs, and the office starting to shrink; both at the federal and the state level*, and really, besides engaging the whole community just made great sense. (ReadyCommunities Partnership, 2013, Doral, p. 14).

RQ1 Symposium, New Orleans

The ReadyCommunities Partnership New Orleans (2013) symposium excerpts which provide the context for the properties and dimensions of the implied incentives and perceived barriers are listed below. The symposium participants were never presented with questions about perceived incentives or perceived barriers for collaboration. Rather, the incentives or barriers listed below were implied in the symposium participant remarks.

RQ1 implied incentives. The following implied incentives for private sector engagement and collaboration were described by participants in the ReadyCommunities Partnership (2013) symposium co-hosted by the Port of New Orleans.

(Inc_BusCon): Business continuity subcategory with the following properties and dimensions of implied incentives are italicized as follows with respective excerpts: (a) get (businesses) back up and going; (b) safely get people in and out of port and get port up and running, and (c) oil and gas support:

- “*Get business up and running again*” (How: “make sure everything is safe and secure, ready for them to come back into the port”) (ReadyCommunities Partnership, 2013, New Orleans, p. 25).
- “*Safely get people in and out of port and get port up and running*” (How: “Collaboration with private sector . . . MOUs signed that they will come in with their heavy equipment and push debris off the road”) (ReadyCommunities Partnership, 2013, New Orleans, p. 23).

- “*Oil and gas support*” (How: Landlord port – with over 200 businesses private industry assistance when storms . . . or any disaster might occur)
(ReadyCommunities Partnership, 2013, Port New Orleans, p. 23).

(Inc_ComRes); Community resiliency subcategory with the following properties and dimensions of implied incentives are listed as follows with respective excerpts: (a) be an asset to the EOC and the people on the ground, (b) be equally impactful in the response, (c) help you, (d) enhance your efforts, (e) crisis response preparation, (f) be an asset right away, (g) rebuild and recover, (h) first 72-hour response, recovery, (i) couldn’t have survived, (j) successful (collaboration), (k) saved lives, (l) saved that community, (m) ensure the health and public safety of the citizens:

- “Be an asset to the EOC and the people on the ground (How: Share information, know who is doing what and what they cannot do)”
(ReadyCommunities Partnership, 2013, New Orleans, p. 17).
- “Be equally impactful in the response” (How: communication is key, put them in opportunities where they are most needed) (ReadyCommunities Partnership, 2013, New Orleans, Summary p. 18).
- “Help you” (ReadyCommunities Partnership, 2013, New Orleans, p. 18).
- “Enhance your efforts” (How: Regional collaborative efforts are important in bring technology to those efforts...and enhance ...regional collaboration)
(ReadyCommunities Partnership, 2013, New Orleans, p. 20).

- “Do (crisis) event planning, *(crisis) response preparation*” (How: collaborative environment facilitated by technology) (ReadyCommunities Partnership, 2013, New Orleans, p. 20).
- “*Be an asset right away*” (ReadyCommunities Partnership, 2013, New Orleans, p. 29)
- “*Rebuild and recover*” (How: working together) (ReadyCommunities Partnership, 2013, New Orleans, p. 17)
- “*First 72-hour response, recovery*”; (How: “transition recovery center to a response center, communication with entire neighborhood) (ReadyCommunities Partnership, 2013, New Orleans, p. 18).
- “Region’s (help)” (first responders, elected officials, volunteers, volunteer groups): “*Couldn’t have survived*” (How: partners from across the state and nation made it possible) (ReadyCommunities Partnership, 2013, New Orleans, p. 16).
- “Regional collaboration”: “*Successful (collaboration)*” (How: trust among the individuals and organizations that are sharing information sharing, bring technology to support regional collaboration) (ReadyCommunities Partnership, 2013, New Orleans, p. 20).
- “Cooperative (spirit)”: “*Saved lives*” (How: (making the right decision in a split moment, working across parish lines, political differences) (ReadyCommunities Partnership, 2013, Port New Orleans, p. 17).

- “Cooperative (spirit)”: “*Saved that community*” (How: not asking who was going to pay or who was in charge) (ReadyCommunities Partnership, 2013, Port New Orleans, p. 16).
- “Our mission: “*Ensure the health and public safety of the citizens*” (How: “working with local leaders and our federal partners to refine and address those requirements (ReadyCommunities Partnership, 2013, Port New Orleans, p. 35).

(Inc_Cul): Culture: (a) Interdependencies for mutual success (a predominant theme) - Cannot handle it alone (big events); (b) our successes depend on all of us:

(Inc_KE): Knowledge and education: (a) Improve plans . . . help us not repeat mistakes.

(Inc_LR) Liability and risk: (a) Eliminate the risk barges pose to river navigation and infrastructure), (b) prevent a catastrophic vessel impact, and (c) ensure that the region is best prepared for the immediate post-storm response operations.

(Inc_Cul): Culture and behavior subcategory with the following properties and dimensions of the implied incentives with respective excerpts: (a) interdependencies for mutual success (a predominant theme) - cannot handle it alone (big events); and (b) our successes depend on all of us:

- “*Cannot handle it alone (big events)*” (How: “other agencies help us, work together, share our information”) (ReadyCommunities Partnership, 2013, New Orleans, p. 19).

- “*Our successes depend on all of us*” (ReadyCommunities Partnership, 2013, New Orleans, p. 17).

(Inc_Lead) ‘Leadership’ subcategory with the following properties and dimensions to convey the implied incentives are listed below with excerpts. Leadership in the New Orleans case was demonstrated through mutual missions to achieve community resiliency as spearheaded by a regional initiative, task force, a coordination team, an operations and recovery center, and a four-wide structured committee.

Mutual mission is one of the emergent themes from this study and an element of the grounded theory and companion applied mutual mission theory of this study in order to (a) provide resources; (b) protect lives and vital infrastructure, enhance public safety, (c) prevent a catastrophic vessel impact, ensure that the region is best prepared for the immediate post-storm response operations; (d) get businesses back up and going; and (e) improve our plans, a best practice is this is a four-wide structure for engagement including both federal partners, state partners, local government partners as well as private industry partners.

A few examples of mutual missions driven by cross-sector collaboration to achieve a goal within the context of strategic military base and port community resiliency were highlighted in the ReadyCommunities Partnership symposium summary (2013) as listed below and earlier in this chapter:

- “Miss-Lou Cross-River Regional Initiative - an alliance of public and private sector leaders from two sides of the Mississippi River”: “Community and economic development, *provide resources.*” (How: “Work together, trust

based on the alliance.”) (ReadyCommunities Partnership, 2013, New Orleans, p. 11)

- “Joint Task Force 7 maritime law enforcement task force - seven sheriffs, port, U.S. Coast Guard, private sector”: “*Protect lives and vital infrastructure, enhance public safety . . .*”; (How: “Rapid response and unified command; cooperation, communication, and collaboration to enhance public safety.” (ReadyCommunities Partnership, 2013, New Orleans, p. 11)
- “Port Coordination Team” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 13; Government): “Eliminate the risk they posed (barges, to river navigation and infrastructure), *prevent a catastrophic vessel impact, ensure that the region is best prepared for the immediate post-storm response operations.*”; (How: “Essential guidance and coordination.”) (ReadyCommunities Partnership, 2013, New Orleans, p. 13).
- “Louisiana Business Emergency Operations Center (BEOC)”: “*get (businesses) back up and going*”; (How: “. . .find out what businesses need (response), coordinated effort. . .” (ReadyCommunities Partnership, 2013, New Orleans, p. 17).
- “Four-wide structure committees”: “What makes these committees so worthwhile as a *best practice is this is a four-wide structure for engagement including both federal partners, state partners, local government partners as well as private industry partners* that have interest equities in these various responses. We get together, we develop plans collaboratively, exercise these

plans collaboratively. We get best lessons from these exercises and roll them into *improving our plans. That structure has helped us not repeat the mistakes of the past*” (ReadyCommunities Partnership, 2013, New Orleans, p. 33).”\

Each of the mutual missions listed above demonstrate the vested interests of public and private collaborators and stakeholders for resiliency at the local level.

RCP Symposium, Long Beach

While RQ1 was not posed to participants in the ReadyCommunities Partnership symposium convened in 2014 at the Port of Long Beach, implied incentives were noted and are listed below. There were no remarks that implied perceived barriers.

(Inc_BusCon): RQ1 implied incentives within the business continuity subcategory include the following properties and dimensions as revealed in the corresponding excerpts: (a) *business continuity plan is definition, almost an economic plan; and (b) keep cargo flowing in and out of the port:*

- “The fact of the matter is, is that a *business continuity plan is by almost definition an economic plan*” (ReadyCommunities Partnership, 2014, Long Beach, p. 26).
- “One of our priorities is to *keep the cargo flowing in and out of the port*. So, each day at noon everyone looks for our “who’s coming” report to know how many ships are expected today and tomorrow” (ReadyCommunities Partnership, 2014, Long Beach, p. 36).

(Inc_ComRes): RQ1 implied incentives within the community resiliency subcategory include the following properties and dimensions as revealed in the excerpts

which follow: (a) a seat in the EOC to provide information about capabilities; (b) capitalize across the partnership to the best of everyone's benefit; (c) national resiliency and economy are dependent upon the resiliency of our nation's strategic military and port communities; and (d) need to depend on public-private partnerships:

- “We then moved forward with how can we formalize this and, and how can we provide a greater incentive to each of these agencies and these groups? And what we did was we guaranteed every single one a seat inside the emergency operations center for the City of Los Angeles with linkage to the County of Los Angeles. *So it was no longer a voice for just one person representing every sector plus government. There were 16 different seats inside the EOC where they have full command and full ability to provide their input, their ideas, their capabilities*” (ReadyCommunities Partnership, 2014, Long Beach, p. 15).
- “With that comes an attitude I think ...of sharing. I think people don't hold things close to their vest or get technology or capability and try to keep that for their own purposes. Usually when we bring those things online, all of the partners, they look to *capitalize on that across the partnership*. So, across the enterprise, how can we use this capability *to the best of everybody's benefit?*” (ReadyCommunities Partnership, 2014, Long Beach, p. 42)
- “To a large extent, our *national resiliency and economy are dependent upon the resiliency of our nation's strategic military and port communities*” (ReadyCommunities Partnership, 2014, Long Beach, p. 42).

- “But it shouldn’t come to any surprise to you that government can’t do it all.

We are going to and *need to depend on public-private partnerships*”

(ReadyCommunities Partnership, 2014, Long Beach, p. 43).

(Inc_ComRes): Implied incentives within the community resiliency and survival subcategory include the following properties and dimensions as revealed in the excerpts which follow: (a) *work with the private sector to identify lifeline resources and needs; and (b) working with the private sector for sheltering:*

“The other is our lifelines, which is going to be crucial for us when we start looking at water and waste water, fuel, communications, power, and natural gas. *Looking at and working with the private sector to be able to now identify some of those needs and help us be able to come up with some type of options that we can put in place in real-time, whether or not it was going to the military for ... or looking at water purifiers or whatever else may be out there to be able to help us address some of these situations (ReadyCommunities Partnership, 2014, Port of Long Beach, p. 28)*

- “But looking at working with the private sector, to be able to *help us to do some of those things that are going to be key to us; sheltering*” (ReadyCommunities Partnership, 2014, Long Beach, p. 45).

(Inc_Fin): Implied incentives within the finance subcategory include the following properties and dimensions as revealed in the excerpts which follow: (a) port closure could impact millions of dollars of business activity:

- “A port closure could impact millions of dollars of business activity”

(ReadyCommunities Partnership, 2014, Long Beach, p. 15).

(Inc_KE): Implied incentives within the knowledge and education subcategory include the following properties and dimensions as revealed in the excerpts which follow:

(a) making sure that we have one voice so everyone will know what to do; and (b) keep those relationships current:

So some of the keys for us are kind of looking at information sharing, both amongst our government agencies and with the private sector, all the way down to the general public; making sure that we have *one voice to be able to put the information out to everyone, so they know what to do*. As someone else was talking about earlier, is making sure that they have faith in what’s actually being done and that the decisions being made are actually accurate and up-to-date.

(ReadyCommunities Partnership symposium, 2014, Long Beach, p. 37)

Leadership changes out. In fact, I’m leaving here shortly. And just in my three and a half years here, we’ve had significant changes throughout the port security leadership. So, you create those relationships. You think you know who’s sitting in the seat and *who you’re going to call*, and then that number on your cell phone or that relationship that you formed, that understanding that you have might not be there. So it requires continual updating and effort to keep current; keep those relationships current. (ReadyCommunities Partnership, 2014, Port of Long Beach, p. 39)

(Inc_LR): Implied incentives within the liability and risk subcategory include the following properties and dimensions as revealed in the excerpts which follow: (a) best solution to crisis is prevention:

The best *solution to a crisis is prevention*. How do we do risk assessment to the point where we actually can prevent something from happening? . . . how do we anticipate the risks that are there, mitigate those threats, because *resiliency in many ways is the ability to anticipate what could happen, putting things place that mitigate the impact*, even things like zoning areas so you don't have the risk that might occur.

(ReadyCommunities Partnership, 2014, Long Beach, p. 39)

SQ2 Results: ReadyCommunities Partnership Symposia

SQ2: “What are the perceived barriers and incentives to private sector collaboration with the public sector to develop a plan, program or system for caring for vulnerable or special needs family members or other dependents (i.e. frail elderly, those with access issues, disabled or other) of responders and or critical sector employees so that the latter may remain on the job during the first 72 hours of crisis?”

SQ2 is shown above and was addressed by interview participants in all six cases who responded to the corresponding interview questions. However, several best practices and recommendations relevant to SQ2 were initially shared by stakeholders during the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative Symposia held in Miami, Florida (2011), Doral, Florida (2011) and New Orleans, Louisiana (2013).

To the extent that programs and best practices featuring care for families and dependents of emergency responders and critical sector employees were addressed by symposia participants, relevant symposia excerpts are listed below. The ReadyCommunities Partnership symposium participants were not presented with the SQ2 per se as were the dissertation participants. However, private sector incentives or private sector barriers may be implied in the symposia participant remarks about programs, best practices or recommendations for caring for family or dependents of emergency responders or critical sector employees. I perused the symposia summaries to identify these best practices and have included them in the SQ2 results shown below.

Symposia participants revealed best practices and or degree of willingness to support care for families and dependents of responders and critical sector employees. It was understood that support for families and dependents of responders and critical sector employees may help to reinforce our existing response capacity by minimizing potential conflict between duty to family and one's job.

RCP Symposium Miami

A search on the words vulnerable, special needs, disabled, and critical sector employee did not yield any results. However, participants in this symposium did address the role of the corporate crisis response officer (private sector liaison), which can be instrumental in the provision of care for families and dependents of first responders, military personnel and critical sector employees in the first 72 hours. Implied incentives are listed as follows.

(Inc_KE): Knowledge and education subcategory - Properties and dimensions are italicized as follows with the respective excerpt listed below: (a) so that they can respond as quickly as possible;

Knowing and understanding, identifying those corporate response officers early so that you already have those names, you already have those numbers. These folks are already credentialed to be able to come on to the incident site *so that they can respond as quickly as possible*. (ReadyCommunities Partnership, 2011, Miami, p. 22)

(Inc_HR): Human resources subcategory - Properties and dimensions are listed as follows with the respective excerpt listed below: (a) first responders can focus on the incident and they can give their full attention to it because they know that their families are safe:

“We have to build a plan for the families of our first responders, so that our first responders can focus on the incident and they can give their full attention to it because they know that their families are safe” (ReadyCommunities Partnership Symposium, 2011, Miami, p. 34).

RCP Symposium Doral

Participants in the ReadyCommunities Partnership symposium held in Doral, Florida in 2013 summarized a plethora of best practices which can serve as an incentive to leaders in other strategic military base and port communities wishing to establish a program to care for families or dependents of emergency responders or critical sector

employees. Properties and dimensions of implied incentives are listed below as derived from the respective symposium excerpts:

(Inc_BusConComRes): Business continuity/community resiliency subcategory - Properties and dimensions of the implied incentive are listed as follows with excerpts shown below: (a) we need communications to reach out to special needs communities and first responder organizations; (b) have a place for their families to go in the event that there is a challenge with their home; (c) a pool for me to reach out to, to work with and pull in to fill needs; (d) digging deep down to identify who are those essential people, and do they have backups? (e) what is their challenge? Maybe it is a dependent with special needs. Maybe it is a housing issue or something else; (f) We actually follow up with our employees of any special needs after the storm and ensure that they're all safe and everything's in place for them; (g) We try to get the families out of the zone that's going to be impacted; (h) we identify critical mission essential personnel ahead of time. We then release them early from work to take care of their families so, they will be ready for work and worry free; (i) alerting systems are also helpful to track responders or personnel if there are impacted by a natural disaster in parts of the country; (j) those responders, when they go off to work, their family members are taken care of. They can provide food, shelter, information, and a good point of contact; give them that time off so they can take care of their family, so they can get back to work, and they need to do what they need to do; (k) under the developmental disabilities category, which means that it's not everyone who has a disability; and (l) the most critical resource for all of us are the families of our first responders; (m) most important is to take care of the families of the people that you

have either working for you or working alongside of you; (n) understand what that the particular need is and be ready to attend to it should an event occur; (o) actual, local relationships are what really count. That's why we work in partnership obviously with the emergency operations center; (p) capacity is what we're talking about today. . . . to make sure that 100% of the vendor capacity, the contract capacity show up so that the plan actually can take place; (q) focus on your job helping the community and helping the Coast Guard (your organization) as opposed to worrying about your dependents:

- My team actually brings critical infrastructure into areas that are damaged by disasters, emergencies, or incidents. Communications is the foundation of response and recovery. We need communications to be able to reach out to the special needs communities. Reach out to our first responder organizations. This is what my team does. We bring those communications in.
(ReadyCommunities Partnership, 2013, Doral, p. 12)
- Miami-Dade County Police does have a police family shelter. It's located here in Doral. They *have a place for their families to go in the event that there is a challenge with their home* and that type of thing. The fire rescue department has something as well . . . where all fire personnel's family can go in the event there's a challenge with their homes. (ReadyCommunities Partnership, 2013, Doral, p. 21)
- Everybody else who they've not identified are non-essential, they become EOC essential. They're *a pool for me to reach out to, to work with and pull in to fill needs*; whether that's working at points of distribution to hand out

water, and ice, and food, and tarps, providing Red Cross additional support and shelters if we have to stand up more shelters post storm, and a lot of other needs. (ReadyCommunities Partnership, 2013, Doral, p. 21)

- We ask each of our department heads to identify essential versus non-essential employees. We have a county database which keeps record of who all those folks are... *digging deep down to identify who are those essential people, and do they have backups?* Do they have other responsibilities; dependents with special needs that could prevent them from coming back to work and fulfilling that essential role? (ReadyCommunities Partnership, 2013, Doral, p. 21)
- As we reach out to some of these EOC essential employees, we work to identify do they have needs? Are they available to come in? If they're not available to come in, *what is their challenge? Maybe it is a dependent with special needs. Maybe it is a housing issue or something else.*
(ReadyCommunities Partnership, 2013, Doral, p. 22)
- As far as preparation goes, the Port of Miami is actually part of Miami-Dade County and through the emergency manager and Dade County as a whole, our preparation for employees; we actually have established policies to let our employees go home and prepare for the event prior to the event, and prior to them responding. Obviously, we're in a situation where from the police department and the security perspective, we're first responders. We let our employees prepare prior to the storm. *We actually follow up with our employees of any special needs after the storm and ensure that they're all safe*

and everything's in place for them. (ReadyCommunities Partnership, 2013, Doral, p. 22)

- I think our best practice as far as how we take care of our people is, again, we do identify those essential personnel that we would expect to participate in the event, and then for everybody else, we look for a preposition evacuation site. *We try to get the families out of the zone that's going to be impacted. We put them into a safe haven. ... We preposition what's called a personnel support team. We put them on the road. They go up ahead of time. They secure facilities whether they're hotels or whether they're leased housing that we have to have. Those personnel are there prior to our folks coming into the area and to help set up and keep peace of mind.* (ReadyCommunities Partnership, 2013, Doral, p. 22)
- One of the things we all must do as emergency responders is that we need to make sure we take care of our families. As a best practice, *we identify critical mission essential personnel ahead of time. We then release them early from work to take care of their families so, they will be ready for work and worry free.*" (ReadyCommunities Partnership, 2013, Doral, p. 23)
- In the military we have alerting systems that works well to notify personnel and family members of contingencies and emergency actions. These *alerting systems are also helpful to track responders or personnel if there are impacted by a natural disaster in parts of the country.* Sometimes, it's

important to have another team to focus just on accounting.”

(ReadyCommunities Partnership, 2013, Doral, p. 23)

- So, a lot of times you want to delegate that out to an external resource. That's one of the things we learned, try to delegate that out as much as possible.

They provide a lot of good emergency information to the family members, *that way those responders, when they go off to work, their family members are taken care of. They can provide food, shelter, information, and a good point of contact.* A belly button if you will, for the family members.

(ReadyCommunities Partnership, 2013, Doral, p. 23)

- Seventy-two hours prior to a storm, we make sure we release our emergency responders so they can take care of family. Sometimes you've got to *give them that time off so they can take care of their family, so they can get back to work, and they need to do what they need to do.* (ReadyCommunities Partnership, 2013, Doral, p. 23)

(ReadyCommunities Partnership, 2013, Doral, p. 23)

- What we do is we serve individuals who have special needs. Particularly *under the developmental disabilities category, which means that it's not everyone who has a disability.* I think that warrants clarification because of just the nature of the name of the agency. It gives the impression that it includes all types of disabilities when it really doesn't. (ReadyCommunities Partnership, 2013, Doral, p. 23)

(ReadyCommunities Partnership, 2013, Doral, p. 23)

- In our organization, the most critical employee is every employee, but more critical than our employees, the most critical resource we have; are the

families of our employees. The way I see it, *the most critical resource for all of us are the families of our first responders.* (ReadyCommunities Partnership, 2013, Doral, p. 25)

- Every employee I consider to be critical. ...Every part of the organization of South Florida is critical and the *most important is to take care of the families of the people that you have either working for you or working alongside of you.* (ReadyCommunities Partnership, 2013, Doral, p. 25)
- But, that is the absolute core; to make sure that anybody with special needs has been restored, as we do in our organization, understand what that the particular need is and be ready to attend to it should an event occur.”
(ReadyCommunities Partnership, 2013, Doral, p. 25)
- If a major storm here hit in Miami-Dade, we would actually bring people (corporate reservists) from outside of the area so they (local corporate employees) *could focus on taking care of their families*, taking care of their homes and their needs, and *then they can come back and take care of the business.* ...very, very critical part of it. (ReadyCommunities Partnership, 2013, Doral, p. 26)
- Our coop plan does identify essential and nonessential staff. We do have a disaster coordinator for this southern region. We rely heavily on the rest of the regions throughout the state with the agency.... We work very close with the CERT and the folks up in Tallahassee, *but the actual, local relationships are what really count. That's why we work in partnership obviously with the*

emergency operations center. (ReadyCommunities Partnership, 2013, Doral, p. 27)

- Where's the plan to make sure that "Bill" shows up? That capacity is what we're talking about today. ...to make sure that 100 percent of the vendor capacity, the contract capacity show up so that the plan actually can take place. (ReadyCommunities Partnership, 2013, Doral, p. 27)
- If you are worried about your home, you're not able to focus on the job. That's why we try to stress to our employees, the ones that are essential, that must remain in the area, is to make sure your family gets out into that safe zone so that their not impacted, and *you can focus on your job helping the community and helping the Coast Guard (your organization) as opposed to worrying about your dependents.* (ReadyCommunities Partnership, 2013, Doral, p. 28)

(Bar_Fin): Finance subcategory - Implied incentives within the finance subcategory include the following properties and dimensions as revealed in the excerpts which follow: (a) everybody is being asked to do more with less, is the most challenging thing associated with preparedness:

The final issue is the elephant in the room that everyone is struggling with and that's budget. Budget, because *everybody is being asked to do more with less, is the most challenging thing associated with preparedness.* Especially for vulnerable populations.... ..if you set it aside each year, then when you do take a hit, you have the resources to house people to effectively pay for those

unintended consequences. (ReadyCommunities Partnership, 2013, Doral, p.

14)

(Bar_LE): Knowledge and education subcategory - Implied incentives within the knowledge and education subcategory include the following properties and dimensions as revealed in the excerpts which follow: (a) need to identify the special needs population and their needs including in military base and port communities; (b) the employees that are providing those services are often times unknown to the individuals that are receiving the services; and (c) quite a challenge in identifying caregivers for vulnerable dependents:

- First and foremost, we need to identify who the special needs communities are on military bases and ports. Be it through surveys, through assistance organizations, or families of individuals living on military bases and ports, *so that we at least know what that population base is and what the primary needs are for communications*. We can replicate it (national programs), so if we're able to focus it down to ports and military bases, now you can replicate that program and focus it into the communities as well. (ReadyCommunities Partnership, 2013, Doral, p. 13)
- Every individual that works in the public sector or a community organization will often have contractors or vendors that are supplying services to the military base or to the community organizations, institutions like a church or a medical university. Sort of by definition, that's critical infrastructure for that particular group. You could make the argument that *the employees that are*

providing those services are often times unknown to the individuals that are receiving the services. (ReadyCommunities Partnership, 2013, Doral, p. 27)

- We serve over 8,000 folks in this community. That's quite a lot of folks to be able to keep track on in terms of who, in their life that is responsible for their care, are actually critical personnel in this community. I guess we have *quite a challenge in identifying that group of folks.* (ReadyCommunities Partnership, 2013, Doral, p. 28)

(Inc_LR): Liability and risk subcategory: (a) housing of first responders and their families in the community and for those that house them, you cannot be sued civilly;

We initiated legislation several years ago which was passed, allowing for *the housing of first responders and their families in the community and for those that house them, you cannot be sued civilly.* That's been the biggest problem in providing free housing in a community. In the Caribbean it works naturally, because nobody is going to sue. (ReadyCommunities Partnership, 2013, Doral, p. 25)

RCP Symposium New Orleans

Department of defense best practices highlighted by ReadyCommunities Partnership participants in symposium co-hosted by the Port of New Orleans in 2013 include the exceptional family member program and designation of mission essential personnel. These best practices are positioned as implied incentives.

(Inc_ComRes): Implied incentives within the community resiliency subcategory include the following properties and dimensions as revealed in the excerpts which follow:

(a) exceptional family member program and (b) department of defense has identified assets and individuals required for a mission:

- “The *exceptional family member program* requires that those with a dependent(s) with special needs (education, medical) enroll, select and locate to a geographic area based on the categorization of the family need (one through five)” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 12).
- The *department of defense has identified assets and individuals required for a mission*, noting the least required to most required, along with a designation for those who need to leave and when . . . mission essential personnel are given two days to prepare themselves and their families, and then return to work to focus on the job at hand. (ReadyCommunities Partnership, 2013, New Orleans, p. 12)

The findings included an implied role for members of the community, including the private sector, and recommendations for caring for individuals with vulnerabilities:

(Bar_Cul): ‘Culture and behavior’ subcategory: The implied barrier within the ‘Culture and behavior’ subcategory includes the following properties and dimensions as revealed in the excerpts which follow: (a) needs a culture with a level of organization tuned to the needs of the vulnerable populations during crises, (b) culture needs to organize and tend to the elderly, disabled and the poor to ensure evacuation:

- “America needs a culture with a level of organization tuned to the needs of the vulnerable populations during crises” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 18).
- “American culture needs to organize and tend to the elderly, disabled and the poor to ensure evacuation” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 35).

(Bar_SLM/HR): Implied barriers within the scope, logistics, and management/human resources subcategory include the following properties and dimensions as revealed in the excerpts which follow: (a) American culture needs to organize and tend; (b) plan with individuals with disabilities as partners, (c) families of first responders can take personal responsibility for their welfare in the first 72 hours if they have physical access, emergency program access, and communication access; and (d) response plans must adapt:

- “Plan with individuals with disabilities as partners” (ReadyCommunities Partnership, 2013, New Orleans, p. 25).
- “Families of first responders can take personal responsibility for their welfare in the first 72 hours if they have physical access, emergency program access, and communication access” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 32).
- “When responders become victims, the response capacity is impacted and the *response plans must adapt*” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 31).

(Inc_GovRes): Implied incentives within the government resiliency subcategory include the following properties and dimensions as revealed in the excerpt which follows:

(a) A critical incentive for corporate leadership and collaboration at the local level to care for others is to *keep the government functioning in the face of crisis*. The underlying implication is that no one should be exempt from playing a part in ensuring a plan to care for the needs of families and dependents of America's emergency responders and critical sector employees:

“Minimize the number of victims, individuals that must be dealt with during the response, to *keep the government open and functioning*” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 30).

(Inc_SLM): Implied incentives within the scope, logistics, and management subcategory include the following properties and dimensions as revealed in the excerpts which follow: (a) supporting resource requests, and (b) assists people in need with evacuation:

Louisiana EMDAC is an example of a state organization which supports disabled and elderly individuals through partnerships. In as much, there may be an opportunity for a vetted nonprofit third party organization and or private sector liaison to provide support for citizens with access or functional needs and dependents of responders or critical sector employees. Here is an excerpt from the ReadyCommunities Partnership symposium co-hosted by the New Orleans in 2013:

- “(Louisiana EMDAC) addresses the needs of people with disabilities and the elderly...in supporting resource requests from the parishes or mass care

providers” (How: by emergency management experts throughout disaster response and into recovery” (ReadyCommunities Partnership, 2013, Port New Orleans, p. 12).

RCP Symposium Long Beach

An implied incentive within the business continuity and community resiliency subcategory includes the following property and dimension as revealed in the excerpt shown below: (a) to get staff back to work: The following remark may be applicable to how collaboration would impact providing care for critical sector employee families or dependents.

(Inc_BusConComRes): “Reassembling our workforce that does not have access to the port if they evacuate to other areas. We have to work with our labor partners and our terminal operations in order to be able to get staff back to work” (ReadyCommunities Partnership, 2014, New Orleans, p. 47).

Cross-Case and Cross-Data Analysis

RQ1 (Barriers & Incentives)

In response to RQ1 and subquestions, the results across the six cases were consistent, both with the predominant themes and the perceived barriers and incentives. Public, private, military and community sector participants across the six cases and both sources of data shared a common concern for community resiliency. Furthermore, participant responses from all six cases reflected their sophistication and experience of their disciplines and careers.

To an overarching extent, the public and private sector leaders who participated in the symposia shared in the views of those who participated in the qualitative one-on-one dissertation interviews; in that community resiliency is a common incentive for stakeholder collaboration. The predominant themes, including leadership through mutual missions for community resiliency, cut across the six cases and both data sources. Likewise, interview participants and symposia participants recognized sector-silo bias as a perceived barrier to collaboration and community resiliency.

Predominant themes were aligned with the answers to the research questions in that the theme can be aligned with a perceived barrier or perceived incentive. The predominant themes; interdependency, return-on-investment, mutual mission, and sector-silo bias were common to the dissertation interviews and symposia summaries. Interdependency, return-on-investment, and mutual mission can be aligned with perceived incentives while sector silo bias is aligned with that of a perceived barrier.

Ultimately, each of the perceived barriers may serve as a catalyst for private sector engagement and or cross-sector collaboration, supported by new policies and regulations. Within each opportunity for private sector engagement, a private sector liaison could serve in collaboration with a counterpart in the local public-sector response organization(s) to support the provision of critical goods or services in the first 72 hours. Relative to the private sector's charitable provision of support for families of paid or volunteer emergency responders or critical sector employees; collaboration with a vetted third party organization with non-critical employees is recommended.

Perceived barriers and incentives suggested by interview participants were also mirrored as implied barriers and incentives in the ReadyCommunities Partnership symposia summaries. In other words, the remarks by symposia participants supported and did not contradict any of the findings from the interview results. However, incentives and or barriers culled from symposia remarks are couched as implied rather than perceived in that the symposia remarks are excerpts from a discussion rather than a response to an interview question.

FEMA (2011) suggested that partners identify common ground for developing partnerships (p. 11). Indeed, the results of this study revealed perceived barriers to private sector engagement, such as sector-silo bias, which may need to be mitigated if not overcome before finding common ground to move forward. Establishment of incentives to encourage private sector engagement including tax credits, indemnification, an understanding of return-on-investment in collaboration, acknowledgement of the interdependency between public and private sectors, interdependency between business continuity and port community resiliency, and supply chain interdependencies may facilitate finding common ground.

Additionally, it is noteworthy that a common thread of responses was a function of lessons learned from two large-scale crises which caused loss of life and or physical destruction; Hurricane Katrina and the 9/11 attacks.

RQ1 SQ 2 (Responders/Critical Sector Employee Family Support)

Interview participants across the six cases and from all sectors generally supported establishment of a plan to arrange emergency shelter and essential medical care

for families of responders including any dependents with disabilities or access or functional needs to ensure that the responder and or critical sector employee may remain on the job in the first 72 hours. The private sector's potential role in providing support for a third-party organization to care for families and vulnerable-special needs dependents of responders was also favorably addressed by a few participants in the Doral and New Orleans symposia. Symposia remarks included the sharing of department of defense best practices which may serve as a model for the private sector.

Cross-Case Summary

Results by case were unique to the extent that responses may have been a function of reflected their unique geographic context and corresponding man-made or natural threats or experiences with crises.

However, the passion and commitment to strategic military base and port community resiliency in the first 72 hours was shared across all six cases, all sector and both data sources. Additionally, there is a call for private sector engagement due to explicit needs for their capacity, on a voluntary yet incentivized basis, in the first 72 hours to reinforce the public-sector response capacity. Incentives also include community resiliency, recognition as a good corporate citizen, tax deductions, public sector payment for loaned assets or services during the first 72 hours with a pre-crisis MOU(s) and or contract(s) in place, and or funding of an extraordinary mutual mission so that it might replicated, one strategic community at a time for the resiliency of the nation.

In the context of ports as complex environments, national security and economic prosperity as a function of strategic military base and port community resiliency relies

upon cross-sector collaboration while addressing the unique needs of each port community. Furthermore, chief executive officers and policy makers would be wise to bear in mind that there is complexity in management of the ports if there is truth in the common adage; “If you've seen one port, you've seen one port.”

Qualities of Discrepant Cases and How Factored Into the Analyses

There were no instances of discrepant cases with non-confirming data, as each case suited the research purpose. Each of the six cases, representing six U. S. strategic military base and port communities of the East, West and Gulf coasts during the period between 2010 and 2014, were established as the ReadyCommunities Partnership symposia were conducted, and followed up by the dissertation interviews completed in 2016. In as much, the cases are defined by the time in which the perspectives and best practices of public and private sector participants were shared to support strategic military base and port community resiliency.

Evidence of Trustworthiness

Implementation for each of the credibility strategies are outlined as follows:

Credibility Strategies

Integrity of participant responses. To the greatest extent, the participants were engaged in the interview process with me and provided thorough responses to the extent that their time permitted.

Avoidance of leading questions. The questions were presented in an open-ended fashion to avoid providing any suggested responses.

Triangulation. As mentioned in Chapter 3, triangulation was achieved in this study through interviews with participants in six different communities as well as data gleaned from the six ReadyCommunities Partnership symposia summaries. Additionally, triangulation was achieved by including participants from the private and public sectors within each of the six communities.

Member checks. Member checks were completed for each interview by providing the transcript to each participant for review, edits and approval.

Transferability Strategies

Transferability of this research study to other settings is possible given full disclosure of the sample interview questions as listed in Appendix A and the descriptive list of interviewees included in Table D1. Additional research could be conducted in the same or additional strategic military base and or port communities of the United States. Participants selected for this study included leaders from both the public and private sectors including for-profit, nonprofit, emergency response (fire, police, and or emergency management), public agency, and or military organizations. Additionally, the de-identified participant codes were structured to include the participant's case, sector and industry, similar participants could be selected for interviews in additional communities.

Dependability Strategies

As stated in Chapter 3, dependability or repeatability of the results is based upon both the member checked transcripts of the one-on-one qualitative interviews, and the supplemental data from the ReadyCommunities Partnership symposia summaries

previously posted online. Both the qualitative interviews for this study and the ReadyCommunities Partnership symposia were conducted by me. The interviews were conducted by me as the sole researcher for my PhD in 2016. Between 2014 and 2014, I convened the symposia were convened in my role as national director of the ReadyCommunities Partnership.

Confirmability Strategies

To support confirmability by other researchers, the sample interview questions are listed in Appendix A and a descriptive list of interviewees identified by sector type and locale, while protecting the participant's identity is provided in Table D1. Additionally, a summary of the coded data is provided within this chapter.

Results Summary

Summary of Answers to Research Questions

A summary of the answers to each research questions presented at the onset of this qualitative study is as follows.

RQ1. What are the perceived incentives and barriers to private sector collaboration with the public sector for preparedness and response to provide select services or resources for the first 72 hours of a large-scale or national crisis, thereby reinforcing if not augmenting the existing response capacity?

RQ1. Perceived incentives and perceived barriers (IQ12-IQ33/34). Based on a review of the data gleaned from the qualitative interviews for the RQ1 interview questions (IQ12, IQ13, IQ19, IQ20, IQ21, IQ27, IQ31, IQ32, IQ33/IQ34), the perceived incentives and perceived barriers are essentially summarized in the results to IQ33 and

IQ34. Additionally, based on a review of the symposia summaries, implied incentives and implied barriers were gleaned and further substantiated the findings from the interview results. Four predominant themes emerged from the participant interviews and symposia summary data.

RQ1. Perceived barriers and perceived incentives list (IQ33/IQ34). A list version of interview participant responses to IQ33 and IQ34 are summarized as follows. A table version of this list, Table F1, can be found in Appendix F.

IQ34: “What would be the greatest perceived barrier for your organization and or its leaders to collaborate with the public sector (cross-sector) to foster community resiliency, particularly in our nation’s strategic military base and port communities during the first 72 hours?”

The greatest perceived barriers to cross-sector collaboration, according to participant responses to IQ33 and IQ34 include crisis complacency or denial (3); sector-silo bias (12); financial (2); human resources (2); lack of knowledge about private sector resources available for response, lack of relationships and knowledge of whom to call in the first 72 hours, and lack of knowledge about public sector protocols (14); need for enlightened leadership (8); liability concerns (6); governance model (1); laws and regulations (5); and scope and management (6). Sector-silo bias and lack of knowledge about available resources and the right person to call during the first hours of a crisis were cited the most as the greatest barriers to collaboration between public and private sector leaders.

The specific barriers and respective participant codes for each of the aforesaid responses to IQ33 and IQ34 are listed as follows:

- Crisis denial/partnership complacency (3)
 - Crisis denial – 2 (MIA1, CHS3)
 - Partnership complacency – 1 (DOR2)
- Financial (2)
 - Lack of interagency incentive, competition or profit making - 1 (NCR2)
 - Financial constraints especially if no reimbursements - 1 (NOL10)
- Governance (1)
 - Confederation vs. federal model may be suitable for some resiliency applications - 1 (NCR2)
- Human Resources (2)
 - Emergency management planners lack experience - 1 (NCR1)
 - Leadership turnover diminishes capacity to develop expertise - 1 (PED5)
- Knowledge (14)
 - Lack of knowledge regarding available private sector resources - 5 (CHS3, NCR5, PED2, PED3, PED4)
 - Politicians lack knowledge about logistics/supply chain interdependencies – 1 (PED5)
 - Lack of knowledge about public sector protocols (ICS) - 2 (PED4, PED6)

- Lack of relationships and do not know whom to call during crisis – 6
(CHS1, CHS5, DOR1, MIA1, NCR6, NOL8)
- Laws/Regulations (5)
 - Appropriations law – 1 (NCR2)
 - Lack of interagency laws and regulations – 1 (NCR2)
 - Limitations on military help post crisis – 1 (NCR1)
 - Regulatory requirements for doing business with department of defense – 1 (NCR3)
 - Regulatory impediments – 1 (NCR2)
- Leadership (8)
 - Need community-level approach to cross-sector collaboration with government support – 2 (MIA1, NCR2)
 - Need to work more than one project at a time – 1 (CHS7)
 - Advance planning needed -1 (DOR3)
 - Enlightened leadership needed to support partnerships, investments – 3 (CHS7, NCR5, NOL8)
 - Industry coordinating committees needed – 1 (PED5)
- Liability Concerns (6)
 - Interest to protect private sector proprietary information - 3 (DOR3, PED7, PED8)
 - Public sector concerns when using private sector equipment - 1 (PED5)

- Public sector fear private sector will gain too much information - 1 (PED5)
- Uninvited volunteers can create problems – 1 (PED3)
- Scope/Management (6)
 - Ensure no administrative barriers to receiving private sector support – 1 (PED3)
 - Organization too small to compete for contracts – 1 (NCR3)
 - Organization too small, although critical, to allocate resources/time – 1 (MIA4)
 - Organization may not have resources for external support - 1 (NOL10)
 - Time and resources are a concern - 1 (CHS7)
 - Supply chain disruptions are a concern – 1 (PED4)
- Sector-silo bias (12)
 - Agency bias when aligned partisan - 1 (NCR7)
 - Group think – 1 (PED5)
 - Organizational bias - 1(NCR5)
 - Public sector bias - 1(PED4)
 - Distrust between sectors - 4 (CHS1, NCR2, NOL6, PED5)
 - Public and private sector motivations differ - 4 (NCR4, NCR5, PED2, PED6)

The greatest perceived incentives to cross-sector collaboration, according to participant responses to IQ33 and IQ34 include business continuity/port community

resiliency (7), business resiliency/survival (3), community resiliency/greater good (5), financial (ROI) (1); knowledge (2), leadership (1), logistics (1), risk management (2).

Business continuity and port community resiliency were cited the most.

The specific incentives and respective participant codes for each of the aforesaid responses to IQ33 and IQ34 are listed as follows.

IQ33: “What would be the greatest perceived motivation (incentive) for your organization and or its leaders to collaborate with the public sector (cross-sector) to foster community resiliency, particular in our nation’s strategic military base and port communities during the first 72 hours?”

- Business continuity/port community resiliency (7)
 - New revenue generation (NOL10)
 - 40% of American economy is the customer of the port (PED5)
 - Each sector’s realization of ROI in collaboration for continuity (PED5)
 - Public-private sector interdependency (NCR4)
 - Get up and running quickly, public-private sector interdependency (PED2)
 - Enhanced continuity from community support (PED5)
 - Greater efficiencies through public-private collaboration (NCR5)
- Business resiliency/survival (3)
 - Survival - (1) DOR1
 - Survival, good reputation – 2 (NCR1, PED2)
- Community resiliency/greater good (5)
 - Community duty, corporate good citizen – 3 (NCR2, PED2, NCR3)

- Greater good – 2 (CHS3, NOL10)
- Financial (1)
 - Industry financial gain (ROI) (NOL6)
- Knowledge (2)
 - Situational awareness/information sharing - resources (1) (PED7)
 - Know the response leadership or take charge (1) (NCR6)
- Leadership (1)
 - Lead from the bottom-up with top-down/government support (1) (NCR2)
- Logistics (1)
 - Support DoD requirements for military outloads first 72 hours (PED3)
- Risk management (2)
 - Private sector indemnification/streamline MOUs (NCR6)
 - Risk mitigation, partner resiliency (PED8)

In summary, for the sake of America’s security and economy; the two greatest incentives; business continuity and community resiliency; are worthy of addressing the two greatest perceived barriers; sector-silo bias and lack of knowledge about available private sector resources and whom to call in a crisis.

SQ2. “What are the perceived incentives and perceived barriers to private sector collaboration with the public sector to develop a plan, program or system for caring for vulnerable or special needs family members or other dependents (i.e. frail elderly, those with access issues, disabled or other) of responders and or critical sector employees so that the latter may remain on the job during the first 72 hours of crisis?”

SQ2. Care for Families and Dependents of Responders and Critical Sector

Employees. Based on a review of the data gleaned from the qualitative interviews, the private sector is willing to support a program to arrange care for families and dependents, including those who are disabled, of first responders and critical sector employees.

Technicalities need to be addressed, but value is seen in such a concern to reinforce the local response capacity in this regard. The data gleaned from the ReadyCommunities Partnership symposia summaries revealed best practices of the department of defense and a county emergency operations center which can serve as models for this initiative.

SQ1. “What, theoretically and or practically, would motivate the private sector to collaborate or serve as a barrier to collaboration with the public sector to foster resiliency in one’s community during the first 72 hours?”

This question was answered by the responses to IQ33 and IQ34 as summarized just above in this chapter.

Transition to Chapter 5

Analysis of the data generated from the one-on-one dissertation interviews revealed perceived barriers and perceived incentives to private sector engagement and collaboration. This data was corroborated by the data gleaned from the secondary source, the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative Symposia summaries, to answer RQ1 and subquestions. While the data from the secondary source took the form of implied barriers and implied incentives, collectively, the results from both sources inform leaders proactively engaged in public policy development and practical applications for community resiliency.

Recommendations as to ways in which leaders might act upon the perceived barriers and or perceived incentives to reinforce the existing response capacity if not foster incremental capacity for resiliency in our nation's military base and port communities are presented in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Summary of Purpose and Nature of Study

This study was conducted to gain an understanding of perceived barriers and perceived incentives to private sector engagement and cross-sector collaboration to fortify resiliency in the first 72 hours of a large-scale or national crisis in the strategic military base and port communities of the United States of America. Ultimately and within this context, this study was conducted so that public and private sector leaders might leverage the findings through cross-sector collaboration to fill cracks in resiliency and reinforce the local response capacity in America's strategic communities.

For those who are outright deniers or otherwise complacent with respect to preparedness for a large-scale crisis, this study serves as a call-to-action. Most of the findings and recommendations from this study can be acted upon by leveraging existing talent and resources to reinforce the local response capacity. Spending new money is not necessarily required.

Summary of Key Findings

In response to the research questions, 43 participants across the six cases cited range of perceived barriers and perceived incentives to private sector engagement and cross-sector collaboration for strategic military base and port community resiliency in the first 72 hours.

These perceived barriers and incentives were coded within 13 subcategories including (a) business continuity, (b) business resiliency, (c) business continuity and

(port) community resiliency, (d) community resiliency, (e) culture and behavior, (f) financial, (g) government resiliency, (h) human resources, (i) knowledge and education, (j) leadership, (k) liability and risk, (l) policy and law, and (m) scope, logistics, and management. In response to each interview question, the properties and dimensions of each barrier and incentive has been delineated in the results section of Chapter 4.

The perceived barriers and incentives were reported in the results section of Chapter 4, and organized by five groups of interview question(s) as listed in Table E1. In brief, the key results for each of the five groups are as follows:

- Preliminary: Participants described probable threats, resource limitations and response capacity concerns. Perceived threats included terrorism or large-scale crises as a function of one's geographic region. Resource concerns included the need for private sector specialists to support the work of responders in the first 72 hours and for the private sector collaborators to first complete incident command training. Response capacity concerns included post-9/11 complacency.
- General (RQ1): An exhaustive overview of perceived barriers and incentives has been provided in Chapter 4. Additionally, while each of the perceived barriers and perceived incentives are worthy of consideration and follow-up in and of themselves within the context of resiliency, the four predominant themes are collectively illuminating in that they serve as the basis for the grounded theory. One of the four themes which emerged from the interviews and the symposia is interdependency; the *interdependency between sectors*

and the *interdependency between business continuity and community resiliency*. Additionally, mutual mission and return on investment emerged as themes, each of which is aligned or can be construed as a perceived incentive. Likewise, perceived barriers to cross-sector collaboration, identified through this study, include the *need to establish contracts and memorandums of understanding* between the sectors prior to a crisis, and *public sector leadership turnover* which has consistently impacted the private sector's ability to readily know its public sector counterparts for preparedness and response in the first 72 hours. Additionally, sector-silo bias emerged as a predominant theme and perceived barrier to private sector engagement and cross-sector collaboration for strategic community resiliency in the first 72 hours.

- Greatest perceived barriers and greatest perceived incentives (SQ2): As summarized in the results, business continuity and community resiliency were deemed to be the two greatest incentives for cross-sector collaboration, while sector-silo bias and lack of knowledge about available private sector resources and whom to call in a crisis were deemed to be the two greatest barriers to cross-sector collaboration for resiliency.
- Willingness to support a plan to provide emergency shelter and care for responders and critical sector employees in the first 72 hours (SQ1): Generally, the private sector is willing to serve as a corporate liaison and or to provide charitable support for a vetted third party organization to establish a

program to identify emergency shelter and essential care for families and dependents of first responders and or critical sector employees in the first 72 hours. Exceptions to the willingness to serve as a liaison included organizations wherein all employees are essential; thus, these organizations would potentially be the recipient of said private sector support.

- Desired return-on-investment (ROI) for cross-sector collaboration: Overall, responses to the question about desired ROI included recognition as a good corporate citizen and anecdotal calculations or formulas for ROI in cross-sector collaboration for strategic military base and port community resiliency. ROI was defined as the cost of a port shut-down for a day, or in simplest terms, avoiding a port shut-down for any period. While many acknowledge the interdependency between business continuity and community resiliency, the lack of widespread private sector engagement and cross-sector collaboration for community resiliency in the first 72 hours remains a continuing conundrum.

With the actionable knowledge gained from this study, the priority for emergency management and risk management leaders, practitioners, and policy makers is to collaborate to overcome the perceived barriers and implement the incentives perceived as necessary for collaboration. A concerted effort by public and private sector leaders to collaborate will be required to overcome or remove the perceived barriers. Implementation of perceived incentives, such as the provision of set-asides as according to the applied mutual mission theory, may serve as a catalyst to incubate if not

institutionalize mutual missions to fortify strategic military base and port community resiliency.

Return-on-investment in private sector engagement and cross-sector collaboration for the sake of strategic military base and port community resiliency may be formidable when the perceived barriers are overcome while the perceived incentives are established. Again, strategic military base and port community resiliency is a necessary factor to undergird national security and sustain and foster economic vitality.

Grounded theory. A key result of the findings and themes of this study is the grounded theory; I love/support (in theory or in practice) collaboration but for sector-silo bias; and the companion applied mutual mission theory. Woven together, the four predominant themes of this study serve as the grounded theory's firm foundation and are *sector-silo bias*, *interdependency*, *return-on-investment* and *mutual mission*. I propose the applied mutual mission theory to serve as a tool and framework for public and private sector leaders and policy makers. This framework and tool will facilitate those who wish to institutionalize existing extraordinary as well as incubate and launch new mutual missions for the sake of resiliency, through the provision of incentives, including set-asides, to support and encourage cross-sector collaboration – and in the process, mitigate if not overcome degrees of sector-silo bias. Leveraging the applied mutual mission theory, public and private sector leaders and policy makers might acknowledge existing extraordinary examples of cross-sector collaboration which reinforce the capacity for resiliency in America's strategic communities and provide incentives to institutionalize

them so they may serve as a model for potential replication in other strategic communities.

Some have cited distrust as one of the inhibiting factors for collaboration between the private and public sectors (Stavridis & Farkas, as cited in Wells & Bendett, 2012). Indeed, the findings from this study show that distrust, an aspect of sector-silo bias, embodies a variety of properties and dimensions at its root, including fear and or lack of knowledge at an institutional, organizational, or situational level. In the one words of one interview participant in the Long Beach case (PED, 2: Pr. (N-P); Emerg. Mgmt. & (F-P, Lg.) Software) with both public and private sector experience; “The greatest barrier is a lack of trust, really relates to a lack of knowledge regarding capabilities and intentions of the private sector in working with the general public and government in helping to prepare for and respond to critical events.”

Another interview participant from the public sector in the National Capital Region (NCR, 5: Pu. (County); Public Safety/Fire) stated “generally public safety personnel, firefighters and cops are very *reticent to share experiences or vulnerabilities* with anybody including those whom we trust.” In the one words of another interview participant in the Long Beach case with both public and private sector experience (PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace), “(There is) private sector distrust of public sector government agencies...*now (with) statutory measures in place to protect disclosure (sensitive information about operations), we saw disclosure, even with legislation.*” Therefore, leaders would be wise to address these fears and lack of

knowledge to overcome or mitigate aspects of sector-silo bias for the sake of strategic community resiliency as it impacts America's national security and economic vitality.

Throughout this study, mutual missions were observed as a predominant theme, method, and recommendation for cross-sector collaboration to reinforce if not augment military base and port community security. Mutual missions can also help increase the capacity for response and recovery, situational awareness, and ensure continuity of critical infrastructure. This model for addressing and achieving a common goal of mutual benefit shall be referred to as a mutual mission within the context of the applied mutual mission theory. Indeed, many of the local-level or regional missions identified through this study, across each of the cases, were extraordinary in their objective and achievement of a mutual purpose while effective in working around or through degrees of sector-silo bias, whether the bias was deliberately recognized or experienced subconsciously at the sector, institutional, organizational, or situational levels.

Born from this study, the companion applied mutual mission theory is a proposed framework, tool, and method for developing if not institutionalizing local and or regional mutual missions of extraordinary value to fortify strategic military base and port community resiliency in the first 72 hours; through public-private collaboration supported by incentives and legislative, legal, administrative, and policy actions while overcoming, working-around, and or mitigating sector-silo bias. Set-asides can be leveraged to encourage and incubate new mutual missions.

Perceived barriers to private sector engagement and cross-sector collaboration. Of all the barriers cited by interview participants, sector-silo bias at the

sector, institutional, organizational or situational level may have the most debilitating impact on the potential for cross-sector collaboration. Sector-silo bias is a cultural issue that was apparent in all six cases. Were it not for sector-silo bias, one might categorize the other perceived barriers as excuses to be readily overcome or addressed by concerted effort. Indeed, local-level leaders have proven that degrees of sector-silo bias have been overcome through cross-sector collaboration to tackle, develop, and or accomplish a mutually valued mission.

During the research process within the New Orleans case, an extraordinary mutual mission was identified. A law enforcement terrorism task force was locally developed through the work and collaboration between parish sheriffs, law enforcement partners, the port, and the private sector to serve the local port community and the region. This exemplar revealed how cooperation, communications, and collaboration can enhance public safety and protect critical infrastructure in a port community with the potential to serve as a model for other port communities across the United States (ReadyCommunities Partnership, 2013, New Orleans, p. 11).

Another example of an extraordinary mutual mission was identified in the Charleston case, when cross-sector collaboration took place to design and build a fireboat with capacity unlike any other to respond to maritime crises. A federal grant enabled the prototype to be developed, and ultimately, funds were provided by the private sector to build the boat (IQ21, CHS, 2: Pr. (F-P, Sm.); Maritime/Transportation). This mutual mission is extraordinary in that the provision of this critical asset through public-private collaboration and a financial incentive helped to overcome vulnerabilities in the response

capacity, thereby fortifying strategic port community resiliency. This example is one whereby a mutual mission, when funded, realized its potential to become extraordinary in its capacity to reinforce if not augment strategic port security resiliency. Indeed, many of the extraordinary mutual missions identified in this study can serve as models for other strategic military base and port communities throughout the United States and other strategic port communities around the world.

Perceived incentives for private sector engagement and cross-sector collaboration. Many perceived incentives for cross-sector collaboration were highlighted in the results and include interdependency between sectors and systems; interdependency between business continuity and community resiliency, explicit need for particular forms of private sector expertise to augment the local response capacity, private sector revenue generation, new business and or business continuity, community resiliency, recognition as a good corporate citizen, and return on investment.

Perceived incentives as themes. As revealed through interviews with participants in this study, private sector leaders recognize the interdependency between business continuity and community resiliency. Similarly, leaders also described their perspectives about expected return on investment (ROI) as a perceived incentive for cross-sector collaboration. Indeed, in and of itself; return on investment in port community resiliency is a perceived incentive and worthy of consideration by policy makers, logisticians, elected officials, port security manager, and risk managers, especially when calculated as the value of a port community shut down for a day: Additional definitions for ROI as a perceived incentive were provided:

- “Cumulative value of what the port community would lose if shut down for a day” (IQ24, PED, 3: Pu. (Ci) - Landlord Port).
- “But it’s also important that we open up the port again whenever there’s a national emergency. *Every day that the Port of New Orleans is closed, it costs the United States economy \$300 million per day* and it grows exponentially after the fourth day. The Port of New Orleans is responsible for almost 400,000 jobs directly and indirectly. That’s almost \$18 billion in earnings and \$37 billion in economic output, almost \$3 billion in economic tax revenue for the federal government. It’s important for us that we have a plan in place, and when there’s a national emergency, that we get that port back up and running. 60% of the nation’s grain and 20% of the petro chemicals in the United States come up and down the river to the Port of New Orleans. If the Port of New Orleans is closed, gas prices go up, food prices go up, and with the laws of supply and demand, our U.S. economy suffers” (ReadyCommunities Partnership, 2013, Doral, p. 15).
- “Of that, 40 % of the U.S. goods shipped into our country, that come in via the sea are shipped through the Ports of Long Beach and Los Angeles. This is for distribution throughout every congressional district in the U.S. A port closure could impact hundreds of millions of dollars of business activity. San Pedro Bay is the busiest seaport in the nation. Long Beach alone moves more than \$180 billion worth of goods every year. We support 1.4 million jobs nationally, 300,000 jobs just right here regionally. We serve over 140 shipping

lines and we have connections with 217 seaports throughout the world. *When you compound the effects of a shutdown throughout that entire supply chain, you can see how easy the effects of a terrorist activity and how wide spread that could be*” (ReadyCommunities Partnership, 2014, Port of Long Beach, p. 25).

Interpretation of the Findings

Ways in Which Findings Confirm, Disconfirm or Extend Knowledge

The findings from this research extend the knowledge and fill a void in the peer-reviewed literature relative to understanding perceived incentives and barriers to private sector engagement and public-private sector collaboration for strategic military base and port community resiliency. The literature was void of a prior qualitative study to understand private sector perceived incentives and or perceived barriers to cross-sector collaboration for resiliency in the first 72 hours of a large-scale or national crisis. Even more so, a study of this nature had not been conducted in the context of private sector engagement and cross-sector collaboration in America’s strategic military base and port communities.

Collectively, the actionable knowledge gained from the interview responses and symposia remarks by public and private sector leaders in the six military base and strategic port communities who participated in this study may serve as a resource and platform for further policy and program development for community resiliency in America’s strategic military base and port communities. Through increased private sector engagement and cross-sector collaboration and by leveraging existing resources,

America's national response capacity can be reinforced if not augmented to fortify community resiliency.

Extraordinary mutual missions. The applied mutual mission theory, as a function of the grounded theory from this study; I love/support collaboration but for sector-silo bias extends the knowledge and literature. Implementation of the applied mutual mission theory begins with recognition of cross-sector collaborative initiatives with the potential for extraordinary mutual benefit in the strategic military base and port community, to which incentives and legislative, legal, administrative and policy actions are taken to institutionalize them locally, if not regionally or nationally, while mitigating if not overcoming degrees of sector-silo bias. Mutual mission examples which reinforce the response capacity in the strategic military base and port communities of this study were identified, whereby incentives either facilitated or are needed to institutionalize or to replicate the mutual mission.

Institutionalization of extraordinary mutual missions in strategic military base and port communities of the United States, through incentives, also extends the literature when reflecting on Hayes and Ebinger (2011) who recommended that government provide incentives to the private sector for investments in critical infrastructure protection. Also, as mentioned earlier, there is conceptual continuity between mutual mission, an integral component of the emergent grounded theory and applied mutual mission theory of this study, and the reference in the literature by Austin (2000) who cited Swartz for his acknowledgement of mutual mission relationships.

Additionally, the findings from this study extend the knowledge relative to the private sector's role and interest to collaborate to support responders in the first 72 hours as recommended by Tompkins and Marcks (2012) and Aldrich and Benson (2008). Through participant responses to interview questions, this study confirmed the private sector's willingness to support a qualified and vetted third-party organization to arrange shelter and essential care for families and vulnerable dependents of responders and critical sector employees in the first 72 hours. Additionally, department of defense best practices were identified from the ReadyCommunities Partnership symposia summaries and can serve as models for those developing a program to support responder and or critical sector employee families and dependents.

Furthermore, the findings of this research can serve as the basis for a template for reinforcing if not augmenting resiliency in America's strategic military base and port communities beginning with the recognition of extraordinary mutual missions through cross-sector collaboration and provision of incentives to facilitate institutionalization thereof or incubation of new mutual missions while overcoming degrees of sector-silo bias. This template, inclusive of the grounded theory and applied mutual mission theory, not only extends the knowledge but confirms the literature by Crosby and Bryson (2010) who discussed bottom-up partnerships as more probable compared to those driven by the top-down. Community-driven partnerships with top-down support was acknowledged by interview participants in this study as an incentive to cross-sector collaboration and prerequisite to successful community-driven mutual missions for resiliency.

While I posit that private sector engagement in cross-sector collaborative initiatives and roles should remain optional or at the will and discretion of the private sector actor(s), the perceived value of public-private collaboration to reinforce the response capacity for America's resiliency in America's strategic military base and port communities is compelling and should be encouraged in a world of increasing frequency and scale of crises.

Some may argue that the understanding of perceived 'barriers' is perhaps more useful to emergency preparedness planners than perceived 'incentives' in that perceived 'barriers' must be addressed before resources can be applied to the establishment or implementation of incentives. However, I posit that the removal of perceived barriers and implementation of perceived incentives are equally necessary to fortify strategic military base and port community resiliency.

Findings and Data in Context of Theoretical and Conceptual Framework

The findings are in context of the conceptual framework and the theoretical foundation introduced in Chapter 1. In review, the conceptual framework is based on cross-sector collaboration for response to extreme events as understood by Bryson et al. (2006). Complementary theories include the cultural theory, social networks theory, the dynamic network theory, and the complex adaptive systems theory.

The grounded theory which emerged from this study; I love/support collaboration but for sector-silo bias and the companion applied mutual mission theory is rooted in the aspects of my conceptual framework including community resiliency, networks, public-

partnerships, cross-sector collaboration, and America's strategic military base and port communities.

The findings, relative to perceived barriers and perceived incentives to private sector engagement and cross-sector collaboration were consistent across the cases; and each case was rich in experiences and perspectives as a function of their own geographic region, culture, organizations, and leaders. The perceived barriers and incentives in the cultural, finance, liability and risk, policy and law, and other subcategories are delineated in Chapter 4; each of which are actionable in the context of cross-sector collaboration to reinforce the local response capacity to maintain or foster community resiliency.

Data generated from each of the six cases was similar in that participants from each of the six cases shared a concern and interest in strategic military base and port community resiliency for the benefit of national security and economic vitality. Data generated from each of the six cases was also similar in that lessons learned from recent large-scale crisis, namely the 9/11 attacks and Katrina, were common points of reference relative to policy and preparedness priorities.

Limitations of the Study

Limitations to Trustworthiness That Arose

There are no perceived limitations to trustworthiness from this study. Collectively, the integrity of the participant responses and data collection from the participant interviews as well as the symposia summaries and member checks of interview transcripts have underscored the trustworthiness of this study.

Recommendations for Future Research

Future research and or planning to implement recommendations for overcoming perceived barriers or providing perceived incentives for private sector engagement can be a part of the purpose for the next iteration of this study. Continuing within the boundaries of this study to understand barriers and incentives to private sector engagement and collaboration for strategic community resiliency in the first 72 hours, my recommendations for future research are as follows:

In sync with the grounded theory; I love/support collaboration but for sector-silo bias and the applied mutual mission theory born of this study, I propose a follow-up qualitative study of the development and institutionalization of an existing or a new extraordinary mutual mission through cross-sector collaboration and the provision of an incentive(s) in one or more strategic military base and port communities, while overcoming degrees of sector-silo bias to reinforce if not augment the local public-sector response capacity. The study would include an analysis of how incentive(s) and or policy impacted the incubation and institutionalization of the mutual mission(s) to achieve mutually beneficial value for community resiliency through cross-sector collaboration while overcoming degrees of sector-silo bias. Each mutual mission is unique and focused on strengthening base and port community resiliency, but the art of institutionalization of an extraordinary mutual mission while overcoming sector-silo bias is based on community-level initiative with necessary incentives.

Additionally, building on the findings from this study, I recommend that mixed methods research be conducted to further understand how a private sector organization's

return on investment (ROI) in community resiliency, as a perceived incentive and distinct from business continuity, can be measured and communicated to private sector chief executive and risk management officers as a call-to-action for engagement and cross-sector collaboration for strategic military base and port community resiliency.

Additionally, I recommend that a pilot be conducted to understand how a neutral third party, such as a non-governmental organization, might collaborate with the private sector, state and local emergency response organizations to develop a first 72-hour plan to support and or provide basic care and shelter and or move emergency responder and critical sector employee dependents out of harm's way in the face of a large-scale crisis. Go one step further to understand if and or how charitable support for a third-party organization could be raised to ensure coordination of emergency shelter and medical care for families of emergency responders and critical sector employees in the first 72 hours.

Also, I recommend that a pilot be conducted to understand how private and public sector liability concerns can be mitigated when sharing assets or proprietary or sensitive information.

Implications

Positive Social Change

This mutual mission theory born of this study offers a vehicle for translating an existing or new mutual mission through cross-sector collaboration and incentives; into an extraordinary mutual mission to support the response capacity for strategic military base and port community resiliency, and in the process, mitigate if not overcoming degrees of

sector-silo bias. In every instance, the implications for positive social changes are rooted in individual, organizational, and sector engagement and collaboration.

Individual. In part, this study explored to what extent private sector organizations and leaders might be willing to provide, arrange or sponsor care for families or dependents of first responders and critical sector employees during the first hours of a large-scale crisis. Participants of this study generally supported the concept of an emergency responder and private sector buddy system and or identification of a vetted third party to organize such a plan to provide emergency shelter and essential care for families and or dependents of responders and critical sector employees to reinforce the existing local response capacity. Some of the private sector participants also indicated a willingness to support such an organization through charitable donations. In so doing, conflict between the responder or critical sector employee's duty to one's family and one's job may be minimized.

Also, department of defense best practices, as described by participants in the ReadyCommunities Partnership symposia, can be referenced by private sector and community leaders who wish to develop such a plan.

Organizational. Public and private sector organizational leaders might identify existing local and or regional mutual missions and apply incentives develop them to an extraordinary level of performance and value while overcoming degrees of sector-silo bias. I recommend that incentives or set-asides be leveraged to incubate new mutual missions for strategic military base and port community resiliency.

Societal and policy. The results of this study offer society at large and public policy planners several avenues for achieving a more resilient nation in the aftermath of a large-scale or national crisis, through reinforcement of our existing response capacity in America's strategic military base and port communities.

Public policy recognition of community-driven, bottom-up collaboration with top-down support is of great social value. The social implications of this study and its grounded theory; I love/support collaboration but for sector-silo bias; and the companion applied mutual mission theory give rise to resiliency driven by cross-sector collaboration that can float all segments of the community. Indeed, faster cross-sector and community-centric successes can create a resiliency tide that equally floats all people in America's strategic military base and port communities.

Enlightened planners and policy makers may proactively acknowledge and collaborate to institutionalize bottom-up mutual missions with extraordinary value by providing incentives for at will versus mandatory cross-sector collaboration while overcoming shades of sector-silo bias.

Also, while distrust was mentioned throughout the literature as one of the perceived barriers to cross-sector collaboration, this response may indeed masque the root of the distrust. As explained earlier in this dissertation, some have posited that fear and or lack of knowledge is the root of the distrust between public and private sector leaders.

Methodological, Theoretical, and/or Empirical Implications

Theoretical framework. The theoretical framework outlined in the proposal for this study included the conceptual framework and recognition of seven theories. Upon

completion of the data generation and analysis, I perceive that each of the seven theories have a degree of relevance. However, the cross-sector collaboration theory (Bryson et al. 2006) remains central or intrinsic to this study. The cultural theory (Douglas, 1992) is significant to the extent that culture, at the institutional, situational or experiential level, is woven into the root of the companion and applied mutual mission theory born out of the predominant themes and grounded theory; I love/ support collaboration but for sector-silo bias. As stated in Chapter 3, to realize this grounded theory, I relied upon Eisenhardt's (1989) approach to development of a new grounded theory (p. 548) based on case study evidence (p. 535) without preconceived theoretical notions. Together, the data which emerged from both data sources supports the grounded theory and companion applied mutual mission theory. The data sources included the one-on-one qualitative interviews with participants from the private, public, military and emergency response sectors in each of the 6 strategic military base and port communities along with the six ReadyCommunities Partnership symposia summaries.

Cross-sector collaboration (Bryson et al., 2006). This study reinforced the tangible and intangible value of cross-sector collaboration in the immediate aftermath of a large-scale crisis in America's strategic military base and port communities.

Indeed, the emergent grounded theory; I love/support collaboration but for sector-silo bias underscores the need to overcome sector-silo bias to achieve mutual mission. The companion applied mutual mission theory is a proposed framework and method for institutionalizing mutual missions of extraordinary value for community resiliency

through public-private collaboration by while providing incentives and mitigating if not overcoming degrees of sector-silo bias.

Cultural theory (Douglas, 1992). The sector-silo bias theme was born out of the ‘culture and behavior’ subcategory of the axial codes developed in this study. Indeed, as stated in my proposal, Douglas (1992) pointed out how an organization’s response to risk is in part driven by an organization’s culture. Sector-silo bias as a property or dimension of culture may indeed be at one end of the continuum, curtailing an organization’s capacity to respond to risk, which if unaddressed, could result in human fatalities and financial losses.

As a point of reflection about the impact of cultural persuasions on community resiliency, one participant in just one of the cases addressed a potential concern for ‘fairness’ by stating that private sector support for coordination of safety and care for responder or critical sector families or other dependents, including the vulnerable, in the first 72 hours, as a policy, might not be accepted locally by others who think that the same level of coordination must be made available for all citizens. Inasmuch, a possible connection with the cultural theory (Douglas, 1992) has been noted.

Dynamic network and complex adaptive systems theory (Kapucu, 2005). As stated in my proposal, findings from Kapucu’s (2005) research included that public-private partnerships are effective in response to crises (p. 33). Toward this end, my companion applied mutual mission theory informs a model for overcoming the fundamental impediment of sector-silo bias through the provision of incentives including seed funding, policy, and administration to support cross-sector collaboration and

institutionalization of the mutual mission for reinforcement if not augmentation of the local response capacity following a large-scale crisis.

Social networks theory (Hossain & Kuti, 2010). This theory can be relevant to my research results in that highly structured social networks can support crisis response to the extent that they provide timely and accurate information about programs and resources available for response.

Networking theory (Peterson & Besserman, 2010). To the extent that this theory has to do with the potential value of informal networks in crisis response, informal networks possess situational and resource awareness to complement crisis response. However, *without structure*, optimal utilization of these assets may be compromised in the first 72 hours. I believe that engagement of the private sector through collaboration will require structure to effectively provide resources or support for first response. As stated by a for-profit interview participant from the private sector; “We are *not going to develop this network solely for altruism*, it is a service that is required, the service needs to be paid for...one way to keep accountability for the service” (IQ11, CHS, 2: Pr. (F-P, Sm.); Maritime/Transportation.

Resource dependence theory (Nienhuser, 2008). As stated in my proposal, this theory is based on the human need for critical resources which can impact behavior during crisis response. The resource dependence theory is further illuminated by the ‘interdependency’ theme of my study as it applies to supply chains, business and community resiliency, and or cross-sector interdependencies.

Blame avoidance theory (Moynihan, 2012). As stated in the proposal, Moynihan discussed blame avoidance as an incentive for participation in networks. However, on a micro-level, one public sector participant in the qualitative interviews stated that blame avoidance is a perceived barrier to cross-sector collaboration for port community resiliency. The participant stated that “Huge concerns about security, standard players – big players did not want to step forward...did not want to get blamed” (IQ11, DOR, 4: Pu. (Fed.)).

Recommendations for Practice

Based on the findings or what was learned from this study, both inductively and or deductively, the following recommendations for practice are suggested for but not limited to America’s strategic military base and port communities. Cumulatively, these recommendations can serve as the basis for a template for the reinforcement if not augmentation of local response capacity.

Community-driven resiliency. As exemplified and or discussed by participants in this study, collaboration between the private and public sectors for resiliency should be driven from the community, from the “bottom-up,” versus from the top-down as crises start and or are experienced at the local level.

Institutionalization of extraordinary mutual missions through incentives. The emergent grounded theory and companion applied mutual mission theory of this study stems from the truth that many community-level stakeholders are receptive to collaboration but for the sector-silo bias barrier. As a means of overcoming this barrier while reinforcing if not improving local response capacity in America’s strategic military

base and port communities, I encourage public and private sector leaders to identify existing and or new extraordinary community generated mutual missions and provide financial and or policy-driven incentives to institutionalize them. Incentives may include set-asides to encourage incubation through cross-sector collaboration of mutual missions. In so doing, degrees of organizational, institutional, and or situational sector-silo bias may be ameliorated if not overcome and the first 72-hour response capacity may be reinforced if not formidable. In brief, the mutual mission theory provides a framework for public-private collaboration to fortify strategic community resiliency.

Engage the private sector prior to a crisis. Within the context of preparedness to reinforce the response capacity for strategic military base and port community resiliency to further engage the private sector through public-private sector collaboration at the local and regional levels, leaders are urged to consider adoption of the following measures for local response in the first 72 hours:

- *Private sector leaders are urged to learn the established public sector emergency response protocols, including the incident command system, in case of the opportunity to support the public-sector response.*
- *Identify sources of private sector expertise that may be needed in the first 72 hours to support the needs of emergency responders and or other critical sector employees. According to the interests, will, and voluntary decision of the private sector; paired with the requisite budgetary and administrative capacity of the public sector; establish the fee and expectations in a contract or memorandum of understanding between the necessary parties – prior to a*

crisis. As outlined in the IQ7 results, participants indicated that the types of specialists needed include communications experts/operators, medical providers, architects, engineers, attorneys (maritime law), hazmat teams, logistics management (for food, water, lodging), vehicle/equipment operators, and care coordinators for family and dependents of emergency responders and critical infrastructure employees.

- *Private sector leaders are encouraged to identify a private sector liaison for each local critical infrastructure entity, as well as each vendor and supplier to the military base and the port community; and to identify their respective public-sector counterparts.*
- *Develop the role of the participating private sector liaisons in communicating available resources, expertise and external dependencies to their public-sector emergency management counterparts.*
- *Establish contracts and memorandums of understanding with emergency clauses, between the private and public sectors in order that both parties may understand realistic commitments and expectations and train to supply and or receive said resources and or services during the first 72-hour response.*
- *Establish a private sector seat in the city, county, and or state emergency operations center with an equitable rotation policy for small and large businesses across various critical sectors. With a seat in the EOC, the optional role of the private sector liaison is to provide awareness of available resources*

without compromising confidential and proprietary business information.

Otherwise, the overall public-sector response capacity may be marginalized.

- *Conduct public-private sector collaboration training.* Develop and conduct public-private sector collaboration training to increase awareness about public and private sector priorities and protocols. Conduct cross-cultural training about the differences, limitations, and common ground of the public and private sectors; beginning with public safety missions and for-profit objectives and priorities in the first 72 hours. Leverage this understanding to illuminate and motivate leadership to further develop community and regional preparedness and response plans.
- Given the interdependency between business continuity and community resiliency, develop and provide community-level training to *broaden the private sector lens from business continuity alone to encompass and prioritize return-on-investment (ROI) in strategic military base and port community resiliency.* Increase awareness and provide information about opportunities for private sector engagement and cross-sector collaboration to reinforce the response capacity and fortify strategic military base and port community resiliency.
- *Develop and support a plan to arrange emergency shelter and essential care for families and dependents of first responders and critical sector employees* so that potential conflict between the duty to one's employer and or one's family or other dependents may be minimized during the first hours of a large-

scale crisis, thereby enabling the responder and or critical employee to remain on the job during the first 72 hours. Prepare MOUs with emergency clauses with vetted providers of shelter and or essential care as necessary during the first 72 hours. Identify a third-party organization to develop, coordinate and or process private sector charitable support for such a program

- *Make a point to know the public-sector emergency management* points of contact in one's immediate locale and neighboring locales, prior to a crisis, especially within the strategic military base and port communities. Stay apprised of any turnover. Knowing who is in charge was cited as one of the greatest perceived barriers to collaboration and has been exacerbated by public sector leadership turnover.
- Understand FEMA reimbursement requirements prior to a crisis.
- *Public and private sector leaders alike are encouraged to develop a redundancy plan. Understand the interdependencies of the supply chain for one's organization* and when possible, establish contracts with multiple vendors to avoid sole reliance on a single vendor.

Consider new economic and risk management models. Several economic principles and risk management models were recommended for consideration and or adoption by policy makers, emergency managers, risk management executives, chief financial officers, and operations officers:

- *Elastic resiliency models.* One participant suggested that leaders consider consequences when developing resiliency models. "Resiliency models need

elasticity based on consequences versus risks, threats or causes” (PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

- *Manage ports based on their economic footprint.* One participant suggested that ports should be managed based upon their economic footprint, versus jurisdictional lines:

Don't take ports by civil jurisdictional lines, nationally when you are looking at this...the government of being linked to commerce as we were when inception of country...now we are cut in this jurisdictional gerrymandering...microscopic . . . smaller than the regional interest. . . . Everybody is concerned about that ceiling tile, not the room, so the port is based on an economic footprint, that's why JTF7 (joint task force counter terrorism law enforcement cooperative) goes beyond the petty juvenile way of thinking....so many civil jurisdictions around it, that creates the problem for the overall port. (IQAC, NOL, 6: Pu. (Cit.); Public Safety/Law Enforcement)

- *Leverage existing resources.* Central to any new template for port community resiliency is the determination and commitment to leverage existing resources and dollars before seeking additional resources or dollars. Institutionalization of existing extraordinary mutual missions through cross-sector collaboration is one such approach. Reinforcement of the existing response capacity, both responders and critical infrastructure and other critical sector employees through the support of private sector liaisons, is another means of leveraging existing resources. As indicated in Chapter 1, there is a shortage if not drain

on existing resources and emergency preparedness budgets. “We're facing some unprecedented challenges today in our seaports. Aging infrastructure, lack of technology investment, depth in our channels, and loss of revenue, they are the underpinning of our ability to establish resiliency”

(ReadyCommunities Partnership, 2010, Senate, p. 15).

- *Develop policies and practical methodologies to mitigate private sector liability concerns* about revealing proprietary information when loaning assets to augment the local response capacity.

Conclusion

America’s strategic communities can benefit from a larger role with opportunities for the private sector through increased and enlightened local-level public and private sector collaboration. As stated earlier in this dissertation; “But it shouldn’t come to any surprise to you that government can’t do it all. We are going to and need to depend on public-private partnerships” (ReadyCommunities Partnership, 2014, Long Beach, p. 43).

To reiterate and as stated by former Louisiana senator Mary L. Landrieu, the resiliency of America’s strategic military base and port communities is tied to national security and economic vitality at home and abroad:

The uninterrupted operation of America’s 513 ports is essential to our national economy. They collectively amount for about 13.3 million jobs, generating \$649 billion in annual revenue. Each year, maritime commerce in the United States accounts for approximately 3.2 trillion in total economic activity and generates 2.2 billion in federal, state, and local taxes. And our country has 136 military

installations which are considered critical. With ports and military bases knocked offline during a crisis, not only would (human) lives be at risk, but the effect of our economy would be catastrophic. (ReadyCommunities Partnership, 2014, Long Beach, p. 25)

In consideration of the private sector's unparalleled capacity and that the government's priority in the first 72 hours is continuity of government, this study underscores the call for enlightened private sector leadership to be further engaged in preparedness and cross-sector collaboration to reinforce if not augment the response capacity of America's strategic military base and port communities. At the same time, public sector receptivity to private sector engagement is required.

Through a review of the data generated from 43 qualitative one-on-one interviewees and six ReadyCommunities Partnership symposia in six of America's strategic military base and port communities, various perceived barriers and perceived incentives were identified and delineated in Chapter 4. Plus, four predominant themes emerged from this study; interdependency, mutual mission, return-on-investment, and sector-silo bias.

Despite the evidence of public and private sector acknowledgement of interdependency between business continuity and community resiliency, as well as shared interests in mutual missions, cross-sector collaboration has been inhibited by a steady undercurrent of sector-silo bias. Therefore, in practice, stakeholders and policy makers are encouraged to leverage the grounded theory which emerged from this study; I love/support collaboration but for sector-silo bias together with the companion applied

mutual mission theory. Leaders are encouraged to acknowledge existing and locally-based extraordinary mutual missions and provide necessary incentives, including financial set-asides and policy, to further cross-sector collaboration to incubate if not institutionalize the mutual missions at the local level and serve as a template for other regions. In so doing, the response capacity of our nation's strategic military base and port communities may be reinforced while overcoming degrees of sector-silo bias.

With respect to the reality that each community and organization realizes a commensurate return on its investment (ROI) in cross-sector collaboration for strategic military base and port community resiliency, participants in this study expressed their understanding of the interdependency between business continuity and community resiliency. In the words of one interview participant, "Resilience is best achieved when each sector or component of community are resilient and acknowledge their interdependence" (IQ11, NCR, 5: Pu. (County); Public Safety/Fire). Participants shared additional perspectives and definitions of ROI in preparedness and cross-sector collaboration for resiliency in strategic military base and port communities. These definitions, including anecdotal evidence, are provided earlier in Chapter 4 where ROI is covered as a predominant theme. One participant in the Long Beach case described the desired ROI for preparedness as "The ability to keep the business model going (public agency's is to deliver their service) . . . that's what is required and that is what drives each organization to participate, collaborate with the other" (IQ33, PED, 5: Pu. (Cit.); Landlord Port & (F-P) Aerospace).

Additionally, to fill the *public-private collaborative deficit*, the pyramid approach to community resiliency through community engagement with top-down support was recommended. One participant advised that government should promote private-public collaboration starting at community-level rather than from the top-down as “Disasters start at local level. Regional disasters will have local responders” (IQ33, NCR, 2: Pr. (F-P, Lg.); Logistics, IT, Emergency). Moreover, another participant explained that the pyramid approach allows the federal government to focus on continuity of government:

It is common sense – the threshold of expectations and expense and level of effort would allow the federal government to focus on continuity of government... You build a pyramid from the bottom, the individual is the base of the pyramid, state/local (is in the) middle, and the top is federal. Cannot have the top without the bottom. (IQ33, MIA, 1: Pr. (F-P, Sm.); Consulting/Retired Military)

Overall, the findings and corresponding recommendations encourage a heightened level of local-level public-private collaboration to maintain if not augment the existing response capacity while leveraging existing resources. In so doing, gaps or cracks in strategic military base and port community resiliency may be addressed to fill any public-private collaborative deficit. Policy makers, emergency managers, risk management officers and other local public, private, military, and community sector leaders might review and together address the perceived barriers and incentives delineated in Chapter 4. Chief operating officers and risk mitigation executives of large corporations or small business owners and operators are encouraged to take part by implementing the practical recommendations listed earlier in Chapter 5.

Through cross-sector collaboration, there are innumerable opportunities to make a positive difference in America's overall resiliency. A retired military leader who participated in the ReadyCommunities Partnership Military Base and Port Community Resiliency symposium held at PortMiami (2011, p. 13) said,

Because there's not a person here that doesn't hold a piece of the puzzle . . . this is a Rubik's cube." Couple that thought with this remark by a public safety official with over three decades of service to the community: Better collaboration will result in better outcomes. (IQ33, NCR, 5: Pu. (County); Public Safety/Fire).

Given that the strategic military base and port communities of the United States fuel the economic engine and undergird national security, the role of the private sector in filling any gap and or reinforcing the existing response capacity is unquestionably critical. A military leader who participated in the ReadyCommunities Partnership Military Base and Port Community Resiliency Initiative symposium held at the Port of Long Beach said, "I think . . .that this is a strategic port is something we should always think about. The fact that it could be a target that it is so important to the country could be another challenge" (ReadyCommunities Partnership, 2014, Long Beach, p. 39).

In conclusion, public-private partnership and cross-sector collaboration at the local-level in our nation's strategic military base and port communities is a mutual mission of the greatest order. The return on investment in deliberate and community-based private sector engagement and cross-sector collaboration is increased probability of strategic military base and port community resiliency, having addressed the Achilles heel of community resiliency. Leaders from the public and private sectors can take steps *prior*

to a large-scale crisis to engage members of the private sector with an interest and capacity to provide critical resources and expertise. Such steps can reinforce the local public-sector response capacity in the first 72 hours for the sake of America's security, public health, and prosperity. In so doing, America's strategic communities and stakeholders will possess their best advantage to withstand and rebound from a large-scale or national crisis.

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Appendix A: Sample Interview Questions

Participant Overview

a) Geographic base

- a) Louisiana:
 - i. New Orleans; Baton Rouge; Vidalia; Other _____
- b) California:
 - i. Los Angeles; Long Beach; Other _____
- c) New York/New Jersey
 - i. New York City; New Jersey
- d) South Carolina
 - i. Charleston
- e) Florida
 - i. Miami
 - ii. Doral
 - iii. Ft. Lauderdale
- f) Other _____

g) Organization type:

- a. *Private Sector For-Profit Business:* _____

A1) Business Size?

- i. Small business (<100 employees)
- ii. Large business (100 or more employees)

A2) Business Location?

- iii. Distributed business with locations nationwide
- iv. One primary location

A3) Business Provider of Local Critical Infrastructure?

v. Type:

1. Fuel
2. Power
3. Water
4. Communications _____
5. Food
6. Other: _____

A4) Business is a Contractor or Vendor to a Military Base or Port Community: Yes; No

- b. *Private Sector Nonprofit Entity:* _____
 - i. Community or regional only focus
 - ii. National organization
- c. *Emergency Response Organization:* _____
 - i. Fire
 - ii. Police
 - iii. Emergency Management/Operations
- d. *Government Organization:* _____
 - i. Federal
 - ii. State
 - iii. Local (City); (County)
- e. *Faith-Based Organization:* _____
- f. *Military Organization:* _____
- g. *Tribal Organization:* _____
- h. *Educational Institution:* _____

h) Title/Role:

- a. *Corporate:*
 - i. Chief Executive
 - ii. Manager/Director
 - iii. Staff
 - iv. Owner
 - v. Attorney
- b. *Emergency Response; Emergency Management*
 - i. Paid Responder
 - ii. Volunteer Responder
- c. *Military*
 - i. Retired
 - ii. Active
- d. *Elected official:* _____

Sample Interview Questions

Please reply to each of these questions, bearing in mind the context of the first 72 hours of a large-scale or national crisis. There is no word limit to your response. If the question is not applicable to your organization or role, respond in brief with “not applicable (NA).” (Interview question numbers comport to dissertation results summary.)

1. Preliminary - Participant frame of reference: What types of large-scale natural or man-made crises has your community experienced or do you anticipate that your community might experience?
2. Have you participated in preparedness or response for any crisis(es)? If yes, which type of crisis(es) and what was your role?
3. To what extent is your organization already engaged or not already engaged in preparedness or response to a large-scale or national crisis, either unilaterally or in a collaborative manner? In what ways?
4. To what extent does or has your organization currently collaborate or has your organization collaborated with the public sector to reinforce the local response capacity in the first 72 hours of a large-scale crisis?
5. To what extent does or has your organization have any staff members that also serve as volunteer responders?
6. To what extent has your organization pre-identified its critical employees (those that are needed on the job in the first 72 hours)?
7. What type of resource limitation(s) in the first 72 hours concern you the most?

8. Theoretically, would your organization/leadership be willing to make a commitment to make plans, potentially through collaboration, to provide or arrange care for a vulnerable/special needs family member or dependent of a *local emergency responder (paid and/or volunteer)* thereby enabling this/these individuals to remain on the job during the first 72 hours?
9. Theoretically or practically, how might your organization/leadership be willing to make a commitment to make plans, potentially through collaboration, to provide or arrange care for a vulnerable/special needs family member or dependent of a *critical sector employee during the first 72 hours* thereby enabling this/these individuals to remain on the job?
- 9b) What kind of plan does your organization have to ensure care for the families or dependents of responders or critical infrastructure employees during the first hours or recovery period of a large-scale or national crisis; including the disabled, vulnerable and or those with special needs (be specific)?
10. What perceived internal or external barriers exist that would prevent your organization from developing a plan to providing care for a vulnerable/special needs family member or dependent of a local emergency responder and/or critical sector employee during the first 72 hours – thereby enabling this/these individuals to remain on the job?
11. What would incentivize you or your organization to further to engage in preparedness by collaborating with other entities and or sectors, to reinforce the local response capacity in the first 72 hours?

12. *In general*, what types of perceived barriers, if any, do you think need to be overcome to incorporate private sector assets and capabilities into the local public sector's first 72-hour response capacity? Please explain.
13. *Relative to your organization*, what type(s) of perceived barriers, if any, do you think need to be overcome to incorporate private sector assets and capabilities in the first 72-hour response? Please explain.
14. What concerns do you, your organization or community have about ensuring that the *existing* local first response capacity can be sustained in the first 72 hours? Explain if and or how your concerns are based upon past experience or other factors?
15. To what extent would your organization be willing to dedicate resources to support an organization that could provide care for vulnerable/special needs (disabled, or those with access or functional needs) family members of responders or critical sector employees in the first 72 hours – so that the responder and/or critical sector employees can remain on the job?
16. To what degree or how would your organization be willing *to support a volunteer responder "buddy" network or program so that a responder and/or critical sector employee can remain on the job* during a large-scale crisis?
17. Aside from caring for responder and or critical sector employee vulnerable special needs family member and other dependents, are there any other ways in which you envision that private sector or community organization assets and capabilities could support the public-sector response in the first 72 hours?

18. PRIVATE SECTOR: *To what extent has your organization already collaborated* with the public sector to augment the local response capacity in the first 72 hours of a large-scale crisis? If yes, please explain in detail.
19. PRIVATE SECTOR: If your organization has already collaborated with the public sector to prepare for crises, *what incentivized your organization* to collaborate relative to local preparedness for the first 72 hours? Please describe all types of incentives. Alternatively, please describe what would or might incentivize your organization to collaborate relative to local preparedness for the first 72 hours.
20. PRIVATE SECTOR: If your organization is not or has not been engaged by providing resources (assets or capabilities) or making resources available to reinforce the local response capacity in the first 72 hours, why not? Be specific. What are your reasons, issues or concerns? Be specific. What are the *perceived barriers if any to your and your organization's* engagement as described above? Be specific.
21. PRIVATE SECTOR: What would your organizational leadership *require to provide resources* (goods and or services) to help reinforce or augment the local public-sector response in the first 72 hours? Be specific.
22. PRIVATE SECTOR: What organizational *investments and resource commitments*, such as assets and/or capabilities, has or would your organization be willing to make to reinforce or augment the public-sector response in the first 72 hours?
23. PRIVATE SECTOR: What *type or level (%) of return-on-investment* would your organization expect or want for pre-designation/contribution of a portion of your organization's assets and/or capabilities (headcount, time, resources) for local

- preparedness and response in the first 72 hours of a large-scale or national crisis (community resiliency)? Be specific.
24. PRIVATE SECTOR: Please explain if the desired return-on-investment (ROI) your organization expects for cross-sector collaboration for resiliency is specific to the *business alone and/or the community*?
25. PRIVATE SECTOR: What type of contribution(s) or provisions beyond those already designated within a corporate continuity or corporate social responsibility plan can or might your organization make to realize a return-on-investment relative to community-level resiliency?
26. PRIVATE SECTOR: To *what extent and or on what basis* would your organization be willing to make its assets and/or capabilities available to the local public sector in the first 72 hours? Which assets or capabilities?
27. PRIVATE SECTOR: How *readily could your assets* or capabilities be made available to the public sector in the first 72 hours? What *prearrangements* would be needed?
28. PRIVATE SECTOR: To what extent would your organization be willing to *dedicate time of one employee to identify organizational assets and/or capabilities* that could be incorporated into the first 72-hour response through collaboration with the local public sector?
29. PRIVATE SECTOR: To what extent would your organization be willing to *contribute a portion of a headcount/employee to pre-coordinate/collaborate with the public sector to arrange care for vulnerable/special needs family members of a responder(s) or critical sector employee(s) in the first 72 hours*?

30. PRIVATE SECTOR: What would incentive you as a leader of your business/organization to invest 2% of your corporate profits for *your business'* continuity of operations in the first 72 hours of a large-scale crisis? Be specific.
31. PRIVATE SECTOR: What would incentive you as a leader of your business/organization to invest 2% of your corporate profits for your *community's* continuity of operations in the first 72 hours of a large-scale crisis?
32. PRIVATE SECTOR: To what extent do you perceive that there are barriers that prevent or limit your organization's willingness to collaborate with other organizations in a cross-sector fashion (ex., public-private) for the sake of community resiliency; or to what extent would an established incentive (i.e. tax credits, assurance of limited or no liability) overcome any perceived barrier, etc.? Also, list perceived incentives for cross-sector collaboration for your organization or other organizations.
33. PRIVATE SECTOR: What would motivate your organization and or its leaders to collaborate with the public sector to foster community resiliency, particular in the nation's strategic military base and port communities during the first 72 hours? In other words, what is the greatest incentive to public-private sector collaboration?
- a. What is the greatest perceived barrier to public-private collaboration?

Appendix B: ReadyCommunities Symposia/Roundtables

Table B1

ReadyCommunities Partnership Symposia/Roundtables

ReadyCommunities partnership military base & port community resiliency initiative symposium title	Symposium date (2010-2014)	Symposium location	Public/private sector participants (approximately 300)
Round-Table & Pilot Planning Session: “Mapping Local Critical Infrastructure, Vendors and Suppliers in America’s Strategic Communities to Prepare for a Large Scale or National Crisis”	March 24, 2010	Senate Dirksen Office Building Washington, DC	60
Charleston Advisory Committee Round-Table & Pilot Planning Session: “Inter-Port Communications & Exercise Planning Session”	August 24, 2010	82 Queen Street Charleston, SC	16
Pilot Meeting & Field Hearing: “Atlantic and Gulf Coast Connectivity, Identifying Local Critical Infrastructure & Crisis Response Officers”	May 10, 2011	Port Miami, Miami, FL	42
Roundtable: “Atlantic and Gulf Coast Connectivity Identifying & Connecting Corporate Crisis Response Officers to Map Local Critical Infrastructure & Support the Vulnerable/Special Needs Community”	June 11, 2013	Fire Headquarters, Fire-Rescue Training Facility Doral, FL	34
Port of New Orleans Symposium: “The Greater New Orleans Model: A Foundation for the Role of the Corporate Crisis Response Officer in Supporting First Responders in the First 72 hours - Providing Assistance for Family Members and Dependents with Disabilities or Access and Functional Needs”	December 3, 2013	Port of New Orleans New Orleans, LA	105

(Table continues)

ReadyCommunities partnership military base & port community resiliency initiative symposium title	Symposium date (2010-2014)	Symposium location	Public/private sector participants (approximately 300)
Public/Private Sector Roundtable: “San Pedro Bay Port Complex Model: Best Practices and Recommendations and Using Existing (Commercial-Off-The- Shelf-Technology (COTS)) Capability to Integrate Local Critical Infrastructure into a Surface and Subsurface Awareness, Identification and Interdiction Network for Military, Port, Law Enforcement and First Response Partners”	March 18, 2014	Port of Long Beach Long Beach, CA	35

Note. Reference link: http://www.readycommunities.org/showarticle_pilotprojects.php

Appendix C: Case Locations and Dates

Table C1

Case Locations and Dates

Case name (City, Port)	Case dates
Washington, DC (National Capital Region) (Port of Baltimore)	3/7/16-4/26/16 Participant interviews 3/24/10 RCP Symposium (Washington, DC)
Charleston, SC (Port of Charleston)	3/28/16-6/3/16 Participant interviews 8/24/10 RCP Symposium (Charleston, SC)
Miami, FL (Miami-Dade County) (Port of Miami)	3/21/16-4/5/16 Participant interviews 5/10/11 RCP Symposium (Miami, FL)
Doral, FL (Miami-Dade County) Port Everglades (Broward County)	3/31/16-4/28/16 Participant interviews 6/11/13 RCP Symposium (Doral, FL)
New Orleans, Louisiana (Port of New Orleans and other MS River ports)	5/17/16-5/16 Participant interviews 12/3/13 RCP Symposium (New Orleans, LA)
Long Beach, CA (San Pedro Bay) Port of Long Beach and Port of Los Angeles)	4/25/16-6/3/16 Participant interviews 3/18/14 RCP Symposium (Long Beach, FL)

Note. Interviews were held at participant office, restaurant, or by teleconference.

Appendix D: Descriptive List of Interviewees

Table D1

Descriptive List of Interviewees (N = 43)

CASE: National Capital Region (DC, Virginia, Maryland) including Port of Baltimore	Participant (n = 7) titles include chairman, senior consultant, program manager, executive director, sector commander, deputy county manager, director	Participant source: RCP symposia (1+); RCP referral; or organization website	Interview length; recorded audio (RA)	Informed consent and transcript
Interview date; In-person location (office, restaurant/coffee shop) (6) or teleconference (1), City (VA, MD)	Organization sector; industry. State where participant's organization located (FL, MD, VA) with activity in case locale			
March 7, 2016; Restaurant, Fairfax	NCR, 1: Private (For-Profit, Small); Crisis, Risk Management (VA)	RCP symposia	102 min; RA	Yes
March 8, 2016; Coffee shop, Leesburg	NCR, 2: Private (For-Profit, Small); Logistics, IT, Emergency Preparedness (VA)	RCP symposia	165 min; RA	Yes
March 10, 2016, Office and March 17, 2016, Coffee shop; Arlington	NCR, 3: Private (For-Profit, Small); Secure Communications Technology (VA)	RCP symposia	139 min; RA	Yes
April 11, 2016; Teleconference	NCR, 4: Private (Nonprofit, Small); Logistics/Supply Chain (FL)	RCP referral	48 min; RA	Yes
March 16, 2016; Office, Arlington	NCR, 5: Public (County); Public Safety/Fire (VA)	Website	157 min; RA	Yes
April 26, 2016; Office, Amissville	NCR, 6: Public (Federal); Security/Response (VA)	RCP referral	82 min; RA	Yes
April 14, 2016; Office, Baltimore	NCR, 7: Public (Military); Maritime/Transportation (MD)	Website	69 min; RA	Yes

(Table continues)

CASE: Charleston (Chs.), South Carolina (CHS) including Port of Charleston	Participant (n = 7) titles include director, president, senior chaplain, disaster specialist, fire chief, vice president, professor	Participant source: RCP symposia (1+); RCP referral; or organization website	Interview length; recorded audio (RA)	Informed consent and transcript
Interview date; In-person location (office, restaurant/coffee store) (6) or teleconference (1), City (SC)	Organization sector; industry. State where participant's organization located (SC) with activity in case locale.			
March 28, 2016; Office, N. Charleston	CHS, 1: Private (For-Profit, Small); Emergency Response/Supplies	RCP referral	57 min; RA	Yes
June 3, 2016; Teleconference	CHS, 2: Private (For-Profit, Small); Maritime/Transportation	RCP symposia	30 min; RA	Yes
March 28, 2016; Office, N. Charleston	CHS, 3: Private (Nonprofit, Small); Chaplaincy; Responder/Family	RCP symposia	50 min; RA	Yes
March 29, 2016; Office, N. Charleston	CHS, 4: Private (Nonprofit, Large); Disaster Relief	Website	52 min; RA	Yes
March 29, 2016; Office, Charleston	CHS, 5: Public (City); Public Safety/Fire	Website	60 mins; No RA	Yes
March 29, 2016; Restaurant, Charleston	CHS, 6: Public (State); Ports Authority	RCP symposia	60 mins; No RA	Yes
March 28, 2016; Restaurant, Charleston	CHS, 7: Public (State); University/Research	RCP symposia	103 min; RA	Yes
CASE: Miami, Florida (MIA) including PortMiami (Miami-Dade County)	Participant (n = 5) titles include chairman, vice president, director, prevention department head, chief executive/port director	Participant source: RCP symposia (1+); RCP referral; or organization website	Interview length; recorded audio (RA)	Informed consent and transcript
Interview date; In-person location (office, restaurant/coffee shop) (3) or teleconference (2), City (FL)	Organization sector; industry. State where participant's organization located (FL) with activity in case locale.			
March 21, 2016; Teleconference	MIA, 1: Private (For-Profit, Small); Consulting & Retired Military	RCP symposia	48 min; RA	Yes
April 5, 2016; Office, Ft. Lauderdale	MIA, 2: Private (For-Profit), Large; Maritime/Transportation	RCP symposia	77 min; RA	Yes
March 31, 2016; Teleconference	MIA, 3: Public (County); Port	RCP symposia	48 min; RA	Yes
April 4, 2016; Office, Miami	MIA, 4: Public (Military at Combatant Command); Public Works	RCP referral	98 min; RA	Yes
April 6, 2016; Office, Miami	MIA, 5: Public (Military); Maritime/Prevention	Website	60 min; RA	Yes

(Table continues)

CASE: Doral, Florida (DOR) including Port Everglades in adjacent county (Broward County)	Participant (<i>n</i> = 6) titles include president, flight chief, director, manager.	Participant source: RCP symposia (1+); RCP referral; or organization website	Interview length; recorded audio (RA)	Informed consent and transcript
Interview date; In-person location (office, restaurant/coffee store) (5) or teleconference (1), City (FL)	Organization sector; industry. State where participant's organization located (FL) with activity in case locale.			
March 31, 2016; Office, Riviera Beach	DOR, 1: Private (For-Profit, Large); Container and Ocean Transport	RCP symposia	103 min; RA	Yes
April 28, 2016; Teleconference	DOR, 2: Private (Nonprofit, Edu.); Public Safety, Emergency Management.	Website	77 min; RA	Yes
April 1, 2016; Office, Doral	DOR, 3: Public (County); Public Safety, OEM	RCP symposia	80 min; RA	Yes
April 1, 2016; Restaurant, Doral	DOR, 4: Public (Federal); Maritime/Transportation	RCP symposia	41 min; RA	Yes
April 1, 2016; Restaurant, Doral	DOR, 5: Public (Military); Air/Emergency Management	RCP symposia	57 min; RA	Yes
April 5, 2016; Office, Miami	DOR, 6: Public (State); Disabled Persons	RCP symposia	56 min; RA	Yes
CASE: San Pedro Bay, California (PED) including Port of Los Angeles and Port of Long Beach	Participant (<i>n</i> = 8) titles include (chairman/CEO, director of security, principal, executive director, commander, fire chief, deputy director, manager	Participant source: RCP symposia (1+); RCP referral; or organization website	Interview length; recorded audio (RA)	Informed consent and transcript
Interview date (interview length); In-person location (office, restaurant/coffee shop) (5) or teleconference (3), City (CA)	Organization sector; industry. State where participant's organization located (CA) with activity in case locale.			
May 24, 2016; Teleconference	PED, 1: Private (For-Profit); Entertainment	RCP symposia	60 min; RA	Yes
May 24, 2016; Coffee store, Burbank	PED, 2: Private (Nonprofit); Emergency Management & For-Profit; Software	RCP symposia	93 min; RA	Yes
June 3, 2016; Teleconference	PED, 3: Public (City); Landlord Port	RCP symposia	57 min; RA	Yes
May 25, 2016; Office, Long Beach	PED, 4: Public (City); Law Enforcement	RCP symposia	60 min; No RA	Yes
April 25, 2016; Teleconference	PED, 5: Public (City); Private; Landlord Port (CA) & For-Profit/Aerospace	RCP symposia	59 min; RA	Yes
May 25, 2016; Coffee store, Garden Grove	PED, 6: Public (City); Public Safety, Fire	RCP symposia	57 min; RA	Yes
May 23, 2016; Office, Los Angeles	PED, 7: Public (County); Emergency Operations	Website	33 min; RA	Yes
May 23, 2016; Office, San Pedro	PED, 8: Public (Military)/Private (Nonprofit); Marine Transportation	RCP symposia	97 min; RA	Yes

(Table continues)

CASE: New Orleans, Louisiana (NOL) including Port of New Orleans	Participant titles include vice chairman & chief operations officer, security manager, director, sheriff, port director, fire chief, director, advisor, security officer, executive director	Participant source: RCP symposia (1+); RCP referral; or organization website	Interview length; recorded audio (RA)	Informed consent and transcript
Interview date; In-person location (office, restaurant/coffee shop) (10) or teleconference (0), City (LA)	Organization sector; industry. State where participant's organization located (LA) with activity in case locale.			
May 18, 2016; Office, Des Allemands	NOL, 1: Private (For-Profit, Small); Marine Transportation	RCP referral	25 mins; RA	Yes
May 19, 2016; Office, Norco	NOL, 2: Private (For-Profit, Large); Oil Refining	RCP referral	62 min; RA	Yes
May 18, 2016; Coffee store, New Orleans	NOL, 3: Private (Nonprofit, Small); Emergency Recovery Center	RCP symposia	35 min; RA	Yes
May 17, 2016; Office, New Orleans	NOL, 4: Public (City); Public Safety, Emergency Comms.(Police/Fire/EMS)	RCP symposia	57 min; RA	Yes
May 20, 2016; Office, New Orleans	NOL, 5: Public (City); Public Safety, Fire	RCP symposia	60 min; No RA	Yes
May 19, 2016; Restaurant, Baton Rouge	NOL, 6: Public (City); Law Enforcement	RCP symposia	77 min; RA	Yes
May 18, 2016; Office, Galliano	NOL, 7: Public (City); Landlord Port	RCP symposia	27 min; RA	Yes
May 19, 2016; Office, Vidalia	NOL, 8: Public (City); Port Commission	RCP symposia	63 min; RA	Yes
May 18, 2016; Restaurant, New Orleans	NOL, 9: Public (Federal); Transportation/Maritime	RCP symposia	36 min; RA	Yes
May 20, 2016; Office, New Orleans	NOL, 10: Public (State); Public Safety, Port Law Enforcement	RCP referral	60 min; No RA	Yes

Appendix E: Interview Questions

Table E1

Interview Questions Posed to Answer Research Questions

RQ1 Preliminary	Perceived Threats, Resource Limitations, Response Capacity Concerns (IQ1, IQ7, IQ14, IQ17)	Interview Question (IQ): Number of Participants/Cases
	Probable large-scale threats	IQ1:31 Participants/6 Cases
	Resource limitations/concerns in the first 72 hours	IQ7:30 Participants/6 Cases
	Response capacity concerns in the first 72 hours	IQ14:30 Participants/6 Cases
	Other ways private sector assets/capabilities could support the first 72 hours	IQ17:24 Participants/6 Cases
RQ1	Perceived Barriers and Incentives to Collaboration/Engagement (IQ11, IQ12, IQ13, IQ19, IQ20, IQ21, IQ27, IQ31, IQ32, IQ33/IQ34)	Interview Question (IQ): Number of Participants/Cases
	Incentive further collaboration/preparedness to reinforce local response capacity first 72 hours?	IQ11:29 Participants/6 Cases
	Barrier/Incentive (perceived) to Incorporate private sector assets into first 72 hours?	IQ12:35 Participants/6 Cases
	Perceived barriers, if any, do you think need to be overcome in order to incorporate private sector assets and capabilities in the first 72-hour response?	IQ13: 5 Participants/4 Cases
	Perceived private sector incentives for collaboration to reinforce response capacity first 72 hours?	IQ19:14 Participants/6 Cases
	Perceived private sector barriers to provision of resources to reinforce response capacity first 72 hours?	IQ20:16 Participants/6 Cases
	Perceived incentives for private sector contributions to reinforce response capacity?	IQ21:18 Participants/6 Cases
	Readiness of assets for public-sector response first 72? (Responses include incentives or barriers)	IQ27:16 Participants/5 Cases
	Incentive to invest % profits for community continuity first 72 hours?	IQ31: 16 Participants/4 Cases
	Other private sector incentives to cross-sector collaboration for the first 72 hours (tax incentives, indemnification, Good Samaritan laws, civil immunity)?	IQ32:14 Participants/5 Cases
RQ1 SubQ2	Greatest perceived incentives, perceived barriers for collaboration with the public sector to foster community resiliency, particular in our nation's strategic military base and port communities? IQ33/IQ34	IQ33: 22 Participants/6 Cases) IQ34 (7 Participants/3 Cases

(Table continues)

RQ1 SubQ1	Perceived Barriers and Incentives or Extent of Willingness to Care for Family/Dependents (Including Vulnerable/Special Needs/Disabled Individuals) of Emergency Responders (ER) and Critical Sector Employees (CSEs): IQ8, IQ9, IQ9B, IQ9C, IQ10, IQ15, IQ16, IQ28, IQ29, IQ35	Interview Question (IQ): Number of Participants/Cases
	<i>Arrange Care</i>	
	Extent of willingness to collaborate to arrange care for Family/VSN of local emergency responders (ERs) 1st 72?	IQ8:28 Participants/6 Cases
	Extent of willingness to collaborate to arrange care for Family/VSN of Critical Sector Employees (CSEs) in 1st 72?	IQ9:20 Participants/6 Cases
	What kind of plan does your organization already have to ensure care for the families or dependents of responders and or critical sector/infrastructure employees during the first hours or recovery period of a large-scale or national crisis; including the disabled, vulnerable and or those with special needs (be specific)? (IQ9b)	IQ9B:1 Participant/1 Case
	To what extent does your organization already mandate or require a plan for your family or other dependents (including those with vulnerable/special needs) for their safety in first 72 hours (IQ9c)	IQ9C:4 Participants/2 Cases
	Perceived incentives, perceived barriers (to internal plan) to care for Family/VSN of local emergency responder (ER) or critical sector employee (CSE)?	IQ10:24 Participants/6 Cases
	<i>Dedicate Resources</i>	
	Extent of willingness to dedicate resources to support an organization (third party) to care for Families/VSN of ER/CSEs?	IQ15:15 Participants/5 Cases
	<i>Buddy Program - with Private Sector Liaison (PLA)/(Corporate Crisis Response Officer (CRO))</i>	
	To what degree support buddy program for ER/CSE?	IQ16: 24 Participants/6 Cases
	Extent of willingness to dedicate time of an employee to private sector corporate crisis response (CRO) position for the first 72 hours?	IQ28:24 Participants/6 Cases
	Willingness to dedicate CRO for precoordination to care for families/VSN of ER/CSEs in first 72?	IQ29: 18 Participants/5 Cases
	Recommended steps, issues to implement corporate first responder - PLA/CRO (critical infrastructure)?	IQ35: 17 Participants/6 Cases
RQ1 (ROI)	Return on Investment (ROI) for Cross-Sector Collaboration and Engagement (IQ23, IQ24, IQ 25, IQ26, IQ30, and IQ31)	Interview Question (IQ): Number of Participants/Cases
	ROI Incentive for pre-designation of portion of assets for preparedness/response first 72?	IQ23:16 Participants/6 Cases
	ROI expected for collaboration for business and or community?	IQ24:14 Participants/5 Cases
	Additional contributions to realize return for community resiliency? (IQ25)	IQ25:7 Participants/4 Cases
	Willingness to share assets/capabilities with public sector for first 72 hours? (IQ26)	IQ26:9 Participants/3 Cases
	Incentive to invest % profits business continuity first 72 hours?	IQ30:12 Participants/4 Cases
	Incentive to invest % profits for community continuity first 72 hours?	IQ31:16 Participants/4 Cases
	<i>Note (Abbreviations): RQ (research question); IQ (interview question); and SubQ (subquestion).</i>	

Appendix F: Barriers and Incentives

Table F1

*Greatest Perceived Barriers and Incentives (Interview Questions 33 and 34)***Greatest Perceived Barriers**

AdminBarriers_EnsureNoneToRecvPrSupport
 AppropriationsLaw
 BiasAgencies_AlignedPartisan_DistrustIsResult
 BiasGroupThink
 BiasOrganizational
 BuildCommunityLvlApproach_VsTopDown
 BuildPyramidCommunityEngagementWithTopSupport
 CostofCollaboration_VsROIView
 CrisisDenier_NoInstiutionalizationBestPractices
 CrisisDenier_ProbabilityCrisis
 DevelopIndustryCoordinatingCommittees
 DistrustBetweenPrPuSectors
 DistrustBetweenPrPuSectors_PrSectorofPuSector_PropInfoDisclosure
 DistrustBetweenPrPuSectors_PuSectorPerceivedResistPrSector
 DistrustBetweenPrPuSectors_PuSectorPerceivedResistPrSector
 DoDResourcesCannotUpstageLocalContractor
 Don'tKnow_PersonInChargeDisaster
 Don'tKnow_ProgramsAvail
 Don'tKnow_PrSectorResourcesAvail_CapabilitiesIntentions
 Don'tKnow_PrSectorResourcesAvail_Needed (2)
 Don'tKnow_PrSectorResourcesAvailPrograms
 Don'tKnow_PuSectorProtocols_NeedICSTraining
 Don'tKnow_PuSectorProtocolsNIMS_ICS_MACS_PrPuPracticeNeeded
 Don'tKnow_WhatDoNotKnowOrWhomToContactCrisis_Hubris
 Don'tKnow_WhoIsLeaderDuringDisaster_OrICS
 Don'tKnow_WhomToCallCrisisOrHaveRelationships (2)
 Don'tKnow_WhomToCallOrHaveRelationships
 EmergMgmtPlannersDoNotHaveNecessaryExperience
 FinancialConstraintsEspIfNoReimbursements
 GovernModel_ConfederationApplicationsPossForResiliencyVsFederal

(Table continues)

Greatest Perceived Barriers

InteragencyLaws/RegsNeeded
 LeadershipDecisionsHaveConsequences_BeWillingToInvest
 LeadershipTurnover_ImpactsCapacityToBeExpert
 NeedAdvancePlanning
 NeedEnlightenedLeadership
 NeedEnlightenedLeadershipForEmployeeSupportP3
 NoInteragencyIncentiveCompetition_OrProfitMaking
 OrgTooSmallCompeteMilContracts
 OrgTooSmallForResourceAllocation_AlthoughCritical
 PartershipComplacency_PuPrPrtnrship
 PoliticiansNeedToKnow_LogisticsChainInterdependencies
 ProtectProprietaryInfo
 ProtectProprietaryPrSectorInfo
 ProtectProprietaryPrSectorInfo_CompAdv
 PublicSectorFearPrivateSectorGainTooMuchInfo
 PuPrSectorMotivationsDiffer
 PuPrSectorMotivationsDiffer
 PuPrSectorMotivationsDiffer
 PuPrSectorMotivationsDiffer
 PuSsectorUsePrivateSectorEquipment
 RegRequirementsDoingBusinessDoD
 RegulatoryImpediments
 SilosPuSector
 SufficientResourcesOwnMission_ UnsureCollabSupportEmergResponders
 SupplyChainDisruption
 TimeResources_DoMoreWLess
 VolunteersUninvitedCanBeProblematic
 WorkOneThingOnlyNotGood

(Table continues)

Greatest Perceived Incentives

CanPoLBAcceptShutDown_40%AmericanEconItsCustomer
ComDutyCorpGoodCitizen
ComDutyCorpGoodCitizen_Profitability
ComDutyCorpGoodCitizen_Reputation
EaSectorRealizesROIInCollabForContinuity
EnhancedContinuityFromCommSuppt
GreaterGood
GreaterGood
InfoSharingSitAwareness_PrSectorResources
KnowWhoInChargeDisaster_TakeOrSupportLead
NeedPyramidCommunityLvlEngagementWithTop-DownGovtSupport
PrivateSectorIndemnification_StreamlineMOUsAvoidOnerousPaperwork
PuPrCollabGreaterEfficiencies_ViaAwarenessRelsTrustSharedResources
PuPrSector_Interdependency
RevGenNew
RiskMitigation_AndPartnerResiliency
ROI_IndustryMonetaryGain
SupportDoDRequirementsFirst72Hours_MileEquipmentOutloads
SurvivabilityIndustryAndAdjoiningIndustry
Survival
Survival_GoodRep
Survival_GoodRep
