2023

Strategies Automotive Manufacturing Managers Use to Deliver Work in Alignment with Project Milestones

Sashidhar Mr. Sankaranarayanan
Walden University

Walden University

College of Management and Human Potential

This is to certify that the doctoral study by

Sashidhar Sankaranarayanan

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Kenneth Gossett, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Warren Lesser, Committee Member, Doctor of Business Administration Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2023

Abstract

Strategies Automotive Manufacturing Managers Use to Deliver Work in Alignment with Project Milestones

by

Sashidhar Sankaranarayanan

Micro Masters, University of California, Berkley, 2018

Micro Masters, Massachusetts Institute of Technology, 2018

MIM, Portland State University, 2002

MS, University of Toledo, 1999

BS, Manipal Institute of Technology, 1996

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

August 2023

Abstract

Project managers working in manufacturing firms in the automotive industry frequently face challenges such as cost overruns, schedule delays, and scope changes. Project managers often lack effective strategies to ensure that different departments deliver their work in alignment with project milestones, which can negatively affect project success rates. Grounded in the balanced scorecard framework, the purpose of this qualitative single case study was to explore strategies managers in the automotive manufacturing industry used in their different departments to deliver their work in alignment with project milestones. The participants were three project managers who had successfully implemented strategies that reduced the impact of disruptions in manufacturing in an automotive firm in the north central region of the United States. Data were collected through face-to-face semistructured interviews and reviews of performance records. Through thematic analysis, three themes emerged: (a) leadership to keep people informed, involved, interested, and inspired; (b) communications that are timely, honest, and relevant; and (c) the use of key project indicator metrics. A key recommendation is that strong leadership is essential for achieving alignment between project milestones and department milestones. Findings may be used by a large automotive company to create employment and increase tax revenues for local communities, which may be used to provide needed social services.

Strategies Automotive Manufacturing Managers Use to Deliver Work in Alignment with Project Milestones

by

Sashidhar Sankaranarayanan

Micro Masters, University of California, Berkley, 2018

Micro Masters, Massachusetts Institute of Technology, 2018

MS, Portland State University, 2002

MS, University of Toledo, 1999

BS, Manipal Institute of Technology, 1996

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

August 2023

Dedication

This study is dedicated to my esteemed wife, Dayalini, whose exceptional patience and unwavering encouragement have been indispensable throughout the extensive hours invested in pursuing my doctoral degree. Her steadfast support and unwavering motivation have been the catalysts that propelled me toward accomplishing my ultimate objective.

I extend my sincere appreciation to my two children, Anushka and Ajay, for their profound impact on my academic journey. They have served as a constant source of inspiration, instilling in me the drive to pursue higher education and embody a role model figure that exemplifies the enduring significance of continued learning as a lifelong practice.

Throughout this scholarly pursuit, moments of doubt and uncertainty existed when attaining my goals seemed impossible; however, the unwavering support I received from my family, colleagues, and friends offered reassurance and reaffirmed the attainability of my aspirations. Their unwavering belief in my abilities has been instrumental in traversing the path to completion, allowing me to overcome obstacles and reach the zenith of my academic journey.

Acknowledgments

First and foremost, I express my sincere gratitude to my chair, Dr. Kenneth Gossett, for his continuous support, patience, motivation, dedication, enthusiasm, and valuable advice. Prof. Gossett's ability to convey complex ideas in a relatable manner left a lasting impact, empowering me to think critically and push the boundaries of my capabilities. Prof. Gossett's mentorship extended beyond academic matters; he provided invaluable advice and shared personal anecdotes that imparted wisdom and encouragement. The lessons learned and the inspiration derived from Prof. Gossett's guidance will continue to shape my academic and professional pursuits, reminding me of the profound impact a great professor can have on the lives of their students.

I thank the second committee member, Dr. Warren Lesser, for the insightful comments that encouraged me to sharpen my study. Similarly, my sincere thanks go to the participants who willingly accepted and participated in this study by sharing their knowledge and experiences. I want to offer special thanks to all Walden professors for their guidance throughout my doctoral program.

Finally, I would like to express my sincere gratitude to my family: my wife, Dayalini, and my kids, Anushka and Ajay, for being understanding on why I couldn't spend as much time as I would have liked during this demanding doctoral program and supporting me throughout this research process.

Table of Contents

List of Tables

List of Figures

Section 1: Foundation of the Study

Managers working in manufacturing firms in the automotive industry face challenges such as cost overruns, schedule delays, and scope changes. In addition, managers often lack effective strategies to ensure that different departments deliver their work in alignment with project milestones, which can negatively affect project success rates. Cost, schedule, and scope, otherwise known as the triple constraints, are the most critical elements of a project and often cause project failure (Abdul-Rahman et al., 2017). Abdul-Rahman et al. (2017) found that 55% of Malaysia's construction projects increase by 80% or more significantly from initial cost estimates. Isharyanto et al. (2015) discovered that a significant portion of infrastructure projects in the Middle East faced schedule delays, with almost half of them (46%) being affected. Isharyanto et al. also revealed that only 36% of the projects were finished within the specified budget. An example of a project that was not completed within its set budget was the $16 Million Play Pump project in Africa, which had negative effects on the triple constraints of cost, schedule, and scope (Donnelly & Ika, 2017). Delays and disruption can lead to more drastic results, such as results that bankrupted this $16 Million project Play Pump project in Africa (Donnelly & Ika, 2017).

Background of the Problem

Given the intricate nature, significance, and unique aspects of a manufacturing company operating in the automotive industry, additional research is required to enhance its business strategy (Corti et al., 2017). Project managers implement various strategies to reduce the adverse effects on the triple constraints as much as possible; however, cost

overruns, schedule delays, scope changes, and failed strategies to align various departments' deliverables to improve project success rates have achieved dismal results Picciotto (2020). Picciotto (2020) found that conventional project management methodologies, processes, and tools are not feasible in every industry. Further development of thinking processes and project management strategies is vital to the success and management of projects (McGrath & Košťálová, 2020). Project managers need strategies to address project failures that result in cost increases and loss of revenue for the business deliverables with project milestones to improve project success rates and ensure project success leading to business prosperity. Postponing tasks in a project can trigger delays in succeeding tasks and lead to systemic delays/failure in a project (Ellinas, 2019). Global carmakers produce 90 million vehicles on a yearly basis, and sales of automobiles, maintenance work, and replacement parts generated 5.2 trillion dollars in customer revenue (Kim et al., 2021).

Problem and Purpose

The specific business problem was that managers in a manufacturing firm in the automotive industry lacked strategies to align various departments' deliverables with project milestones to completion to improve project success rates. The general business problem was that project failures resulted in cost increases and loss of revenue for businesses. The purpose of this qualitative single case study was to explore the strategies used by some project managers in an automotive manufacturing firm to align various departments' deliverables with the project milestones to completion to improve the project's success rates. The target population consisted of three team leaders/managers

from key functional departments with proven experience in successful project management in an automotive firm located in the north central region of the United States. The findings from this study may provide effective project management strategies to departmental managers to manage projects for adhering to project milestones, thereby reducing project costs. In addition, increasing the success rate of projects may not only help improve job satisfaction and employee retention among team members but also increase employment opportunities, thereby bringing about beneficial social change.

Population and Sampling

The target population consisted of managers from key functional departments with proven experience in successful project management in an automotive firm located in the north central region of the United States. In this study, the sample population consisted of three managers from key functional departments who were able to achieve data saturation during the interviews I had with them. I used purposive sampling, which allowed me to reach data saturation with a small sample size. Korstjens and Moser (2017) indicated that qualitative researchers purposefully select participants for their sample, rather than randomly selecting them, to achieve data saturation with their small sample size. Qualitative researchers make these intentional choices based on their knowledge and experience regarding the research question.

After I received approval from the Walden Institutional Review Board (IRB) and they granted permission for me to conduct my research, I sought access to participants within the automotive firm through my personal network to conduct my qualitative interviews. I purposefully selected three managers from key functional departments who

met my eligibility requirements for this study. The data sources for this study consisted of my interview data from the participants and reviews of performance records.

Nature of the Study

The three conventional research methods are qualitative, quantitative, and mixed methods (Saunders et al., 2019). Researchers use the qualitative method to obtain rich textual data for exploring phenomena. Using the qualitative methodology helps researchers obtain insights into research questions by exploring the thoughts and opinions of people who have experience with the phenomenon (Yin, 2018). Conversely, a quantitative approach involves the statistical testing of relationships among variables (Saunders et al., 2019). The quantitative method was not appropriate for exploring strategies used by the functional project leaders within the various departments within the organization. A mixed-methods approach requires researchers to use a combination of qualitative and quantitative methods (Maxwell, 2015). The mixed-methods approach was not appropriate for my study because an in-depth statistical analysis of data was not needed to answer the research question. I chose the qualitative method for my study.

I considered three qualitative designs for studying the strategies project managers in an automotive manufacturing firm use to align various departments' deliverables with the project milestones to completion to improve the project's success rates: (a) phenomenological, (b) narrative, and (c) case study. Phenomenological researchers explore meanings from the participants' lived experiences with phenomena in a shared context (Henriques, 2014) to understand the personal meanings of their real-life experiences (Saunders et al., 2019), which was not suitable for my study. Narrative

researchers focus on the elicitation and interpretation of participants' accounts of their personal life experiences (Bojko, 2021). A narrative design was not appropriate for my study because the purpose was not to explore an individual's derived meanings from personal life stories (see Caine et al., 2013). Using a case study design, a researcher can explore a phenomenon within a real-world setting to obtain insights from individuals with rich data and thick descriptions of the phenomenon (Yin, 2018). I chose a single case study design because I planned to collect all of my data from one of the largest manufacturing firms in the United States, which was of particular interest to researchers who focus on large manufacturing companies because of their effects on the economy.

Research Question

What strategies do the managers of an automotive manufacturing firm use to align various departments' deliverables with project milestones to improve the project's success rates?

Interview Questions

1. How do you track the program deliverables in your project team?
2. How often do you meet as a team to go over the status of your project?
3. How do you develop and report your team's deliverables?
4. What key process input (KPI) variables do you use to measure the program metrics?
5. What were the primary obstacles encountered during the development and implementation of strategies and processes aimed at aligning key project milestones?

6. How did the leaders of your organization address the key challenges to aligning program milestones to department milestones?
7. What derivative processes and tools do your department leaders utilize to control and minimize the influence of approved scope changes on project schedules and budget constraints?
8. What other information would you like to provide to characterize the strategies your organization's leaders use to align departments' deliverables with the project's milestones to improve the project's success rates?

Conceptual Framework

The conceptual framework used in this study included the balanced scorecard (BSC) developed by Norton and Kaplan in the 1990s (as cited in Victor & Farooq, 2021). The BSC enables translating an organization's mission and strategy into a comprehensive set of performance measures (Kaplan & Norton, 2001). The BSC is a framework for developing performance metrics used in strategic management to identify and improve the internal functions of a business and its resulting external outcomes (Dyer et al., 2016).

Organizational performance is measured across four perspectives: (a) financial, (b) customer, (c) internal business process, and (d) employee (as cited in Victor & Farooq, 2021). A financial perspective helps in tracking the financial performance of the firm. A customer's perspective helps track customer satisfaction, attitudes, and market share goals. An internal business process perspective covers the internal operational purposes needed to meet customer objectives. Finally, an employee perspective addresses learning and growth. The BSC is a model that organizational leaders can use to address

the business and provide top management with a view of the health of the firm by measuring organizational performance. Using the BSC measures/metrics aligned with my focus because the scorecard/metrics provided data to the managers, which aided the decision makers in identifying and solving problems and implementing new strategies to improve performance where necessary (see Gawankar et al., 2015). The internal business process perspective and customer perspective of the BSC methodology are used for developing and implementing key performance metrics.

Operational Definitions

The following definitions of terms were applied in this study:

Balanced scorecard (BSC): A BSC is a concept used to assess whether an organization's activities correlate with its general vision and objectives. The BSC involves a balanced approach that converts an organization's mission and strategy into a comprehensive set of performance measures. The BSC provides top management with a view of the health of the firm by measuring organizational performance across four perspectives: financial, customer, internal business process, and learning and growth (Kaplan & Norton, 2001).

Key performance indicators (KPIs): KPIs are the essential indicators of progress toward an intended result. KPIs provide evidence, help decision making, and help focus attention on what matters most. KPIs are specific metrics designed to evaluate KPIs (Rylková et al., 2021).

Project management office (PMO): A PMO is a dedicated unit within an organization comprising team members with various experiences who come together to

assist project managers in project management activities. PMOs streamline and accelerate project work by implementing standardized procedures. PMO staff members assist in promoting increased efficiency and effectiveness in project management, facilitating better strategy implementation (Bredillet et al., 2018).

Assumptions, Limitations, and Delimitations

Assumptions

One assumption in this study was that the participants selected for the interview had project management exposure. Assumptions are assertions the researcher assumes as true and takes for granted because they are out of the researcher's control (Yin, 2018). The second assumption was that at least three to five managers from key functional departments would participate voluntarily, enabling me to have a sufficient sample size to reach data saturation and answer my research question.

Limitations

Limitations are potential weaknesses not controllable by the researcher (Yin, 2018). One limitation in the current study was the constant turnover of managers of the functional departments. Another limitation was the findings of the research study might be affected by the level of complexity between the functional departments. Some departments may perceive their work to be more complicated than someone else's department. This potential weakness was not controllable by me as the researcher.

Delimitations

The study was limited to a small project located in the north central region of the United States with repetitive tasks that significantly affected the project launch. Defining

the research scope is within the researcher's control and might affect the validity of the findings (Yin, 2018). The study participants were limited to managers/ supervisors of the department with at least 3 years of experience. In addition, the study was limited to the departments involved with the project in terms of performance monitoring in relation to organizational milestones.

Delimitation of the current study included the selection of managers and supervisors with project management experience and at least 3 years in the current positions. I limited the scope of the study to the project methodologies used in the specific departments in the past 5 years.

Significance of the Study

Success in project management goes beyond schedule and cost considerations. Performance measurement for the projects provides information on key metrics, which are used to manage projects successfully. The findings of the current study may help project managers understand the strategies for using the process metrics from the BSC and visual project management (VPM) as a communication tool for managing the projects for aligning various departments' deliverables with the project milestones. The final outcomes of the study may help organizations manage projects effectively. Through improved communication within the group, each team member may be more engaged in the project team, and the performance measurements may keep the projects on track. If project leaders can manage projects effectively and efficiently, it may improve project success rates and increase overall business success. Organizational success may help improve job satisfaction, employee retention among team members, and employment

opportunities. Communities may benefit from a successful organization, and teamwork and communication among individuals may promote the dignity and development of individuals within society.

Contribution to Business Practice

Knowledge gained from the research may provide project/program managers with information on managing the projects by monitoring the KPIs and communicating the results using VPM techniques for increased productivity and profitability. Performance measurement for the projects may provide information on key metrics, which may be used to manage the projects while maintaining flexibility. For the project to completely satisfy its purpose, project managers must ensure alignment between working processes and methods of planning, reporting, and analysis (Valčić et al., 2016). Program managers can achieve higher success rates in managing projects from conception to full implementation by using effective communication strategies. Through improved communication within and among groups, team members may be more engaged in the project team. The performance measurement may help managers ensure that projects stay on track and follow the time line.

Implications for Social Change

The results of the study may be effect social change because some projects can serve as a valuable source of information for businesses to improve their success and social standing in their communities. Employees and local citizens may benefit when the profitability of a large company is increased. As that takes place, the employees' worth, dignity, and development may improve, resulting in improved employee morale and job

satisfaction, which may further benefit the health and financial status of the employees. In addition, communities may benefit from a successful organization through increased tax revenues for benefitting citizens and company employees supporting local charitable causes and worthwhile projects.

A Review of the Professional and Academic Literature

In the literature review section, I provide an in-depth review of the literature regarding the BSC and VPM. I investigated the relationships between department milestones and project deliverables. The review is organized in five sections to achieve this objective. First, I present the literature search strategy. In the second section, I discuss the conceptual framework for this study and explain how it related to my research question. In the third section, I discuss the literature pertaining to department deliverables and project milestones. I align the theory and the topics in the fourth section. In the fifth section, I discuss the alternative theories that were considered but not used in this study.

Literature Search Strategy

The literature search strategy in this study encompassed the primary topics (BSC, VPM) and other secondary search terms including *Project Strategy*, *communications*, *KPI*, *Project Management*, *organizational leadership*, *Critical Success factors*, *Metrics*, *Key performance indicators* (*Management*), *Office management*, *management consulting services*, *RBM*, *TBL*, *Performance Management*, and *Measurement*. I accessed the following databases to collect the resources of the study: ACM Digital Library, Dissertations & Theses at Walden University, EBSCOhost, IEEE Explore the digital library, Project Management Journal, ProQuest, Science Direct, and SEGA Journals.

The Project Management Institute offers its members a knowledge database of published sources. As a member, I benefitted from various resources such as webinars, access to practitioners in the community, and the projectmanagement.com website. I searched within the PMI.org and projectmanagement.com website knowledge databases to locate relevant resources for my study.

I filtered the search results to include peer-reviewed sources and those published after 2019 to meet the time line requirements of the study. If a listed source's website did not provide the full content article, I searched Google Scholar for the full article. I included a total of 100 sources to review the professional and academic literature. Of the 100 sources, three were books, one was a non-peer-reviewed journal article, and one was from an internet website. The reference book dates from 2006 to 2016. The non-peer-reviewed articles were published within the last 5 years. Eight of the remaining 100 peer-reviewed articles were older than 5 years. The remaining 86 peer-reviewed articles were in the date range of 2019–2023. Of the peer-reviewed articles, 86% were published within 5 years (see Table 1).

Table 1

Literature Review Sources

Source	Number > 5 years	Number < 5 years	Total
Peer-reviewed journals and articles	8	86	94
Dissertations	0	0	0
Non-peer reviewed journals	0	1	1
Books	3	0	3
Government or corporate sites	2	0	2
Total	13	87	100

Purpose of Study

The purpose of this qualitative single case study was to explore the strategies some project managers used in an automotive manufacturing firm to align various departments' deliverables with the project milestones to improve the project's success rates. The target population consisted of three project managers from key functional departments with proven experience in successful project management in an automotive firm located in the north central region of the United States. The findings from this study may provide project managers with strategies to effectively manage projects for adhering to project milestones, thereby reducing project costs. Increasing the success rate of projects may not only improve job satisfaction and employee retention among team members but may also increase employment opportunities, thereby bringing about beneficial social change.

Conceptual Framework: The BSC

Managing projects concurrently is a problematic task resulting in less attention focused on all projects in general, leading to delays in project deliverables. Project success is multi-dimensional. Availability of funds, project planning, scope, communication, time, and workforce resources are some of the significant causes of project failure (Barbalho & Silva, 2022). Organizations employ numerous management tools and techniques to ensure project success.

Organizations establish a PMO to define and maintain project management standards (Nyameke & Haapasalo, 2022). The PMO is responsible for project selection and implementation, from initiation to completion, and ensuring stakeholder satisfaction. This process requires constant monitoring through KPIs for the PMO office (Mahabir & Pun, 2022). Several factors determine PMO success: change and stakeholder management, tools and framework (resources management), effective documentation, progress controlling and quality, risk management, training and capability training, communication, and collaboration (Khoori & Hamid, 2022). The factors have to be measured and improved upon based on the rules put in place by the management (Khoori & Hamid, 2022). The critical success factors drive the KPI metrics. The organization must identify critical success factors for its project and individuals (Alghamdi et al., 2022).

In a competitive environment, business managers must deliver products and services better, faster, and as cheaply as possible. Managers must display adequate leadership that monitors performance and makes correct and timely decisions. Projects

are complex, and the failure rate increases with project complexity (Waheed et al., 2022). Complexity indicators are used to measure the degree of project complexity. In addition to monitoring the projects, managers must communicate and coordinate the requirements for successful project management (Smith, 2019).

More than 150 management tools are available for organizational leaders to choose from to implement and manage a strategic plan. The most challenging task is to select the right management tool. The selection process is complicated because the management tool that works well for a given scenario in the United States may not work well in other countries. Also, each tool has a drawback, and only some tools work well in certain situations. The most popular business strategy tools company managers use to implement their strategic plans include Political, economic, socio-cultural, and technological Strategy (PEST), Strategy Canvas, Why Analysis, BSC, SWOT Analysis, Business Screen, Porter's 5 Forces, the Business Case, and the Osterwalder Business Model Canvas. The BSC is a top-rated management strategy tool (Turan et al., 2022). In addition, the BSC has many advantages as a performance management tool (Kiriri, 2022).

The managers of more than half of the companies in the Asia-Pacific, Europe, Middle East, and Africa, Latin America, North American Free Trade Agreement regions use BSCs. The acceptance of BSC use has been increasing in Africa and the Middle East. Managers of organizations have used the BSC in constructing performance indicators, adding internal and external process indicators as a project measure (Nguyen et al., 2020).

Of all the tools, the BSC is very popular because it is a management system (Victor & Farooq, 2021). Managers of organizations use the BSC to help implement their vision of the company for the stakeholders (Victor & Farooq, 2021). The BSC can help managers generate strategic maps to balance several economic factors, which is an organizational goal (Yu et al., 2022). A strategy map in the BSC model also helps managers to map and evaluate their goals and visions and how to achieve them (Eftekhari & Torabi, 2022).

:

The BSC has emerged as one of the most widely used tools in which both financial and nonfinancial factors are used to assess the performance of businesses (Turan et al., 2022). The BSC is a management tool that managers of organizations use to

- help facilitate organizational change and the companywide understanding of the corporate vision (i.e., communicate what they are trying to accomplish)
- align the day-to-day work that everyone is doing with strategies that work
- prioritize projects, products, and services
- measure and monitor progress toward strategic targets

Kaplan and Norton (2001) first presented the BSC concept in the early 1990s. Managers use the BSC to address the financial and nonfinancial objectives of the firm, which should help provide a balanced approach. Managers use the BSC to evaluate the business and provide top management with a comprehensive understanding of the organization's performance, using metrics from four perspectives: customer, internal business process, innovation and learning, and financial. Managers can also use BSC to

update a business's strategy, link the strategic objectives to long-term targets and annual budgets, and guide resource allocation processes. Managers can use the BSC to facilitate organizational change and the companywide understanding of the corporate vision. In addition, managers can use the BSC to translate an organization's mission and strategy into a comprehensive set of performance measures using a balanced approach (Gawankar et al., 2015). Managers of an organization also need to identify and measure numerous KPIs periodically. Performance measurement is a critical function in a project because it provides information on the key metric, which helps in the management decision process (Gawankar et al., 2015). Managers using the BSC can also connect all departments and employees at all levels of an enterprise through proper metrics to account for strategic objectives. Managers can use the BSC to help the employees understand the enterprise's business planning and strategic objectives more deeply (Dinçer & Yüksel, 2019).

Managers can use the BSC to measure organizational performance across four perspectives: financial, customer, internal business process, learning, and growth. The scorecard/metrics provide data to the managers, which aids the decision makers in identifying and solving problems and implementing new strategies to improve performance where necessary (Gawankar et al., 2015). Managers use the BSC as a balance of measures of essential business perspectives and goals versus accountability and provide the leadership team with the necessary feedback on the organization's performance. For a project to be successful, key metrics need to be identified, tracked, measured, and revisited.

Four Elements of a Balanced Scorecard

Managers use the BSC for a balanced approach by translating an organization's mission and strategy into a comprehensive set of performance measures. The BSC assists managers of organizations by representing a balance in financial and nonfinancial indicators, internal and external constituents of the organization, and lag and lead indicators (Dyer et al., 2016; see Figure 1).

Figure 1

Elements of a Balanced Scorecard

Note. Adapted from Dyer et al. (2016). *Strategic management: Concepts and tools for creating a real-world strategy.* John Wiley & Sons.

The BSC helps managers measure organizational performance across four perspectives: learning and development, internal business process, customer, and financial (Gawankar et al., 2015): The success of a company's vision depends on training its employees and corporate culture/attitude. Therefore, regular employee training

sessions are necessary, and the company must allocate funds to the areas that require training. Internal process refers to the internal business process or operations. The subject matter expert in the internal business process should develop the performance metrics, which allow management to know the success of the internal process of the vision and strategy. Customer satisfaction is crucial for any business to succeed because if customers are unsatisfied, they will find alternatives to meet their needs. If the metrics for customer service show a decline, then it will require some immediate damage control by the firm. As a result, customer metrics should be detailed to identify the customers by product. Financial perspective recognizes the need for financial data. Timely and accurate data will always be a priority for frequently evaluating the strategy and making necessary adjustments.

BSC Implementation

Top-level management generally formulates an organization's vision, mission, and strategy. Performance measurement is a critical function in a project because it provides information on the key metrics, which help the management decision process. Managers can use the BSC to translate the vision, mission, and strategy into objectives and performance measures. Implementing a BSC or any measurement system can be challenging and will take much work, effort, and time to achieve a result. Of the tools available, many managers of organizations across the world prefer the BSC as a reporting tool. To align the PMO office with the corporate strategy, the performance metrics/BSC needs to be constantly measured and feedback must be provided to workers, managers, and leadership in a complex system in the form of a triple feedback scorecard (Gossett et

al., 2023). In addition to schedule and budget compliance, managers of an organization must identify and measure metrics for measuring KPIs that link project success to business goals and other parameters. Project status needs to be measured and communicated to the team frequently. Once the team acknowledges the key indicators for monitoring the project, the BSC approach will increase the success of the project implementation. The following are the six steps for BSC implementation (Strategy Tools from MindTools, n.d.):

- Step 1: lead the implementation
- Step 2: prepare for change
- Step 3: develop performance measurements
- Step 4: inform everyone in the organization about the measures put in place
- Step 5: plan initiatives
- Step 6: follow up and evaluate

Managers can use BSC to connect all departments and employees at all levels of an enterprise through the layered decomposition of strategic objectives to improve employees' understanding of the enterprise's business planning and strategic objectives (Dinçer & Yüksel, 2019). Strategy implementation is vital for organizations. A custom-tailored, user-friendly Excel-based tool can enable efficient and effective progress tracking irrespective of the industry. Data collection and processing can help organizations' managers achieve higher control over their production resources. The custom-designed homegrown tool has a significant drawback: if not appropriately maintained, it is not sustainable, according to Glegg et al. (2019). Scope, time, and cost

are areas of performance recognized in managing projects (Muhsina & Nory, 2022). Other non-financial performance perspectives are essential in managing modern projects. These non-financial performance perspectives will be ideal for monitoring performance measurement as a dashboard. Performance measurement shows the company's performance, strengths, and weaknesses (Yazdi et al., 2022). VPM tools facilitate the management of the effects of time, cost, quality, safety, and waste individually.

BSCs' continuous monitoring of KPIs through VM systems influences the organization by assisting the managers in taking necessary corrective actions. Senior management involvement is of utmost importance in evaluating and verifying the monitoring of the KPI metrics. Scorecards will differ based on needs, market areas, people, products, disruptions, and services. Employee involvement is critical in the implementation of the BSC. The selection process is complex because several KPIs are available to evaluate performance and the relationships between them. Rodrigues et al. (2021) stated that organizations must use modeling to identify the KPIs they should monitor. The methodology includes collating KPIs from published literature, crystallizing KPIs using the Delphi Method, and applying the Likert scale to prioritize them (Victor & Farooq, 2021).

Managers can use the BSC method to establish their approach to analyze the four perspective areas (e.g., financial, customer, internal business processes, and learning and growth). Many researchers have suggested adding new perspectives to the existing four BSC perspectives because the current perspectives do not meet current businesses' needs (Akman & Turan, 2021). For example, a BSC provides detailed measures for managers to

conduct a performance evaluation comprising 5 key elements: learning and growth, clients and customers, internal business processes, financials, and audit-related perspectives of corporate ethics (Hegazy et al., 2022). In another instance, social responsibility was added as a perspective for BSC (Yazdi et al., 2022). new perspectives like agility and risk management were added to the current BSC structure (Akman & Turan, 2021), as shown in figure 3 below.

The agile perspective emphasizes fast production from supply to sale. Agile primarily focuses on the speed of the existing system in creating new products and services and the company's agility in responding to external developments (Akman & Turan, 2021). The risk perspective encompasses the risks associated with the products and services. Risks may arise from external actions (Akman & Turan, 2021).

Figure 2

Modified BSC Structure Includes Six Perspectives

Note. Adapted from Akman and Turan (2021).

The BSC is a valuable strategic management roadmap for optimal performance that organizations may modify and adapt to various environments (Hoyo & Bouland,

2022). The BSC is a management tool for measuring performance in multiple dimensions (Liu, 2022). Sharaf and Fazel (2021) examined the BSC's effect and confirmed how it positively influenced the overall project performance.

Visual Project Management

The concept of VPM has gained significant attention in project management. In emphasizing the significance of VPM, Xia et al. (2020) noted how different domains, such as engineering and architecture, employ visual aids. The visual boards are an attractive approach to engaging the teams and first-line managers in discussions and problem-solving using visual aids, such as diagrams, charts, and graphs, to improve planning, execution, and communication in project management. Visualization involves presenting information to enable the managers to see the KPIs in the data display distinctly. VPM assists in the smooth management of organizations by displaying the current status of all outcome indicators in green, yellow, or red. According to Glegg et al. (2019), VPM can help managers better understand complex project data, identify critical issues, and make informed decisions. VPM influences the organization as the tool helps to monitor the KPI continuously and helps quickly detect an out-of-control situation, which in turn assists the team in taking the necessary corrective actions.

VPM is both a conceptual framework and a methodology. As a conceptual framework, managers can use VPM as a visual tool and technique to help teams and individuals better understand and manage their projects. For example, VPM can use diagrams, charts, and other graphical representations to visualize project plans, progress, and status.

As a methodology, VPM involves the application of specific techniques and tools to manage projects in a visual manner. This can include using tools such as Kanban boards, Gantt charts, and mind maps to plan and track project activities and milestones. VPM is a concept that integrates visual thinking tools and data visualization methodologies with more traditional project communication, reporting, and facilitation practices. Visual aids can improve stakeholder communication and increase project performance (Amati et al., 2022). Visual aids can improve project planning, execution, monitoring, control, and communication (Secundo et al., 2022). VPM helps project managers identify critical issues and risks, which can help managers make timely decisions (Majava et al., 2019). VPM opens communication channels and opens up information flows.

VPM-provides many benefits to the organization, e.g., strategy development, performance measurement, review, communication, and enhanced collaboration and integration (Kurpjuweit et al., 2019). Managers can use VPM to monitor and track progress toward milestones. The dashboard on relevant KPIs leads to a more balanced performance measurement adoption of lead indicators. End-to-end visual strategy and performance management help with ongoing strategy development and implementation, facilitating performance measurement and review and improving internal and external communication (Psárska et al., 2019). VPM positively influenced team performance as it helped the team members share knowledge and collaborate more efficiently (Xiong et al., 2021). The impact of VPM resulted in both incremental and transformational organizational changes. VPM resulted in more focused and more interactive

communication where people at all levels are in a conversation about the strategy and performance of the company. VPM, when combined with performance management and continuous improvement programs, will help managers to identify changes in the firms' performance over chosen periods.

Urban and Zawadski (2022) reviewed VPM in project management and found that visual aids can enhance communication, coordination, and collaboration among project stakeholders. VPM can help to overcome language barriers and improve project outcomes. Communication is critical to project success. A well-informed team will be able to find solutions to problems in a routine fashion using VPM (Butt et al., 2016). DSM helps to bring the team together and helps ensure that all the team members have the same understanding of the project scope and deliverables (Stray et al., 2016). VPM tools have numerous usages across all industries. VPM tools can positively influence the effects of scope, time, cost, quality, and waste by creating a more transparent and informative environment. Implementing VPM allows for greater control of the project or process (Siaudzionis et al., 2018). Every level of the organization benefits from constant dialogue as the team members keep abreast of the issues, strategies, etc., which helps the team members to channel their energy in the right direction to achieve organization objectives, which keep frequently changing (Stanciu et al., 2016).

A strategy to provide greater control over the project or process is using Daily Standup Meetings (DSM). DSM should not focus on past performance but address current and future deliverables. The DSM should always start on time, be as brief as possible, and not last more than fifteen minutes (Stray et al., 2016). Managers of the

firms should design a visual communication system to complement DSM by identifying the metrics that work for them and need to be tracked instead of using a standardized system. Once implemented, the use of the visual board should be consistent across the firm (Bateman et al., 2016). Managers of organizations can implement the VPM as a tool but must customize the metrics for their specific industry and demonstrate high commitment (Bateman et al., 2016). There are several challenges in implementing visual tools, e.g., resistance to change, integration with the current systems (Mofolasayo et al., 2022), and fear of management. However, the Visual Management Board (VMB) and DSM should be used for status reporting to the manager and for participative discussions and problem-solving (Stray et al., 2016). The design of the VMB is critical as this is the communication tool utilized by the team, and the importance of correctly calculating performance measures is vital (Bateman et al., 2016). Irrespective of the industry, daily VPM is a valuable tool, and if implemented successfully, it will provide increased efficiency and improved information flows within an organization (Kurdve et al., 2019).

VPM can play a significant role in project management by improving planning, execution, and communication. Visual aids can help not only the project managers but also the team members to understand complex data better. PMs' can identify critical issues and make informed decisions. Unfortunately, a comprehensive framework does not exist for VPM. Also, the implementation of VPM may face challenges, such as resistance to change resulting in less adoption and integration with existing project management methods.

Balanced Scorecard and Project Scorecard

The BSC uses a balanced approach by translating an organization's mission and strategy into a comprehensive set of performance measures. The scorecard helps managers to measure organizational performance across four perspectives: financial, customer, internal business process, learning, and growth. Monitoring the BSC metrics will ensure that the organization's vision, mission, and strategy are effective in relation to performance milestones. Researchers (Rad & Levin, 2006) have found that success in project management extends far beyond schedule and cost considerations. A manager uses BSC to measure the organization's effectiveness, while a Project Scorecard (PS) helps to measure the project's KPI metrics. Therefore, it is important to define the measures of a project's success at the beginning of the project. In addition to identifying and calculating KPIs to link project success to business goals and other metrics, project managers must frequently communicate these metrics to all stakeholders. Performance measurement is a critical function in a project as it provides information on the key metric, which helps in the management decision process (Gawankar et al., 2015).

The Critical Success Factors (CSF), also known as Key Results areas (KRA), help managers to ensure the project is on the right path toward the common goal. Researchers have shown that 65 percent of organizations have a high alignment of projects to strategic objectives (Pulse of Profession, 2017). Also, 63% of business firm managers use project performance measures frequently to manage projects (Pulse of Profession, 2017). A PS is a tool used to measure and track the progress of a project against predetermined metrics or key performance indicators (KPIs). Measuring the progress of a specific project is the

focus of the project scorecard while measuring progress toward broader strategic goals is the design of the BSC.

Using a PS, project managers can better manage their projects and make data-driven decisions to ensure project success. A PS is usually created at the beginning of the project and updated regularly to reflect changes in the project's status. A PS visually represents the project's performance and helps stakeholders understand if it is meeting its goals and objectives. A PS can be used as a communication tool by managers to inform stakeholders about the project's progress and identify potential problems early on.

Managers of organizations typically use the BSC, while project managers use project scorecards. Managers use the PS to supplement the BSC by providing information on the progress of individual projects that contribute to the organization's broader strategic objectives. By tracking project metrics, managers use PS to identify potential roadblocks and disruptions in areas where projects need to be adjusted to align with the organization's goals. Managers of organizations can use this information to allocate resources and prioritize projects strategically. By managing project scorecards for each project, they also provide critical information for the BSC.

Managers of the organization use PS to provide valuable data and contribute to the BSC as this helps managers of organizations identify areas where they can adjust individual projects to align with broader strategic objectives and improve organizational processes and procedures to achieve those objectives. A scorecard that combines financial, schedule, quality, safety, and environmental performance indicators have been found to be very effective (Jones & Doberstein, 2022). The PS provided a structured

project management approach, enabling managers to make effective decisions. PS can be custom tailored to measure what the managers of organizations want and need to measure.

1. A PS for an innovation project included measures for project outcomes, learning, resource allocation, and stakeholder engagement (Holliman et al., 2020).
2. Kusrini and Sahraen (2021) suggested an integrated approach that combined risk management and a BSC to enhance project performance and reduce the likelihood of failure.

Managers used PS to measure multiple KPIs. Irrespective of the factors considered, BSC enables effective project monitoring and control. A PS and BSC comparison study by researchers found that both frameworks can effectively monitor and manage project performance (Sarraf & Nejad, 2020).

Balanced Scorecard and Visualization Methods

The BSC has gained significant popularity in project management. The objective of the BSC is to offer a comprehensive assessment of an organization's performance by incorporating both financial and non-financial metrics from various viewpoints in a balanced manner. As a result, BSC application in project management has increased significantly. There is a strong focus on BSCs' role in improving project performance and stakeholder satisfaction (Marzuki et al., 2020).

BSC can be a valuable tool for project management. Still, the success of BSC depends on several factors, for example, effective implementation, the organization's

culture, and the alignment of project goals with the BSC framework. Christian et al. (2022) suggested a conceptual framework for integrating the BSC with project management. Rodriguez et al. (2020) explored the use of the BSC in project management and concluded that the BSC approach could provide a balanced and integrated view of project performance and facilitate strategic decision-making. BSC implementation also leads to improved sustainability outcomes as this approach offers a comprehensive and integrated view of sustainability performance (Chao et al., 2021). Managers using BSC can offer several benefits, like improved performance measurement, increased stakeholder engagement, and enhanced strategic alignment (Oliveira et al., 2021). In conclusion, project managers can use BSC to enhance the measurement and strategic alignment of team member performance and the engagement of all project stakeholders.

BSC is often difficult for some managers to implement. Implementing BSC effectively enhances project management resulting in improved project performance by aligning project goals with organizational strategy and providing a framework for measuring and monitoring performance (Abbasi et al., 2020). Kumar et al. (2021) highlighted the importance of aligning the BSC with the project's objectives and strategy and the need for stakeholder involvement in the BSC development process. Integrating the BSC with project management processes requires a systematic approach to its implementation and support from key stakeholders (Christian et al., 2022). Researchers have also focused on the challenges associated with implementing the BSC in project management (Christian et al., 2022). Barros and Ferreira (2019) highlighted the importance of aligning the BSC with the project strategy. Marzuki et al. (2020) suggested

a need for more research on the practical implementation of the BSC in project management.

Monitoring and evaluating project performance by managers is essential for project success. However, visualizing data and making it meaningful for project management can be challenging when using the balanced scorecard (BSC). Lucianetti et al. (2019) have explored the use of visualization techniques to enhance the use of the BSC in project management. Visual project management (VPM) is a rapidly growing field that uses visual representations to provide insights into project status, progress, and performance.

Implementing VPM in project management can improve stakeholders' communication, collaboration, and decision-making. A Performance Measurement System (PMS) can effectively support the implementation of an organization's strategy. Lucianetti et al. (2019) recognized the visual balanced scorecard (V-BSC) as a prime example of a tool for managing strategy performance. Quezada et al. (2022) utilized a V-BSC for project management that incorporates various visual tools, including a dashboard, spider chart, and radar chart. They found visuals can enhance project monitoring and control and facilitate stakeholder communication and collaboration.

Juliana et al. (2021) suggested a novel method for visualizing the BSC in project management based on integrated process modeling (IPM), which effectively captured the complex relationships among BSC indicators and provided a comprehensive view of project performance. These studies highlighted the importance of developing innovative

and effective visual tools and techniques for project management, which can enhance project performance, stakeholder communication, collaboration, and decision-making.

Using visual aids by project managers to enhance communication, monitoring, and decision-making among project stakeholders offers numerous benefits (Singh & Kumar, 2021). Because of these benefits, project managers should incorporate visual tools and techniques to improve project performance and enhance stakeholder communication, collaboration, and decision-making. In addition, using VPM in project management provides a promising avenue for future research to explore the effectiveness of visual aids in project management.

The use of VPM by project managers has demonstrated the potential value of visual tools and techniques in enhancing project performance, stakeholder communication and collaboration, and decision-making. Woeppel (2015) presented a framework for VPM using a visual approach to manage project execution and improve performance outcomes. Visualization techniques as a strategy can help project managers better understand and communicate project goals, objectives, and progress. The visualizations provide managers with real-time information on project performance and help them make informed decisions (Woeppel, 2015). Visualizing the BSC can improve project outcomes, including increased efficiency, higher quality, and better stakeholder satisfaction.

The alignment of BSC with the project strategy and the need to adapt the BSC to the project's specific context is very critical. Selecting appropriate metrics and measuring performance across different dimensions can be very challenging for some project

managers. The project managers should assemble the project metrics for the stakeholders, a necessary BSC development process (Ntshwene et al., 2022). Aligning the BSC with the project's objectives and strategy, the process of selecting appropriate metrics and measuring performance across different dimensions for some project managers is very challenging. In determining relevant metrics, it is important for project managers to choose appropriate metrics to align the BSC with the project's objectives and strategy (Philbin & Kaur, 2020). Depending on the firm's strategy, it is also important for managers to select the appropriate metrics to address the four dimensions: financial, customer, internal processes, and learning and growth (Tawse & Tabesh, 2023).

Managers use several KPIs to monitor and measure the project's performance against the four perspectives of the BSC. Here are some examples of KPIs for each perspective:

Financial Perspective:

- project budget variance
- return on investment (ROI)
- cost savings achieved

Customer Perspective

- on-time delivery rate
- cycle service level

Internal Business Processes Perspective

- project schedule adherence
- productivity

Efficiency of Resource Utilization

- employee satisfaction and engagement score
- employee turnover rate
- employee skill level development

Managers monitor the identified KPIs and use the feedback to determine whether the project meets its objectives and targets in the BSC. KPIs will help the PMs to make informed decisions and take proactive measures when required. Managers use a BSC approach, along with VM, to significantly improve project performance. Managers ensure that:

- BSC aligns specific KPIs to project goals. Outlines KPIs to track project goals. The visual tools to keep track of the KPIs and outcomes make it understandable for each project team member.
- BSC sets up a link between the organization's goals and project vision. As a result, project managers can gain a comprehensive and balanced view of the project's performance based on the KPI variables.
- BSC accounts for internal and external stakeholders' viewpoints.
- BSC helps to break down a combination of goals into separate actions.
- BSC ensures alignment of all plans and measures of a project with those of the company's major objectives.

The BSC approach can help managers make informed decisions. The KPIs measured by project managers within the organization will indicate the maturity of BSC implementation. Under the next subheader, research studies and themes and the BSC, I

will explore recent peer-reviewed articles to identify themes from the research findings on the BSC.

Research Studies on Themes and BSC

Several studies have investigated the identification of themes and the implementation and effect of the BSC in various industries. For example, according to Cignitas et al. (2022), the use of BSC by managers positively affects Positive Management (PM) in organizations. This HR management form prioritizes the themes of employee strengths, well-being, and appreciation. Researchers found that project managers, while implementing BSC, also facilitated employee education and development and prioritized positive management to enhance organizational performance and productivity. Ali et al. (2022) conducted a study on BSC implementation in healthcare organizations and found that BSC themes can improve strategic management efficiency and existing capabilities and routines, but single-loop learning cannot develop new capabilities. The authors of this study emphasized the importance of linking organizational values with vision as a theme to optimize learning effects.

Researchers demonstrated the effectiveness of the BSC in aligning an organizational strategy theme with performance targets and addressing performance measurement challenges across various industries. Rasida et al. (2021) conducted a study to implement a BSC design that aligns the themes of the vision and strategy of Perusahaan Daerah Air Minum Hulu Sungai Utara (PDAM HSU) to achieve desired performance targets. In this study, the authors found that the measurements aligned with strategic objectives in each perspective, facilitating PDAM HSU in achieving its goals.

Victor and Farooq (2021) developed a digital dashboard based on BSC to address the themes of inconsistency, comparability, and timeliness issues in the healthcare sector. The dashboard provided a comprehensive view of the organization's performance, enabling decision makers to make data-driven decisions. Asdiana et al. (2021) evaluated a hotel's performance during the COVID-19 pandemic and designed a business strategy using BSC for the new normal period. In this study, they highlighted the usefulness of BSC in identifying key performance indicators and setting targets to measure and manage the hotel's performance.

BSC is an effective strategic management tool used by managers in various industries. In a study by Chao et al. (2021), the researchers explored the learning styles of BSC implementation in the healthcare industry and found that BSC learning can improve strategic management efficiency and strengthen existing capabilities and routines. The authors of this study found that employees prefer following existing routines and rules but lack the power and right to make changes, limiting single-loop learning in developing new capabilities. Miftahul and Rhoni (2020) analyzed the BSC as an alternative tool for school management systems, showing that it can be used as a comprehensive management system for strategic management, translating an organization's vision, mission, themes, and strategies into a set of performance measurements.

Other researchers examined the sustainability and challenges of implementing BSC in various industries. Gooneratne and Hoque (2021) investigated the fate of BSC in a Sri Lankan commercial bank and found that the sustainability of BSC depends on the efforts and relative power of its advocates. Imanda et al. (2021) used the sustainability

BSC model to investigate the acceptance of State Islamic Religious Colleges (PTKIN) performance in terms of social and environmental responsibility. In their study, the authors identified themes such as challenges involving budgeting, regulations, and paradigms that policymakers need to address to implement the BSC model effectively. These studies demonstrate the usefulness of BSC and other management accounting practices in improving performance management methodologies in various industries (Pigatto et al., 2023).

Sycheva and Shramchenko (2020), Bertz and Quinn (2022), and Khalid et al. (2022) each conducted studies exploring different aspects of implementing the BSC in various organizations. Sycheva and Shramchenko (2020) investigated the role of BSC in project-oriented organizations. Bertz and Quinn (2022) explained how individuals could bring new ideas from their past experiences into a housing department dealing with a lack of money due to external factors. Bertz and Quinn (2022) called this "situated rationality," as the individual's experience can help the department find new solutions. Khalid et al. (2022) explored the challenges and motivations of integrating environmental performance into BSCs in an Australian public health service organization, identifying internal barriers such as limited environmental commitment practices and organizational culture as challenges, recruiting sustainability expertise, and recognizing external pressures as solutions.

The BSC has emerged as a popular strategic management tool for managers in organizations to improve performance and achieve their objectives. Quesado et al. (2022) suggested the implementation of the BSC in a large Portuguese textile company to

improve organizational performance. The managers of the company had established the main pillars for building the BSC, including mission, values, vision, themes, and strategies, and had an open culture dedicated to clear communication of strategic objectives. Factors such as time availability, organizational culture, and commitment to executing this strategic management tool may hinder its implementation. Mozhdeh et al. (2020) suggested a compensation model for executive directors in private manufacturing companies based on a BSC framework. Mozhdeh et al. identified effective communication with the group as the most important theme under manager characteristics and identified the growth and learning perspective as the most important theme under the final research plan. Victor and Farooq (2021) suggested a conceptual framework in the digital dashboard format using BSC in the healthcare sector to address the lack of consistency, comparability, and timeliness in performance management methodologies. Leaders of organizations choose the BSC because it helps highlight their vision and enables managers to translate it into action.

Performance measurement is a crucial aspect of organizational management, particularly in times of crisis such as the COVID-19 pandemic. Zeho et al. (2020) conducted a descriptive qualitative study to examine the effect of the pandemic on the performance of regional public hospital "X" using a BSC scorecard as the measuring instrument. The results indicated that the pandemic has significantly affected hospital performance across all four perspectives of the BSC: finance, customer, internal business processes, and learning and growth. Nadig et al. (2021) conducted a sequential mixed-methods study to generate value scorecards for four rural hospitals in South Carolina

regarding the organizational, clinical, financial, and strategic effects of intensive care unit (ICU) telemedicine. The authors of the study applied the pervasive BSC framework to identify themes and compile strategies within each domain. The authors found substantial variation in the relative value derived from ICU telemedicine, highlighting the need for a structured approach to decision-making for ICU telemedicine investments in rural hospitals.

A study conducted by Boudlaie and Shamsi (2020) aimed to identify the strategic objectives of human resource management (HRM) in the public sector by using the stakeholder approach and the BSC. The author's main achievement was the presentation of the strategy map using the resulting themes and applying the human resources (HR) scorecard. Saliya and Pandey (2021) investigated the effectiveness of the scorecard in Fiji's financial battle against climate change (FBACC). Saliya and Pandey concluded that regulatory agencies need to effectively communicate and implement the existing political initiatives in the financial system. In their study, Ogwu and Naicker (2023) examined the impact of information technology (IT) innovation on organizational performance using the BSC approach and found that subject matter experts (SME)s can enhance their performance by adopting IT innovations. All of the authors of these studies found that the BSC approach can be useful in identifying strategic themes and objectives, assessing performance, and achieving sustainable growth in different sectors.

The concept of a BSC for HRM in public organizations has been gaining attention in recent literature. For example, Boudlaie et al. (2020) argued for a revised narrative on the map of strategic goals for HRM in public organizations, which requires a different

approach than private organizations. Boudlaie et al. suggested redesigning the strategy map and the BSC for HRM based on a stakeholder approach from a corporate culture perspective. The qualitative research using the Kish Free Zone Organization as a case study was conducted through interviews with various stakeholders to identify strategic goals. Similarly, Ruli and Kristanto (2021) conducted a qualitative research study to investigate the impact of implementing a BSC and KPIs on the productivity of customer service employees. The authors of the study found that implementing a BSC and KPIs as productivity metrics for customer service employees in Larissa Aesthetic Center was successful. The insights obtained from these research studies could be useful for corporate evaluations and academic studies, and future research should extend the observation period, compare different organizations or companies, and include additional research variables.

The Ministry of Research, Technology, and Higher Education in Indonesia regularly releases university rankings, and the results have shown that Universitas Brawijaya has experienced fluctuations in its ranking over the years (Mochammad et al., 2020). In a recent study by Rengel et al. (2020), he aimed to formulate strategies to improve the university's ranking using qualitative methods and literature review techniques, using the following approaches: BSC Scorecard and strengths, weaknesses, opportunities, and threats (SWOT) analysis. The study researcher gathered data through observation and documentation and validated using triangulation. Rengel et al. concluded that the university could use the above approaches to develop strategic steps for

improving its ranking based on the Ministry's indicators. Rengel et al. recommended eleven strategies to optimize and enhance Universitas Brawijaya's ranking.

The research conducted by Tavera (2022) aimed to characterize financial management in the construction sector in the municipality of San Gil, Santander, Colombia. Tavera identified that many companies had deficiencies in using basic administrative and financial tools to make timely and accurate decisions that generate value, highlighting the importance of a defined organizational structure with process and procedure manuals and efficient software for good financial management. This finding aligns with Gabbi et al. (2020) research, which showed that qualitative variables, such as processes, knowledge, and corporate finance, can contribute significantly to credit risk estimation for small and medium-sized enterprises. The results of both studies highlighted the importance of having a structured approach to financial management to make informed decisions and reduce financial risk in the construction sector.

Lianto and Andono (2022) conducted a qualitative study to explore the readiness of a manufacturing company to implement the BSC system. The authors of the study have identified eight problems that need addressing:

- lack of understanding of the BSC
- the absence of an adequate information system
- the absence of overall support
- lagging indicators and leading indicators that have not been integrated
- inadequate performance measurement indicators
- some indicators do not have clear targets

- incompetent workforce
- common measurement bias

The authors emphasized that implementing an integrated measurement system based on the BSC requires prior evaluation of the characteristics and readiness of the organization. Dlamini et al. (2020) investigated the challenges faced by small and medium hotels (SMHs) in Eswatini using performance measurement tools, focusing on the BSC. The authors of the study revealed that SMHs use the BSC for performance measurement, with a focus on non-financial measures; the authors did not use financial measures as much, highlighting the need for a better alignment of financial and non-financial measures. Vaio and Varriale (2020) investigated the extent to which airport firms in Italy have adopted sustainable performance practices, particularly the 17 United Nations Sustainable Development Goals (SDGs). Although the airports mention the SDGs in their reporting, they cannot fully meet the SDGs goals, highlighting the need for better implementation of accounting and reporting practices, organizational architectures, and educational programs to achieve the SDGs (Vaio & Varriale, 2020).

Possible Strategies to use with the Balanced Scorecard

Organizations use several alternative strategies in conjunction with the BSC scorecard. The triple bottom line approach, results based management, performance measurement and management, and system theory are the four alternative strategies that researchers have used to complement a BSC system. Here are brief examples of each of these approaches:

Triple Bottom Line Approach

The triple bottom line (TBL) focuses on social, environmental, and economic dimensions. The TBL approach focuses primarily on financial and related measures (Sethi & Rajesh, 2022) and has been adopted by many companies (Henao & Sarache, 2022). The TBL approach balances financial performance with social and environmental responsibility. By measuring and managing performance across all three dimensions, companies create long-term value for stakeholders.

Results-Based Management

Results-based management (RBM) is a management approach that links resources, activities, and outputs to outcomes and effects (Asif & Rathore, 2021) and emphasizes accountability, learning, and aligning actions with goals and targets (Arias et al., 2022). The RBM focuses on achieving specific results or outcomes rather than measuring inputs or activities alone. The RBM provides a framework for linking activities and resources to outcomes, which will help to enhance performance measurement (Ismail & Abdullah, 2019). In addition, RBM involves negotiations, contestations, and compromises among different stakeholders to achieve the desired results (Järvenpää et al., 2021). RBM improves organizational performance by enhancing accountability, transparency, learning, and aligning activities and resources with strategic goals (Bhattarai, 2020).

Performance Measurement and Management

Performance measurement and management (PMM) is the process of assessing and improving the effectiveness and efficiency of an organization, team, or individual.

The PMM approach involves setting performance goals in alignment with departmental deliverables. The process also involves measuring progress and using the information gained to improve performance (Reinaldy et al., 2023).

Systems Theory

Systems Theory is an interdisciplinary framework that helps generate insight into complex phenomena and systems. The various components of the system have complex inter-relationships and interactions with each other. Irrespective of the complexity, the components comprising interconnected elements work together towards a common goal. Well-developed, highly reliable organizations utilize triple-loop learning principles such as observe, orient, decide, and act (OODA) or Boyd cycle. OODA is a decision-making process that emphasizes the importance of agility, speed, and constant feedback in responding to changing circumstances. The OODA Loop comprises four stages: observe, orient, decide, and act. Using the OODA Loop, organizational leaders can improve their decision-making processes, become more agile and adaptable, and respond better to changing circumstances. The OODA cycle helps managers lead to improved organizational performance, increased efficiency, and a more responsive and resilient organization. OODA or Boyd cycle helps the leaders address the system changes in real-time, enabling efficient decision-making (Gossett et al., 2023).

Summary of Alternative Theories and Strategies

The BSC is a strategic performance management tool that helps organizations to align their objectives and strategies with their mission and vision. The BSC consists of four perspectives: financial, customer, internal business processes, and learning and

growth. BSC helps organizations measure and manage their performance in each of these areas.

The triple bottom line (TBL) approach is a framework that considers three sustainability dimensions: economic, social, and environmental. The TBL approach encourages organizations to assess the effects of their activities on these three dimensions and to develop strategies that balance economic growth with social and environmental responsibility. I did not choose the TBL approach for my final study because it does not address the critical areas of internal business processes and the importance of learning and growth. The BSC addresses and includes the environmental area in all four perspectives. Results based management (RBM) is an approach to managing and measuring performance that focuses on achieving results rather than just completing them. RBM involves setting clear objectives and measuring progress. RBM also allows managers to use the information gained to improve performance and achieve better outcomes. I did not choose the RBM because the journey is just as important as the destination. The BSC approach helps organizations measure and manage their performance in the four areas simultaneously, including financial, customer, internal business processes, and learning and growth, to use the information gained to improve performance and achieve better outcomes in all four domains.

Performance measurement and management (PMM) is the process of assessing and improving the effectiveness and efficiency of an organization, team, or individual workers. The PMM approach involves setting performance goals in alignment with departmental deliverables. The PMM approach also helps to measure progress and uses

the information gained to improve performance. I decided not to choose the PMM as I felt that evaluating and enhancing the efficiency and productivity of an organization, team, or individual workers, in this case, the study, may not be essential. Instead, the BSC approach helps organizations measure and manage their performance in the four areas simultaneously, including financial, customer, internal business processes, and learning and growth, to use the information gained to improve performance and achieve better outcomes in these four domains.

System's theory utilizes triple-loop learning and principles such as observe, orient, decide, and act (OODA) or the Boyd Cycle to identify and resolve problems without blaming others for the problem. Rather than considering an entity according to the properties of its individual parts, systems theory focuses on positioning the components and their connections into a whole. System's theory enables researchers and practitioners to create a picture of the complex system and how the different parts are related to one another. I did not choose the system's theory because 35 open system theories have been published and promoted by researchers. I have chosen to work with Dr. Gossett (my chair) and Dr. Lesser (my second committee member) to use a negative feedback system entitled "Improvement in Project Metrics using Balanced Scorecard" to highlight and showcase the dynamic nature of the relationships between the themes and strategies covered in my review of the literature, my conceptual framework, and the independent variables affected within the complex adaptive system (see attached model in Appendix D).

Conclusion

Organizational leaders can use various management frameworks like the BSC, and each framework has unique features and approaches, although, they share some similarities. I have chosen the BSC system because it aligns organizational goals with individual performance. As the researcher for this study, I did not select management by objectives (MBO) as it only sets specific employee goals. I also did not choose results based Management (RBM) because it focused on achieving results through performance indicators, which is also related to setting specific goals for employees. Finally, I did not choose Lean because it primarily focuses on streamlining processes and reducing waste. All these frameworks can improve organizational performance. Each framework has unique features and approaches; the best one will depend on the organization's specific goals and needs. Different management approaches also have their unique benefits. Therefore, one tool may not be superior to another. Managers of organizations should choose the tool that best aligns with their goals and needs.

Transition

In Section 1 of the doctoral study, I discussed the study problem statement, purpose statement, and nature. With the specific business problem, I formulated the research question and listed the interview questions. I also discussed the conceptual framework and its relation to the foundation in this section of the study. Next, I addressed the assumptions, limitations, and delimitations. Lastly, I reviewed the professional and academic literature and explained the BSC methodology as my conceptual framework while comparing BSC and VPM with other project management methodologies and

strategies. In Section 2 of the doctoral study, I discussed the purpose statement, the role of the researcher, participants, research method, research design, population and sampling, ethical research, data collection instruments and techniques, data organization technique, data analysis, reliability, and validity. In Section 3 of the doctoral study, I presented my research findings, application for my results in the professional world, and the study's implications for social change. I concluded my doctoral study with recommendations for action, suggestions for further research, reflections on the study, and a conclusion.

Section 2: The Project

In Section 2, I restate the purpose of the study and explain the researcher's and participants' role. I also discuss the research design and method, population and sampling, ethical research, data collection instruments and technique, data organization technique, data analysis, reliability, and validity. Finally, I discuss the importance of data saturation and how I achieved this goal for my study.

Purpose Statement

The purpose of this qualitative single case study was to explore the strategies used by some project managers in an automotive manufacturing firm to align various departments' deliverables with the project milestones to improve the project's success rates. The target population consisted of three managers from key functional departments with proven experience in successful project management in an automotive firm located in the north central region of the United States. The findings from this study might provide effective project management strategies to departmental managers to effectively manage projects for adhering to project milestones, thereby reducing project costs. Increasing the success rate of projects may not only improve job satisfaction and employee retention among team members but may also increase employment opportunities to bring about beneficial social change.

Role of the Researcher

I was the sole researcher for the study and was the primary data collection instrument. As the researcher, I created and used an interview protocol (see Appendix A)

to maintain the consistency of the interview among the participants. In addition, I maintained consistent professional behavior during the interview process.

As a program manager, I have 26 years of project management experience working with various manufacturing projects in the United States. I worked in the automotive industry in the same location for 7 years where my study took place. As a program manager, I was not responsible for supervising any potential participants I interviewed for this study. However, the research occurred in the same general area where I previously worked.

I followed the three basic ethical principles of *The Belmont Report*: respect for persons, beneficence, and justice (National Commission for the Protection of Human Subjects and Biomedical and Behavioral Research, 1979). I provided the informed consent form to provide participants with all the details, including the purpose of the interview and the participant's right to withdraw from the study. I ensured that the participants were aware of the interview procedures before and during the interviews.

Shufutinsky (2020) discussed researchers using themselves in qualitative organizational research methods, emphasizing the importance of transparency, rigor, trustworthiness, and credibility in research design, data collection, and analysis. I maintained a reflective journal throughout my study to help me monitor and mitigate personal biases. I also interviewed the participants while removing bias and emotion from the participants' responses (see Sutton & Austin, 2015). Finally, I ensured the confidentiality of the participants and their data by not disclosing participants' identity in

the research (see Sutton & Austin, 2015). Yin (2018) suggested limiting or eliminating any biases with a high level of transparency.

As the researcher, I was responsible for identifying the participant pool. I sought access to participants within the organization through my personal network. As advocated by Yin (2018), I conducted conversational interviews following my interview protocol to enhance rapport with participants and foster the collection of rich, truthful data. The researcher's role in following the interview protocol directly affects the study because the researcher is the primary instrument of the study (Ravitch & Carl, 2016).

Participants

As the researcher, I was responsible for identifying the participant pool. I sought access to participants within the organization through my personal network. To be eligible for the study, participants were required to have worked as a manager in a critical functional department of the firm. Also, participants needed to have at least 3 years of experience in the field. Each participant must have successfully launched at least one program and had proven project management experience. I ensured this by adding the following item to the introductory email: "The study necessitates that the participant must have launched a minimum of one program and should possess at least three years of experience. If you feel that you do not fulfill these requirements, kindly inform me by sending an email to sashidhar.sankaranarayanan@waldenu.edu" (see Appendix B).

After I received approval from the Walden IRB (#06-01-23-0673396) to conduct my research, I sought access to participants within the organization through my personal network to conduct my qualitative interviews. I emailed the participants an informed

consent form to establish working relationships and set up a time to discuss the requirements of my study, and I answered any questions they raised with me. The Declaration of Helsinki ethical principles required that researchers provide potential participants with sufficient information regarding the objectives and methods, potential benefits and risks, as well as the right to decline participation or withdraw consent at any time without facing the consequences (Kaewkungwal & Adams, 2019). When developing a working relationship with the participants in the current study, I disclosed the purpose of the research and ensured that the informed consent process was understandable for the participants.

Informed consent is an essential component of the research process. As a result of this factor, some problems may arise because a few participants may not read the consent form entirely (Geier et al., 2021). To avoid this problem, I sent each participant a personalized email (see Appendix B) explaining the importance of the informed consent form. The participants reached out to me directly if they had any need for clarifications.

After receiving each participant's signed consent form, I worked to establish rapport with each of them. To build rapport with the participants, I showed an interest in why my participants had done such a good job with the strategies they had used to fulfill the company's expectations relative to their performance. Because I no longer worked for the company, I no longer needed to address the issue of power imbalances, and the participant characteristics aligned with the research question for this study. I followed the interview protocol and supplemented the interview with follow-up member-checking questions during the interview. Using this approach, the researcher can obtain

unstructured data; give insights into the participants' thoughts, feelings, and beliefs about a particular topic; and delve deeply by probing into personal and sometimes sensitive issues (DeJonckheere et al., 2019).

Research Method and Design

Saunders et al. (2019) suggested that a researcher's philosophy, beliefs, and assumptions must be related to knowledge development, which could serve as a basis for the research strategy. The researcher needs a strategy to establish a sound basis for selecting a research method and design. I was able to consider choosing a quantitative, qualitative, or mixed-methods approach. As an amateur researcher, I strove for a coherent research project in which the problem, purpose, and research question were aligned. The selection of research method was a crucial process because each of the methods has strengths and weaknesses that could have influenced the study. The researcher must base the decision on a thorough literature review that will help them know the best approach to answer a research question.

I chose to use the qualitative single case study method because all of my research activities took place under the roof of a single organization. There were four research designs that I considered for this study: phenomenology, ethnography, narrative, and case study (see Yin, 2018). I chose a single case study design for my study because the rich data and thick descriptions were necessary for me to answer my research question. I did not choose phenomenology, ethnography, or narrative because the personal stories of each of the participants were not helpful for me in answering my research question.

Research Method

The three conventional research methods are qualitative, quantitative, and mixed methods (Saunders et al., 2019). Researchers use the qualitative method to obtain rich textual data for exploring phenomena. Using the qualitative methodology helps researchers obtain insights into the research phenomenon by exploring the thoughts and opinions of people with experience with the phenomenon (Yin, 2018). Conversely, a quantitative approach involves the statistical testing of relationships among variables (Saunders et al., 2019). The quantitative method was not appropriate for exploring strategies used by the functional project leaders within the various departments within the organization. A researcher using a mixed-methods approach must use a combination of qualitative and quantitative methods (Maxwell, 2015). The mixed-methods approach was inappropriate because in-depth statistical data analysis was unnecessary to answer the research question. Therefore, I chose the qualitative method for my study.

Research Design

I considered four qualitative designs for studying the strategies project managers in an automotive manufacturing firm use to align various departments' deliverables with the project milestones to completion to improve the project's success rates: (a) phenomenology, (b) ethnography, (c) narrative, and (d) case study. Phenomenological researchers explore meanings from the participants' lived experiences with a phenomenon in a shared context to understand the personal meanings of their lived experiences (Saunders et al., 2019), which was unsuitable for my study. Ethnographic researchers focus on social and cultural issues that affect people's behavior. The

ethnographic design was inappropriate for my study because it would not have helped me answer my research question (see Saunders et al., 2019). Narrative researchers focus on eliciting and interpreting participants' accounts of their personal life experiences (Bojko, 2021). A narrative design was not appropriate for my study because the purpose was not to explore the individual's derived meanings from personal life stories (see Caine et al., 2013).

Takahashi and Araujo (2020) discussed the value of case study research in project management, highlighting its potential to generate rich insights, contextualize findings, and inform theory development. Using a case study design, a researcher can gain insights from individuals and study a real-world phenomenon with detailed data and descriptions until the participants can no longer provide new information (Yin, 2018). I chose a single case study design to understand successful project management strategies used in multiple departments of the same organization. I collected all of my data from one of the largest manufacturing firms in the United States, which was of interest and relevant to my research question.

Population and Sampling

The target population consisted of three managers from key functional departments within the same organization with proven experience in successful project management in an automotive firm located in the north central region of the United States. The specific business problem was that some managers in a manufacturing firm in the automotive industry lacked strategies to align various departments' deliverables with project milestones to improve project success rates. I used purposive sampling to ensure

my small sample size would be sufficient to answer my research question and achieve data saturation. Korstjens and Moser (2017) indicated that qualitative researchers do not randomly select participants for their sample but instead purposefully choose their participants. There should be enough participants to achieve reliability, validity, and data saturation (Hennink & Kaiser, 2022).

My goal was to have three participants who provided data to meet data saturation, which they did. Qualitative studies typically have a small sample size, but the data obtained are rich and case oriented (Crick, 2021). Although the sample size was three participants, I achieved data saturation with the three participants through member checking. My study involved three experienced and knowledgeable participants familiar with the strategies used to answer my research question, making them suitable for the study. I encouraged my participants to engage in interviews with me from a private setting where they were comfortable and relaxed. Likewise, I worked in my private office to be relaxed, comfortable, and free from distractions.

Ethical Research

To ensure that this study was conducted according to ethical guidelines, I maintained compliance and transparency by following academic research protocols while creating this study. For example, I sent out consent forms by email to participants to sign, which guaranteed compliance, confidentiality, and transparency. I also informed participants that they could exit the study at any time to ensure that their best interest was always at the forefront of the study. Each interview started with me explaining the consent and guidelines of the study so that participants would be aware of their rights.

Participants had their identities protected through the use of code names such as P1 through P3 to ensure confidentiality. During interview recordings, participants refrained from saying their name to protect their identity from getting out to the public. Data collected from this study will be maintained in my home safe and laptop to ensure this information remains confidential. I will destroy all data following Walden University guidelines after 5 years. The participants also had the right to withdraw from the research process at any time during the study. I did not offer any incentives to participants to entice them to participate in the study. To safeguard the welfare of the participants, I avoided any potential harm to them during the study, including physiological, psychological, and informational harm (see Geier et al., 2021). I complied with the *Belmont Report* guidelines, which consisted of three core principles: respect for persons, maximizing beneficence, and ensuring justice (see National Commission for the Protection of Human Subjects and Biomedical and Behavioral Research, 1979). I also updated my Collaborative Institutional Training Initiative (CITI) research certification, which is good until 2026.

To ensure adherence to the first principle of the *Belmont Report*, which is to respect persons, I honored my subjects by treating them kindly and respectfully. I used the informed consent form so participants would be informed and would know their rights during this study. The informed consent form emphasized the voluntary nature of the study, the privacy policy enforced for the interview, and how participants could withdraw in the middle of the study. I did not offer any incentives for participation in the study.

The second principle of the *Belmont Report*, beneficence, ensures that the minimal risk of harm to the participants will be outweighed by the benefits of contributions to business practice and social change (National Commission for the Protection of Human Subjects and Biomedical and Behavioral Research, 1979). In Section 3, I summarize the findings of my study in the form of themes and strategies identified to answer my research question.

The Belmont Report's third principle, "ensuring justice," requires selecting participants without targeting particularly vulnerable groups (National Commission for the Protection of Human Subjects and Biomedical and Behavioral Research, 1979). All of my participants were treated equally and fairly by me as the researcher. The principle of "ensuring justice" is a foundational "bedrock" for all researchers to follow when they conduct research. As another aspect of safeguarding the rights of participants, I have stored the collected data in a secure, password-protected drive in my home office safe. I will delete this information permanently after 5 years.

Data Collection Instruments

As a qualitative researcher, I was the primary data collection instrument. I conducted a qualitative research study using semistructured, open-ended interviews with the study participants who were working as managers in critical functional departments of the automotive firm. The semistructured interview helps the researcher to ask very focused questions followed by in-depth discussions in a particular area (Husband, 2020). The semistructured interview, member checking, and any data provided during the interview will allow for probing answers and exploring further, generating more in-depth

data (Saunders et al., 2019). The semistructured interview followed by member checking helps the researcher to probe in depth into participants' responses (Yeong et al., 2018). The interview allowed participants to answer truthfully by discussing issues and topics pertinent to their experiences following the question in the interview protocol (see Appendix A) that I used in all my interviews. The other data set was information that was shared with me in a confidential manner by the project managers to verify the reliability and validity of their answers to the interview questions. I also used the same information for triangulation purposes collected from the participants at the end of the interviews.

I followed the interview protocol as shown in Appendix A to guide the interview and allowed relevant themes to develop. I used Microsoft teams to record and transcribe all the interviews. I then sorted the data into themes and strategies. Finally, I enhanced validity and credibility by conducting member checking to follow-up meetings to confirm the accuracy of participant transcripts and data.

Data Collection Technique

The research question for this study was What strategies do the managers of an automotive manufacturing firm use to align various departments' deliverables with project milestones to improve the project's success rates? After I received approval from the Walden Institutional Review Board (IRB), they granted permission for me to conduct my research; I sought access to participants within the automotive firm through my personal network to schedule my qualitative interviews. I sent out an introductory email (see Appendix B) to the participants to set up a time within a week with each of them to discuss the requirements of my study and answer any questions they might have. Once

the participants provided verbal or written consent for participating in the study, I emailed the participants the informed consent form (see Appendix C), which was due to me within a week. I followed up with one potential participant who changed her mind about participating in the study. I ensured that I had three participants identified for the study as I hoped to achieve data saturation by interviewing no more than three participants. The informed consent form emphasized the voluntary nature of the research, the privacy policy enforced for the interview, and how participants could withdraw in the middle of the study. I did not offer any incentives for participation in the study.

As part of my qualitative research, I conducted semistructured, open-ended interviews for the qualitative research. I conducted the interviews using Microsoft teams meetings. Recording a meeting may have significant legal and privacy implications for the researcher and the participants. Therefore, I obtained the participants' consent beforehand. I have constantly used Teams at my current workplace and am well-versed in the programs' functionalities. For Microsoft Teams, you can begin recording by clicking on the "..." button and selecting "Start Recording" or by pressing "Ctrl + Shift + R" on your keyboard. Once I started the recording, I informed all participants that I was recording the meeting. To stop the recording, click the "..." button again and select "Stop Recording." I saved the files only to the c drive of my laptop and not in the cloud storage.

Teams offer a transcription feature that can automatically transcribe the audio from meetings, webinars, or video conferences into text. In Microsoft Teams, the transcription feature is called "Live transcription." I enabled the transcription feature before the start of the meeting. During the meeting, the transcription appeared in real-

time on the right-hand side of the screen, and participants could also download the transcript after the meeting. The transcription features used automatic speech recognition technology, which may not always be 100% accurate and may struggle with some accents or background noise. As a result, I reviewed the transcripts carefully and made some necessary edits to ensure accuracy.

I employed multiple data collection techniques to address the research question, including my interview data and a second source of information provided by the research participants. In qualitative case studies, researchers collect data through interviews, documentation, and direct observations (Yin, 2018). Using an interview protocol helps ensure consistent, high-quality data collection, thereby increasing the interview's effectiveness, as noted by Yeong et al. (2018). Data saturation is necessary to ensure that the researcher collected enough data for qualitative studies, as mentioned by Yin (2018). I conducted interviews using member checking to gather comprehensive and valid data for this study. I reviewed additional documentation from the research participants for triangulation to verify the information given in the interviews. An interview is a discussion, a learning experience, and a "social engagement" between two people, the interviewer (researcher) and the participant (research subject), about a topic that both parties have an interest in. The purpose of an interview is to develop a profoundly contextual, nuanced, and genuine perspective on a study issue by having the researcher engage the participant in direct contact. The interview facilitates the unearthing of the study phenomena profoundly and richly. A researcher can access the participant's depth, "subtlety," and "personal emotion" rather than gaining access to the experience on a

surface level due to the interview. This phenomenon is one of the greatest strengths of researchers using a semistructured interview to collect rich data and thick descriptions (Saunders et al., 2019). One weakness of semistructured interviews is that some participants may not clearly understand the questions. If the problem occurs, a researcher must recognize it and take the time to use member checking to ensure that the participant understands the question and has the opportunity to answer it more appropriately and correctly.

I used an Interview Protocol to maintain consistency in interviews with all participants (see Appendix A). I conducted the interviews in person via video conferencing. During the interview, I briefly introduced the study and provided the research question, followed by eight open-ended interview questions. The interview process took up to 45 minutes, and follow-up interviews took up to 20 minutes. Recording the interview helped identify common themes in the data collected, as Yin (2018) suggested. In addition, I took some notes during the interview process regarding the tone of voice if they were noteworthy. In face-to-face interviews, participants may respond with socially desirable answers, while the researcher's ability to listen, remain engaged, suspend judgment, and probe without being seen as interrogation as well as managing the researcher's own biases, which are essential for capturing the information effective.

Member checking has been commonly used in qualitative research to achieve validity. Member checking provides a way for the researcher to ensure the accurate portrayal of participant voices by allowing participants the opportunity to confirm or

deny the accuracy and interpretations of data, thus adding credibility to the qualitative study (Candela, 2019). I conducted member checking to ensure the validity and reliability of participants' responses. Member checking involves reviewing the summary of responses with the participants to add more details to the initial answers or address new points (Saunders et al., 2019). I gave the participants enough time during member checking to be satisfied with their answers before I moved on to any other questions.

Using multiple data sources for data collection techniques enhances the likelihood of validity and reliability in a study, as suggested by Bowden and Williams (2013). To further ensure the validity and reliability of the study, a secondary data collection technique, such as reviewing company documents (e.g., financial statements, press releases, data from websites, and public updates), can be employed for data triangulation. According to Yin (2018), any data obtained through this documentation review can corroborate interview data and enhance the validity and reliability of the study. I did not conduct a pilot study following IRB approval of my DBA proposal.

Data Organization Technique

In my research log, I recorded all daily events related to the research and interactions with participants. In the second portion of my research log, I maintained the entries related to my reflective journal. I put all entries in this journal as I reflected on possible researcher bias relative to my research activities. I also organized a drawer in my locked cabinet for everything cataloged and organized relative to my research study alphabetically. Similarly, I also organized all of my electronic files in an external hard drive for data retrieval and finding information whenever needed.

I conducted semistructured interviews for the qualitative research using Microsoft teams. I obtained verbal authorization before recording the interview. I interviewed three participants from different departments from one location of the organization to ensure the validity of the data collected. Coding helps develop a sound qualitative analysis (Clark & Vealé, 2018). I used alphanumeric codes, consisting of letters and numerals, to save the interview transcripts. I coded each participant using alphanumeric codes (P1, P2, P3). To identify themes, I saved all interview transcripts in Atlas Ti and allowed it to apply relevant codes to all of the data in the transcript file. For a participant interviewed on 6th June, I saved the file as P1_MAIN_06/06/2023. The use of coding helped me to represent data in a concise and organized manner. Using word frequency analysis, I assigned code to words to identify possible themes for this study. The coding made it easier to manage and analyze large amounts of data and move related data to the three main themes. Decoding is the process where data is analyzed to decipher its core meaning. Encoding is labeling the information with an appropriate code (Clark & Vealé, 2018). I transcribed the semistructured interviews using Microsoft teams and then organized the transcribed data into Microsoft Excel to sort and code. After I sorted and coded the information appropriately, I reviewed the information for patterns and common themes. According to researchers, data analysis should begin immediately preceding transcription to identify emerging categories and themes as early in the research process as possible (Wolff et al., 2019).

I created a section in my journal where I explored and reflected on the research participant's feedback during the interview. The second section of my journal also helped

me to reflect on my preconceived assumptions and biases that I needed to be aware of. By creating a reflective journal, I was able to reanalyze the answers and information, which could have resulted in an alternative interpretation that would be worth exploring further (Feldman & Shaw, 2019).

I will store the information and coded data electronically in an external hard disk /USB drive for 5 years and keep it locked in my home office safe. I organized a drawer in my locked cabinet for all the paper files cataloged and organized relative to my research study. After 5 years, I plan to delete electronic data files and destroy or scrub the Universal Serial Bus (USB) drive where I saved the file. Also, I will destroy all the paper by shredding.

Data Analysis

This study explored the strategies managers use in an automotive manufacturing firm to align departmental deliverables with project milestones to improve project success rates. I initiated the data analysis process after collecting and appropriately coding the data. Data triangulation, which refers to using multiple data sources to confirm the research data's validity, credibility, and authenticity, is one of the tools for data analysis (Saunders et al., 2019). Methodological triangulation, which involves the collection of different data sets with the same study design, is the best method for analyzing multiple data sources, such as interviews and organizational documentation (Abdalla et al., 2018). This study generated a data set consisting of interview data from three managers and program evaluation organizational documents. Although investigator methods and data source forms of triangulation will be used due to methodological

triangulation, using data triangulation for qualitative research helps to mitigate researcher bias (Moon, 2019).

Data analysis in this study involved answering the "how" and the "why" through collecting rich data that is within the context of an interpretive philosophy (Ravindran, 2019). I used multiple data sources to confirm the findings of the study. As a researcher, I used triangulation through convergence of findings when determining whether the research was valid. Researchers often use triangulation to ensure that data, sources, or methods all fall under the umbrella of validity. The primary purpose of using triangulation is to increase the accuracy of the research when using a large data consumption (Moon, 2019). There are three forms of triangulation. The first form of triangulation is investigator, which involves one or more data analysts. The second form of triangulation is data triangulation, which involves multiple data sources. The final form of triangulation is methodological triangulation, which involves multiple methods to prove one single conclusion.

I used the 5-step approach of Yin (2018) to thematic data analysis to analyze data in my research. Yin's 5 step approach analyzes data so that researchers can put findings within their study into text (Yin, 2018). The 5 steps in Yin's (2018) process involve: (1) compiling the data; (2) disassembling the data; (3) reassembling the data; (4) interpreting the meaning of the data; and (5) concluding the data. Compiling the data involves grouping data in a format that could become understood by your audience. Disassembling data involves the process of elimination of invariant phenomenon themes. Reassembling data allows the process of clustering core themes. Finding the meaning of the data

involves finding patterns across the interviews, surveys, and documents within the data. Last, the researcher can conclude and summarize the findings in the data while giving a structural description of his or her experience (Yin, 2018).

I analyzed data after organizing all primary and secondary data. I also used ATLAS.ti to document analytic decisions in a transparent, reflexive, rigorous, and systematic way. ATLAS.ti enables the analyst to solve various methodological challenges, such as working with large datasets and supporting deeper levels of analysis than is possible by hand (Paulus et al., 2019). ATLAS.ti supports three performances of data collection; (a) keywords-in-context (KWIC) analysis, (b) constant comparison analysis, and (c) classical content analysis (Paulus et al., 2019). By using ATLAS.ti, I was able to perform comparisons of themes within the study as well as support data analysis triangulation.

Within any study, it is important to recognize themes that may emerge multiple times within a study. Researchers use KWIC analyses to discover keywords that lead to underlying connections within a study and to identify repeated language used within the study. The researcher understands the culture of what is happening within the study and how participants can create better strategies to become more successful by discovering key themes and languages. Mishra and Dey (2022) argue that identifying relevant themes justifies the typology of the research questions without considering the number of occurrences across the document. Researchers use ATLAS.ti for data analysis and project management, literature reviews, data collection, and report writing (Soratto et al., 2020).

I used ATLAS.ti to analyze and count each time a code appeared in the study. Coding in qualitative research allows researchers to identify, organize, and build theory (Williams & Moser, 2019). In addition, counting codes support understanding the relative importance of deductive and inductive codes and identifying key underlying themes within the collected data. Lastly, I used ATLAS.ti to analyze and explore relationships between codes. Interpreting the data helps researchers to ensure that the data is accurate, consistent, and credible. After completing all four steps, I, as the researcher, was able to conclude if the data answered the research questions. Interpreting and concluding data is important because it requires the researcher to understand intimately the data by continuously reading and rereading the collected data for theory and themes to emerge (Williams & Moser, 2019).

I planned to collect data by conducting semistructured interviews. I used software to maintain and organize my data. I used Microsoft Word, Excel, and ATLAS.ti as a collective, which falls under the methodological triangulation strategy. Second, I gathered reoccurring circumstances and themes I found in my interviews and pulled from information collected in my literature review. Finally, I used Yin's 5-step approach to data analysis to understand, group, and describe data found within the study.

Reliability and Validity

Reliability

According to Saunders et al. (2019), qualitative reliability refers to a consistent approach researchers can apply to different projects. Consistency in analysis across participants is essential for data adequacy, which demonstrates reliability in qualitative

research (Spiers et al., 2018). To ensure reliability in my study, I coded, analyzed, and interpreted all data, following the interview protocol consistently. Johnson and Rose (2020) highlighted that soundness in qualitative research depends on the appropriate methods chosen and how those methods were implemented and applied. I maintained consistency and clarity throughout my research by being transparent with the interview protocol and using computer-assisted qualitative data analysis software to assist with coding. The stability of the results over time is an embedded notion of study reliability, and the methods used by the researcher are clear enough for anyone else to replicate the study and compare their results with the results from the original study (Hayashi et al., 2019).

Validity

According to Saunders et al. (2019), qualitative validity refers to the procedures used by the researcher to ensure the accuracy of the findings. The findings allow for an accurate account of participants' experiences, as noted by Spiers et al. (2018). Nha (2021) defines validity in qualitative research as the appropriateness of the tools, processes, and data. Internal validity is crucial in ensuring that participants' representations match their intentions. To achieve validity in this study, I used member checking and rephrased interview questions where necessary during the follow-up interviews. Methodological triangulation is another technique that can increase the study's rigor by evaluating data from different sources throughout the research process (Abdalla et al., 2018). By using multiple techniques and data sources, the study can increase its validity and provide a more accurate representation of the research topic. The program information on KPI

metrics clearly substantiated the information I obtained from the participant interviews and the importance of methodological triangulation in my research study.

Dependability

As the primary data collection instrument, I strictly followed the interview protocol specified in Appendix A and transcribed the interviews. To ensure the robustness of the study results, the researcher needs to verify and adjust the research processes rather than merely justifying the completion of the study (Spiers et al., 2018). During member checking, I asked follow-up questions to gain clarity on the participants' responses. As suggested by another researcher, I made necessary adjustments to the output data based on member checking and follow-up questions, which should increase the dependability of the study. The researcher achieves dependability by reaching data saturation (Trochim, 2020).

Credibility

To ensure credibility in this study, I used member checking, transcript review, and triangulation with other program information shared by participants, as recommended by Yin (2018). I constantly assessed and monitored any assumptions and limitations that may have arisen during the study, as stated by Sumskis and Moxham (2017). McInnes et al. (2017) and Trochim (2020) noted that when researchers interpret data truthfully, participants perceive the results as credible. To achieve credibility, I strived for transparency throughout the research process by sharing my methods and findings with participants and other stakeholders, as this increased the credibility of the study. The

development of the negative feedback model with my committee members was also an example of establishing credibility for this study.

Transferability

Colorafi and Evans (2016) stated that when researchers can apply the findings of a study to other contexts or studies, the research is considered transferable. In the realm of qualitative research, Colorafi and Evans (2016) defined transferability as the extent to which a different group of study participants can replicate the results of a study in the same location with the same underlying assumptions as the original study. Replicating the study in a different location may involve different underlying assumptions about the original study. Therefore, using the same methods in both studies does not guarantee that the results will be the same. To maintain transferability, I provided a detailed description of the research methods, contexts, and assumptions, including relevant parameters, locations, settings, and timeframes. This documentation will enable other researchers to compare the results with their studies that use the same methods.

Confirmability

Confirmability, which refers to the extent to which qualitative research outcomes can be validated or supported by other researchers, has been discussed by Trochim (2020). As the researcher conducting this study, I aimed to maintain objectivity and transparency. To enhance the confirmability of the study, I adhered to the interview protocol and used member checking. If any contradictions arose between my observations and those of the member-checking process, I immediately took action to

address these issues. I organized all the raw data. I will dispose of the raw data per my proposal's data organization section.

Trustworthiness

Trustworthiness is a valuable consideration for qualitative research (Mtisi, 2022), and as a qualitative case study researcher, it is crucial to ensure that the data collected is trustworthy. To achieve trustworthiness, I employed data saturation as a key strategy, continuing data collection until I no longer received new information, themes, codes, or patterns. Semistructured interviews enabled me to gather data from multiple perspectives, while follow-up questions and member checking provided additional insight into the participants' experiences. The absence of new data indicated data saturation following my third interview with my participants, thereby contributing to the trustworthiness of the data collected. Triangulation is essential to ensure credibility, transferability, and dependability in all aspects of trustworthiness (Mtisi, 2022).

Data Saturation

Data saturation can occur when no new information is forthcoming or when no new themes emerge from the participants during the interviews. When collecting data, data saturation can occur as a result of member checking and triangulation. Member checking helps to ensure data saturation. I confirmed that no new information or themes appeared during semistructured interviews with participants. To achieve data saturation, I conducted interviews, performed constant member checking, and used triangulation techniques to ensure I did not overlook any new information. I provided participants with

copies of their transcripts to obtain feedback on their accuracy, which helped me ensure data saturation in this study with my three participants.

Transition and Summary

In Section 2 of the study, I reiterated the purpose statement and my role as the researcher. First, I described the participants and their respective eligibility requirements. Next, I expanded on the nature of the study within the research method and design, clearly identifying how I ensured data saturation. Next, I explained the scope of the study defined in the population and sampling sections. Then, I expanded on how I researched in an ethical fashion and collected data with specific instruments. Finally, I explained in detail the reliability and validity of the final study.

In Section 3 of the study, I present the findings, which included the themes and strategies that emerged from my data analysis. The three themes included the following.

- leadership (keep people informed, involved, interested, and inspired)
- communication (timely, honest, and relevant)
- KPI metrics (blood pressure, temperature, and pulse)

I will be discussing the strategies under these three themes in detail and also their relationship to the conceptual framework and the review of the literature. After, I will cover the application to professional practice, implications for social change, recommendations for action, and further research recommendations. Toward the end, I summarized my reflections and concluded the doctoral study.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of my qualitative single case study was to investigate the strategies used by project managers in an automotive manufacturing firm to align the deliverables of different departments with the project milestones, aiming to enhance the success rates of the projects. The target population consisted of three team managers from key functional departments with proven experience in successful project management in an automotive firm located in the north central region of the United States. The findings from this study might provide effective project management strategies to departmental managers to effectively manage projects for adhering to project milestones, thereby reducing project costs. Increasing the success rate of projects may not only improve job satisfaction and employee retention among team members but may also increase employment opportunities, thereby bringing about beneficial social change. The research findings revealed six strategies that project managers in the automobile industry use to ensure operational efficiencies. I grouped these strategies under three identified themes:

Theme 1: Leadership (Keep People Informed, Involved, Interested, and Inspired)

- provide help and support when needed by subordinates (coaching)
- timely, transparent, and transformational

Theme 2: Communications (Timely, Honest, and Relevant)

- daily stand-up meetings with visual management
- triple feedback loop (assembly line, mid-level managers, and head of the departments)

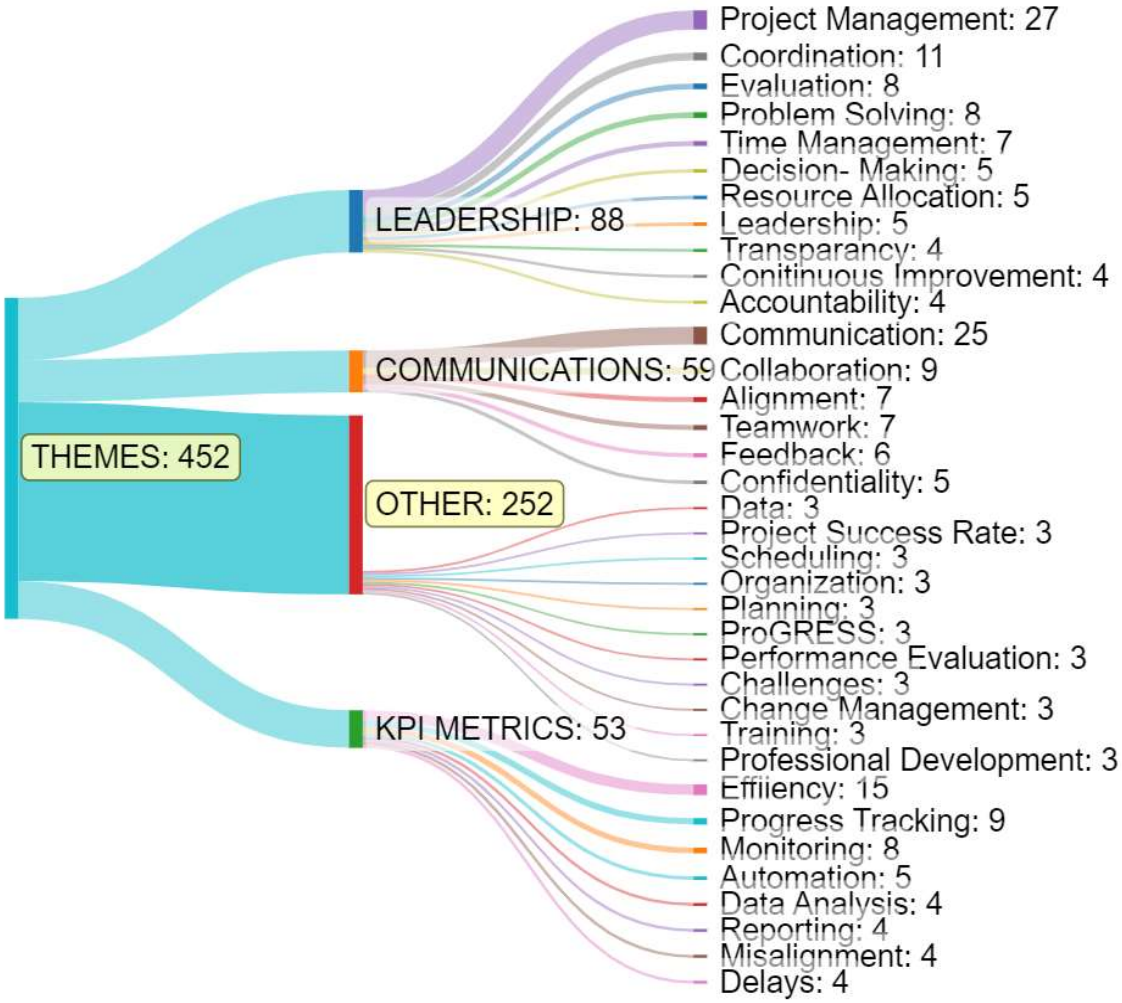
Theme 3: KPI Metrics (Blood Pressure, Temperature, and Pulse)

- performance criteria (critical success factors)
- performance standards (benchmarking)

Figure 3 illustrates the frequency of themes participants mentioned during the interviews. Leadership appeared as the most frequently mentioned item. Communications appeared as the second most important theme from the participant responses, followed by KPI metrics.

Figure 3

Sankey Diagram: Proportions of Connections in Overall Study



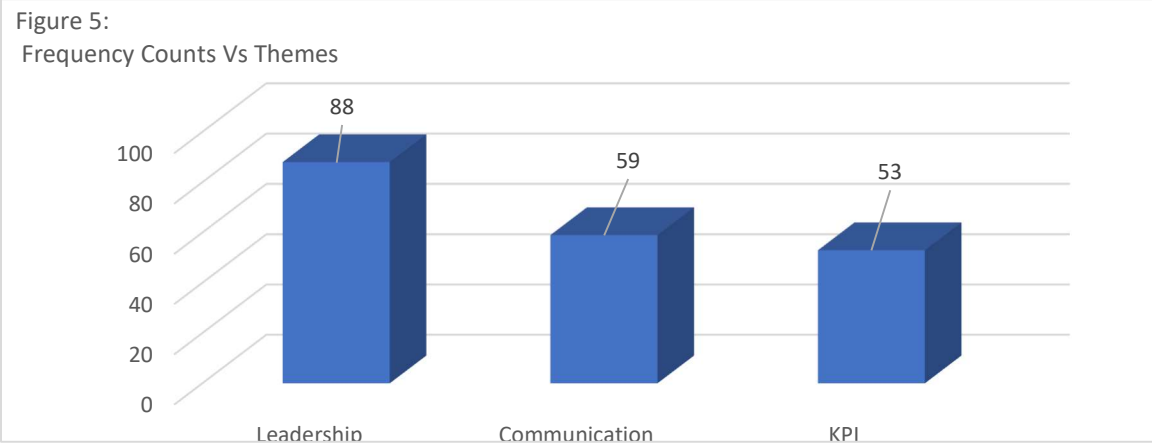
Note. The width of the line is proportional to the number of connections found between the theme and the codes that emerged during the interview.

Presentation of the Findings

The research question for the study was as follows: What strategies do the managers of an automotive manufacturing firm use to align various departments' deliverables with project milestones to improve the project's success rates? To answer this question, I asked eight open-ended interview questions to three participants who had successfully implemented strategies. To protect participants' identities, I established codes for each participant: P1, P2, and P3. Analysis of participants' answers resulted in the identification of three themes, and each theme comprised two strategies derived from 452 codes consolidated into 15 code groups (see Figure 4).

Figure 4

Frequency Counts Versus Themes



Theme 1: Leadership

The first theme that emerged from collected data analysis was Leadership (keep people informed, involved, interested, and inspired) strategies. Two key strategies emerged in relation to Theme 1: (a) providing help and support when needed by subordinates (coaching) and (b) timely, transparent, and transformational leadership

when it is needed. The data analysis process yielded each strategy, which aligned with the existing literature and the conceptual framework.

Strategy 1: Project leadership- Providing Help and Support When Needed by Subordinates (Coaching)

Automotive project managers highlighted the importance of key performance metrics and technology that enabled data-based decision making to identify situations in which workers require help and support, in alignment with Dubey et al. (2019) who posited that analytics are knowledge based and that managers and employees should value the metrics and benefits they make for the organization. Similarly, Shamout (2019) added that project managers will gain valuable insights and make data-driven decisions. Therefore, combining technology-enabled resources and data management leads to a competitive advantage. P3 stated

> it's funny because we have project chiefs who use a mini scorecard to track their own department's progress. When it goes to the project responsible for electrical, they combine all the mini scorecards from the six departments in electrical into one. This combined scorecard is presented weekly, and it represents a subset as you move from the department level to the vehicle level.

P1 added "leaders rely on a set of tools and processes to effectively manage projects. These tools collectively contribute to successful project management by allowing leaders and managers to evaluate status, determine readiness, track progress, and maintain alignment with project plans."

Big data analytics capability has immense potential. Mikalef et al. (2020) highlighted that this potential includes capturing and analyzing data, which creates insights and supports transformation. The same was validated by P2, the program manager, who said "our leaders use scorecards to evaluate the project's status. We use the stage gate process to determine if the program is ready to move to the next stage and the project tracking to ensure the project is on track."

Business performance monitoring is not a choice in effective automotive management. Monitoring is a requirement when workers need help and support. Along those same lines, Agarwal et al. (2019) posited that a performance measurement system is the requirement that managers want to see in place to address these problems in a timely fashion. As shown in Figure 4, analysis appeared as a prominent code and was related to other codes at different proportional levels. P3 confirmed that "technology is an important enabler of big data analytics." According to Breznik et al. (2019) and Aslam et al. (2020), seizing as the second group of dynamic capabilities embraces technology. Furthermore, Shamout (2019) elaborated that the Qlik tool technology supports big data analytics by acquiring, storing, and transforming large volumes and a variety of data at high velocity. All three current participants affirmed this. P1 stated that

> initially, creating a PowerPoint deck to report on these deliverables consumed a significant amount of our time. However, we recognized the need for a more efficient solution. As a result, we took the initiative to develop a custom dashboard using the Qlik tool. This dashboard automated the reporting process by extracting all the necessary data from the cloud on a daily basis.

P2 stated that

> we eventually automated reporting using a home-built dashboard, the Qlik tool that will automatically pull all the data from the cloud daily to provide the management team with the status of the deliverables. The only drawback with this tool is that it was not live, and it takes 24 hrs for the system to be updated with new data.

P3 added

> regarding tools, we utilize various internal systems, including Qlik, as an analytical tool to gather and present data effectively. These systems track a wide range of aspects, such as quality issues, warranties, and financials. By linking these systems, we can generate informative visualizations like pie charts and bar graphs within minutes.

Incorporating new technology for monitoring metrics for projects enables managers to make quicker, more efficient, and more relevant decisions. Project managers should have a balanced approach to new technology (Kwak et al., 2018), which I discuss in Strategy 2.

Strategy 2: Organizational Leadership- Timely, Transparent, and Transformational Leadership when it is Needed

Top-level management generally formulates an organization's vision, mission, and strategy. Performance measurement is a critical function in a project because it provides information on the key metrics, which helps the management decision process. Managers can use the BSC in a timely, transparent, and transformational leadership

fashion when needed to translate the vision, mission, and strategy into objectives and performance measures. Implementing the BSC or any measurement system is challenging and will take much work, effort, and time to achieve a result. Of the tools available, many leaders and managers of organizations across the world prefer the BSC as a reporting tool to be constantly measured and to provide feedback to workers, managers, and leadership in the form of a triple feedback scorecard (Gossett et al., 2023).

In addition to schedule and budget compliance, leaders of an organization must identify and measure metrics for measuring KPIs that link project success to business goals and other parameters. Project status needs to be measured and communicated to individual workers, the management team, and top management frequently. Once the team acknowledges the key indicators for monitoring the project, the BSC approach will increase the success of the project implementation (Strategy Tools from MindTools, n.d.). As with any strategic implementation, leaders must take the following six steps for the BSC implementation to be effective (Strategy Tools from MindTools, n.d.):

- Step 1: lead the implementation
- Step 2: prepare for change
- Step 3: develop performance measurements that provide triple-level feedback for the bottom, middle, and top levels
- Step 4: inform everyone in the organization about the measures put in place
- Step 5: plan initiatives
- Step 6: follow up and evaluate

Kwak et al. (2018) identified managerial leadership as important in implementing the BSC in a work location. Leadership entails proactive thinking and necessitates reflecting on the political situation, economic supply chain problems, security issues, conflicts between managers and workers, and geographical site location (Kwak et al., 2018). From a leadership perspective, there is no one-size-fits-all approach because each project requires different approaches and strategies based on its location, geography, politics, and security requirements, which require adaptation and accommodations to account for the differences with each project. P3 stated that

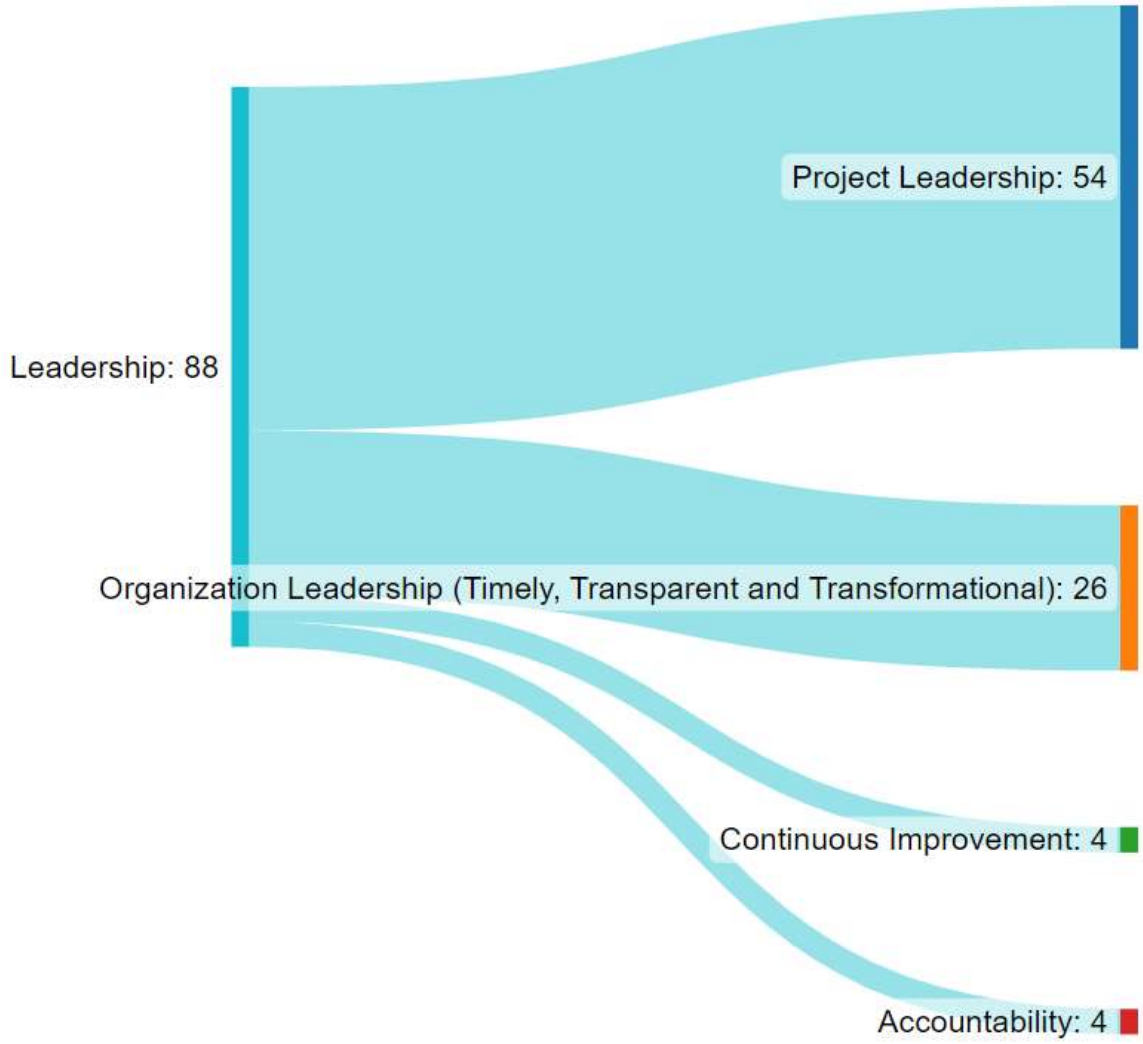
> one metric that he believed was lacking in his company was accountability for time. While we track time extensively, we do not hold departments, managers, and directors accountable for their time effectively. When someone misses their cost or time objectives, there should be repercussions. They should be required to explain the delay in front of the industrial heads and face the consequences. There may be a fear of holding people accountable in this regard, but it is the managers and individuals responsible for missing objectives who should be held accountable, not just the program management team. By making individuals answer for their actions, we may reduce the likelihood of missed deadlines. Accountability should happen at every level. Having said that, a leadership metric will be a good one to add. I'm not sure how you track that specific KPI, but it would definitely be valuable. Additionally, I've noticed that some organizations implement an internal 360-degree review. This involves having your peers and workforce rate your performance, allowing for areas of improvement to be

> identified. Unfortunately, such reviews are not conducted here very often, if at all. The issue with this is that even if you have a bad manager, I'm unsure if HR is aware or how they handle it. I'm not familiar with the details of how that process works.

Other strategies emerged in relation to Theme 1: (a) Effective leadership should foster a culture of accountability, change management, and integrations through long-term partnerships, collaborations, and clear policies, and (b) leading with vision, setting priorities, leading projects effectively, and ensuring their full implementation bring expected benefits and improvement. The data analysis process resulted in the emergence of each strategy, which aligned with the existing literature and the conceptual framework (see Figure 5).

Figure 5

Sankey Diagram: Proportions of Connections in Theme Leadership and Codes Forming the Theme



Note. The width of the line is proportional to the number of connections found between the Theme and the codes that emerged during the interview.

Theme 2: Communications

The second theme that emerged involved communications and the importance of being timely, honest, and relevant to the tasks at hand. Project managers have been shifting from intuitional to data-driven leadership. Teece et al. (1997) highlighted the importance of reconfiguration that brings changes, hence improvement. However, there should be a way of measuring the level of improvement. Therefore, Agarwal et al. (2019) suggested a balanced scorecard and critical success measures for measuring performance and evaluating project management's overall well-being. Managers mentioned two strategies as important for them to use in this process:

Strategy 1: Communication and Coordination- Daily Stand-Up Meetings with Visual Management

Accountability is a critical factor for successful supply chain management. A strategy to provide greater control over the project or process was using Daily Standup Meetings (DSM). DSM should not focus on past performance but address current and future deliverables. The DSM should always start on time, be as brief as possible, and not last more than fifteen minutes (Stray et al., 2016). Managers of the firms should design a visual communication system to complement DSM by identifying the metrics that work for them and need to be tracked instead of using a standardized system. Once implemented, the use of the visual board should be consistent across the firm (Bateman et al., 2016). All three of the participants had comments on the DSM. P1 stated

> to effectively manage our programs, we have implemented daily stand-up meetings as a central element of our project management approach. These

> meetings are purposefully designed to be concise and targeted, typically lasting between 15 to 20 minutes per day. Our objective in conducting these meetings is to improve communication, coordination, and visibility within the team.

P2 stated that

> instead of reviewing the program's status after the fact, we are now managing the program proactively and calling these daily Stand-Up Meetings. DSM's are short and focused meetings where the team members huddle together for 15- 20 min daily. These meetings enhance communication, coordination, and visibility within the team by providing a regular opportunity to discuss progress, challenges, and plans.

P3 said "on an individual level, communication occurs daily. As a management team, we have weekly meetings, while upper management gathers quarterly. Daily meetings are primarily focused on ensuring progress and addressing any potential obstacles."

Managers of organizations can implement the VPM as a tool but must customize the metrics for their specific industry and demonstrate high commitment (Bateman et al., 2016). There are several challenges in implementing visual tools, e.g., resistance to change, integration with the current systems (Mofolasayo et al., 2022), and fear of management. However, the visual management board (VMB) and DSM should be used for status reporting to the manager and for participative discussions and problem-solving (Stray et al., 2016). The design of the VMB is critical as this is the communication tool utilized by the team, and the importance of correctly calculating performance measures is

vital (Bateman et al., 2016). Irrespective of the industry, daily VPM is a valuable tool, and if implemented successfully, it will provide increased efficiency and improved information flows within an organization (Kurdve et al., 2019).

VPM can play a significant role in project management by improving planning, execution, and communication. Visual aids can help not only the project managers but also the team members to understand complex data better. PMs' can identify critical issues and make informed decisions. Unfortunately, a comprehensive framework does not exist for VPM. Also, the implementation of VPM may face challenges, such as resistance to change resulting in less adoption and integration with existing project management methods.

Project managers should also cultivate a culture of change management to ensure improvement in high acceptance of new technologies. Aslam et al. (2020) called these managers entrepreneurial or innovative leaders. Standardization through well-defined policies is essential for global organizations. Friday et al. (2018) explained that standardization of procedures may serve as a risk mitigator, thus in alignment with contrasting institutional conceptual frameworks. Flynn and Walker (2020) elaborated on the pressure that large companies in the automotive industry endure to remain in compliance with internal and external regulations and to remain competitive in the marketplace with their competition. Participant 3 confirmed the same and said that implementing project strategies can be challenging because "you feel quite constrained by company policies because of the fact that top-level managers are answerable to their Board Members." Nevertheless, participants 2 and 3 strongly argued that having internal

SOPs and blueprints “definitively helps” as operating guidance or framework clarifying how to exercise certain processes correctly, thus avoiding confusion and remaining “aligned with the aspirations and vision of the organization.”

However, Dubey et al. (2018a) warned of the trade-off between adaptation and standardization to achieve anticipated responsiveness. For example, too many standardizations in procedures and formalities may result in inflexible supply chains (Dubey et al., 2018b). In this regard, Participant 1 posited, “the rigidness of our rules and regulations on many occasions become the obstacle for more efficient and effective support,” thus explaining that the substantive side of the manufacturing organization should understand these constraints and accordingly manage expectations on responsiveness from supply chain side of the company.

Collaboration appeared as a very intensively discussed code during the interviews. According to Wilson et al. (2018) supply chain based on collaboration results in a coordinated project management fashion. All participants emphasized the importance of “close collaboration.” Participant 3 posited that more collaboration leads to improvement and explained repeatedly that interactions, collaboration, and teamwork are paramount. Therefore, managers should promote teamwork. Similarly, Participant 1 highlighted that “collaboration and early involvement allows you to plan properly” and understand the need of the customer. Similarly, Participant 2 said collaborations allowed to close identified gaps and bottlenecks on time.

Managers may facilitate collaboration in many ways. Participants 1, 2, and 3 presented the example of internal and daily stand-up meetings, the communication tool

that enables business partners to collaborate. Aulkemeier et al. (2019), Prasanna and Haavisto (2018), and Parast (2020) explained that collaboration supported by IT systems or digital networks allows collaboration to become more efficient. Therefore, managers should not hesitate to invest in adequate IT capabilities such as Qlik and Tableau as a long-term approach for big data analytics that will assist in collaboration. Participant 3 said, "We bring all stakeholders together under one roof, so people started talking to each other." As an illustration, figure 4, through the Sankey diagram, shows leadership and management related to codes of collaboration, information sharing, and people.

Strategy 2: Feedback- Triple Feedback Loop (Assembly Line, Mid-Level Managers, and Head of the Department)

Project implementation could be an indicator of efficient leadership. Moreover, project managers are under constant pressure to implement integrated structures, practices, and policies (Flynn & Walker, 2020). The majority of participants during the interview expressed their awareness of challenges related to implementations, and they are in alignment with Zimon et al. (2020), saying the reasons are mainly time-consuming and complex processes. Shan et al. (2020) explained that the inability to implement collaborative innovation directly negatively impacts production capability and sustainable work performance. Conclusively, alignment between individual dynamic capabilities and the innovative or entrepreneurial leadership style leads to improved efficiency and effectiveness in the workplace. P1 stated,

> Regular progress monitoring through daily stand-up meetings allows leaders to track the status of department deliverables and their alignment with project

milestones. This facilitates continuous communication and feedback, ensuring departments stay on track and make necessary adjustments to align their deliverables with project milestones."

P2 stated, "Inadequate Monitoring and Feedback Mechanisms: Without robust monitoring and feedback mechanisms in place, it becomes challenging to track progress, identify deviations, and take corrective actions. Lack of timely feedback resulted in misalignment and the inability to address issues proactively."

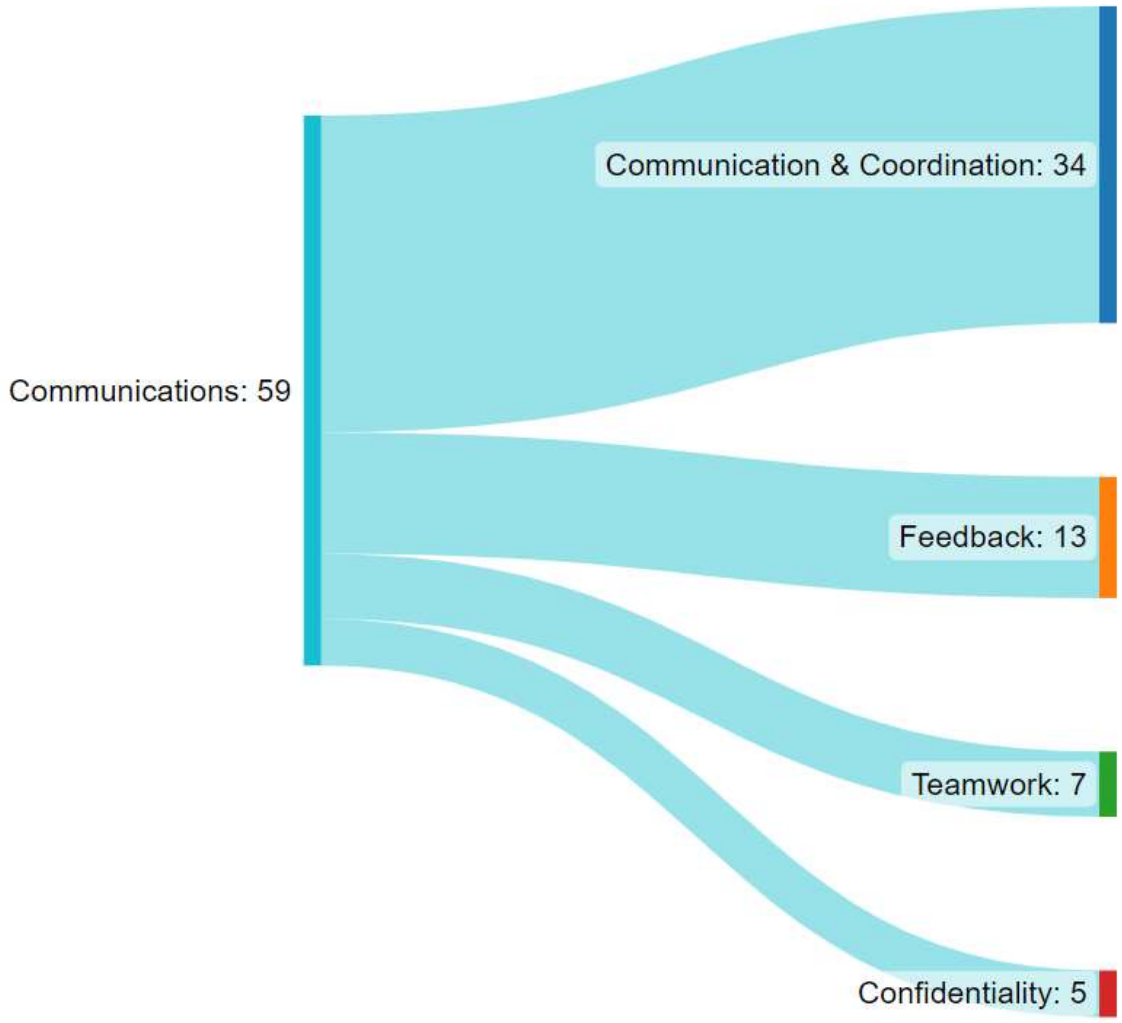
P3 stated, "In a way, you can view this process daily stand-up meeting as a feedback loop or a continuous feedback mechanism. It ensures that there are steps in place to address and resolve deviations from the KPIs throughout the program."

Top-level management generally formulates an organization's vision, mission, and strategy. Performance measurement is a critical function in a project as it provides information on the key metrics, which helps the management decision process. Managers can use the BSC to translate the vision, mission, and strategy into objectives and performance measures. Implementing a BSC or any measurement system is tough and will take much work, effort, and time to achieve a result. Of the tools available, many managers of organizations across the globe prefer the BSC as a reporting tool. To align the PMO office with the corporate strategy, the performance metrics/ BSC needs to be constantly measured and feedback provided to workers, managers, and leadership in the form of a triple feedback scorecard (Gossett et al., 2023). In addition to schedule and budget compliance, managers of an organization must identify and measure metrics for measuring KPIs that link project success to business goals and other parameters

periodically. Project status needs to be measured and communicated to the team very frequently. Once the team acknowledges the key indicators for monitoring the project, the BSC approach will increase the success of the project implementation.

Figure 6

Sankey Diagram: Proportions of Connections in Theme Communications and Codes Forming the Theme



Note. The width of the line is proportional to the number of connections found between the Theme and the codes that emerged during the interview.

Theme 3: KPI Metrics (Blood Pressure, Temperature, and Pulse)

Strategy1: Performance Criteria- Use of Key Performance Criteria

The primary purpose of using key performance criteria in an automotive manufacturer should be to identify opportunities to improve the performance of production operators. Performance measures address high-level patterns and outcomes of work, comparing various dimensions of quality and cost across departments and geographic areas. Organizations may utilize performance measures for productivity-based improvement efforts and implement profit-sharing bonus programs, which aim to enhance accountability in the workspace. According to P1, there are key performance indicators (KPIs) that she said her company regularly tracks using a scorecard approach:

Financial Perspective

- return on investment (ROI) to measure the profitability of our investments
- net profit margin to assess the effectiveness of our cost management and revenue generation
- cash flow from operations to ensure healthy cash flow and liquidity

Customer Perspective

- customer satisfaction index to gauge customer happiness and loyalty
- market share to evaluate our market position and competitiveness

Internal Processes Perspective

- cycle time measures the time taken to complete a process or deliver a product/service

- process efficiency to assess how effectively we utilize resources to achieve desired outcomes
- defect rate or quality metrics to monitor the level of defects or errors in our processes/products
- employee productivity to evaluate the efficiency and output of our workforce
- inventory turnover to track how quickly we sell or utilize our inventory

Learning and Growth Perspective

- employee satisfaction and engagement to measure the level of employee happiness and commitment
- employee turnover rate to monitor employee retention and identify potential issues
- training hours per employee to assess the investment in employee development and learning

By regularly tracking these KPIs across the different perspectives, P1 stated that we gain valuable insights into our financial performance, customer satisfaction, internal processes, and the growth and development of our employees. This allows us to make informed decisions and take proactive actions to improve our overall performance and achieve our organizational objectives.

P2 stated,

The KPIs that we track regularly are as follows: I'll try to explain them here. So, we use a scorecard approach. Start with a financial, formal financial perspective; we do ROI or return on investment, net profit margin, and cash flow from

operations. The next category is customer perspective, the customer Satisfaction Index and market share. From an internal process perspective, the next category is cycle time, process efficiencies, defect rate or quality matrix, employee productivity, and inventory turnover. And then lastly, from a learning and growth perspective, we would measure employee satisfaction and engagement, Employee turnover rates, and then training hours per employee. These are just some of the metrics we are measuring.

Strategy 2: Performance Standards- Use of Key Performance Standards

The proper performance of the management control and leadership function is critical to the success of an organization. Sr Level Managers must execute a series of steps after setting plans in place to ensure the implementation of the plans. Managers can follow the steps in the basic control process for almost any application, such as improving product quality, reducing waste, and increasing sales. The basic control process includes establishing performance standards to answer how well we should do. These performance standards can be in the form of goals, such as revenue from sales over a period of time. Managers can establish standards based on individual performance compared to a company average or team performance compared to a team average.

The standards can also be referred to as benchmarks if they are predetermined, and benchmarking is the process of setting them. To determine benchmarks, you need to measure your work against something else. There are a variety of things you can set benchmarks against, including

- Competitors: Comparing your work or desired results against your competitors shows you what's normal in the industry and what customers expect. Once you know this, you can adjust your business, product, or messaging to remain competitive.
- Previous results: Using previous results as your benchmarks shows you if you're improving internally and helps you identify gaps in your processes and workflows. If you're improving, you can double down on what you're doing (because it's working). If you're not, this is a great opportunity to make changes.
- Goals: Using goals as a benchmark shows if your results are what you expected or initially wanted when you began. If you're falling short, you might need to adjust your goals to ensure they're achievable.

In the Harbour Report, the word Automotive is a valuable cooperative benchmarking tool automakers use to improve labor productivity, quality, and efficiency. Over 2,000 unique data points are collected and independently analyzed by the Harbour Report team as part of our analysis. While the global automotive industry experienced a record low point in 2009, with sales of only 61.9 million units, 2014 was the fifth consecutive year of sales growth, with vehicle sales reaching 86.5 million. Since the global crisis in 2009, when the US automotive industry, including General Motors and Chrysler, required billions in government bailout money for rescue, significant changes have occurred. Since then, the automotive industry landscape has changed drastically, with manufacturers and suppliers re-evaluating how they do business globally. The

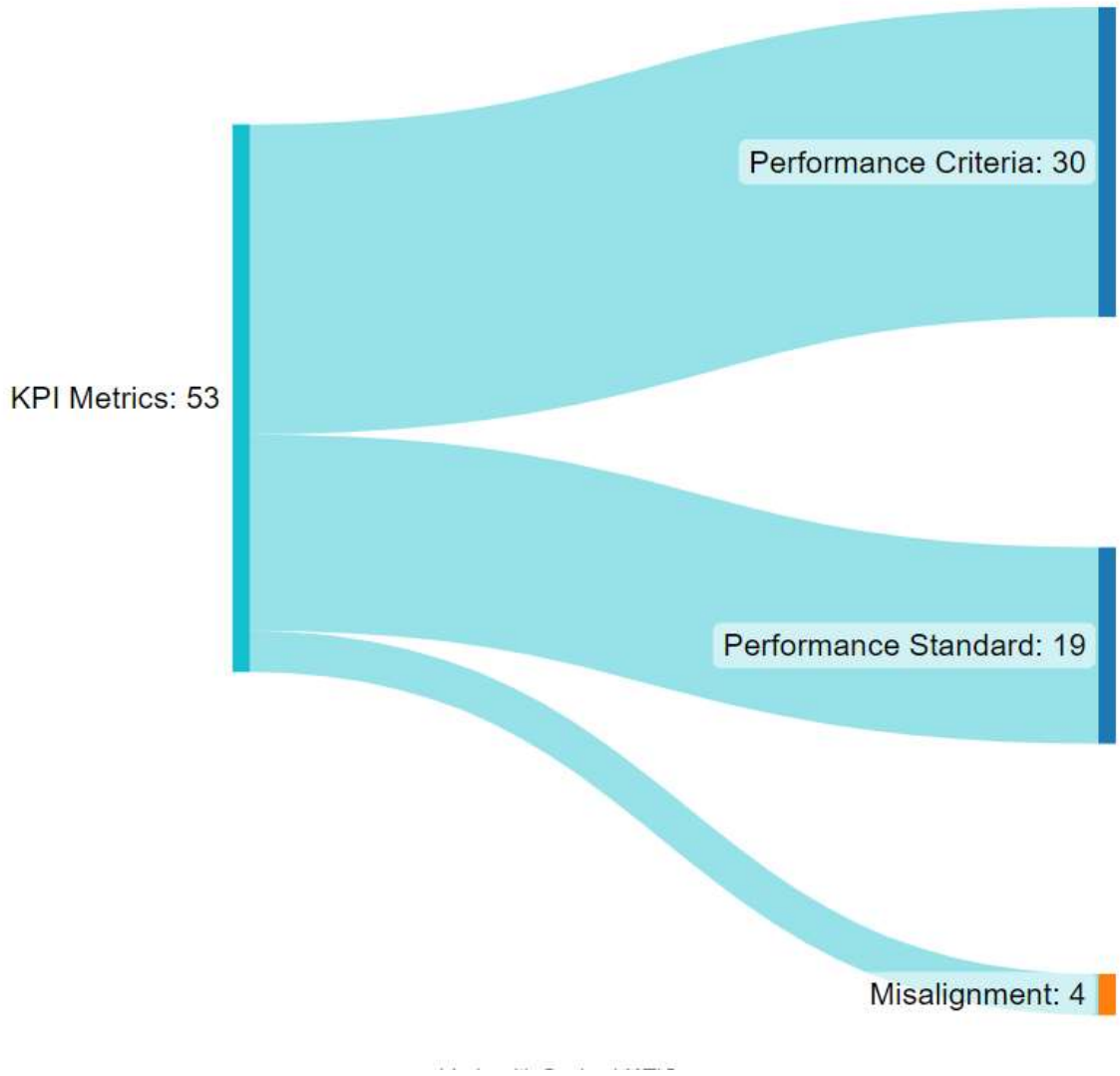
industry has shown signs of drastic recovery in the wake of the global crisis, but that recovery has been highly uneven. Oliver Wyman and the Harbour Report™ team have had a front-row seat in observing the transformational changes that have occurred and continue to transpire in the industry. The Harbour Report™ has been the pre-eminent auto industry authority on manufacturing performance since 1989. Since the original publication, the report has evolved and grown from three regional studies to one confidential report with over 400 sites globally across 25 countries. The Harbour Report™ Automotive is a valuable cooperative benchmarking tool automakers use to improve labor productivity, quality, and efficiency. Over 2,000 unique data points are collected and independently analyzed by the Harbour Report team as part of our analysis. The Harbour Report team has had the unique opportunity to visit almost every factory that builds cars, trucks, stampings, engines, and transmissions worldwide – many of them multiple times. Many trends and changes witnessed during the downturn remain relevant as the industry recovers from the global crisis. Consolidation has led to manufacturers shifting from single-model plants to producing multiple models and body styles, resulting in logistics challenges and cost pressures for suppliers. Flexibility, quality, environmental responsibility, safety, and performance efficiency are standard business requirements for global survival and competitiveness. Launching new models – with increased part complexity, variants, infotainment, and alternative propulsion systems – challenges manufacturers.

2014 topped the record for product recalls driven by common parts and component strategies across vehicles, brands, and regions. Manufacturing productivity

improvements are often offset due to these continuing industry challenges. While differences exist across manufacturers, regions, and plants, far more similarities exist. The auto industry is aggressively searching for cost-saving economies of scale by focusing on “more from less” creative solutions. Oliver Wyman has helped facilitate the sharing of competitive benchmarking among all of the world’s major vehicle manufacturers and, through this process, has helped the entire industry raise its level of competitiveness.

Figure 7

Sankey Diagram: Proportions of Connections in Theme-KPI Metrics and Codes Forming the Theme



Note. The width of the line is proportional to the number of connections found between the Theme and the codes that emerged during the interview.

Themes and Conceptual Framework

I selected the BSC as my conceptual framework for this study because the company has proven very helpful and supportive to their many customers. They offer a comprehensive assessment of an organization's performance by incorporating both financial and non-financial metrics from various viewpoints in a balanced manner. As a result, BSC applications in project management have increased significantly. There is a strong focus on BSCs' role in improving project performance and stakeholder satisfaction (Marzuki et al., 2020). Of course, from a system's standpoint, when project performance goes up, stakeholder satisfaction also goes up. These variables are directly related to one another (+). If x goes up, y goes up. If x goes down, then y goes down. The full circle needs to include effective leadership at the top.

The participants in my study identified the importance of communication as the second most important theme in the study. Many business managers have not been able to predict or imagine the social implications of doing things to help the bottom line improve while increasing their production capacity and profits. Knowledgeable leaders can accomplish this task through teamwork, support, and properly recognizing individual accomplishments, even in the most negative working environments. Communications need to bring out the best, the brightest, the most dedicated to the company, and people who want to bring problems to management's attention or have questions they want to ask. They may also have suggestions on ways to make the company more productive. The promising future of robotics and artificial intelligence will make communications

even more important to avoid unnecessary and catastrophic problems like we have seen in our railway systems in 2023.

The importance of having the "right KPI metrics" to monitor, evaluate, be subject to data analysis, and compared with standards (Benchmarks) to evaluate performance by using a triple loop feedback system (Gossett et al., 2019). Individuals, managers, and stakeholders need feedback, and we can utilize a BSC system to publicly release information on the financial and nonfinancial measures covered in my literature review. I firmly believe that my chosen themes were well-suited for my conceptual framework, primarily due to their consistent alignment with the values exemplified by the BSC in their interactions with others. The perceived ease of use and perceived usefulness of the BSC make this approach and philosophy suitable for my conceptual framework.

Themes and the Review of the Literature

Several studies have investigated the identification of themes, the implementation, and the effect of the BSC in various industries. For example, according to Cignitas et al. (2022), BSC positively affects Positive Management (PM) in organizations, an HR management form that prioritizes the themes of employee strengths, well-being, and appreciation. Researchers found that implementing BSC facilitated employee education and development, prioritizing positive management to enhance organizational performance and productivity. Ali et al. (2022) conducted a study on BSC implementation in healthcare organizations and found that BSC themes can improve strategic management efficiency and existing capabilities and routines, but single-loop learning cannot develop new capabilities. The authors of this study emphasized the

importance of linking organizational values with vision as a theme to optimize learning effects.

Researchers demonstrated the effectiveness of the BSC in aligning an organizational strategy theme with performance targets and addressing performance measurement challenges across various industries. Rasida et al. (2021) conducted a study to implement a BSC design that aligns the themes of the vision and strategy of PDAM Hulu Sungai Utara to achieve desired performance targets. In this study, the authors found that the measurements aligned with strategic objectives in each perspective, facilitating PDAM HSU in achieving its goals. Victor and Farooq (2021) developed a digital dashboard based on BSC to address the themes of inconsistency, comparability, and timeliness issues in the healthcare sector. The dashboard provided a comprehensive view of the organization's performance, enabling decision makers to make data-driven decisions. Asdiana et al. (2021) evaluated a hotel's performance during the COVID-19 pandemic and designed a business strategy using BSC for the new normal period. In this study, they highlighted the usefulness of BSC in identifying key performance indicators and setting targets to measure and manage the hotel's performance.

BSC is an effective strategic management tool used by managers in various industries. In a study by Chao et al. (2021), the researchers explored the learning styles of BSC implementation in the healthcare industry and found that BSC learning can improve strategic management efficiency and strengthen existing capabilities and routines. The authors of this study found that employees prefer following existing routines and rules but lack the power and right to make changes, limiting single-loop learning in developing

new capabilities. Miftahul and Rhoni (2020) analyzed the BSC as an alternative tool for school management systems, showing that it can be used as a comprehensive management system for strategic management, translating an organization's vision, mission, themes, and strategies into a set of performance measurements.

Other researchers examined the sustainability and challenges of implementing BSC in various industries. Gooneratne and Hoque (2021) investigated the fate of BSC in a Sri Lankan commercial bank and found that the sustainability of BSC depends on the efforts and relative power of its advocates. Imanda et al. (2021) used the sustainability BSC model to investigate the acceptance of PTKIN's performance in terms of social and environmental responsibility. In their study, the authors identified themes such as challenges involving budgeting, regulations, and paradigms that policymakers need to address to implement the BSC model effectively. These studies demonstrate the usefulness of BSC and other management accounting practices in improving performance management methodologies in various industries (Pigatto et al., 2023).

Sycheva and Shramchenko (2020), Bertz and Quinn (2022), and Khalid et al. (2022) each conducted studies exploring different aspects of implementing the BSC in various organizations. Sycheva and Shramchenko (2020) investigated the role of BSC in project-oriented organizations. Bertz and Quinn (2022) explained how individuals could bring new ideas from their past experiences into a housing department dealing with a lack of money due to external factors. Bertz and Quinn (2022) called this "situated rationality," as the individual's experience can help the department find new solutions. Khalid et al. (2022) explored the challenges and motivations of integrating environmental

performance into BSCs in an Australian public health service organization, identifying internal barriers such as limited environmental commitment practices and organizational culture as challenges, recruiting sustainability expertise, and recognizing external pressures as solutions.

The BSC has emerged as a popular strategic management tool organizations use to improve performance and achieve their objectives. Quesado et al. (2022) proposed the implementation of the BSC in a large Portuguese textile company to improve organizational performance. The company had established the main pillars for building the BSC, including mission, values, vision, themes, and strategies, and had an open culture dedicated to clear communication of strategic objectives. Factors such as time availability, organizational culture, and commitment to executing this strategic management tool may hinder its implementation. Mozhdeh et al. (2020) proposed a compensation model for executive directors in private manufacturing companies based on a BSC framework. Leadership, communications, and having the right KPIs can make all the difference for an organization in getting worse, staying the same, or making extraordinary progress.

Applications to Professional Practice

In my study, I explored the strategies that project managers of a single automotive manufacturer used to leverage operational performance. The eligibility criteria for selecting the participants for the single-case study included three project managers who have successfully implemented BSC strategies in their workplace. The three themes that emerged from data collection were (a) Leadership (Keep people informed, involved,

interested, and inspired), (b) Communications (Timely, honest, and relevant); and (c) KPI Metrics (Blood Pressure, Temperature and Pulse). In the study, participants discussed how establishing successful project strategies could improve operational performance and ensure efficiency.

The results of my study could help leaders and managers in the automotive industry. Professional practice leaders might use these three themes to understand the strategies that will allow them to plan proactively, anticipate unexpected disruptive events, build collaborative networks, respond effectively in a crisis, and remain resilient with a high level of sustainability in increasingly challenging operational circumstances. I, Dr. Kenneth Gossett, and Dr. Warren Lesser developed a Feedback Model that presents an overview of the themes and strategies (refer to the model in Appendix D).

Implications for Social Change

The results of this study may be important regarding social change because some projects can serve as a valuable source of information for businesses to improve their success and social standing in their communities. Employees and local citizens may benefit when the profitability of a large company is augmented or increased. As that takes place, the employees' worth, dignity, and development may improve, resulting in improved employee morale and job satisfaction, which may further benefit the health and financial status of the employees. In addition, communities may benefit from a successful organization through increased tax revenues for benefitting citizens and company employees supporting local charitable causes and worthwhile projects.

Recommendations for Action

Focusing on several key strategies is recommended to enhance leadership effectiveness in the automotive industry. Firstly, leaders should provide help and support to subordinates through coaching, utilizing key performance metrics (KPM), and data analysis enabled by technology. Implementing tools like scorecards and project tracking systems will enable timely, transparent, and transformational leadership. Leveraging big data analytics capabilities will generate valuable insights for organizational transformation. Incorporating technology, such as the Qlik tool, automates reporting processes and enhances data gathering.

Implementing a balanced scorecard (BSC) facilitates translating the organization's vision, mission, and strategy into measurable objectives. Fostering a culture of accountability by holding managers and directors responsible for missed objectives is crucial. Managers should use an internal 360-degree review process to gather feedback and identify areas for improvement. Encouraging partnerships, collaborations, and clear policies fosters integration and change management. Leaders must set priorities, effectively lead projects, and ensure full implementation to realize the desired benefits and improvements. Maintaining a balanced approach when adopting new technologies is essential, recognizing their potential advantages in making informed decisions.

Managers should implement daily stand-up meetings (DSM) with visual management to improve communications within the automotive industry. DSMs should focus on current and future deliverables, enhancing communication, coordination, and

visibility within the team. Designing a visual communication system and utilizing a visual management board (VMB) will complement DSMs and facilitate status reporting and problem-solving. Overcoming challenges such as resistance to change and integrating visual tools with existing systems is crucial. Additionally, implementing a triple feedback loop involving the assembly line, mid-level managers, and heads of departments will enhance project implementation efficiency. Utilizing tools like the balanced scorecard (BSC) to measure performance and provide constant feedback on key metrics and KPIs will improve communications and decision-making processes.

To enhance performance management in the automotive industry, Senior leaders must focus on two key strategies. Firstly, managers should identify and implement key performance criteria, encompassing financial, customer, internal processes, and learning and growth perspectives. Tracking KPIs such as ROI, net profit margin, customer satisfaction, cycle time, and employee productivity provides valuable insights for informed decision-making and proactive actions. Secondly, managers should implement the key performance standards as a benchmark. Managers can use industry competitors, previous results and set goals to determine the benchmark standards. Benchmarking tools like the Harbour Report™ can improve labor productivity, quality, and efficiency. By leveraging key performance criteria and standards, automotive organizations can drive accountability, productivity, and competitiveness, improving overall performance and achieving organizational objectives.

Recommendations for Further Research

The purpose of this qualitative single case study was to explore the strategies used by some project managers in an automotive manufacturing firm to align various departments' deliverables with the project milestones to completion to improve the project's success rates. The target population consisted of three managers from key functional departments with proven experience in successful project management in an automotive firm located in the north central region of the United States. I chose a single case study design to fully understand successful project management strategies used in multiple departments of one of the largest manufacturing firms in this country, which was of interest and relevant to my research question. After I received approval from the Walden Institutional Review Board (IRB), I sought access to participants within the automotive firm through my personal network to schedule my qualitative interviews. I conducted semistructured interviews for the qualitative research. I held interviews with the participants using Microsoft teams.

Researchers should conduct future research in other industries outside of automotive, which could lead to a greater variety of strategies to ensure alignment of program milestones with departmental milestones. To enhance the applicability of the study, it is advisable to conduct research in multiple geographical locations, as conducting research in a single location may restrict the generalization of the study. Another area worth exploring is adding Leadership and Supply Chain as a perspective in the BSC metrics.

Reflections

Completing my doctoral degree in Business Administration has been a transformative and enriching experience, marking a significant milestone in my academic and professional journey. Over the years, this rigorous program has equipped me with the skills, knowledge, and mindset necessary to make meaningful contributions to the field of business. One of the most rewarding aspects of pursuing a doctoral degree in Business Administration has been the opportunity to deepen my understanding of various business disciplines. I have explored diverse subject areas, each contributing to my comprehension of the business landscape. Throughout the program, I have also honed my research skills and developed a robust understanding of various research methodologies. I have learned to critically analyze existing literature, design research studies, collect and analyze data, and draw meaningful conclusions from my findings. This emphasis on research has equipped me with the tools to contribute to the academic community and enhanced my ability to approach business problems with a systematic and evidence-based mindset.

My doctoral journey in Business Administration has been an incredible voyage of self-discovery, intellectual growth, and professional development. Engaging with fellow doctoral students, faculty members, and industry professionals has been an invaluable part of my journey. Collaborative discussions have provided platforms for exchanging ideas, receiving constructive feedback, and expanding my professional network. These interactions have broadened my perspective and opened doors to potential future collaborations and career opportunities. Completing a doctoral degree in Business Administration has demanded significant perseverance, dedication, and self-discipline.

The program has provided me with the tools and expertise to significantly contribute to the field while shaping me into a well-rounded individual with a deep understanding of business complexities. Overcoming challenges, managing time effectively, and maintaining a healthy work-life balance have been crucial aspects of this journey. Throughout the process, I have developed resilience and valuable transferable skills such as problem-solving, critical thinking, and project management.

Moreover, this experience has reinforced my passion for lifelong learning, instilling in me the desire to continually pursue personal and professional growth. As I embark on the next phase of my career, armed with my doctoral degree, I am confident that I am well-prepared to tackle the challenges and opportunities. I am grateful for the immense support and guidance I have received throughout this journey. I look forward to leveraging my newfound knowledge and skills to create a positive impact in the business world.

Conclusion

In conclusion, aligning project milestones with department milestones is crucial for the future success and performance of the automotive industry. Companies can enhance coordination, efficiency, and overall project outcomes by ensuring this alignment. Through my study, I have identified key strategies individuals/organizations can employ to achieve this alignment effectively.

Strong leadership (key people informed, involved, interested, and inspired) is essential for aligning project and department milestones. Leaders play a crucial role in keeping people informed, involved, interested, and inspired. They must provide their

subordinates with the necessary support and resources, offering coaching and guidance. Timely, transparent, and transformational leadership fosters a positive work environment and encourages collaboration, ultimately leading to successfully aligning project and department milestones.

Effective communication serves as a foundation for aligning project milestones with department milestones. To facilitate seamless information flow between project teams and departments, it is imperative to establish timely, honest, and relevant communication channels. Daily stand-up meetings with visual management can provide a platform for sharing updates, discussing progress, and identifying potential bottlenecks. Implementing a triple feedback loop involving the assembly line, mid-level managers, and heads of departments can further enhance communication, address concerns, and foster collaboration.

The use of key performance indicators (KPIs) is vital in aligning project milestones with department milestones. By establishing performance criteria based on critical success factors, automotive industries can set clear objectives for projects and departments. Performance standards can be established through benchmarking, ensuring project progress aligns with the department's goals and objectives. Regular monitoring and analysis of these KPIs enable companies to track progress, identify deviations, and take corrective actions on time.

The strategies identified may not be universally applicable to all automotive industries, as factors such as organization size, location, and staffing may vary. Therefore, it is imperative for automotive industry owners and managers to familiarize

themselves with the available strategies and carefully consider their suitability in their specific organizational context. In conclusion, automotive industries can successfully align project milestones with department milestones by implementing the identified strategies and emphasizing effective communication, using KPI metrics, and strong leadership. This alignment enhances coordination, efficiency, and overall project success, contributing to the long-term success and performance of the companies.

References

Abbasi, D., Ashrafi, M., & Ghodsypour, S. H. (2020). A multi objective-BSC model for new product development project portfolio selection. *Expert Systems with Applications*, *162*(30), Article 113757. https://doi.org/10.1016/j.eswa.2020.113757

Abdalla, M. M., Oliveira, L. G. L., Azevedo, C. E. F., & Gonzalez, R. K. (2018). Quality in qualitative organizational research: Types of triangulations as a methodological alternative. *Administração: Ensino e Pesquisa*, *19*(1), 66–98. http://doi.org/10.13058/raep.2018.v19n1.578

Abdul-Rahman, H., Chen, W., & Yap, J. (2017). Collaborative model: Managing design changes with reusable project experiences through project learning and effective communication. *International Journal of Project Management*, *35*(7), 1253–1271. http://doi.org/10.1016/j.ijproman.2017.04.010

Agarwal, S., Kant, R., & Shankar, R. (2019). Humanitarian supply chain management frameworks: A critical literature review and framework for future development. *Benchmarking: An International Journal*, *26*(6), 1749–1780. https://doi.org/10.1108/BIJ-08-2018-0245

Akman, G., & Turan, H. (2021). Extensıon of the balanced scorecard structure for banking industry. *Endüstri Mühendisliği*, *32*(1), 127–146. https://doi.org/10.46465/endustrimuhendisligi.797129

Alghamdi, B., Khadawardi, H., Alghamdi, B., Almathami, K., Alshimai, A., Alqahtani, M., Alanazi, H., Alfawaz, F., Alodhaibi, S., & Talukder, M. (2022). Key

performance indicators for measuring sustainable performance: A case study of implementing Saudi Arabia's vision 2030 strategy. *Performance Improvement Quarterly*, *34*(4), 491–519. https://doi.org/10.1002/piq.21359

Ali, I., Sami, S., Senan, N. A. M., Baig, A., & Khan, I. A. (2022). A study on corporate sustainability performance evaluation and management: The sustainability balanced scorecard. *Corporate Governance and Organizational Behavior Review*, *6*(2), 150–162. http://doi.org/10.22495/cgobrv6i2p15

Amati, M., Valnegri, A., Bressan, A., La Regina, D., Tassone, C., Lo Piccolo, A., Mongelli, F., & Saporito, A. (2022). Reducing changeover time between surgeries through lean thinking: An action research project. *Frontiers in Medicine*, *9*, Article 822964. https://doi.org/10.3389/fmed.2022.822964

Arias, J., Laksá, U., Fonseca, B. D., Diallo, M., Brahim, K., Rodríguez, A., Doblado, S. M., Galvão, J. A., Viðarsson, J. R., & Friðriksdóttir, R. (2022). Results-based management in practice: Lessons learnt and policy recommendations from the implementation of RBM in European fisheries outside Europe. *Marine Policy*, *139*, Article 105038. https://doi.org/10.1016/j.marpol.2022.105038

Asdiana, D. S., Zuhroh, D., & Parawiyati, P. (2021). Penilaian kinerja berbasis balanced scorecards (bsc) untuk melakukan rancang ulang strategi bersaing. [Performance evaluation based on balanced scorecards (BSC) for redesigning competitive strategies]. *Jurnal Manajemen Dan Kewirausahaan*, *9*(1), 26–41. https://doi.org/10.26905/jmdk.v9i1.5705

Asif, A., & Rathore, K. (2021). Behavioral drivers of performance in public-sector

organizations: A literature review. *SAGE Open*, *11*(1). https://doi.org/10.1177/2158244021989283

Aslam, H., Blome, C., Roscoe, S., & Azhar, T. M. (2020). Determining the antecedents of dynamic supply chain capabilities. *Supply Chain Management: An International Journal*, *25*(4), 427–442. https://doi.org/10.1108/SCM-02-2019-0074

Aulkemeier, F., Iacob, M.-E., & van Hillegersberg, J. (2019). Platform-based collaboration in digital ecosystems. *Electronic Markets*, *29*(4), 597–608. https://doi.org/10.1007/s12525-019-00341-2

Barbalho, S. C. M., & Silva, G. L. (2022). Control of project data and team satisfaction as results of PMO effort in new product development projects. *International Journal of Managing Projects in Business*, *15*(1), 121–149. https://doi.org/10.1108/IJMPB-02-2021-0045

Barros, R. S., & Ferreira, A. M. D. S. C. (2019). Bridging management control systems and innovation: The evolution of research and possible research directions. *Qualitative Research in Accounting & Management*, *16*(3), 342–372. https://doi.org/10.1108/QRAM-05-2017-0043

Bateman, N., Philp, L., & Warrender, H. (2016). Visual management and shop floor teams – development, implementation, and use. *International Journal of Production Research*, *54*(24), 7345–7358. https://doi.org/10.1080/00207543.2016.1184349

Bertz, J., & Quinn, M. (2022). Situated rationalities and management control change – an

empirical note on key actors, situated rationalities, and generalized practices. *Qualitative Research in Accounting & Management*, *19*(1), 77–100. https://doi.org/10.1108/QRAM-03-2021-0042

Bhattarai, R. N. (2020). Basic concepts and approaches of results-based management. *Journal of Population and Development*, *1*(1), 156–171. https://doi.org/10.3126/jpd.v1i1.33113

Bojko, M. (2021). Preface: Understanding women's lives and trauma through narrative research and analysis. *East European Journal of Psycholinguistics*, *8*(1), 8–11. https://doi.org/10.29038/eejpl.2021.8.1.boj

Boudlaie, H., Amoozad Mahdiraji, H., Shamsi, S., Jafari-Sadeghi, V., & Garcia-Pereze, A. (2020). Designing a human resource scorecard: An empirical stakeholder-based study with a company culture perspective. *Journal of Entrepreneurship, Management and Innovation*, *16*(4), 113–147. https://doi.org/10.7341/20201644

Boudlaie, H., & Shamsi, S. (2020). A qualitative study of human resource scorecard in the public sector with the key stakeholders approach: A case study of kish free zone organization.مدیریت دولتی *Journal of Public Administration*, *11*(4), 581–607. https://doi.org/10.22059/jipa.2019.283750.2570

Bowden, J., & Williams, M. (2013). *Mixed methods research for nursing and the health sciences.* John Wiley & Sons.

Bredillet, C., Tywoniak, S., & Dwivedula, R. (2018). Project management offices (PMOs) as organizational structures support more efficient and effective project management for better strategy implementation. *International Journal of Project*

Management, *36*(1), 190–204. https://doi.org/10.1016/j.ijproman.2017.07.009

Breznik, L., Lahovnik, M., & Dimovski, V. (2019). Exploiting firm capabilities by sensing, seizing and reconfiguring capabilities. An empirical investigation. *Economic and Business Review for Central and South - Eastern Europe*, *21*(1), 5–36. http://doi.org/10.15458/85451.72

Butt, A., Naaranoja, M., & Savolainen, J. (2016). Project change stakeholder communication. *International Journal of Project Management*, *34*(8), 1579–1595. https://doi.org/10.1016/j.ijproman.2016.08.010

Caine, V., Estefan, A., & Clandinin, D. J. (2013). A return to methodological commitment: Reflections on narrative inquiry. *Scandinavian Journal of Educational Research*, *57*(6), 574–586. https://doi.org/10.1080/00313831.2013.798833

Candela, A. G. (2019). Exploring the function of member checking. *The Qualitative Report*, *24*(3), 619–628. Retrieved from https://www.proquest.com/scholarly-journals/exploring-function-member-checking/docview/2213787326/se-2

Chao, H. L., Wen, G. Y., & I-Tung, S. (2021). Exploration on the gap of single- and double-loop learning of balanced scorecard and organizational performance in a health organization. *Heliyon*, *7*(12). https://doi.org/10.1016/j.heliyon.2021.e08553

Christian, Y., Suroso, S., & Untari, D. T. (2022). Project performance analysis using balanced scorecard (Case study: Manage service project at PT. X). *Dinasti International Journal of Management Science*, *3*(4), 702–714. https://doi.org/10.31933/dijms.v3i4.1138

Cignitas, C. P., Arevalo, J. A. T., & Crusells, J. V. (2022). Positive management and the balanced scorecard: A successful strategy for organizations. *Journal of Positive School Psychology*, *6*(3), 2606–2627. https://upcommons.upc.edu/handle/2117/367242

Clark, K. R., & Vealé, B. L. (2018). Strategies to enhance data collection and analysis in qualitative research. *Radiologic Technology*, *89*(5), 482CT–485CT. http://www.radiologictechnology.org/content/89/5/482CT.extract

Colorafi, K., & Evans, B. (2016, July). Qualitative descriptive methods in health science research. *HERD: Health Environments Research & Design Journal*, *9*(4), 16–25. https://doi.org/10.1177/1937586715614171

Corti, B., Golini, R., & Landoni, P. (2017). More efficient project execution and evaluation with logical framework and project cycle management: Evidence from international development projects. *Impact Assessment and Project Appraisal, 35*(2), 128–138, http://doi.org/10.1080/14615517.2016.1239495

Crick, J. M. (2021). Qualitative research in marketing: What can academics do better? *Journal of Strategic Marketing*, *29*(5), 390–429. https://doi.org/10.1080/0965254X.2020.1743738

DeJonckheere, M., Vaughn, L. M., Jacquez, F., & Baker, R. C. (2019). Flexible methods for qualitative research in community health systems. *Qualitative Health Research*, *29*(8), 1186–1197. http://doi.org/10.1136/fmch-2018-000057

Dinçer, H., & Yüksel, S. (2019). An integrated stochastic fuzzy MCDM approach to the balanced scorecard-based service evaluation. *Mathematics and Computers in*

Simulation, *166*(11), 93–112. http://doi.org/10.1016/j.matcom.2019.04.008

Dlamini, W. B., Migiro, S., & Tefera, O. (2020). The balanced scorecard and its practical application to small and medium hotels' growth in Eswatini. *African Journal of Hospitality, Tourism and Leisure*, *9*(4), 567–581. https://doi.org/10.46222/ajhtl.19770720-37

Donnelly, J., & Ika, L. (2017). Success conditions for international development capacity building projects. *International Journal of Project Management*, *35*, 44–63. http://doi.org/10.1016/j.ijproman.2016.10.005

Dubey, R., Altay, N., Gunasekaran, A., Blome, C., Papadopoulos, T., & Childe, S. J. (2018a). Supply chain agility, adaptability, and alignment: Empirical evidence from the Indian auto components industry. *International Journal of Operationsa & Production Management*, *38*(1), 129–148. https://doi.org/10.1108/IJOPM-04-2016-0173

Dubey, R., Luo, Z., Gunasekaran, A., Akter, S., Hazen, B. T., & Douglas, M. A. (2018b). Big data and predictive analytics in humanitarian supply chains. *The International Journal of Logistics Management*, *29*(2), 485–512. https://doi.org/10.1108/IJLM-02-2017-0039

Dubey, R., Gunasekaran, A., Childe, S. J., Roubaud, D., Wamba, S. F., Giannakis, M., & Foropon, C. (2019). Big data analytics and organizational culture as complements to swift trust and collaborative performance in the humanitarian supply chain. *International Journal of Production Economics*, *210*, 120–136. https://doi.org/10.1016/j.ijpe.2019.01.023

Dyer, J. H., Godfrey, P., Jensen, R., & Bryce, D. (2016). *Strategic management: Concepts and tools for creating real-world strategy.* John Wiley & Sons.

Eftekhari, A., & Torabi, A. (2022). Drawing a developed strategy map in balanced scorecard model in an iron and steel company. *IEEE Engineering Management Review, Engineering Management Review*, *50*(3), 58–69. ***https://***doi.org/10.1109/EMR.2022.3192247

Ellinas, C. (2019). The domino effect: An empirical exposition of systemic risk across project networks. *Production & Operations Management*, *28*(1), 63–81. https://doi.org/10.1111/poms.12890

Feldman, S., & Shaw, L. (2019). The epistemological and ethical challenges of archiving and sharing qualitative data. *American Behavioral Scientist, 63*(6), 699–721. https://doi.org/10.1177/0002764218796084

Flynn, A., & Walker, H. (2020). Corporate responses to modern slavery risks: An institutional theory perspective. *European Business Review*. https://doi.org/10.1108/EBR-05-2019-0092

Friday, D., Ryan, S., Sridharan, R., & Collins, D. (2018). Collaborative risk management: a systematic literature review. *International Journal of Physical Distribution & Logistics Management*, *48*(3), 231–253. https://doi.org/10.1108/IJPDLM-01-2017-0035

Gabbi, G., Giammarino, M., & Matthias, M. (2020). Die hard: Probability of default and soft information. *Risks*, *8*(2), 46. https://doi.org/10.3390/risks8020046

Gawankar, S., Kamble, S. S., & Raut, R. (2015). Performance measurement using the

balanced scorecard and its applications: A review. *Journal of Supply Chain Management Systems*, *4*(3), 6–21. https://doi.org/10.21863/jscms/2015.4.3.009

Geier, C., Adams, R. B., Mitchell, K. M., & Holtz, B. E. (2021). Informed consent for online research-is anybody reading? Assessing comprehension and individual differences in readings of digital consent forms. *Journal of Empirical Research on Human Research Ethics: JERHRE*, *16*(3), 154–164. https://doi.org/10.1177/15562646211020160

Glegg, S. M. N., Ryce, A., & Brownlee, K. (2019). A visual management tool for program planning, project management and evaluation in paediatric health care. *Evaluation and Program Planning*, *72,* 16–23. https://doi.org/10.1016/j.evalprogplan.2018.09.005

Gooneratne, T. N., & Hoque, Z. (2021). The fate of the balanced scorecard: Alternative problematization and competing networks. *Qualitative Research in Accounting & Management*, *18*(2), 255–281. https://doi.org/10.1108/QRAM-03-2020-0028

Gossett, K., Padgett, J., Pierce, S., & Scott, J. (2019). The Tau conceptual framework for understanding healthcare and human service programs. Journal of Academic Perspectives. Volume 2019 No. 3, ISSN 2328-8264

Gossett, K. D., Padgett, J. D., Pierce, S. M., & Scott, J. L. (2023). Complex adaptive systems theory and the Tau conceptual framework for understanding healthcare and human services in the United States. *Journal of Health and Human Services Administration*, *46*(1), 1–19. https://doi.org/10.37808/jhhsa.46.1.1

Hayashi, P. J., Abib, G., & Hoppen, N. (2019, January). Validity in qualitative research:

A processual approach. *The Qualitative Report*, *24*(1), 98–112. https://doi.org/10.46743/2160-3715/2019.3443

Hegazy, M., Hegazy, K., & Eldeeb, M. (2022). The balanced scorecard: Measures that drive performance evaluation in auditing firms. *Journal of Accounting, Auditing & Finance*, *37*(4), 902–927. https://doi.org/10.1177/0148558X20962915

Henao, R., & Sarache, W. (2022). Sustainable performance in manufacturing operations: The cumulative approach vs. trade-offs approach. *International Journal of Production Economics, 244*. Article 108385. https://doi.org/10.1016/j.ijpe.2021.108385

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. Social Science & Medicine, 292. Article 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Henriques, G. (2014). In search of collective experience and meaning: A transcendental phenomenological methodology for organizational research. *Human Studies*, *37*(4), 451–468. https://doi.org/10.1007/s10746-014-9332-2

Holliman, A., Thomson, A., & Hird, A. (2020). Collaborative project brief scorecard method: evaluating product design projects to aid design effort estimation. *Proceedings of the Design Society: Design Conference*, *1*, 1445–1454. https://doi.org/10.1017/dsd.2020.298

Hoyo, V., & Bouland, D. L. (2022). Lessons learned: Evaluating the role of a balanced scorecard in the strategic management of a translational science research institution. *Physician Leadership Journal*, *9*(5), 16–22.

https://doi.org/10.55834/plj.1620793732

Husband, G. (2020). Ethical data collection and recognizing the impact of semistructured interviews on research respondents. *Education Sciences*, *10*(206), 1–12. https://doi.org/10.3390/educsci10080206

Imanda, F. P. P., Rosana, E. P., & Saifudin, S. (2021). Responsibility and accountability of university social and environmental performances: A sustainability balanced scorecard model. *Shirkah*, *6*(1), 1–17. https://doi.org/10.22515/shirkah.v6i1.343

Isharyanto, F., Parker, W. D., & Parsons, N. (2015). Inclusion of strategic management theories to project management. *International Journal of Managing Projects in Business*, *8*(3), 552–573. http://doi.org/10.1108/IJMPB-11-2014-0079

Ismail, A. M., & Abdullah, A. M. (2019). The impact of results-based management on performance measurement in public organizations: A systematic review. *International Journal of Public Administration*, *42*(8), 728–742. https://doi.org/10.1080/01900692.2018.1511136

Järvenpää, M., Kallio, K. M., Kallio, T., & Rautiainen, A. (2021). The chain of control in results-based management in Finnish universities. *In Public Sector Reform and Performance Management in Developed Economies: Outcomes-Based Approaches in Practice (pp. 177–192).* London, New York, NY: Routledge.

Johnson, C. W., & Rose, J. (2020). Contextualizing reliability and validity in qualitative research: Toward more rigorous and trustworthy qualitative social science in leisure research. *Journal of Leisure Research*, *51*(4), 432–451. http://doi.org/10.1080/00222216.2020.1722042

Jones, D. M., & Doberstein, B. (2022). Encouraging co-benefits in climate-affected hazard adaptation: Developing and testing a scorecard for project design and evaluation. *International Journal of Disaster Risk Reduction, 74.* https://doi.org/10.1016/j.ijdrr.2022.102915

Juliana, K., Leandro, W., & Júlio, M. T. (2021). Visual management of audiovisual projects: Improving the creative process of production design. *ModaPalavra E-Periódico*, *14*(31), https://www.redalyc.org/journal/5140/514065956010/514065956010.pdf

Kaewkungwal, J., & Adams, P. (2019). Ethical consideration of the research proposal and the informed-consent process: An online survey of researchers and ethics committee members in Thailand. *Accountability in Research: Policies & Quality Assurance*, *26*(3), 176–197. https://doi.org/10.1080/08989621.2019.1608190

Kaplan, R. S., & Norton, D. P. (2001). The strategy-focused organization: How balanced scorecard companies thrive in the new business environment. *Harvard Business Press.*

Khalid, S. K., Beattie, C., & Sands, J. S. (2022). Barriers and motivations to integrating environmental performance in the BSC: A case study in health care. Sustainability *Accounting, Management & Policy Journal*, *13*(2), 297–319. https://doi.org/10.1108/SAMPJ-09-2020-0325

Khoori, A. A. A. G. A., & Hamid, M. S. R. A. (2022). Success Factors of PMO Implementation for UAE project-based organizations. *International Journal of Sustainable Construction Engineering and Technology*, *13*(4), 224–237.

https://doi.org/10.30880/ijscet.2022.13.04.020

Kim, S., Connerton, T. P., & Park, C. (2021). Exploring the impact of technological disruptions in the automotive retail: A futures studies and systems thinking approach based on causal layered analysis and causal loop diagram. *Technological Forecasting & Social Change, 172*, Article 121024. https://doi.org/10.1016/j.techfore.2021.121024

Kiriri, P. N. (2022). Management of performance in higher education institutions: The application of the balanced scorecard (BSC). *European Journal of Education (EJE)*, *5*(1), 144–158. https://files.eric.ed.gov/fulltext/EJ1348803.pdf

Korstjens, I., & Moser, A. (2017). Series: practical guidance to qualitative research. Part 4: trustworthiness and publishing. *European Journal of General Practice*, *23*(1), 120–124. https://doi.org/10.1080/13814788.2017.1375092

Kumar, J., Prince, N., & Baker, H. K. (2021). Balanced Scorecard: A systematic literature review and future research issues. *FIIB Business Review. 11(2).* https://doi.org/10.1177/23197145211049625

Kurdve, M., Harlin, U., Hallin, M., Söderlund, C., Berglund, M., Florin, U., & Landström, A. (2019). Designing visual management in manufacturing from a user perspective. *Proceia CIRP*, *84* , 886–891. http://doi.org/10.1016/j.procir.2019.04.310

Kurpjuweit, S., Reinerth, D., Schmidt, C. G., & Wagner, S. M. (2019). Implementing visual management for continuous improvement: barriers, success factors and best practices. *International Journal of Production Research, 57(17),* 5574–5588.

https://doi.org/10.1080/00207543.2018.1553315

Kusrini, E., & Sahraen, A. N. (2021). Risk mitigation using integration enterprise risk management and balanced scorecard model [A Case Study in a Consulting Services Company in Indonesia]. *Spektrum Industri: Jurnal Ilmiah Pengetahuan Dan Penerapan Teknik Industri*, *19*(1), 73–85. https://doi.org/10.12928/si.v19i1.17830

Kwak, D.-W., Seo, Y.-J., & Mason, R. (2018). Investigating the relationship between supply chain innovation, risk management capabilities and competitive advantage in global supply chains. *International Journal of Operations & Production Management*, *38*(1), 2–21. https://doi.org/10.1108/IJOPM-06-2015-0390

Lianto, C. N., & Andono, F. A. (2022). Kesiapan perusahaan dalam penerapan balance scorecard: Studi kasus pada pt a. [Company readiness in implementing balanced scorecard: A case study of PTA. *SAR (Soedirman Accounting Review): Journal of Accounting and Business*, *7*(1), 24–34. https://doi.org/10.32424/1.sar.2022.7.1.5704

Liu, S. (2022). Internal economic management and performance evaluation method of enterprise based on balanced scorecard. *Discrete Dynamics in Nature & Society, 2022,* 1–13. https://doi.org/10.1155/2022/5071667

Lucianetti, L., Battista, V., & Koufteros, X. (2019). Comprehensive performance measurement systems design and organizational effectiveness. *International Journal of Operations & Production Management*, *39*(2), 326–356. https://doi.org/10.1108/IJOPM-07-2017-0412

Mahabir, R. J., & Pun, K. F. (2022). Revitalizing project management office operations in an engineering-service contractor organization: A key performance indicator based performance management approach. *Business Process Management Journal*, *28*(4), 936–959. https://doi.org/10.1108/BPMJ-10-2021-0655

Majava, J., Haapasalo, H., & Aaltonen, K. (2019). Elaborating factors affecting visual control in a big room. *Construction Innovation*, *19*(1), 34–47. https://doi.org/10.1108/CI-06-2018-0048

Marzuki, S., Laksmono, B. S., & Subroto, A. (2020). Improving government's performance management by using the balanced scorecard on stakeholders perspectives. *Journal of the Community Development in Asia (JCDA)*, *3*(3), 29–47. https://ejournal.aibpmjournals.com/index.php/JCDA/article/view/888

Maxwell, J. A. (2015). Expanding the history and range of mixed methods research. *Journal of Mixed Methods Research*, *10*(1), 12–17. https://doi.org/10.1177/1558689815571132

McGrath, J., & Košťálová, J. (2020). Project management trends and new challenges 200+. *Hradec Economic Days. 10(1),* 534–542. https://doi.org/10.36689/uhk/hed/2020-01-061

McInnes, S., Peters, K., Bonney, A., & Halcomb, E. (2017, January). An exemplar of naturalistic inquiry in general practice research. *Nurse Researcher (2014+)*, *24*(3), 36–41. https://doi.org/10.7748/nr.2017.e1509

Miftahul, H., & Rhoni, R. (2020). Balanced scorecard sebagai alternatif tool sistem manajemen sekolah abad 21 [Balanced scorecard as an alternative tool for the

21st century school management system]. *Tadbir: Jurnal Studi Manajemen Pendidikan*, *4*(2), 201–214. https://doi.org/10.29240/jsmp.v4i2.1619

Mikalef, P., Krogstie, J., Pappas, I. O., & Pavlou, P. (2020). Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Information & Management*, *57*(2), 103–169. https://doi.org/10.1016/j.im.2019.05.004

Mishra, S., & Dey, A. K. (2022). Understanding and identifying 'themes' in qualitative case study research. *South Asian Journal of Business and Management Cases*, *11*(3), 187–192. https://doi.org/10.1177/22779779221134659

Mochammad, R., Maya, K., & Khairunnisa, A. (2020). Strategi peningkatan peringkat perguruan tinggi versi kemristekdikti (Studi pada Universitas Brawijaya) [The strategy for improving university rankings according to the Ministry of Research, Technology, and Higher Education (a study of Brawijaya University)]. Kelola: *Jurnal Manajemen Pendidikan*, *7*(1), 86–97. https://doi.org/10.24246/j.jk.2020.v7.i1.p86-97

Mofolasayo, A., Young, S., Martinez, P., & Ahmad, R. (2022). How to adapt lean practices in SMEs to support Industry 4.0 in manufacturing. *Procedia Computer Science, 200,* 934–943. https://doi.org/10.1016/j.procs.2022.01.291

Moon, M. D. (2019, January). Triangulation: A method to increase validity, reliability, and legitimation in clinical research. *Journal of Emergency Nursing*, *45*(1), 103–105. https://doi.org/10.1016/j.jen.2018.11.004

Mozhdeh, G., Gholamreza, K., Hamid, H., & Abbas, A. D. (2020). Developing a model

for executive directors compensation plan based on balanced scorecard framework)*11*(2)31(69 , مجله دانش حسابداری.
https://doi.org/10.22103/jak.2020.14153.3003

Mtisi, S. (2022). The qualitative case study research strategy as applied to a rural enterprise development doctoral research project. *International Journal of Qualitative Methods*, *21*, 1–13. https://doi.org/10.1177/16094069221145849

Muhsina, I. F., & Nory, Z. K. (2022). Extended balanced scorecard approach for evaluating the performance of Iraqi construction companies. *Journal of Management Information & Decision Sciences*, *25*(5), 1–10. https://www.researchgate.net/profile/Ibrahim-Muhsin/publication/361700442_Extended_Balanced_Scorecard_Approach_for_Evaluating_the_Performance_of_Iraqi_Construction_Companies/links/62c046280bf6950edea535b9/Extended-Balanced-Scorecard-Approach-for-Evaluating-the-Performance-of-Iraqi-Construction-Companies

Nadig, N., Hynden, L., Sterba, K., McElligott, J., Valenta, S., Warr, E., Beeks, R., & Ford, D. (2021). Preliminary development of value scorecards as ICU telemedicine evaluation tools. *Journal of Healthcare Management*, *66*(2), 124–138. https://doi.org/10.1097/JHM-D-19-00188

National Commission for the Protection of Human Subjects and Biomedical and Behavioral Research. (1979). *The Belmont Report: Ethical principles and guidelines for the protection of human subjects of research*. Washington, DC: U.S. Department of Health and Human Services.

Nguyen, P. H., Tsai, J. F., Nguyen, V. T., Vu, D. D., & Dao, T. K. (2020). A decision support model for financial performance evaluation of listed companies in the Vietnamese retailing industry. *Journal of Asian Finance, Economics, and Business*, *7*(12), 1005–1015. https://doi.org/10.13106/jafeb.2020.vol7.no12.1005

Nha, V. (2021). Understanding validity and reliability from qualitative and quantitative research traditions. *VNU Journal of Foreign Studies, 37(3),* 1–10. https://doi.org/10.25073/2525-2445/vnufs.4672

Ntshwene, K., Ssegawa, J. K., & Rwelamila, P. D. (2022). Key performance indicators (KPIs) for measuring PMO services in selected organizations in Botswana. *Procedia Computer Science*, *196*, 964–972. https://doi.org/10.1016/j.procs.2021.12.098

Nyameke, E., & Haapasalo, H. (2022). Identity formation and maintenance in a large hospital construction project. *Project Leadership and Society*, *3*, 1–10. https://doi.org/10.1016/j.plas.2022.100058

Ogwu, K., & Naicker, V. (2023). The role of information technology innovations on organizational performance: A case study of selected SMEs. *EUREKA: Social & Humanities*, *1*, 3–13. https://doi.org/10.21303/2504-5571.2023.002760

Oliveira, C., Martins, A., Camilleri, M. A., & Jayantilal, S. (2021). Using the balanced scorecard for strategic communication and performance management. *Emerald Publishing Limited*. 73–88. https://doi.org/10.1108/978-1-80071-264-520211005

Parast, M. M. (2020). The impact of R&D investment on mitigating supply chain disruptions: Empirical evidence from U.S. firms. *International Journal of*

Production Economics, 227, 107671. https://doi.org/10.1016/j.ijpe.2020.107671

Paulus, T. M., Pope, E. M., Woolf, N., & Silver, C. (2019). "It will be very helpful once I understand ATLAS.ti": Teaching ATLAS.ti using the Five-Level QDA method. *International Journal of Social Research Methodology*, *22*(1), 1–18. https://doi.org/10.1080/13645579.2018.1510662

Philbin, S. P., & Kaur, R. (2020). Measuring PMO performance - application of the balanced scorecard in a collaborative research context. *Journal of Modern Project Management*, *7*(4), 1–22. https://doi.org/10.19255/JMPM02212

Picciotto, R. (2020). Towards a 'New Project Management' movement? An international development perspective. *International Journal of Project Management*, *38*(8), 474–485. https://doi.org/10.1016/j.ijproman.2019.08.002

Pigatto, G., Cinquini, L., Tenucci, A., & Dumay, J. (2023). Serendipity and management accounting change. *Meditari Accountancy Research*, *31*(7), 88–115. https://doi.org/10.1108/MEDAR-09-2021-1450

Prasanna, S. R., & Haavisto, I. (2018). Collaboration in humanitarian supply chains: An organizational culture framework. *International Journal of Production Research, 56*(17), 5611–5625. https://doi.org/10.1080/00207543.2018.1475762

Psárska, M., Hašková, S., & Machová, V. (2019). Performance management in small and medium-sized manufacturing enterprises operating in automotive in the context of future changes and challenges. Sr. Ad Alta: *Journal of Interdisciplinary Research*, *9*(2), 281–287. https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=a9h&

AN=141142523&site=ehost-live&scope=site

Pulse of Profession. (2017). *Success in disruptive times.* Project Management Institute.

Quesado, P., Marques, S., Silva, R., & Ribeiro, A. (2022). The balanced scorecard as a strategic management tool in the textile sector. *Administrative Sciences*, *12*(1), 38. https://doi.org/10.3390/admsci12010038

Quezada, L. E., López-Ospina, H. A., Ortiz, C., Oddershede, A. M., Palominos, P. I., & Jofré, P. A. (2022). A DEMATEL-based method for prioritizing strategic projects using the perspectives of the balanced scorecard. *International Journal of Production Economics*, *249*, Article 108518. https://doi.org/10.1016/j.ijpe.2022.108518

Rad, P. F., & Levin, G. (2006). *Metrics for Project Management: formalized approaches.* Vienna, VA: Management Concepts.

Rasida, C., Putra, H. S., & Wardhaningrum, O. A. (2021). Desain balanced scorecard untuk mencapai target strategis pdam hulu sungai utara, kalimantan selatan [Design a balanced scorecard to achieve strategic targets for the upstream North River water supply company, South Kalimantan]. *Jurnal Manajemen Stratejik Dan Simulasi Bisnis*, *2*(2), 40–54. https://doi.org/10.25077/mssb.2.2.40-54.2021

Ravindran, V. (2019). Data analysis in qualitative research. *Indian Journal of Continuing Nursing Education*, *20*(1), 40–45. http://doi.org/10.4103/IJCN.IJCN_1_19

Ravitch, S. M., & Carl, N. M. (2016). *Qualitative research: Bridging the conceptual, theoretical, and methodological.* Sage Publications.

Reinaldy, M. D. A., Elquthb, J. N., Yudhistira, G. A., & Qurtubi, N. F. N. (2023).

Hospital Performance Measurement with the Balanced Scorecard. *2023 International Conference on Cyber Management and Engineering (CyMaEn,* 2023 International Conference On, 138–142. https://doi.org/10.1109/CyMaEn57228.2023.10051067

Rengel, R., José Monteiro, J., Murilo Petri, S., & Schnorrenberger, D. (2020). Planejamento estratégico em um escritório de contabilidade em processo de sucessão familiar. *Revista Gestão Organizacional (RGO)*, *13*(2), 6–25. https://doi.org/10.22277/rgo.v13i2.5190

Rodrigues, D., Godina, R., & da Cruz, P. E. (2021). Key performance indicators selection through an analytic network process model for tooling and die industry. *Sustainability*, *13*(24), Article 13777. https://doi.org/10.3390/su132413777

Rodriguez, R., Alfaro-Saiz, J.-J., & Carot, J. M. (2020). A dynamic supply chain BSC-based methodology to improve operations efficiency. *Computers in Industry*, *122*. Article 103294. https://doi.org/10.1016/j.compind.2020.103294

Ruli, C., & Kristanto, H. (2021). Implementation of balance scorecard and key performance indicator on customer service employee productivity. *EUREKA: Social & Humanities*, *4*, 26–32. https://doi.org/10.21303/2504-5571.2021.001988

Rylková, Ž., Čemerková, Š., & Pokorná, P. (2021). Key indicators of the production process in global environment. *SHS Web of Conferences*, *92*, Article 03025. https://doi.org/10.1051/shsconf/20219203025

Saliya, C. A., & Pandey, S. K. (2021). Financial battle against climate change – assessing effectiveness using a scorecard. *Qualitative Research in Financial Markets*, *13*(2),

141–160. https://doi.org/10.1108/QRFM-05-2020-0087

Sarraf, F., & Nejad, S. H. (2020). Improving performance evaluation based on balanced scorecard with grey relational analysis and data envelopment analysis approaches: Case study in water and wastewater companies. *Evaluation and Program Planning*, *79*, 1–11. https://doi.org/10.1016/j.evalprogplan.2019.101762

Saunders, M., Thornhill, N. K., & Lewis, A. P. (2019). *Research methods for business students*. Pearson Education Limited

Secundo, G., Elia, G., Margherita, A., & Leitner, K.-H. (2022). Strategic decision making in project management: a knowledge visualization framework. *Management Decision*, *60*(4), 1159–1181. https://doi.org/10.1108/MD-02-2021-0196

Sethi, R., & Rajesh, M. (2022). Assessing triple bottom line assessment framework: Asystematic approach for the manufacturing industries. *Journal of Language & Linguistics Studies*, *18*(2), 444–464. https://search.informit.org/doi/10.3316/informit.498612643305750

Shamout, M. D. (2019). Does supply chain analytics enhance supply chain innovation and robustness capability*? Organizacija*, *52*(2). https://doi.org/10.2478/orga-2019-0007

Shan, H., Li, Y., & Shi, J. (2020). Influence of Supply Chain Collaborative Innovation on Sustainable Development of Supply Chain: A Study on Chinese Enterprises. *Sustainability*, *12*(7), 2978. https://doi.org/10.3390/su12072978

Sharaf, A. H. H., & Fazel, H. (2021). Balanced scorecard development as a performance management system in Saudi public universities: A case study approach. *Asia-*

Pacific Journal of Management Research and Innovation, *17*(1–2), 57–70. https://doi.org/10.1177/2319510X211048591

Shufutinsky, A. (2020). Employing use of self for transparency, rigor, trustworthiness, and credibility in qualitative organizational research methods. *Organization Development Review*, *52*(1), 50–58. https://d1wqtxts1xzle7.cloudfront.net/93118191/UoS_in_Research_Final_PublishedODR_V52_No1_Shufutinsky-libre.pdf?1666831514=&response-content-disposition=inline%3B+filename%3DEmploying_Use_of_Self_for_Transparency_R.pdf&Expires=1683489181&Signature=cKvo3Nni2HMxP0LWOYy6ieKYebiCvgTGqN-Ly6RFQJ8709zGfwDiHCiW4TJ3xtQk~9Xv3HHQO~0vhIkNgIQ0D4J17U33z2lFLybOGwnpFaAj2I~8U~lXpNu4Z0Ay5d0lxrnGKCZaMc36B3JK0sDDnL-w-cPyiaGJ~MYO35x46Pmpsp9HtW~ngUSXBzdD3yaHrN5hJo410kZI13TEqsHiwXYihV3qe-~1QY4wELHsZR4xnmzvUWSohHQndCEpWzcwLlP3Ri2HBswtsO5MQXVpHCrFSM-E4aAIdOhtSt3kME2knMevXgs36gAj9IlRg6UiVDhYPP1jVTdTW4DcqOn-iA__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Siaudzionis, F. F. A. B., Pontes, H. L. J., Albertin, M. R., de Lima, R. L. M., & Moraes, T. C. (2018). Application of visual management panel on an airplane assembly station. *International Journal of Productivity & Performance Management*, *67*(6), 1045. https://doi.org/10.1108/IJPPM-09-2016-0189

Singh, S., & Kumar, K. (2021). A study of lean construction and visual management tools through cluster analysis. *Ain Shams Engineering Journal*, *12*(1), 1153–1162. https://doi.org/10.1016/j.asej.2020.04.019

Smith, S. (2019). Improving governance through gemba walks. *Healthcare Executive*, *34*(2), 50–51. https://www.hpsinc.ca/userContent/documents/MA19_GovInsights_reprint.pdf

Soratto, J., Pires de Pires, D. E., & Friese, S. (2020). Thematic content analysis using ATLAS.ti software: *Potentialities for research in health. Revista Brasileira de Enfermagem*, *73*(3), Article e20190250. https://doi.org/10.1590/0034-7167-2019-0250

Spiers, J., Morse, J. M., Olson, K., Mayan, M., & Barrett, M. (2018). Reflection/commentary on a past article "Verification strategies for establishing reliability and validity in qualitative research." *International Journal of Qualitative Methods*, *17*(1–2). https://doi.org/10.1177/1609406918788237

Stanciu, A. C., Condrea, E., & Zamfir, C. (2016). The importance of communication in quality management. *Ovidius University Annals, Economic Sciences Series*, *16*, 393–396. https://www.20-libre.pdf (d1wqtxts1xzle7.cloudfront.net)

Strategy Tools from MindTools. (n.d.). https://www.mindtools.com/community/pages/main/newMN_STR.php

Stray, V., Sjoberg, D. I. K., & Dybå, T. (2016). The daily stand-up meeting: A grounded theory study. *The Journal of Systems & Software*, *114*, 101–124. https://doi.org/10.1016/j.jss.2016.01.004

Sumskis, S., & Moxham, L. J. (2017, December). The use of van Kaam's psychophenomenological method to interpret the meaning of resilience in the experiences of people with schizophrenia. *Nurse Researcher (2014+)*, *25*(3), 8–13. https://doi.org/10.7748/nr.2017.e1514

Sutton, J., & Austin, Z. (2015). Qualitative research: data collection, analysis, and management. *Can J Hosp Pharm. 2015 May-Jun;68*(3):226–31. https://doi.org/10.4212/cjhp.v68i3.1456

Sycheva, S. M., & Shramchenko, T. B. (2020). Role of the balanced scorecard in project-oriented organizations. *Вестник Университета*, *2*, 148–155. https://doi.org/10.26425/1816-4277-2020-2-148-155

Takahashi, A. R., & Araujo, L. (2020). Case study research: Opening up research opportunities. *RAUSP Management Journal*, *56*(1), 100–111. https://doi.org/10.1108/RAUSP-05-2019-0109

Tavera, C. F. (2022). Caracterización de la gestión financiera para las empresas del sector de construcción del municipio de San Gil, Santander, Colombia. (Spanish). [Characterization of financial management for companies in the construction sector in the municipality of San Gil, Santander, Colombia]. *Activos, 20(1*), 109–133. https://doi.org/10.15332/25005278.7869

Tawse, A., & Tabesh, P. (2023). Thirty years with the balanced scorecard: What we have learned. *Business Horizons*, *66*(1), 123–132. https://doi.org/10.1016/j.bushor.2022.03.005

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic

management. *Strategic Management Journal*, *18*(7), 509–533. https://doi.org/10.1002/(sici)1097–0266(199708)18:7<509::aid-smj882>3.0.co;2z

Trochim, W. (2020). *Research methods knowledge base.* Conjoint.ly, Sydney, Australia. https://conjointly.com/kb/qualitative-validity/

Turan, H., Akman, G., & Aladag, Z. (2022). Evaluation of the new balanced scorecard structure via design of experiment: A case study in it departments of banks. *Journal of Industrial Engineering (Turkish Chamber of Mechanical Engineers)*, *33*(2), 346–365, https://dergipark.org.tr/en/pub/endustrimuhendisligi/issue/72166/1068873

Urban, W., & Zawadski, A. (2022). Visual performance management as a cascade-participatory information exchange system, in-depth manufacturing study. *Management & Production Engineering Review (MPER)*, *13*(1), 19–31. https://doi.org/10.24425/mper.2022.140873

Vaio, D. A., & Varriale, L. (2020). SDGs and airport sustainable performance: Evidence from Italy on organisational, accounting and reporting practices through financial and non-financial disclosure. *Journal of Cleaner Production*, *249*, 1–16. https://doi.org/10.1016/j.jclepro.2019.119431

Valčić, S. B., Dimitrić, M., & Dalsaso, M. (2016). Effective project management tools for modern organizational structures. *Annals of Maritime Studies / Pomorski Zbornik*, *51*(1), 131–145. https://doi.org/10.18048/2016.51.09

Victor, S., & Farooq, A. (2021). Dashboard visualisation for healthcare performance management: Balanced scorecard metrics. *Asia Pacific Journal of Health*

Management, *16*(2), 28–38. https://doi.org/10.24083/apjhm.v16i2.625

Waheed, F., Siddique, S., Saha, R., & Ahsan, A. (2022). Mapping of project manager competences with project complexity - a case study of it sector in Pakistan. *2022 8th International Conference on Control, Decision and Information Technologies (CoDIT), Control, Decision and Information Technologies (CoDIT), 2022 8th International Conference On*, *1*, 663–668. https://doi.org/10.1109/CoDIT55151.2022.9804023

Williams, M., & Moser, T. (2019). The art of coding and thematic exploration in qualitative research. *International Management Review*, *15*(1), 45–55. https://www.proquest.com/scholarly-journals/art-coding-thematic-exploration-qualitative/docview/2210886420/se-2

Wilson, M. M., Tatham, P., Payne, J., L'Hermitte, C., & Shapland, M. (2018). Best practice relief supply for emergency services in a developed economy: Evidence from Queensland Australia. *Journal of Humanitarian Logistics and Supply Chain Management*, *8*(1), 107–132. http://doi.org/10.1108/JHLSCM-03-2017-0008

Woeppel, M. J. (2015). *Visual project management: Simplifying project execution to deliver on time and within budget*. Pinnacle Americas Inc.

Wolff, B., Mahoney, F., Lohiniva, A. L., & Corkum, M. (2019). Collecting and analyzing qualitative data. *The CDC Field Epidemiology Manual;* Oxford University Press: Oxford, UK; New York, NY, USA, 213-228. https://doi.org/10.1093/OSO%2F9780190933692.003.0010

Xia, L., Li, X., & Meng, W. (2020). Evaluation of Innovation Management of Major

Projects. *E3S Web of Conferences*, *165*, Article 04031. https://doi.org/10.1051/e3sconf/202016504031

Xiong, G., Helo, P., Wang, F., Lu, W., Hu, B., & Xiong, G. (2021). A visual management method applied for r&d project management: A case study. *2021 IEEE 16th Conference on Industrial Electronics and Applications (ICIEA), Industrial Electronics and Applications (ICIEA), 2021 IEEE 16th Conference On*, 1850–1855. https://doi.org/10.1109/ICIEA51954.2021.9516335

Yazdi, A. K., Mehdiabadi, A., Hanne, T., Sarfaraz, A. H., & Yazdian, F. T. (2022). Evaluating the performance of oil and gas companies by an extended balanced scorecard and the hesitant fuzzy best-worst method. *Mathematical Problems in Engineering, 2022*, Article 1019779. https://doi.org/10.1155/2022/1019779

Yeong, M., Ismail, R., Ismail, N., & Hamzah, M. (2018). Interview protocol refinement: fine-tuning qualitative research interview questions for multi-racial populations in Malaysia. *The Qualitative Report*, *23*(11), 2700–2713. https://doi.org/10.46743/2160-3715/2018.3412

Yin, R. K. (2018). *Case study research and applications: Design and methods (6th ed.).* SAGE Publications.

Yu, M., Bratus, H., Karbovaska, L., & Paliy, S. (2022). Strategic maps as a form of functional strategies of motor transport enterprises in Ukraine implementation. Financial & credit activity: *Problems of Theory & Practice*, *2*(43), 296–305. https://doi.org/10.55643/fcaptp.2.43.2022.3599

Zeho, F. H., Setyowati, E., & Hermawan, R. (2020). The impact of pandemic covid-19 on

the performance of regional public hospital-based approach to balanced scorecard in rsud "x." *Wacana: Jurnal Sosial Dan Humaniora*, *23*(3), 194–199. https://wacana.ub.ac.id/index.php/wacana/article/view/822

Zimon, D., Tyan, J., & Sroufe, R. (2020). Drivers of sustainable supply chain management: Practices to alignment with UN sustainable development goals. *International Journal for Quality Research*, *14*(1). https://doi.org/10.24874/IJQR14.01-14

Appendix A: Interview Protocol

My Actions	Script
Preparation: I will contact the Human Resources Manager at the organization and submit my study participant request in preparation for the interviews. Once I receive the final list of participants, I will send out an informed consent form to all the participants. Next, I will schedule a conference call with all participants to answer any questions the participants may have. Within a week of the initial call, I will schedule the interview. I will explain the purpose of the study, their right to withdraw, and their confidentiality.	
Introduction of the interview.	Hello, thank you for participating in my doctoral study interview. Is it still a good time to talk today, or should I reschedule it for another day? If not, shall we get started?

• Repeat the questions or rephrase as needed • Ask follow-up probing questions to get more in-depth • Watch for non-verbal queues. Occasionally, you may have to move on to the next question or end the interview if required.	1. How do you track the program deliverables in your project team? 2. How often do you meet as a team to go over the status of your project? 3. How do you develop and report your team's deliverables? 4. What KPIs variables were used to measure the program metrics? 5. What were the key challenges you faced in developing and implementing the strategies and processes to align key milestones? 6. How did your organization address the key challenges to aligning program milestones to department milestones? 7. What derivative processes and tools does your department utilize to control and minimize the effect of approved scope changes on projects' schedules and budget constraints? 8. What other information would you like to provide to characterize the strategies your

	organization uses to align departments' deliverables with the project's milestones to improve the project's success rates?
Wrap up interview thanking participant.	Thank you so much for your time. The answers you have provided me to the questions are invaluable and will be very helpful for my doctoral study. Are there any questions you may have for me?
Schedule a follow-up interview.	I want to schedule a follow-up interview to clarify some of the answers you gave me during the first interview. When is a suitable time for you?
Follow-up Member Checking Interview • Review the interview transcripts • Write a synthesis after each question • Provide a copy of the synthesis to the participant • Make the necessary additions to the synthesis based on participant feedback • Continue member checking until data is validated.	

Follow-up interview introduction.	Hello, thank you once again for your time today. I will complete a follow-up interview based on your feedback during the initial interview. Shall we get started?
Script to include “Do you think I have captured all your feedback? If not, please advise what you like to add?”	1. 2. 3. 4. 5. 6. 7. 8. 9.

Appendix B: Invitation Email to Prospective Participants

Subject: Invitation to Participate in Qualitative Research Interview

Dear Name,

My name is Sashidhar Sankaranarayanan, and I am a doctoral candidate at Walden University. I am reaching out to invite you to participate in my research study that aims to explore "The strategies the managers of an automotive manufacturing firm use to align various departments' deliverables with project milestones to improve a project's success rates?" According to your social profile, your knowledge and experience make you a valuable participant in this study. Your participation will contribute significantly to the success of this research, and your insights and perspectives will help me better understand the strategies managers employ to improve project success rates. The study will involve facilitated interviews that I will lead, and each participant's confidentiality will be protected during data collection and the reporting of the results. The study requires that the participant must have launched a minimum of one program and should possess at least three years of experience. If you feel that you do not fulfill these requirements, kindly inform me by sending an email to sashidhar.sankaranarayanan@waldenu.edu. If you are interested in participating in the study, please email me directly at sashidhar.sankaranarayanan@waldenu.edu, and I will follow up to provide the consent form for your review and completion. The consent form includes information on research guidelines and your role as a research participant. Your participation is voluntary, and you may withdraw from the study anytime. If you decide to participate, you will have the opportunity to contribute to the advancement of

knowledge in this field. Next, I will invite you to a pre-interview meeting to review the consent form and answer any questions before signing.

I look forward to your participation. If I have not heard back from you within a week, I will contact you by phone. You may also reach me with any questions at [248 463 8367]. I appreciate your consideration.

Best regards,

Sashidhar Sankaranarayanan

Appendix C: Informed Consent Form

You are invited to participate in a research study of strategies managers of an automotive manufacturing firm use to align various departments' deliverables with project milestones to improve the project's success rates. The researcher is inviting team leaders from five functional departments of the Organization with proven experience in successful project management of program launches in their respective areas. The study requires that the participant must have launched a minimum of one program and should possess at least three years of experience. If you feel that you do not fulfill these requirements, kindly inform me by sending an email to sashidhar.sankaranarayanan@waldenu.edu. This form, "informed consent," provides the information that will allow you to understand this study before deciding whether to participate. Sashidhar Sankaranarayanan, a doctoral student at Walden University, is conducting the study.

Background Information:

The purpose of this study is to determine what strategies the managers of an automotive manufacturing firm use to align various departments' deliverables with project milestones to improve the project's success rates.

Procedures:

If you agree to be in this study, you will be asked to:

- Participate in a zoom call for a minimum of 30 minutes. Though a video call is preferable, I am open to an audio call

- Participate in a follow-up, member-checking interview for a minimum of 20 minutes.
- Share any publicly accessible documents of lessons learned.

Here are some sample questions:

- How do you track the program deliverables in your project team?
- How often do you meet as a team to review your project's status?
- How do you develop and report your team's deliverables?

Voluntary Nature of the Study:

This study is voluntary. You are free to accept or turn down the invitation. If you choose to be in the study, you can change your mind later or stop anytime.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of minor discomforts like becoming upset as some questions bring back memories of failure. However, being in this study would not pose a threat to your safety or well-being. The study's potential benefits may include a positive social change in the project management community and future project management practices.

Withdrawal information:

You have the right to withdraw at any time during or before the interview. To withdraw from the study, email sashidhar.sankaranarayanan@waldenu.edu with "Withdrawal Request" in the subject line. The email should state your request to withdraw from participating in the interview at least 24 hrs. before the interview.

Payment:

There is no financial incentive for participating.

Privacy:

This study's reports will not share individual participants' identities. Details identifying participants, such as the study's location, will also not be shared. The researcher will not use your personal information outside this research project. Data will be kept secure by a password-protected electronic folder placed inside a data-encrypted hard drive. Data will be held for at least 5 years, as required by the university.

Contacts and Questions:

You may reach out to ask any questions at any time throughout the study. You may contact me by email at sashidhar.sankaranarayanan@waldenu.edu or at +1 248 463 8367. In addition, if you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at 612-312-1210. Walden University's approval number for this study is # 06-01-23-0673396.

Please print or save this consent form for your records.

Obtaining Your Consent

If you are willing to participate in the interview, please indicate your consent by replying to this email with the following information.

Printed Name of Participant

Date of consent

Appendix D: Feedback Model