

# Analysis of Matrix Organizational Structure Implementation in Achieving Company Strategic Objective

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## KEYWORDS

*Matrix Structure, Change Management, Leadership, Strategic Objectives, CIPP.*

## ABSTRACT

*Several researchers assert that the matrix structure has the capacity to exert a substantial impact on implementation strategies; however, its complexity presents numerous obstacles that may result in significant decision-making delays and even financial losses for the organization. This research aims to analyze the application of a matrix structure in a company that changes its organizational structure to a matrix in order to achieve its strategic goals. The research method used was a qualitative descriptive analysis method with a case study approach at a health institution, a company that has implemented a matrix organizational structure for three years. The CIPP concept framework (context input, process, product) was used as a tool for collecting primary data through in-depth interviews with the board of directors and management that supports several directorates, as well as secondary data through document review. The data analysis process was carried out using the content analysis method. This study has identified important steps that organizations must take when implementing change management initiatives through the implementation of a matrix organizational structure to effectively achieve their strategic goals. However, strong leadership must be present throughout the change process to ensure the achievement of organizational goals. The findings from this research are expected to be useful for institutions that change their organizational structure to a matrix to build synergy and manage challenges to achieve their strategic goals.*

## INTRODUCTION

Transforming an organization is a multifaceted, innovative, and logical undertaking encompassing disorder and gratification (Palmer et al., 2016). This demonstrates that change management is a multifaceted process that relies on numerous aspects for its efficacy (Fedynets, 2023). Additionally, it is observed that most businesses embark on changes during times of crisis, irrespective of their industry or sector of operation (S. L. Burton, 2023). Organizational change management encompasses various approaches, including implementing new technologies, incentives, work habits, and restructuring and strategic change (Rousseau & ten Have, 2022).

Change management practices are among the most common methods healthcare organizations use today (Tamer & Gürül, 2022), as healthcare organizations often have to respond to complex and sudden changes (Karanika-Murray et al., 2023). There are many advantages and disadvantages that health organizations experience when responding to change that can encourage organizational learning processes to respond successfully to disruptive changes (Karanika-Murray et al., 2023). This is because in the health sector, the increasing priority placed on the quality of health services in six domains, namely efficiency, safety, patient-centeredness, effectiveness, timeliness, and accessibility, has encouraged accelerated change in implementing initiatives and realizing their results to meet external targets (Harrison et al., 2021). In addition, change management practices are an influential variable for

productivity, employee motivation, organizational commitment, technology, and competitive conditions (c).

Organizational structure and culture changes are two of several organizational change substances (Palmer et al., 2016). The organizational structure is part of the organizational design, which carries out predetermined tasks and give authority to subordinates (Muslih, 2021). Four basic forms of organizational structure reflect the general trends followed by most companies, namely functional, divisional, matrix, and international (Ebert & Griffin, 2017).

The matrix structure is a form of organizational structure that is flexible, easy to adjust, and layers various forms of structure (Egelhoff, 2020) and is a structure that can significantly influence an organization's implementation strategy (Oladimeji et al., 2019). Sometimes combining two different structures will work better than using one structure alone, as with matrix structures (Sfetcu & Popa, 2020). Goś (2015) asserts that a matrix organization has three distinct advantages: effectively handling complexity, enhancing communication efficiency, and improving output quality. Therefore, to achieve success and effectively manage complexity, companies may need to cultivate matrix thinking (Lukinaitė & Sondaitė, 2017). The matrix structure can influence employees' perspectives, enabling them to think globally and adopt a broad perspective, which allows individuals to perceive themselves as influential through collaboration, discourse, and personal effectiveness (Lukinaitė & Sondaitė, 2017). Employees in a matrix organizational structure perceive their influence through collaboration, dialogue, and individual effectiveness, in contrast to employees in non-matrix structures, where the emphasis is on the authority of managers and formal power rather than personal power (Lukinaitė & Sondaitė, 2017).

Despite the many positive influences that the matrix structure has, this structure also has several weaknesses, such as a lack of accountability and frequent conflicts over the allocation of resources and division of authority (Metcalf, 2014). There are also controversial characteristics, referred to as "matrix paradoxes," such as problems of costs, motivation, job satisfaction, decision-making effectiveness, and power balance (Goś, 2015). Generally, problems that arise with the matrix stem from a lack of ability to communicate effectively and the failure of leaders to recognize the challenges their employees experience in the organization, a lack of orientation to the matrix, and no training for managers (Azevedo, 2018; Habib, 2015; Jegorova & Kuznecova, 2020).

Many public and private companies use matrix structures to meet the growing complexity of the world in which they operate. However, often these organizations need help gaining the benefits of matrix organizations (R. Burton et al., 2015). Likewise, in the health sector, many hospitals and health systems have adopted a matrix organizational model to increase efficiency and reduce costs, but sometimes the opposite is true (North & Coors, 2010). Hughes (2021) examined the complexity issues matrix companies face in his study of organizational effectiveness, which he conducted from 2013 to 2018 and updated over the following three years. He discovered that complexity impedes decision-making and implementation quality and speed in many matrix organizations, but not all. The matrix organizations' inherent complexity complicates the implementation of day-to-day operational tasks and hinders strategic agility and innovation (Regidor et al., 2021). Because of the challenges in matrix structure, companies need to focus on their business performance to achieve targets under operational pressure and daily dynamics to survive in a tight, competitive market environment (Jegorova & Kuznecova, 2020).

According to prior research (Ebert & Griffin, 2017; Egelhoff, 2020; Galbraith, 2008), large profit-oriented multibusiness-multinational organizations like NASA, P&G, and MNCs adopt the matrix structure model. Multi-national companies (MNCs) adopt matrix structures because they want to compete with a more complex portfolio of strategies and advantages than they can develop and implement with a single type of hierarchical dimension (Egelhoff, 2020). Likewise, what is found in Indonesia's companies that implement a matrix organizational structure based on each company's annual report for 2022 is that they are generally holding companies and have subholdings or subsidiaries, such as PT Widya Karya (WIKa) and PT Unilever Tbk. Nevertheless, it is worth noting that

one successful non-profit organization or business employs the matrix structure: the Socio-Economic Development and Promotion Association Catalactica, a legally recognized Romanian organization established in 2001 (Sfetcu & Popa, 2020). This organization operates in an apolitical, non-governmental, and non-profit capacity and initially operated by executing individual projects before devising a matrix structure that is both adaptable and reasonably functional (Sfetcu & Popa, 2020).

The health institution used as a case study in this research is a private, non-profit organization that has been around for more than 100 years and, in 2020, formally uses a matrix organizational structure. Even though it is not a multinational company (MNC), this health institution has several business units (hospitals, health science colleges, training institutions, research, and primary health services). Throughout the three years in which the organization adopted the matrix structure, an assessment or analysis of its implementation has yet to be conducted. However, it has been observed that employee satisfaction has declined since the adoption of the matrix structure. Additionally, there have been complaints from employees who were required to assist with programs outside their primary unit.

Shifts in technology, customer trends, and market regulations drive companies to consider organizational changes to remain competitive “Change Management Execution,”. Changes made in a crisis are often operational because they must be made in a time-limited environment (S. L. Burton, 2023). Buchanan et al. (2016) stated in their book that there are four stage models of change management, namely Unfreeze, Move, and Refreeze (Lewin, 1951), the IHI large-scale change framework (Reinertsen et al., 2008), Kotter's eight-stage model (Kotter & Cohen, 2012), and Nottingham Hospitals' five-step process (Guylor et al., 2014). The substance of the change itself can be new technology, process redesign, new payment systems, or changes to organizational structure and culture; the implementation process (tasks, decisions, and time); political behavior inside and outside the organization; and the interactions between these factors (Palmer et al., 2016).

Leaders are responsible for leading and creating innovation in their organizations by influencing them directly and indirectly (Alblooshi et al., 2021). North and Coors (North & Coors, 2010) stated that leaders are tasked with creating conversations in a matrix organization. Moreover, breaking down silos that hinder effective communication, organizational leaders must clearly define roles and responsibilities for the matrix model to work well; therefore, they must also be aligned with the mission and vision of the organization.

Leadership is the key to strengthening health system performance; therefore, leadership style is an essential organizational antecedent, especially in influencing employee motivation, job satisfaction, and teamwork (Musunguzi et al., 2018). Active transformational and transactional leadership fully mediate the relationship between emotional intelligence and performance contribution satisfaction, efficiency satisfaction, and interest satisfaction (Zhang et al., 2018). In organizations that use a matrix structure, in addition to leadership style, business dimension leaders and matrix leaders must have the right mindset and skills to thrive in a collaborative and dynamic structure (Bhalla et al., 2022).

The matrix is a collaborative organization, so its implementation requires a collaborative change process (Galbraith, 2008). In a matrix organizational structure, there are at least two commanders-in-chief, the project manager and the functional manager; the first is responsible for project implementation, and the second provides all necessary support to the first (Kiruba Nagini et al., 2020). These complex organizational structures are thought to bring together the best expertise for any given project, and groups of people from diverse backgrounds and disciplines come together in cross-functional teams to work together inefficiently to achieve organizational goals (Kiruba Nagini et al., 2020). A flexible matrix structure organizes high levels of knowledge and specialization in large and complex organizations to be used more flexibly. Each dimension or hierarchy of the matrix structure maintains its integrity throughout all parts of the company matrix (Egelhoff, 2020)

One of the main drivers for choosing a matrix structure is implementing a double- or multiple-priority strategy (Galbraith, 2008). According to Egelhoff (2020) multinational corporations (MNCs) use matrix structures because they want to compete with a wider range of strategies and unique advantages than they can create and use with a single hierarchical structure. Examples of matrix structures MNCs use include the world functional division structure, the international division structure, the geographic region structure, and the world product division structure.

There are several challenges to the matrix structure, such as incompatible goals, employees focusing on silos, and interpersonal issues such as roles, responsibilities, and decision-making, as well as ambiguous authority and a lack of matrix guardians (Appelbaum et al., 2009). Conflicts or challenges frequently arise due to tasks and are primarily the result of conflicts of interest or opposing viewpoints on the same issue (Shahani, 2020). Prolonged conflicts can significantly impede the decision-making process (Shahani, 2020).

An essential part of making a matrix organization work is that individuals and teams working within a matrix must understand why a matrix organization was chosen (R. Burton et al., 2015). According to Shahani (2020), five things need to be considered in implementing a matrix organizational structure: control and coordination mechanisms, decision-making mechanisms, ambidexterity mechanisms, conflict mechanisms, the role of culture and identity, and boundary spanning. To reduce disproportions in allocating and evaluating employee tasks, organizations that implement a matrix structure must implement a system of clear procedures and continuous employee assessment, which allows one to avoid personal relationships and evaluate each employee exclusively based on the work he performs (Sfetcu & Popa, 2020).

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This research utilises Stufflebeam's CIPP evaluation framework, which incorporates a context, input, process, and product component evaluation approach (Stufflebeam & Zhang, 2017). The study analyses organizational needs through a matrix structure and efforts to enhance synergy to attain organizational goals. It also examines the readiness and planning of resources, systems, and strategies for implementing the matrix structure and implementation process. The research identifies obstacles that pose a threat to success and highlights areas for improvement. Additionally, it assesses the level of achievement the organization has reached during the implementation of the matrix structure. Therefore, this research aims to analyze the efforts of health institutions to implement a matrix structure to achieve their strategic goals.

## METHODS

This qualitative research uses descriptive analysis methods with a case study approach in health institutions. Case studies are empirical investigations investigating contemporary phenomena (cases) in real-life contexts, especially when the boundaries between phenomenon and context may be unclear (Merriam & Tisdell, 2015). To evaluate the matrix structure's implementation in the under-investigated health institution, the study used the Stufflebeam-developed CIPP assessment framework. A research conceptual framework was established for this purpose. The CIPP Evaluation Model is an evaluation framework oriented toward improvement and accountability (Stufflebeam & Zhang, 2017). The CIPP evaluation framework will be a guide for researchers in collecting data regarding existing theories.

**Table 1. CIPP model study/evaluation framework**

Evaluation Type	Question	Method
Context	What was the need for an organization to use a matrix, and how can an organization build synergy through implementing a matrix structure to achieve its strategic goals?	Interview with the CEO and Board of directors, The health institution's document
Input	What resources, systems, and strategies were prepared and planned for implementing a matrix structure?	Interview with the CEO and Board of Directors The health institution's document
Process	How was the matrix structure implemented, what obstacles threaten the success of the organization, and what improvements need to be made?	Interview with the CEO, Board of Directors and management
Product	What were the organization's achievements and benefits from implementing a matrix structure?	Interview with the CEO and Board of Directors The health institution's document Organization Performance Report for 2022 2022 Community Satisfaction Survey

Researchers collected primary data through in-depth interviews with 14 participants (directors and managers) and complemented the primary data with secondary data in documentation, regulations, standards, or guidelines from the health institutions studied. Researchers conducted research triangulation using the same interview questions with various participants and compared the results with available secondary data (Bachri, 2010; Chang et al., 2009; Wahyuni, 2019). Next, the content analysis method was used to examine the data obtained in this research. Data were analyzed using coding methodology (Khandkar, 2009; Saldaña, 2021; Williams & Moser, 2019).

## RESULTS

This study had 14 participants, consisting of 78.6% women, with an average age of 49 years and an average length of work of around 19.7 years. Of the 14 participants or informants, 50% worked for the business directorate, 43% for the strategic support directorate, and one was the top leader of the organization. This data can be seen in Table 1.

The matrix's organizational structure was analyzed using content analysis in four main themes: context, input, process, and product (Table 2). The context component produces two main themes, namely the need for organizations to use matrices and efforts to build synergy. The input component



identifies the readiness of resources, systems, strategies, and plans for improvement. The process component identifies the implementation of the matrix structure, the challenges faced, and the improvement plans identified. The product component identifies the organization's achievements over 3 years of implementing a matrix structure.

**Table 2. Biographical Characteristics of Participants**

Descriptive statistical participants		Frequency (%)
Gender	Female	11 (78.6)
	Male	3 (21.4)
Division	CEO	1 (7)
	Support Div	6 (43)
	Business Div	7 (50)
Age	49-year-old average age	
Work Experience	19.57 average years	

The health institution studied has officially changed its organizational structure to a matrix since 2020, due to the need to develop all its business directorates, but has limited resources, especially human resources, infrastructure, and finance. Apart from that, it is known that there is a need to comply with external regulations due to differences in management and standards for hospitals, education, and training, which can no longer be united under the hospital umbrella, thus requiring organizations to immediately adjust their organizational structure. One form of crisis condition that encourages an organization or company to make changes (Fedynets, 2022) Changing the organizational structure is one of several substances of organizational change (Palmer et al., 2016). There are many forms of change management, ranging from introducing new technology, incentives, or work practices to restructuring and strategic change (Rousseau & ten Have, 2022).

The overall driving force behind the need for organizations to immediately change their organizational structure into a matrix is because these internal and external factors are conditions that build urgency (create a sense of urgency) to carry out organizational change management (Kotter & Cohen, 2012). It is also known that changes in external regulations, such as technological shifts in customer trends and market regulations, may encourage companies to consider organizational changes to remain competitive "Change Management Execution,".

At the beginning of the process of implementing the matrix structure, there were several problems due to not understanding the working pattern of the new organizational structure. Several directorate policies are not in line with the organization. This lack of understanding is still present today, and according to the data discovered, several sources claimed that they had never received official guidance regarding the matrix structure. As a result, understanding the matrix structure's work pattern required learning by doing. The conditions that occur indicate that there are stages of change that may not be implemented adequately, especially in terms of communicating the vision of change. According to Kotter and Cohen (2012), companies need to create the right vision to direct change efforts; then, the direction of change needs to be communicated widely (communicate vision) for direct understanding and acceptance, to invite as many people as possible to act to achieve the vision.

The impacts arising from not understanding the matrix work pattern give rise to several challenges, such as ambiguity of authority, silos at the management and employee/unit levels, delays in decision-making, obstacles to work mechanisms, and problems in determining organizational priorities.

According to Errida & Lotfi (2021), lack of clear vision, lack of leadership skills, low stakeholder involvement, and poor communication are the main causes of change management failure. Furthermore, after three years of implementing the matrix and realizing that there were challenges in its implementation, the participants revealed that the need for improvement had been identified to build synergy in the organization implementing the matrix structure. The process of identifying improvements that occur in the health institutions studied is a learning process in the work environment that allows the organization to adapt to the project community with collaborative and quality management (Desjardins et al., 2022).

Identification of improvements consists of improving input components and processes, including fulfilling human resources, strengthening understanding of the matrix structure at all levels (R. Burton et al., 2015), improving performance systems, clarity in decision-making within the organization, and the need for strong leadership. According to Kotter and Cohen (2012), part of removing obstacles is having the ability to identify improvements. In very successful change efforts, people begin to understand and act on the vision of change and remove the obstacles that hinder them.

The organization's achievements during the three years of implementing a matrix based on findings in the product evaluation component include success in obtaining recognition for the legal operational aspects of its business directorate, such as achieving plenary accreditation for hospitals and "A" accreditation for the training institute. The participants highlighted that the acquisition of accreditation was achieved through the collective effort of all employees across all departments within the firm. The success of achieving this accreditation is a form of the organization's success in creating its short-term goals (creating short-term wins), even though there are still organizational achievement targets that have not been realized. Kotter and Cohen (2012) state that in successful change efforts, empowered employees create short-term wins—wins that foster confidence in the change effort, emotionally reward hard workers, ward off criticism, and build momentum.

The next step that the organization needs to take is to build on the continuous changes that have been successfully created and consolidate them in the culture of the organization, including by translating improvements in regulations, guidelines, and guidance of the work patterns of the matrix so that they can be followed and run by the entire work system from the level of the directorate to the unit and employees. This encompasses rules and workflow relationships across directorates, operational guidelines and standards for employee work procedures, job descriptions, and the regulation of employee work allocations in each business directorate. In addition, the implementation of the matrix structure can be further optimized by incorporating conflict management guidelines, control mechanisms, decision-making mechanisms, and ambidexterity mechanisms (Shahani, 2020).

**Table 3. CIPP model dimensions results for analyzing the implementation of matrix organizations**

CONTEXT	INPUT	PROCESS	PRODUCTS
<b>Goals and Needs of Using a Matrix Structure</b> - Multibusiness/ multi-business - Resource Limitations - External Regulation	<b>Resource, System, and Strategy Readiness</b> - Resource Management - Regulations Supporting Work Patterns - Organizational	<b>Application of Matrix Structures</b> - Inter-Directorate Coordination - Priority Setting - Decision-making strategy - Adjustment of Working Mechanisms	<b>Organizational Achievements</b> - Hospital/Training/ST IK Accreditation - Organizational Program Achievement: 70% - Financial targets have not been achieved.

Strategy

- The positive value of customer satisfaction
- Improvement of Organizational Work Processes

<b>Efforts to Build Synergy: Implementing a Matrix Structure in LKBB:</b>	<b>Resource Provision Planning, Systems, and Strategy:</b>	<b>Matrix Implementation Challenges:</b>	<b>Improvements to the Application of Matrix Structures:</b>
<ul style="list-style-type: none"> <li>- Building an Understanding of Matrices</li> <li>- Provision of Collaborative Coordination Mechanisms</li> <li>- Key Leadership Roles</li> </ul>	<ul style="list-style-type: none"> <li>- Fulfillment of HR Standards</li> <li>- System Performance Improvements</li> </ul>	<ul style="list-style-type: none"> <li>- Inadequate understanding of the matrix</li> <li>- Ambiguity of authority</li> <li>- Silo mentality</li> <li>- Barriers to working mechanisms</li> <li>- Work regulations and rules are not optimal</li> <li>- Priority Setting Issues</li> <li>- Slow decision-making,</li> </ul>	<ul style="list-style-type: none"> <li>- Matrix Understanding</li> <li>- System Performance Improvements</li> <li>- Organizational Scope Decision-Making</li> <li>- Strong Leadership</li> </ul>

Source: compiled by researcher (2023)

Furthermore, enhancing employee performance assessment components to be more specific and involving cross-directorates in the assessment process is also necessary. It is essential to convert enhancement strategies into legislation, as the primary obstacle in these eight phases lies in altering employee conduct. Undoubtedly, the first concern is employee behavior, specifically the necessity for substantial modifications in their actions (Kotter & Cohen, 2012). This is crucial for anchoring new behavior inside the organizational culture and is a key component of Kotter's change model, ensuring the long-term sustainability of the implemented changes.

To effectively develop and reinforce improvement plans within an organization's culture, a leader must possess a comprehensive understanding of the organization's objectives and be capable of assuming the role of the primary decision-maker (Shahani, 2020). Leaders must possess the ability to foster cohesion, align the organization's objectives, and establish strategic measures alongside executing centralization and decentralization functions to ensure the effective functioning of the matrix structure (Egelhoff, 2020) and promote the success of the change process (Bhalla et al., 2022). North and Coors (2010) stated that leaders are tasked with creating conversations and breaking down silos that hinder effective communication, and organizational leaders must clearly define roles and responsibilities for the matrix model to work well. They must also be aligned with the mission and vision of the organization. This is because leadership is the key to strengthening organizational performance, and leadership style is an important organizational antecedent, especially in influencing employee motivation, job satisfaction, and teamwork (Musinguzi et al., 2018). Hence, it is imperative for leaders



to embrace suitable leadership styles to enhance organizational innovation intelligently (Alblooshi et al., 2021). Therefore, leaders in the health institution studied should consider improving their leadership abilities and adapting their leadership techniques to be implemented by both top leaders and directorate leaders. Because transformational leadership has a positive effect on boosting motivation, ensuring job satisfaction, and strengthening the work team among health workers compared to those who exhibit transactional skills or laissez-faire styles, it becomes one that the organization's leadership recommends adopting (Musinguzi et al., 2018).

## CONCLUSION

This research has examined the implementation of a matrix organizational structure in achieving company strategic goals in a non-profit health institution (not-for-profit organization) that has several business units (hospital, high school, health science institute, training center, research institute, and primary health care), but there are also limitations in resources. Using the CIPP model evaluation framework (context, input, process, product) as a tool for data collection and analysis, it has identified the needs of health institutions to transform their organizational structure into a matrix and efforts to build synergies in its implementation, the readiness and availability of resources, systems, and strategies of the company in three years to implement the matrix structure, as well as planning improvements for the future. This study identified the implementation process, problems, and achievements of the organization during a three-year period when adopting the matrix organizational structure. Additionally, steps were identified to enhance the implementation of the matrix. These steps include enhancing comprehension of the matrix structure at all levels, enhancing the organizational performance system, maximizing the role of key leaders, and improving organizational decision-making processes.

In addition to the findings of the evaluation of the aforementioned four CIPP components, this research has also identified a change management process that the health institutions under study undertook through the organizational strategy of changing their structure into a matrix. The health institution under study needs to change and decide how to implement the identified improvement steps so that they become the new standard for the organization as the next step in the change management stage.

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