

Digitalization Components at Strategizing Digital Transformation in Organizations

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Abstract

This paper delves into the pivotal role of digitalization in the gap analysis process within contemporary organizations. As organizations increasingly navigate the complexities of the digital age, this study explores how integrating digital components transforms the conventional gap analysis methodology. The syntheses of the gap analysis and digitalization component give a thorough overview of the components that can enhance the gap analysis to be more precise and accurate in bridging the gap within the digital common issues that arise in organizations. The synthesis is based on a review of the latest research and literature on gap analysis and digital transformation to highlight the significant components of digitalization offers such as Business and Governance (Domain, Business, and People), Technology (Data, Application, and Infrastructure), and Innovation into gap analysis for digital transformation strategic planning for organizations. Ultimately, companies striving to strengthen their digital capabilities and accomplish their digital transformation objectives will benefit greatly from the inclusion of the critical importance of embracing digitalization as an integral component in the modern gap analysis framework, enabling organizations to thrive in a rapidly evolving business environment.

Keywords: Strategic Planning, Gap Analysis, Digitalization, Digital Transformation

1. Introduction

To evaluate and analyze the discrepancy between present operational performance and planned future goals, gap analysis is a vital tool used in strategic planning within organizations. Organizations can identify weaknesses, order strategic objectives, and create action plans to close the gap between the current situation and the desired future using this structured evaluation process. The incorporation of digitization has been increasingly important in recent years, significantly impacting gap analysis within organizations and transforming how companies assess their strategies and adjust to the changing technology landscape. This paper examines the use of gap analysis tools in strategic planning and how the influx of digitalization affects this process, emphasizing the need for modern strategic management to handle digital advancements.

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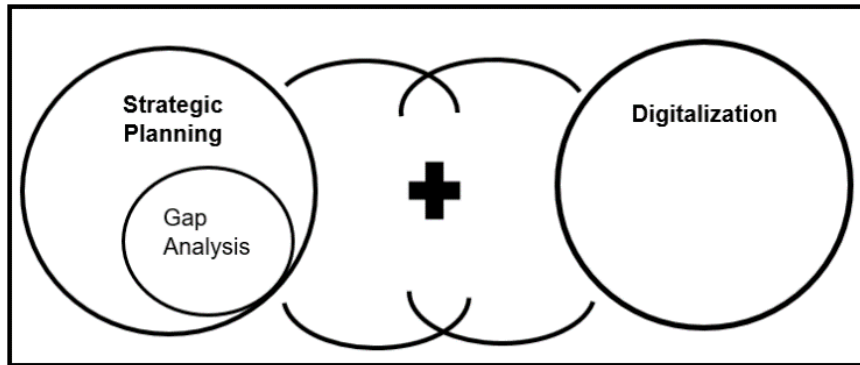


Figure 1. Relationship between Gap Analysis and Digitalization in Strategic Planning [1]

The process of creating a long-term plan for an organization is called strategic planning. It entails deciding on objectives, formulating goals, and creating plans of action to reach those targets. One of the critical components in an organization's strategic planning is gap analysis. Gap analysis is a method for locating and evaluating the discrepancies between the present state of an organization and its desired future state. It can be used to pinpoint areas where the organization has to strengthen its performance to meet its strategic objectives. However, organizations are utilizing cutting-edge technologies and data-driven insights to change their operations and maintain a competitive edge in the era of digitalization. Therefore, by doing a gap analysis without a digitalization component for their strategic planning, the organization's gap analysis is likely to be inaccurate and misaligned with the organization's objective. This is because digitalization is fundamentally altering every facet of business, and firms that do not account for digitalization in their gap analyses run the danger of missing crucial areas where improvement is required.

This paper is structured into three main sections to facilitate readers in comprehending the research. The first section consists of a review of the current gap analysis framework delineating the fundamental components of gap analysis and categorization the components into three common foundations – people, process, and technology. The second section delves into the existing digitalization framework and its components. The components are categorized by common information on contemporary business environments. The third section synthesizes the findings from the literature analysis, offering insights into how digitalization can enhance and optimize the gap analysis framework, ultimately contributing to the effective organizational development of digitalization strategic planning.

2. The Research Background

The gap analysis process is a systematic procedure that organizations use to evaluate the state of their operations now, pinpoint their long-term goals, and specify the activities required to close the gap between the two. Typically, the procedure includes the organization's definition of objectives, evaluation of the organization's current state, envision of the desired future state, gaps determination, and bridging the gaps with an action plan. A gap is usually defined as a difference between a current performance level and with desired level [2]. However, this definition might cause people to not be able to widen the determined consequences

of an intervention in the performance [3]. In 1998, Graham Winch found that the gap analysis technique provides both a theoretical model and procedure that fulfill both principles which is concerned with the entire service delivery process and focused on customer happiness [4]. On the other hand, according to Amanah and Harahap, gap analysis is a tool or method for an organization to make a comparison between perception and expectation about the organization-provided services and organizations have to try to minimize the gap. [5].

From the previous study by [1], a review of five gap analysis frameworks from McKinsey 7-S Framework, SWOT Analysis, PEST and LONGPESTLE, and PMESII-PT ASCOPE has been done and the summary of the review are as in Table 1.

Table 1. Summary of Gap Analysis Framework [1]

McKinsey 7-S Framework	SWOT Analysis	PEST Analysis and LONGPESTLE	PMESII-PT And ASCOPE Matrix
<p>Aim for an Organization’s strategy plan for building and maintaining a competitive advantage over its competitors and determine specific aspects to meet expectations.</p> <p>Hard elements</p> <ul style="list-style-type: none"> • Strategy • Structure • Systems <p>Soft elements</p> <ul style="list-style-type: none"> • Shared Values • Skills • Style • Staff 	<p>Aim to assess the organization’s position before deciding new strategy based on the:</p> <ul style="list-style-type: none"> • Strength • Weakness • Opportunity <p>Threat</p>	<p>Aim to brainstorm threats and opportunities based on (axis-x) factors of:</p> <ul style="list-style-type: none"> • Political • Economic • Social • Technological <p>LONGPESTLE Extend PEST by adding longitudinal perspectives (axis—y):</p> <ul style="list-style-type: none"> • Local • National • Global aspects 	<p>Aim for comprehensive market forces by monitoring the environmental factors (axis-x):</p> <ul style="list-style-type: none"> • Political • Military • Economy • Social • Information • Infrastructure <p>ASCOPE Extend PMESII-PT by adding new elements of (axis-y):</p> <ul style="list-style-type: none"> • Area • Structures • Capabilities • Organizations • People • Events
[6]	[7]	[8, 9]	[10-13]

From the elements summarized in Table 1, this study categorizes the connected elements into several gap analysis components categorization as in Table 2. Connected elements are the components from the gap analysis framework that serve

a common objective. It usually refers to a group of elements that have the same intent to accomplish a common, clearly stated aim or purpose. This shared goal can be a particular customer, service, or capability of an organization. In this study, the connected elements are categorized based on the Business Process Management Framework (BPM). A fully process-oriented business process management (BPM) framework should take into account both the soft and hard aspects of an organization, such as people, processes, and technology [14]. A practical approach to the BPM Framework is to consider strategically the linkages between the soft and hard dimensions of the organization with the business environment. The definition of business process management addresses the business process through a comprehensive perspective of the organization by considering the three common foundations - people, process, and technology, which are the connections of the organization) [15]. Hence, in this study, the connected information is arranged according to People, Process, and Technology.

Table 2. Gap Analysis Component Categorization

Main Element	McKinsey 7-S Framework	SWOT Analysis	PESTAnalysis and LONGPESTLE	PMESII-PT And ASCOPE Matrix
People	Skills Style Shared Values Staff		Social	Social People
Process	Strategy Structure	Strength Weaknesses Opportunity Threat	Economic Local National Global Political	Economy Information Organization Structure Political Military Area
Technology	System		Technological	Infrastructure Capabilities

As shown in Table 2, the People components categorized in the first category revolve around developing each employee to the fullest extent possible, because no organization can operate effectively without having the proper people working with the correct mindset. The second category is Process in which the components in this category are related to actions done to accomplish a particular business objective and to provide structure and guidance for people on what, how, and when the task should be accomplished. In the Technology category, the components are all about providing a variety of tools for employees to boost their output and carry out tasks more effectively. The proper personnel following the right procedures is the only way to fully utilize technology. To guarantee optimal use of technology and maximum production, it is crucial for firms to clearly outline their goals and procedures in addition to providing the necessary training for their workforce. Therefore, all of these three categories are highly correlated and important components to build an effective gap analysis for digitalization.

The broad component of gap analysis is sufficient. However, the technological component receives very little attention in the digitalization component. We need to delve deeper into the digitalization component to improve the gap analysis for digitalization strategic planning. Table 3 below summarizes all digitalization components extracted from seven existing digital transformation frameworks. The identification of these components will eventually assist in enhancing the required gap analysis for digitalization.

3. Methodology of Comparative Systematic Literature Review

The exploratory technique in this paper has been using a comparative Systematic Literature Review (SLR) method. This paper employs SLR rules, which are a sort of auxiliary inquiry that employs a well-defined technique by being adjustable and repeatable, the SLR method is meant to be as rational as possible [16]. Besides, the goal of an SLR is to provide a comprehensive overview of all studies discovered within a specific field of study [17]. Hence, this research compares all of the digitalization components from existing gap analysis and digital transformation frameworks to identify which digitalization components are suitable to be incorporated to improve the gap analysis in developing an effective digitalization strategic company for the company.

Four SLR techniques are used in this study, (1) Systematic Approach: The review adheres to a methodical and planned methodology to identify, select, and analyze relevant gap analysis and digitalization components. Choosing frameworks for review usually entails creating search criteria, carrying out a comprehensive literature search, and applying precise inclusion and exclusion criteria. (2) Multiple Studies Included: A wide variety of both gap analysis and digitalization frameworks that are pertinent to the study subject are included, (3) Comparison and Synthesis: Comparing and synthesizing the gap analysis and digitalization components from the chosen studies in determining the similarities, and differences between the studies, (4) Data Extraction and Analysis: To find recurring themes, connections, and data from the chosen frameworks that included frequently in each frameworks. This methodology will help practitioners, policymakers, and academics to have a better understanding of the current level of knowledge on components of gap analysis and digitalization frameworks. It can also help point out areas of the framework that require more expansion of components to give more value to the digitalization gap analysis for organizations.

3. Results and Findings

The process of using digital technologies to change corporate operations, goods, and services is known as digitalization. It is a crucial trend that is affecting businesses of all sizes and industries. Adopting the digitalization component in gap analysis is beneficial for organizations to use to improve their performance and achieve their strategic goals as it can help organizations identify and prioritize their digital transformation initiatives, track their progress over time, and measure the impact of their digital transformation efforts, communicate their digital vision and strategy to employees and stakeholders and manage the risks associated with digital transformation in organization.

According to McKinsey, digitalization is the application of digital technologies to support new modes of value creation, delivery, and consumption. According to Castells [18] digitization in the modern period should exhibit traits from the new economy, society, and culture. Digitalization is the process of incorporating numerous technologies into all aspects of daily life that may be digitized, such as smart homes, mobility, and smart cities [19]. According to Gartner (2015), digitalization is the process of converting an organization to a digital business by modifying the organization's business model to create new chances for value creation. The arrangement of the organization's many management domains around digital communication and infrastructures is increasingly frequently referred to as "digitalization infrastructures [20, 21]. On the other side, Bloomberg [21] believes that rather than emphasizing social ties or economic strategies, digitalization is mostly about corporate operations.

From the previous study by [22], a review of seven digital transformation framework from McKinsey, DXC Technology, MIT, Gartner, Capgemini, and EY Digital Transformation has been done and the summary of the review are as in Table 3. However, in this study, an additional digital transformation framework that is Malaysia Public Sector Digitalization Strategic Blueprint was added for comparison. Public Sector Digitalization Framework 2021-2025 was formulated systematically and comprehensively for the reference of public sector agencies in implementing digitization initiatives in agencies. The strategic direction worked on in this digitalization framework is in line with the global and national direction including Sustainable Development Goals (SDG) 2030, Wawasan Kemakmuran Bersama (WKB) 2030, Rangka Tindakan (Blueprint) Ekonomi Digital Malaysia (MyDIGITAL) and Rancangan Malaysia Kedua Belas (RMKe-12).

Table 3. Digitalization Framework Components Matrix

Main Element	McKinsey	DXC Technology	MIT Digital Transformation	Gartner Digital Transformation	CapGemini Digital Transformation	EY Digital Transformation	Malaysia Public Sector Digitalization Strategic Blueprint
Customer	Discover.	Digital Customer Experience.	Shared Customer Insights.		Customer Experience. Customer understanding. Top Line Growth. Customer Touch Points.	Design, Test and Iteration.	Citizen-Centric
Process		Process Transformation.			Operational Process. Process Digitalization. Worker Enablement. Performance Management.	The Engine Room. Deployment Hub.	Coordination and Collaboration
Business Model	Design. De-Risk.	Business Model Innovation.		Formulate a digital strategy to respond to opportunities and threats. Create New Digital business capabilities.	Business Model. Digitally Modified Business. New Digital Business. Digital Globalization.	The Bridge.	Optimizing Secured Shared Services Values. Digital Governance Effectiveness. Enterprise Architecture. Change Management. Law and Regulations.
Domain	Deliver.					Digital Factory.	
Cultural				Create the right mindset and shared understanding.			Rebranding, Promotions and Enculturation.
Accountability and Authority			Accountability framework.	Put the right leaders in place.			Digital Leadership. Accountability and Transparency.

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Main Element	McKinsey	DXC Technology	MIT Digital Transformation	Gartner Digital Transformation	CapGemini Digital Transformation	EY Digital Transformation	Malaysia Public Sector Digitalization Strategic Blueprint
Technology and Innovation		Digital Organization Transformation.	Operational Backbone. Digital Platform. External Developer Platform.	Digital business centre of excellence.	Digital Capabilities.	Innovation.	Emerging Technologies Adoption. Harnessing Data Intelligence. Spearheading and Inclusive and Integrated Digital Services. Diverse and Agile Governance. Cybersecurity. Technology Readiness. Data Driven Centric. ICT Compliance. Open-Source Solution. Digital Project Management.
Human Capital				Business skills and roles			Reinvigorate Human Capital Attitude, Skills, and Knowledge

Table 3 shows that customer-centricity is at the heart of transforming the customer experience. Hence, in the first category Customer, almost all frameworks emphasize customer transformation in their strategies by analyzing customer behavior, and the customer journey, and addressing customer problems to remove obstacles in utilizing services. In the second category Process, process transformation serves as a step-by-step guide that helps organizations deliver tasks in the most effective way possible. Frameworks find that improving processes by gathering insights from customer journeys and feedback enhances operational efficiency and performance management. The third category, Business Model transformation involves significant changes in how an organization operates to compete better, enhance efficiency, or shift its strategic direction. Three frameworks deem aligning their business models with the customer journey, prioritizing customer-centric approaches, whereas another four frameworks focus on adapting business models to respond to opportunities and threats in digitally evolved business and market dynamics.

This study finds that frameworks are not focusing on the Domain category. Domain Transformation involves shifting business operations and services into new areas, essentially expanding an organization's current offerings with new products or services. Many enterprises overlook the potential of this digitalization revolution, which can unlock endless possibilities for venturing into new business categories and unexplored territories [23]. Cultural transformation on the other hand, refers to a deliberate and comprehensive shift or change in the values, beliefs, behaviors, and norms that define the organizational culture of a company to align the organization's culture with its strategic objectives, business goals, and the evolving needs of organization's stakeholders, markets, and environment. In Accountability and Authority related to creating an environment where everyone feels connected and valued, it's important to decentralize authority throughout the entire organization. The significance of accountability and authority development will reduce the skill gaps within the organization, hence, an effective transformation.

Technology plays a vital role in completing digital transformation and enhancing business efficiency across the value chain. Innovation, on the other hand, involves introducing entirely new ideas, requiring initiative and commitment. When effectively adopted and integrated, technology and innovation have the potential to completely transform an organization in achieving goals and objectives. Lastly, the Human Capital category refers to the enhancement of the organization's overall performance, agility, and competitiveness by developing a motivated, skilled, and engaged workforce. It requires thoughtful planning, investment, and ongoing evaluation to ensure that employees can adapt to changing business landscapes and drive success.

4. Literature Synthesis and Conclusion

The study's findings highlight an important flaw in the current paradigm, which unifies Customer, Process, Business Model, Domain, Culture, Accountability and Authority, Technological and Innovation, and Human Capital. As shown in Figure 2, the results highlight a serious shortcoming in shallowly covering the technological component and demonstrate a lack of depth in its incorporation and consideration of current gap analysis components. Technology is an unquestionable fuel for organizational success and creativity in today's fast-changing digital landscape. Its absence or cursory consideration within the gap analysis for digital transformation in organizations makes it difficult to fully realize its revolutionary

potential. Hence, a more thorough understanding of technology must be infused into this framework to achieve a comprehensive and all-encompassing strategy, while also appreciating its critical importance in modern business environments.

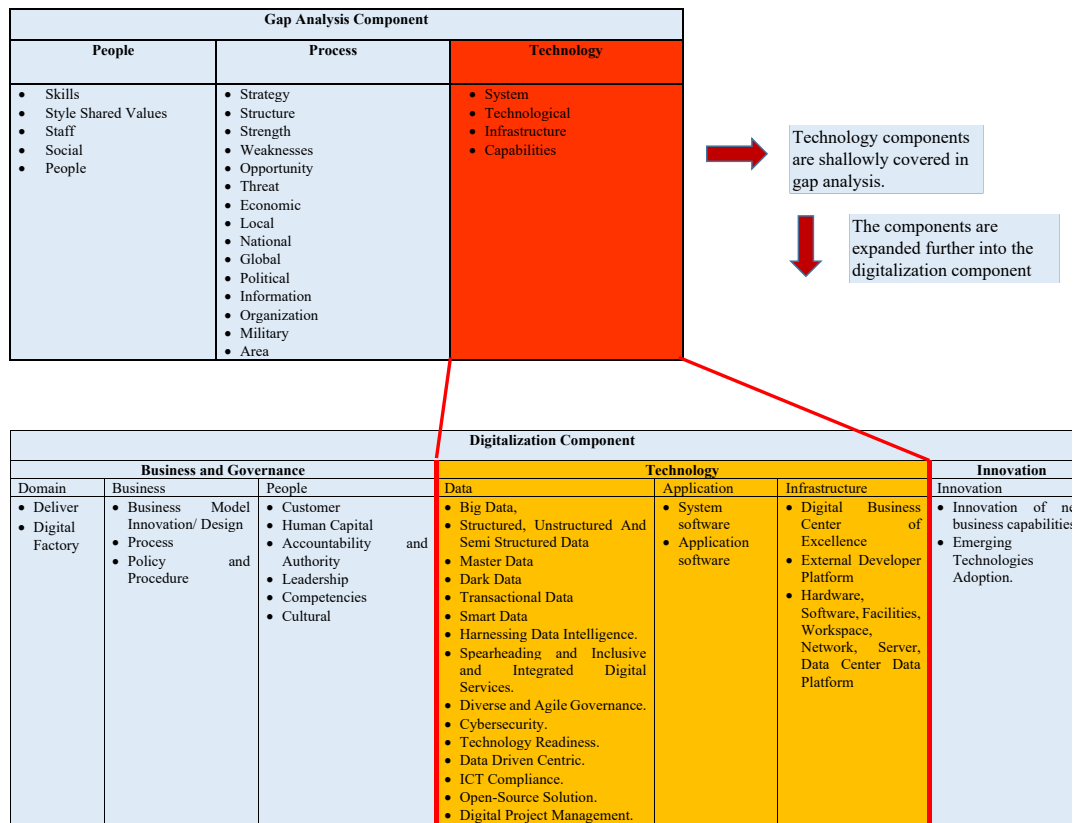


Figure 2 Synthesis of Technology Component in Gap Analysis Framework with Technology Component in Digitalization

This research further investigates the digitalization components for the gap analysis through the use of comparative SLR. According to the findings, other components were deemed as important to include in the gap analysis. The first component is Data. Data is essential for making informed decisions. By collecting and analyzing data, we can gain insights into an organization’s environment. Data can be used to solve problems, improve efficiency, and make predictions. Hence, it is important to include data components for digitalization since organizations will be able to know the current situation of their data repository. The second digitalization component considered as important is Application. Regardless of the size of a business, software applications are vital tools for contemporary businesses. They help companies run more smoothly, make wiser decisions, offer better services, and maintain their competitiveness in a market that is always changing. Achieving these advantages requires selecting the appropriate software and successfully incorporating it into an organization's workflow, therefore it is a very crucial component to be included in digitalization gap analysis.

Lastly, Infrastructure is found to be an important component of digitalization since the success of digitalization is largely dependent on a strong infrastructure. Its significance cannot be emphasized because it makes possible the services, data, and technologies that propel digital transformation in organizations, resulting in

increased productivity, economic expansion, and improved quality of human capital. Interestingly, the research also found innovation as one critical component in the digitalization gap analysis. Innovation is the engine of growth and advancement in almost every facet to address issues of both now and in the future and to improve current technology used in organizations. Achieving sustained growth and prosperity requires a fundamental commitment to promoting and facilitating innovation, in which digitalization will become a major factor in sparking innovation in the organization. Therefore, this study concludes that the innovation component is one of the gap analysis critical components but an independent component rather than include it as sub-component under Technology.

Leveraging digital technologies and data to improve consumer experiences, increase productivity, and revolutionize company processes is known as digitalization. By integrating the digitalization component into the current gap analysis framework, the Technology component will be covered widely to ensure the gaps are reviewed in detail based on three major sub-components, Data, Application, and Infrastructure. Hence, when digitalization components are incorporated into a gap analysis, it will identify an organization's current position in its digital journey and point out areas in need of development. It offers an organized method for assessing the existing situation, establishing strategic goals, and ranking projects to close the gaps found. In the end, this makes the business more competitive and technologically advanced. As a way forward, this study can develop a comprehensive framework that comprises digitalization gap analysis for organizations to obtain a clear knowledge of their digitalization goals, analyze their current digital capabilities, and identify areas that require changes or interventions. The suggested framework in the future might as well contribute to the current body of knowledge by providing a tailored method specifically built for digitalization gap analysis in bridging the gaps and developing an action plan in line with the organization's goals.

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