

Assessing And Understanding The Current Situation In Information Systems

Anisatul Maghfiroh

Sultan Thaha State Islamic University, Jambi

anisatulmaghfiroh@gmail.com

Inputted : July 31, 2024
Accepted : August 22, 2024

Revised : August 15, 2024
Published : August 27, 2024

ABSTRACT

This study aims to examine the information system strategy in supporting the alignment between business needs and technology utilization through the Business Process Reengineering (BPR) approach. In a dynamic business environment, understanding external opportunities and threats, as well as the organization's internal capabilities, is an important foundation in designing information systems that can drive efficiency, effectiveness, and competitive advantage. Information systems not only play a role as operational support, but also as a driver of strategic transformation through innovation in processes, structures, and organizational culture. This study uses a qualitative descriptive method with a case study approach, involving in-depth interviews, observations, and documentation studies. The analysis techniques used include Critical Success Factors (CSF), Balanced Scorecard (BSC), and gap analysis to map actual conditions and determine future strategies. The results of the study are expected to produce an application portfolio that is in accordance with the needs of the organization, as well as a BPR strategy that is oriented towards improving service quality, reducing costs, and customer satisfaction. The strategic value of information systems is largely determined by the extent to which business understanding is integrated into the design of an adaptive system. Active participation at all levels of the organization, including through workshops based on actual data, is key to formulating effective and sustainable strategies.

Keywords: Balanced Scorecard; Business Process Reengineering; Information Systems

INTRODUCTION

In the process of achieving strategic alignment between business and information technology, a deep understanding of the business environment and relevant technological developments is required. This includes identifying external opportunities and threats that can affect the sustainability and growth of the organization. In addition, it is very important to understand how information



Creative Commons Attribution-ShareAlike 4.0 International License:

<https://creativecommons.org/licenses/by-sa/4.0/>

systems can be used innovatively to support and even transform other dimensions of the organization, such as corporate strategy, organizational structure, operational processes, work culture, and inter-unit relationships. This approach positions information systems not only as a tool, but also as a driver of change and strategic added value.

Next, it is necessary to map the expected benefits explicitly and realistically from the implementation of information systems, both in terms of efficiency, effectiveness, and competitive advantage. An objective evaluation of the organization's strengths and weaknesses—both in terms of business and information technology capabilities—is the basis for assessing readiness for change and opportunities for improvement. Based on a comprehensive understanding of the actual conditions, a gap analysis is carried out between the current situation and future strategic goals, both in terms of business processes and information system support.

This analysis will produce a concrete information system strategy formulation, which is manifested in the form of a target application portfolio. This portfolio is designed to answer the specific needs of the organization, support the achievement of business goals, and maintain the continuity and sustainability of the information technology resources used. In formulating strategies and determining information system needs (IS demand), various approaches can be used, ranging from collecting facts in the field, interviews with stakeholders, to utilizing analysis tools such as Critical Success Factors (CSF), SWOT, and Balanced Scorecard. This mixed approach allows organizations to produce an integrated information system plan, adaptive to change, and relevant to the organization's strategic direction in the future.

METHOD

The research method used in this study is descriptive qualitative with a case study approach, which aims to deeply understand the implementation of Business Process Reengineering (BPR) and the actual situation of information systems in an organization. The research was conducted in organizations that have or are implementing BPR, with research subjects consisting of information system division leaders, business analysts, related employees, and external parties if any. Data were collected through in-depth interviews, direct observation of business activities and information systems, and documentation studies of strategy documents, business

processes, and performance reports. The main instrument was a semi-structured interview guideline compiled based on components of business strategy, business processes, information systems, and analysis techniques such as Critical Success Factors (CSF) and Balanced Scorecard (BSC). Data analysis was conducted using the Miles & Huberman interactive model which includes data reduction, data presentation, and drawing conclusions. To maintain validity, source triangulation, confirmation of results to informants (member checking), and discussion with fellow researchers (peer debriefing) were used. The research results are expected to be able to map the current condition of the information system, identify process areas that need to be re-engineered, and produce recommendations for BPR strategies based on CSF and BSC that are oriented towards increasing efficiency, effectiveness, and customer satisfaction.

DISCUSSION

Business Process Re-Engineering

Re-engineering is a process to achieve radical improvements in time, quality, rewards, and of course costs by simultaneously redesigning processes, organizations, and information systems (Petrozzo and Stepper). Meanwhile, according to Hammer and Champy, a business process is a collection of activities that require one or more inputs and produce outputs that are useful/valuable to customers.

Not much different, according to the textbook written by Indrajit and Djokopranoto, business process is a number of activities that change existing input into output, either goods or services, using tools. All parties are involved in it between one and another. So the business process is a collection of work done to change input into something more valuable so that it can be useful to meet the needs and desires of consumers after becoming the output of a series of processes that have been carried out. BPR (Business Process Re-engineering) is defined as a radical redesign process in order to achieve significant improvements in cost, quality, and service (Hammer and Champy). Meanwhile, according to Patwardhan and Patwardhan, business process reengineering is defined as a management approach that rethinks current practices and processes in business and their reciprocal relationships.

In other words, business process engineering is an idea that is carried out to improve process efficiency that applies a fundamental, radical, dramatic approach, and also a process by modifying or eliminating activities that do not have added value and rebuilding the processes, structures, and cultures that exist in it. In fact, business process reengineering requires redesigning processes, organizations, and information system support simultaneously to achieve major improvements in terms of time, cost, quality, and customer attention to products and services (Ostadi et al.,). The point is the element of radical change and

significant improvement in the parameters measured in the business process is the concept of Business Process Reengineering. In the book Petrozzo and Stepper explains that in business process reengineering is useful for making a business more efficient and flexible, the key to the success of this business process engineering is a new concept, simple but can change the system that is not useful in it. Consumers are the main target in business process engineering because the main goal is to design a process by simplifying the work process that can satisfy customers and increase existing values, especially customer value.

BPR is a popular approach used by organizations to improve organizational performance. Organizations see the importance of BPR especially in the areas of improving customer service initiatives, project tenders, and most cost reduction processes.

Understanding Current Conditions In Information Systems

Understanding the current state involves having a deep understanding of business strategy, the business and technology environment and the current state of information systems in the business. This will enable in determining the opportunities, threats and needs in the business strategy, and to recognize the strengths and weaknesses of the business operations and information systems.

IS strategy is best developed in parallel with business strategy. By incorporating trends, opportunities and ideas into the business strategy process, then working with all business areas, in developing Business initiatives- information systems that will deliver performance objectives. To achieve the desired results, it is necessary to gain an understanding of the drivers of change and the current conditions, then set objectives/targets, and begin to propose plans to close the gap. This is achieved

through analysis that focuses on elements in the business environment and information systems. Business Strategy Interpretation Business Environment

Internal Elements that must be identified, analyzed and understood are Business strategy, not only its goals but also how to achieve them. Current business processes, activities and key information entities (customers, inventory, cash), and how they relate to other entities. Organizational environment, including structure, assets and capabilities, knowledge, competencies, values, style, culture and relationships. From here, information, systems and technologies that appear in current business strategies and activities can be prioritized.

In analyzing Business Strategy, it is necessary to identify the current strategy, and new elements since the previous strategy development cycle, if necessary, interpretation and analysis of the strategy are then described in a structured manner. This can be achieved if the organization has capable Business employees and information systems and how to combine and confirm the needs of the current information system.

In Business Strategy Interpretation there are Business Processes, Activities and Key Entities including Business Processes, which are a set of interconnected activities or roles that deliver specific outputs to identify consumers inside and outside the organization. Then activities, which are elements of the business process that organizations use to produce, market and distribute products or services, then to develop, support and manage infrastructure, and to measure performance against goals. The last Key Entity is in the activity, is fundamental and important in the business process, and for that it is connected to information. This includes people (consumers, suppliers, employees), goals (products), places (workshops, labs), or events (sales, orders).

Analyzing the Current Information Systems Environment

In Analyzing the assessment of the internal environment of the information system consists of, Evaluation of the current condition of the application portfolio and applications being developed to determine their content, scope and contribution. Evaluation of current information resources and Evaluation of current information system infrastructure and services The result of this basic analysis is to assess the Gap between the current condition and the required target.

In analyzing the information system environment, there needs to be a Current Policy and Strategy, including IS/IT Strategic Planning and Development is a continuous process, therefore it is very possible that there will be a previous strategy. Documentation of previous policies and strategies can be adopted to face new strategic changes. IS Organization and Process. Functions, size, structure and relationships with the business at the organizational, functional, departmental and individual levels. Strategy for allocating resources and information system services.

Interpretation and Analysis Techniques

There are many ways that can be used to analyze current conditions and business strategies, some of which are:

- CSF (Critical Success Factor) Analysis
- Balanced Scorecards Analysis

Critical Success Factors (CSF)

CSF Is a popular technique in developing IS/IT Strategy and Business Strategy. Critical Success Factor (CSF) according to Rockart is defined as a limited number of areas whose results can guarantee the success of an organization's competitive performance. They are the main areas where things must be done right for the benefit of the business, so they must receive special attention from management. is a collection of analyses of many success-determining processes. CSF is needed to achieve a company's mission. Based on the results of the strategy analysis through SWOT, several determining factors for the success of a strategy can be determined after the strategy is implemented. Based on an article written by Anne Parr and Graeme Shanks in the Journal of Information Technology, several CSF (Critical Success Factor) points are explained, namely:

- a. Management Support, in the form of support from top management which is very much needed from the start of the project until the project is finished.
- b. Loyal and comprehensive involvement of competent people in their fields.
- c. There is delegation Which given authority For givedecision, its use is to get faster decisions.
- d. A realistic schedule and always monitor progress.
- e. Agents of change who always 'promote' new systems and act as

'listeners' so that they can provide corrections in implementation.

- f. The scope is not too large to be more effective and efficient.
- g. The definition of objectives and scope must be clear.
- h. A balanced team composition between business analysts, technical experts, and users who are both internal and external to a company.
- i. Commitment to change, persistence and resilience in the face of problems that occur during the project.

Balanced Scorecard

Balanced Scorecards (BSC) can be described as a carefully selected set of metrics derived from an organization's strategy. The BSC provides a tool for leaders to use in communicating with employees and external stakeholders. The BSC identifies the information needed to measure performance against business objectives. The BSC examines performance from four interrelated perspectives, each described by a question.

BSC is an instrumentation system for business actors to control the company's organization in order to translate the company's vision and mission into a strategic measurement framework for a set of parameters in each comprehensive perspective, so that it can improve the company's work capacity to create sustainable competitive advantage in today's competitive conditions. The four perspectives in the balanced scorecard are an inseparable whole, complement each other as performance measurement indicators and have a causal relationship. The financial perspective is the estuary or end result of the other three perspectives. To measure financial performance, it is done by looking at financial indicators including profit level, sales level, and cost efficiency (Bank Indonesia; Sasono, Alimudin, Kamisutara, & Inayati,). The customer perspective was developed based on the results of previous studies including: the ability to gain customer trust, good relationships with both internal and external customers, the ability to retain old customers and customer service (Alimudin, Falani, Setiawan, & Arifin). This customer perspective determines how the internal business process perspective can be achieved, in which there are service indicators that have standards, products that satisfy consumers and purchase return services (Alimudin, A., & Yoga). While the growth and learning perspective emphasizes the company's infrastructure where employees as company assets act as the spearhead of the company in

providing company products that can be goods or services. So this method is interrelated with one another so as to create a balanced condition between finance and aspects that support the achievement of the company's expected finances (Narayanamma).

CONCLUSION

From the explanation above, we can conclude that Business Process Re-engineering (BPR) is a fundamental rethinking and radical redesign of core business processes to achieve dramatic improvements in critical performance measures such as quality, cost, and time. A process is a structured and measurable set of activities designed to produce specific outputs for consumers and markets. BPR is a popular approach used by organizations to improve their performance. Organizations see the importance of BPR especially in the sector of increasing service initiation to consumers, project tenders, and in most cost reduction processes.

The quality and value of the information systems strategy developed depends on the depth of understanding of the business and its needs, and the interpretation of those needs into information and appropriate information systems services. Much of the information needed must be discussed with employees at all levels of the organization, through workshops. Workshops cannot work well if business people are accustomed to building facts based on existing documentation. This problem can be overcome by reviewing as many documents as can be found before the workshop is held.

BIBLIOGRAPHY

- Augustsson, H. et al. (2019–2020). *Aplikasi Soft Systems Methodology dalam manajemen perubahan kesehatan*. Relevan untuk pemahaman situasi kompleks dalam pengembangan SI en.wikipedia.org.
- Bali, R. & Rukmin, Dkk. (2024). *Strategi Pengendalian Sistem dalam Sistem Informasi untuk Optimalisasi*. Tinjauan peran sistem kendali manajemen untuk menilai kinerja ejournal.unesa.ac.id+4e-journal.uingusdur.ac.id+4ejournal.unama.ac.id+4.
- Endsley, M. R. (2021). *Systematic review and meta-analysis of direct objective measures of situation awareness: SAGAT vs SPAM*. *Human Factors*, 63(1), 124–50. Relevan untuk pemahaman pengukuran situasi en.wikipedia.org.
- ESIT (2024). *Penerapan Sistem Informasi dalam Mendukung Pengambilan Keputusan di Era Digital*. Kajian kualitatif real-time dan tantangan keamanan data repository.dinus.ac.id+3openjournal.unpam.ac.id+3media.neliti.com+3.
- Haque, A.K.M.B. et al. (2022). *Explainable Artificial Intelligence (XAI) from a user perspective*. Relevansi XAI untuk meningkatkan situational awareness di SI diva-portal.org+15arxiv.org+15ejournal-ibik57.ac.id+15.
- Jiang et al. (2021). *Cyber Situational Awareness...* arxiv.org.

- Jiang, L. et al. (2021). *Systematic Literature Review on Cyber Situational Awareness Visualizations*. Membahas situational awareness di bidang keamanan siber melalui visualisasi ejournal-ibik57.ac.id+5arxiv.org+5repository.penerbitwidina.com+5.
- Mueller & Urbach (2021). *Strategy assessment in IS...* link.springer.com+1repository.dinus.ac.id+1.
- Mueller, B. & Urbach, N. (2021). *Understanding strategy assessment in IS management. Information Systems and e-Business Management*, 19, 1245–1273. Membahas proses dan outcome penilaian strategi dalam manajemen SI ejournal.unama.ac.id+3repository.dinus.ac.id+3ejournal.unesa.ac.id+3link.springer.com.
- Patnayakuni, Ruppel & Varajão (2022). *Models and methods...*, VUCA analysis dalam evaluasi SI sciencedirect.com.
- Pawson, R. & Dada, S. (2025). *Realist evaluation methods*. BOA untuk menilai relevansi dan efektivitas SI berdasarkan konteks ejournal.unama.ac.id+10en.wikipedia.org+10repository.dinus.ac.id+10.
- PMCI (2023). *Telaah Teknologi Informasi dan Sistem Informasi dalam Organisasi*. Tinjauan peran TI/SI dalam transformasi tugas dan proses ejournal.pmci.ac.id.
- Sharma & Jain (2023). *Ontology for situational awareness...* .
- Sharma, S. & Jain, S. (2023). *Comprehensive Review on Semantic Information Retrieval and Ontology Engineering*. Mengaitkan kesadaran situasional dengan teknik ontologi arxiv.org.
- Unas (2023). *Sistem Informasi Manajemen Terkini: Meningkatkan Efisiensi dengan Kecerdasan Buatan*. Fokus pada kondisi sistem informasi saat ini & solusi AI repository.unas.ac.id.
- Varajão & Carvalho (2022). *IS project success evaluation...* sciencedirect.com.
- Varajão, J. & Carvalho, T. (2022). *Models and methods for information systems project success evaluation. Journal of Information Systems*, membahas evaluasi kesuksesan proyek SI dalam VUCA environment sciencedirect.com.
- Widina (2021). *Sistem Informasi Strategik Pasca Pandemi*. Pemahaman tentang peran SI strategik dalam adaptasi organisasi repository.penerbitwidina.com.
- Zhuang et al. (2020). *Framework for Evaluating Dashboards...* arxiv.org.
- Zhuang, M., Concannon, D. & Manley, E. (2020). *A Framework for Evaluating Dashboards in Healthcare*. Tinjauan metodologis tentang evaluasi dashboard sebagai sistem informasi arxiv.org.