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Measurement of information system maturity at PT Bee solution partner using the SAMM method

Syafika Zalfanissa Dila[1], Helmy Pramudita[2], Alfina Poetri Abdillah[3], Rifqah Haura Maharani[4], Rizky Muhammad Rofif[5]

[1,2,3,4,5]Sistem Informasi, Fakultas Ilmu Komputer, Universitas Esa Unggul, Indonesia

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ABSTRACT

This research aims to analyze the level of alignment between business strategy and information technology strategy at PT Bee Solution Partner using the Luftman method. PT Bee Solution Partner, an information technology company located in Arcamanik, Bandung, provides bootcamp services, consultations, and overseas development, as well as IT consulting for application creation. The data collection method used is a closed questionnaire, structured with predetermined answer alternatives. The research results indicate that PT Bee Solution Partner has achieved aligment between business and IT strategies at level 4 (improved/managed process) according to the Luftman method. At this level, the organization is assesed to be strong in aligning IT and business, with the business considering IT to add value and being willing to take risks and benefits arising from the use of IT. The research conclusion indicates that overall, PT Bee Solution Partner has reached a fully strategic position at level 5 according to the Luftman method. However, there are some aspects of each criterion that need improvement to enhance the maturity of aligment between business and IT strategies. These the findings provide additional insights into the steps that can be taken to strengthen the integration of business and IT strategies in the context of an Information Technology company. This research is expected to contribute to a better understanding of the importance of aligning business and IT strategies in optimzing the performance of Information Technology companies.

Corresponding Author:

Helmy Pramudita,
Fakultas Ilmu Komputer,
Universitas Esa Unggul,
Harapan Indah Boulevard Street, no.2, Bekasi, 17214, Indonesia.
Email: helmypramudita@gmail.com

1. INTRODUCTION

In the era of globalization and increasingly fierce business competition, the alignment between business strategy and Information Technology (IT) strategy is crucial to support the growth and sustainability of the company. Such alignment plays an important role in ensuring that IT investments effectively support business objectives, improve operational efficiency, and provide competitive advantage. One commonly used method to measure and analyze the level of alignment between business strategy and IT strategy is through the Luftman Strategy Alignment Framework. This method provides a holistic view of the relationship between business and IT strategy, involving various dimensions including infrastructure, human resources, and the relationship between business and IT departments.

In this context, this research aims to analyze the aligmnet of the business strategy and IT strategy at PT Bee Solution Partners using Luftman method. PT Bee Solution Partner is a profesionall Information Technology company located in Arcamanik, Bandung that provides

bootcamp, consulting, and overseas development services that also provides Information Technology consulting services to create applications.

The Luftman Strategy Alignment Framework was chosen as the analytical method in this research due to its ability to comprehensively address the complexity of business and IT strategies. This framework provides a holistic structure using six main perspectives—communication, IT competence and value, IT governance, partnership, IT scope and architecture, and skills. This approach enables the alignment of IT strategy with business objectives comprehensively, ensuring that every IT element supports the strategic and operational needs of the business.

The advantage of the Luftman Strategy Alignment Framework compared to other methods is its ability to better manage the interaction between business units and IT. This framework not only facilitates alignment but also enhances communication and coordination between IT and business, ensuring that IT investments support daily operations and promote long-term innovation and competitive advantage. With a focus on various alignment dimensions, Luftman is able to provide deep insights and actionable steps to improve the alignment of business and IT strategies, making it an ideal choice for alignment analysis in complex contexts.

The alignment analysis between business strategy and IT strategy at PT Bee Solution Partners is crucial because it ensures that IT investments directly support the company's strategic objectives. By aligning IT with business priorities, PT Bee Solution Partners can optimize their technological resources, ensuring that IT expenditures yield returns that support business growth and operational efficiency. This allows for process integration and automation, which enhance productivity and reduce inefficiencies. Good alignment also makes PT Bee Solution Partners more adaptable to market changes and customer needs, enabling the company to respond swiftly to external dynamics. Additionally, IT and business alignment drives relevant innovation, strengthens governance and risk management, and improves customer experience through more responsive and intuitive solutions. Therefore, this alignment analysis is key to achieving operational efficiency, strategic innovation, and sustainable competitive advantage for PT Bee Solution Partners.

2. RESEARCH METHOD

The Luftman method is a framework used to assess the level of fit between business strategy and information technology (IT) in an organization. This method helps organizations identify and correct gaps between business and IT strategies, so that can improve overall organizational performance (Handayani et al., 2019).

There are 5 levels of strategy alignment maturity outlined in the luftman method as in the table below.

Table 1. 5 Level SAMM luftman method

	Grade	Scale Range
		Average
Level 1	Intial Process	1.0-1.9
Level 2	Commited Proces	2.0-2.9
Level 3	Eslablished Process	3.0-3.9
Level 4	Improved Process	4.0-4.5
Level 5	Optimized process	4

The following is an image of 6 criteria for aligning business strategy and information technology strategy according to the Luftman model, namely: Communication Maturity, Competency Value Measurement Maturity, Governance Maturity, Partnership Maturity, Scope and Architecture Maturity, Skills Maturity.

Collection Methodology Data

In this study, the authors used a questionnaire as the data collection method. A questionnaire is a data collection tool that contains a series of questions asked to respondents to obtain information about a certain topic directly or indirectly. Questionnaires are used to collect data through pre-constructed questions, structured observation involves pre-designed observations with predetermined variables, and experiments involve manipulating certain variables to see their impact on other variables (Ardiansyah et al., 2023).

The type of questionnaire used is a closed questionnaire where the questionnaire has been prepared by the author with alternative answers that have been provided. Respondents only need to choose the answer that suits their opinion.

3. RESULT AND DISCUSSION

The results of the analysis of the research conducted on the alignment of the maturity of business strategy and information technology strategy successfully achieved by PT Bee Solution Partner are based on data obtained through instruments in the form of questionnaires, and the results are documented in each criterion tested. The results of the study discuss the value and level of alignment of business and IT strategies based on the results of the assessment that has been carried out along with general recommendations (Junidar et al., 2023).

Communication criteria analysis results

Based on the assessment results from various aspects evaluated by the team members, it can be seen that the IT Department of PT Bee Solution Partner has a generally high performance. PT Bee Solution Partner's IT department shows excellent performance based on assessments from various aspects. There is implementation of the latest technology, successful integration, and system stability (4.8) and the significant impact of Information Technology (IT) on work processes that facilitate cross-team work or increase productivity (4.8) reflect the alignment of technology with operational needs. Effective dissemination of innovative information through pre-established mechanisms (4.8) is successful. Responsiveness to requests and provision of operational support (4.8) reflects a high level of service. Although relationships with vendors score well (4.4), there is room for improvement in the management of external relationships. Formalized knowledge sharing (4) signals a collaborative effort, but improvements may be needed.

The department's overall average was 3.8, indicating that while most aspects were rated highly, there is still room for improvement especially in managing vendor relationships and improving internal knowledge sharing practices. This evaluation provides valuable insights for development and improvement continuous improvement in the functioning of the IT Department.

Results of competency criteria analysis

Based on the results of the competency assessment in the IT Department of PT Bee Solution Partner, it can be concluded that in general, this department has a good performance in measuring and managing IT competencies and related business aspects. The IT Department of PT Bee Solution Partner shows a good level of maturity in measuring IT competencies and related business aspects. Cost-effectiveness measurement (4.2) indicates optimizing efforts in assessing IT performance from a financial perspective, while business opportunity engagement (4.2) signifies attention to the impact of IT on business opportunities.

Competency assessment from the business side by focusing on leaders' orientation to employees (4) reflects an approach related to human factors in managing business aspects. The high score for interconnectedness between business, partner business and IT competency measures (4.8) indicates good integration between these aspects. The integrated implementation of service level agreements across all units (4.2) reflects efforts to ensure consistent application of service standards. Framework comparison of evaluations conducted in (4) and regular reviews of evaluations and assessments of IT investments (4.4) show a focus on continuous improvement and efficient management of resources. These evaluations provide a positive picture of the department's efforts in measuring and improving competencies and IT investments in a holistic manner.

The department's overall average was 4.3, illustrating a high level of maturity in managing IT and business competencies. This evaluation provides a foundation to continuously improve performance and strengthen integration between business and IT aspects.

Results of the analysis of governance criteria

IT department shows great maturity in the integration of various strategic aspects. From business strategy planning to IT strategy planning and information systems, everything is well integrated (4.4), reflecting the sustainability and alignment between business objectives and technology utilization. The organizational structure that organizes the responsibilities and

authorities of the IT department under the leader, with the IT manager reporting directly to the leader (4.4), demonstrates an effective hierarchical relationship.

The existence of a budget provided for IT infrastructure (4.2) reflects financial commitment to technology sustainability. IT implementation priorities determined based on IT and business functions (4.6) confirm that strategic decisions regarding technology are based on business needs and objectives. Overall, the evaluation results illustrate an integrated and holistic approach to utilizing technology to effectively achieve company goals and growth.

While there are variations in the assessment of IT infrastructure budgets, the overall assessment provides an indication that PT Bee Solution Partner has successfully achieved a consistent level of alignment between business and IT strategies, creating a strong foundation to support the holistic achievement of company goals.

The results of the analysis of partnership criteria

Based on the results of the assessment of the team's perception of the role of Information Technology (IT) at PT Bee Solution Partner, it can be concluded that the IT department of PT Bee Solution Partner received a high rating in recognizing the importance of Information Technology (IT) as a crucial asset (4.8), showing awareness of the strategic role of IT in creating corporate value through close cooperation with the business.

IT presence is also considered a key factor in easing the company's adaptation to change (4.8), demonstrating a deep understanding of the flexibility and agility that IT brings. Evaluation of the risk of IT implementation failure shared with appreciation of implementation success (4.4) reflects a collaborative approach where management and the IT department work together to manage risk and celebrate achievement.

A well implemented relationship between business management and IT, with continuous improvement continuous improvement (4.8), demonstrates continuous communication and cooperation. Internal trust in relationships with business partners (4.8) reflects success in building mutual trust between the IT department and business partners. In addition, the leader's role as a corporate development sponsor (4.4) signifies high support for the company's growth and development through innovation and effective use of IT.

This evaluation illustrates the commitment and effectiveness of PT Bee Solution Partner's IT Department in integrating IT as a strategic value driver and corporate growth driver. The department's overall average is 4.6, reflecting consistent alignment in viewing IT as a strategic asset that supports the growth and sustainability of the company.

Scope and architecture criteria analysis results

Based on the results of the assessment of the role and integration of Information Technology (IT) at PT. Bee Solution Partner, it can be seen that IT is considered an important business strategy opportunity. The IT department of PT Bee Solution Partner received an excellent rating in understanding the crucial role of Information Technology (IT) as an enabler in the company's business strategy (4.6). This evaluation reflects an awareness of IT's contribution to supporting and driving business efficiency. In addition, the company has successfully integrated and standardized IT planning and implementation (4.6), demonstrating efforts to achieve consistency and coordination in technology management. IT/SI architecture that has been integrated with business partners (4.4) signifies the department's ability to bridge the gap between internal IT infrastructure and the needs of external business partners. The care given to the IT/SI Architecture used as work (4.4) reflects a focused approach to the maintenance and development of systems that support day-to-day operations.

With high ratings on all these points, Bee Solution Partner's IT department demonstrates a strong commitment to the effective utilization and integration of IT as a means to achieve business objectives and enhance collaboration with business partners.

The department's overall average is 4.5, reflecting a good level of maturity in managing and integrating IT as an integral part of the company's business strategy. This evaluation provides a solid foundation for continuing to strengthen IT's role as an enabler of a more effective business strategy.

Results of skill criteria analysis

Based on the results of the assessment of responses and initiatives in the face of innovation and change at PT. Bee Solution Partner, it appears that the IT team has a good level of maturity in these various aspects. PT Bee Solution Partner's IT department achieved a high rating in response to new innovations in technology, showing success in accommodating and responding to technological developments quickly and effectively (4.4). The implementation of tasks based on meetings and joint discussions with a high rating (4.6) reflects a collaborative approach.

Collaborative approach in carrying out tasks, ensuring comprehensive understanding and team synergy. The high level of change readiness and focus (4.4) signifies flexibility and agility in responding to the fast-changing dynamics of the business and technology environment. The existence of career advancement opportunities for all staff (4.4) reflects a commitment to professional development and motivation to improve employee well-being.

Nonetheless, providing training to staff in line with their skill sets with the assessment of (4.2) and the use of consultants to plan and develop strategies (4.2) indicate areas for improvement in human resource management and strategy development. This evaluation provides a foundation to continue reinforcing positive practices and improve adaptation to change and innovation within the department.

The department's overall average was 4.4, reflecting the commitment of Bee Solution Partner's IT team to supporting innovation, managing change, and providing career development opportunities for its staff. This evaluation provides a solid foundation for continuing positive practices and continuously improving adaptability to technology and business dynamics.

Analysis results for all criteria

The following is a table of analysis results based on answers from respondents for all criteria.

Table 2. Results for all criteria

Criteria	Grade	Average
Communication	3,8	
Competence	4,3	
Governance	4,4	
Partnership	4,6	4,3
Scope and Architecture	4,5	
Expertise	4,4	

Based on the assessment conducted at PT Bee Solution Partner, PT has achieved alignment of business strategy and IT strategy at level 4 (Improved/Managed Process). At this level it can be said that the organization has aligned IT and business strongly and the business has assumed that IT can create added value for the company or organization. The business part values IT more and is willing to take risks and profits with IT.

4. CONCLUSION

In the short term, PT Bee Solution Partners can optimize the use of IT resources by immediately identifying areas where IT investments can be optimized to support daily operations more efficiently. This includes enhancing system integration, automating processes, and improving data security. Additionally, by aligning IT strategy with business objectives, the company can promptly implement necessary changes to enhance operational efficiency, such as reducing operational costs, increasing employee productivity, and providing more responsive customer service. Focusing on IT and business alignment also allows PT Bee Solution Partners to improve service quality to customers with IT solutions that better meet their needs, including enhancing user experience through digital platforms and developing more intuitive applications.

In the long term, by ensuring alignment between business strategy and IT, PT Bee Solution Partners can develop new innovations that support growth and maintain a competitive edge in the market. This includes developing new products, expanding market reach through digital technology, and differentiating from competitors with additional services. This research also enables PT Bee Solution Partners to become more adaptive to future market and technology changes, by understanding how technology can be used to support flexible business strategies,

allowing the company to respond more quickly to emerging opportunities or threats. Through continuous IT and business alignment analysis, the company can improve technology governance and risk management related to information security and regulatory compliance, helping ensure long-term operational sustainability. By focusing on IT and business alignment, PT Bee Solution Partners can also enhance stakeholder satisfaction, including shareholders, employees, and customers, creating a more productive work environment, increasing customer loyalty, and strengthening the company's overall reputation.

Business strategy and IT strategy planning is used to align the needs of business strategy and IT strategy to add value to competitive advantage an organization. Based on the results and discussion in the previous chapters and also based on the results of the questionnaire conducted to PT. Bee Solution Partner, the conclusions can be drawn from the results of the research conducted as follows: After the identification process using the Luftman method, overall all criteria and maturity of business strategy and IT strategy are at level 5, which can be said that PT. Bee Solution Partner has reached a fully strategic position, there are still several things from each criterion that must be improved in order to increase the maturity of the alignment of business strategy and IT strategy.

This research has several limitations that might affect the results or the generalization of the findings. First, data limitations, both in terms of access and quality, can impact the accuracy of the IT and business alignment analysis. To address this, future research should enhance data collection methodologies or use multi-method approaches to validate the results. Second, the limited time and scope of the research might cause the findings to not cover long-term changes or dynamics in IT and business alignment. Future research should consider longitudinal studies or extending the time frame to observe the impact of alignment more comprehensively. Third, uncontrollable external factors such as regulatory changes, market conditions, or new technologies can influence the IT and business alignment outcomes at PT Bee Solution Partners. Taking these factors into account and controlling for them will improve the validity of the findings. Recommendations for future research include conducting cross-industry comparative studies to understand differences in IT and business alignment, using mixed-method approaches to gain a deeper understanding of the impact of this alignment, extending the research time frame to track the evolution of alignment, integrating broader stakeholder perspectives such as end-users and top management, and performing longitudinal studies to track changes in IT and business alignment over time.

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