Strategic IS/IT Planning for Enhanced Competitiveness and Operational Efficiency at PT. Songgo Jati Baru: Applying the Ward and Peppard Method

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Abstract

This study designs an integrated IS/IT strategy to enhance PT. Songgo Jati Baru's operational efficiency and global competitiveness in the trading and services sector. A qualitative approach was employed, utilizing data collection methods such as focus group discussions, document analysis, observation, and interviews. Analysis was conducted using the robust Ward and Peppard method, which incorporates SWOT analysis, Gap analysis, and the McFarlan Strategic Grid. The findings revealed that the company faced significant challenges, including a lack of system integration, limited data analytics capabilities, and suboptimal digital marketing strategies. To address these, the research recommends a cloud-based Enterprise Resource Planning (ERP) system for comprehensive business process integration, a Vendor Management System (VMS) for efficient collaboration, and a Customer Relationship Management (CRM) system for data-driven marketing, with a phased implementation planned for 2026-2028. This comprehensive strategy, underpinned by robust cloud infrastructure and continuous staff training, is poised to not only significantly enhance PT. Songgo Jati Baru's operational efficiency and global market reach but also to solidify its competitive position and ensure sustainable growth in the dynamic trade and services sector.

Keywords: Gap Analysis, IS/IT Strategy, McFarlan Strategic Grid, SWOT Analysis, Ward and Peppard, Operational Efficiency.

1. INTRODUCTION

In today's rapidly evolving era of digitalization and globalization, information technology (IT) has become the heartbeat of organizational sustainability and competitiveness. Across industries, the effective integration of information systems and information technology (IS/IT) is no longer a luxury but a necessity to survive and thrive in an increasingly volatile market landscape. Optimizing IS/IT integration empowers businesses to automate critical processes, reduce operational inefficiencies, enhance resource utilization, and unlock powerful insights through data-driven decision-making, which allows organizations to

swiftly adapt to ever-changing market dynamics and consumer demands [1]. In fact, numerous studies have consistently highlighted that organizations with well-designed IS/IT strategies are better positioned to create and sustain competitive advantages, enabling them to outperform competitors in even the most saturated markets [2], [3].

The transformative impact of digital technologies is evident worldwide, and Indonesia is no exception. According to recent reports, around 60% of Indonesian small, micro, and medium enterprises (SMEs) have embraced digital tools such as e-commerce platforms, social media marketing, and online payment systems to expand their market reach and improve customer engagement [4]. However, significant disparities remain across regions, with rural and less-developed areas lagging behind in digital adoption—a stark reminder of the persistent digital divide that threatens to widen socioeconomic inequalities.

PT. Songgo Jati Baru, a company operating in the trade and service sector, exemplifies both the promise and the pitfalls of digital transformation. While the company has adopted several technological systems over the years, it continues to face substantial hurdles that impede its growth and competitiveness. Key challenges include fragmented integration between existing systems, minimal leverage of data analytics for informed decision-making, and underdeveloped digital marketing strategies that fail to capture and retain customers effectively [5]. These obstacles not only undermine operational efficiency but also limit the company's ability to expand its market presence in an increasingly digital economy, making a robust and structured IS/IT strategy imperative for sustainable growth.

To bridge this gap, there is an urgent need for a comprehensive framework capable of aligning IS/IT initiatives with the company's overarching business goals. The Ward and Peppard methodology offers a systematic approach to crafting IS/IT strategies by aligning technology solutions with business objectives through a structured evaluation of internal and external factors [6], [7]. When complemented with SWOT Analysis for identifying organizational strengths, weaknesses, opportunities, and threats; Gap Analysis for pinpointing discrepancies between current and desired states; and the McFarlan Strategic Grid for classifying information systems based on their strategic impact, this integrated approach has proven highly effective across diverse organizational contexts [8], [9], [10]. For instance, previous implementations of this combined methodology have resulted in well-defined IS/IT portfolios that enhance operational efficiency, foster innovation, and strengthen competitive positioning in sectors ranging from manufacturing to services.

Moreover, the rapid pace of digital transformation today demands strategic IT solutions, such as Enterprise Resource Planning (ERP) systems, Customer

Relationship Management (CRM) platforms, and advanced data analytics tools, to streamline workflows, improve coordination, and generate actionable insights [8]. By leveraging these technologies, companies like PT. Songgo Jati Baru can unlock new levels of efficiency, agility, and customer responsiveness—key ingredients for long-term success in the modern business landscape.

Against this backdrop, the present study aims to address the specific challenges faced by PT. Songgo Jati Baru through the formulation of an integrated IS/IT strategy. The central objective of this research is to demonstrate the practical application of the Ward and Peppard method, alongside SWOT Analysis, Gap Analysis, and the McFarlan Strategic Grid, in designing an IS/IT strategy tailored to the unique context and needs of PT. Songgo Jati Baru. Additionally, this research seeks to identify a comprehensive application portfolio and development roadmap that can serve as a blueprint for enhancing the company's operational performance, resource management, and digital marketing effectiveness. Ultimately, this integrated approach aspires to transform PT. Songgo Jati Baru into a digitally mature, agile, and competitive organization capable of navigating the complexities of the digital age.

2. METHODS

This study adopted a qualitative approach with descriptive characteristics to explore the strategic IS/IT planning for PT. Songgo Jati Baru in depth. Data were collected through single-session Focus Group Discussions (FGDs) and semi-structured interviews to ensure efficiency while capturing comprehensive insights. Three FGD sessions, each involving 4 participants, and 5 individual interviews were conducted with key stakeholders at PT. Songgo Jati Baru. These methods were complemented by document analysis and a literature review to provide a holistic understanding of the company's current IS/IT environment, as supported by similar qualitative approaches in strategic IS planning [11]. Participants were selected using purposive sampling to align with the research objectives, ensuring relevance and diversity in perspective. The FGDs involved 12 participants, divided into three groups of 4, selected based on their roles in operational, financial, and managerial functions at PT. Songgo Jati Baru. The interviews included 5 participants, comprising senior manager and IT staff, chosen for their expertise in the company's business processes and IS/IT systems. This selection strategy, consistent with qualitative research practices, ensuring data richness and relevance [12].

Qualitative data from FGDs and interviews were analyzed using thematic analysis to identify patterns and themes. The process involved transcribing data verbatum, developing an initial coding framework based on recurring concepts, and iteratively refining codes as new themes emerged. These codes were grouped into broader

themes, validated through team discussions to ensure consistency with research objectives. Triangulation with document analysis and literature review enhanced the reliability of findings, aligning with established qualitative methodologies [13]. The analytical approach centered on thematic analysis, supported by a structured coding framework to categorize data into meaningful units. Initial codes were generated inductively, followed by deductive application of theoretical concepts from the Ward and Peppard framework. This dual approach ensured data-driven insights and alignment with strategic IS/IT planning literature. Cross-checking among researchers. As recommended in recent studies, minimalized interpretive bias and strengthened analytical rigor [14].

The qualitative approach provided rich contextual insights but has inherent limitations. Single-session FGDs and interviews may limit the depth of exploration compared to multiple rounds, potentially missing nuanced perspective. The purposive sample, while appropriate, restricts generalizability to other organizations. Subjectively, in participants responses, influenced by personal biases, may affect data objectively, necessitating careful interpretation [15]. Data collection faced challenges, including group dynamics in FGDs were dominant voices occasionally overshadowed quieter participants, potentially skewing insights. Moderators mitigated this by encouraging balanced participation. Recalling bias in interviews, particularly for past events, may have impacted data accuracy. Researcher bias during coding was minimized through triangulation and regular team discussions, ensuring robust findings [11].

The research process is depicted in Figure 1, a flowchart illustrating key stages from participants selection to data analysis. This visualization clarifies the methodological workflow, ensuring transparency in the study's execution. Figure 1 includes steps such as purposive sampling, data collection via FGDs and interviews, thematic analysis and validation through triangulation. This structured approach aligns with best practices in qualitative IS/IT research [12].

This research began with a comprehensive literature study using the Ward and Peppard method to build a theoretical and methodological foundation in IS/IT strategic planning. This literature study aims to understand relevant concepts, theories, and analysis techniques through reviewing scientific journals, books, and other related publications. Research by [10] demonstrated the successful application of the Ward and Peppard method in designing an IS/IT strategy in a freight forwarding company, providing insight into implementing this method in logistics. Likewise Prayogo et al., [7] Confirm that an in-depth literature study supports identifying a strategic framework for aligning information technology with business objectives, which is relevant for PT. Songgo Jati Baru.
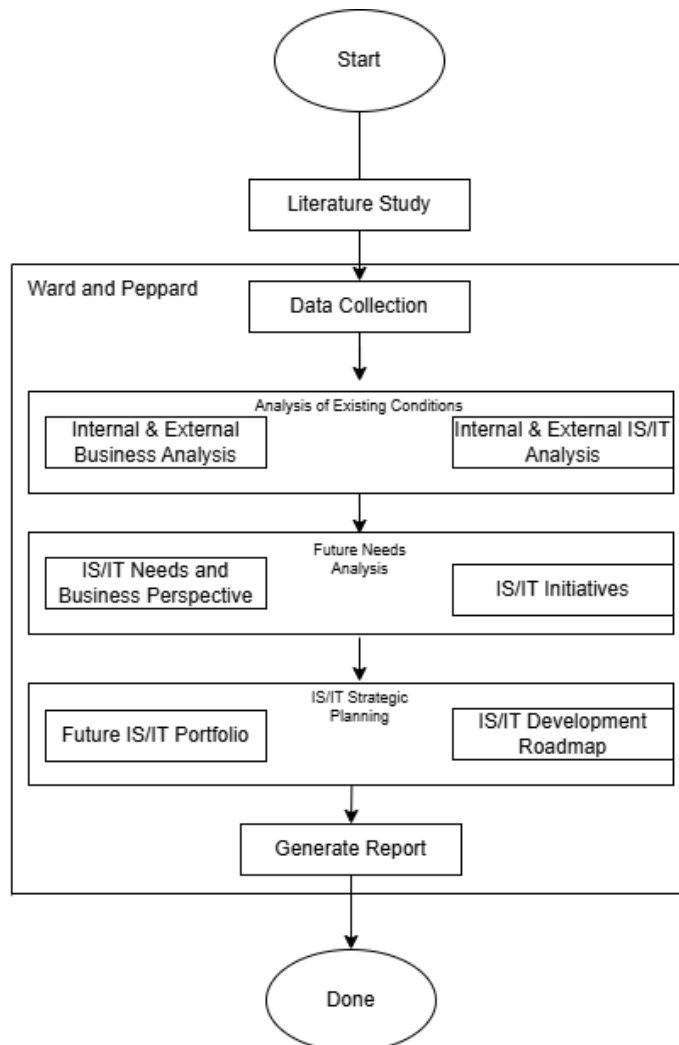
Figure 1 Research Flow

The Ward and Peppard method were applied through three main stages: analyzing existing conditions with SWOT analysis to evaluate internal and external factors, analyzing future needs using GAP analysis to identify systems gaps, and IS/IT strategic planning using McFarlan's Strategic Grid to compile an application portfolio and development roadmap. Observations and interviews produced actual data on business processes, business units, and technologies used, while document studies provided information such as business process flow and organizational structure.

3.   RESULTS AND DISCUSSION

This study employed FGDs and document analysis to gather comprehensive insights into PT. Songgo Jati Baru operational and IS/IT environment. Three single-session FGDs, each involving 4 stakeholders from operational, financial and managerial roles, revealed critical inefficiencies, with one participant noting, "Our fragmented systems hinder seamless operations". Document analysis provided detailed records of business processes, system usage, and key performance indicators (KPIs), obtained post-FGD from PT. Songgo Jati Baru. These qualitative insights, combined with empirical data, formed a robust foundation for strategic IS/IT planning, aligning with qualitative methodologies in similar studies [6].

3.1.   Internal and External Analysis

PT. Songgo Jati Baru operates through three key units: the field unit manages on-site projects, the operations unit oversees administrative and accounting tasks, and the HR unit handles recruitment and staff development. Table 1 presents the SWOT analysis, which maps the company's strategic position for sustainable growth.

Tabel 1. SWOT Analysis

Strengths	Weakness
1. High-quality product with competitive pricing 2. Focus on quality and customer satisfaction 3. Strong customer relations 4. Effective resources synergy 5. Diverse products and services offering 6. Commitment to timely delivery	1. Thin profit margins 2. Rising consumer expectations 3. High relational investments 4. Inter-functional coordination challenges
Opportunities	Threats
1. Global market expansion 2. Demand for quality products 3. IT utilization potential 4. Strong reputation and customer trust	1. Global competition and currency fluctuations 2. Changing consumer preferences and competitor innovations 3. Reputational risks from service issues 4. Technological lag and cyber threats 5. Economic downturns reducing purchasing power

Table 1 highlights PT. Songgo Jati Baru's strengths, such as product quality and customer relations, which enable leveraging opportunities like global market expansion. However, weakness, including coordination challenges, require mitigation to address threats like technological lag, consistent with findings on strategic business analysis [16]. Based on the results of the SWOT analysis, several strategies can be identified that can be applied to PT. Songgo Jati Baru to overcome existing problems, as summarized in Table 2, which contains strategies from the SWOT analysis results. The following are strategies that can be applied.

Tabel 2 Matrix SWOT

Strategy SO	Strategy SW
Utilizing IT for global expansion	Improved coordination with ERP systems
Strategy ST	Strategy WT
Strengthening Cyber Security with IT infrastructure	Market diversification for economic resilience

3.2. Internal and External IS/IT

The IS/IT environment was assessed to evaluate current systems and technologies. Table 3 details the existing information systems at PT. Songgo Jati Baru.

Tabel 3 Information System at PT. Songgo Jati Baru

No.	SI Name	Users	Types of Application
1.	SI Marketing	Marketing section	Web and social media
2.	SI Accurate	Accounting and Admin	Web-based
3.	SI Attendance	HR Department	Web-based

1) SI Marketing
   Marketing Information Systems (MIS) is an information technology-based website and social media utilized by related divisions to support effective communication and customer acquisition strategies.
2) SI Accurate
   SI Accurate is a financial software designed to manage the financial management process and generate financial reports automatically, supporting efficiency and accuracy in managing organizational financial data.
3) SI Attendance
   SI Attendance is a web-based staffing information system that processes all staffing-related information. So that it can simplify the staffing administration process

Based on the analysis in Table 3, PT. Songgo Jati Baru implements 3 types of information systems to support the implementation of business processes and activities. In addition, the company utilizes information technology to increase efficiency and convenience in running business operations. Details of the technology currently used by PT. Songgo Jati Baru can be seen in the following Table 4.

Tabel 4. Information Technology

No.	Category	Description	Types of Technology
1.	Hardware	Hardware to help in running the company	PC, Laptop, Mouse, Keyboard
2.	Data Storage	Data storage and security of the company	Local storage and Cloud storage
3.	Network	A system that connects two or more devices	Local Area Network (LAN)

FGD participants emphasized inefficiencies due to system fragmentation, with one stating, "Reconciling data across systems is time-consuming". This aligns with research highlighting inefficiencies in siloed IS/It environments [17]. Several systems used by similar companies can be used as a reference for PT. Songgo Jati Baru's future because this technology trend is seen from several aspects involving the suitability of the business. Table 5 shows systems used by similar companies.

Tabel 5. Current Technology Trends

No.	Name System	Description
1.	ERP	A cloud-based ERP system like Odoo integrates PT. Songgo Jati Baru core business processes, supporting operational efficiency and strategic decision making
2.	Vendor Management Systems	The cloud-based Vendor Management System (VMS) enables PT. Songgo Jati Baru to efficiently manage vendor relationships with real-time tracking and IoT integration, supporting optimal collaboration and operational efficiency
3.	Customer Relationship Management	CRM Systems such as Qontak enable PT. Songgo Jati Baru to manage customer relationship and data-driven marketing strategies to improve service satisfaction and efficiency

3.3.   Future Needs Analysis

These future needs analyses assess the gaps and evaluate the current information systems and technology (IS/IT) capabilities at PT. Songgo Jati Baru compared them to the desired state to improve operational efficiency, support global market expansion, and strengthen competitiveness in the trade and services sector. The analysis focused on three key areas: integrated business management, vendor management, and customer relations and marketing.

Tabel 6. Gap Analysis

Aspect	Current State	Desired State	Gap	Recommendation
Integrated Business Management	Separate systems for marketing, finance and HR	A unified EPR system integrating all core business (finance, operations, HR)	Fragmentation causing inefficiencies and coordination issues	Implement a cloud-based ERP systems (Odoo) to streamline and integrate all business processes
Vendor Management	No dedicated vendor management system (VMS) vendor management is conducted manually or with basic methods.	An advanced VMS with real-time tracking and IoT integration for efficient vendor relationship management	Inefficient vendor management can potentially cause delays in collaboration and operational inefficiencies.	Adopt a cloud-based VMS with Iot capabilities for accurate and efficient vendor management.
Customer Relationship and Marketing	Basic marketing via web and social media	A comprehensive CRM system for customer engagement, data analytics, and personalized marketing	Limited customer insights and suboptimal digital marketing strategies	Implement a CRM system (Qontak) to enhance customer relationships and data-driven marketing

To overcome the lack of integration of current systems, companies need a cloud-based Enterprise Resource Planning (ERP) systems such as Odoo to integrate financial, operational and HR processes, as well as an Iot-based Vendor Management System (VMS) system for real-time vendor tracking, which will improve coordination and cost efficiency. In addition, Customer Relationship Management (CRM) systems such as Qontak, are required to strengthen customer engagement through data analysis and personalized marketing, supporting market expansion and customer satisfaction. Cloud infrastructure with 5G connectivity and IT training for staff are also essential to ensure effective implementation of new systems, bridge technology gaps, and support sustainable business growth as outlined in Table 6.

3.4. Implementation Planning

Based on the analysis of the business environment and IS/IT of PT. Songgo Jati Baru, the preparation of the application portfolio will be carried out using the McFarlan Strategic Grid analysis as a reference. This analysis aims to map information systems based on their strategic role in the information systems into four quadrants, namely strategic, high potential, key operational, and support to determine development priorities. The mapping of information systems used by PT. Songgo Jati Baru, based on the McFarlan Strategic Grid analysis, is presented in the following Table 7

Tabel 7. McFarlan Strategies Grid

Strategic	High Potential
ERP (Odoo)	CRM
Key Operational	Support
VMS	Marketing (Website & social media)

Based on the McFarlan Strategic Grid analysis in Table 7 for PT. Songgo Jati Baru, strategic recommendations include the implementation of Odoo Enterprise Resources Planning (ERP) systems as a strategic system to integrate core business processes, replacing Accurate and Attendance to improve operational efficiency and support global market expansion, and the development of a Customer Relationship Management (CRM) system in the high potential quadrant to strengthen customer engagement through data-driven marketing. Vendor Management System (VMS) was maintained in the key operational quadrant with integration to Odoo optimize vendor collaboration, while SI marketing in the support quadrant was optimized through integration with CRM to improve digital marketing effectiveness. This approach, supported by cloud infrastructure upgrades and staff training, ensured IS/IT alignment with the company's business objectives in the trade and services sector.

3.5.   Roadmap Implementation

Based on Table 8 and the results of the McFarlan Strategic Grid analysis, PT. Songgo Jati Baru IS/IT roadmap includes strategic (ERP/Odoo), high potential (CRM), key operational (VMS), and supporting (SI Marketing) quadrants. Implementation is scheduled for 2026 – 2028, with priority on system integration, elimination of SI Accurate and SI Attendance, and optimizing of existing systems to support operational efficiency, global market expansion, and increased competitiveness in the trade and service sectors. Implementation challenges include high costs (estimated at $100,000-$200,000 for cloud infrastructure), resistance to change, and training needs, requiring robust change management and staff upskilling [18].

Tabel 8 Roadmap Implementation

SI Name	2026	2027	2028
ERP	Strategic		
VMS		Key Operational	
CRM		High Potential	
SI Marketing			Support

3.6.   Discussion

This study employed the Ward and Peppard methodology as the backbone for analyzing and designing an integrated IS/IT strategy tailored to PT. Songgo Jati Baru. By triangulating data gathered through focus group discussions (FGDs), document reviews, direct observations, and in-depth interviews, the research provided a comprehensive evaluation of the company's business environment and current IS/IT landscape. Through SWOT analysis, several critical insights emerged: among the company's strengths are its high-quality products and a dedicated workforce, while weaknesses include fragmented systems that cause inefficiencies and delays. As one participant aptly remarked during interviews, "Our systems lack integration, which slows down our entire operation." This sentiment underscores the urgency of establishing a unified technology framework to support seamless business processes.

The subsequent gap analysis highlighted pressing needs for adopting a cloud-based Enterprise Resource Planning (ERP) system to centralize and streamline operations, a Vendor Management System (VMS) to improve supplier relationships, and a Customer Relationship Management (CRM) platform to enhance engagement and retention. By applying the McFarlan Strategic Grid, these proposed solutions were categorized according to their strategic importance: the cloud-based ERP was identified as a strategic system, the VMS as key operational, and the CRM as high potential—each playing a pivotal role in modernizing PT.

Songgo Jati Baru's business processes and preparing the company for sustainable growth. From these analyses, a clear IS/IT development roadmap for 2026–2028 was formulated, offering a phased approach to improve operational efficiency, decision-making, and competitiveness in a rapidly digitalizing market.

These findings align closely with previous studies validating the Ward and Peppard method's effectiveness across diverse sectors. For instance, Faizal and Chernovita [6] successfully applied this method in the governmental sector to align IT projects with public service goals, while Wijaya and Prasetyo [14] demonstrated its relevance in private enterprises seeking digital transformation. Further support for the proposed solutions comes from research by Ardiansyah and Wahyudi [3] and Alviansyah and Rudianto [10], who highlighted the critical role of integrated systems and data analytics in enhancing organizational agility and market responsiveness.

Moreover, additional validation is provided by Agnes and Wijaya [19], who showcased the method's adaptability in SMEs, Sembiring Pelawi and Wijaya [17], who applied it in web-based service development, and Ikhwan and Hendri [20], who extended it to the educational sector. Recent contributions by Prasetyo and Wijaya [21] and a comprehensive systematic review by Pajar [18] further confirm the Ward and Peppard method's versatility and robustness across industries and organizational scales.

However, despite the promising prospects, the study identified several implementation risks that must be carefully managed to ensure successful deployment of the proposed IS/IT solutions. Among the most significant risks are the potentially high initial investment costs associated with acquiring and deploying ERP, VMS, and CRM systems; employee resistance to adopting new technologies due to fear of change or unfamiliarity; and skill gaps that could impede effective utilization of these systems. Participants expressed concerns candidly, with one stating, "We need thorough training programs for staff to adapt to the new systems." Addressing these challenges through change management strategies, comprehensive training programs, and phased implementation plans will be essential to maximizing the benefits of the new systems.

To measure the success of the IS/IT strategy and ensure its alignment with evolving market demands, clear key performance indicators (KPIs) have been established. These include achieving a system adoption rate of at least 80% among staff within the first six months post-implementation, reducing operational costs by a minimum of 15% annually through improved efficiency, and boosting customer satisfaction scores by at least 20% within the first year of full system deployment. Regular monitoring and evaluation of these KPIs will provide

actionable insights, enabling PT. Songgo Jati Baru to make timely adjustments and maintain a competitive edge in a dynamic business environment [22].

Overall, the study not only reaffirms the efficacy of the Ward and Peppard approach in aligning IS/IT strategies with business objectives but also demonstrates its practicality in designing a concrete roadmap tailored to PT. Songgo Jati Baru's unique needs. By addressing both the opportunities and challenges identified, the proposed IS/IT strategy offers a clear path toward operational excellence, improved customer engagement, and sustained competitiveness.

4. CONCLUSION

This study has developed an integrated IS/IT strategy for PT. Songgo Jati Baru to address critical challenges, including fragmented system integration, limited data analytics utilization, and suboptimal digital marketing. Utilizing the Ward and Peppard method, supported by SWOT analysis, Gap Analysis, and the McFarlan Strategic Grid, the research recommends adopting a cloud-based Enterprise Resource Planning (ERP) system, a Vendor Management System (VMS), and a Customer Relationship Management (CRM) system, with a phased implementation planned from 2026 to 2028 to enhance operational efficiency and global competitiveness. PT. Songgo Jati Baru should prioritize ERP deployment in 2026 with meticulous data migration and comprehensive staff training, followed by VMS and CRM integration in 2027 leveraging IoT and analytics, and SI marketing optimization in 2028 with 5G connectivity support. Continuous evaluation through key performance indicators, such as achieving a system adoption rate of 80% within six months and reducing costs by 15% annually, is essential to remain responsive to market dynamics.

Despite its contributions, this study's single-case design limits the generalizability of findings to other organizations, and its qualitative approach may introduce subjectivity, although this was mitigated through data triangulation. Future research could explore the strategy's applicability across diverse sectors or evaluate its long-term impact post-implementation to provide broader insights into strategic IS/IT planning. PT. Songgo Jati Baru should maintain ongoing assessments to stay aligned with technological advancements, ensuring sustained competitiveness in the trade and services sector. This research offers a practical framework for similar enterprises, demonstrating how structured IS/IT planning can drive operational excellence and market resilience.

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