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# Strategy for achieving IT-business alignment in gaming industry in Indonesia

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#### Abstract

The gaming industry is one of the industries that generate huge and promising revenue. Many factors support the rapid development of the gaming industry. One of which is IT-Business alignment. The alignment between Information Technology (IT) and business is crucial. Therefore, several studies on how to achieve alignment had been done. Unfortunately, few research specifically addressed how to achieve alignment between IT and business in gaming companies. This study aims to formulate a strategy to attain alignment between IT and business in gaming companies, based on the Strategic Alignment Model (SAM) with a SWOT analysis. SWOT Analysis was done based on each domain in the SAM. This research generated several specific recommendations for gaming companies in Business Strategy, IT Strategy, Organizational Infrastructure/Process, and IS/IT Infrastructure/Process domains. The key strategies obtained from this research such as strengthening product promotion and marketing and expanding networks with potential consumers, other game producers, and governments; doing research and innovation on new games and game-making technology; developing staff with training and certification, maintaining good relations, and appreciating staff achievements; formulating company strategic plans by considering the position of competitors and future market opportunities.

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#### 1. Introduction

The gaming industry is one of the fastest-growing industries and is predicted to experience a significant increase in the next five to seven years. According to the Market Analysis Report, this industry is worth USD 151.06 billion in 2019 and is predicted to grow with a Compound Annual Growth Rate (CAGR) of 12.9% from 2020 to 2027 [1]. This

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rapid development is supported by the development and innovation of hardware and software. In addition, COVID-19 also makes internet services inevitably a primary need for anyone. Internet is increasingly needed, and in line with that, Internet Service Providers welcome the requirements of this market by increasing their capacity to meet customer needs. This condition makes the prospects for the gaming industry even more promising. In addition, game developers continue to improve and compete to produce games that increasingly attract users of all ages anywhere in the world.

Although many factors support the growth of the gaming industry, according to [1], in the internal environment of a company, aligning IT with business strategy is vital as well as focusing on the game products. Nowadays, IT Business Alignment is a center of consideration of numerous IT pioneers or supervisors. Not only in the gaming industry, but several areas also require IT and business alignment. IT and business alignment are needed in education [2], several processes such as mergers and acquisitions of a company [3], adjustment between business processes and software [4], and many more. Many researchers have demonstrated the alignment of IT and Business to help an institution or organization to assist organizations in various ways, such as maximizing IT investment [5], maximizing the use of IT [6], and helping the institutions to get to know the value of their IT [7].

The absence of alignment between IT and business strategy is why an organization fails to recognize the essence of the IT investment [8]. On the other hand, organizations that align IT with their business strategies have good overall business achievement [9][10]. The lack of alignment also causes a loss of moment to boost competitive advantage, increased consumption, thus increasing the negative impact on IT investment [11][12][13].

Recognizing the significance of aligning IT with these business strategies, numerous researchers have inspected how to achieve and accomplish this alignment. Henderson and Venkatraman first introduced Strategic Alignment Model (SAM), continued by Luftman with Luftman's Alignment Model (LAM). Reich and Benbasat made a model named Reich & Benbasat Model (RBM), Sabherwal and Chan with Alignment Model (SCAM), and Hu Huang with Alignment Model (HHAM) [14]. These studies are then followed by another research about IT Business Alignment practices in the organization.

There are large numbers of research concerning IT Business Alignment practice such as in association, companies, and organization [15], [16], in manufacturing companies [17], service companies [10][18], but only a few research has gone into how to achieve alignment in the gaming industry. Therefore, this paper will discuss how a gaming company can achieve alignment between IT and Business.

#### 2. Literature review

#### 2.1. Strategic alignment model

Henderson and Venkatraman, who introduced SAM, argued that the strategic alignment between IT and business could be achieved through integration between the IT and Business domains. There are four perspectives of alignment in this model. First, business strategy is a trigger for organizational infrastructure and IS infrastructure design. Second, business strategies are assessed through IT strategies and articulation of infrastructure and IT processes. Third, IT capabilities impact products and services (business scope), influence key attributes of strategy (distinctive competencies), and develop new forms of relationships (business governance). Fourth, understanding the external dimensions of IT strategy with IT infrastructure and processes is necessary [11].

### 2.2. Research about IT and business alignment practice

Masri studied the impact of IT Business Alignment Practices on Organizational strategy. They found that the governance, partnership, scope and architecture, communication, value, and skills alignment factors were effective and valid components of the maturity of an organization in applying practices that drove the alignment process. Moreover, they suggested formalizing a program management process, improving support for hierarchies of authority, and integrating collaboration values could be the best practice to implement IT Business Alignment [15]. Alaceva found that common understanding of counterpart's environment; poor communication; unclear specifications; limited cooperation, and lack of mutual commitment and support inhibits the achievement of alignment between business and IT domains on the social dimension were the barriers in achieving business/IT alignment [16]. Wong did a two-stage analysis to find influences of employee alignment on effecting business-IT alignment and find that employee

communication had the most direct contribution to the business-IT alignment [17]. Jabbari found IT resource management, performance measurement, knowledge sharing, IT architecture, and IT infrastructure. According to the findings of this study, all five factors influenced the alignment of business and IT positively, and among them, performance measurement had the highest impact [18]. Horlach reconceptualized BITA for agile contexts based on data from banking, telco, retail, government, automotive, and IT industry [19]. Although many studies discussed IT-business alignment practices, no one had explicitly addressed how to achieve alignment in the gaming industry.

#### 3. Methodology

This study analyzed the current state of a game company using the Strategic Alignment Model (SAM). The object of this research was a game company located in Yogyakarta, Indonesia. This research used a qualitative approach. The qualitative approach was adopted because this research required a detailed understanding of the issues being discussed [20].

Data collection was conducted from August 2019 - January 2020 by conducting in-depth interviews 2-3 times for each source with an average duration of two hours with three respondents from the game company and gathering information via its website and related news. The respondents consisted of the CEO, COO, and CTO of the game company. Data collection was stopped when the data was saturated, or no new information was obtained [21]. All interviews were recorded, and then a transcript was made. The interview's validity depends on the interviewee's willingness to openly express their views and opinions and the ability of the interviewer to understand them correctly [22]. The theory used as a basis for extracting information from sources is the Strategic Alignment Model from Henderson and Venkatraman [23]. Before conducting the interview, identifying keywords included in each of the variables in the theory above had been placed. These keywords were used as a guide in conducting interviews. Interviews were conducted without using a list of questions but by discussing each keyword in each variable. The questions posed were open-ended. The respondents were free to say anything following the keywords previously identified. The interview results, which had a transcript made, were coded and then analyzed for patterns.

Data analysis in this study was carried out in several stages, including Mapping Data to SAM Model, SWOT Analysis, and Strategy Recommendation Formulation. The interview data obtained were then mapped according to their suitability with the variables in the SAM Model. After being mapped into each SAM variable, a SWOT analysis was performed for each domain. This SWOT analysis would compile solutions for each weakness and threat of each field, and the answers would construct recommendations for game companies to achieve a higher level of strategic alignment. The advice was then verified by conducting discussions with the game company to obtain corrections from the results.

#### 4. Result and discussion

After collecting and analyzing interview data, the researchers presented it in a SWOT Analysis table. Recommendations for Strength – Opportunity (SO), Weakness – Opportunity (WO), Strength – Threat (ST), Weakness – Threat (WT) were compiled based on each point in the SWOT and have been verified by the game company.

#### 4.1. SWOT analysis and recommendation for business strategy domain

Table 1 shows SWOT Analysis for Business Strategy and Strategy recommendation for the Business Strategy domain.

Table 1. SWOT analysis for business strategy

#### STRENGTH WEAKNESS • This game studio is quite well known • Business planning activities have not among the national gaming industry, been seriously documented. It will as evidenced by the news about this only be reported when the planning game studio on various online news has begun to be done thoughtfully. sites • There is no strategic planning · Clients and partners come from document. Planning is only carried out various regions in Indonesia and as a discussion, and if it wants to be outside Indonesia. carried out, it is carried out directly by The company focuses on B2C products the related parties. by strengthening the B2C Game · They only have one certified employee division. • The company's size is small and located in Yogyakarta, a student city close to several universities. So, it is easier to get resources, and the regional minimum wage is lower than in other cities. • There is a game and non-game application division. • The workers have had a passion for games since college. OPPORTUNITIES S-O Recommendation W-O Recommendation • Internet and smartphone users in Indonesia • Promoting products by game studios • Preparing periodic corporate strategic and the world are increasing every year. online through social media or other planning documents in the short, An easier way of marketing because of the online portals medium, and long term increasing number of social media and Expanding • Starting to look for funding from outside the network and social media users. maintaining good relations with the company with the help of • The gap in internet access will decrease existing client connections in areas information from partners. with the inauguration of Palapa Ring Jilid spread across Indonesia and abroad. • Taking a certification or online course to • Keeping the company size small to increase skills and recognition in the The existence of a game publisher who can management and facilitate game development help market the game. expenses. A reasonably wide connection from the · Enlarging, exploring benefits and relationships with partners Market interest in new types of games · Brainstorming regular research on trending games THREATS S-T Recommendation W-T Recommendation • Starting to plan applications/games for • Indonesia's geographic structure, which · Adjusting the price or special service consists of islands, makes internet customers with unlimited sources of packages for clients in remote areas infrastructure development quite tricky and Starting to promote to funds. Example: government. expensive. This condition makes Indonesia governments and think about the types • Conducting promotions, campaigns, one of the countries with the lowest of applications offered to the online marketing that encourage people connection speeds in the Asia Pacific. to stay at home and fill their activities by government. • Unpredictable circumstances such as a • Urging the employees to work from playing games. pandemic · Grabbing potential game development their homes (WFH) Several local game studios produce games Increasing cultural research to explore people and educating them in a dedicated with cultural themes. any cultures used as game ideas boot camp • The large number of young talents who can produce homemade games with the potential to become competitors in the future

## 4.2. SWOT analysis and recommendation for IT strategy domain

Table 2 shows SWOT Analysis for IT Strategy and Strategy recommendation for the Business Strategy domain.

Table 2. SWOT analysis for IT strategy

	STRENGTH	WEAKNESS
	<ul> <li>Quickly adapt to new technology</li> <li>The company implements IT governance, services, and security following their beliefs and what they think is good.</li> <li>The cofounder is also the direction of IT.</li> <li>The company provides a product warranty.</li> <li>Good communication with B2B clients is also carried out to get feedback about products and respond to product performance imperfections on specific devices.</li> </ul>	<ul> <li>There is no procurement planning.</li> <li>The company does not implement IT guidelines or standards such as COBIT, ITIL, ISO, etc.</li> <li>There is no IT Steering Committee which focuses on directing the company's IT direction.</li> <li>Limited variety of test equipment types</li> <li>Lack of attention to user reviews on Google Play</li> </ul>
<ul> <li>OPPORTUNITIES</li> <li>The diverse needs of clients who are increasingly using new technologies such as digital desks.</li> <li>The average game studio in Indonesia is still on a small scale with unorganized IT governance.</li> <li>The more established IT governance of the leading competitor</li> <li>There are Agile software development methods such as Scrum that can be adopted.</li> </ul>	S-O Recommendation  Increasing new technologies to the games Participating in a business assistance event, game software house association to gain insight into managing a good company.  Implementing and adopting software development methods following company conditions	<ul> <li>W-O Recommendation</li> <li>For game development tools that are pretty expensive, renting or buying by joining a partner can be a solution.</li> <li>Participating in a business assistance event, game software house association to gain insight into managing a good company.</li> <li>Paying more attention and respond to complaints from users</li> </ul>
THREATS  There has been no interest from investors to invest.  Dimensions, sizes, and specifications of HP are increasingly diverse.  Clients whose devices cannot be moved, so they have to do the testing at the client's location and remote client locations	S-T Recommendation  Participating in competitions or events that can expose the company.  Conducting comparative studies with other game companies both in Indonesia and abroad  Communicating the obstacles and challenges during game development with clients and trying to find a way out together	W-T Recommendation  • For game development tools that are pretty expensive, renting or buying by joining a partner can be a solution.  • Encouraging company leaders to be more concerned with their IT governance  • Creating a memorable and direct communication channel with customers and game users makes it easier for users to express opinions and complaints regarding games

## 4.3. SWOT analysis and recommendation for organizational infrastructure and process domain

Table 3 shows SWOT Analysis for Organizational Infrastructure and Process and Strategy recommendation for Business Strategy domain.

Table 3	SWOT	analysis t	for organ	izational	infrastructure	and process

	STRENGTH	WEAKNESS
	For small-scale companies, all the roles required are covered.     Excellent and continuous communication between cofounders and employees as well as the company and partners and clients     A clear workflow     The majority of employees come from circle/cofounder connections, making it easier for employees to get along with the cofounder.     The company accepts interns who have the potential to become permanent employees	<ul> <li>There are still resources with multiple positions.</li> <li>A significant problem faced by the company is marketing/promotion.</li> <li>The reduction in employee familiarity programs outside of working hours.</li> <li>There is no documentation related to SOPs or workflows in the company.</li> <li>The company has not implemented a psychological test. Personal matters related to prospective employees are known from interviews.</li> </ul>
OPPORTUNITIES	S-O Recommendation	W-O Recommendation
<ul> <li>The broad connections of cofounders and activeness in the gaming community make the company more likely to acquire resources, partners, clients, and mentors.</li> <li>Tender for a project with a chance to make the company name known and a chance to get a client.</li> <li>A government program to facilitate and accelerate the growth of digital business players by supporting the development of new local start-ups, looking for potential start-ups to get funding, and providing full support for unicorns and decacorns.</li> <li>There are efforts to accelerate the digital investment process in line with President Joko Widodo's vision of creating a prosperous and sustainable Indonesia.</li> <li>Extensive cofounder connections and activeness in the gaming community make the company more likely to acquire resources, partners, clients, and mentors.</li> <li>An education program from the government such as the digital talent Scholarship to give special attention to increasing superior digital talents</li> </ul>	Expanding company networks and connections by participating in conferences, competitions, and events     Participating in project tenders that allow the company to participate.     Participating in a business assistance event, game software house association to gain insight into managing a good company	<ul> <li>Choosing routine work that can be completed using the help of specific tools so that employees can focus on prioritizing work.</li> <li>Holding training in marketing or find employees who can focus on marketing.</li> <li>Managing better projects by paying attention to time management.</li> <li>Assigning administrative staff to document company SOPs.</li> <li>Learning the character of employees and how to face and develop their potential</li> </ul>
THREATS	S-T Recommendation	W-T Recommendation
A compelling offer from other game studios to employees     Competitor	<ul> <li>Improving good relations with employees by holding gatherings and sharing</li> <li>Communicating to employees to always have a competitive mindset.</li> <li>Opening a sharing session and listen to complaints from employees regarding the running of the company</li> </ul>	<ul> <li>Giving a salary based on employee performance and performance.</li> <li>Observing the workings and strategies of competitors, then adopting the essential values.</li> <li>Learning the character of employees and how to face and develop their potential</li> </ul>

### 4.4. SWOT analysis and recommendation for IS/IT infrastructure/process

Table 4 shows SWOT Analysis for IS/IT Infrastructure Process and Strategy recommendation for Business Strategy domain.

•	STRENGTH	WEAKNESS
	Able to take advantage of existing devices within the limitations experienced.     Every personnel in the company actively conducts research and skills development independently related to game development.	Non-standard documentation in game development.     Incomplete testing equipment     Having only one certified employee
OPPORTUNITIES	S-O Recommendation	W-O Recommendation
<ul> <li>The development of ICT infrastructure in Indonesia has been carried out on a large scale.</li> <li>The government is also developing 5G technology.</li> <li>A government program provides facilities for goods and services to help develop initiatives that drive the digital economy in frontier, outermost, underdeveloped areas.</li> <li>A program from the Ministry of Communication and Information in a Digital Talent Scholarship, as well as 300 Digital Leadership Academy slots</li> </ul>	<ul> <li>Seeing opportunities for cooperation and building mutualism symbiosis with software and hardware vendors</li> <li>Participating in government funding programs</li> <li>Encourage staff to take free training and certification.</li> </ul>	<ul> <li>Starting an effort to document game development in an orderly and routine manner.</li> <li>Seeing opportunities for cooperation with hardware vendors</li> <li>Starting an effort to document game development in an orderly and routine manner.</li> <li>Encouraging employees to take part in free training and certification programs</li> </ul>
THREATS	S-T Recommendation	W-T Recommendation
<ul> <li>Competitor</li> <li>Lack of investor interest in investing in companies</li> <li>The possibility of annexing resources of the company to other companies</li> </ul>	Looking for competitors' weaknesses and form a strategy from these gaps.     Participating in competitions or events that can expose the company.     Improving good relations with employees and hear complaints from employees	Observing the workings and strategies of competitors, then adopting the critical values, and following the company Seeing opportunities for cooperation with hardware vendors Improving good relations with employees and hear complaints from employees. Providing salary based on performance and performance, offering bonuses for employees who excel.

#### 5. Conclusion

The shortage of alignment between IT and business is why many companies do not realize the importance of IT investment, cannot maximize their competitive advantage, and increase corporate spending. Therefore, several studies on how to achieve alignment between Business and IT have been done. Unfortunately, no research explicitly addressed how to attain alignment between IT and business in gaming companies. This study intended to formulate a strategy to create alignment between IT and business based on the Henderson and Venkatraman Strategic Alignment Model (SAM) with a SWOT analysis of each domain in the SAM. Several recommendations in Business Strategy, IT Strategy, Organizational Infrastructure/Process, IS/IT Infrastructure/Process domains have been formulated. This research is limited to one game company only. Further research is expected to carry out in-depth investigations on more game companies. In addition, further research on how gaming companies' perceptions of IT and Business alignment and measuring the alignment of Game companies after implementing the strategies is necessary.

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