INCREMENTAL AND COMPREHENSIVE IT STRATEGIC PLANNING
AT PT XYZ

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ABSTRACT
This paper aims to research what is needed for strategic IT PT XYZ and plan what will be done to implement the IT strategy. But the barriers that exist how to make improvement in accordance with company and describe how those needs are basic needs so that they can cover all aspects of the company. Embodied in a document and the strategic IT plan needed to implement the strategic IT. This becomes a challenge for the writer in making an assessment framework to be able to do it. Based on the journals of journals and books related to strategic planning tool used to determine the condition of a company could use SWOT, Critical Success Factors (CSF), Competitor analysis, The Five Competitive Force, IT BALANCE SCORECARD, and APPLICATION PORTFOLIO. The six tools are used for three different aspects of SWOT and CSF is used to measure the internal condition of the company, Competitor analysis and Five Competitive Force aims to measure the external condition of the company, and IT Balanced Scorecard and Portfolio Applications aims to find out what it takes to perform incremental and comprehensive IT to support existing business processes or IT will propose changes to business processes. And resulting in any tools will be into a strategic IT Planning which aims to make the incremental IT resources.

Keywords: IT, Strategic plan, Business processes, Incremental

INTRODUCTION
Information Technology not only as a support in a company but a major factor for increasing productivity of these companies. So the company is not just enough to make the business strategy but also the need to create a strategy in terms of information technology. So the information technology function may be optimized and support business activities in the company.

Research by Henry E. Newkirk and Albert L. Lederer called Incremental and Comprehensive Strategic Information. This study contributes by suggesting that comprehensive SISP planners should expect it to be less effective as fickle and increase uncertainty, but is more effective with increasing competition. (Newkirk, Henry E; Lederer, Albert L;, 2006)

Research conducted by C. Anthony Di Benedetto, Wayne S. DeSarbo, and Michael Song, entitled Strategic radical innovation capability and an empirical study in three countries. The research was conducted in three developed countries, namely the United States, Japan, China. This Study discusses how strategic capabilities as a driver of development and launch of a radical innovation and builds a theoretical framework related to five strategic capabilities (marketing, linking markets, technology, information technology, and management-related capabilities) ( Di Benedetto, DeSarbo, & Song, 2008)

Research by Hongyi Chen, Jonathan C. Ho, and Dundar F. Kocaoglu titled A Strategic Technology Planning Framework: A Case of Taiwan's Semiconductor Foundry Industry. In this research proposed a hierarchical decision model and sensitivity analyzes are presented as two major steps of the framework to provide effective technology assessment and technology for generating scenarios. Link competitive model of hierarchical organization goals and strategies in evaluating the overall contribution of alternative technology business
success, sensitivity analysis helps to predict and implement changes in the future may be in the economic environment, industrial policy, and organizational strategy. With the proposed framework, an organization can begin to implement their technology plans synoptically and follow up with adaptations as needed. (Chen, Ho, & Kocaoglu, 2009)

Research conducted by the Centers Michael D. Santoro and Alok K. Chakrabarti entitled Corporate Strategic Objectives for Establishing Relationships with University Research This study examines the industry's strategic goals to build relationships with university research centers. As a result of exploratory multi method field study, we have identified three groups of industrial companies with different strategic objectives: collegial players, aggressive players, and players who are targeted. their relationships with university research centers to meet the specific needs of their business center. We conclude by discussing the implications of these findings for both industrial companies and universities. (Santoro & Chakrabarti, 2001)

Research conducted by Mahesh S. Raisinghani, Laura Meade, and Lawrence L. Schkade, entitled Strategic e-Business Decision Analysis Using the Analytic Network Process. research discusses e-business and information systems has required managers to make decisions that strive to balance technical factors with strategic business goals. This research uses analytic network process (ANP) to provide insight into the optimal-seeking process of decision making by managers, as investments made to utilize e-commerce technology. ANP and nonlinear network approach is used to study "the system with feedback" in which e-commerce strategy may be both dominating and dominated, directly or indirectly, by the business-level strategy. This study analyzes the e-business decisions within the organization, management and perception based heuristic expected contribution of e-commerce strategy and business-level strategy. (Raisinghani, Meade, & Schkade, 2007)

From the literature on the literature obtained some steps that turned into a frame of mind. Here are the steps - steps.
1. Outlining the vision and mission of the company in order to obtain some goal and set a primary goal.
2. Identify strategy and evaluate the contribution of the strategy is the goal.
3. Identify a suitable technology to support the strategy.
4. Calculate the contribution to the goal of technology.

So the company can quickly overcome all challenges and opportunities. PT. XYZ is a company exclusive agent DEF oil specifically for marine vessels. In addition to selling PT. XYZ also checked the vessel and sampling intervals to see the condition of the vessel.

Currently, there are already some systems. However, all of these systems have not been integrated as well as the absence of plans for that supports business activities in the Performance Management. Therefore, it needs to made an information technology strategic plan in order to support and improve the performance of the company.

The problem that occurs is not stock increases and decreases in real time as the applications used in the warehouse area and at head office still stands alone. Head office had to wait for a report from the barn area does warrant expenditures or may not be implemented by the regional warehouses to reduce stocks in the warehouse area and also had to wait for the report if the supply of goods has been received or not by the warehouses to increase the stock in the warehouse area said.

In the division of customer service, sales, technical and customer data unavailability clear to the information required by the division of the division. So the divisions must make manual data they need for customer.

The purpose of the IT strategic planning is to create a business strategy, supported by IT so as to be better.

The objectives in this paper are:
1. Doing research on the internal and external conditions of the company.
2. To find out the needs of the design and make the design of IT Strategic Planning at PT. XYZ.
3. Analyze the critical factors that can achieve the vision and mission of the company.
4. Creating a framework that can be used by similar companies to build IT Strategy plan.

The scope of the limitations issue in this research, among others:
1. Analyzing the company's particular circumstances IT situation.
2. Understanding the business needs with the use of IT.
To frame the manufacture of IT Strategy Planning at PT. XYZ leads from the book written by Bernard H Boar's The Art of Strategic Planning for Information Technology. As Figure 1. Based on the image above to IT strategy planning consists of the assessment strategy and execution.

**RESEARCH METHOD**

3. Determining strategic IT to support the business needs to enhance, and optimize the performance of the PT. XYZ.

![Model of IT Strategic Planning](image)

*Figure 1: Model of IT Strategic Planning (Boar, 2001)*

Useful at this stage to analyze the scope of business and IT so that the focus can be determined that the business and IT can be run externally and internally. This stage includes several analyzes such as:

1. **Business Analysis**
   A. **Internal:** The analysis was conducted only limited to knowing the internal factors that affect the business of the company as strengths, weaknesses, opportunities and constraints of the company internally. The analysis is done by using the SWOT analysis and the analysis of CSF.
   B. **External:** The analysis was done merely to know the external factors that affect the business of the company as opportunities and obstacles the company externally. The analysis is done by using analysis of the five competitors force and competitor analysis.
2. Analysis of the IT environment
A. Internal: In this phase the mapping of the applications and devices that relate to IT and categorize devices into strategic, key operational, support and high potential. The analysis is done by using a portfolio of IT applications and balance scorecard.
B. External: At this stage, the analysis of external factors made an impact to IT and performance results of these strategies. This is done to further examine the growing trend of technology in the community and are appropriate for the company.

At this stage conducted by making IT Strategic Planning can help achieve the vision and mission of the company. In this stage, there are several steps the futures business, is business strategy, IT strategy and IT / IS management strategy.

1. Future business
Future business is the initial result of the analysis of internal and external business combined with the vision and mission of the company and current business trends.

2. Business IS Strategy
Business IS Strategy is a recommendation applications and solutions needed to resolve the problems that exist for business.

3. IT Strategy
IT Strategy will result in a recommendation needs hardware, software and infrastructure necessary to support the business IS strategy

4. IT / IS Strategy Management
IT / IS Strategy Management should be able to create a consistency that will be taken by the policy relating to the Management of IT / IS that will be implemented by the company.

Methods of data collection in this study are:
1. Direct observation.
Direct observation aimed to obtain primary data. The observation is to observe directly and ask these questions in the form of interview questions.
2. Questionnaire
Questionnaire containing a number of questions will be distributed to employees and Management of.
3. Study literature
Study aims to obtain literature studying the theory of strategic planning and supporting others through books, journals, articles and other documentation that supports research company.
The data used are substantially the two data namely primary data and secondary data. Primary data were obtained from the questionnaire and interviews. While secondary data on the basis of the existing literature.

**RESULTS AND ANALYSIS**

Before making strategic planners, we must identify the internal and external business conditions at XYZ company. Which aims to determine the focus of strategic planning will be done

**Identification of the Company**

At the beginning of the PT. XYZ just as a supplier of oil for ships and industry. In 2000 PT XYZ DEF believed to be a product distributor and only serves the field of marine and power generation.

**Business Scope**

Based on the observations obtained some important information for businesses stages scope can be seen in Table 1

Table 1. Business scope

<table>
<thead>
<tr>
<th>Business Scope Attribute</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission Vision</td>
<td>Global Technology Local Service</td>
</tr>
<tr>
<td>Customer / Market</td>
<td>shipping company Indonesia power plant</td>
</tr>
<tr>
<td>Product / Service</td>
<td>Lube, oil shipments and Technical service</td>
</tr>
<tr>
<td>Geography</td>
<td>Indonesia and association</td>
</tr>
<tr>
<td>Strategic intent</td>
<td>Maintain a good relationship with the customer.</td>
</tr>
<tr>
<td>Supremacy</td>
<td>Our forte is a lubricant company with a quality product and skilled technicians with good service</td>
</tr>
</tbody>
</table>

**Network Infrastructure**

PT. XYZ has one head office and five warehouses. But each - each warehouse and head office is located in a different network. The geographical position of head office location can be seen in Figure 3.

Figure 3 Map Warehouse and Head office

The position of the head office of PT. XYZ (colored pink) is located in Jakarta and warehouse company PT. XYZ (which is yellow) there are two warehouses in Jakarta, Surabaya, there is one warehouse, Medan and Balikpapan there is a barn there is a warehouse. Due to the geographical location of PT. XYZ can not make head office and warehouse in one network. Head office use two ISPs and each warehouse using one ISP.

**Internal Business Environment Analysis**

At the stage of business environment analysis is done by using a tool that is SWOT analysis, critical success factors and The Five Competitive Force .

A. SWOT Analysis

Based on the results of research through the distribution of a questionnaire to representatives of each division there is the composition of the respondents is two people from each division at PT. XYZ, one of which is the division manager and the other is the staff of the division. Each - each employee to fill the questionnaire with a weighting scale of one to five and total and divided by 14, according to the respondents no. Table 2 is the result of analysis of questionnaires distributed.

Table 2 SWOT Analysis

<table>
<thead>
<tr>
<th>Question</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Cooperation and coordination among different departments</td>
<td>4.07</td>
</tr>
<tr>
<td>S2 Effectiveness in meeting customer needs</td>
<td>4.5</td>
</tr>
<tr>
<td>W1 media Campaign</td>
<td>2.85</td>
</tr>
<tr>
<td>W2 Price levels with alliance</td>
<td>3.5</td>
</tr>
<tr>
<td>O1 New customer information</td>
<td>3.86</td>
</tr>
<tr>
<td>O2 Market potential</td>
<td>4.14</td>
</tr>
<tr>
<td>T1 Price wars with competitors</td>
<td>3.71</td>
</tr>
<tr>
<td>T2 The possibility of cross promotions with consumers</td>
<td>3.29</td>
</tr>
</tbody>
</table>
After obtaining the weight of each factor. To obtain the required position quadrant SWOT see which one is more important according to external factors and internal factors. To internal factors compared between strength and weakness to external factors than between opportunities and threats. After the choice of which one is more important than the internal and external factors that we can count swot IFAS (internal strategic factors analysis summary), and EFAS (external strategic factors analysis summary). The following table normalization EFAS and EFAS. Having obtained the value of each of the factors necessary swot diagram to illustrate the total value of IFAS and EFAS. IFAS value will be the value of the x-axis and the value of EFAS will be the y-axis.

![SWOT Diagram](image)

From the picture above we can see that XYZ is in quadrant one is a position which has the force of internal and external opportunities. Strategy undertaken for one quadrant is a progressive strategy. That XYZ should use its power to take advantage of existing opportunities.

### B. CSF (Critical Success Factors)

Based on the results of the study found perspective-a perspective that important factors such influence success XYZ table below

<table>
<thead>
<tr>
<th>Perspective</th>
<th>CSF</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>sales of products</td>
<td>Increased product sales will directly improve revenue company directly.</td>
</tr>
<tr>
<td></td>
<td>market share</td>
<td>Expansion of market share that can reach all the shipping business units and power plants.</td>
</tr>
<tr>
<td>Customer</td>
<td>customer satisfaction</td>
<td>Increasing customer satisfaction will bring a different impact for the company in addition to the material terms as well as non-material terms of the customer can be a media campaign to associate the profession with him.</td>
</tr>
<tr>
<td></td>
<td>customer loyalty</td>
<td>Loyalty is the biggest key to providing opportunities for collaboration with the customer is a loyal customer if they are reluctant to replace products that he uses.</td>
</tr>
</tbody>
</table>
Internal business processes | Control over product quality | Controlling the quality of the company's product is not only control of the product to be sold, but also the analysis after the products are used and also check on the machines that use the product. It aims to foster a sense of trust and a sense of loyalty for customers.

Employee performance | Knowledge and competence employee | Employee knowledge and competence should be evenly distributed so as to make the company more dynamic in developing market share.

Employee discipline | Employee discipline is the key to the advancement of the interests of the company in running business processes so as to achieve the desired goal.

C. The Five Competitive Force
To analyze the external factors that affect the PT. XYZ such as power suppliers, power of buyers, substitute products, competitors, new entrants. So The Five Competitive analysis force drawn in figure 5.

**Figure 4 Analysis five competitive force**

- Power of suppliers:
  To power supplier PT. XYZ own blending the oil and perform oil import oil blending what if the results do not meet the consumption of oil to be sold.

- Power of Buyers:
  To force the buyer PT. XYZ sells the goods to the shipping companies and power plants. Specifically for power generation company acquired by way of a tender process. As for the shipping company obtained the marketing approach.

- Competitors:
  Competition in this industry to date has been tight. The main competition is Integration-Integration PT.XYZ who have first appeared and have a different brand.

- Substitute Products:
Due to the product being sold is too much oil substitutes that can replace DEF product. Only difference is the brand of the product.

• Newcomers:
  Until now the industry's newcomers are not too much because the competition in this industry is the most competitive distributor newcomers are oil retailers who sell various brands of oil.

Analysis IT Environment

Table 4 IT Balance Score Card

<table>
<thead>
<tr>
<th>perspective</th>
<th>initiative</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>business contribution</td>
<td>Support for IT project</td>
<td>5 percent of the revenue for the IT budget</td>
</tr>
<tr>
<td></td>
<td>Evaluation of project implementation</td>
<td>90 percent project implementation schedule</td>
</tr>
<tr>
<td></td>
<td>Control costs on IT investment</td>
<td>10 percent decrease in cost</td>
</tr>
<tr>
<td>user orientation</td>
<td>Technology that is user friendly</td>
<td>Can be used by anyone</td>
</tr>
<tr>
<td></td>
<td>Use of IT for the user work efficiency</td>
<td>Server downtime less than 20 days a year</td>
</tr>
<tr>
<td></td>
<td>Response time to complaints</td>
<td>A maximum of 20 hours</td>
</tr>
<tr>
<td></td>
<td>Update application</td>
<td>Maximum of 5 years of use</td>
</tr>
<tr>
<td>operational excellence</td>
<td>efficiency and effectiveness of the development and operation of IT</td>
<td>Percentage increase 10 percent</td>
</tr>
<tr>
<td></td>
<td>Network integration between the head office and warehouse</td>
<td>100 percent integrated</td>
</tr>
<tr>
<td></td>
<td>Back up routines</td>
<td>A minimum of 2 times a week</td>
</tr>
<tr>
<td></td>
<td>Percentage of down time server and network</td>
<td>minimum of 95% up</td>
</tr>
<tr>
<td>Future orientation</td>
<td>Training for IT developers</td>
<td>2 times a year</td>
</tr>
<tr>
<td></td>
<td>Staff understanding of the business processes it</td>
<td>At least 80 percent</td>
</tr>
<tr>
<td></td>
<td>KPI documentation and SOP</td>
<td>100 percent</td>
</tr>
<tr>
<td></td>
<td>Many research per year</td>
<td>At least 2 times per year</td>
</tr>
</tbody>
</table>

To facilitate the application of perspective-perspective and target information system technology is then mapped into a strategy to establish a strategy map to help the achievement of PT. XYZ.
Figure 5 Mapping IT balance score card

Future Business

Planning must be based on the needs of XYZ future that supports the realization of the vision and mission of PT. XYZ. Needs of today's business is customer loyalty and inventory management which is a most fundamental thing in this business. Based on the analysis that had been done then there are some conclusions that will be drawn to determine the XYZ business forward. The conclusions include integration system that can support the business processes and improving the quality of IT services. In Table 5 is a table of IS support to the business in order to achieve the vision and mission of the company.

Table 5 Proposed IS support to Business

<table>
<thead>
<tr>
<th>Problem</th>
<th>explanation</th>
<th>solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of stock</td>
<td>Stock is not too update the warehouse and headquarters to issue the biggest problem. It is necessary to process integration between warehouses and headquarters. And supply chain management are also needed to address the complexity of the availability of goods.</td>
<td>Supply chain management</td>
</tr>
<tr>
<td>It service support to the marketing division</td>
<td>PT. XYZ needs to utilize CRM technology to help marketing in terms of keeping existing customers and make it easier for new customers. Thus making a strong market.</td>
<td>CRM</td>
</tr>
</tbody>
</table>
To rejuvenate the process of information dissemination and deployment of the product functionality necessary to facilitate the company's website and it also helps performance of CRM that can bring in new customers.

With so many goods items plus we with warehouses. Will make in the process of ordering products or product blending process. To overcome this, we need a certain buffer values are taken when the value it will provide information for an order.

With data processing enables employees to improve employee scheduling training to the employee.

Development of documentation in support will improve IT support is done upon receiving the report of user problems. With the maximum coordination and strong technology support it is hoped will help the development of XYZ.

Almost in all of the security business are the most important issues that must be addressed, especially the problem of database security. Because the database contains all data corporate transactions. Therefore it is necessary for the level of data security.

![Figure 6 Future business models](image)

To make the future business model of the above into something real there are some things that must be prepared by PT. XYZ is an organization of human resources and a reliable system to integrate application portfolio and infrastructure as needed. Table 6 Describing the proposed technology can be a solution to the existing problem.
Table 6 Proposed solution

<table>
<thead>
<tr>
<th>problem</th>
<th>proposed solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>administration of stock</td>
<td>EDI (Electronic data interchange)</td>
</tr>
<tr>
<td>IT service support to the marketing division</td>
<td>Corporate websites and CRM</td>
</tr>
<tr>
<td>administration of purchasing</td>
<td>Stock buffer</td>
</tr>
<tr>
<td>IT support services for the HR division</td>
<td>Human resource application</td>
</tr>
<tr>
<td>Improved IT service and security to customers</td>
<td>Maintenance scheduling, service desk and problem management</td>
</tr>
</tbody>
</table>

Proposed architecture of the proposed network is whole network both head office to the warehouse. To connect between the head office to the warehouse needed WAN connection (Wide Area Network). Within a network is the most important aspect of data security aspects.

![Network Diagram]

**Figure 7 Proposed network infrastructure**

To ensure data security access restriction will require authorization by the user who those users are authorized to access certain data. Besides backing up and recovery of data is also noteworthy. This brought the network architecture is proposed.

**Strategi Maping**

Of all the applications and technologies that can be used as the proposed mapping strategy for the technology in the period 2014-2016. Mapping strategy strategy map is created is a portrait of how the implementation of the application process. The resulting strategy map mapping strategy strategy map is the same as the resultant right by IT strategy map balance score card. Once the strategies are mapped in the application portfolio strategy map which was created when implemented will have integration with each other. Here's an overview of integration applications described in the futures portfolio.
Conclusion

Of this paper some conclusions are obtained as follows. Has produced a proposal that could overcome the existing problems in XYZ and have been prepared in portfolio applications, the proposed technology and network infrastructure needed to overcome these problems. Analyzes were conducted internal and external analysis of the business and the IT tools used for analysis is the SWOT, CSF, The Five Competitive Force, IT balance score card, portfolio use of IT applications and trends. The proposals include:
A. Proposed network infrastructure is the proposed changes to the network infrastructure for improving effectiveness and efficiency.
B. Proposed technology is proposed technologies and infrastructure that can sustain the proposed application.
C. Proposed applications is applications suggestion that can improve business process performance and competitive superiority.

To realize the strategy which produced the necessary suggestions that aim to facilitate the process of application of the strategy that produced
1. Required the support of all parties to assist in the realization of the company strategy in order to run in accordance with the given target
2. Required training for employees in order to achieve the goals desired by the company.

3. Further assessment is needed to measure the performance of the proposed application is effective or not.

REFERENCE


