

Information Technology Investment Strategy Planning: Balance Scorecard Approach

Henny Hendarti, Iwan Kurniawan

Abstract - Purpose of this research are to prepare the IT investment strategy using Balanced Scorecard approach in the company where the appropriate planning of this IT investment strategy can maximize the competitive benefit in the company, and it also to recommended a strategy of IT investment that can be implemented and measure the rate of return from the IT investment in the company. Research Method used book studies, field studies, and analysis system. Book studies from the books and journal. Field studies done by observation, interview, and questioner, and analysis system done by analyzed the ongoing system in the company. The result from this analysis is a recommendation in investment IT such as sales module, payment module, and report module. Then for the conclusion, this information technology investment planning can be develop to another investment implementation such authorized website of the company and using PDA (Personal Digital Assistant)

Index Terms - Planning, Information Technology, Investment, Balance Scorecard

1. INTRODUCTION

In this globalization nowadays, there's many development in IT and give the significant impact to create a capability and the role of IT in many aspect. More tightly in business competitive IT become a fundamental things to be integrated in every company department Being survive in the tightly competitive, company have to use IT as the main object to help the company achieve their goals. Using IT will give more value to the company especially at the financial benefit. In business, investment in IT is an important decision since it has a significant impact in the development of business processes and IT investment will need a big cost and big effort. Before deciding to make an IT investment, companies will have to make some strategy plan according to the company condition and looking for the return. Some reason strategic plan done are to adjust the appropriate between IT with the business, quality service level, and development IT in the future to reduce the project failure. According to Yang et al. [4], Balanced Scorecard (BSC) is one of selected balanced set of measures derived from the vision and strategic that represent a tool of leaders to use in communicate the strategies through the organization and one of the decision making method that measure the achievement consider in each attribute base on not the each department of the company.

This research will be done on PSP, Ltd which focuses on distribution motor oil. This company often gets any some problem and took a long time to collect the information because all the system in this company still using manual system.

2. RESEARCH METHOD

The research method used by book studies, field studies, and analysis method. Book studies are done by getting some information from books and journal. Field studies done by doing the interview to the owner of the company about the problem happened, observation by survey to the company directly, and questioner by giving the questions to the person who know the condition of company and counting on the result. Then for analysis method done by analyze the ongoing

business processes, give some recommendation about the system plan need in the company by the balance scorecard method.

3. LITERATURE REVIEW

According to Sharma [3], BSC can be thought as the strategic chart of account at the organization, the long term success of any organization is determine by the capabilities that has been developed. There are five principles that described about the key element of building an organization that focus on strategic and deliver breakthrough result, such as:

1. Mobilize change through executive leadership
2. Translate the strategy into the operational terms
3. Align the organization to the strategic
4. Make strategy everyone's job
5. Make strategy an continual process.

There are four perspective can be used in the organization, and to develop metrics, collect data and analyze it relative to each of these perspective such, The learning and growth perspective about the attitudes related to both individual and corporate self improvement. The business process perspective is about to know how well their business is running and whether its products and services conform to the customer. The customer perspective is about the satisfaction that came from the customer through the business. Last in the financial perspective, it is about funding data that will always be a priority with managers.

According to Punniyamoorthy [2], there are four barriers through the strategic implementation of BSC, such as:

1. Vision barrier, when no one in the company understands the company strategy.
2. People barrier, that come when the most people have an objective that is not linked to the strategy of company
3. Resources barrier, where time, energy and money are not allocated to things critical to the company
4. Management barrier, when company spends little time and strategy to make decisions.

BSC is a strategic performance that links to the company strategic that using a multidimensional set of financial and non financial measurement.

According to Kulkarni et al. [1], BSC will help to develop the company vision, mission, critical success factor, objective, performance measures, target, and improvement action to maximize all the performance and measure all the key aspect of the business which in financial or non financial.

4. PROBLEM HAPPENED IN THE COMPANY

This research found some problem happened in the company:

The other department except the warehouse department didn't know the supply product information, so the other department need to confirm to the warehouse to know the available of product. The investment that will be recommend for this problem is the the product supply system, it purpose to inform the product stock in the warehouse that can be accessed by the sales administration and purchasing department.

To prepare the document, it needs a long time for the executive department, it shown especially in the end of period. It happened because the business process in the company such as the recording and documentation use a manual process which not being computerized and integrated. This things make the employees busy in every end of period and there's un balanced of the financial statement if it adjust with the documentation of document to check the validity. For this problem , so the company needs some system which can produced the report as it wrote in the input transaction of the proper department when it needed, and the executive can see the report by input the date of transaction.

5. MIS HIERARCHICAL ANALYTIC IN STRATEGIC PLANNING

In the first step, company have to be survive and get a competition with their competitive to know which area of the business become the treats and possibility for the company. Company have to open themselves in the IT investment to do the competition with their competitive. Area become treats for the company: Many company failed in implementation of IT investment. This situation happened because of the lack of IT planning. So it needs to plan the IT to count the overall of investment planning that will be implement in the company.

The possibility of the company : by using the BSC to make an IT investment strategic planning and see how far that IT investment will take the impact through the 4th perspective in the BSC such internal business process strategic, and learning and growth perspective. Company will know which part will spend the benefit after they implement the IT investment.

In the second step, company will find out which become the strength of company that can be use to be a leader of the competition, and it will help the company to find out which become the weaknesses so company can take the action to fix the weaknesses. The strengths of the company among others are that the company has a special budget to develop the lead

the company to the better way. By that budget, company can choose the best IT investment for the company. The company also has many regular customers. Costumers become strength of company to develop their business. Because the company already get many regular customer, company have to optimistic to develop their business.

The company weakness are all of the activity in the company use a manual process because there is no information system that integrated to the computerized in every division of company. This activity have to change into the computerized system so it will help the employee to solve the customer needs.

In the third step, company used it to achieve the company policy they will take and company have to maintain consistency of their vision and mission. Company has to have a IT investment strategic planning by the IT BSC that appropriate with their specific vision and mission. Company have to do the investment to support the mission of company, which they want to be a leader of their competitive.

In the forth step, to focus the purpose of the company through the specific MIS functional area. It completes the strategic planning process. By the IT investment strategic planning, company can see the estimation impact of IT implementation and see how the cycle of investment can help the company in all perspective of BSC. In this step, company also will focus on the purpose to increase the company quality in IT.

6. IT INVESTMENT PLANNING NEEDED

Recommendation of Business process analysis are in the following paragraphs. Business process of company starts when Sales Executive Bottle offers the products to the company by giving the product brochure.

Customer will make a product list in the Order Form complete with the payment method they choose, then the Order form will give to the Sales Executive Bottle Staff. There's 2 payment system in the company, Cash On Delivery (COD) which the customer will pay all the order when they receive the product completely, and use the maturity payment, which the customer have to pay in the maturity date.

Then, Sales Executive Bottle will send the Order Form to the Sales Administration and make it as base of making Sales Order Form (SO). Sales administration no need to confirm to the warehouse because all the product stock can be accessed from the database.

Warehouse department have to provide the product as it wrote in SO and make a Delivery Order form (DO) as an evidence to the customer and warehouse supervisor that product have been delivery.

Based on DO, cashier and finance department will make Sales Form (SF) and give it to the warehouse and bring it when deliver the product to the customer.

The goods send to the customer and it attached with SO and DO. If there's any exchange from the customer, the customer have to make any exchange form then give it to administration department to be checked.

Customer that made payment in the maturity time, cashier and finance department will input to the proof of payment. Every payment, cashier no need to check it with the SO and DO because everything already inside the system

Company will purchase the goods stock when it achieve the reorder point that set by the company. The system will announce the company about the reorder point and warehouse will make a list of goods they will purchase.

After receiving the announcement from the system, purchasing will confirm to the supplier that goods being order are available. If it is available, the purchasing will make Purchase Order form (PO) and give it to the supplier.

Based on the receiving goods, warehouse will check the condition and the adjustment between the total goods and DO that attached with the PO. Then warehouse will make the Good Receive Form (GR) and give it to the supplier.

Based on DO and GR, purchasing will record the payment to the supplier in the Purchase form, if there's any damage in the goods received, purchasing will make any exchange purchase to the supplier.

Based on GR and PO, cashier and finance will input the payment into the card debt.

Cashier and finance will make a payment based on the announcement that the GR will maturity. Cashier and finance will print the proof of payment and give it to the supplier.

In the end of period, every department will take their responsible in every activities. Head of sales will make any sales report and receivable report. Accounting system will make any goods receive report, goods spend, product supply, purchase, and liabilities of company report. Cashier and finance will make cash receivable reports and cash spend report.

Every report can be access by the head of finance and they will check the validity of report.

Every new transaction report, employee will get a notification in the computer screen so the working process can be done without any confirmation

To prevent the information accessed by the unnecessary people, there's any recommendation to make the system with security access. Every user has to input the user ID and password.

7. CONCLUSION

With any IT investment in the maintenance module in the company, product supply information can be access directly by the sales administration department, so they don't need take a long time to confirm the availability and goods stock to the warehouse department.

With any IT investment in maintenance module in the company, any purchase, sales, supply, payment, and report can give any simplicity to the head of finance to make any report and it doesn't take any long time to processing the report that necessary for the executive in the end of period.

Based on observation through the company, the owner needs some IT application to solve any problem about the accessibility and reliability information o the company.

Based on MIS analysis, to achieve the goals of company, we can recommend to make any IT investment strategic planning using the BSC approach to know the appropriate IT investment and the return contribution in IT investment, and we can take the conclusion :

- Based on Financial perspective, implementation of IT investment about the application module of maintenance, purchase, sales, supply, payment, and

report, and it expected the return about 30% from the actual condition.

- Based on Customer perspective, benchmarking by the accuracy and validity of company to handle the customer order
- Based on business process internal perspective, by the IT investment in many module, it can increase the accessibility and information reliability.
- Based on learning and growth perspective, none of IT investment make the customer satisfaction in the low level and by implement the IT investment it can increase the accessibility of company information
- And based on the financial performance measurement, we can see from the profitability measures that ROE in 49,58%, ROA 17,79%, ROI 28,16%, ROS 5,945, and RG 30%. Then from efficiency measures, we can see STA in 2,92 and SE for Rp. 1.112.493.390.00

REFERENCES

- [1] S. S. Kulkarni, J. Messina, X. Ding, and R. R. Bishu, "Integration of Balance Scorecard with Six Sigma", in *Proc. of the 2008 Industrial Engineering Research Conf.*, pp. 1166-1171.
- [2] M. Punniyamorthy, and R. Murali, "Balanced score for the balanced scorecard: a benchmarking tool," in *Benchmarking: An International Journal*, vol. 15, no. 4, pp. 420-443, Aug. 2008, from www.emeraldinsight.com/1463-5771.htm.
- [3] A. Sharma, "Implementing Balance Scorecard for Performance Measurement", in *IUP Journal of Business Strategy*, vol. 6, no. 1, pp. 7-16, Mar. 2009.
- [4] K. M. Yang, Y. W. Cho, S. H. Choi, J. H. Park, and K. S. Kang, "A Study on Development of Balanced Scorecard for Management Evaluation Using Multiple Attribute Decision Making," in *J. Software Engineering & Applications*, vol 3, pp. 268-272, Mar. 2010.