

# NEW INFORMATION ECONOMIC (NIE) METHOD FOR INFORMATION TECHNOLOGY INVESTMENT ANALYSIS: BUSINESS STRATEGIC

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## ABSTRACT

Based on the development of technology, especially Information Technology and Information System, and coupled with the needs of application development system in the company, but only with the needs of the application used must be adjusted to the value of investments issued by the company, because not a small fee to spend as the value of the initial investment that must be issued. In this case XYZ Group has been using the application system in the company's work operations, the application is Nawakara Information System (NIS). However, in the use of NIS in the company is still constrained by inaccurate management data. Based on this, the company wants to improve the quality of service and improve the quality of performance between departments by analyzing existing systems, ranging from the value of investments that have been made to infrastructure and applications that have been done, New Information Economic (NIE) as the basis of analytical methodology used as a reference with the hope of getting the right solutions and decisions in the implementation.

**Keywords:** *New Information Economic, Investment Information System and Technology, inaccurate, improve, right solutions.*

## 1. INTRODUCTION

Information Technology is a pre-tool to help companies in the work every day. Currently, many companies use information systems that support operational activities in order to achieve the vision and mission of the company. To generate competitive competition in tight markets, companies need to do business strategic planning that aligns with IT strategies tailored from existing and future investments. This allows the company must have a benchmark in the implementation of daily work, whether it is in accordance with what is desired [1].

New Information Economic (NIE) method used as a benchmark, on investments already made. The processing of this information system is very important to be managed in a system application. Thus, the company developed its own information system to be tailored to the needs of the company's business in the future [2].

In the case of XYZ Group, build the Nawakara Information System (NIS) system application as a support of the company's operational work. In other words, the development of information systems has a strong relationship with the architecture of the company and also with the value of investments that have been done. Because the information system is one component to accelerate the process of business transactions managed by human resources within the company. Indirectly, the company must continue to control the implementation of IS / IT so as to produce an effective and efficient company performance. NIS is an application that has one dashboard for all departments, using user authorization according to function and responsibility.

However, it is still constrained by inaccurate data for management. Based on this, the company wants to improve the quality of service and improve the quality of performance between departments, from the investment that has been done to the infrastructure and the application that has been made, NIE as the basis of the methodology used, in

hopes of getting the right solutions and decisions in the implementation.

## 2. METHOD

According to Benson [3], New Information Economics is a practical methodology for prioritizing IT investments, and illustrates that focusing on new investments in achieving a satisfactory explicit and operational business strategy helps maximize the bottom line impact on new investments for business. The NIE concept in a complete management and planning framework sets out a new way for business managers and information technology to understand and use information technology to produce better employee relationships. NIE is a set of collaborative principles and activities that effectively coordinate business activities with information technology management processes and be able to link corporate business strategies with information technology activities and initiatives.

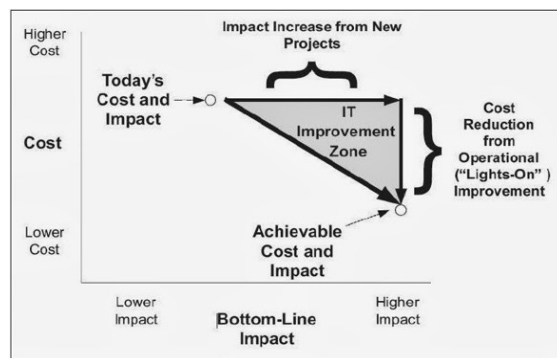


Figure 1: Company Objectives In Achieving IT Improvement Zone

According to Benson [3], the company can realize its goal of achieving IT Improvement Zone by looking at the impacts of the new project and controlling and reducing costs on the cost of ongoing IT investments (lights-on).

The most important idea of New Information Economics is that companies should only invest money in information technology that supports the company's business strategy and operational effectiveness, and not spend money on IT investments that do not benefit the company's business strategy [4].

So, the company's management team should be able to control IT budgets and investments, so that the impact of the bottom layer business processes

will be felt. This combination will cause the company to move away from the current cost structure and bottom-line position toward controlled costs and increase its bottom-line impact by consistently selecting the best IT investments that support the company's business strategy and putting aside the less useful IT investments and beneficial to the company [5].

- Right Results  
The right result to be achieved is managing the cost of IT spending and at the same time improving the impact on the bottom line of the company.
- Right Decisions  
Right Decisions will result in the right management decision required to produce the right results.

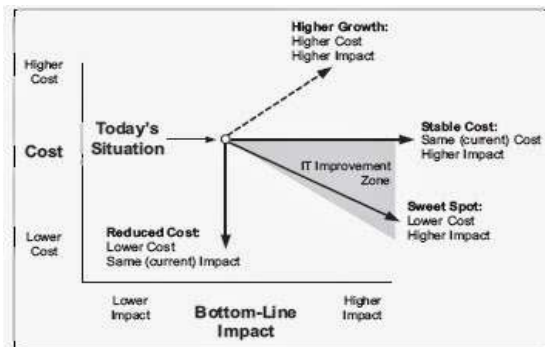


Figure 2: Possible results obtained by the company

According to [3] overall NIE objectives, namely:

- a. Provides the ability to see 100% of overall IT spending.
- b. Create a planning framework through budgeting (supporting the value chain strategy to the bottom-line)

Practice NIE Demand / Supply Planning and Innovation aims to:

- a. Connecting existing and required resources with corporate strategic intention.
- b. Make the foundation to access the existing portfolio and define the portfolio of future strategies.
- c. Make consistent words between business and IT.
- d. Illustrates where IT resources are applied and relate them to company budgets and planning processes.
- e. Provides a framework for defining IT needs, including renewal and growth.
- f. Making connections with performance measurements.

The NIE Prioritization Practice aims to:

- a. Establish the basis of Strategic Intention for resource allocation and priority.
- b. Provide perspectives for future investment needs.
- c. Provide a basis for accessing project risks and benefits.

NIE Alignment Practice aims to:

- a. Make a basis for service tasks, quality, reliability and risk.
- b. Create information for alignment.
- c. Connecting 100% IT spending expenses that have been spent on Strategic Intention IT.

NIE Performance Measurement Practice aims to:

- a. Provides a framework for measuring the performance of 100% of IT spending.
- b. Link performance measurement with strategic planning.
- c. Connect to business performance that affects IT Portfolio.

According to [3], to obtain the results of NIE management must answer the following questions as a guide:

- a. Affordability Questions
  - What can we make for IT spending?
  - Can we reduce unnecessary IT costs?
  - Can we redesign the costs to support the required projects?
- b. Impact Questions
 

Are we investing IT resources in the right place?

  - Can the company's business strategy control IT action and generate bottom-line impact?
  - Are we getting bottom-line impact from lights-on source?

Is it appropriate between strategy investment and tactical investment?

The data collection techniques are done by using several methods such as [6] :

- a. Literature Study Methods
 

Collecting data and information in the form of secondary data obtained from the internet, journals, reference books, and other print media sources to obtain data and information in analyzing the internal and external environment of the company.
- b. Field Research Methods [7]
  - Conduct observations directly on XYZ Group.

- Conducting interviews on the parts that are directly related to the application of the information system.

- Perform the distribution of questionnaires to application users

#### c. Questionnaire [8]

In this case the questionnaire is also used as a data collection technique. Here is a description of the shared questionnaire:

- SWOT (Strength, Weaknesses, Opportunities, Threats) questionnaire

This questionnaire aims to reduce the subjectivity of the results of the company's SWOT analysis in weight assignment for each item on the IFE (Internal Factor Evaluation) and EFE (Internal Factor Evaluation) matrix. This method uses AHP (Analytic Hierarchy Process) technique by performing pairwise comparison on each item on internal and external factors [9]. This SWOT questionnaire is filled by the company.

- Portfolio and Alignment Questionnaire

The questionnaire is a form that will be filled by the company, which is divided into four separate sections. The first part is a form that aims to determine the category of each lights on (running applications). The second part is a form that aims to determine lights on based on alignment, quality intensity of use, and cost. The third part is a form that aims to determine the category of portfolio projection and its valuation based on risk, impact, and cost. The last part is a form that aims to determine an alignment assessment of the company's strategic direction. The four parts of the portfolio and alignment questionnaire form are provided to the company's accounting manager for completion.

- User satisfaction questionnaire on NIS system.

The questionnaire aims to determine the user satisfaction of the NIS system and distributed to 20 users of system users in each department consisting of 3 people Manager, 3 Supervisors, and 14 staff. The questionnaires developed in the study using non-comparative measurement scales, using a likert scale of 1 to 5.1 are weighted to strongly disagree, 2 are weighted for disagreeing, 3 for neutral, 4 to agree, and 5 for strongly agree. The use of likert scale in this questionnaire is in accordance with the rules in the book Marketing Research [10].

In the opinion [11] analysis SWOT is the systematic identification of various factors to formulate corporate strategy. This analysis is based on logic that can maximize strength (Strength) and opportunity (Opportunities), but simultaneously can minimize weakness (Weaknesses) and threat (Threats).

According to [12], the SWOT method is a process of tracking the internal strengths and weaknesses of firms as well as the opportunities and threats posed by the company's external environment which are then drawn some conclusions about:

1. How the company's strategy can be aligned with the company's resource capabilities with opportunities in the marketplace.
2. How important it is for companies to improve certain resources and protect them against certain threats from the market.

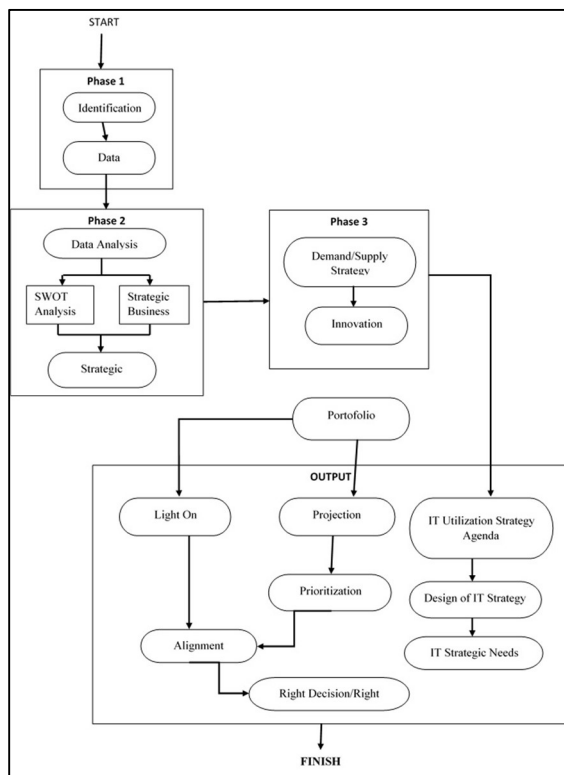


Figure 3: Research Methodology

a. From the Figure 3, Phase 1, there are:

- The author conducted a survey in the company that became the object of research, which then get the problems that arise. Based on this the authors decided to conduct an analysis using the method of New Information Economics to evaluate

the NIS system used. In analyzing the New Information Economics method, the author uses the Benson, Bugnitz and Walton manuals entitled "From Business Strategy to IT Action".

- Conducted collection of data related to the analysis to be done. For example, in the form of SWOT data, corporate financial report data related to the system for one year, and others. The way of collecting the data is mostly obtained by direct survey to the relevant parts in the company and conduct interviews with representatives of designated companies.
- b. On the Phase 2;
  - Once the data is collected, a Strategy to Bottom Line Value Chain analysis can be performed. This analysis will consist of four New Information Economics practices and 7 deliverables. The analysis begins by conducting a SWOT analysis to find out the company's business strategy. Then the business strategy of this company, we describe in the Strategic Intention of the company, Strategic Intention is described in a metric that describes Strategic Intentions into Strategic Objectives, Strategic Initiatives, Strategic Plan for the Use of IT and Strategic Plan for the Supply of IT, the translation is a form of cause and effect connection.
- c. For the Phase 3:
  - From the description of Strategic Intentions, the authors can make the planning to reach the right decision by describing the strategic demand / supply based on the Strategic Initiative, Strategic Plan for the Use of IT and Strategic Plan for the Supply of IT that has been described in Strategic Intentions. The results of the Strategic Demand / Supply can be derived into an innovative idea to target Demand / Supply of IT to the company.
  - Analysis of Strategic Demand / Supply and Innovation will be generated output of IT Strategic Use Agenda, IT Strategic Plan, and IT Strategic Needs. These three outputs can be a guide in company planning to reach the right decision.

d. Result output from methodology:

- Then perform the IT Portfolio analysis especially on the NIS system. Where the portfolio is divided into two major parts namely, Portfolio Lights On (running applications) and Portfolio Project

(applications to be run). From Portfolio Lights On analysis, it will be seen from the four categories of Portfolio Lights On application which need to be increased its investment to improve the quality. Then from the application Projection will be seen approximately what applications should take precedence implementation.

- After that is done alignment between application of Lights on and Projection to know whether investment decisions made on each category Portfolio Lights on and Projection is right. In addition, through alignment can be known whether the application is a factor that allows to achieve Strategic Intention.
- The results of the New Information Economics method above will produce a conclusion of Right Decision and Right Result Goal on the final destination.

The research model of user satisfaction on the NIS system can be described as follows:

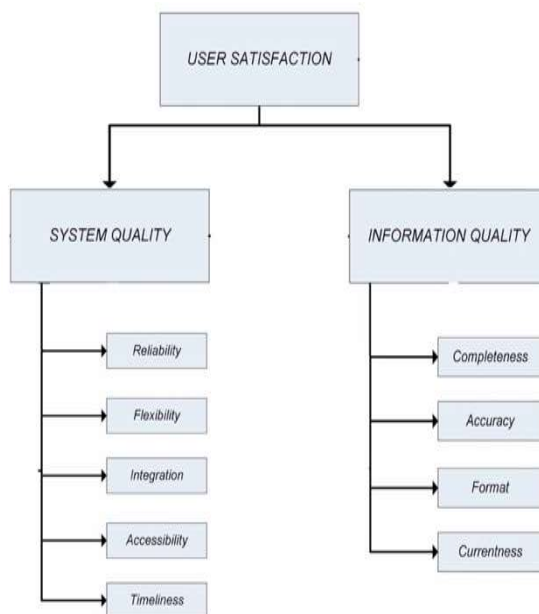


Figure 4: User Satisfaction Research Model [13]

According to [3], The Strategy to Bottom Line Value Chain is a suite of management processes that are linked and reflected in project and operational budgets and performance measurements to monitor actions and impacts on the bottom line.

Figure 5 shows the elements of the planning and management process needed to produce Right Decisions / Right Results for the bottom line.

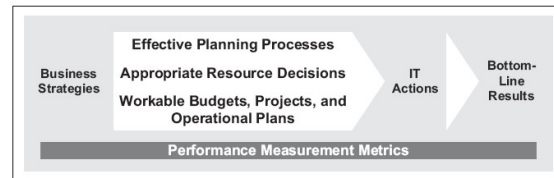


Figure 5: Strategy to Bottom Line Value Chain [3]

- Effective planning - Generating IT strategies, programs and initiatives that are driven by business strategy, objectives, and operational needs.
- Appropriate resource decisions - Reviewing investment and prioritization of strategic programs, initiatives, and projects, resulting in resource allocation to IT projects.
- The operational budget, project and operational plan operationalize and set an operating budget for the next year and establish the schedule and objectives of the IT actions and projects, the result is from the IT actions that will produce the desired business impact.

Analysis of Strengths, Weaknesses, Opportunities, Threats (SWOT), In the opinion [11] analysis of Strength, Weaknesses, Opportunities, Threats (SWOT) is the systematic identification of various factors to formulate corporate strategy. This analysis is based on logic that can maximize strength and opportunity but simultaneously can minimize weakness and threat

According to [12] the SWOT method is a process of tracking the internal strengths and weaknesses of firms as well as the opportunities and threats posed by the company's external environment which are then drawn some conclusions about:

- How the company's strategy can be aligned with the company's resource capabilities with opportunities in the marketplace.
- How important it is for companies to improve certain resources and protect them against certain threats from the market.

Taken from the Journal of IJTEF [14] that the Business Organization must adopt the New Economic Information Model along with the System Development Life Cycle as a guide for improving and managing information systems. Modern day call centers are increasingly complex, and should ensure they specialize in various business areas to address the complaints of modern customers by using the NIE.

According to Doug Laney [15], he stated that most businesses are frantically curating and



utilizing information to improve business performance and innovation. But while the race is innovating with big data, most of the company's information assets cannot be reported to the company.

In the journal S. S. Lippman and J. J. McCall [16], states that assessing the current status of the information economy with its focus is on acquiring information and incentives associated with asymmetric information (non-cooperative game theory). In the asymmetric information economy, game theory consists of a formal trajectory and industrial organization, widely interpreted, is a relatively informal path.

Regarding journals [17], case study Information technology implementation by applying NIE - SDLC model in Thailand, in this study, a research model called NIE -System Development Life Cycle (SDLC) was developed to facilitate IT project management for business managers. The overall research design for this research is a qualitative method using descriptive interviews and surveys.

### 3. RESULTS AND DISCUSSION

From the analysis obtained there are several problems that arise and occur in XYZ Group, which among others are as follows:

1. Directly, the company cannot see the results / contributions of the NIS system used against the achievement of the strategic direction of the company.
2. Obviously, the company does not have a clear IT planning, so the company does not know the right investment strategy on the system being used.
3. The number of complaints from users / users on the performance of the NIS system used today, there is an error in the system and the disconnection of the network connection used.

In this case analysis is needed for the company can see clearly what environmental factors that have influence so that companies can determine the right strategy and maximum impact for the company. In addition, with this analysis, the company will help to improve performance or strength, and also minimize weaknesses, as well as to see opportunities or opportunities and impacts, so it is expected to assist companies in anticipating threats that have a negative impact.

The strengths of the XYZ Group are:

- Already have representative offices and projects spread throughout Indonesia. With the spread of XYZ Group throughout Indonesia, did not rule out opportunities or greater opportunity in getting demand for security services.
- Use of information technology to support business processes. XYZ Group, already using information technology in supporting the operational activities of the company, so that the business process in running effectively, and real time. XYZ Group is now using several systems, namely NIS, which supports the activities of the Department of Finance, HR, Operation, Legal, Procurement and MIS.

The weaknesses in XYZ Group are:

- The office is located in shop houses. Headquarters in the neighborhood of shop houses, which does not rule out the possibility that the supposition or presumption of potential users / prospective clients will question the ability of the company. This can be a threat to XYZ Group for prospective clients who do not know or get the right information about XYZ Group.
- Improper circulation of vehicle flow to head office. There are limitations on the main route to headquarters, because of the congestion that arises from the development of alternative transportation, resulting in difficult access.
- System that has not been fully integrated systems owned by NIS in this case, cannot be fully integrated. However, some existing systems are already integrated as an example is a system used by Procurement department with Operation, travel application with HR department. And for financial application systems in Finance (ACIS), still using the old type of application that cannot be integrated with NIS, which must be changed application. Therefore, the resulting information becomes constrained for companies that make business processes ineffective.

The opportunities gained by XYZ Group are:

- Already the spread of representative offices and project offices throughout Indonesia, resulting in the possibility of new clients or projects in the can, based on requests from the area around the office or existing projects.

- Crime increases every year, with reference to existing statistics, providing a great deal of need for security units

The threats posed by XYZ Group are:

- IT investment is not cheap. With the rapid development of information technology, the company will keep abreast of technological developments and try to apply information technology as part of the company's business process for competitive advantage. It's just that the investment requires a planning and investment value is not small [18].
- Already many similar companies that appear. Over time, the number of security services companies in Indonesia has become a clear threat to the company. Taken from [jurnalsecurity.com](http://jurnalsecurity.com), Security Services (BUJP) in Indonesia is about 1,700 companies. This amount will be doubled when added with an unregistered security company [19].

In the IFE and EFE Matrices [20], calculations will be calculated by weighting, as well as determining the rating of impacts that will result from the potential of the company. In this case the company will have a strong Internal position and a good response to opportunities and threats if the value is above the average of 2.5.

Total Weight:

Internal Environment (IFE) = 100% External Environment (EFE) = 100%

Rating Determination:

• For IFE Matrices:

1 = Big weakness 3 = Small force

2 = Small Weakness 4 = Big Strength

• For EFE Matrix:

1 = Bad response 3 = Response above average

2 = Average Response 4 = Extraordinary Response

Table 1: Metrics IFE (Internal Factor Evaluation)

Strength	Weight	Rating	Weight* Rating
The location of the office/project strategic	0.25	4	1
Business Information Technology	0.13	3	0.39
The need for increase security services	0.2	4	0.8

Sub Total Strength			2.19
Weakness	Weight	Rating	Weight* Rating
Located in the home office area	0.15	1	0.15
Circulation of vehicle on the main line to the head office	0.1	1	0.1
System integration is not yet full implementing	0.17	2	0.34
Sub Total Weakness			0.59
TOTAL	1		2.78

Table 2: Metrics EFE (External Factor Evaluation)

Opportunity	Weight	Rating	Weight* Rating
The spread of representative and project offices	0.25	4	1
Increased crime	0.15	4	0.6
The rapid development of information technology	0.18	2	0.36
Sub Total Opportunity			1.96
Threat	Weight	Rating	Weight* Rating
Number of similar companies	0.2	3	0.6
IT investment is not cheap	0.1	3	0.3
Traffic conditions	0.12	2	0.24
Sub Total Threats			1.14
TOTAL	1		3.1

Viewed from the IFE Matrix results obtained that the total value of IFE obtained from the company is equal to 2.78 and from EFE Matrix resulted the total value of EFE obtained from the company of 3.1. From the IFE value of 2.78 it can be concluded that the company has a very strong internal position because it is above the average value of 2.5. While the EFE score of 3.1 can be identified that the company provides a good response to the existing

opportunities and threats that exist in the industry, the company's strategy can effectively exploit the existing opportunities and minimize the negative impact of external threats.

Once we know the internal and external factors of the company, the next thing to do is to mapping strategy by matching between key external factors and key internal factors.

Table 3: Metrics SWOT

	<b>Strenghts (S)</b>	<b>Weakness (W)</b>
	The Location of the office/have strategic project (S1) Information Technology as business support (S2) Increased security needs (S3)	Located in shophouce office (W1) Circulation of vehicles on the main line to the head office (W2) Integration system is not yet full implementation (W3)
<b>Opportunities (O)</b>	<b>Strategic SO</b>	<b>Strategic WO</b>
The spread of representative and project offices (O1) Increased crime in the project area (O2) The rapid development of information technology (O3)	Improve net property income (S1,S3, O1)) Increase the number of requests for security services (S1,S3,O1,O2)	Apply integrated information system to support better business processes (W3, O3)
<b>Threats (T)</b>	<b>Strategic ST</b>	<b>Strategic WT</b>
Number of similar companies (similar providers) (T1) IT investment is not cheap (T2) Traffic and environmental conditions (T3)	Create a company promotion (S1, S2, S3, T2)	Head office location and road condition in the neighborhood (W2,T3) Doing proper planning on IT investments (W3, T2)

From the results of SWOT analysis that has been done, then the strategic direction of the company is:

1. Increase net income

The first strategic direction is to increase net income for the company. From here IT is expected to provide a meaningful contribution to help companies increase net property income either. The company gives the largest weight on this lead with a value of 50 points. With the aim of strategic direction is to improve application performance for company operation. With the

aim of facilitating the workmanship and provide information fast and accurate.

2. Increasing demand for security services

The second strategic direction of the company has the goal of developing revenue from project or client demand. With success indicators, the first goal is the addition of new security amounts. As for the purpose of both indicators of success can be judged from the increase in demand from new projects or new clients. This strategic direction is weighted by the importance of 30 points.

3. Being a leader in the use of IT for innovative and strategic

It is the company's last strategic direction. By being a leader in innovative and strategic IT usage, it is hoped that it will be able to increase profitability by initiating the use of integrated system applications in interrelated departments. The indicator of the success of this strategic direction is the improvement of the company's management performance.

Table 4. Company Strategic Referrals

Strategic Intention	Strategic Intention Goals	Strategic Intention Metrics	Weight
Increase net income	Improve service for clients	Increase the value of client satisfaction	50
	Improve the handling of outstanding clients	Pending billing decline and billing target achievement	
Increase demand for security service	Develop promotional and information program using various media	Added number of client	30
Being a leader in the use of IT for innovative and strategic	Initiate the application of integrated system between related departments that support the profitability of the company	Improve performance management	20



From the SWOT analysis above can be formulated the following strategies that can help companies:

- Increase the value of client satisfaction.
- Decreased billing pending and achieving company targets.
- Maximize the use of existing systems. As an example of using NIS application system for accuracy of information.
- Develop promotional programs and information through various media

Once we know the strategic direction of the company, then we can make the demand supply planning from XYZ Group to find out what the needs in achieving strategic direction. The following is a description of IT Demand Supply Planning for each strategic direction of the company:

*Table 5. Demand supply planning for referrals increases net property income*

	DEMAND		SUPPLY
	Business Strategic Context	Strategic Plan for the Use of IT	Strategic Plan for the Supply of IT
Strategic Intention	Increase net property income	IT systems that can support management performance and minimal errors	Infrastructure, hardware, network and systems that must support and align with the expectation and performance of management
Strategic Objectives	Improve service of clients	Initiates the use of integrate applications	Purchase and set up network required for deployment of integrated applications
	Improve the handling of outstanding invoices	Maximize the use of existing systems so as to support the company's operation	Make a training for employees of Finance Department

	DEMAND		SUPPLY
		nal processes are neat, systematic and integrated	
Strategic Initiatives	Approach with the client by trying to meet the needs of clients and accommodate critics and suggestion to improve the management	Create a database containing information about client	Build infrastructure and support staff in the implementation of client database management
	Focus on outstanding billing	Improve billing systems	Evaluate the systems and make necessary improvement

Based on the results of demand supply planning analysis, our company can find out what is required by the company to achieve strategic direction that can be supported by the use of information technology. The agenda of the strategy of IT usage to support the achievement of strategic directives, among others are:

- Making improvements to the reporting system on the NIS system so that it becomes more real time and accurate, perform a good database client governance system, and provide more services to the client. With the agenda, it is expected the management to know the information needs of companies to increase net property income.
- Improve the official website of the company to be more interactive and dynamic and better data base marketing management. So hopefully the management knows the information usage and management of data marketing better to support the increase in the number of clients
- Create a better integrated client database. In addition, all employees can actively communicate to express opinions and ideas through an internal corporate knowledge management system. With expect, the management can know the information needs.

- Begin to initiate the application of decision-making systems in investment costs, human resource preparation, possible risks, and so on.

Risk and Impact Assessments are filled based on the importance of the project and on the consideration of the company, using a scale of 1-100 accordingly [22]. While the cost column is filled by using data obtained from the company. The portfolio columns are filled out by considering the existing categories and adapted to the conditions

Based on the results obtained from the previous NIE process, then obtained some decisions that according to the author is appropriate to be implemented in the company, the decisions include:

- Preface the process of developing NIS modules that have not run to date (Projection), because with the operation of these modules then the company's operational performance can be better and can save employee time in running the operational activities. But for what Projection module will run first all depends on company policy.
- Focusing investments not only on system installations and modules that exist in the system, but also should focus investment on system performance support attributes such as Network LAN and Server Platform. It is also supported by the Lights-On Portfolio process where Network LAN is one of the infrastructure included in Crisis category or category whose investment should be further improved.

For user satisfaction against NIS system. To find out whether the user at the operational level is satisfied with the current NIS system, the authors do an analysis of the NIS system user satisfaction assessment. The analysis was done by distributing questionnaires to system users on the XYZ Group total 16 people.

According to [23] the perception of an information system can be said to succeed if the user is satisfied, and the technology is well received. Users will be satisfied with the system it uses, if its information quality and system quality can be accepted by the user.

Because of the above reasons, to see the level of customer satisfaction, the author uses two approaches of information quality and system quality. The attributes used in the assessment of information quality are completeness, accuracy, format, and currency. While the system quality, the attributes used are reliability, flexibility, integration, accessibility, and timeliness [23].

#### 4. CONCLUSION

Based on the results of the analysis used NIE has been done on investment planning conducted on XYZ Group, the conclusions that include:

1. The use of NIEs helps to analyze the benefits of NIS investments in XYZ companies, in order to create business strategies. The analysis results has shown the value of NIS investment for XYZ company. Based on the analysis results the management can improve the business strategy for the future.
2. The implementation of the NIS system for three years has supported the achievement of the company's strategic objectives, especially to increase net property income. Shown from the alignment result, that the total weighted value on the strategic direction of net property income is greater than the value on other strategic direction. It's just the contribution of the NIS system to the achievement of strategic direction of the company is not too large because it is limited to supporting the operations of the company only.
3. Based on the results of the analysis of Prioritization all projection modules run simultaneously. There are two categories obtained from Prioritization analysis that is Mandated and Factory. Both categories have the same value and are only distinguished in terms of descriptive.
4. Based on the analysis of Lights-On Portfolio, it is known that lights-on included in the Abandon category are Staff and Budget Management (Administration) and LOO Printing Module, Lights-On which is included in Crisis category is Network LAN, and Finance module, Lights-On which are included in the category of Non Critical, Lights-On which is included in the category of Improved Only as Needed is Platform-Server, Data Management, Client Relationship Management, Installation and User Hardware Maintenance and Lights-On are included in the category Excellent, Monitoring is Software and License Security, Internet Support. From these categories of investment categories, companies must invest in Network LAN and accounting modules included in the Crisis category to raise the quality of supporting elements of the NIS system at the XYZ Group.
5. On the analysis of user satisfaction of the system, from the calculation results obtained, the overall user is less satisfied with the NIS system. However, when further investigated the

user's dissatisfaction is more emphasized on the quality of information compared to the quality of the system. It can be seen from the result of mean value of each attribute in information quality dimension which shows lower value than mean value of each attribute in system quality dimension.

Based on the results of the analysis and discussion, it is recommended that:

1. From the results of the analysis that has been done, XYZ Group does not have clear IT planning as a long-term supporter, in this case the company should immediately plan to make a clear annual IT planning for the next 5 years, and prepare the appropriate human resources working support and preparing IT investment budget. Especially for budget IT needs, should not only limited the cost of routine expenditure and maintenance costs, but the long-term investment planning IT budget by adjusting the strategic of the XYZ Group.
2. To overcome the problems in the strategic development of IT in the XYZ Group, one way that can be done is to use the services of a reliable IT consultant, hoping to overcome the existing problems in helping companies to overcome the problem of the effectiveness of human resource use in the transition from the use of existing systems, and also the knowledge transfer culture can be run in order to minimize repeated errors in the use of application systems, in this case NIS.
3. For the results of Prioritization analysis, the authors suggest that each department's application module can be used in an inter-departmental integration, since each existing application module can have a direct impact on the XYZ Group's operational activities. Prioritization can be done by looking at the importance of existing applications in the modules of each department within the NIS.
4. In the implementation of the analysis carried out cover only four basic practices of New Information Economics with 7 deliverables. To obtain maximum results, further analysis is required by applying performance measurement and other 5 deliverables and taking into account the implementation of IT Impact and Culture Management.
5. Implementation of the analysis also does not further analyze the gaps that arise in the user satisfaction of information quality compared with the use of system quality. Therefore, it should also do gap analysis of information

quality and system quality for improving the quality of system performance and user satisfaction. Gap analysis can be done intensively with forum discussion group, in which each user can provide input to the system performance that at XYZ Group.

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