



## **Strategic Planning of Information Systems and Information Technology by applying the Tozer Methodology to The Lampung Betacom Pawnshop**

**Chelsea Florentine<sup>1</sup>, Hanna Prillysca Chernovita<sup>2</sup>**

<sup>1,2</sup>Program Studi Sistem Informasi , Universitas Kristen Satya Wacana, Salatiga, Indonesia  
Email: <sup>1</sup>682018026@student.uksw.edu, <sup>2</sup>hanna.chernovita@uksw.edu

### **Abstract**

Betacom is one of the pawnshops established since 2017, which is engaged in the service of distributing loan money to the public based on pawn law with electronic goods guarantees such as mobile phones, laptops, TVs, and so on. In carrying out its business processes, Betacom pawnshops have implemented information systems and information technology but are still not optimal, have not been integrated with each other and are not in line with the mission vision and business strategy of Betacom pawnshops. Therefore, proper strategic planning is needed. This strategic planning will be carried out using the Tozer method, to produce a strategic planning model of information systems that can support and improve the business processes of Betacom pawnshops. This research aims to improve the quality of business processes and SI / IT that can answer solutions to problems that occur. The output resulting from this research is in the form of recommendations for the results of strategic planning of information systems that can be used in the future.

**Keywords:** Strategic Planning, Information Systems, Tozer

### **1. PENDAHULUAN**

Today, the development of increasingly sophisticated technology and computerized systems is needed in all fields and aspects of the company. Each company is required to be able to compete and innovate to generate profits for its company and improve the performance of the company. By optimizing the use of SI / IT in a company or organization will make a company or organization more effective and efficient in decision making and increase organizational competitiveness [ 1] This makes each company implement information systems and information technology to get appropriate business processes and provide positive value in business competition. Companies now rely on IT to support their business strategies in competing with other agencies. There are even



companies that have made IT as the main strategy to achieve the company's goals, both profit and business continuity of the company, and in order to build a good corporate image, the company needs to implement several strategies in doing business [2]. To produce a SI / IT strategy that is in line with a company's business strategy, it requires investments issued to provide benefits as measured by the achievement of company goals and {Formatting Citation}. According to, information systems are the relationship between people, procedures and the use of technology to collect, process, store, disseminate and present information used by one or more business processes in an organization.

In building an information system, strategic planning is required. Strategic planning of information systems is a systematic, effective, efficient approach aimed at meeting the information system needs of an organization or individual business model. Information technology strategy is a strategy that focuses on establishing a vision of how technology can support in meeting the information and system needs of an information [6]. Companies that do not have strategic planning for information systems / information technology will cause unclear direction to SI / IT in the long run. Strategic planning of information systems and technologies is needed to prepare organizations in planning the use of information technology and systems for their organizations.

Betacom is one of the pawnshops established since 2017, which is engaged in the service of distributing loan money to the public based on pawn law with electronic goods guarantees such as mobile phones, laptops, TVs, and so on. The products contained in this pawnshop have a pawn system and different interpretation values in accordance with the Standard Operating Procedure (SOP) that has been set. At Betacom pawnshops, a system of pawn data management information is needed to facilitate the stock of goods and cashier system when the borrower makes repayment or extension of the pawn note. In carrying out its business processes, Betacom pawnshops have implemented information systems and information technology but are still not optimal, have not been integrated with each other and are not in line with the mission vision and business strategy of Betacom pawnshops. As a result, the business processes carried out are still not running effectively and efficiently.

In carrying out strategic planning, information that needs to be considered is the use of methodology. In strategic planning management this will be done using the Tozer method, to produce a strategic planning model of information systems that can support and improve the business processes of Betacom pawnshops. With the Tozer version of the methodology, it is an easy and practical methodology based on the concept of business strategy. Not only that, with this method can also answer the needs of the company's information system and information technology. To facilitate analysis in this research, an analysis tool is needed in the

form of SWOT analysis techniques, Value Chain, CSF (Critical Success Factor), McFarlan Grid's Portfolio Application and Porter's Competitive. This research will also discuss si / IT strategic planning and the right business strategy to solve the problems that exist in Betacom Lampung pawnshops and to improve the performance and performance of this pawnshop.

## 2. METHOD

Research methods are important in a study because a conclusion taken can be influenced by the research methods taken and used. In this study the information system planning methodology used is the Tozer methodology. The analysis tools used are SWOT, Value Chain, CSF (Critical Success Factor) analysis techniques, McFarlan Grid's Portfolio Application and Porter Competitive.

### 2.1. Strength, Weakness, Opportunities, Threats (SWOT)

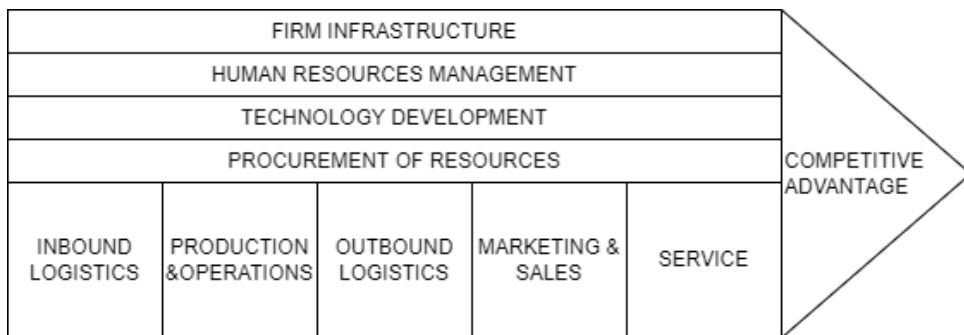
SWOT analysis is a widely used method of strategic planning to evaluate an organization's internal strengths and weaknesses, as well as find opportunities and threats that arise from the outside [9]. SWOT analysis is a simple method of analysis but has a big role in developing a profitable business strategy as well as building a company for the better. SWOT analysis is done by developing strategies using logic in maximizing strengths and opportunities but can simultaneously minimize weaknesses and threats that will occur to the company. In SWOT analysis is divided into 2 parts, namely internal factors that include strengths and weaknesses and external factors that include opportunities and threats. Below is an overview of the SWOT analysis in Figure 1.

INTERNAL EKSTERNAL	STRENGTH	WEAKNESS
OPPORTUNITIES	SO : Mengembangkan suatu strategi dalam memanfaatkan kekuatan untuk mengambil manfaat dari peluang yang ada.	WO : Mengembangkan suatu strategi dalam memanfaatkan peluang untuk mengatasi kelemahan yang ada.
THREATS	ST : Mengembangkan suatu strategi dalam memanfaatkan kekuatan untuk menghindari ancaman.	WT : Mengembangkan suatu strategi dalam mengurangi kelemahan dan menghindari ancaman.

Figure 1. SWOT Analysis

**2.2. Value Chain Analysis (Value Chain Porter)**

Identification of business functions that begin by dividing the functional areas of the preparation of marketing strategies at Betacom pawnshops is described into the value chain of Michael Porter [10]. Value chain analysis is the process by which a company identifies its main activities and analyzes its internal activities. The value chain aims to identify and group the activities contained in the company into two parts, namely the main activities and supporting activities of these activities will be mapped and used as the basis for determining SI / IT solutions[ 11]. In other words, by looking into internal activities, the analysis will reveal where the competitive advantage or lack of a company lies. Companies that compete through differentiation advantages will try to perform better activities than competitors. The value chain model sees a company as a set or chain of basic activities that can add value to a company's products or services. Below is an overview of Porter's Value Chain analysis in Figure 2.



**Figure 2.** Value Chain

**2.3. Critical Success Factor (CSF)**

Critical Success Factor is a provision of the organization and its environment that affects the success or failure of the organization revealed by Tozer. CSF analysis aims to interpret business objectives with regard to the actions needed to achieve those goals, the key information and application needs of the organization and its managers, and to determine the weaknesses and strengths in the system that the organization has in its current condition [13]. Below is an overview of the Critical Success Factor in Figure 3.

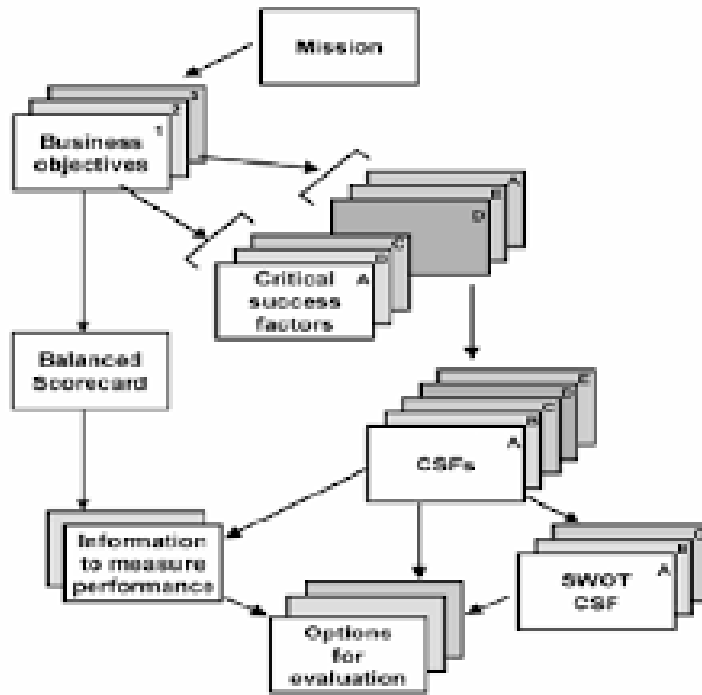


Figure 3. Critical Success Factor (CSF)

#### 2.4. McFarlan Grid's

McFarlan Grid's is used to map the application of information systems and information technologies based on their contribution to the organization. There are 4 quadrants carried out on the mapping, namely Strategic, High Potential, Key Operation, and Support. Of these four quadrants are adjusted to the category of assessment of an application for its impact on the business. Below is an overview of Mc Farlan Grid's in Figure 4.

<i>Strategic</i>	<i>Potential</i>
Aplikasi yang kritis untuk mendukung strategi bisnis mendatang.	Sistem aplikasi yang menjadi penting bagi perusahaan untuk mencapai bisnis yang akan datang.
Sistem aplikasi dimana perusahaan saat ini menggunakannya untuk mencapai sukses.	Sistem aplikasi yang berharga tetapi tidak kritis untuk mencapai sukses.
<i>Operational</i>	<i>Support</i>

Figure 4. McFarlan Grid's

## 2.5. Five Forces Competitive Model

A competition-based strategy is a plan from a company to win the competition by achieving a competitive advantage that can exceed its competitors or by reducing the advantage of competitors. Porter's five force is used to determine the external conditions of the company in the face of business competition. Below is an overview of the Five Forces Competitive Model in Figure 5.

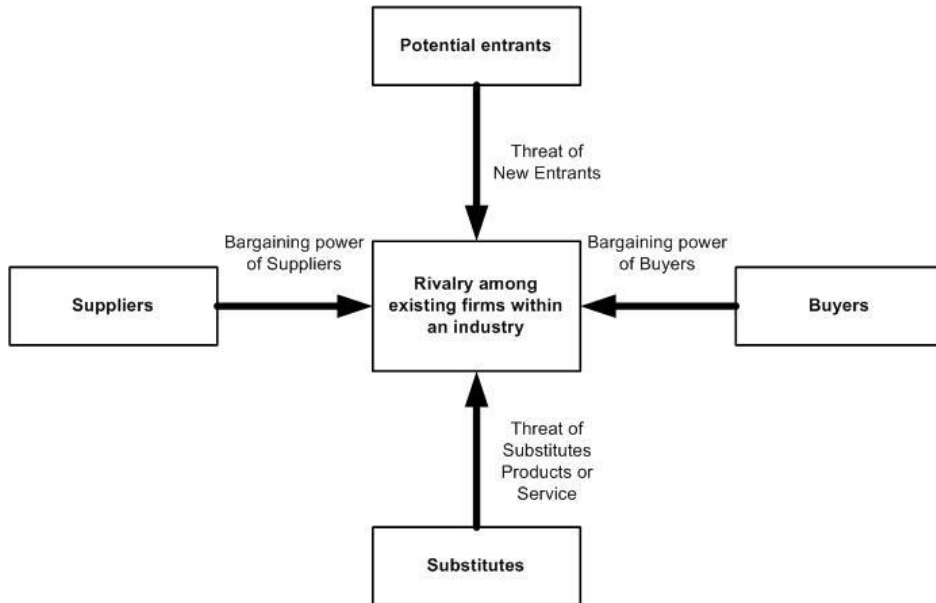


Figure 5. Five Forces Competitive Model

## 2.6 Tozer Methodology

The methodology carried out in this study is the Tozer methodology. The use of the Tozer method is based on the concept of a business strategy that will exploit information systems and information technology resources and their utilization. There are several phases in the Tozer methodology:

- Phase 0 determines context and scope.
- Phase 1 determines information about the business and supporting needs.
- Phase 2 evaluates the suitability of the system to current needs.
- Phase 3 determines the strategy solution.
- Phase 4 prepares and executes an implementation plan.

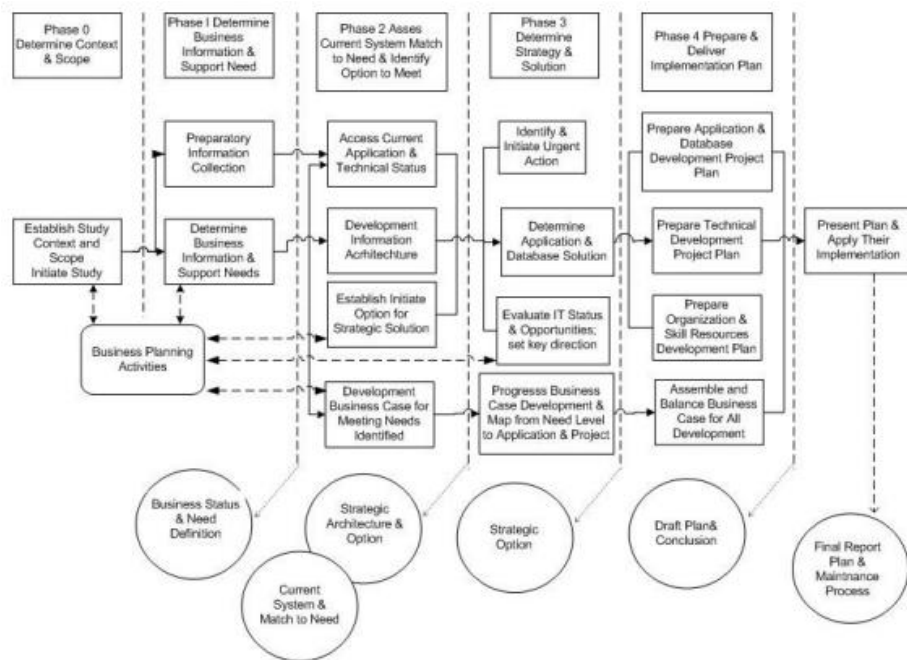


Figure 6. Tozer Methodology

### 3. RESULTS AND DISCUSSIONS

In this study, an analysis of the results of interviews and observations that have been carried out and covers the suitability and needs of the business. After that determine the solution and proposal of information system. With the existence of a strategic planning framework for information systems or information technology, the implementation of the framework to make SI / IT strategic planning in Betacom can be done. The stages of the SI / IT strategic planning framework are as follows:

#### 3.1 Phase 0 (Determining context and scope)

##### 3.1.1 Identify Problems

Based on observations, Pegadaian Betacom has problems, such as:

1. Supervision of pawn products is still lacking and limited.
2. Checking pawn products that are still manual.
3. The use of SI / IT is still not optimal.

### 3.1.2 Internal Environmental Analysis

#### a. SWOT Analysis

At this stage, the SWOT analysis in Pegadaian Betacom is seen in Table 1.

**Table 1.** SWOT Analysis

INTERNAL EKSTERNAL	STRENGTH (S)	WEAKNESS (W)
	<ul style="list-style-type: none"> <li>- Strategic location</li> <li>- Mastering the level of dominance of the market and its competitors.</li> <li>- Easy administrative requirements.</li> <li>- The development of an increasing number of customers.</li> </ul>	<ul style="list-style-type: none"> <li>- Not too big storage.</li> <li>- SI / IT human resources that still have to be developed.</li> <li>- Checking products and goods that are still manual.</li> </ul>
OPPORTUNITIES (O)	S-O	W-O
<ul style="list-style-type: none"> <li>- Meningkatnya kebutuhan ekonomi dalam rumah tangga.</li> <li>- Proses bisnis yang sudah banyak menggunakan SI/TI didalamnya.</li> <li>- Meningkatnya perkembangan hardware dan software.</li> </ul>	<ul style="list-style-type: none"> <li>- Improve the quality of employees in the use of IT.</li> <li>- Improve service with it system.</li> <li>- Improve good relations and cooperation between pawnshops or other agencies.</li> </ul>	<ul style="list-style-type: none"> <li>- Maximize employee performance by conducting special training.</li> <li>- Cooperate with various parties.</li> <li>- Create a checking system to make the job easier.</li> </ul>
THREATS (T)	S-T	W-T
<ul style="list-style-type: none"> <li>- The emergence of companies that produce similar pawn services.</li> <li>- There's a lot of robbery.</li> <li>- Hardware malfunction.</li> <li>- Network problems.</li> </ul>	<ul style="list-style-type: none"> <li>- Improve the quality of available IT.</li> <li>- Neutralize network problems.</li> <li>- Improve promotional services.</li> </ul>	<ul style="list-style-type: none"> <li>- Develop a place or branch office and introduce it to the surrounding community.</li> <li>- Improve the quality of services owned.</li> </ul>

After conducting an analysis of internal and external factors, the alternative strategies obtained are as follows:



SO (Strength Opportunities)

- Improve the quality of employees in the use of IT.
- Improving service with it systems.
- Improving relationships and cooperation that bai kantar pawnshops or other agencies.

ST (Strength Threats)

- Improve the quality of available IT.
- Neutralize network problems with the help of the relevant agencies.
- Utilize IT systems to improve promotional services.

WO (Weakness Opportunities)

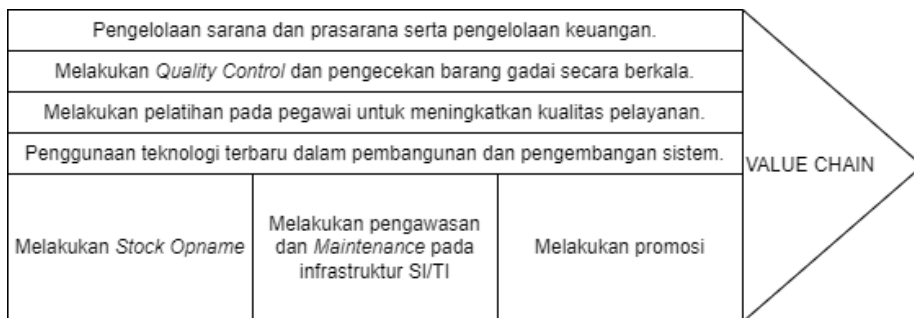
- Maximize employee performance by conducting special training.
- Create a checking system to make the job easier.

WT (Weakness Threats)

- Develop a place or branch office and introduce it to the surrounding community.
- Improve the quality of services owned.

**b. Value Chain Analysis**

At this stage explain how the planning of information systems using Value Chain is seen in Figure 7.



**Figure 7.** Value Chain Analysis

**3.1.3 External Environment Analysis**

Based on the Five Forces Competitive Model method, the analysis of the external environment in Betacom pawnshops is:

The first part is business competition with similar companies. The company must be able to compete with other similar companies, namely judging from the quality of service of its employees. Good service can attract interest and attention so that customers want to return to using the services of Betacom pawnshops.

The second part is the threat of newcomers. Because the pawnshops in the surrounding area are very minimal, the more and more pawnshops are new and have implemented SI / IT in their business process activities. Therefore, Betacom pawnshops must improve the quality and quality of their SI / IT application so that they are not left behind and keep up with the times.

The third part is customer bargaining power. Pegadaian Betacom offers a suitable interpretation value for the community.

The fourth part is the bargaining power of the supplier. In this section, the supplier in question is the person who will buy auction items that are not redeemed by the customer concerned. The goods will be interpreted at a price that is not too high.

The fifth part is the replacement product. Betacom pawnshop always guarantees good security and supervision of every pawn so that customers can give confidence to Betacom pawnshops.

### 3.2 Phase 1 (Determining information about the business and supporting needs)

#### 1) Identify Business Information

In this process there is a goal, vision, and mission that has been sharpened to answer the challenges of the vast digital industry and internalize the transformation agenda of betacom pawnshops.

- The objective, implementing and supporting the implementation of policies in the field of economy and national development in general through the distribution of borrowed money based on pawn law.
- Vision, As a solution of a pawn-based integrated business.
- Mission, provide optimal benefits and benefits and expand the range of services to improve the value proposition to customers and stakeholders.

#### 2) Identify Success Factors

To identify what factors can determine the success of a company can use Critical Success Factor Analysis (CSF). Here is the CSF analysis of Betacom's assessment presented in Table 2.

**Table 2.** Critical Success Factor (CSF) Analysis

MAIN PURPOSE	Key Success Factors (Critical Success Factor)
The rapid and modern development of information technology and the	The construction of SI / IT systems that support business activities in accordance with needs.

availability of applications that can facilitate work.	
Improving the quality of pawnshops and the growing business environment.	Improving public service and trust in Betacom pawnshops.
Increased number of human resources in the field of SI / IT.	Availability of competent human resources.

The key performance indicators in the table are:

- The rapid and modern development of information technology and the availability of applications that can facilitate work.
- Improving the quality of pawnshops and the growing business environment.
- Increased number of human resources in the field of SI / IT.

### 3.3 Phase 2 (Evaluating the suitability of the system to current needs)

Evaluate the suitability of the system to current needs based on Mc Farlan Grid's analysis that has been presented in Table 3.

**Table 3.** Mc Farlan Grid's

Strategic	High Potential
- HR Management - Betacom's web Pegadaian information system	- Web application of service assessment from customers.
- Financial information system - Goods stock information system	- Employee performance analysis
Key Operational	Support

### 3.4 Phase 3 (Preparing and implementing an implementation plan)

Below is the implementation plan of Pegadaian Betacom in Table 4. and the development plan in Table 5.

**Table 4.** Implementation Plan

Recommendations			Year				
No.	Information System	Explanation	2022	2023	2024	2025	2026
1.	Pawn checking app	This application will later facilitate and speed up in checking pawns so that they are complete and there is no loss.				√	
2.	Pawnshop service website.	A website that contains what benefits will be obtained by prospective customers.			√		
3.	Application of financial system and the estimated value of pawns.	This application contains automatic calculations of the calculation and date of the maturity of pawns.			√		

**Table 5.** Development Plan

No.	Activities	Necessity	PIC
1.	System Analysis and Design	- Application - Computer - Internet - Analyst System Services	System Analyst
2.	Application Design	- Computer - Services	UI Designer
3.	Programming	- Computer - Services - Programmer	Programmer
4.	Application Testing	- Computer - Internet	Quality Control

5.	Implementation	- Computer	Manager Project
6.	Training User		Trainer
7.	Maintenance	- Computer	Programmer
8.	Update Data	- Computer - Internet	Surveyor

#### 4. CONCLUSION

Based on the results of the analysis obtained in this study, it illustrates that the information system owned by Betacom's assessment can already support the company's overall business processes, but it has not been maximized and there needs to be improvements in the inspection of goods that must be done periodically, supervision of products and improving employee performance. By improving the information system and integrated information technology will be useful for business continuity and can provide added value for the company's services to its consumers. The advice for further research is expected to review various sources and related references so that the research can be better later and deepen the methods to be more extensive.

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