Method of Application Information in Engineering College Planning Information System
(Case Study on Univeritas Musi Rawas)

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Abstract

At This thesis will discuss the strategic planning of information systems University of Musi Rawas using the Information Engineering of James Martin. The purpose of this study is to conduct strategic planning of information to develop appropriate information strategy and aligned with business strategy college and Identify the functions and information required by the University of Musi Rawas. Stages in Information Engineering method consists of mapping functions, mapping infomasi, strategic analysis, analysis of objectives and issues, critical factor analysis, analysis of the impact of technology, the model function, entity relationship models, identification of business areas, and prioritizing business area.

Keywords : *Method of Application, Information, Information System*

1 INTRODUCTION

The development of increasingly complex business environment currently causing universities must manage its resources effectively and efficiently in order to enhance the ability of higher education in the face of increasingly fierce competition. Similarly, the information as one resource that is owned by the college. Information must be managed well, because the information has strategic values that can be utilized by the college. In order to manage and utilize these resources, universities must have information systems strategic planning is good, because without a good planning strategy then substantial investment in information systems to be in vain, and colleges may lose the opportunity to take advantage of the opportunities arise from the development of information technology.

With the issuance of Government Regulation of the Republic of Indonesia Number 30 Year 1990 on the college in article 33, paragraph 1, which reads "Satuan pelaksana administratif pada perguruan tinggi menyelenggarakan pelayanan teknis dan administratif yang meliputi administrasi akademik, administrasi keuangan, administrasi umum, administrasi kemahasiswaan, administrasi perencanaan, dan sistem informasi"so that the information system has a very important role in a higher education.
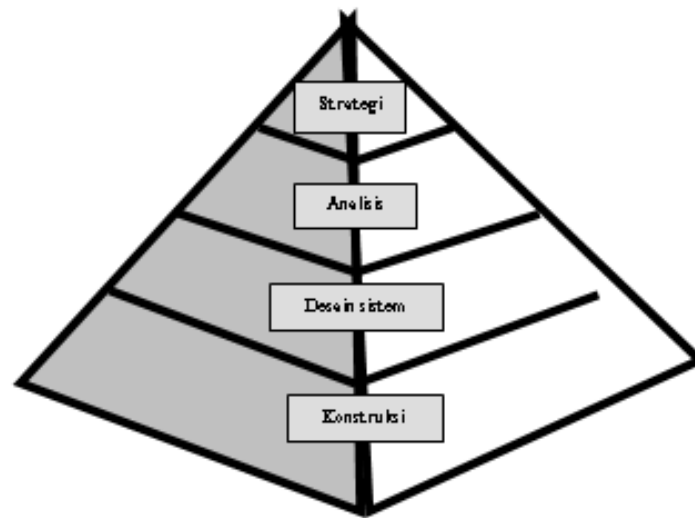
Figure 1: Methods Four Stages of Information Engineering

There is still a lack of information systems at the University of Musi Rawas because there is good planning in the development of information systems. Activity still running individually without cooperation, so that every piece of data has each and led to redundancies and inconsistencies. This condition is caused by the development of information-oriented file system which tends to a certain section. To support the development of management information systems college needed an information system development methods, so that the method used is the method of Information Engineering of James Martin.

Information Engineering from a pyramid shape which has two parts, the left part and right part of the form of the data in the form of activity. Pyramid of the top one is the strategy, analysis, design, and most under construction, so Infromation Engineering using top-down management with a series of stages that strategy, analysis, design, and construction (James Martin, 1986).

2 RESEARCH METHODOLOGY

2.1 Information Systems Development Methodology

Development of information system by using Information Engineering has 4 stages with the top-down method is as follows:

1. Information Strategy Planning. At this stage a general picture of the company, the functions, the data and information needed, critical success factors, goals and problems. The main concern at this stage is the strategic use of information technology.

2. Business Area Analysis. Analyze processes required to run a particular business area and the relationships between processes, and data needs. At this stage the data obtained have been normalized full model and process model is mapped to the data model.

UNIVERSITAS
MUSI RAWAS :

Visi

Misi

Tujuan

INFORMATION
INGINEERING:

Strategi

Analsisi Area

Bisnis

RENCANA
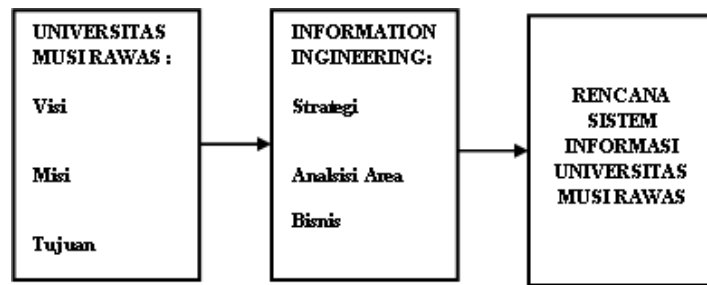SISTEM
INFORMASI
UNIVERSITAS
MUSI RAWAS

Figure 2: Mindset

3. Design System. Designing how certain processes in the business area can be used as a procedure and how the procedure works. Required direct involvement of users in the design procedure and its interaction with the prototype.

4. Construction. Application procedure using code generation and end-user tools. The design is very related to the construction, so the discussion of system design and construction is difficult to separate.

Addressing the four phases in Figure 1 Information Engineering method which is divided into two parts of the right side and the left side in the form of activities such as data.

2.2 Mindset

This study contains an organization that already has a business plan which contains the mission, vision, goals, objectives. To retain existing business and gain the ability to compete with its competitors. Plan information systems strategy and information technology strategy aims to evaluate current business to align (alignment) with strategies and information systems and information technology should also to look for new business opportunities with the support of information systems and information technology. In order for this strategy plan can be created, we need a better workflow and information systems strategic planning and information technology can be implemented in an organization. Figure 2 can be seen in a picture frame.

3 RESULTS AND DISCUSSION

3.1 Higher Education Approach in Information Engineering

University leaders will formulate a strategic vision based on the level of technological development activities, which may affect the business, as well as how the goals and objectives of the college. While the level of analysis will merge each application in each division into the use of the integrated data.

Development of strategic information on colleges close relation to information engineering approach is an activity that must be undertaken for strategic information systems college. The implementation of strategic information development can be done in college with a look at how colleges approach to the use of Information engineering methods. After analysis, the use of information engineering methods provide positive outcomes for college.

3.2   The approach is based on the Strategic Analysis

Strategic system is a system that allows a college to have a competitive advantage against competitors. The rapid development of information technology has changed the behavior of the business. The company is aware of the impact of the development of this technology and has a strategic vision system, can take advantage of the opportunities arising from technological developments in order to win the competition.

3.2.1   The approach is based on Objective Analysis and Problem

After the goal of the University of Musi Rawas derived from the formulation of the Vision and Mission of the University of Musi Rawas determined, further defined the problems faced by the University of Musi Rawas:

1. Only 30% of students who activity follow ekstraskulikuler interpreneur.

2. 50% of lecturers do not have a hierarchy of academic

3. Had high school education staff

4. Lack of skills professors implementation ekstraskulikuler interpreneur.

5. The information system is manual.

6. There is still a lack of cooperation at both national and international.

3.3   The approach is based on Factor Analysis Critical Success Factor

Critical Success Factor is mapped from every major destination University Forms Musi Rawas human decency that is capable and has the responsibility for the welfare of society so as to apply knowledge, able to create jobs and be able to assume the government and private.

3.4   The approach is based on Analysis of Impact of Technology

Analysis of the context of the IS/IT environment consists of the analysis of External IS/IT and Internal environment analysis of IS/IT. Environmental analysis SI/IT external useful to know the technological developments in the organization and utilization of these technologies in support of business strategy Musi Rawas University.

3.5   Analysis and Discussion

3.5.1   Business Area Identifiers

From the list that was made in the analysis of problems and goals, we need a measure that should be implemented immediately in college, is coordination between functions, especially in the establishment of the information system of each business unit. The resulting information system based structure each function and organization of data subjects.

Table 1: . Business areas contributed to the values of accreditation

No.	functional	Value of accreditation
1	Field of Organization and Management	4.59
2	Field of Teaching	4.74
3	Field of Research	1.88
4	Field of Community Service	0.94
	Number	12.15

3.5.2 Priority Areas of Business

Grouping the business area is a group of functions and data subject. Grouping formed a system or business area that determines the functions that should be running in the system and the data used.

Based on the results of grouping functions held Univeritas Musi Rawas have as many as four business areas. In this study there are four business areas that form will be assessed based on the items role of value accreditation. Contribution of business areas to the value of accreditation is assumed to be equal. The total contribution of the business area is the sum of the contribution of the business area multiplied by the weight value of accreditation.

Area businesses have teaching as much as 4.74 points, the largest contribution to the total value of the accreditation of the university. Because the business area has the largest contribution, then this can be prioritized business areas to be developed first.

3.5.3 Entity Relationship Diagram Teaching Business Area

One or step in the development of the business area is the mapping relationships between entities that exist in the business area. Mapping relationships between entities can be helped by entity relationship diagram (ERD). Entity involved in teaching business area by 27 entities.

4 CONCLUSION

Strategic Planning SI/IT Universitas Musi Rawas

To realize the vision, mission, Goals and Objectives University of Musi Rawas, plans have been made Univeritas Musi Rawas during the period 2014-2025 as:

1. Strategic client through the Web-Based Services

2. Reinforcement Strategy Network

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