Strategic Planning of Information Systems / Information Technology at KOMINFO Department in Malang

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ABSTRACTS

The implementation of information systems and information technology is a long-term investment. This investment requires a huge financial support. In fact, the application is often failed. Therefore, we need a structured strategic planning. The department of KOMINFO in Malang develops information technology based on the recommendation of the vendor. Therefore, it needs a strategic planning to prepare Department of KOMINFO Malang in developing information technology which is structured in order to avoid large financial losses. The development of unstructured information systems and information technology give an impact for incompatibility with the business processes from the Department of KOMINFO Malang. As the consequences, it requires synchronizing the information systems and information technology condition with the business condition in the Department of KOMINFO Malang.

Currently, the Department of KOMINFO Malang has a picture of the performance plan for the next 5 years. The plan which is owned by Department of KOMINFO Malang is not been accompanied by strategic planning of IS / IT because the performance plan of the Department of KOMINFO Malang not yet have a strategy for IT, SI strategy, infrastructure management, SI and IT application portfolio. Based on the existing problems, the Department of KOMINFO Malang needs to make a strategic planning of information systems and information technology in order to perform the synchronization of IT goal according to the vision and mission of the Department of KOMINFO Malang.

There are several methods in the strategic planning of information systems and information technology. One of the methodologies used in this study is the method of Ward and Peppard. This methodology consists of input and output stages. Input stages consist of an external analysis of business environment, internal environment of the business analysis, internal environment analysis of SI / IT and external environment analysis of of IS / IT. While the output stages consists of SI strategy, management strategy of SI / IT and IT strategy. The analysis method used PEST analysis, Porter's Five Force analysis, the analysis of Business Strategy, BSC analysis, McFarlan Strategic Grid analysis, the analysis of resources, the analysis of IT Infrastructure, Infrastructures analysis, analysis of Trends IT, SWOT analysis, value chain analysis, CSF analysis, and GAP analysis. The results of this study have four outputs, there are in the form IT strategy, SI strategy, infrastructure management, the application of portfolio SI and IT. From the findings are expected to be a reference for the Department of KOMINFO Malang in implementing information systems and information technology in accordance with the business conditions in the Department of KOMINFO Malang.

Kata Kunci: Strategic Planning, Information Systems, Information Technology, Methods Ward and Peppard, Department of KOMINFO Malang.

I.   INTRODUCTION

Strategic planning for Information System (IS)/Information Technology (IT) is required for every organization in order to meet the needs of information technology system. The needs of IS/IT are planned for this recent times and the next few years. If there is a structured strategic planning for IS/IT, thus every organization will be able to know the internal and external conditions existing in their organization.

Along with the development of Communication and Information Agency Malang, the needs of IS/IT would be affected. Consequently, to maintain the superiority of Communication and Information Agency Malang, the use of technology must refer to the strategic planning for IS/IT.

Communication and Information Agency is located on Jl. Mayjend Sungkono Kedungkandang Malang 65132, East Java, Indonesia. The Communication and Information Agency constitutes Regional Work Unit, which was created to comply with Government Regulation. That stipulation is listed in the Government Regulation No. 41 of 2007 concerning regional organization as well as attention to the need of public services. As the result of Job Analysis Team and Workload measurement for the development and management of Information and Communication Technology, thus Communication and Technology agency Malang was established, which was merger among the Office of Electronic Data Processing; Post and Telecommunications divisions at Department of Transportation, Communication and Information Division at Department of Tourism , Information and Communication office Malang. There are five divisions at the Communication and Information Agency in Malang, which are Division of post and telecommunication, division of infrastructure and information dissemination, Division of telematics applications, Division of public information and Integrated Service Unit of Electronic Procurement Services.

Today, Communication and Information Agency Malang has an outline of performance plans for the next five years. Each division has roadmap to be carried out for five years. Division of telematics applications applies ICT-based governance, improves electronic procurement services, develops the quality of integrated e-government applications services, performs community empowerment through the use of ICT utilization and increases the use of Open Document Text (ODT) through Malang Go Open Source (Magos). Next, Division of public information is commissioned to carry out preparation of a list of public information online, utilize public space as a communication public media and strengthening media center. Furthermore, division of infrastructure and information dissemination is on duty to perform the empowerment of society information group and develop partnership in public operation dissemination. In addition, Division of post and telecommunication is in charge to improve private role in the management of post and telecommunication services establishment through business opportunities and build Regional Owned Enterprise in the field of telecommunication. However, those plans are not yet accompanied by   strategic planning for IS/IT because performance plans of Communication and Telecommunication Agency Malang has not yet have IT strategy, IS strategy, infrastructure management, and portfolio of IS and IT application.

Moreover, Communication and Telecommunication Agency Malang carries out the development of information technology based on recommendation from vendor. The development

of information system and information technology requires structured plan in order to minimize a massive financial loss. The unstructured development of information system and information technology will result in the incompatibility with business process from Communication and Telecommunication Agency Malang. Therefore, the alignment between the information system & information technology condition and business condition in Communication and Telecommunication Agency Malang is needed.

From the problems above, it is found that it is required for Communication and Telecommunication Agency to create strategic planning for IS/IT so that they will be able to perform the alignment of IT goal, which is suitable with vision and mission of Communication and Telecommunication Agency Malang.

II.　　THEORETICAL REVIEW

Ward, John (2002 : 153) The IS/IT Strategy Formulation and Planning Framework: Overview Model. An overview model, shown in Figure 1, illustrates the building blocks of the strategy formulation and planning framework—the inputs, outputs and essential activities. Briefly, these are:

Inputs:
a. The internal business environment: current business strategy, objectives, resources, processes, and the culture and values of the business.
b. The external business environment: the economic, industrial and competitive climate in which the organization operates.
c. The internal IS/IT environment: the current IS/IT perspective in the business, its maturity, business coverage and contribution, skills, resources and the technological infrastructure. The current application portfolio of existing systems and systems under development, or budgeted but not yet under way is also part of the internal IS/IT environment.
d. The external IS/IT environment: technology trends and opportunities and the use made of IS/IT by others, especially customers, competitors and suppliers.

Outputs:
a. IS/IT management strategy: the common elements of the strategy that apply throughout the organization, ensuring consistent policies where needed.
b. Business IS strategies: how each unit or function will deploy IS/IT in achieving its business objectives. Alongside each of them are application portfolios to be developed for the business unit and business models, describing the information architectures of each unit. The portfolios may include how IS/IT will be used at some future date to help the units achieve their objectives.
c. IT strategy: policies and strategies for the management of technology and specialist resources. These and other 'soft' outputs are described under the heading 'Deliverables from the IS/IT Strategy Process', later in the chapter.
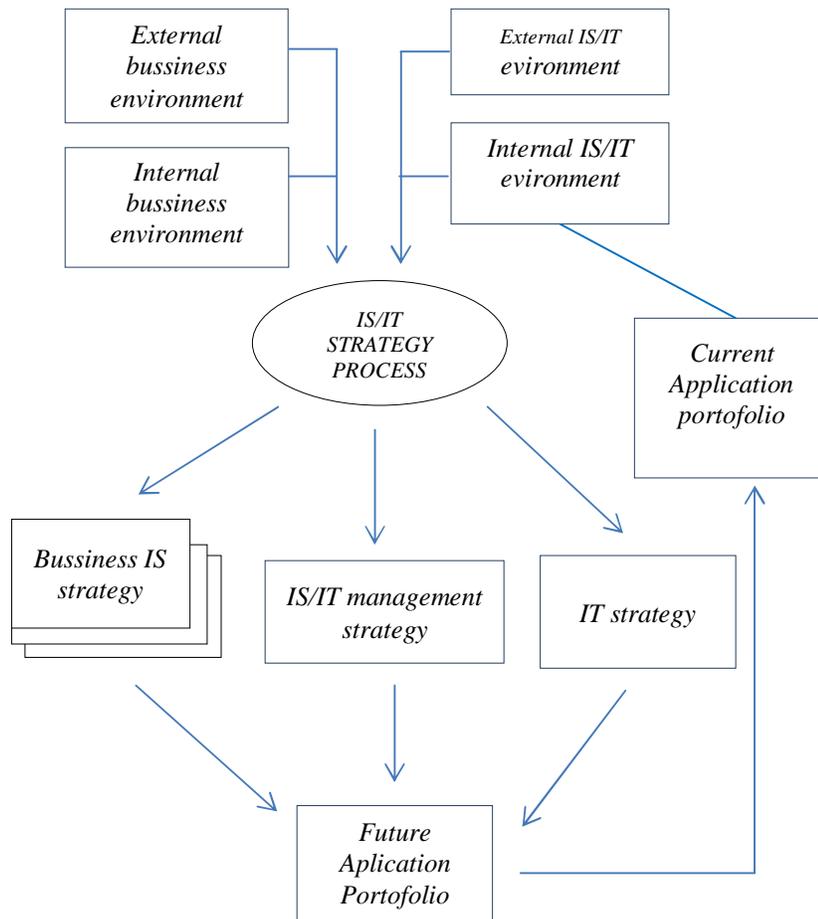
Figure 1. The IS/IT strategic model

III. DESIGN METHODOLOGY

Method and Methodology are two different things. Method is procedure used by the researcher to achieve the goal of the research. Meanwhile, methodology is a study contained in the research. Methodology of Strategic planning for IS/IT used in this thesis is Ward and Peppard Method using multiple analytical techniques. It has several phases, which are preliminary phase, data and information collection phase, comprehension of current conditions phase, future needs phase, strategy formulation phase, and the finale phase.

a. **Preliminary Phase**

In this phase, the researcher determined background of the study, research problems, the aim and significance of the research. Then the researcher found the problems faced by Communication and Telecommunication Agency Malang fro the background of the study, therefore the research can be conducted to obtain the significance and the aim that has been determined before. After that, the researcher collected the data and information to support the process of strategic planning for IS/IT in Communication and Telecommunication

Agency Malang by using several methods, which are study of literature, study of Communication and Telecommunication Agency's document, interviewing, and observation.

b. **Data and Information Collection Phase**

In this phase, the researcher conducted data collection related to business process model of Communication and Telecommunication Agency Malang, opportunities and weaknesses of information technology application, duties and functions of each section in the Communication and Telecommunication Malang. The required data was collected by literature studies, observations, interviews and identification of organizations.

Literature Study. Literary study is the method used to collect data or sources related to strategic planning for IS / IT in Communication and Telecommunication Agency Malang. Literature study can be obtained from various sources, such as journals, documentation books, internet and libraries.

Interview. At this phase, the researcher conducted a series of direct question and answer to the authorities in the Communication and Telecommunication Agency Malang. Interview was conducted with the head of each division in order to find more details data and information related to the Communication and Telecommunication Agency Malang.

Observation. Data collection by direct observation is a method to collect data by using the researcher's eyes without the assistance of any other standard tool for the purpose of collecting such data. The researcher conducted observation in Communication and Telecommunication Agency of Malang in a whole.

c. **Comprehension of Current Condition Phase**

At this stage, there are four stages that must be done by different analytical techniques. The purpose of this phase is to produce data and information describing the current condition of IS/IT business. The four stages are External business environment analysis, internal business environment analysis, External IS/IT Environment analysis and internal IS/IT environment analysis. After the four stages have been conducted, then the results of these stages are grouped by using SWOT analysis.

External Business Environment Analysis. Within external environment analysis, the researcher should be able to select the problems faced by Communication and Telecommunication Agency in Malang in form, function and interrelation among divisions. This analysis was not only used to analyze opportunities and threats, but it was also used to determine from which and for what the results of the analysis were used. Therefore, the researcher used PEST analysis and Porter's Five Forces analysis to supplement the results of the external business environment analysis. PEST analysis was used to identify several factors, such as politic, economic, social and technological factors affecting Communication and Telecommunication Agency in Malang. Porter's Five Forces analysis was used to analyze the position of the Communication and Telecommunication Agency Malang in the government.

Internal Business Environment Analysis. Internal business environment analysis was used to find out competitiveness level of Communication and Telecommunication Agency

Malang. Consequently, the researcher used business strategy analysis and value chain analysis to supplement the results of internal business environment analysis. Business strategy analysis was used to analyze business condition of Communication and Telecommunication Agency Malang. Value Chain analysis was used to figure out how a business is able to place value for customers.

Internal IS/IT Environemnt Analysis. Internal IS/IT environment analysis was used to find the proportion of IS/IT current condition with aim that want to be achieved by Communication and Telecommunication Agency Malang. Therefore, the researcher used McFarlan Strategic Grid analysis, infrastructure resources, facilities and infrastructure to supplement the result of internal IS/IT environment analysis. McFarlan Strategic Grid analysis was used to analysis the existing, planned, and potential information system contained in Communication and Telecommunication Agency Malang. Analysis of resources, infrastructure, IT, facilities and infrastructure were used to find out the resources competence, infrastructure condition, IT, number of facility and infrastructure in Communication and Telecommunication Agency Malang.

External IS/IT Environment Analysis. External IS/IT environment analysis included technology trend, technology utilization, and IS/IT usage. This analysis was used to obtain any application that would be applied in the future, for instance, trend of technology development, which recently is mostly used and needed by Malang people. Accordingly, the researcher used IT trend analysis to supplement the result of external IS/IT environment analysis.

SWOT analysis. SWOT analysis was used to evaluate strength, weakness, opportunities, and threat owned by Communication and Telecommunication Agency Malang.

d.   **Future Needs Phase**

In this phase, the analysis was conducted to determine business needs and IS/IT needs in the future. In consequence, the researcher used value chain analysis, CSF analysis, GAP analysis to supplement determination of future needs ohasse.

BSC Analysis . BSC Analysis constitutes combination among system, people, strategy, process, and technology. BSC analysis used to measure performance of Communication and Telecommunication Agency Malang.

CSF Analysis. CSF analysis was used to determine factors, which assisted Communication and Telecommunication Agency Malang to be successful in achieving their goal.

GAP Analysis. GAP analysis is analysis that enables an organization to determine which performance that must be stimulated and improved.

e.   **Strategy Formulation Phase**

This phase was conducted to perform phase of information system strategy, IS/T management strategy, and information technology strategy. Information system strategy was applied to stimulate business activities of Communication and Telecommunication Agency Malang.

IS Strategy Recomedation. IS strategy is a proposal on how every unit or business function will apply information system in achieving their business goals. The result of IS strategy

recommendation in Communication and Telecommunication Agency Malang is the needs of information system that are conformable with their business strategy.

IT Strategy Recommendation. IT strategy is a strategy policy for technology management and experts. The aim of this IT strategy recommendation was to produce recommendation on IT needs supporting application proposal of Communication and Telecommunication Agency Malang.

IS/IT Management Strategy Recommendation. IS/IT management strategy is strategy including the whole strategy element applied on organization, strategy that guarantees the policy taken by management party relating to information system and technology used by organization.

f. **Final Phase**

Here is the final phase or it also can be called as final result. This phase contains document of application portfolio recommendation in the future. This recommendation has been adapted with the identification and results of multiple analysis phases in Communication and Telecommunication Agency Malang.

IV.   ANALYSIS AND RESULT

The results of the factor mapping that becomes strengths, weaknesses, opportunities and threats were mapped into the coordinates of SWOT. To know in which quadrant does the KOMINFO Department Malang City, can be calculated based on the value of IFAS and EFAS. The result can be seen in Table 1 and Figure 2.

Table 1. Information of SWOT Diagram of KOMINFO Department Malang City.

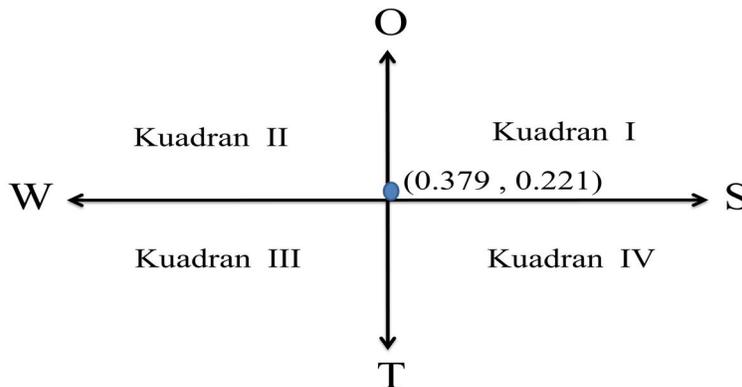| Value of IFAS	0.379
Value of EFAS	0.221
🔵 = Coordinate Position of SWOT	

Figure 2. SWOT Diagram of KOMINFO Department Malang City.

In figure 2, it can be seen that the department of KOMINFO Malang city is in quadrant I with the coordinates (0379, 0221). Thus the strategy was focused on SO strategy (Strength - Opportunities). Strategy of SO is a strategy that harnesses the power of Department's internal of KOMINFO Malang City to take advantage of the opportunities that exist outside KOMINFO Department Malang City. Quadrant 1 is an advantageous position. KOMINFO Department Malang City has the opportunity and strength that it can take advantage of opportunities as much as possible. SO Strategy by the Department of KOMINFO Malang City can be seen in Table 2.

Table 2. Strategy of SO (Strength - Opportunities) Department of KOMINFO Malang City.

Code	Results of Analysis	Origin
SO1	There is a law, regulation, Regulation, Perwal and decree that regulates public relations and information services.	ST1, ST2, ST3, ST4, ST5. ST6, ST7, ST8, ST9, ST10, ST11, ST12, ST13, ST14, ST15, ST16, ST17, ST18, ST19, TST20, ST21 - OP27
SO2	Available a budget from the government for the Development of Electronic Governmental System. That is one of the Programs to Accelerate Bureaucratic Reform	ST22, ST38 – OP2, OP5, OP6, OP7, OP42
SO3	Disclosure of Information to the Community of Malang City raises public awareness of the importance of information provided by the Department of KOMINFO Malang.	ST23 – OP1, OP44
SO4	Improving employee performance to improve public services by providing information in the field of communication and informatics, by conducting socialization and training of applications, in order to improve the knowledge, skills and quality of KOMINFO Department Malang.	ST24, ST45 – OP4, OP8, OP40
SO5	Owns e-Procurement, e-Report LPSE, SIRUP, e-Katalog, SMEP, SIMBADA, SIM ANJAB dan ABK, Monitoring NOC and NMS, Portal Web KOMINFO, KOMINFO APPS and online sambat for the development of public information service.	ST25, ST 26, ST27, ST28, ST29, ST30, ST31, ST32, ST37, ST40, ST52 - OP37, OP9, OP10, OP11, OP13, OP14, OP24, OP25, OP26
SO6	Establish good relations with the makers of information technology services to make payments and to appreciate contractual agreements that have been made. In order to provide rebates, willing to defer repayment of debt and provides good payment terms.	ST32, ST41, ST46, ST50 - OP38
SO7	Department of KOMINFO Malang City has gradually improved bureaucratic efficiency of communication and informatics services to include web operating licenses courier service of branch offices, agents,	ST34 – OP16, OP17, OP18, OP19, OP20, OP22, OP28, OP29, OP30, OP31, OP 32,

Code	Results of Analysis	Origin
	recommendations of tower construction, control of towers, radio operating licenses, business licenses for telecommunication shop and online complaint service.	OP33, OP34, OP35, OP36
SO8	Department of KOMINFO Malang City has gradually increased the number of HR communications and informatics.	ST 35 – OP23
SO9	Department of KOMINFO Malang city has gradually increased the amount of human resources with better understanding on ICT.	ST36, ST44, ST51– OP23
SO10	The success of the Department of KOMINFO Malang city in the management of Public Information (KIM) by increasing the number of KIM in the level of villages and sub districts.	ST43, ST53 – OP15
SO11	Owns a program called Smart City of Malang. To strengthened the management of city through the use of ICT and improve local competence. By the support of taking advantage of technology currently developed.	ST48 – OP41, OP42, OP43, OP45
SO12	Department of KOMINFO Malang City monitors and evaluates network infrastructure to support the successful implementation of e-Government.	ST42, ST47, ST49 – OP21, OP46

Mapping Strategy of Strength- Opportunities to BSC

Of the four perspectives above, they are pictured into strategy map. Strategy Map Department of KOMINFO Malang City can be seen in Figure 3. Each perspective should have relevance. Once the strategy map is done, then sort out the use of strategy. Sorting can be seen in Table 3.
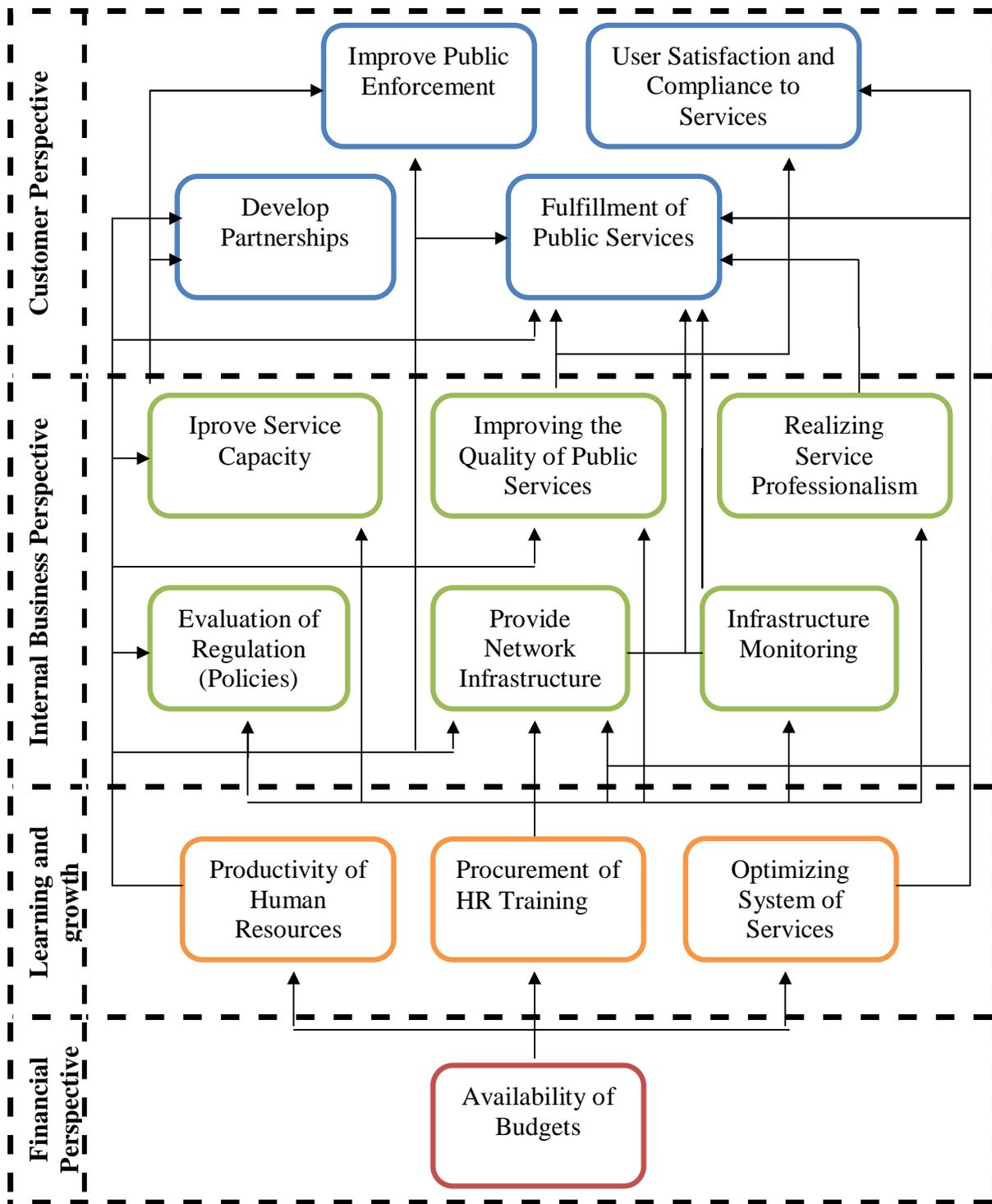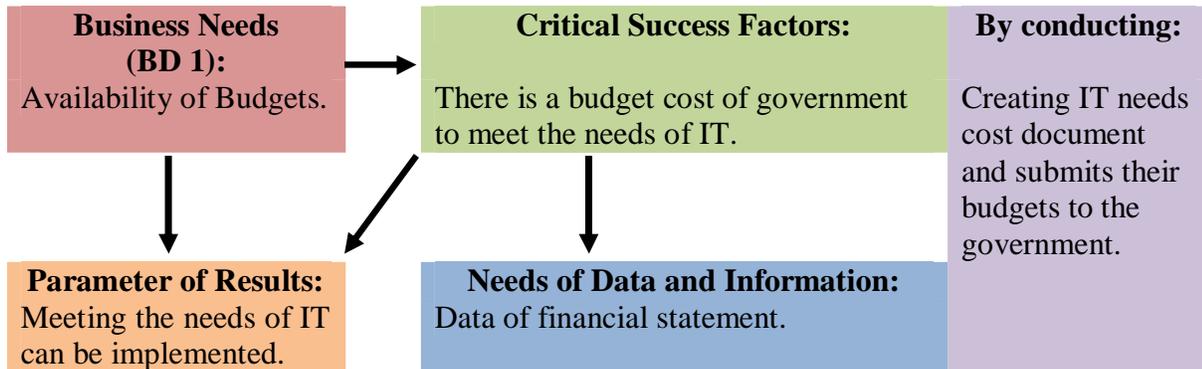
Figure 3. BSC Diagram of KOMINFO Department Malang City.

The results of the analysis BSC is consolidated with CSF analysis. The usefulness of this consolidation is to know the needs of the information system. CSF scheme can be seen in Table 3. The table is one of the results of CSF analysis of 14 potential business needs.

Table 3. One of the Results of Mapping of Threats Factor.

Business Needs (BD 1):	Critical Success Factors:	By conducting:
Availability of Budgets.	There is a budget cost of government to meet the needs of IT.	Creating IT needs cost document and submits their budgets to the government.
Parameter of Results: Meeting the needs of IT can be implemented.	**Needs of Data and Information:** Data of financial statement.	

From the analysis of CSF, generated mapping of gap of the current conditions with what should be existed. Information system gaps is indicated by the potential needs, the needs of SI, current conditions and a description of the system. Results of mapping of information system strategy in the Department of KOMINFO Malang City that can be seen in Table 4.

Table 4. Results of mapping of information system strategy in the Department of KOMINFO Malang City.

Origin	Needs of Information System	Information	User of Information System	Information of Information System
SI1	SMEP (IS Need 1)	Continue as-is and Retained	Head of Department	A monitoring and evaluation information system development. Useful for management and monitoring of the project.
SI2	SIPKD (IS Need 2)	Continue as-is and Retained	Sub Department of Finance	A system of financial management. Useful for cash and treasury.
SI3	SIM APBD (IS Need 3)	Continue as-is and Retained	Sub Department of Finance	A system of local government budget. Useful for budget plan.
SI4	e-Payment (IS Need 4)	New System	Sub Department of Finance	A budget disbursement system and electronically. Useful to facilitate the work of civil servants and accelerate payment of a project.
SI5	e-Performance (IS Need 5)	New System	Head of Department	A performance management information system. Useful for performance appraisal of civil servants.

Origin	Needs of Information System	Information	User of Information System	Information of Information System
SI6	SPSE (e-Procurement) (IS Need 6)	Optimized	UPT LPSE.	An electronic procurement system. Useful to increase the transparency of procurement of goods and services used by LPSE.
SI7	e-Report LPSE (IS Need 7)	Optimized	UPT LPSE.	An auction system of UPT LPSE report. Useful to know the data packets of auctions per year. Including data on the total package and the complete package
SI8	SIRUP (IS Need 8)	Optimized	UPT LPSE.	A general plan of procurement system. Useful for creating certainty of the rules of procurement of goods and services.
SI9	e-Katalog (IS Need 9)	Optimized	UPT LPSE.	An electronic catalog system. Useful for selecting goods and services. Containing lists, types, technical specifications, prices of goods and services.
SI10	e-Delivery (IS Need 10)	New System	UPT LPSE.	An administrative support system of activities. Useful to meet the needs of the procurement contract of goods or services. Also useful for providers of financial documents.
SI11	Desk Pilkada (IS Need 11)	Continue as-is and Retained	Department of Public Information (BIP).	An element of support systems unit for election performance. Useful to facilitate pairs of candidates in the election nomination process.
SI12	Portal Web (IS Need 12)	Upgrade	Department of Informatics Applications (APTIKA).	An online web-based system. Useful for data providers and information.
SI13	Kominfo App (IS Need 13)	Upgrade	Department of Informatics Applications (APTIKA).	An application available on Google play store. Useful for information of Diskominfo Malang City agenda Malang news portal, e-performance, NMS of villages and email

Origin	Needs of Information System	Information	User of Information System	Information of Information System
				Malang City.
SI14	Aplikasi Sambat Online (IS Need 14)	Upgrade	Department of Public Information (BIP).	An online integrated application system for community to ask Malang City. Useful to submit suggestions, critics, questions and complaints. Through Online SAMBAT the public would just send SMS regarding issues or suggestion or criticism to service number 081 333 471 111.
SI15	e-Health (IS Need 15)	New System	Department of Public Information (BIP).	A health care system. Useful to facilitate the public to come to the clinic, to register online.
SI16	Aplikasi Panic Button (IS Need 16)	New System	Department of Informatics Application (APTIKA).	An application provided by PT. Telkom on google play store. Useful to transmit emergency information to the family quickly.
SI17	Media Social Mapping (IS Need 17)	New System	Department of Informatics Application (APTIKA).	A public service system. Useful for capturing public conversation in social media related to the complaints made by public about the infrastructure. The system can also extract public conversation per area per issue.
SI18	SIMBADA (IS Need 18)	Continue as-is and Retained	General Department.	A regional goods management information system . Useful to manage goods in the area.
SI19	Application of Monitoring NOC (IS Need 19)	Upgrade	Department of Informatics Application (APTIKA).	A system that provides monitoring information network on education and village office. Useful to provide information such as usage graphs of internet connection.
SI20	NMS (Network Monitoring System) (IS Need 20)	Upgrade	Department of Informatics Application (APTIKA).	A network monitoring system for wards. Useful for monitoring network problems in server overload and monitoring network connections.
SI21	SIM ANJAB dan ABK (IS Need 21)	Continue as-is and Retained	Sub Department of Program.	A system of job analysis and workload analysis. Useful to provide information related to

Origin	Needs of Information System	Information	User of Information System	Information of Information System
				positions and workload in each section.
SI22	E-ATTENDANCE dan Finger Print (IS Need 22)	Continue as-is and Retained	Employee of Department of KOMINFO Kota Malang.	An attendance system. Finger Print useful for reading fingerprint which is then converted into data.
SI23	e-mail (IS Need 23)	Optimized	Employee of Department of KOMINFO Kota Malang.	An electronic mail system used in correspondence.
SI24	e-Controlling (IS Need 24)	New System	Head of Department.	A control system of activity. Useful for monitoring and evaluating works in each SKPD.
SI25	Letter Management System (SMS or e-office) (IS Need 25)	New System	Department of Post and Telecommunications (POSTEL).	A mailing system to support the implementation of e-Government. Useful to know incoming and outgoing mail.
SI26	Digital signature applications (IS Need 26)	New System	Head of Department and Head of each section.	A system of digital signatures on electronic transactions. The use of digital signatures included in Law No. 11 of 2008.

Information technology gap is indicated by the potential needs, IT requirements, current conditions and a description of the system. The results of mapping of information technology strategy in the Department of KOMINFO Malang City, can be seen in Table 5.

Table 5. Results of mapping of information technology strategy in the Department of KOMINFO Malang City.

Origin	Information Technology Needs
TI1	Building e-payment system infrastructure in accordance with the structure of work and with sufficient network for online-based payments. (IT Need 1).
TI2	Building infrastructure systems of e-Performance in accordance with work structures. (IT Need 2).
TI3	Building Command Center Kota Malang. Supported by the facility of Closed Circuit Television (CCTV) and Global Positioning System (GPS) Tracking. For the implementation of Social Media Application Mapping and Application of Panic Button. (IT Need 3).
TI4	Building infrastructure of e-Health systems according to the structure of employment. (IT Need 4).

Origin	Information Technology Needs
TI5	Building infrastructure of e-Delivery System in accordance with work structures. (IT Need 5).
TI6	Improvement of backbone datacenter NOC. (IT Need 6).
TI7	Conduct training for IT human resources and system managers. Through training as follows (IT Need 7): • e-Payment • e-Performance • e-Delivery • e-Health • e-Controlling • Mail Management System (SMS or e-office) • Application of Panic Button • Social Media of Mapping • Digital Signature Application
TI8	Improvement the use of Open Documen Text (odt) through MAGOS (Malang Go Open Source) to minimize the use of office illegal. (IT Need 8).
TI9	Supporting equipment for applying digital signature applications. (IT Need 9).
TI10	Building infrastructure of e-Controlling system corresponding to work structures. (IT Need 10).
TI11	Building infrastructure of e-Office system in accordance with work structures. (IT Need 11).

Gaps in the management of SI / IT indicated to the potential needs, IT requirements, current conditions and a description of the system. The results of mapping of management strategy of SI / IT in the Department of KOMINFO Malang City, can be seen in Table 6.

Table 6. Results of mapping of management strategy of SI / IT in the Department of KOMINFO Malang City.

Origin	Management Needs of SI/TI
MI1	e-Payment, creating MoU with stakeholders to develop an online-based payment system. (MSI Need 1).
MI2	Organizing SOP e-Payment and its management and build an online-based payment system in accordance with structure of the SOP. (MSI Need 2).
MI3	Create the mapping of e-Payment system in accordance to SOP based on online payment system. (MSI Need 3).
MI4	e-Performance, e-Delivery, e-Health, e-Controlling, e-Office, Media Social Mapping and Digital signature applications. That creates MoU with stakeholders to develop a web-based system. (MSI Need 4).
MI5	Organizing SOP e-Performance, e-Delivery, e-Health, e-Controlling, e-Office, Media Social Mapping, Application of digital signatures as well as its management and building a web-based system in accordance with the structure of SOP. (MSI Need 5).

Origin	Management Needs of SI/TI
MI6	Create the mapping of e-Performance, e-Delivery, e-Health, e-Controlling, e-Office, Media Social Mapping systems and Application of digital signatures according to SOP web-based system. (MSI Need 6).
MI7	Certified E-Procurement by ISO 27001:2013 ISMS. (MTI Need 7).
MI8	Application of panic button, creates MoU with PT. Telkom Indonesia to develop a system based on Android. (MTI Need 8).

Upcoming Application Portofolio Recommendation.

In this stage, the activities carried out are determining the upcoming application portfolio recommendations. From some analysis done, obtained the results of the upcoming application portfolio according to business needs of organization. The result of the upcoming application portfolio were mapped into McFarlan Strategic Grid Analysis. The result can be seen in Table 7. For a description Table 8.

Table 7. Results of Upcoming Application Portfolio.

STRATEGIC	HIGH POTENTIAL
• SIM ANJAB and ABK (SI21)* • SMEP (SI1)* • e-Performance (SI5)***	• Portal Web and Subdomain (SI12)** • Kominfo App (SI13)** • Media Social Mapping (SI17)*** • Application of Panic Button (SI16) ***
• SIMBADA (SI18)* • SIPKD (SI2)* • SIM APBD (SI3)* • Aplikasi Monitoring NOC (SI19) ** • NMS (Network Monitoring System) (SI20)** • e-Controlling (SI24)***	• E-ATTENDANCE and Finger Print (SI22)* • SPSE (SI6)* • e-Report LPSE (SI7)* • SIRUP (SI8)* • e-Katalog (SI9)* • Desk Pilkada (SI11)**** • e-Mail (SI23)* • Mail Management System (SMS atau e-office) (SI25)*** • Digital Signature Application (SI26) *** • e-Health (SI15)*** • e-Delivery (SI10)*** • e-Payment (SI4)*** • Online Sambat Application (SI14)*
KEY OPERATIONAL	SUPPORT

Table 8. Upcoming Application Portfolio Symbol Description.

Description	
*	Application still in use today.
**	Application still needs to be improved.
***	Application recommended.
****	Application rarely used. Used when needed.

V.   CONCLUSION

The conclusion of this study are as follows:

a. Based on the analysis of current conditions, obtained matrix SWOT located at coordinates (0379, 0221) Thus the strategy was focused on the strategy of SO (Strength - Opportunities). SO strategy is a strategy that harnesses the power of internal Department of KOMINFO Malang City to take advantage of the opportunities that exist outside the Department of KOMINFO Malang City.

b. The results of the analysis of SI strategy, namely it is recommended that the new nine applications that can improve public services. So as to support business processes of KOMINFO Department Malang City. The 9 applications are planned for its development within the next 5 years.

c. The results of the analysis of IT strategy, namely it is recommended 11 proposals to support the strategy of SI.

d. The results of the analysis of the management of IS / IT, it is recommended 8 proposals to support the SI strategy and IT strategy.

VI.   REFERENCES

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