

Enterprise Architecture Planning as a Marketing Strategy Based on MSME Product Information Systems

Megasari¹

¹ Prodi Manajemen, Universitas Mitra Indonesia (UMITRA)
Jl. Z.A. Pagar Alam, No.07 Gedong Meneng, Bandar Lampung, Lampung
E-Mail: megasarisastia@gmail.com

Abstract

This research is intended to assist MSME actors in developing information technology which aims to design a marketing information system and inventory management so as to make it easier for MSME actors to monitor MSME marketing activities easily and precisely. In this study, the Enterprise Architecture Planning (EAP) method was chosen because the EAP method has complex components in the design activities of the information system in question. In addition, qualitative research methods are used to inform the facts that occurred by using observations, interviews, and documentation. So that the process and meaning are shown in this study so that the information provided is in accordance with the facts that occurred, while the informants in this study involved the head of the workshop and two of the workshop employees. Therefore, the selection of this method is considered appropriate to assist MSME actors in planning the development of product marketing information systems by utilizing information technology developments as a step to develop MSMEs that are run. The design of the development of the information system created can be used to make it easier to manage the number of stock items that were previously done manually but with the use of technology it can make it easier for MSMEs to find out the total number of goods automatically correctly based on data recorded by the system and then displayed as the right information. and accurate.

Keywords: Research, Information Systems, Information Technology, Enter Architecture Planning Methods.

INTRODUCTION

Technology in the current era is very advanced and growing rapidly. The rapid advancement of technology forces us to be ready for changes in all aspects of life, both social activities, education, trade, work and lifestyle. The magnitude of the influence of technology on the trade aspect is very clearly seen with the increasing graph of e-commerce consumers in Indonesia. based on data released by Kata Data in 2016 the number of e-commerce consumers reached 8.7 million, in 2018 online sales transactions increased very rapidly to reach 144 trillion. The influence of technological developments in the trade aspect does not only have an impact on macro business actors but also greatly impacts MSME actors. MSME actors are required to be able to take advantage of technological developments to facilitate the transaction process to product marketing in order to be able to compete with other business actors.

Based on research that has been carried out by Akhmad Aris Tantowi (2020) with the title Application of Enterprise Architecture Planning in the Preparation of Integrated Information System Planning at Ptp Nusantara Vii Bunga Mayang Business Unit, Kotabumi, North Lampung.

¹Coressponden: Megasari. UMITRA. Jl. ZA. Pagar Alam No.7, Gedong Meneng, Kec. Rajabasa, Kota Bandar Lampung, Lampung 40115. megasarisastia@gmail.com

The research. In this study, the stages of the EAP method used produced a blueprint for the corporate architecture of PTP Nusantara VII, the Bunga Mayang business unit. The results of the research are used as a reference for the management and development of business processes in realizing the vision of the future. Research with the title "fundamental organization of a system consisting of several components, the relationships that occur between components and their environment, as well as the principles used as guidelines in their design and evolution (Zaliluddin 2012). Based on this research, the author aims to make information technology research that focuses on marketing information systems for MSME products, managing stock of goods and MSME products. The results of the research obtained can then be applied to an idea in creating technological advances in the field of marketing that can facilitate MSME actors in marketing products in addition, controlling the stock of goods and products available based on the data obtained and input into the information system. The researchers conducted focused on the Enterprise Architecture Planning (EAP) method, this is because the Enterprise Architecture method is an emerging professional and management practice that is shown to improve company performance which allows them to see the company itself holistically and see the integration of their strategic direction for business practice. flow of information, and technology resources (Zaliluddin 2012). Planning a modern business strategy can be a reference in developing an information system that has several components such as (data architecture, application architecture, and technology architecture). to determine the further development of Information Technology. Enterprise Architecture Planning will provide access to technology development which is a planning path for business and technology changes, so that it can be oriented to business needs as well as a way to support the achievement of asset management goals for MSME actors to be maximized.

In this case, the researcher focuses on the point that becomes a problem or obstacle in MSME activities, namely "how to implement an information system using the Enterprise Architecture Planning methodology as a means of marketing MSME products". The purpose of this study is to facilitate MSME actors in making designs for implementing information technology using the Enterprise Architecture Planning (EAP) method, especially in marketing activities for MSME products to the fullest, so that the risk of procurement of goods can be prevented and business activities run smoothly.

LITERATURE REVIEW

Based on the research of (Fauzi dan Handoko 2018) which discusses the design of a general model of enterprise architecture for MSMEs using the Togaf ADM framework. The research was carried out. To realize a sustainable business process, an alignment between business processes and technology is needed that is able, can support, improve, change, or even find a business process or business system in creating more value for new customers and existing customers or better known as e-Business concept. In accordance with the implementation of the e-Business concept for several MSMEs, a general enterprise architecture model is proposed that can be used by MSMEs (production of goods, service providers and sales of goods) by applying the e-Business concept, using the TOGAF ADM framework, implementing value chain analysis, the use of Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) applications as well as the use of cloud computing technology. With the hope that the design of the model can be used as a reference for all types of MSMEs who want to implement an e-Business-based information system.

Based on the research of (Marjuki dan Cahyana 2022) this study aims to apply TOGAF ADM in describing the details of enterprise architecture which includes the need for computer-based information systems in the tourism village business process. The TOGAF ADM phase that this research went through was only up to the fifth phase. The research succeeded in defining

three information system modules used in primary and supporting activities in the management of Tourism Villages. The modules include the lodging module, the electronic market module, and the tourist ticket sales module. Based on the results of the study, data were obtained that the existence of a tourist village had a positive impact on the people's economic business in the vicinity. In addition, the participation and support of local governments is very much needed, especially in the provision of road infrastructure, which currently still needs to be improved.

Based on the research of (Altas, Junaedi, dan Sulaiman 2022), the research conducted is to design an information system that is used for business processes by utilizing Information Technology to help culinary companies achieve their vision and mission. Warung Rupik does not escape the need to define business needs and information architecture so that the direction of development strategies, especially sales, can be planned properly. Planning is built with the Enterprise Architecture Planning (EAP) approach. EAP is an architectural planning method that is oriented to business needs. EAP can provide architectural planning results in the form of an Information Technology blueprint for data, applications, and technology that is useful as the basis for Information Technology development.

METHODS

Information System

(Muhamad Muslihudin, Fauzi, Satria Abadi, Trisnawati 2021; Muhamad Muslihudin, Fauzi 2021) Information System as a set of components that are interconnected, collect, or obtain, process, store and distribute information to support decision making, and management processes in an organization. As well as helping to analyze problems and new innovations. According to (Irviani 2017) there are several types of functional information systems that are commonly used, as follows:

a. Accounting Information System

Information systems that provide information used by accounting functions (departments or accounting departments). The system includes all financial-related transactions within the company.

b. Financial Information System

Information systems that provide information on the financial function (department or finance department). Which concerns the company's finances. For example, in the form of a summary of cash flow (cash flow and payment information).

c. Manufacturing Information Systems

Information systems that cooperate with other information management to support company management (both in terms of planning and control). In solving problems related to the products or services that the company produces. For example, in the form of raw material data, new vendor profiles and production schedules.

d. Marketing Information System

Information systems that provide information used by marketing functions. For example, in the form of a series of explanations.

e. HR Information System

Information systems that provide information used by personnel functions. For example, it contains salary information, tax summaries and benefits to employee performance.

Enterprise Architecture Planning (EAP)

(Basir, Fadlil, dan Riadi 2019; Fatoni, Supratman, dan Antoni 2021; Indra dan Dewi 2018; Trisminingsih dan Putra 2017) Enterprise Architecture Planning (EAP) is a method developed as

a process of defining architecture in the use of information to help business activities to carry out architectural planning. In general, this method is an effort to approach data quality planning that is oriented towards business needs in order to achieve the mission of an information system in an organization. The enter architecture planning method has several main components which include data architecture, application architecture, and technology architecture (Supardi 2016) So that it can be adjusted to the use of information systems to be applied in technology development, combined by several stages of manufacturing which include the initiation of planning, identifying and defining business functions, and enterprise review in the future (Nugroho, Setiyowati, dan Kusumaningrum 2020) So that the data created can be complex because it uses appropriate and clear procedures because it uses sequential stages. To help make it easier for users to correctly identify company data.

Website

According to Arief (2011: 7), the Web is an application that contains multimedia documents (text, images, sound, animation, video) in it that uses the HTTP protocol (hypertext transfer protocol) and to access using software called a browser. The functions of the website include:

1. Promotional Media
2. Marketing Media
3. Information Media
4. Educational Media
5. Communication Media

Marketing

(Rizaldi et al. 2020; Simamora et al. 2020; Yosep et al. 2021) Marketing is the activity and process of creating, communicating, delivering, and exchanging offers of value to customers, clients, partners, and the general public. Marketing strategy is very important for companies where marketing strategy is a way of achieving the goals of a company, because the potential to sell propositions is limited to the number of people who know about it. This is also supported by the opinion Swastha Strategy is a series of grand designs that describe how a company must operate to achieve its goals.

So that in running a small business, in particular, development is needed through its marketing strategy. Because at the time of critical conditions, it is precisely small businesses that are able to provide growth to people's income. Marketing according to W. Y. Stanton Marketing is something that includes the entire system concerned with destinations to plan and assess prices up to by promoting and distributing goods and services that can satisfy the needs of actual and potential buyers.

Enterprise Architecture Framework

A framework for managing information system planning through the analysis of data architecture for the present, which is necessary to achieve a goal of the enterprise. This analysis is used to summarize the review point of technology development for monitoring the implementation of architecture in an enterprise.

eCo-Buss

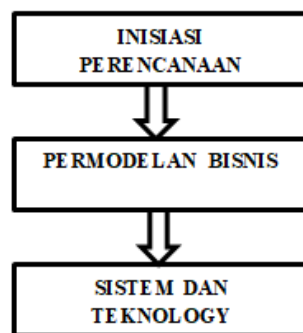


Figure 1. The structure of the stages of the methodology

Following some of the stages that will be carried out to create Enterprise Architecture Planning (EAP) are:

1. Planning Initiation

This stage is a reference in the process of building an architectural model so that it can be directed very well, as a basis for the next step of work. So that this initial stage becomes important because to determine the scope and planning of activities or work plans must be in accordance with the definition of the methodology to be used, the resources involved, and establish what plans will be used. Therefore, this factor becomes complex because it directly affects the resources (personnel, budget, and time) to run the entire process.

2. Business Modeling

The next stage is carried out to compile the basis of knowledge about the business and the information used in carrying out business activities. The purpose of this business modeling is to provide a complete and thorough knowledge base that can be used to define the architecture and its implementation plan

3. Systems and Technologies

The last stage aims to document and define the entire technology platform and systems that will be used by the company today and provide a reference for long-term implementation. Meanwhile, what must be produced in this phase is the company's readiness to use systems and technology so that later it can be in line with the goals of companies that want to use information technology in helping these business activities. So that the creation of business processes with technology uses a data architecture that aims to define the main types of data needed to support business activities. Data architecture consists of data entities, where each data entity has attributes and relationships to other data to run applications, therefore application architecture is needed to manage data and support business functions so that the application definition process can provide data and information management for management of its business functions.

Results

Implementation

The implementation of the Enterprise Architecture Planning design is the last plan to achieve the goal of creating an information system that is prepared to implement an enterprise architecture in MSMEs that focuses on marketing goods and products for enterprise business activities so that they can be monitored. The design of the enterprise architecture that will be implemented is based on the business model that has been previously defined into the application design. The first activity carried out is to arrange a sequence to prioritize the implementation of information

systems based on the pre-designed application architecture. So that the next step that is already known that the enterprise architecture to be implemented is the implementation based on the order of the application architecture that has been designed with several data architectures that have been collected.

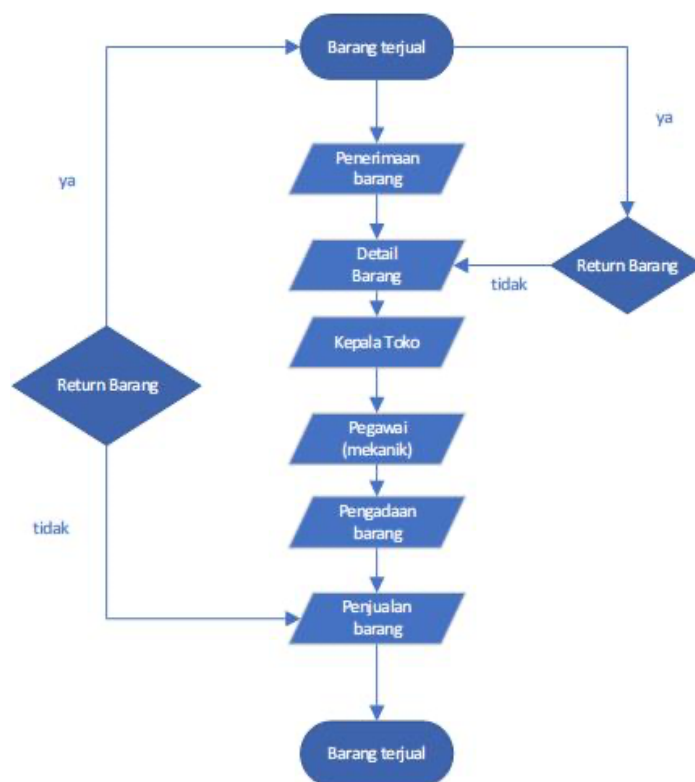


Figure 4. Flowchart of goods management activities

Application Architecture of The Rendering

This activity is an application planning that will be developed including identifying and defining what applications are needed to manage data and support the function of MSMEs that focus on marketing and managing the number of stock of goods. The application candidate is obtained from the relationship of data entities and business processes that are already described in the data architecture process flow.

Table 3. Application architecture design

No	application candidates	legacy related systems	information
1	system admin	web-based applications	stages of development
2	goods management system	web-based applications	stages of development
3	Asset management system	web-based applications	stages of development

eCo-Buss



Figure 5. Flowhart application work design

Technology Architecture

This activity is based on the identification and definition of technological designs needed in the enterprise, then the researcher provides the arrangement of technological needs based on a data architecture that can be managed into an application architecture. So it can be said that technology architecture is a need for instructors who must be designed to support the running of data and applications that will be used by the enterprise.

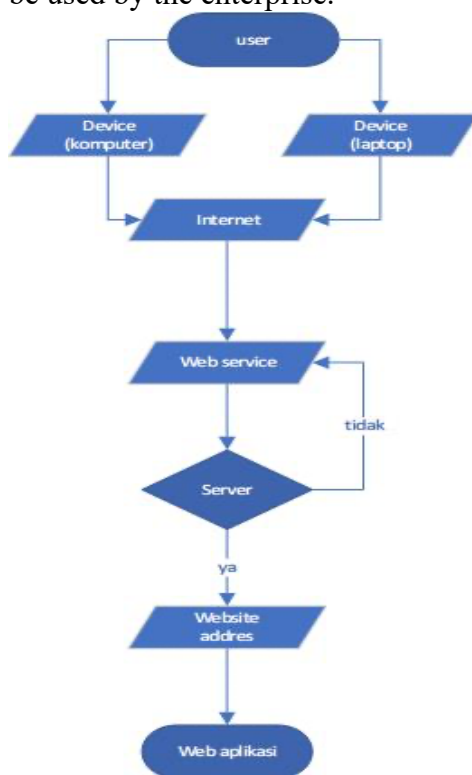


Figure 6. Flowchart Architecture Technology

Analysis of the results of the discussion

Based on the results of the analysis of the application of the MSME product marketing information system by applying the enterprise architecture planning method, it can be concluded that the data used in the preparation process uses complete data through the data collection process, the data collected is then managed to form the core components in the enterprise architecture planning method, in the enterprise architecture planning method, sequential component design stages are needed so that the data can be a necessary information for marketing MSME products.

The readiness of technology and systems has been tried as much as possible to achieve the application of information technology to MSMEs. The system that has been designed can be used for product marketing, managing the number of stock of goods and products, so that the risk of misrepresentation of goods can be minimized. For this reason, it is hoped that the results of this study can help store owners in planning the development of information technology with the enter architecture planning method so that later it can be used in accordance with the purpose of applying the technology.

Conclusion

Based on the stages that have been carried out previously, it can be concluded that the application of the Information System using the Enterprise Architecture Planning methodology designed for MSME actors is useful for helping MSME owners in the process of product marketing, product control and quantity of goods. In addition, MSMEs can make designs for the development of information technology. The enterprise architecture planning method is made with several components that have interconnected stages so that they become a unified whole result. With this research, it is hoped that the next step is the use and application of the application, so that product marketing and stock management of goods can be monitored easily because the procurement of goods has been input into the database which is then raised through a website-based application, so that the inputted goods data is recorded and stored in the database with the correct and appropriate data, whether the goods are entered, outgoing goods, as well as updates to goods assets that will be managed in marketing activities using information technology.

References

- Altas, Mochmad Noval, Lukman Junaedi, dan Mochamad Sulaiman. 2022. "Jurnal Teknologi Sistem Informasi dan Sistem Komputer TGD Desain Arsitektur Sistem Informasi Menggunakan Enterprise Architecture Planning (EAP) Jurnal Teknologi Sistem Informasi dan Sistem Komputer TGD." 5: 193–204.
- Basir, Azhar, Abdul Fadlil, dan Imam Riadi. 2019. "Enterprise Architecture Planning Sistem Informasi Akademik Dengan TOGAF ADM." *J-SAKTI (Jurnal Sains Komputer dan Informatika)* 3(1): 1.
- Fatoni, Fatoni, Edi Supratman, dan Darius Antoni. 2021. "Arsitektur Sistem Informasi Akademik Perguruan Tinggi Swasta Menggunakan EAP." *Jurnal Sisfokom (Sistem Informasi dan Komputer)* 10(1): 59–70.
- Fauzi, Ali, dan Yeffry Handoko. 2018. "Analisa dan Perancangan Model Umum Enterprise Architecture untuk E-Business Usaha Mikro Kecil dan Menengah (UMKM) dengan Menggunakan Framework TOGAF ADM." *Jurnal Tata Kelola dan Kerangka Kerja Teknologi Informasi* 4(1): 1–8.
- Indra, Vivi, dan Lily Puspa Dewi. 2018. "Enterprise Architecture Pada CV . Grande Zangrandi Dengan Metode Enterprise Architecture Planning (EAP)." (121).
- Irviani, Elisabet Yunaeti A dan Rita. 2017. *Pengantar Sistem Informasi*. ed. Erang Risanto.

- Yogyakarta: Andi.
- Marjuki, Andi Saepul, dan Rinda Cahyana. 2022. "Penerapan Framework TOGAF-ADM dalam Perancangan Enterprise Architecture Desa Wisata." *Jurnal Algoritma* 18(2): 503–8.
- Muhamad Muslihudin, Fauzi, Satria Abadi, Trisnawati, Siti Mukodimah. 2021. *Implementasi Konsep Decision Support System & Fuzzy Multiple Attribute Decision Making (Fmadm)*. ed. Citrawati Jatiningrum. Bandung: Penerbit Adab. www.journal.uta45jakarta.ac.id.
- Muhamad Muslihudin, Fauzi, Satria Abadi. 2021. *Metode Desain & Analisis Sistem Informasi Membangun Aplikasi Dengan UML Dan Model Terstruktur*. Yogyakarta: Andi Offset.
- Nugroho, Anton Wahyu, Setiyowati Setiyowati, dan Andriani Kusumaningrum. 2020. "Metode Enterprise Architecture Planning Untuk Merencanakan Sistem Informasi Manajemen Anggaran Perguruan Tinggi Swasta." *Jurnal Ilmiah SINUS* 18(2): 43.
- Rizaldi, Ahmad Fakhri et al. 2020. "Perancangan Enterprise Architecture Yogya Group Pada Fungsi Sales Dan Marketing Menggunakan Togaf Adm Design of Enterprise Architecture Yogya Group Function." 7(2): 7290–97.
- Simamora, Virgo, Muhammad Ulul Albab, Rio Johan Putra, dan Diansyah. 2020. "Pengaruh Digital Marketing Terhadap Daya Saing Pelaku UMKM Kripik Singkong Di Kecamatan Kebon Bawang, Jakarta Utara." *Journal For Business And Entrepreneurship* 4(2): 1–14.
- Supardi, Reno. 2016. "Pengembangan Model Arsitektur Enterprise Sistem Informasi Menggunakan Eap Pada Perguruan Tinggi (Studi Kasus Di Universitas Dehasen Bengkulu)." *Jurnal Media Infotama* 12(1): 70–78.
- Trisminingsih, Rina, dan Solichin Nusa Putra. 2017. "Perancangan Arsitektur Enterprise untuk Koperasi Pertanian Menggunakan Enterprise Architecture Planning." *JSI: Jurnal Sistem Informasi (E-Journal)* 9(1): 1138–48.
- Yosep, Mohamad Arfiman et al. 2021. "Does digital marketing platforms affect business performance? A mini-review approach." *Proceedings of the International Conference on Industrial Engineering and Operations Management*: 4372–86.
- Zaliluddin, Dadan. 2012. "Sistem Informasi Perusahaan Manufaktur (Studi Kasus : CV . Harta Jaya Perusahaan)." *Infotech Journal*: 21–29.