ENTERPRISE ARCHITECTURE PLANNING (EAP) FOR SYSTEM INFORMATION DEVELOPMENT MARKETING DIVISION PT MAHADANA ASTA BERJANGKA

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PT Mahadana Asta Futures is a company engaged in the field of fund management services or alternative trading transactions . PT Mahadana Asta Futures bridge and facilitate for people who want to trade in Jakarta Futures Exchange (BBJ) . PT Mahadana Asta Futures have marketing divisions and there Metatrader information systems . However, not all activities or business activities of the marketing division can be handled only with Metatrader information systems . Metatrader information system has the potential to be developed or built a new system that could be integrated with the old system so that it can generate a dynamic system and can support activities in the marketing division of PT Mahadana Asta Futures . The desire for the development of the system has been sparked by the marketing division and abandoned in the process for planning underdone .

Because of these problems , necessary for the development of information systems require planning to equip the direction of the company's business strategy . Planning is built by defining the architecture of the data , applications and technology in the use of information to support the business process and then designing the architecture for mendeinisi and identify needs and make the architectural scheme and make a plan for implementation. The results of such modeling enterprise architecture planning (blueprint) information systems for data , applications and technologies. Modelling (blueprint) information system is useful as a foundation for the development of information systems as a whole are better in business process company .

The conclusion from building the enterprise architecture planning is the development of information systems need to be done defining and identifying the needs of the information system prior to the implementation or development of information systems . It can anticipate failure or discrepancy implementation of information systems to the needs and the company's business activity .

Keyword : enterprise architecture planning, data architecture, application architecture, technology architecture.

1. INTRODUCTION

PT Mahadana Asta Futures is a company engaged in the service penglolaan funds where the fund will be managed in the Jakarta Futures Exchange (BBJ) or referred to as alternative trading transactions .

PT Mahadana Asta Futures have a marketing department and information systems existing that is Metatrader. However, not all activities or business activities of the marketing division can be handled only with Metatrader information system whose function is limited to the trading system alone . Metatrader information system has the potential to be developed or built a new system that could be integrated with the old system so that it can generate dynamic system and can support activities in the marketing division of PT Mahadana Asta Futures .

The desire for the development of the system has been sparked by the marketing division and abandoned in the process for planning underdone . Lack of planning in the process of developing appropriate information systems would hinder complements the strategic direction of a company . The desire for the development of the system has been sparked by the marketing division and abandoned in the process for planning underdone . Lack of planning in the process of developing appropriate information systems would hinder complements the strategic direction of a company .

PT Mahadana Asta Futures as enterprise implementers need to create a blueprint for the development of information systems as a reference guide and a clear plan for the development of information systems entirely on the company because they want to realize the vision of the company with the support of corporate information systems that are already planned and defined according to business needs.

In this study , the authors used a methodology Enterprise Architecture Planning (EAP), which is the process of defining the architecture in the use of information to support the business and plans to implement the architecture . EAP is stated that the use of the term architecture consists of data architecture, application architecture and technology architecture . Based on the above, the authors give this thesis with the title "Enterprise Architecture

Planning (EAP) for the Development of Information Systems Marketing Division Pt At Mahadana Asta Futures " .

The purpose of this entreprise manufacture of architectural planning is making a careful planning in other words to make enterprise architecture planning (EAP) before building the information system management information system that will be implemented at PT Mahadana Asta Futures . While the objectives to be achieved in this research is to produce arsistektur or enterprise architecture planning (EAP) appropriate information systems for the company .

Boundary problem applied in this study, among other things, that :

1. Business Modeling using the Value Chain and methods compatitive Advantage .
2. Zachman procurement framework using the first three columns are the columns what, how, and where, and the first two lines, namely the perspective of the owner , planner .
3. The data used came from the marketing department, namely the appointment of data, the data submitted by the vehicle and the data analysis market .
4. The resulting architecture data architecture , application architecture and technology architecture .
5. The method of testing the model using the Mann - Whitney .

1.1 *Enterprise Architecture Planning* (EAP)

Enterprise Architecture Planning (EAP) is a process to define the architecture for the use of information in support of business and plans to implement the architecture . There are three pieces of architecture that is referred to in the above definition, the data architecture, application architecture and technology architecture . In EAP, define and describe data architecture, application and technology required to support the business operation, while the implementation plan defines the architecture when implemented[3].

EAP build the two top layers of the Zachman Framework , namely ballpark view and the owner 's view . Zachman Framework is very helpful to put the stages of planning and pad defining a conceptual framework , but the framework does not explain how to define two top layers or how to implement the architecture .

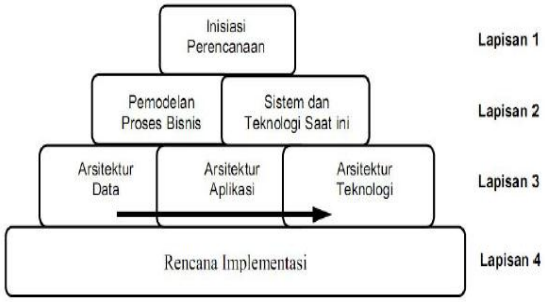


Figure 1 EAP layers

1. Layer 1.

The initiation phase planning is the stage of determining the start of the EAP on the right track , which includes the methodology to be used, who should be involved as well as the toolset used . At this stage produced a workplan for EAP and guarantee the commitment of the organization's management to perform EAP .

2. Layer 2.

Stages of business modeling aims to collect a base knowledge / information yan executing the organization's business activities are complete , comprehensive , and consistent . Business knowledge gathered form the basis for defining enterprise architecture . Documenting the goals of the organization and structure of the organization 's activities are the opening of this stage . Next will be identifikas against business entities and decomposition of functions and business processes .

Tahap Sistem dan teknoloi saat ini bertujuan mencatat keberadaan data, aplikasi, dan *platform* teknologi yang dimiliki oleh organisasi pada saat ini. Catatan tersebut dinamakan Katalog Sumber Daya Informasi (SDI)/ *Information Resource Catalog* (IRC). IRC menjadi dasar dalam pembuatan rencana pengimplementasian SI.

3. Layer 3

Data architecture , which defined the main types of data required to run a business . Data architecture aims at defining the main data types (entity data) required yan organization in doing its business activities .

Application architecture , which defined the major application types dibutuhka to manage the data and support functions of the business is run . The application architecture aimed at defining the applications needed to manage the data in support of the organization's business activities . The word " define" confirmed that at this stage will not be done the analysis and software design in detail .

Architecture technology, which is defined technological foundation needed to provide an environment for applications that manage data

and support functions of the business is run . Architecture technology platform aimed at defining the technologies needed for the implementation of application environments . Defining technology platform is expected to provide a data sharing environment .

4. Layer 4

On the 4th layer , there is a stage plan of implementation or migration plan defined Diman order to implement the application , melakuka timetable for implementation , cost-benefit analysis and plan a clear path for migration of where the organization is today to a desired state .

2 RESEARCH CONTENTS

EAP research conducted by coating or EAP stages which have been described in previous chapters .

2.1 Initiation Planning

At this stage, two things that is :

1. Observation

At this stage, observation or plunge directly into companies where research dilakukan.Terjun directly and become part of the company , the writer can understand the business processes that occur in the company. These observations can also find important facts that can be done background research.

2. Data Collecting

The next phase is the collection of data , where such data directly writers get based on the activities or business activities are performed special employee marketing division of PT Mahadana Asta Futures . The data collected is the data yangd apat appointment , the data submitted by the vehicle , the data market analysis and interviews .

Identifikasi masalah

Based on research , the number of business activities carried on the marketing division of PT Mahadana Asta Futures can not be dealt with only by an information system are in this case is an information system Metatrader .

Metatrader information system has the potential to be developed or built a new system that is integrated with the old system so that it can handle all the business activities and operations of PT Mahadana Asta Futures particularly divis marketing. Besides that, the PT Mahadana asta Futures have a plan for the development of istem information and the plan needs to be done carefully .

To determine the activity and any business activity committed by the marketing division of PT Mahadana Asta Futures , business modeling is done using the value chain as a reference for the construction and development of enterprise architecture

2.2 Analysis of Business Competition

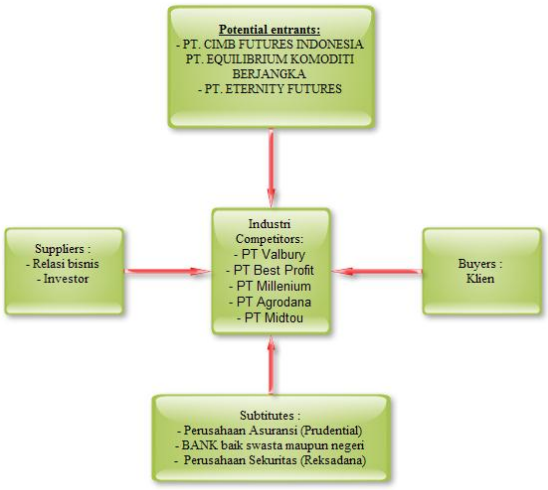


Figure 2 Competitive Advantage

Competitive advantage (kunggulan competing) needs to be analyzed because it will affect the business strategy of a company , therefore it is also necessary to model or framework in order to be an effective business strategy .

1. Industry Competitors

Competitors industries PT Mahadana Asta Futures include PT Valbury , PT Best Profit , PT Millenium , PT Agrodana , PT Midtou considered a competitor because apart brgrak in the same plane , the company has a product that is nearly equal to the PT Mahadana Asta Futures . Besides prusahaan also operate or have a branch office in Bandung .

2. *Potential Entrants*

Newcomers to threaten PT Mahadana Asta Futures are as follows : PT . CIMB Futures Indonesia , PT . Equilibrium Commodity Futures , PT . Eternity Futures . The company is considered to be threatened because the company had a license from BAPPEBTI (Commodity Futures Trading Regulatory Agency) in 2014. In addition, the new company has the potential to open a branch office in Singapore and have the products as well as engaged in the same field with PT Mahadana Asta Futures.

3. *Buyers*

Buyers in this case is better known as the client (user service companies) . Clients can be anyone who wants to trade in the field of alternative trading where the client is not defective in the eyes of the law and without coercion in cooperation with PT Mahadana Asta Futures .

4. *Subtitutes*

Alternnatif product or a replacement product that is owned by the Insurance Company (Prudential) , BANK whether private or public, the Securities Company (Mutual Funds) can threaten PT Mahadana Asta Futures . All three of the industry can be an alternative for the industry's products offer different products but still equally involved in the world of finance in particular the management of funds .

5. *Suppliers*

Furthermore, we will discuss about the Suppliers (Suppliers) . PT Mahadana Asta Futures is a company engaged in the field of fund management services which require companies to conduct their clients or customers for managed funds , therefore PT Mahadana Asta Futures require data suppliers potential clients that have the potential for cooperation and investors .

2.3 Bussiness Modelling

Business modeling is to define a specific business model that is based on reality. Modeling is important because it is associated with the representation of the definition of a business that will be involved in the Development EAP (Enterprise Architecture Planning) .

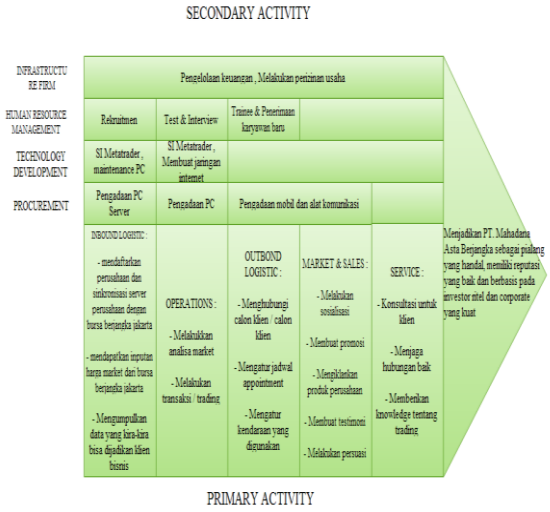


Figure 3 Value Chain Marketing Division

1. Inbound Logistic, The main activities related to the initial input PT Mahadana Asta Futures bisnsinya functions to run and how to get raw materials in running the business , not just the inbound logistics also contains licensing business start-ups
2. Operations is a major activity associated with the process of the ultimate goal or vision of the founding mission of PT Mahadana Asta Futures is bridging clients or people who want to trade in the alternative trading
3. Outbound logistics is a major activity related to the final output (result) of inputs yag been processed , in this case how to get the final output can be touched by the consumer or client . However, because PT Mahadana Asta Futures is a company engaged in the field of financial services , the final product being output is a client or customer in cooperation with PT Mahadana Asta Futures.
4. Marketing & Sales is a major activity associated with the market and the company's sales . Affectively do activities that can sell and market your products or services of the company .
5. Service is a major activity associated with any service in the company and then given to the client.

2.4 Bussiness Process Analysis

Business process analysis is done by using the Business Process Modeling and Notation (BPMN) which has been standardized by the Business Process Management Initiative (BPMI)

In business process modeling is based on the value chain that has been modeled on the main activity , especially business modeling because it is the main activity of the value chain is a key business functions played by the marketing department

1. Procedure relating to inbound logistics . The business process is the first step of processing raw materials in doing business . However, because PT Mahadana engaged in financial services , in particular the management of funds , the raw material used is not physically in the form of raw materials such as manufacturing and others

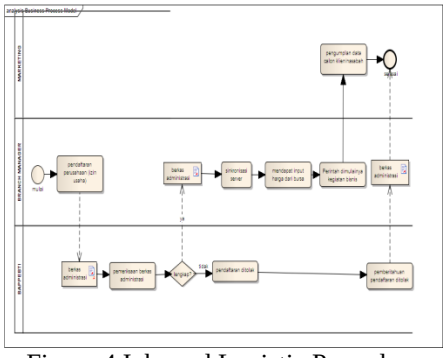


Figure 4 Inbound Logistic Procedure

2. The procedures relating to operations (transactions or trading) . Business process transactions or trading is a key business processes of the company for PT Mahadana Asta Futures is perushaaan financial management services in the alternative trading .

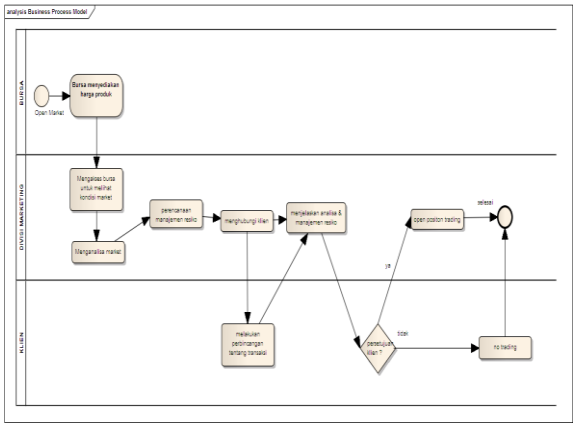


Figure 5 Operations Procedure

3. The procedure associated with outbound logistic appointment or socialization . This business process is the process of how the marketing department to introduce and distribute the company's products in the form of alternative trade services by way of appointment to clients and prospective clients .

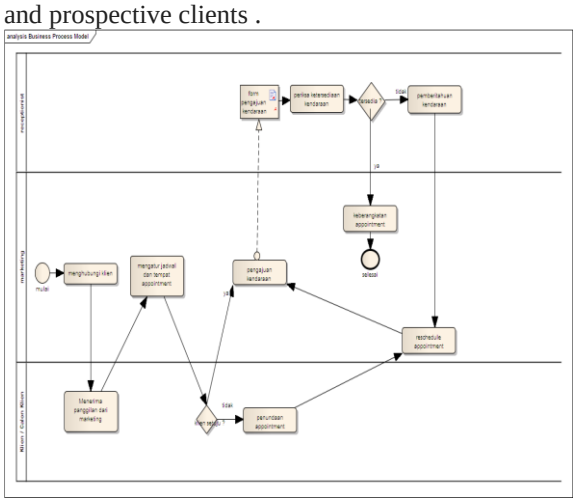


Figure 6 Outbound Logistic

4. Procedures relating to sales and market . This procedure illustrates how the process of socializing the trade altrnatif to the public .

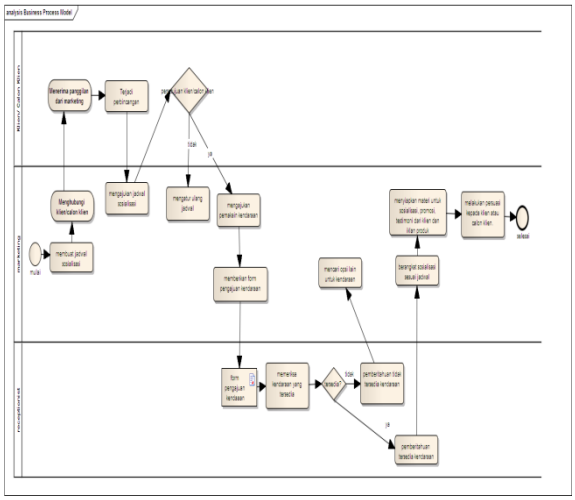


Figure 7 Sales and Market Procedure

5. The procedures relating to service . This section highlights the activities of any Yag made at the time of marketing in the service to the client or customer .

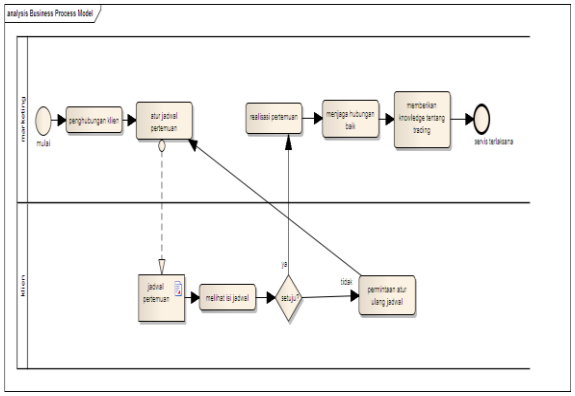


Figure 8 Service Procedure

2.5 Current System and Technology

The system architecture and technology PT Mahadana Asta Futures is an important part of the analysis of the current condition of the enterprise . Documentation of a catalog of information resources or the Information Resource Catalog (IRC) conducted by megidentifikasi any applications that already exist in the division markting PT Mahadana Asta Futures .

From the results of the identification, there is one system that has been used in the marketing division of PT Mahadana Asta Futures is that MetaTrader . This system is used for the activity of alternative trading transactions every time .

Tabel 1 Matrix Mapping Legacy Application with Key Business Functions

Table 1 Matrix Mapping Legacy Application with Key Business Functions

LEGACY APPLICVATION	METATRADER
BUSSINESS FUNCTION	
Registration of companies & enterprises with exchange server synchronization	
Getting input from the stock market price	✔
Data collection potential clients market analysis	
Market analysis	✔
Trading	✔
Call the client	
Appointment schedule arrangement	
Vehicle arrangement	
Bussiness socialitation	
Promotion	
Product Advertising	
Client Testimonials	
Client perusuasiveness	
Bussiness client consultation	
Keep in touch with cliet	
Knowledge training	

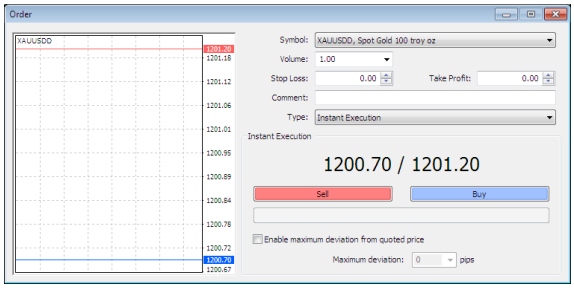


Figure 9 Functionality Display Transaction

Aplikasi			Hardware					Software		
			penggunaan		penyimpanan data	output	input			
Nama Aplikasi	Lokasi	Jenis	batch	onine				sistem operasi	sequrity	perangkat lunak
Metatrader	Perangkat PC diruang marketing	PC Pentium 3 atau sejenis	v		PC di ruang marketing	file, printout	manual	Windows	Password	-

Figure 10 Matrix Mapping circuitry Legacy Applications Platform Technology

2.6 Data Architecture

Data architecture aims at defining the main types of data (data entities) required the organization in doing its business activities . This data architecture is the result of the implementation of the column what the Zachman Framework .

1. Data Entity

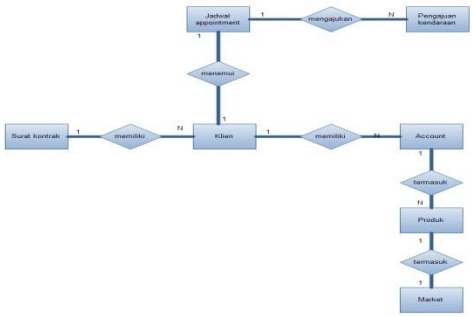
In this section determines a list of all entities that are known at PT Mahadana Asta Futures . Data entity is an implementation of a planner 's perspective what column (scope) . Entity Data obtained from business entities that have created business processes or procedures in this study refers to the business processes modeled with BPMN tools.

Table 2 Data Entity

BUSSINESS PROCEDURE	NEEDED ENTITTY
INBOUND LOGISTIC: register the company to obtain an operating license from BAPPERBTI (Supervisory Board and the Commodity Futures Trading) , sinkronissi enterprise server , gets input from the stock price , and collect data to prospective clients.	Produk
	Market
OPERATIONS : analyzing the market and make transactions (trading)	Klien
	Rule kerjasama
	Produk
	Account
	Market
OUTBOUND LOGISTIC : contacting clients or customers , schedule appointments , submit the vehicle to be digu nThis as transportation .	Klien
	Jadwal appointment
	Pengajuan kendaraan
	Jadwal agreement
MARKET & SALES : dissemination, promotion , advertise the company's products , making testimonials from clients or customers and persuasion	Klien
	Jadwal appointment
	Pengajuan kendaraan
	Produk
SERVICE : consulting for clients or customers , to maintain good relationships with their clients or customers and provide knowledge about trading for customers	Klien
	Jadwal appointment
	Pengajuan kendaraan
	Surat kontrak kerjasama
	Rule kerjasama
	Account
WHOLE DATA ENTITY	
Klien	
Jadwal appointment	
Pengajuan kendaraan	
Surat kontrak kerjasama	
Produk	
Account	
Market	

2. Entity Relation

In this part of the entities that have been identified in the above process and then made the relationship between the entity. Relations between enttas is an implementation of what columns perspective owner (enterprise model) .



Gambar 1 Hubungan Antar Entitas

3. Entity Atribut

An entity must contain attributes that always clung to him because of the presence of the attributes of an entity to be more detailed and granular identity.

Table 3 Entity Atribut

NO	Entitas	Deskripsi	Atribut
1	Klien	Persons or parties plan to target companies	Email
			Nama Klien
			Alamat Klien
			Nomor Kontak
			Jenis Kelamin
2	Jadwal *Appointment*	The composition of the activities carried out when and where meetings with clients / prospective clients	Tanggal
			Waktu
			Nama Marketing
			Nama Tim
			Status Appointment
			Klien yang dituju
			Supir
			Status Kendaraan
3	Pengajuan Kendaraan	How to use a company vehicle for business purposes	Tanggal
			Waktu
			Nama Marketing
			Nama Tim
			Supir
			Nomor Polisi Kendaraan
4	Surat Kontrak Kerjasama	Documents containing about consent and agreement for cooperation.	Nomor Surat
			Nama file
5	Produk	Objects or services that serve as the sale and purchase of materials or the company's business activities	Nama Produk
			Varian
			Deskripsi
6	Account	Account	Nomor Account
			Atas Nama
			Tanggal Pembukaan Account
			Deposit Awal
			Status
			Jenis Transaksi
			Trader
			Perjanjian kerjasama
			Jenis Report
			Email pemilik
7	Market	Container or the place of purchase	Tanggal
			Open price
			High price
			Low price
			Close

			Price
			Range price

4. Matriks pemetaan antara entitas data dengan fungsi atau aktivitas bisnis utama.

The last stage in the phase data architecture is to connect entities with key business functions . Mapping is done for all major business functions that have been modeled on the business modeling phase .

Table 4 Entity Mapping Data with Function or Main Business Activities

Entitas Data	Produk	Jadwal appointment	Pengajuan kendaraan	Account	Klien	Surat kontrak kerjasama	Market
Fungsi Bisnis							
Pendaftaran perusahaan & sinkronisasi server perusahaan dengan bursa	CUR						C
Mendapatkan inputan harga market dari bursa	R			R	R		R
Pengumpulan data calon klien		CUR	UR		R		
Analisa market	UR			UR			R
Transaksi (Trading)	R			R	R		R
Penghubungan klien		UR	UR		UR	UR	
Pengaturan jadwal appointment		UR	UR		UR	UR	
Pengaturan kendaraan yang akan digunakan			CUR				
Sosialisasi bisnis		UR	UR		UR	UR	
Promosi	R	UR	UR		UR	UR	
Pengiklanan produk	R	R	R		R		
Testimoni klien	R			R	R	R	R
Persuasisasi klien	UR			CUR	C	C	R
Konsultasi bisnis klien	R	UR	UR	R	R	R	R
Penjagaan hubungan dengan klien	R	UR	UR	R	UR		R
Pemberian knowledge tentang trading	R	UR	UR	R	R		R
Keterangan	cur=1	cur=1	cur=1	cur=1	cur=1	Cur=0	cur=0
	ur=2	ur=7	ur=8	ur=1	ur=5	ur4	ur=0
	r=8	r=1	r=1	r=6	r=7	r=2	r=8

2.7 Arsitektur Aplikasi

In this phase, aims to define the kinds of major applications required to process the data and supporting enterprise business functions . The application architecture is an implementation of the columns how the Zachman Framework . The application architecture is not a system design or analysis of system requirements , but it is a defining applications needed to manage data and provide information to business users .

1. Candidates Application List

Once the business functions and data architecture defined hereinafter is the stage of defining a candidate application is a boost of business functions need to manage the data that is defined in the application architecture . The candidate list of applications is the implementation of a planner 's perspective how the column . Candidate applications can be obtained by reviewing the Information Resource Catalog (IRC) .

Table 5 Application Candidates

KANDIDAT APLIKASI	DESKRIPSI APLIKASI
Customer Relationship Management System	Sistem yang berguna untuk mengatur dan mengelola hubungan hubungan antara divisi marketing dengan klien
Meeting Management System	Sistem yang berguna untuk mengelola dan mengatur pertemuan bisnis antar divisi marketing dengan klien atau calon klien
Knowledge Management System	Sistem yang berguna untuk mengelola dan mengatur sharing informasi dan pengetahuan tentang marketing dan trading

2. Seleksi aplikasi

The next step is the manufacture of matrix mapping between the candidates with the application data entities precedence . The purpose of the data entities that take precedence are the cells in the matrix mapping data entities to business functions that have been defined on the architecture of the data , then the next step is to prioritize the cells that are more contained " CUR " , then cells " UR " , and cells " R " as a last priority . Priority of an underlying critical applications used to support business processes or functions in generating the data .

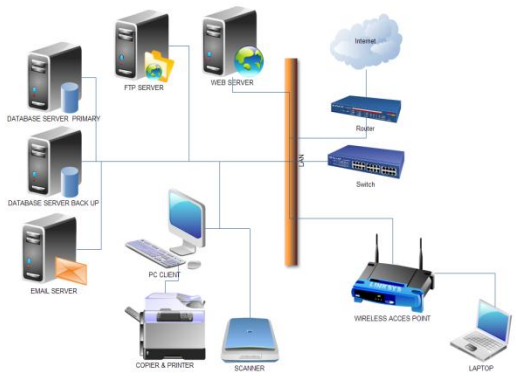
Table 6 Entity Mapping Data with Candidate Application

Entitas Data	Produk	Jadwal appointment	Pengajuan kendaraan	Account	Klien	Surat kontrak kerjasama	Market
Kandidat Aplikasi							
Customer Relationship Management System		✔	✔	✔	✔	✔	
Meeting Management System		✔	✔	✔	✔	✔	✔
Knowledge Management System	✔	✔					✔

1. Technology Platform Configuration

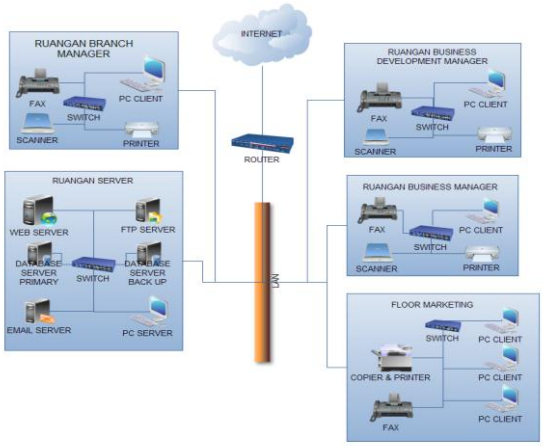
Activities undertaken at this stage aims to define the configuration of the technology platform on a conceptual level , making it independent of the actual selection (vendor / brand) of hardware, software , communication service used . Configuration technology platform is the implementation of the column where the perspective of a business owner because it contains the location of conceptually . EAP defines the configuration of the technology platform which includes three conceptual level technology architecture that is:

a. Conceptual workstation , the facilities used by the user to access data and applications.



Gambar 2 Konseptual *Workstation*

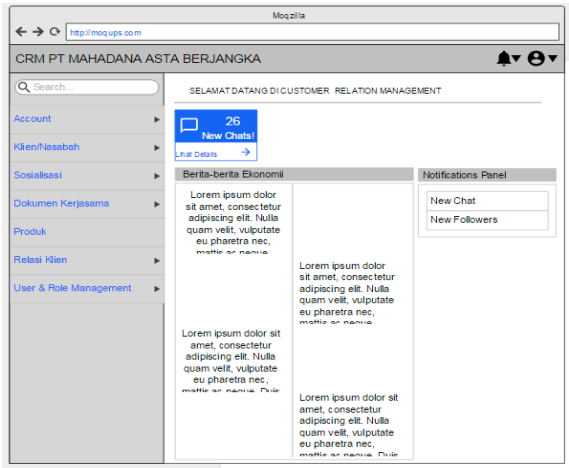
b. *Conceptual enterprise network*, describes the relationship between computing components in the system design . Computing components include computing devices , I / O devices , storage devices , and telecommunications facilities . Conceptual enterprise network , describes the relationship between computing components in the system design. Computing components include computing devices , I / O devices , storage devices , and telecommunications facilities .



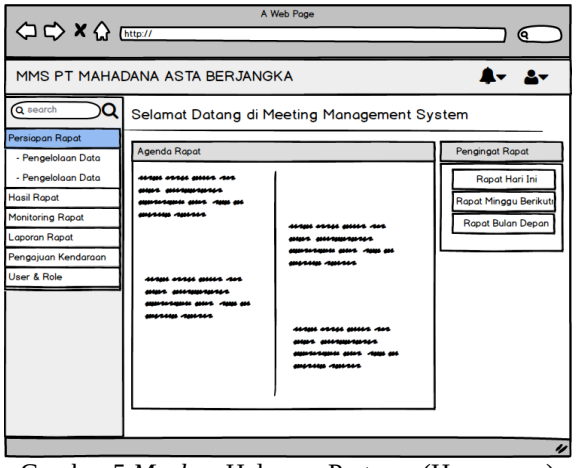
Gambar 3 Konseptual *Network*

2.8 Recomendation EAP of System Information Development

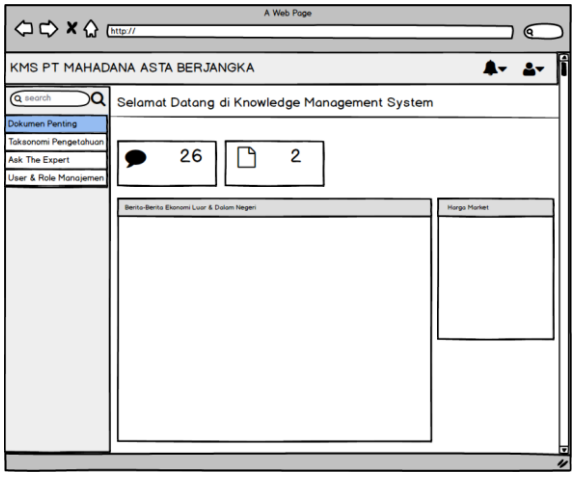
Pada sub-bab ini akan membahas tentang simpulan rekomendasi *enterprise architecture planning* yang telah dirancang pada sub-bab sebelumnya. Rekomendasi EAP berupa *mock up* dan *prototype* dan sistem informasi.



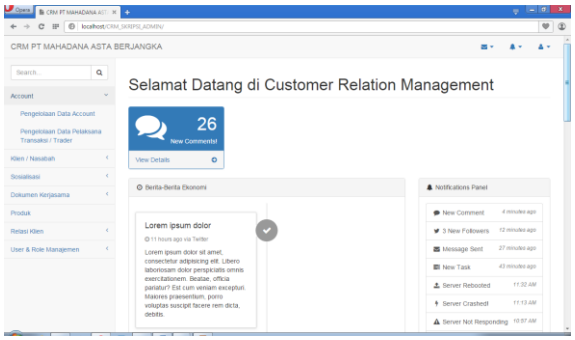
Gambar 4 *Mockup* Halaman Awal sistem CRM (*Homepage* CRM)



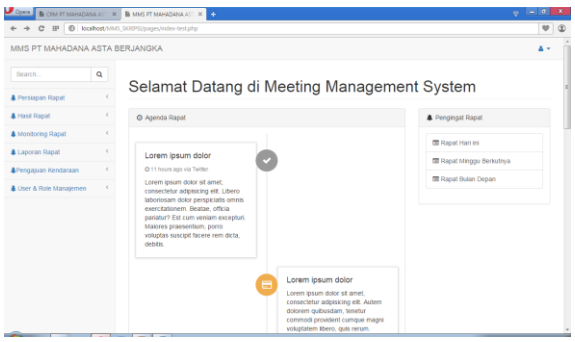
Gambar 5 *Mockup* Halaman Pertama (Homepage) MMS



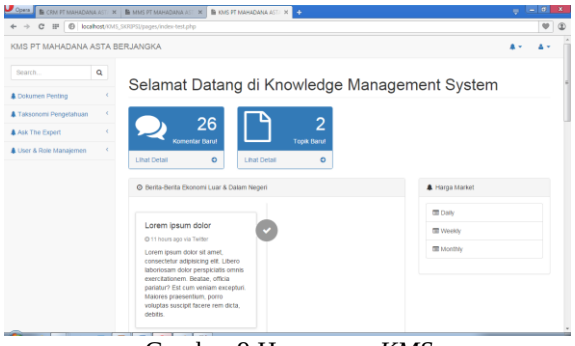
Gambar 6 *Mockup* Homepage KMS



Gambar 7 *Prototype* Halaman Awal sistem CRM (Homepage CRM)



Gambar 8 *Prototype* Halaman Pertama (Homepage) MMS



Gambar 9 Homepage *KMS*

2.9 Quisonaire and Sample

In this sub - chapter will discuss about the things to do in determining the sample , sampling and manufacturing questionnaire. Things to design questionnaires , pettanyaan factor questionnaire , and the recapitulation of the questionnaire.

1. Quisionaire Design

Questionnaires distributed to the marketing division of PT Mahadana Asta Futures . Respondents in the questionnaire is the marketing division of PT Mahadana Asta Futures which is divided into two groups widened the ranks of management and non - management . In this study, the management group will be denoted by the symbol n2 and non- management groups will be denoted by n1 as n1 symbol should have a number of more than n2 . Each question provided the answer option that each answer has a weight or value has been determined as follows:

a. Answer “ya (y)” has value 4.
b. Answer “tidak (t)” has value 3.
c. Answer “tidak yakin (ty)” has value 2.
d. Answer “tidak tahu (tt)” has value 1.

2. Quisionaire Questions Factor

Questions in the questionnaire to discuss the results of the Enterprise Architecture Planning is divided into four parts:

a. Bussiness Activity

Questions in this section broadly relate to the activities and business processes that do the marketing division of PT Mahadana Asta Futures and specifically discusses the results of an architectural model that has been planned and designed based on business needs PT Mahadana Asta Futures .

b. Data Requirements

Question questionnaire in this section broadly relate to the needs of any data that is used by the marketing division of PT Mahadana Asta Futures . Then directed to the question that discusses the results of the planning and architectural design data.

c. Application Requirements

Question questionnaire This section discusses an idea of what kind of system already exists in the marketing division of PT Mahadana Asta Futures then the question leads to models of application architecture that has been planned .

d. Technology Requirements

This section discusses the question questionnaire about what technology is already used by the marketing division of PT Mahadana Asta Futures followed by questions that discuss models of architectural planning technology.

The results of the questionnaire in the form of scores will be processed statistically using Mann Whitney statistical methods . Mann Whitney statistical method chosen to process the questionnaire because :

a. In populations marketing division, there are two different groups , namely the management and non- management . Two different groups will see the difference whether the results of the architecture in accordance with the business needs of both groups or not .
b. The population of the marketing division of PT Mahadana Asta Futures according to the number of terms n defined in Mann Whitney statistical method that is n < = 20 (small sample) for both management and non- management groups .
c. Mann Whitney statistical method is non - parametric statistical methods . This is consistent with the data results of this questionnaire , which does not need to be tested normality so memudahan in the calculation process .

3. Determination Sample

Determination of samples used in the study carried out by quota sampling technique sampling and sample saturated . Quota sampling was used because the samples must meet predetermined ration is at least 30 samples later in kerucutkan to 31 samples . Saturated sample used for respondents who exist on the PT Mahadana Asta Futures only range of approximately 30 respondents in this case are likely in small quantities , and the variables used is score questionnaire and groups. The results of the questionnaire score us can see the discussion of the recapitulation of the questionnaire .

4. Quisionaire Recapitulation.

Recapitulation of the questionnaire is the result of data processing which then becomes material to be incorporated into the system (testing tools) that have been created specifically for this study .

5. The validity and reliability Questionnaire Questions

Validity and reliability testing is used to evaluate the questions that measure the construct or factor in a questionnaire study . If there are questions that do not pass the test the validity of the questions could be deleted or corrected his grammar to pass the validity test .

Tabel 7 Hasil Uji Validitas

NO	PERTANYAAN	HASIL HITUNG	KETERANGAN
1	ab11	0.506	VALID
2	ab12	0.664	VALID
3	ab14	0.484	VALID
4	ab16	0.385	VALID
5	ab17	0.561	VALID
6	ab18	0.604	VALID
7	ab19	0.506	VALID
8	ab20	0.506	VALID
9	ab34	0.434	VALID
10	ab36	0.385	VALID
11	ab37	0.601	VALID
12	ab38	0.65	VALID
13	ab39	0.543	VALID
14	ab40	0.669	VALID
15	ab41	0.589	VALID
16	ab42	0.303	VALID
17	ab43	0.608	VALID
18	ab44	0.717	VALID
19	ab45	0.655	VALID
20	ab46	0.531	VALID
21	ab47	0.607	VALID
22	ab48	0.647	VALID
23	ab50	0.452	VALID
24	ab52	0.667	VALID
25	ab53	0.506	VALID
26	ab54	0.53	VALID
27	ab56	0.385	VALID
28	ab60	0.425	VALID
29	ab62	0.432	VALID
30	ab64	0.385	VALID
31	kd1	0.821	VALID
32	kd2	0.513	VALID
33	kd3	0.528	VALID
34	kt2	0.672	VALID
35	kt3	0.558	VALID
36	kt5	0.403	VALID
37	kt8	0.644	VALID
38	kt9	0.552	VALID
39	kt10	0.662	VALID
40	kt11	0.551	VALID
41	kt12	0.491	VALID
42	kt14	0.404	VALID
43	total	1	VALID

Tabel 8 Hasil Uji Reliabilitas

Cronbach's Alpha	N of Items
.736	43

The calculated value of reliability (Cronbach 's Alpha) on the study questionnaire was 0.736 , where the calculated value of reliability (Cronbach 's Alpha) is greater than the value of r - table is 0.300 then the question questionnaire in this study was trustworthy .

2.10 Architecture Testiong Using SPSS

Tests using SPSS enterprise architecture planning carried out by means of input data results of questionnaires that have been processed . Enterprise architecture planning on testing it using two variables, categories and score questionnaire . Category is represented by the number " 1 " and " 2 " , which means the number "1 " for non - management category and the number " 2 " for category management. Once processed using SPSS tools it will show the results of the calculation :

Tabel 9 Hasil pengujian enterprise architecture planning (1)

Kategori		N	Mean Rank	Sum of Ranks
SkorKuisioner	1.00	20	13.13	262.50
	2.00	11	21.23	233.50
	Total	31		

Tabel 10 Hasil pengujian enterprise architecture planning (2)

	SkorKuisioner
Mann-Whitney U	52.500
Wilcoxon W	262.500
Z	-2.378
Asymp. Sig. (2-tailed)	.017
Exact Sig. [2*(1-tailed Sig.)]	.016[b]

a. Grouping Variable: Kategori

b. Not corrected for ties.

The final results of testing enterprise architecture planning , where the value of statistical test results seen from the Z value of -2378 . Then the Z value is compared with an alpha value of 0.5 . If the value is smaller Z statistic is equal to the value of alpha (0,5) , then reject H0 and accept hipotesin hipotesin H1 .

In this study it was determined that H0 is " EAP is not in accordance with business needs and business processes across the marketing division (in part) " . Fill the hypothesis H1 is " EAP in accordance with business needs and business processes across the marketing division (MNJ & non - MNJ) " .

Determination of the contents of H0 and H1 is based on research on the significance level keecenderungan poenelitian object . H0 for the tendency of small significance levels or no influence on the research object . H1 is the hypothesis that the

level of significance tend to be stronger or give effect to the object of research .

In this study the most accepted hypothesis is the hypothesis H1 as the Z value is smaller than the value of alpha (0,5) . Alpha is the error value that aims to tolerate errors in the calculation of the test , while the Z value is the value of comparison using the Mann - Whitney .

2.11 Test Result Analysis

Before you build and implement the system , it is necessary path to make the design a database that will be used on the system. It can refer to the data entities that have been defined on the data architecture . Then do the design logic of the system (interface and code) and technologies that can support the system .

Technically the construction of the system can be started with the construction of a database with everything that can support and accommodate a variety of data used and required by the marketing division of PT Mahadana Asta Futures .

Tabel 11 Urutan Pengerjaan Sistem

URUTAN PENGERJAAN	APLIKASI	ALASAN
1	Customer Relationship Management System	− Can handle data entities appointment schedule , Submission of the vehicle , and Client Account
		− Managing client datra so organized −Place research is financial companies that manage client capital
2	Meeting Management System	− Can handle data entities appointment schedule , Submission of the vehicle , and Client Account
		− It takes coordination and strategy in running a business and should be held tightly
		− Used to help make decisions while trading in the stock exchange
4	Knowledge Management System	− Products can only handle entities and schedule appointments
		− Collect and facilitate the exchange of information and insight into marketing division of PT Mahadana Asta Futures

3 Closure

3.1 Conclusion

Based on observations , Pengujan validity and reliability of the questionnaire as well as testing of the enterprise architecture planning for the marketing division of PT. Mahadana Asta Futures done in chapter 4 , it can be concluded that the enterprise architecture planning and activities in accordance with business needs marketing division of PT . Mahadana Asta Futures basin management or non - management , it is the acceptance of the hypothesis H1 is " EAP in accordance with business needs and business processes across the marketing division (MNJ & non - MNJ) " and the rejection of H0 is " EAP is not in accordance with business requirements and processes the whole business of the marketing division (part) . " , with the understanding :

1. Architecture of data that has been made in this study are in accordance with the data requirements and data used in the marketing division of PT Mahadana Asta Futures so that the data can be used efficiently and effectively in accordance with the business activities of the marketing division of PT Mahadana Asta Futures.
2. The application architecture that has been made in this study are in accordance with the needs of the application and in accordance with the daily tasks of the marketing division of PT Mahadana Asta Futures so as to facilitate the task or business needs marketing division of PT Mahadana Asta Futures .
3. Architecture technology have been made in this study are in accordance with the needs of technology and business needs of the marketing division of PT Mahadana Asta Futures in order to support the ongoing activities of business marketing division of PT Mahadana Asta Futures maximum.

3.2 Advice

In this study, there are some drawbacks that the future may be improved or enhanced . These deficiencies will be input or advice if further research . Here is a suggestion to this research :

1. Enterprise architecture planning will be created , made better as a whole not only for the marketing division of PT Mahadana Asta Futures .

2. The question questionnaire that quite a lot , better designed and made in an amount not too much .
3. In this research, tools or static testing applications that can only be used by a number of samples and the alpha value has been specified. It would be better if the tools or applications are dynamic testing .

4 BIBLIOGRAPHY

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