

MOBILE APPLICATION FOR CUSTOMER RELATIONSHIP MANAGEMENT OF PT PLN (PERSERO), CASE STUDY INFO PLN APP FOR ANDROID AND IOS OPERATING SYSTEM

Henri Firdaus¹, Lainy Mummaiza², Desi Ayuningtyas³

¹ PT PLN (Persero) Wilayah Aceh, Banda Aceh, henri@pln.co.id

² PT PLN (Persero) Wilayah Aceh, Banda Aceh, lainy.mummaiza@pln.co.id,

³ PT PLN (Persero) Wilayah Aceh, Indonesia, desi.ayu@pln.co.id

Abstract: Responding to the challenges of the company's performance and Information technology is increasingly require a willingness and tenacity, PT PLN (Persero) as one of the leading state-owned electricity company in Indonesia must be able to balance those two things with breakthrough innovation. The current era of information is very important and we must also recognize that the employees and customers of PT PLN (Persero) is spread all around Indonesia where not all information can be easily get. A major step forward has been made by PT PLN (Persero) Distribution of Jakarta and Tangerang since in June 2011 to the present is the development of applications for mobile devices / smartphones that support most of the devices are in demand in Indonesia for its needs. Currently that can be used by the entire employee of PT PLN (Persero) as well as our customer is the mobile application named Info PLN. It's an application based mobile application using the internet in a smart phone (Android, i-OS / i-Phone & i-Pad) that is developed by employees of PT PLN (Persero) to customer for free. With as many as 200.000 active user, Info PLN is a reliable application especially in accessing customer information and features such as online new instalation, power upgrades and also customer complains. The benefits for customers are faster that accessing the corporate website up to 30%, accelerating information access time by 50%, saving the cost of the phone to the call center and also as an online marketing tools.

Keywords: *Customer information, PLN, Mobile, Smartphone, Application*

1. INTRODUCTION

Facing the progress of information technology and customer needs to face the challenges of the company's performance and answer urgently need willpower and tenacity, PT PLN (Persero) as one of the leading state-owned enterprises in Indonesia must be able to balance those two things with breakthrough innovations. The current era of information in mobile handheld is very important and we must also recognize that employees and customers of PT PLN (Persero) is spread from Sabang to Merauke where not all information can be quickly up without using internet and mobile devices.

Technology evolves at a rate much quicker than most of us can keep pace with. Right now we are in the era of mobile applications. Here are three ways to capture the interest of your app happy customers. Can you remember when you got your first Bag Cellular Phone or first Pager? Technology at its best. Business was no longer confined to the physical office; we could take calls or get messages on the road. It was all about being informed and being accessible. No one really thought about it as a way to drive the marketing potential of their company. Over the next few years, technology took off like a rocket, heading for the stars and leaving a trail of ever-evolving devises in its wake. Flip phones, PDAs, two-way pagers and BlackBerry's were everywhere, increasing our ability to communicate, to conduct business. But business-to-business or business-to-consumer interactions were still limited to voice, text and email.

In entering The Era of Apps, Innovation meets creativity, and the Era of Apps is born. Blackberry devices get smarter with online calendars, web browsing, and business related applications such as file viewers and the ability to play media files. The term “crack berry” was established; everywhere, business men and women were on their phones, writing emails, sending txt messages, surfing the web; they were addicted. Other “smart phones” were introduced, and competition was driven by the techno-addicted population to see and do more. The iPhone, the wonder device that does it all, was introduced, and Apple led the charge on true customer interaction. Applications were created, games and media applications were abundant, and finally, companies have avenue to reach the masses with interactive programs. Other devices including Palm and Android hit the market with their own platforms and applications to entice the population. Insurance companies now enable their clients to submit claims, check statuses, find repair shots and pay their premiums from their mobile devices. Banks allow their users to make deposits, check account activities, pay bills and view transactions from their mobile devices. Retail stores allow shoppers to find coupons, see deals local to the user via GPS and prepare shopping lists from their mobile devices. The Technology rocket has traveled a long way in a short time, but the final destination hasn't been reached, let alone defined yet. It seems everyone has a device that keeps them connected to the world around them. Schools (even elementary schools) have to establish rules of conduct for when and how children will use their phones and pads; movie theaters have to remind us to turn the devices off just to watch a movie. Everywhere you look, people have a device in hand and are more interested in the virtual world than what is happening in the real world around them. It seems that news isn't valid unless it comes across a phone or pad.

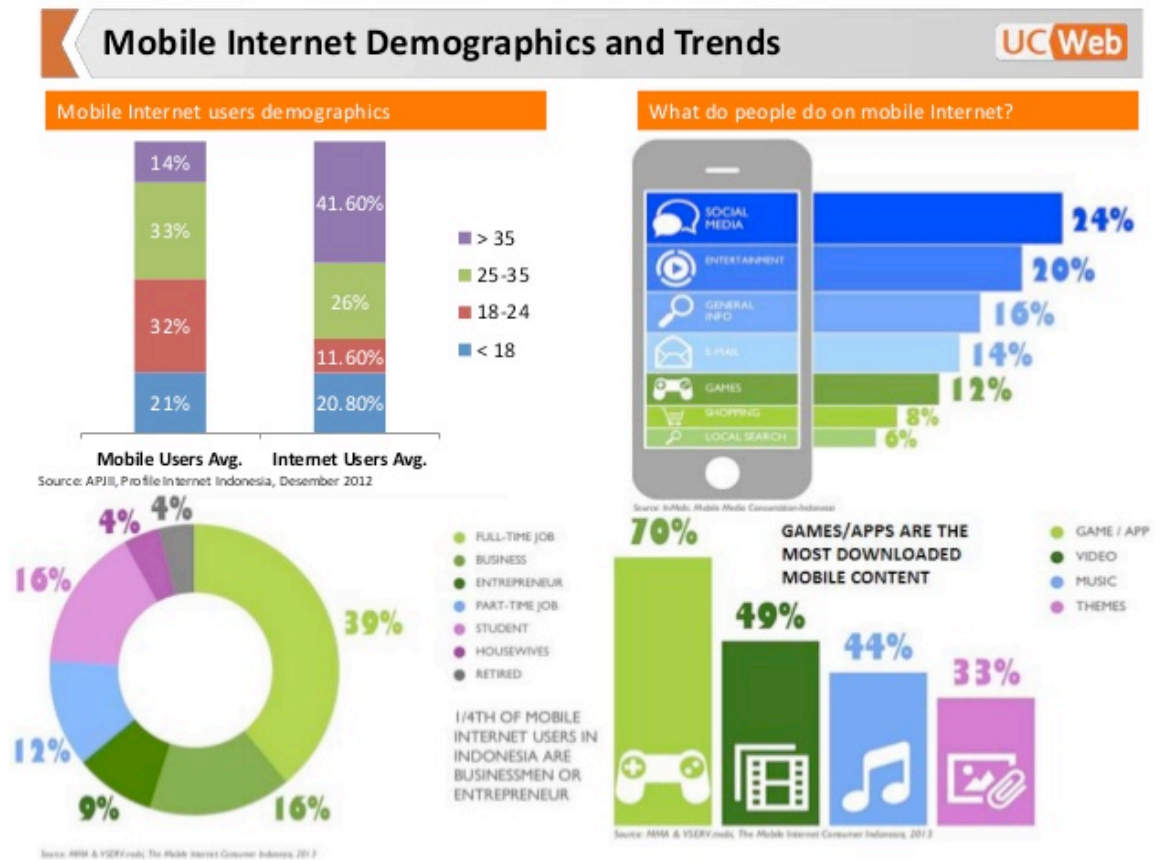


Figure 1 2014 mobile internet demographic and trends in Indonesia

Looking back potential customers who use the Internet in Indonesia at the end of 2011 reached 55 million users (Survey APJII and Internet World Stats) states that there is an opportunity for PT PLN (Persero) to better provide its public service facilities via the Internet and 50% of the users already switch to mobile devices, namely smartphones, tablet PC and notebook.

A major step forward has been made by the PLN independently without the help of a third party / vendor since the month of September 2011 to the present is the development of applications for mobile devices / smartphones that supports most of the devices are in demand in Indonesia for PLN needs. Current that can be used by the entire Employee PT PLN (Persero) and also our customers is through the PLN Self Service Technology and mobile application development of Info PLN designed for Smartphones / Tablet based on Android OS, i-OS and Windows Phone. Several commercial companies already exist that utilize this mobile application but for State-Owned Enterprises and the Company's Electricity Sector Customer Service in this new world that the PLN develop applications that innovation is original. The main purpose of this application development Info PLN is to present information that is necessary customer service and targeted to customers of electricity, the general public, to investors to employees of PT PLN (Persero) that are likely to satisfy the customer and keep the image of PT PLN (Persero) community through media widely used, innovative, interesting, simple but make a big impact.

- Applications developed to shorten and speed up access to corporate information website of PT PLN (Persero), PLN's news on news portal website, Facebook and Twitter Corporate Communications PLN.
- Application serves to present information in a simple online PLN services dynamically sought and needed by the customer prior to entering into more detailed information.
- User applications are customers of electricity customers power company PT PLN (Persero), the general public, to investors to employees of PT PLN (Persero)

2. THEORETICAL BACKGROUND

In 2011 we decided to use the cross platform mobile development method in order to penetrate the all of PLN Customer that using smartphone at that time the operating system consist from Android, iOS, Nokia Symbian, Windows Phone and Blackberry. That's why the cross platform mobile development is chosen. The concept of the development of this application is the uniform design template, accessing the same data but used by different mobile devices using Software Development Kit (SDK) cross platform programming making it easier to equate the content and speed up the process of updating.

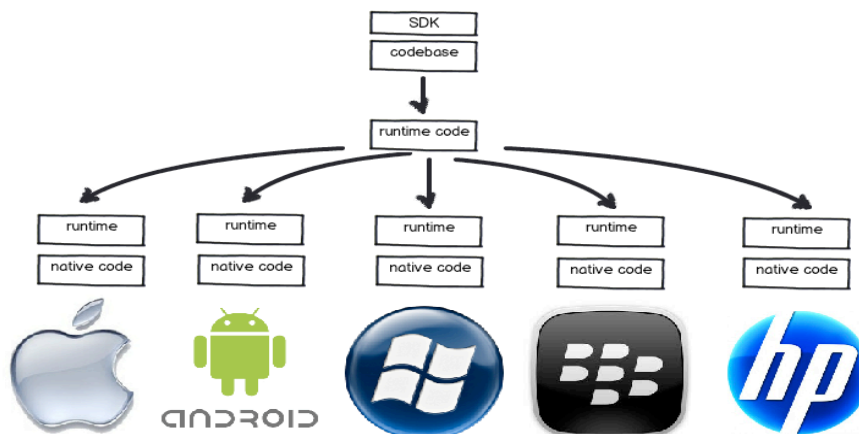


Figure 2 cross platform application development

3. THE RESEARCH METHOD

In inventing the mobile application we use the systems life cycle (SLC) method, which is a methodology used to describe the process for building information systems, intended to develop information systems in a very deliberate, structured and methodical way, reiterating each stage of the life cycle. The systems development life cycle, according to Elliott & Strachan & Radford (2004), "originated in the 1960's, to develop large scale functional business systems in an age of

large scale business conglomerates. Information systems activities revolved around heavy data processing and number crunching routines".

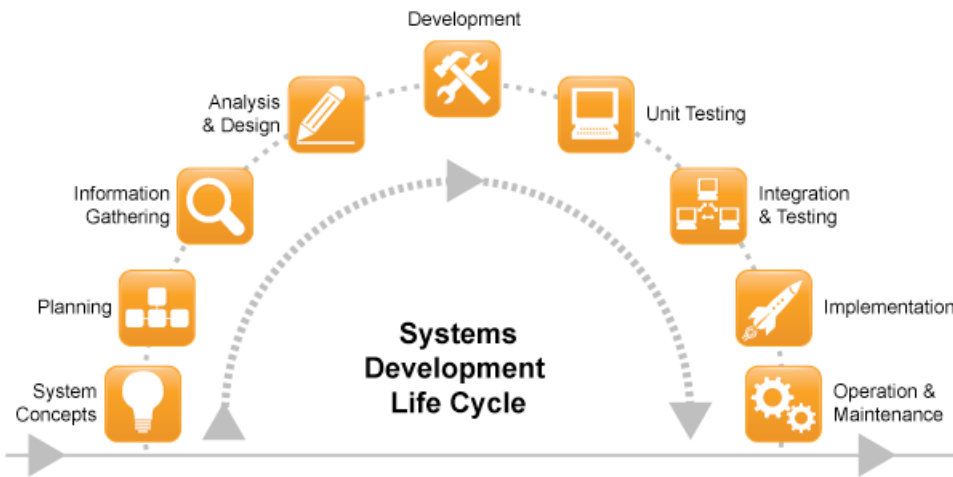


Figure 3 system development life cycle

These standard development describe the important considerations in regard to develop mobile application are much the same in all development methods.

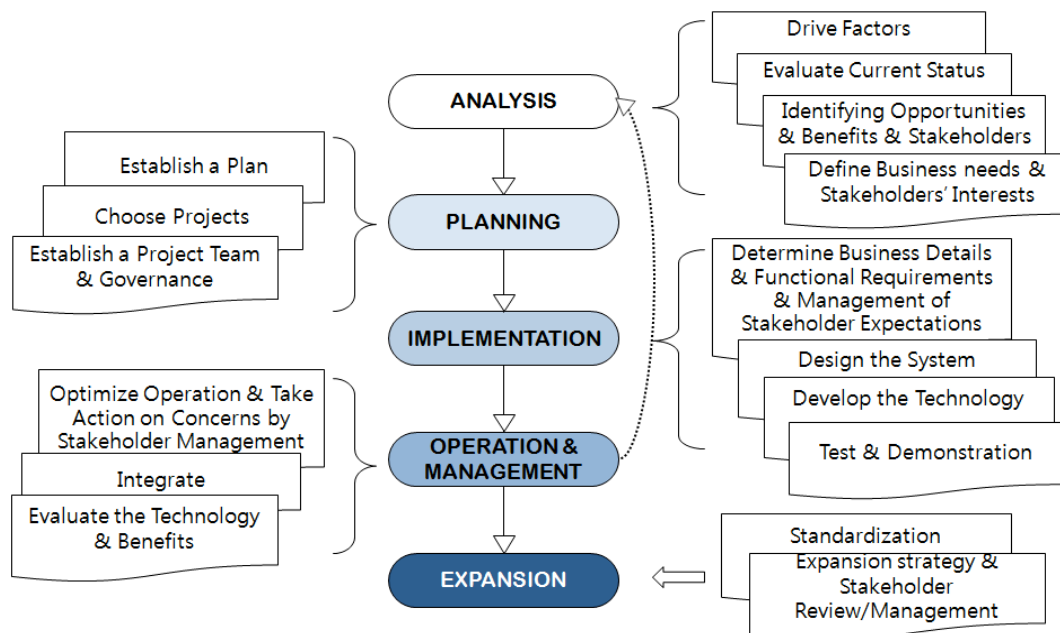


Figure 4 the architecture of the procedures for info PLN application

- Phase 1: Analysis
Based on customer trend in using smartphones and tablets, human resource of PT PLN (Persero) in mobile application programming,
- Phase 2: Planning & System Design
Budgeting plan and risk analysis that always based on low cost high impact, working timeline project, and standardized framework integration design.
- Phase 3: Testing & Implementation
Testing applications there are 3 stages in each device is as follows:
 - Application Emulator

That is by using Virtual Preview typically to test the layout / composition, display design, visualization and other hues.

- Beta Test the Application Software

Before sending your device for testing the market usually we can do the installation directly on the device (APK) but it must be done "configuration" that is not standards-compliant devices. For example, do the jailbreak on the iPhone so it can do the installation without going through Store.

- User Acceptance Test on each Market

Applications that we send / upload to the market will be examined by an independent team of each Operating System provider to ensure that the application will be marketed not intend evil applications (malware), surveillance (spyware) and destructive (viruses), otherwise it will be check as well all features available on the device for damage and irregularities that occurred during the operation.

4. RESULT AND DISCUSSION

4.1 Definition and Application Development

Info PLN mobile application is a mobile solution customer relationship management to get information about the account info, PLN service, complaints and other electrical information through nearly all the gadgets such as smartphones or tablets you either Android, Apple, Samsung, Nokia, Windows Phone for free using the internet connection. Currently customer service information access facilities PLN already enjoyed by customers PLN but in line with the development of technology and the development trend of Indonesian people's lives coupled with high economic growth each year is 6-7% causes frequent customer at the center of economic activity / shopping, public crowd, means of transportation, as well as the central government administration. Not forgetting also the growing usage of smartphone and tablet users in Indonesia exceed the number of desktop computers and laptops. Info PLN has the abilities to access all the customer information provided by PT PLN (Persero) by just using a smartphone that connected to the internet. The customer also can send information by using facebook, twitter, and email for complaints.

4.2 Info PLN Application in PT PLN (Persero) Jakarta & Tangerang Distribution Case Study

PT PLN (Persero) Jakarta Raya and Tangerang Distribution (the PLN) with total subscribers by 2014 as many as 4,803,590 of the year 2014 as many as 4,475,664 customers that with growth of 7% in the ease of access to face the challenges of customer service in the business sector and the electricity demand to lower the cost of administration / the PLN customers find customers increasingly require customer service facilities are cheap, effective and easily accessible location in the busy life every day as well as efforts to reduce operational costs make the PLN should be more observant reading of existing opportunities to use advances in Information Technology and Telecommunications. In line with the implementation of Centralized Customer Service Application (AP2T) is a web-based, uniform and centralized to date has already connected over Indonesia, the opportunity to create innovative customer service information sector greater uniform and high potential in the distribution and level of effectiveness and efficiency. Customer Service Facilities PT PLN (Persero) Jakarta & Tangerang Distribution Year 2010-2011 consists of agents front liner in Office Services, Call Center 123, Website www.pln.co.id. Facing the situation and development of technology in Indonesia where getting pampered with public facilities such as shopping centers, tourism, public centers and very rapid advancement of communication devices used by customers today.



Figure 5 2011 - 2013 customer relationship management era in PT PLN (Persero)

2.2.2 Period of implementation: August 2011- August 2016 (60 months)

PT PLN (Persero) Jakarta Raya and Tangerang Distribution launched Info PLN Mobile Application for Customer Relationship Management in 2011 for Android and iOS.

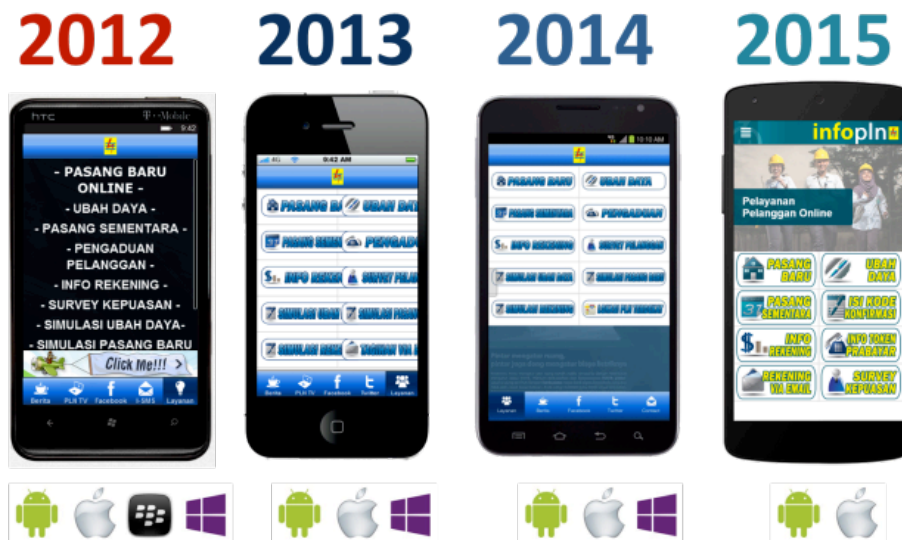


Figure 6 transformation of info PLN 2012-2015

4.3 Overview of the Info PLN Application

There are 5 features inside the Info PLN Application details follow:

Table 1 info PLN features

Category	Contents
Customer Service	New Power Instalation, Power Upgrades, Temporary Power Connection, Complaints, Payment Location, Billing Information, Billing & Tariff Simulation
Customer Complains	Online Complain Submission Forms
Jakarta Electricity Map	Online Electricity Condition Maps
Service Point Area	Locations of Service Point

Contact Us	Official Address, e-Mail and Contact Number
PLN News	News RSS Feed from www.pln.co.id
Facebook	Official PT PLN (Persero) Facebook Account (pln123)
Twitter	Official PT PLN (Persero) Twitter Account (pln_123)



Figure 7 info PLN application screen shots

5. CONCLUSION

Implementation and modernization of customer service PT PLN (Persero) with PLN Info Application Services for mobile devices based on the operating system android, iPhone / iPad, windows phone user a total of 200,000 active users gain the following results:

- The advantage of using Info PLN to customers are faster that accessing the website PLN up to 30%, accelerating information access time by 50%, saving the cost of the phone to the PLN Call Center 123
- New alternative access to information services using Info PLN.
- PT PLN (Persero) operational cost savings and also cost savings of PT PLN (Persero) Customer in Information Access.
- Improved branding of PT PLN (Persero) that utilize the information technology to provide easy access to customer service information.

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