

Finance, Accounting and Marketing

## Mobile Business Commercialization

Abdul Fikri<sup>1\*</sup>, Arismawan<sup>2</sup>

<sup>1</sup>University of Adelaide, Adelaide, Australia

<sup>2</sup>Syiah Kuala University, Banda Aceh, Indonesia

\*Corresponding Author : fikri.abdul@gmail ; arismawan@unsyiah.ac.id

---

**Abstract** – Smartphone shipment volumes have skyrocketed in recent years, and already overtook client PCs in 2011, 488 million smart phones, compared to 415 million client PCs. Unit sales will grow at nearly a 30% compound annual growth rate over the next five years, by 2016, it will exceed 1.5 billion units per year. It is driven by two factors, (i) replacement of nearly 5 billion feature phones with smartphones, which only make up 10% of handsets; (ii) and price declination, as International Data Corporation (IDC) suggests, from US\$337 in 2013 to US\$267 in 2017. In a few years, smartphones have grown from being a niche product segment at the high-end of the mobile phone market to becoming a truly mass-market proposition. Copyright © 2015 Department of industrial engineering. All rights reserved

**Keywords:** IT, smartphone, web, software, devices

---

### 1 Introduction

A survey over 3,500 respondents across the US, UK, France, Germany, India and Japan, conducted by Compuware, in 2013, showed that 85% of people prefer mobile apps over mobile sites, primarily because they believe apps are more convenient, faster and easier to navigate [1]. The phenomenon of people preferring apps is backed up by two separate Pew Research studies that show that the usage of tablets is related to people's age, Particularly only 16% 15-20 years old and 10% 20-29 years old have tablets, while the percentage of 30-55 years old is 25% [2]. The reason, according to the research, is that the over 30-age demography grew up with email, Internet forums, chat rooms, instant messaging and message boards, where the majority of the Internet was experienced through the Web browser. Tablets are a natural extension of this behavior. Tablets have a large screen and they are easy to use for these tasks. However, for the younger generation, hundreds of small single-purpose apps that work together seamlessly are the gateway to the Internet.

Furthermore, young people are growing up with mobile phones as their primary computing device, which has fundamentally changed the way they use the Internet. As a consequence, 74% of teenagers access the Internet from their phones and 55% of young users

choose using only their phones. Young people do not use tablets because they do not see them as necessary for accessing the Internet. They have grown up primarily using their phones, not using laptops with Web browsers.

### 2 Resource Allocation in Smartphone Software Development

According to research2guidance.com, most mobile application developers start off as independent publishers, but many are now turning to third-party application developers due to the increased level of competition in the main app stores and the high failure rates in these crowded markets. And for many developers, third party development is becoming more profitable.

Regarding to the development process and cost, most application project revenues comes from app creation services like concept creation, design and coding, taking up 96-98% of the revenues. But by 2015, this will lower to 70%, meanwhile maintenance, analytics, distribution, and extension services will increase to 30%.

In 2010, as shown in Figure 1, half of developers in United States in 2010 focuses on iPhone only because

distribution of mass market has been extremely complex given the problematic nature of distribution, high expenses in porting applications on hundreds of devices.

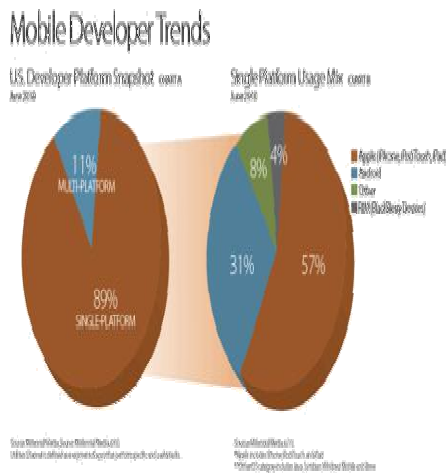


Figure 1 Mobile development trends.

### 3 Technologies in Software Development

Different from PC market, where Microsoft Windows dominates 88% of market at present, mobile device market is the field of two major players; Apple (iOS) and Google (Android), which take up 51% and 38% respectively, according to Net Applications. There is a real need to build applications that is able to run on multiple operating systems.

HTML5 and JavaScript 2 are being standardized by W3C, which has enhanced their development capabilities. This technology is supported by both iOS and Android operating systems. However, for complex apps, such as games, native languages are likely to be employed, because it provides far better performance.

Big companies, such as Microsoft, that is to bring Managed-Code technology from Desktop and Servers to mobile devices, also support another important trend. This is possible due to the fact that mobile devices are becoming more and more powerful. Last year, Apple introduced 64-bit CPU for their iPhone, which they claimed to be a desktop-class CPU. However, this kind of approach will bring a lot of overhead to mobile apps because the additional libraries are not installed as a part of the OS as in Desktops. Similarly, Apple will not embed Microsoft's .NET technologies and Java into their system due to stability of its own operating system.

### 4 Opportunities And Threats

We assume that there is an increasing need to reuse source code for multiple applications and multiple platforms, in order to reduce the cost and time of porting native applications to other mobile platforms, as well as the cost of maintenance.

However, we also see that a part of apps will employ web technologies to build hybrid apps in order to shorten development time and reduce maintenance costs. These trends are likely to increase thanks to the powerfulness of smartphones.

### 5 Competitors

At the moment, we see three major competitors in the market, who launched products to support building applications on multiple platforms. These products can help million developers to re-use their existing source code from Desktop applications. However, as shown in figure 2, the apps employing these products may consume higher CPU resources, and shorten battery life.

### 6 Market Goal

The market goal of XMOB is to develop a tool to assist small and medium mobile software development businesses to expand their market. In this fashion, XMOB is able to transform the logic of any mobile application for a given platform into logic of a mobile application for a different platform, including the two most utilized mobile operating systems: Android and iOS.

### 7 Customer Profile

XMOB, roughly, targets mobile software development businesses in two different segments, as listed below:

1. Small mobile software development businesses;
2. Medium mobile software development businesses; Be sure that the symbols used in your equation have Although our customers are segmented in two different classes, they share a common attribute: all of them provide single platform solutions. Big mobile software development businesses, e.g. Google, Supercell, and King.com, have also been researched; however, they are likely to provide solutions for both platforms. Individual developers, which provide single platform solutions, are the chief small mobile

software development companies segment. The medium mobile software development business segment is comprised by Startups, which are not likely to be able to provide solutions on both platforms due to lack of financial and/or time resources. Furthermore, a set of relevant mobile software categories for Android and iOS has also been analysed. The categories are: Anti-virus, BitTorrent, Games, Media Player, Personalisation, Photo & Video, Productivity and System Tools. Figure 2 demonstrates a list of single-platform mobile applications developed by potential customers of XMob, including small and medium mobile development businesses.

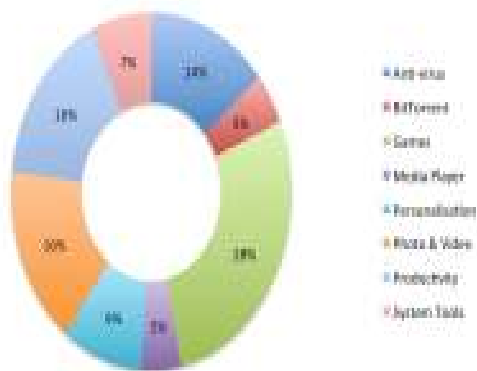


Figure 2 Categories of mobile applications according to XMob's potential customers.

XMob targets mobile software development businesses in Australia and United States. In December 2013, the Australian population was 22,700,000 and the number of mobile devices in use estimated 30,200,000, which means more than 1 mobile device for each Australian citizen [3]. Although Australia is far from holding the biggest number of mobile devices in use, a recent research has shown that the use of mobile devices and, which is the mobile applications vehicle, in the country, is growing significantly due to the poor telephone connections [4]. As a consequence, Australia turns to a prospective target for mobile software developers. Figure 3 demonstrates the growth rate of mobile devices adoption in Australia throughout 2007-2011.

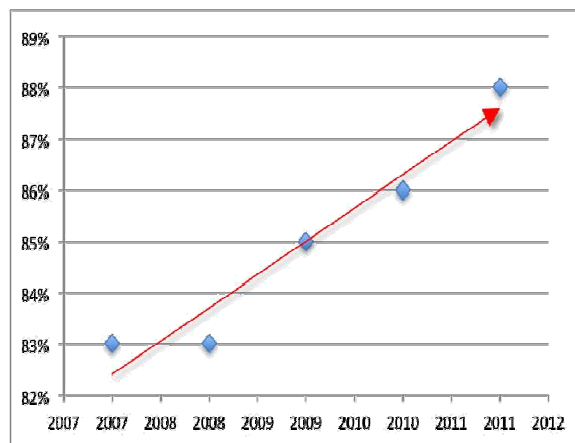


Figure 3 Mobile usage growth in Australia throughout 2007-2011

Similarly, also reaching a significantly growth in mobile devices in use currently, the United States has held the third position in the world rank by number of mobile phones in use [5].

## 8 Market Size

The market sizes in Australia and United States have shown attractive rates on mobile software development companies.

## 9 Australia

According to [6], the Australian mobile software developers market barely existed five years ago. Since then, the market is estimated to grow at an annualised 85.2% over the five years to US\$392 million, containing 452 active businesses through 2013 and 2014. This is mainly due to the increased use of smartphones in Australia and worldwide, which have significantly increased the demand for mobile software developers. Moreover, nowadays, people are confident in adopting mobile applications in order to increase productivity and communication. As a consequence, the revenue is expected to increase 19.8% this year.

## 10 United States

In United States, the market for mobile software development services, including software creation, distribution, maintenance, extension services and management has reached \$US 20.5 billion in 2011.

## 11 Market Need

Our biggest market, according to our market research, is the games market. Therefore, we will focus our need analysis on this segment. In order to provide

multiplatform solutions, developers tend to opt for HTML5, which is the new version of the standard markup language used to create web pages, capable of video, audio, 3D graphics, local storage, local SQL database, and web applications. Figure 4 provides a list of HTML5 mobile games.

Game's Name	Category
Fruit Slicer	Arcade
Alien Defense	Strategy
Car Dodge Extreme	Arcade
Tic Tac Toe XL	Skill
Bubble Blaster 2	Arcade
Speed Boat Racer	Skill
Sinclair C5 Stunt Rider	Driving
Batz & Ballz	Arcade
Return of the Snake	Puzzle
Battle Car Racing	Driving

Figure 4 HTML5 Mobiles Games Currently in the Market

Although many websites have provided HTML5 mobile games, e.g. SnappyGames.com, gamesgames.com, ioplay.mobi, magicappstore.com, zeewe.com, m.friendster.com, among others, developers have addressed different limitations in relation to using HTML5 as an alternative for multiplatform game development. The issues addressed by developers were regarding the following aspects of a mobile application: user input, performance, and native features.

## 12 Business Model

XMob's business model approaches the points related to customer categories, key activities, value proposition, channels of distribution, company segment, costs and details about the revenue stream. Figure 5 summarises XMob's business scheme.

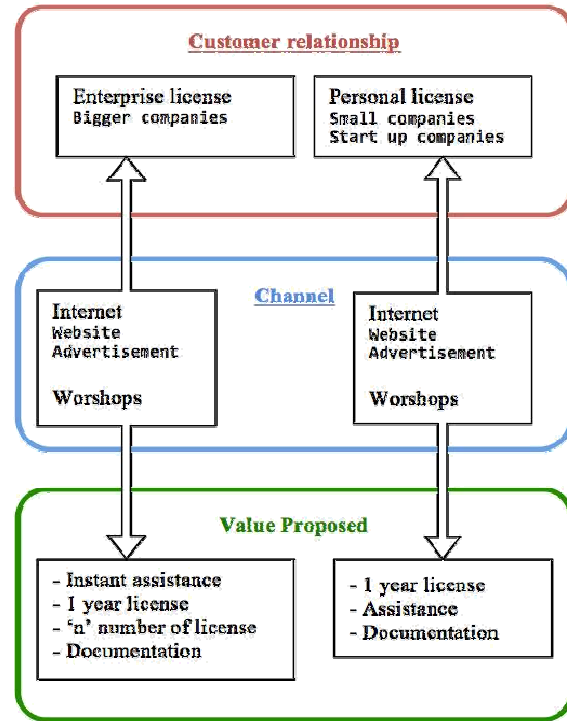


Figure 5 XMob's Business Scheme

## 13 Customer Relationship

In relation to the customer categories, an individual customer is not only a single developer but also small companies and Startups that might not have a defined market and a considerable revenue stream to afford the enterprise license. Thus, such customers are likely to be able to afford only personal licenses instead of an enterprise license, which would be cheaper. In turn, the enterprise customer is considered the one that has the sufficient resources to afford the enterprise license.

The personal license is valid for one-year, including limited support given by XMob. On the other hand, the enterprise license aims to fit the needs of bigger companies

## 14 Channel of Distribution

Moving to the channel that will be used in order to reach the customer, the Internet is the main vehicle that will be used to deliver and promote XMob. The website is also used to provide online tutorials on the XMob tool. The other channels are workshops and conferences.

## 15 Costs

The most important costs of our business are computers costs, for the development of the product, mobile devices costs, website server, advertisements, traveling, and establishment renting.

## 16 Intellectual Property

Our product only presents one potential patent: the algorithm employed to convert the low-level programming languages. As the concept of using MLL is not novel, and converting A to B, and B to C are performed as *matching processes*, our algorithm is not exclusive. Thus, we come to the conclusion that there is no need to legally own our creation.

In addition, we intend to keep our development measures in secret; hence, no patents will be applied.

## 17 Organogram

As shown in figure 6, an Organogram is a chart that represents the formal structure of a company. This sort of chart has an extreme importance for the businesses because it shows how the functional units are allocated as well as the hierarchy and the existing relations of communication between them.

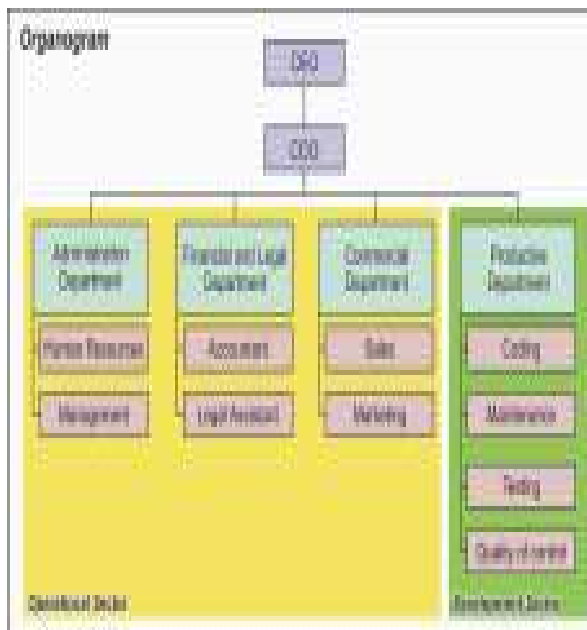


Figure 6 Organogram of the organisation structure.

## 18 Sales Forecast

From the third month, we will have our product ready to go, and then we will start presenting it to potential customers. It is predictable that our sales rate in the beginning, taking into account the amount of customers reached through our strategies, will be low. As a result, our sales margin in the first few months of operation will be fairly small. Also, we expect a constant growth of 15 percent each month for the sales of our personal license software, and a growth of 10 percent for our enterprise version for the first 36 months.

## 19 Profitability

In addition, Figure 7 shows the comparison between the sales and expenses, showing that we can reach the balance point by the second year.

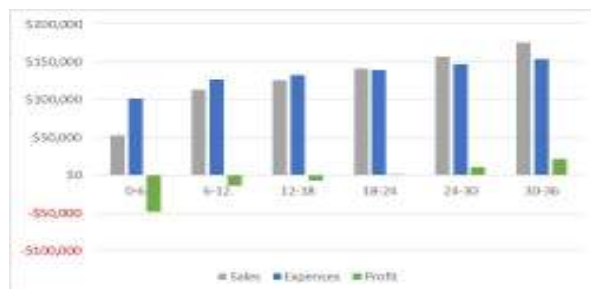


Figure 7 Reaching profitability and balancing expenses.

## 20 Suggestion and Recommendation

This paper only analyses and describes Smartphones Business Commercialization, In some limited aspects. These aspects are explored in terms of Information and Technology, smartphone sales comparison, web developing, software utilities, mobile devices and applications, markets as well as technology. These aspects are very limited as there are many others that can be explored. Therefore the writers strongly recommend the readers to examine this paper with other relevant articles and find out other aspects of smartphones business commercialization to enrich our knowledge about this field of business.

## 21 Conclusion

There are many challenges to face during the process of opening an own business or designing a new product to commercialise. No less important than the other challenges, there is the task of creating a name for the business or the new product. In an increasingly competitive market, the name of a company can define

the success or failure of the venture. To create a good name, many aspects must be analysed such as the need of communication of the brand, the profile of the target audience of the brand, the strategy of visibility of the brand, the territories where the brand will act and the legal aspects of registration and protection in the given segment where the brand will act.

## References

- [1]. [http://mobilemarketingmagazine.com/85-centpeople-prefer-apps-says-compuware/85 per cent people prefer to use apps instead of web because of looks and feels.](http://mobilemarketingmagazine.com/85-centpeople-prefer-apps-says-compuware/85-per-cent-people-prefer-to-use-apps-instead-of-web-because-of-looks-and-feels)
- [2]. [http://www.pewinternet.org/files/2013/05/PIP\\_TeensSocialMediaandPrivacy\\_PDF.pdf](http://www.pewinternet.org/files/2013/05/PIP_TeensSocialMediaandPrivacy_PDF.pdf)
- [3]. <http://www.roymorganonlinestore.com/News/Mobile-phone-use-grows-as-home-telephone-connectio.aspx>
- [4]. <http://www.sourcingline.com/directory/mobile-application-developers>
- [5]. [http://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_number\\_of\\_mobile\\_phones\\_in\\_use](http://en.wikipedia.org/wiki/List_of_countries_by_number_of_mobile_phones_in_use)
- [6]. <http://www.ibisworld.com.au/industry/smartphone-app-developers.html>