

Introduction to Business models

This document aims to give a general introduction to business models and give specific advice for the development of a suitable business model for the Fantsuam Wireless Network.

The document is intended to be used as support for a “*brain-storming*” session performed by the Fantsuam team members. The document should be studied by all members before the session in order to give each member the opportunity to come up with his/her own ideas before the collective “*brain-storming*” takes place.

The session should be lead by one person of the Fantsuam Team and notes should be taken by another member to form a report that summarized the session with the conclusions that has been dawned.

1. What is a business model?

The term *business model* is frequently used in todays society, but there is still no single dominant definition. A business model can be seen as a general description of how an organization handles its major activities. The two most basic components of a business model are:

1. The identification of potential customers
2. The identification of products or services the organization offers

Furthermore, a business model defines how the organization *generates revenues and profits* on its services, which implies to the identification of *money flows between actors* in the model.

The business model should also describe the following components:

1. Products and services (service packages, pricing models)
2. Customer markets (target groups, user profiles, user behavior)
3. Competitors (identity competitors and their services/prices, how can we offer better services?)
4. Business process (how are business done? how are clients reached, marketing, billing and accounting)

In general, a business model that includes services, in difference to manufactures of products or resellers, is more complex. After the Internet revolution, the character of many business models have changed dramatically, since it is now possible to reach a large number of customers to a low cost, which was not possible before.

Let's have a look at a few traditional business models.

2. Different types of business models

2.1 Bait and hook business model

A popular business model that was introduced in the early 20th century, is the *Bait and Hook* business model (aka *Razor and Blades* business model). This business model implies to offer a very basic product to a low price (the bait) and charge associated products to “an overprice” (the hook). Since the basic product is useless (or at least limited in use) without the associated product, the customer falls in the trap.

This model is present for example in razor (bait) and blades (hook), cell phones subscriptions (bait) and airtime (hook), computer printers (bait) and printer cartridges (hook).

2.2 The subscription businesses model

The subscription model is a widely used in many sectors. It has traditionally been used by magazines and membership clubs but has lately expanded to many other areas. Nowadays we see this business model all over the IT sector; mobile telephony, Internet access, fix telephony, cable TV providers etc.

A subscription is traditionally sold periodically (on a monthly or yearly basis), like a magazine or an insurance. However, in the IT sector, we find more and more business models that offers subscription based on quantities (MByte traffic, x amount of SMS's)or smaller time units (\$/min). Airtime for mobile telephony are normally based on minutes and seconds (you hardly find a subscription that offers a fix fee per month) while the cost of electricity is based on actual consumption in kWh (quantity).

The form of subscription that is chosen must fit the service or product it sells. It must also fit the customers user behavior and their estimated budget for this kind of service/product.

Consider this personal example:

Airtime is something that is expensive for me and easily “drifts away”. Therefore, I prefer to recharge my mobile phone quite on a monthly basis with small amounts. In this way, I can keep track of my expenses in this field.

Since Internet access is something that I am using frequently, I do not want to “renew” my subscription by using refill cards or similar solutions too often. That is why I pay a fix fee per month to my ISP. I contact my ISP every 1-2 years to renew or change my subscription.

We can differentiate three different kinds of subscription models

- Fixed set of products or services: *Like a magazine subscription.*
- Unlimited use of a service or a set of services: *For example, when the overhead of administering a subscription is more costly than the service itself, a fix fee for unlimited use of a service can be suitable. For example a monthly ticket for commuting between two cities via bus or train.*
- Basic access (alt. minimal service) plus additional costs depending on usage: *For example fix telephony which normally offers a basic fee for local calls but other tariffs for long-distance calls.*

Furthermore, a subscription can be personal or not. While a Internet subscription is more suitable as non-personal, a mail account is by nature a personal subscription.

Another aspect to consider is the payment model; pre-payment vs credit (payment-after-service).

2. Business Model for the Fantsuam Wireless Network

In the case of Fantsuam Foundation (FF), start to analyze the local conditions of FF as a WISP in Kafanchan. An organization's business model is something unique for its local conditions and its environment. A business model that works for one WISP might not work for another. There is no single "equation" or "rule book" to apply in order to success. What you need is to be aware of the local environment where you operate and be familiar with the needs and financial situation of your potential clients.

2.1 Background studies

As with any other complex task, we should start with a "background study" to identify what problems and opportunities we are facing.

We should never underestimate what we can learn from others although they may work under different conditions than us. Start by investigating a few successful cases of rural ISP's in Africa. What services packages do they offer, to what price, how is the accounting handled, how much bandwidth they have etc. ?

Contact for example Juasun.net, a rural ISP in northern Tanzania. Robi Machaba, the owner and manager of Juasun.net can be reached at: juasun@juasun.net

Even better, try to find a successful case in Nigeria or in a neighboring country.

2. 2 Identify your goal

Before entering the detailed planning of the business model, it is a good idea to have a clear goal of that you want to achieve. Should the model just break even, i.e just return the money for the international bandwidth? Should you aim for a profit that could be used to make future investment in the network and maintain the current infrastructure? Should you aim for a more "collective" model where generated profit are returned to the clients.

2.3 Identify the actors in the business model

Identify all actors that can play a role in the business model in terms of money flow and influence:

For example:

- The Internet Service Provider (Emperion)
- The network owner (Fantsuam Foundation)
- The network maintainer (Fantsuam Foundation)
- The electricity company (NEPA)
- Potential Clients
- Other actors...

2.4 Identify target groups and user behavior among clients

Among all possible clients-users, try to group them together to form different types of *target groups* with a certain kind of *user behavior*.

Within each target group, we can identify different kinds of *user profiles*, which better describe a subgroup of each target group.

For each user profile, we can also try to estimate its *sensibility to pricing* of the services.

By analyzing the clients in this way, we can better know the character of our potential clients and the service packages that suits them best.

In the case of Fantsuam Foundation, we can image the following three target groups:

1. Individual users
2. Private companies
3. Schools, faith-based or health care institutions

Individual users

Note: These following profiles are assumptions done by the authors as a starting point. The profiles should of course be based on the surveys that you have conducted among the potential clients.

Profile	Usage today	Usage tomorrow	Price sensitivity
Advanced user	Uses chat and email to communicate with family. Browsing the Internet regularly.	Is curious about VoIP.	Medium
Minimum cost user	Uses Internet to check mail only. Mainly evenings. No other services required.	Might explore chatting and calling though VoIP.	High
Never used a computer	No services.	A local mail account for communication with family and friends.	High

NGO's , Schools and Faith-based institutions

Note: These following profiles are assumptions done by the authors as a starting point. The profiles should of course be based on the surveys that you have conducted among the potential clients.

Profile	Usage today	Usage tomorrow	Price sensitivity
Many young users that use computers on a daily basis during daytime (typically schools)	Uses Hotmail (or similar) and chat today for private communication. No website (for the institution).	Needs local mail accounts for its students. Web server space for the institution's website. Fix amount of bandwidth to serve their employees and students during office hours.	High
Few users on a "less that daily" basis (typically faith-based or health care institutions)	Small institutions with little knowledge in technology.	Local mail accounts and a per hour based Internet access so that costs can be kept low and under control.	High

Private companies:

Note: These following profiles are assumptions done by the authors as a starting point. The profiles should of course be based on the surveys that you have conducted among the potential clients.

Profile	Usage today	Usage tomorrow	Price sensitivity
Medium sized	Uses Hotmail accounts (or similar) today for business communication. No company website.	Needs local mail accounts for its employees. Web server space for company website. Maybe VoIP can make them reach their clients in the district to a lower price than with mobile telephony? Fix bandwidth to serve their employees during office hours.	Medium
Small sized	Small company with little knowledge in technology. Having doubts if Internet will bring any benefits to his/her business.	Local mail accounts and a per hour based Internet access so that costs can be kept low and under control.	High

2.5 Identify “service packs” that fits each target group and user profile

From the target groups and user profiles that you identified, match “service packages” (subscriptions) to each and one of them. Think about easy-to-remember names for those packages, that will help FF branding them

Although we would like to please all target groups that we have identified, that might not be feasible in terms of technical and administrative limitations (traffic shaping, billing and accounting) . Consider what service packages are practical and financial feasible for Fantsuam as a WISP to offer.

It is suggested to start with few very distinct service packages, and as time pass and clients (hopefully) increases, more client specific service packages can be added to the portfolio.

In the case of Fantsuam, remember to differ between services that require international bandwidth and the ones that do not. While browsing international web pages and chatting require international bandwidth, a local VoIP call does not. Neither does sending/receiving local mail within the Fantsuam network. Since the international bandwidth is extremely expensive we should encourage clients to use “local” services to a high extend. As long as the international bandwidth is provided via satellite communication, there is little money to gain by reselling the bandwidth.

Another aspect we should consider is that the day has 24 hours. While most people prefer to access the Internet during day time, some clients might prefer to work after office-hours to a lower cost.

Some basic service could for example be:

1. Local mail account in FF mail server
2. Web-server* space with FTP access
3. Internet access
4. VoIP Local (in the local network only)
5. VoIP Nigeria (to any fix/mobile phone in Nigeria)

* The web server will need a mirror outside of Nigeria.

The services offered by FF could be *separate basic services* or a *set of basic services* put together to a “service package”.

2.6 Billing and accounting

In the case of a WISP, the type of services you can offer is strongly connected to the billing and accounting method you will use. That is why this topic should be studied in a early stage. For Internet access and VoIP phone calls, some kind of captive portal with the possibility to measure time or traffic is needed.

A few example of open source captive portals that might be useful are: ChilliSpot¹, WifiDog² and MiniBill³.

A list of open-source and proprietary captive portals can be found here:
<http://wiki.personaltelco.net/index.cgi/PortalSoftware>

1 <http://www.chillispot.org>

2 <http://dev.wifidog.org/>

3 <http://www.ultrize.com/minibill/>

The billing must probably be handled differently depending on the service you sell and who your customer is. Take the example of Internet access: For a school, a monthly subscription of a fix bandwidth is probably a good option. In this case, a monthly invoice would be suitable.

An individual that subscribes for a “a per-minute” or “per-Mb” Internet access service, would probable prefer some kind of scratch card with a personal login.

2.7 Pricing model

When setting prices you must consider essential issues like:

- How many clients will use this service?
- How much overhead will this service generate?
- How much international bandwidth will the service require?
- What quantity is suitable for pricing (flat fee, per-minute, per-MByte)
- Different pricing depending on the time (office hours vs evening/night)

In very simple words, in the end the following equation must match:

Number of clients * price of service > fix costs (international bandwidth, electricity, maintenance, staff etc.)