



MP17- ATHENS

Report Project Finance - Non Recourse Finance

Analysing Business Plans for telecom Projects

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1 Analyzing Business Plans for telecom Projects

1.1 Telecom Project Business Model

Nowadays, a great number of different communication technologies have an important role in a Telecom projects. These technologies are mainly defined by two characteristics, which are data rate and mobility. To achieve more data per time, in other words "high data rates", fixed technology, like optical fiber, are used. That is possible because the environment of a optical fiber does not receive external perturbation. However, being a fixed technology it doesn't provides mobility to the user. On the other hand, technologies which privilege the mobility, like the GSM, can't provides a high data rate, because the environment it works receives external perturbation.

The figure 1 shows the characteristics of some technologies.

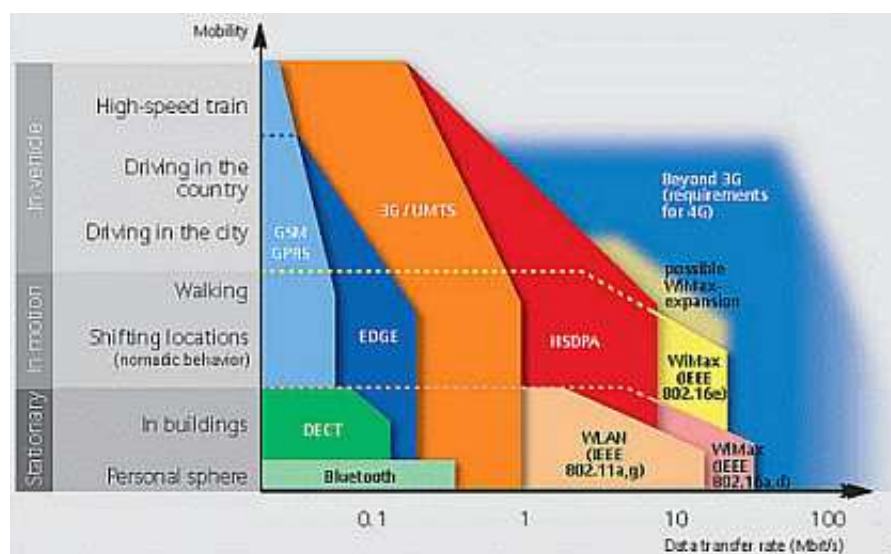


Figure 1: Characteristics of Telecom technologies ¹

Having these different technologies to implement a telecom project, it is first needed to choose which one is the most properly. For this, some simple questions should be made.

What is the business model? You should specify the organization from a high level of perspective (its purpose, offerings, strategies, infrastructure, etc.).

Technology or service driven? Which one will be offered? Should I offer both?

¹Source:Siemens

Is the ecosystem ready? Where I'm going to offer my product? Is it possible to offer this product? Does the environment offer a necessary infrastructure?

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Analyzing the data, revenues had a slightly increasing if compared with past years, on the other hand, the global traffic has tripled in three years and it is expected that it will increase more in the next years. So, today, revenues does not increases as fast as the traffic. Other interesting data: voice, although being a small part of the traffic (20% of total traffic), is the most profitable (80% of revenues)

If a company will offer the infrastructure for telecommunication, some challenges like finding the right mix of services and understand the market drivers will be needed, because a company should offer only what costumer wants, and some times, they want both mobility and high data rates which implies in a difficult to choose technologies and probably a high cost of implementation.

Although some companies are concerned about infrastructures (which have high costs), others are concerned about offering a service using an infrastructure created by other companies, so they have low cost to offer its product. For example, Google, Facebook and Twitter, offer a service based on a software that is connected to Internet which uses physical links implemented by telephone companies. It is remarkable that these companies don't have infrastructure costs, then, we can say that they are "eating food of other".

1.2 Business Planning in Telecom Projects

Business Planning in Telecom Projects have five phases:

Market In this phase it is needed a demographic and economic study to answer some questions like: What is the country population and growth rate? What is population's capacity of spending money? Which will probably be the ARPU (Average Revenue Per User)? And how much SIM cards each person would have?²

Marketing External factors 1. **Country and market environment:** Demand, competitors, possibility and level of portability (change of operator), How much does it cost to construct an infrastructure in the country (for example to construct and maintain an antenna in Africa costs a lot, because of the cost of

²Depending in the country some devices like GPS, PC and dual-chip mobile phones uses other SIM card, so a person would buy more than one SIM card

energy)etc. **2. License and regulatory framework:** what is the best technology, what is the spectrum I'll be able to work with, is it acceptable for the service offered? Which areas will be covered? Will I cover only overpopulated areas or I'll offer a full mobility even if I have a less crowded area? etc. **3. Consumer behavior:** how much my consumer will consume? How the most part of the payments are done (prepaid or postpaid)? etc.

Marketing Internal factors When my network will be working? Which are my marketing strategies? How much I have to finance the structure? etc. One great idea is to compare market studies about one country, with another study done by competitors about a similar country.

Revenues In this phase the ARPU should be estimated based in: price per service, price per bundled package, price trends and forecasted revenue mix. After, the average number of user should be estimated based in: traffic, usage patterns, addressable market etc; So with **ARPU** and an **average number of users**, multiplying both value will give us the **service revenue**.

Capital expenses In this phase expenses should be estimated, in other words, all costs will be summed . Firstly, we have **infrastructure costs**, which is the infrastructure needed to be built in order to be possible to offer my service/product. Secondly, we have cost related to costumers and Site, for example, installation cost, customer premise, equipment. Thirdly, we have License Fee, which are tax needed to be paid in order use a spectrum for data transmission. Moreover, replacement cost should be considered, which is the cost if I lose some costumer. Indeed, a great difficult of telecommunication business is not only to retrieve clients, but also to maintain them for a long time.

Operational expenses In this phase the operational costs , which are composed by two different types of costs (variable costs, and fixed costs) should be estimated;

Variable cost depends on external factor, for example, Roaming Charges depends on the operator that did the service for your company abroad, other examples are Marketing cost, that may be bigger or smaller depending on the number of consumers we already have;

Differently, fixed costs does not depends on external factor, for example, Office costs, spectrum license, Administrative personnel, they can be measured without having external influence as long as they have a fixed price.

Free cash flow Finally, based in Revenues and expenses, and some metrics we will make a cash flow analysis.

1.3 Business Plan Key Output

In this phase, given financial statements, and using Key metrics, we can analyze both loan payment (Payback) and FCF (free cash flow). Two main objective are: have a FCF positive, that means, income is greater than expenses; and pay your debt, which can be viewed by positive accumulated free cash flow.

But, are my expectations reasonable? Depending on the project is will be; For the Payback Year, if it is a GSM project in six to eight years, debt should be payed, if its an optical network, it will take more than ten years. For a positive FCF, if it is a GSM project in three to four years it should happen, if an optical network from seven to nine years should be reasonable;

1.4 Funding Plan and Milestones

The next step after making the business plan, is to meet the peak funding requirement, that means, to make the business possible, an amount of money is needed, but where it will come from? A mix of loan, equity, bonds and others should be well analyzed.

For that, somethings should be considered: risk on the future cash flow stream if some funding mix is chosen; tax impact on debt and dividends; the financial market enviroment (which one is better, how much the bank can loan, etc);

Besides that, in order to get a loan, some thresholds will be imposed, for instance, a minimum of subscribers, revenues and EBITDA;

1.5 Sensitivity Analysis

In this part, firstly, we should review our numbers, for that, we should compare what we have with existing ones (benchmark). Secondly, every risk should be take in account, because they can change the scenario, for example, if the construction of an antenna is delayed, how does it will impact in the project? And if ARPU was miscalculated ? And if inflation rises and local currency depreciates, does my business plan can handle with that? What is the worst scenario? How my bussiness plan will work in that scenario?