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Master’s Thesis

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Title of the Master's thesis

Sustain competitive advantage in IT / Online industry

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Declaration of Authenticity

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Prague, 27 August 2012

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Sustain Competitive Advantage in IT / Online Industry

Abstract:
The purpose of this work is to define a theorical framework to explain sustainability of competitive advantage in what we will name network industries: social networks, internet based services, mobile devices and online softwares. This framework will consist in integration of the well known Porter approach combined with a more recent Resource Based View of the firm. Using four real cases, with a focus on Google, we will demonstrate that sustaining competitive advantage in those industries requires a combination of external opportunities and a strong defensible resource position. One without the other cannot lead to long term success. In order to make our conclusions actionable, we will lay down a checklist of strategic diagnosis that any decision maker in that industry should have in mind at all time, in order to defend his / her market share.

Keywords:
Resource Based View, Porter’s 5 forces, competitive advantage, it / online industry

Agenda

1. Introduction

In this chapter the topic of “Competitive Advantage of IT / Online industry” will be introduced by firstly bringing out its relevance, the necessity to provide with the solution and implications of such solution on businesses. Here we will showcase some of the historical milestones, that were perceived as luck or misfortune by most, but which will be easily explained when applying the practical learnings that will be revealed in the chapter 4.

Later in the chapter we will develop the research problem by posing key question: How do I make sure that with the people, technology, expertise that I have, and given the market situation, I can maximize my chances of success?

Finally, we will lay the fundamentals for the theoretical analysis that we will use to assess each of the business cases in order to come up with the practical implications for the IT / Online businesses to create and sustain their competitive advantage. We will use two major theories in this field Porter’s 5 forces analysis and Resource based view theory.

1.1. Relevance of the topic and the necessity for solution

In the past 30 years, the emergence of mass market computing and the internet has seen the rise many brand new companies, from hardware to service providers, all united in a few essential characteristics:

- Technology plays an essential part in what they offer, and in the profile of their founders
- They are offering products and services that were unseen before, hence each major innovation had the potential to shape desires and needs of customers
- Due to the fast renewal of hardware, fluidity of information and an extreme volatility of users who can switch from an offer to another by a simple click, those companies were born, grew, died and changed at a pace never seen before

Most major errors in the business strategy of these businesses have been unforgiven: not so long ago Windows was the only mass market operating system one would consider, MySpace was the social place to be, Yahoo was the cool search engine one could not skip when surfing, and less than 5 years ago Nokia was a solid leader in high end mobile phones.

During the same period of time, Google took over Yahoo's place to the point that it became a verb, and made this position hard to threaten. They took over the work of mobile operating systems in less than 3 years, which also puts them in a strong position to conquer the tablet market, at least on the software and advertising side. The Mountain View based company also generates and aggregates a tremendous amount of the world's information, and has recently strongly entered the world of social media years after MySpace lost the edge.

In an even shorter period of time, Facebook became a superstar business with the number one social network in the world. A company no one can ignore considering the tremendous mediatic noise it generates, even though it is virtually very fragile in regards to the strategy standards such as no entry barriers for end-users, number of potential competitors with greater server and engineering power, unstable technology.

In a more classic register, the now old timer Amazon is still around and strong, so are Ebay, Wikipedia and more.

All these companies (or nonprofit organizations in the case of Wikipedia), are offering services of a different nature, but had to face fairly similar risks: users can switch, flip, compare easier than ever. Technologies renew so fast that the edge you proudly claim in January is long forgotten in June of the same year. You can quit MySpace to Facebook in 10 min, use both, buy on Amazon and resell on Ebay and buy again "somesite else" the same day.

You can change your phone nearly for free every year with a new contract from a network provider, not as easy but still more convenient than changing a car, you can go from PC to MAC or Ubuntu every 2 or 3 years when replacing hardware...

What made some of those corporations so successful, or temporarily successful then fail when they seemed promised to the brightest future? In essence, this thesis will defend the idea that the way they approached their markets was crucial, in many cases nearly independently from the actual attributes of their products and services. In particular the importance of balancing market attention and market leadership via technology was vital.

We will use the grid of classic strategy and marketing theories such as Porter's 5 forces approach as well as a more recent approach, Resource Based View to show that the right balance between focusing on the unique differentiated strengths of the firm on the one hand, and market adaptation and opportunity seizing on the other, are the key to success. As it is not specific to this industry, the consequences of bad decision making regarding these aspects are far more deadly due to the industry characteristics above mentioned.

1.2. Implication of the work

What business of a significant size can afford to avoid the internet? How many young graduates today work in marketing IT or web related positions? How many decision makers trained in the 70's and 80's are struggling to adapt to the landscape this industry offers?

The dramatic evolutions in the computerized industries are extremely healthy in the sense that they ensure that only the fittest businesses remain. The least performing simply disappear as they cannot rely on huge entry barriers or bought supremacy such as aircraft manufacturers. At a macro level, this is a strong positive. But at the scale of the decision maker, it is crucial to join the right businesses, lead them the right way. Not only it all happens quicker, but the amount of information to process (technologies, emergence of competitors, data, etc) is tremendous.

Through an analysis of Google's key decisions and their impact, compared to other similar companies, we intend to give the decision maker a clear set of tools to better know when his company's resources are facing a true opportunity.

1.3. Research Problem

Quite innocently, the problem here would be : How do I make sure I engage my company's forces into the right fight? Or in more business appropriate terms: with the people, technology, expertise that I have, and given the market situation, on what long term key target I should focus in order to maximize my chances of success.

This might appear as a rather trivial and broad question, but the past few years showed us that the most successful leaders do not seem to be able to cope with the challenge. The following pages will demonstrate that as elementary as this sounds, "What shall I do next?" is a question that is often poorly answered. Business operations such as HR, finance, marketing are well mastered by any group of people with the proper education and experience, but the larger strategic vision that determines how to mobilize those departments often suffers from a lack of signals, missing lighthouses that would make the unforgivable look more obvious to the leader. The IT / Online and we should say "mass market network" industry is very challenging in that regard. As mentioned earlier, the resource aspect of strategic decision making is even more crucial, and often ignored as not part of the teaching and old school business paradigm.

We will look back into some of the key decision making of several major IT / Online companies, at important turns when they either engaged into failure or success. In order to make that historical analysis insightful, and most of all practical and prescriptive, we will use the following method: we will put those past situations into an equation, using an identical set of business variables in each case, and show how match or mismatch between resource variables on one side and market variables on the other side leads to failure or success.

1.4. Methodology

1.4.1. Theoretical Framework

This will require taking into consideration traditional and more recent approaches to strategy theories, we will consider both external and internal variables as key parts of this equation. External variable will be, as in Porter's famous framework:

- The threat of the entry of new competitors
- The threat of substitute products or services
- The bargaining power of customers (buyers)
- The bargaining power of suppliers
- The intensity of competitive rivalry

However, we will also take into consideration internal variables as crucial elements that determine the competitive advantage, using the Resource Based View theory as initiated by Peteraf and Barney. It will emphasize that the match between a sustainable unique resource and an external opportunity are key to success. Finally, we can only analyse decision making in motion if taking into account the life cycle and historical dynamics of the company.

Both Porter's framework and Resource Based View theory will be described in detail in the Theoretical part.

1.4.2. Historical analysis

In this section we will analyse various business events through a theoretical grid that we will further lay down, in order to explain failures and successes via that paradigm. The reader will understand the nature of a competitive advantage in the industry, and comprehend better the successes of Google.

In order to reinforce the argument we will use the same grid to analyse the failures of several key competitors in the same industry.

We will cover 4 following cases:

1. Google +

After just one year with estimated 150M of active users[1], and taking over Twitter in many markets. What were the strategic changes that made it possible?

2. MySpace : from head to the tail of the Social Network business

Less than 10 years ago, having a MySpace profile was a must, the company was worth hundreds of millions, partnering with Google as a key publisher. Now MySpace is worth a fraction of what it used to, and is no longer even mentioned as a key player in the social media world.

3. Android

From being nothing to becoming a global leader in 4 years, in a field that seemingly had nothing to do with the core business.

4. Nokia : from leader to outsider

How did the leading smartphone company dropped down to the 3rd place and remains under dark skies in only 3 years, under the pressure of Apple and Google's Android operating system.

These cases have been selected on purpose as they depict two of the most dynamic products / services in the IT / Online industry and are clear examples of success / failure when it comes to matching sustainable unique resource and an external opportunity.

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1 Neowin.net: http://www.neowin.net/news/google-now-has-over-250-million-accounts

1.5. Work limitations and difficulties

From a methodology standpoint, historical analysis is subjected to bias due to the impossible exhaustive collection of information. Interpretation lays on an intersubjective agreement on what the facts are, and there is a possibility of some missing pieces of information that may never be revealed due to confidentiality reasons, that could probably temper some parts of conclusion. However, by cross-referencing different sources of information and interviews of business leaders, we are confident that the historical data, especially in the context of internet, is sufficient to allow us conduct an insightful analysis.

When it comes to the prescriptive implications of this work, it is noticeable that in situ dynamic analysis of a situation according to a theoretical framework is not realistic. This is why we will provide the decision maker with a set of lighthouses rather than a pre-written path, since the later simply does not exist. It means that beyond the framework, it would take the decision maker some efforts in order to integrate those concepts into the complex reasoning.

Unlike many models sold by consulting companies - that are easy to use but as a consequence are restrictive and incomplete - what we intend to provide requires acceptance by the decision maker that strategy cannot be drawn in a matrix or on a graph, but is a complex iterative process that requires a mix of analytical analysis mixed with anticipation, as well as other soft skills. Those skills include self reflexion on our motivations to take this or that decision, ability to put aside personal bias, sensitivity towards our own organization and what your reportees have to tell you.

We do not believe that sound decision making can be done without taking into account all aforementioned elements, which leads us to a rather obvious limitation: this work can only be one brick in the wall and, unfortunately, would not function for every decision maker, especially if he or she are convinced that their company can be run by strictly using analytical tools.

2. Theoretical Framework

As the title of the chapter suggests, in this section we will introduce the backbone of this work, theoretical framework that will be used as a basis for our historical analysis in chapter 3.

In order to be able to compare seemingly different IT / Online companies, we will start by introducing the concept of network industries. This way we will be able to link not only pure web players such as Google or Facebook, but also pure hardware and software producers such as Apple and Nokia.

Secondly, we will outline 2 major theories that will help us understand the essential forces of competitive advantage and ways to sustain it. The first theory, Porter's five forces assesses external opportunities, or in other words, the nature and degree of competition in a specific industry. The latter theory, resource based view model, assesses how the competitive advantage can be seen from a resource point of view. According to that theory, what needs defending is more an internal success factor than an external market segment. Success is achieved by matching the external opportunity to an internal resource that competitors are unable to replicate.

In order to make the historical analysis in chapter 3 easy to comprehend, we will assess the specifics of both above mentioned theories within the context of network industries.

2.1. Industrial scope

2.1.1. "Network industries"

First of all it is important to determine the object of the analysis. Reading IT specialized press shows us that various types of businesses are covers, from service websites to mobiles and connected television. This goes beyond internet and the computer hardware. In fact what characterizes it all is the fact that all of those services are in essence based on inter-connectivity via a network. They all involve the use of an operating system as the interface between the service and the user, and a piece of hardware.

This is why we can see companies such as Google, Microsoft, Apple, but also Nokia and Samsung all together fighting for the same market shares, even though Microsoft is traditionally a software provider, Apple and Nokia a software and hardware manufacturer, Google originally a web based service provider and is now also a software company, and Samsung a hardware manufacturer. The border in terms of industrial activity is very soft, all of those companies are in one way or another competing not so much on the internet, but within what will be the object of our analysis, an industry that we will call the "network industry". When referring to this, we will not include infrastructural B2B products and services such as data center, fiber optic physical networks etc), but only mass market consumer products and services such as phones, tablets, TV, OS, web-base services and distribution.

2.1.2. Segmentation of the network industry

As said above, it is hard to determine clear activity borders and put companies into clear boxes. However, it will be useful for the analysis to segment services from the user point of view:

- Pure web based services
  Such as search engine, dating site, price comparison sites, blogging platforms. In essence, everything that requires no physical and tangible interaction with a product or delivery.

- Online retailing
  Any service that involves a product or service being physically delivered. That includes classic retailing, but also tickets bookings, travel and hotel bookings. It is significantly different from the previous one as it involves distribution & logistics, but also the production of goods and services, which implies in many cases the addition of a supply chain. It also means that the product sold can be sold elsewhere, adding the idea of a different kind of rivalry.

- Hardware retailing
  The business of producing and selling hardware that allows the use of network based services. This can be exhaustively listed: phone, tablets, computers, connected televisions.

- Software
  The production and distribution of software or operating systems for the above mentioned hardware. This includes also web browsers.

2.2. Theoretical models

As previously mentioned, we will combine the well known Porter model with the more recent Resource Based View as a theoretical grid to analyse the network industry.

2.2.1. Porter's five forces

Porter's work intends to determine attractiveness of a market according to five forces (see figure 1 below), 3 horizontal forces: threat of substitute products, the threat of established rivals, and the threat of new entrants, and 2 vertical forces: bargaining power of customers and suppliers. The model is to be used for prescriptive strategic decision making, but can also be used to analyse past decisions. It is essentially based on the idea that opportunity is made of external factors, which we will temper later on with the Resource Based View in order to show that the actual opportunity is rather of match between external factor and an appropriate set of internal resources.

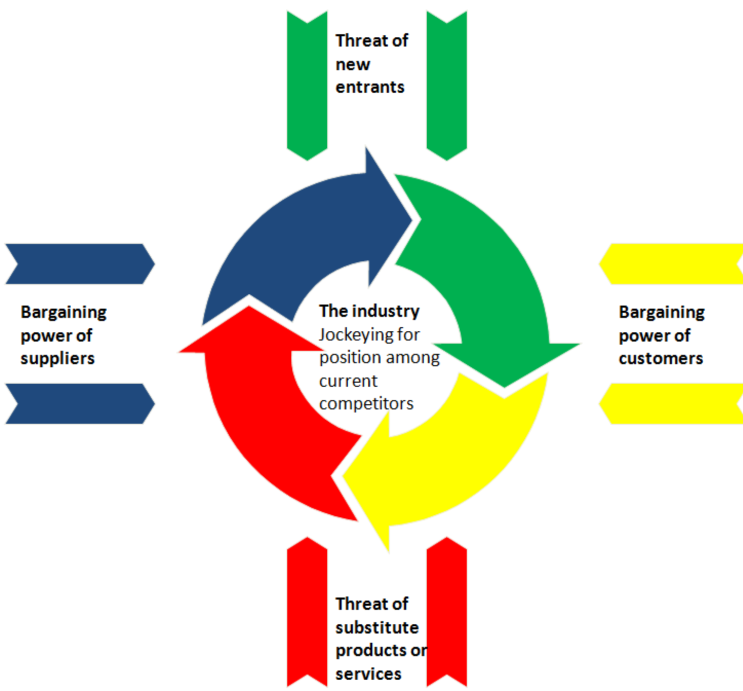

Figure 1: Michael Porter's 5 forces model, Harvard Business Review March-April 1979, pp 141

We will now process the "network industries" through Porter's model that will enable us to conduct the historical analysis of the selected four cases in chapter 3.

Threat of new entrants

In “network industries”, threat of new entrant can appear to be rated very high. The initial popular intuition would be that anyone can create a web based service and grow from cheap advertising and word of mouth. In reality, numerous examples tend to demonstrate the contrary. It is quite relevant to use our segmentation for the different type of services.

Pure web based service
New entrants are an always on threat. It takes nothing more than a bunch of talented and inspired developers to create a new aggregating algorithm and launch a price comparison site, a dating site or else. Server costs are virtually null compared to the standard costs of opening a business, and those costs can be adjusted with demand on a daily basis with an unprecedented level of flexibility. There are strong barriers when it comes to substitution, which we will develop below, but little when it comes to infrastructure. However, some services require a tremendous amount of server capacity, such as search engines. In those rare cases, only a few companies can pretend to strongly enter a market within a short amount of time.

Online retailers
The situation is partially similar yet with a few extra entry barriers. First case scenario, the company produces its own goods, in which case we are facing all traditional barriers: fix production cost, scale and related economies, competitiveness of the product in general. Second case scenario, the company distributes an existing product. It takes building a supply chain, negotiate prices, partnerships. In essence, entry barriers are the same as for a classic retail business, without the constraints of finding a retail space replaced by logistics and shipping. Logistic and shipping, however, are not a entry barrier since there is a vast choice of service providers whatever the size of the business.

Hardware retailers
Here entry barriers are very strong: we are talking about a product with strong technical know-how involved and complex production facilities. Threat can therefore come from two types of companies: hardware manufacturer using their resources to build another kind of hardware, which we will develop later in the Resource Based View model, and companies who can afford taking over a hardware manufacturer, as it was recently the case with Google buying the mobile branch of Motorola. All in all, the least we can say is that you already know who your competitors are and little surprises are to be expected.

Software manufacturers
We are close to the pure web based services situation: making a software needs essentially about engineers. Material resources needed are by comparison to other segments insignificant. Distributing is among the easiest, entry barriers will then come from the substitution effect. In that case, your potential competitors are any business with a few engineers, and to a provocative extent any high school kid who is skilled at programming.

Threat of new entrants, across all segments, is rather high in the network industries as most of the products and services are immaterial, or require material services that are easily obtained. The skill sets required are also not in short supply, and the total lack of any form of constraint to enter the market, i.e. go online, gives a chance to pretty much anyone. The only segment where a company is likely to be aware of potential competition is hardware manufacturing, in which case, from an entry only point of view, constraints are rather traditional.

Threat of substitute products and services

This is probably a part of model that leads to very unconventional results as opposed to more traditional industries. There is hardly any industry where it is easier to substitute a product or service with another one. What makes it traditionally hard to switch? Initial cost, psychological engagement, compatibility with other products, contracts, learning curves, etc. Nearly none of those have a significant impact on substitution in the network industries. What protects a company then? One factor is the inner performance of the product: “Does my search engine lead to better results?” You can easily try, but ergonomics and results may differ.

Another key factor is the network effect: the more people are present on the network, the more chances you have to obtain a satisfying interaction. If we take for example a dating site, it becomes pretty obvious: one can copy your site, but if there is no one on it to date... Another example would be multiplayer online games: users are inclined to prefer the game where more people are.

Now let’s take a look at our segments:

Pure web based services
They are essentially a web site. Nothing is easier than trying a new website. The minute users find the ergonomics is better, or results are more accurate, they will switch. And they will share, on social network, by word of mouth. In that situation, nothing but the quality of your site and the size of your network (if applicable) protect you. Marketing and brand image has little impact online, people value efficiency, price and ergonomics mostly.

Online retailers
In most cases, online retailers sell products or services they do not produce. For users, it is only a matter of finding the best price and service such as shipping, warranty, online help. Substitution effect here is as high as it gets.

Hardware manufacturers
This is the best case scenario in the network industries, due to the cost of devices and learning curves. However, even in that case, the short life cycle of products (down to 1 year for a phone, 2 for a computer) make it very easy to switch. Operating systems (OS) are few, so there is no

learning curve to switch between 2 devices using an identical OS. Phones come very cheap every year at the contract renewal with network provider.

Software manufacturers
Strong substitution, but limited by learning curves. It is very easy to install different software, however, users assimilate a specific use logic and tend to be reluctant to changing, unless the new software is significantly simpler and more efficient (less bugs, faster, better ergonomics). Recent history has shown that computer operating system is complex enough to take time to learn, hence movements from Windows to Mac are not that simple, and price of Apple hardware presents itself also as a barrier. However, simpler software such as web browsers is adopted at a very fast pace, and the same applies to phone operating systems.

Bargaining power of customers

In other words, what level of pressure can buyers put on firms? First of all, network industries are not so concentrated when it comes to pure web based services and retailing. Hardware and software manufacturers are less numerous. There is nearly no user dependency on distribution channels, there is also no actual price bargaining power but searching for better prices is so easy that it is difficult to maintain higher prices. Buyers are very sensitive to price. Switching costs, as we said, are close to null, information is available, "searchable", and last but not least, buyer generated information is circulating fast and efficiently. It is a mixed situation where buyers as individuals do not have much power, but since they can communicate, search and find at scale, they become a very powerful virtual entity.

Pure web based services and retailers
Little negotiation possible, but only sites with top level service and prices can survive. Buyers will figure out where to buy, and they will pass on the message to their peers.

Hardware and software manufacturers
Companies maintain a certain level of control. There are only three to four key players in the field of operating systems, a little more when it comes to mass market software such as messenger or browsers. We have seen how Microsoft was able to maintain a dominant position even with a clearly dysfunctional product. Even if this position was defended through anti competitive practices, the company was in a strong enough position to impose itself to the market since they had all users, in particular in companies, where computing was mostly via Windows. When it comes to hardware, there is a wide enough choice for users to take down a company if they do not find the product good enough. The downfall of Nokia in only a few years, is a perfect example that a dominant position can only be defended by maintaining an edge in terms of product functionality. This will be further explained in the chapter 3 when we will speak of Nokia case.

Bargaining power of suppliers

Who are the suppliers? In most cases we mean logistics (shipment) companies, manufacturers of all possible product sold online, infrastructure (web hosting), but sometimes also browsing devices manufacturers. For example in the case of Android, Google needed phone manufacturers to adopt the OS. Here even though is the phone is also an end product, for Google it represents part of the supply chain.

Web hosting, shipping, payment are made easily accessible and cheap for anyone to use, therefore they are in no way an entry barrier. The true bargaining might occur between retailers and manufacturers but in most cases prices to distributors are fixed.

Intensity of competitive rivalry

As mentioned above, substitution or at least trial of substitute products is easy. The key to maintaining a competitive advantage lies in the ability to provide a service that remains a level above others. In network industries, it often means generating innovation on a regular basis.

For web based services, hardware or software, how do you ensure that your product stays afloat through innovation? In this field, there are 2 possibilities:

- A research based achievement that gives you groundbreaking results, such as a algorithm
- An organization that is built to remain market focused and that stimulates innovation via the proper type of incentive and governance. It often means maintaining a bottom up type of management, encouraging risk taking, not sanctioning failure the wrong way and not being focus on the short term revenue goals

In theory, both are accessible to any company. In practice, figuring out the correct organizational balance is closer to dosing magic ingredients in order to produce a potion without blowing up your lab.

The network industries are very dynamic when it comes to rivalry via innovation. At the company level, there is an open war to be consistently bringing the next "world changing" feature to the user: Facebook and Google +, Apple's IOS and Android are perfect examples of that.

At a more macro level, if the innovation does not occur within the company, it slowly dies as rivalry will come from a new firm rising from scratch with that next innovative feature. One way or another, innovation is a crucial differentiating factor.

For retailers, rivalry is of a more classic kind: offering free shipping, free return with no questions asked, sending newsletters with private sales or else, all the classic levers of retail. What makes it different is the nature of the marketplace: close to perfect with fluidity of information, reviews and price comparisons. In most mature retail fields such as books, DVD, hardware, war on price has now reached a stage where everything is more or less within a 5% price range. However, one issue remains: if anyone can find anything if searching, how do you reach those who do not search and will only go after the obvious, the brand names like Amazon? Here advertising comes into play: it is essential when entering a market to put together an advertising campaign that will reach the right prospects, at the right place, in order to make them aware that precisely what they are looking for is available in your store at the desired conditions. This is how and why Google makes its bread and butter: targeted performance advertising. In that field, even if internet content keeps growing, one can notice how tension gets higher and higher, and so does the average price of click. It takes more and more skills to be able to reach cost efficiencies.

As shown in a summary picture of the landscape through the grid of Porter's five forces, but is not a sufficient model to explain failures and successes in the network industries. We mentioned several times how the Resource Based View theory would complement this paradigm. Indeed, many decision makers have a very limited and childish vision of what opportunities are, and an even more limited vision of how strong their chances are in regards to that opportunity, especially if we look into defending a market position.

Given the bargaining power of customer, ease of substitution and rivalry, maintaining dominant position or conquering market share takes a lot more than opportunity based on external market factors. It takes the appropriate set of resources to be competitive within that opportunity.

2.2.2. Resource Based View

In essence, the Resource Based View is a larger model that integrates Porter's forces and adds to it another element, which is the competitive advantage from an internal perspective. In other words, the competitive advantage is seen as depending heavily on a firm's resource position. This resource position is strong when the company owns or can do something that has value, is rare, hard to imitate or substitute[2]. The resource is not in essence a materialistic object.

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[2] Jay Barney, Firm resources and sustained competitive advantage, Journal of Management 1991, Vol.17 No 1,99-120, pp 99-120

The figure below provides us with one of the possible ways we can link resources, capabilities and competitive advantage.

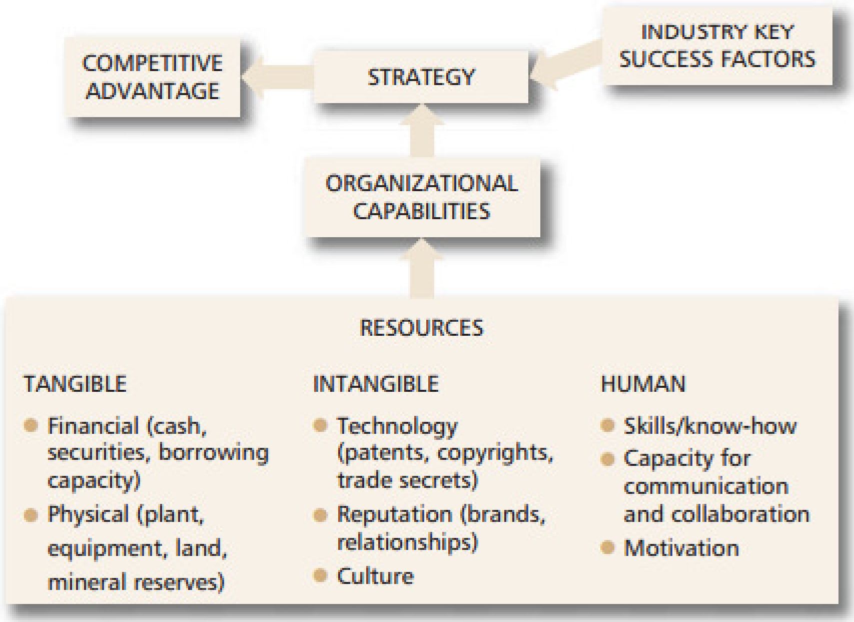

Figure 2: Representation of forces contributing to competitive advantage[3]

Assumptions

In order to get closer to the reality, the founders of the Resource Based View, Jay Barney and Margaret Peteraf[4] for a large part, made some essential assumptions: resources are not homogenous among firms, and they are not mobile. Firms with varying capacities compete, and superior productive factors are in limited supply.

The Resource Based View is used to explain why we observe some long term differences in profitability among firms which cannot be explained by market conditions[5]. Barney[6] suggests that a firm might extend competitive advantage by analysing information about the assets it already controls, especially by using the fact that they are imperfectly mobile and hard to access.

Relationship with competitive advantage

When it comes to the corporate strategy, the central idea behind the Resource Based View is that competitive advantage is not only the result of an analysis of our competitive environment, its

3 Contemporary Strategy Analysis, 7th Edition, Robert M. Grant 2009, ISBN-10: 0470747102, pp 123-168

4 The corner stones of the competitive advantage, a Resource Based View, Margaret A. Peteraf, Strategic Management Journal Vol.14 No. 3 (Mar., 1993, 179-191)

5 The corner stones of the competitive advantage, a Resource Based View, Margaret A. Peteraf, Strategic Management Journal Vol.14 No. 3 (Mar., 1993, 179-191)

6 Barney 1986, Strategic Factor markets: expectations, luck and business strategy, Management science, 42, pp 1231-1241

opportunities and its threats, but also the result of heterogeneity in resource allocation and development among competing firms[7]. Traditionally a firm would defend a market position thanks to external factors well documented by Porter's 5 forces model. The Resource Based View supports the idea that the competitive advantage is in essence the result of such an external opportunity paired up with a company who has:

- The resources to address that opportunity
- Those resources are superior to the ones of the competitor
- That resource position is defensible because it is rare, and hard to substitute or imitate

For a firm to maximize the rent it gets out of its resource set, it should be seeking for every market opportunity where it could deliver a better product than competition, thanks to that resource set. The consistency between markets is irrelevant, because it has in that case nothing to do with the creation of a competitive advantage. We will now use 2 examples to illustrate such causality.

Honda

What differentiates Honda from a resource point of view is its ability to produce top performance four cylinder petrol engines. From there Honda has been approaching markets by addressing the following question: What will become a competitive product if it is equipped with a better four cylinder petrol engine? The opportunity is not formulated in terms of "what is the market space for new quads or bikes", it is formulated as such: "if I enter the quad or bike market with a significantly better engine, what are the chances that I take over the market share?"

3M

Here we will illustrate 2 examples one of a malfunction in resource versus opportunity match and one of the exact opposite. The resulting innovations are approached in the same way Honda does in the paragraph above.

The best example or matching internal resources with external market opportunity is the creation Post It: 3M employees found re-addressable glue that stuck just a little, but never stopped sticking. They were looking for a super glue but they thought "if we patent this, what need can it fulfill?" And so the Post It was born.

From the buyer's point of view 3M is on many inconsistent markets at a time,. But from a producer's point of view, everything they sell requires a similar set of resources.

But 3M has also made some mistakes and misinterpreted their success factors, leading to a notorious failure from the Porter's and Resource Based View point of view

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7 Jay B. Barney, Firm resources and sustained competitive advantage, Journal of Management 1991, Vol.17 No 1,99-120

In partnership with a US university, 3M developed a technology for cochlear implants[8] that would allow some born deaf people to hear. It was an immature technology, but promisingly functional. They thought that:

- They had a resource that was unique leading to a competitive advantage
- There was obviously a market since deaf people obviously want to hear

They were wrong in regards to both: another Australian company was working on a similar technology, but more advanced and less invasive. It was going to come out later on the market, but since the surgery was rather invasive, once patients got aware that the competitive edge of 3M was temporary, they decided to wait.

Last but not least, we mentioned the resource must be matched to the opportunity from Porter's point of view. Something 3M forgot to assess: born deaf people in a vast majority were perfectly happy with their condition.

In the end 3M sold the branch of the business to their Australian competitor a year later, as they felt they did not have enough of insights into the opportunity, and wrongfully thought they had the dominant resource position.

It takes us to our last point, yet a very important one as we will see it later, on the diversification[9].

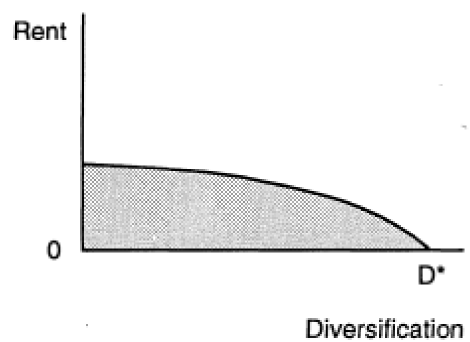

Figure 4. The determination of the extent of diversification Key: D^* = Extent of Diversification, = Accumulated Rents

Figure 3: The cornerstones of the competitive advantage, a Resource Based View, Margaret A. Peteraf, Strategic Management Journal Vol.14 No. 3 (Mar., 1993, 179-191)

8 The Innovation Journey, *Andrew* H. Van de Ven, Douglas E. Polley, Raghu Garud, Sankaran Venkataraman 1999, ISBN-10: 0195133072, pp 223-290

9 The cornerstones of the competitive advantage, a Resource Based View, Margaret A. Peteraf, Strategic Management Journal Vol.14 No. 3 (Mar., 1993, 179-191)

A company that identifies and defends a resource position must aim at maximising the rent it gets from it. The best way is to diversify, as seen in the Honda case, and conquer every market segments, no matter what the nature of the product is, where the resource is relevant.

How does that apply to the network industries?

In the network industries, what can be the resources that determine a competitive advantage?

- Technological edge
- Patents (if applicable)
- Network effect
- A flexible and reactive organizational structure
- A visionary CEO / management team
- Existing products / server capacity or customer base that makes any additional features worth more than what they would be if launched separately. For example, launching a messenger service if you already have an email client and a social network

It is important to keep in mind that the resource can be anything, as long as it is somewhat unique to the firm and sustainable.

If the competitive advantage comes from the match between external and internal opportunity, notice that this can be tempered into shades of grey. A company with a strong cash flow and a superior resource package can force its entry on a rather saturated market, using its other sources of revenue to finance a costly and an aggressive entry, until the superiority of its product is established. We will see later how Google will force its way into the hardware mobile market by simply acquiring Motorola.

However, the same situation the other way around is more arguable: Can a company with no resource advantage conquer a very strong market opportunity? It probably can but it will have trouble maintaining it. We will see that this applies widely to our network industry examples. In many cases market grows and low technological maturity generated a tremendous amount of opportunities, but many of the films engaged, are missing in action due to their incapacity to maintain a competitive advantage; this mostly being caused by a non competitive resources set.

Now that we have laid down the theoretical framework of this work, we will apply it as a reading grid to the historical event above mentioned. Each of them will be described in 5 parts:

1. The facts in chronological order
2. The external opportunity (Porter's forces)
3. The internal opportunity (from the Resource Based View)
4. The match between external and internal opportunities (from the Resource Based View)
5. The outcome and diagnosis

3. Historical analysis

In this chapter we will analyze four business cases from IT / Online industry and observe how historical decision making impacted competitive position and thus an overall well-being of these companies.

The four cases we have chosen are: Google+, MySpace, Nokia and Android. The choice of the cases was deliberate, to assess two of the most dynamic products / services in the IT / Online field: social networks and market for smartphone and/or smartphone operating systems.

In order to analyze the past events of all 4 cases, we have used the theoretical grid line that we concluded in chapter 2. The analysis can be well summarized by following steps:

1. List the most crucial facts that contributed to the current state of the company/product
2. Assess the external opportunity (Porter's forces)
3. Assess the internal opportunity (Resource Based View)
4. Describe the match between external and internal opportunities (Resource Based View)
5. Summarize the outcome and diagnosis

3.1. Google+

The Facts

In spite of being launched just a little more one year ago, G+ managed to create some ripples if not waves in the social network industry by being the first to integrate some key functionalities into its social layer such as hangouts, circles and local content.

In order to be able to put G+ past as a variable in determination the key success factors, I will call out G+'s historical milestones[10]:

June 2011
The +1 button[11] rolled out to sites across the network, so users can more easily recommend websites to their friends.
June 28th launch of Google+ project[12]—real-life sharing, rethought for the web.

September 2011
After 90-day field trial, Google+ moves to open sign up and adds Search and Hangout functionality[13].

November 2011
Google+ pages for businesses, organizations and other entities[14] to enable the users to connect with all the things they care about.

January 2012
President Obama on Hangout answering citizens' questions[15].

May 2012
Roll out of Google+ Local[16], a simple way of discovering and sharing local information featuring Zagat[17] reviews and recommendations from user's circles.
Launch of Hangout on Air[18] enabling users to broadcast publicly a hangout on their Google+ page, Youtube channel or website.

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10 extracted from Google's history: http://www.google.com/about/company/history/#2011
11 Official Google Blog: http://googleblog.blogspot.fr/2011/06/1-button-for-websites-recommend-content.html
12 Official Google Blog: http://googleblog.blogspot.fr/2011/06/introducing-google-project-real-life.html
13 Official Google Blog: http://googleblog.blogspot.fr/2011/09/google-92-93-94-95-96-97-98-99-100.html
14 Official Google Blog: http://googleblog.blogspot.fr/2011/11/google-pages-connect-with-all-things.html
15 Official Google Blog: http://googleblog.blogspot.fr/2012/01/your-interview-with-president-obama.html
16 Official Google Blog: http://googleblog.blogspot.fr/2012/05/localnow-with-dash-of-zagat-and.html
17 Official Google Blog: http://googleblog.blogspot.fr/2011/09/google-just-got-zagat-rated.html
18 Google Playstore sitet: http://googleblog.blogspot.fr/2012/05/google-hangouts-on-air-broadcast-your.html

June 2012
At Google I/O[19] release of Google+ platform for mobile[20] enabling users to interact on their mobile devices, and Google+ events[21] that appear straight in user's Google Calendar and enable a user to view all published guests' updates such as photos or comments related to event.

The milestones in Google+ history may as well explain the rapid growth in user base. Just 3 months after launch, Google+ user base reached 40 million. According to the latest Google press release at the I/O in June 2012, Google+ now has 250 mil users[22].

Meanwhile Google+ competition although in many cases stronger in the total amount of users, is still slower to grow. Just to compare to the global leader in social networks, Facebook no matter from which date we take it (launch of the site or global release) it took 2.5-3.5 years (see figure 4 below) to reach similar base of users.

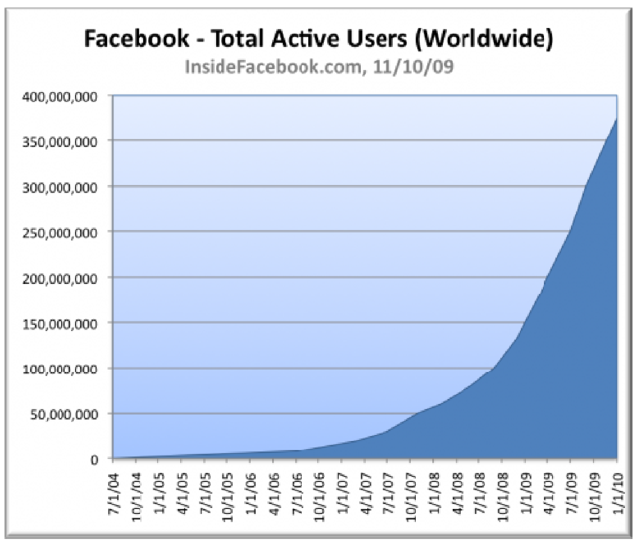

Figure 4: Facebook user base growth: http://techcomm.wikidot.com/privacy-concerns-over-facebook

In general G+ users' quotes remain on the positive side. In spite of the user base being ¼ of the main competitor Facebook[23], recent user surveys claim Google+ to be the most favourite social network with customer satisfaction index at 78 as opposed to Facebook with 61[24].

19 Official Google I/O site: https://developers.google.com/events/io/
20 Google Playstore sitet: https://play.google.com/store/apps/details?id=com.google.android.apps.plus
21 Google Playstore site: http://googleblog.blogspot.fr/2012/06/1.html
22 Neowin.net: http://www.neowin.net/news/google-now-has-over-250-million-accounts
23 Mashable: http://mashable.com/2012/01/12/facebook-1-billion-users/
24 American Customer Satisfaction Index, July 2012: http://www.theacsi.org/index.php?option=com_content&view=article&id=212:acsi-scores-july&catid=14&Itemid=263

The features[25] that are probably appreciated the most are the circles and the privacy feature, which although you can find also on Facebook are the central pieces of Google+ philosophy saying that users want to share different pieces of information with their colleagues, friends and family.

Another pioneering feature was the launch of "Hangouts", a video calling functionality within the website and without having to download any additional software. Couple of weeks later Facebook released a similar feature[26].

Among other very popular features rank integration with other Google services such as Gmail, Picassa or other services. Last but not least recent launch that became very popular was the release of tablet Google+ version[27].

The external opportunity (Porter's forces)

Analyzing external opportunity factors surrounding Google+ based on Porter's 5 forces model we will focus mainly on competitive rivalry, threat of substitution and threat of new entry. Other factors are less applicable in case of Google+ there is no need for suppliers or buyers.

The great amount of various social networks usually started off as small startups consisting of few engineers, suggest that establishing a new social network is not exactly the most difficult or resource demanding thing to do. In fact, the only inputs you really need are: scripting, novelty of the concept and high in numbers user signups. Pinterest, network allowing users to create theme-based image collections such as interests, is a perfect example of this statement. The easiest to obtain is probably the script, in India for example one can purchase "face book" script site for only 210GPB[28]. It is however important to mention that if the technology behind a social network is well known and easy to access, building an all in one social network with multiple platforms such as video sharing, photo sharing, emails, live video chat, doc sharing, is only accessible to a few corporations.

Competitive landscape on the other hand is more difficult to assess as the social network industry is rather complex. There are no two players that are exactly the same, fulfilling the same purpose, attracting same audiences or operating on different platforms. Of course as in every industry there are major players with more resources who can cover multiple functions, platforms and have a strong brand such as Google+ and Facebook, however there are plenty of niche social networks that are focusing on specific functionality, as a clear example of such

25 Mashable.com: http://mashable.com/2012/05/31/google-plus-reasons-to-switch/

26 Digitaltrends.com: http://www.digitaltrends.com/social-media/facebook-with-skype-vs-google-hangout-hands-on-comparison/

27 Techcrunch.com: http://techcrunch.com/2012/06/27/google-i-o/

28 Theinquirer.net: http://www.theinquirer.net/inquirer/news/1050756/cost-building-social-network-site-drops-near-zero

network could serve Flickr, an image and video hosting website that is widely used by blogger photographers.

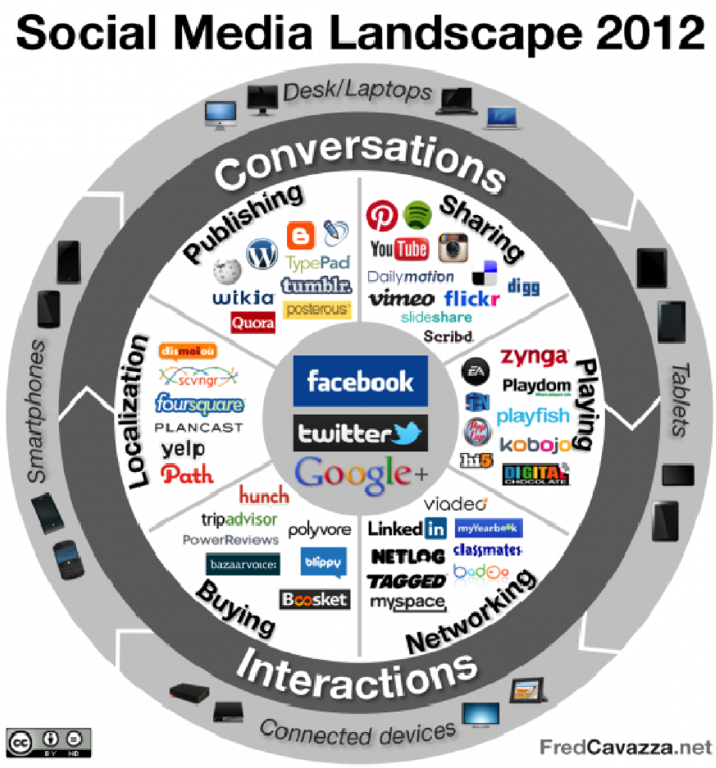

Figure 5: Social Media Landscape 2012: http://www.fredcavazza.net/2012/02/22/social-media-landscape-2012/

The above displayed diagram of the social media landscape seems rather exhaustive, however most of the local networks are completely ignored: Orkut, Xing, Vkontakte among the few.

In addition even though the type of interactions seem rather exhaustive: publishing, sharing, playing, networking, buying, localization; there are plenty of new features and social interactions that are yet to be discovered, causing the social media landscape to grow further on complexity. One thing however that does not exist is a network capable of re-grouping a large amount of those functionalities into one.

Very closely linked to the competition rivalry is the factor of substitution. As mentioned above, no two social networks are equal and the real substitution goes on when it comes to the time spent on the social network (see figure 6 below). Indeed, the actual debate on whether Google+ is a success leans toward looking at time spend rather than acquisition of unique users (a metric at which Google+ is doing great). Every power user seems to use multiple network, the question is: where do they spend time, or if reading between the line: where will he be the most receptive to advertising.

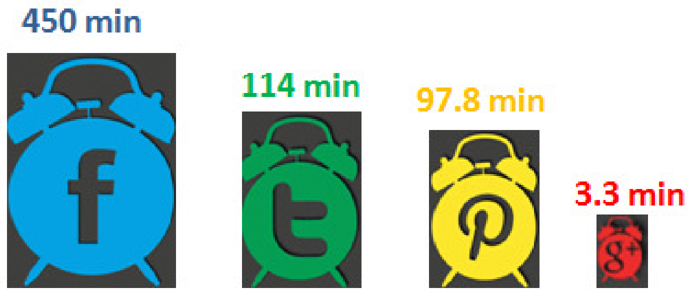

Figure 6: Average time spend per month per user, May 2012: http://edudemic.com/2012/07/state-of-social-networks/

One of the answers to this threat is constant merger or embedding of various networks in larger social networks. An example of this could be Spotify or Pinterest where the activity on these networks shows directly within user's profile on Facebook.

It is also important to mention that the level of substitution threat is variable depending on the type of network: if you are a photo sharing network (or any other niche), you are not directly in competition with Facebook that is more of a personal branding / social interaction site. However, if you intend to compete on the same usage as Facebook, the risk is much higher: once users have built a strong network and interaction history on their main "life display window" (user's Facebook profile and friends list), restarting the process on another platform is less likely. It would be more relevant for competition to enter the market with a sufficiently differentiated product, in order to capture different usage or at least, find an audience that appreciates better that new variation.

The internal opportunity (Resource Based View)

Before launching Google+, Google was well equipped for the challenge. They had a customer base (Gmail, Picasa, Google Apps, Android) of hundred of millions, a strong reputation and positive image, but also the strongest server / engineering force in the industry.

The additional costs of creating a social network were considerably reduced by the synergies with other services. For example, photo hosting is already covered by Picasa, the photosharing home service, video hosting by YouTube, etc etc.

Most of the functions already existing internally as separate products (Picasa and Youtube again), Gtalk for video and text chat, and a lot of the social functions have been tested extensively via Buzz and Wave. Buzz and Wave are exemplary of the previously mentioned fact according to which one of Google's key strengths, pacing its launches. Indeed, Buzz and Wave, although considered as failures, were nothing else but field functional tests of social functionalities. It strikes when we see the difference in communication and packaging between the final product (Google+) and the testing features (Buzz and Wave).

One of the main worries in terms of know-how could have been on the design side, Google being famous for the rather minimal or nonexistent designs of its user interfaces.

Another important part of Google's skill set that qualifies as a rare resource: their sandbox approach. Google launches products in a way that is ideal to minimize risk of a mismatch between the external opportunity and the resources available: they create a shell product with a few basic features, interact with the market and throw iteration and features in the box[29].

The match between external and internal opportunities (Resource Based View)

We made it clear that Google has everything in store to launch a social network, but we also stated how simple it is to create one. Google struck by picking a market position no one else could: a complete integration of all services into a one-stop shop social network. By integrating photo sharing capacities, video conferencing, and linking the network notices within other Google products (Toolbar, Gmail, Android, Calendar), Google created a service that is not strictly a frontal competitor to Facebook: it is meant to cover the same types of usage, but also much more. Last but not least, Google not being under financial pressure for an immediate success, made the network flexible enough to allow users to shape it.

They use the above mentioned sandbox tactic, in the most appropriate manner: since the social network landscape is yet to be shaped, the best approach for a entrant willing to take on a major role, that is to say a generalist role, is certainly not to take a product guess and hope it will fit market needs (needs that are anyway undefined). By mobilizing a very large array of teams and tools and articulate them progressively, they minimized the risks. They also created momentum among opinion leaders who have been regularly consulted all along the development process.

However, the number one entry barrier for Google was the network effect. And we will see in the next section that this is not easy to overcome.

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[29] Paraphrased from: http://www.geek.com/articles/geek-pick/google-plus-explained-pages-suck-20111110/

The outcome and diagnosis

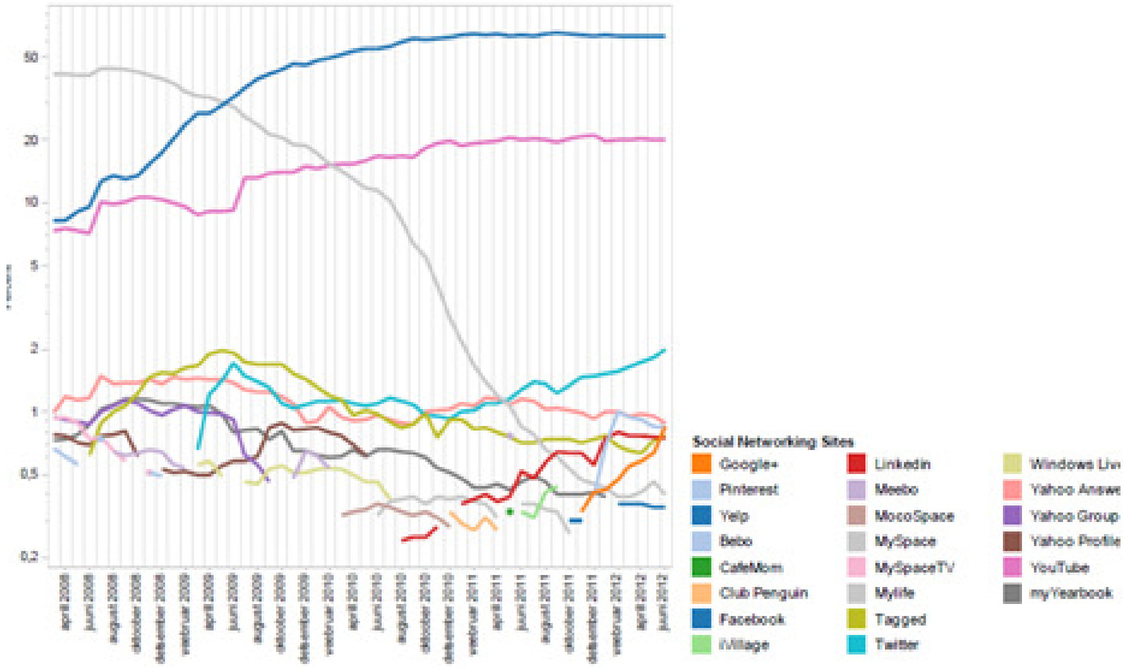

Figure 7: Market shares of Social networks and forums 2008-12: http://www.dreamgrow.com/top-10-social-networking-sites-by-market-share-of-visits-june-2012/

As mentioned earlier, the external opportunity existed but under certain constraints. The entrant could aim at an existing niche such as photosharing or tweets, or creating a new one for example Pinterest. Both were accessible to pretty much everyone but the intensity of rivalry and the sustainability of a competitive advantage would make it closer to gambling than a business strategy. Or, even more challenging, Google could confront Facebook in the field of generalist networking sites. In that case, it required a superior resource position to Facebook in order to compensate the 1bn user base[30]. It also required a specific project management skill set in order to remain flexible, and financial resources to allow the service some time before becoming successful.

Google+ grew 250 million active users[31] since launch date in late June 2011, this growth rate being so far its main success, along with very good user reviews. However, Facebook still rules the world of social networks in terms of time spent on the site (see figure 7). At the same time Google+ is becoming a key site for photographers & IT news. Essentially, two things need to be highlighted about Google+:

30 Mashable.com: http://mashable.com/2012/01/12/facebook-1-billion-users/

31 Neowin.net: http://www.neowin.net/news/google-now-has-over-250-million-accounts

- Google+ is a growing product, iteratively evolving, and some key features have been only recently launched (events, hangout on air). It will take some time to assess the actual success of the network, but with YouTube being the second biggest social networking site, Google (as a company) has clearly taken its place in the social field with a combination of two complementary web sites. However, it is impossible at this stage to know if Google will be able to overcome Facebook as the main generalist network. One of the Google's assets is its superior ability to monetize and the spread of Android. If Google can find a way to match these assets / resources, with a market opportunity, it certainly would have a shot at Facebook

- Quantitatively speaking, the user base is impressive after so little time but the time spent is not. However qualitatively, it appears that Google+ is being used in a very specific manner:

  - People exchange with strangers, using Google Plus as Tweeter, Yahoo Answers, sometimes Linkedin or even Flickr. It appears that it is very versatile and demonstrates that the flexible approach pays off. Yes, they spend less time on it, but do punctual target searches for interaction. One can argue this is highly valuable from a network monetization point of view

  - Demographics is crucial, and here Google+ is in an interesting position: 50% of its users are under 24 years, when 46% of Facebook users are over 45 years[32]. 80% of Google+ users are under 35 years, while 68% of Facebook users are over 35 years (April 2012 data). The same people that are one Google+ are also on Facebook so we are talking about the same audience, but the fact that the youngest are using both service much more than the older trench of the population is encouraging

32 Techni.com:http://www.techi.com/2012/04/google-vs-facebook-by-the-numbers/

3.2. MySpace

Facts

Even though success of MySpace seems like light years ago, in the mind of its users, geeks and social network leaders it remains as a glaring example of how fast "your luck" may change. However, is it really luck?

Below we will list the key historical milestones that reflect company's progression towards its current state.

August 2003
Launch of Myspace by Chris DeWolfe and Tom Anderson

July 2005
News Corporation led by Rupert Murdoch trumps Viacom and acquires MySpace for $580 million[33]

June 2006
MySpace surpasses Google as the most viewed website in the United States[34]

August 2006
News Corporation signs a 3 year $900 million contract with Google AdSense[35] to make MySpace a premium publisher of text and display ads

April 2008
MySpace overtaken by Facebook in the number of unique worldwide visitors[36]

November 2008
Paul McCartney and Guns N' Roses release their new albums on MySpace[37]

February 2009
90 000 sex offenders removed from MySpace[38]

June 2011
MySpace sold to Specific Media, where pop singer Justin Timberlake takes a stake[39], business is being streamlined by laying off 47% of employees[40].

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33 Newscorp.com: http://www.newscorp.com/news/news_251.html
34 Mashable.com: http://mashable.com/2006/07/11/myspace-americas-number-one/
35 Gigaom.com: http://gigaom.com/2006/08/08/google-myspace/
36 Techtree.com: http://archive.techtree.com/techtree/jsp/article.jsp?article_id=92134&cat_id=643
37 Reuters.com: http://www.reuters.com/article/2008/11/20/us-myspace-idUSTRE4AJ08G20081120
38 Reuters.com: http://www.reuters.com/article/2009/02/04/us-myspace-offenders-idUSTRE51278C20090204
39 Bbc.co.uk: http://www.bbc.co.uk/news/business-13969338

July 2011
MySpace surpassed by Linkedin who becomes # 2 social network in the US[41].

To conclude the factual section we would like to illustrate the evolution of unique visitors of MySpace as it is the one indicator that links both popularity and directly impacts profitability of the company. In order to put these numbers in context, we also show Facebook's growth of unique visitors.

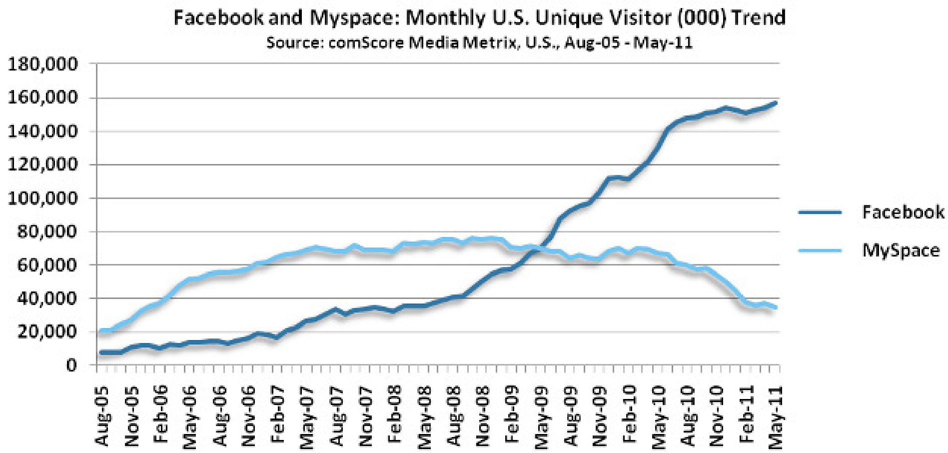

Figure 8: MySpace and Facebook Monthly Unique Visitors (000): http://blog.comscore.com/2011/06/facebook_linkedin_twitter_tumblr.html

External Opportunity

It is rather difficult to assess this opportunity, or claim that anyone could measure the scale of it in the first half of the past decade. Internet use was growing and spreading in all possible directions. Social was without a doubt going to play a big role but no one could quantify how its extent. One thing was for sure: along the years and until the usage pike of MySpace in 2007, it was growing very fast, and yet most users all over the world did not even get started. The opportunity was humongous.

From a business point of view, the question was and still is to some extent: "How can one make a profit with a social networking site?" We see nowadays how Facebook struggles to monetize its mobile traffic[42], and for quite long they struggled to monetize the desktop version of the site. They had to aggressively hire specialists (from Google to a large extent) in monetization of content with advertising. If we look back at the early 2000's, online advertising was far from its actual level of evolution: ads were mostly text based, display ad serving was not well automated and happened through direct sales of advertising space. Yet the market was growing at an

40 Techcrunch.com: http://techcrunch.com/2011/06/27/myspace-expected-to-lay-off-at-least-150-employees-on-wednesday/

41 Techcrunch.com: http://techcrunch.com/2011/07/08/linkedin-surpasses-myspace-for-u-s-visitors-to-become-no-2-social-network-twitter-not-far-behind/

42 Forbed.com: http://www.forbes.com/sites/ericjackson/2012/08/03/why-the-higher-click-through-rates-for-mobile-ads-which-facebook-touts-mean-nothing/

unprecedented rate. Advertisers were looking for online reach and because big sites were selling their inventory directly, companies like Google were having a hard time getting ads to pass on those sites at a much cheaper price. Indeed, social networks were, thanks to their nature, source of page views and reach at a moderate cost and could fit the needs of large automated ad networks[43] like Google or Yahoo.

Internal Opportunity

For MySpace, the key resource, and essentially the only one they really had at first, was the network effect: they managed to get the larger user base, which was giving them the power to shape what a social network could be via permanent innovation that would be immediately rolled out by millions of users.

After being purchased, MySpace was also in a situation when they had cash to evolve, which was not necessarily the case of other networks.

Nothing else that MySpace had was defendable from a resource point of view. Web design and development: not rare, easy to replicate or imitate. Server capacity: abundant and cheap.

The match between external and internal opportunities

This case will demonstrate all its exemplary potential here, and will resonate later when drawing conclusion. It is a perfect illustration of the challenges that an online business faces: you can be the best, biggest, most famous of your time: if you do not stay on top of your game, no matter what giant external opportunity is ahead of you, one with a better resource position can take it all away.

MySpace did not do everything wrong though, let's start by the positives: they quickly had an agreement with Google AdSense to monetize the site, for $900 millions. A very good deal for MySpace, since Google found out the advertising value was in the end very little before closing the deal. And this is the moment when things started to go down:

- MySpace should have done anything in their power to ensure that advertisers were getting value for the money they spent on MySpace. Integrating a monetization team to collaborate with Google was a must have. By achieving this, Google would not have dumped MySpace, and they would have consolidated their partnership to create another pole versus Microsoft / Facebook on the other hand. But MySpace, as for the rest of their product development, remained average. Google realized they were not up to the

[43] An ad network is a advertiser / publisher automated system where the first can place an ad, a bid and a targeting method, and the system will automatically show that ad on any relevant publisher website. Direct sales work as such: the site calls for ads and specifies the number of impressions and price. Advertisers agree contractually

challenge from a resource standpoint and would weaken their position: partnering with MySpace was giving Google a weak resource position.

- On a feature side, that is to say what users can do on MySpace, they developed all essentials, but it was never good enough. Even its founder, Tom Anderson stated that a key difference between MySpace and Facebook was that Facebook was doing all the same but better[44], and that better was all the difference that it took to overtake the leadership position. In other words: Facebook was growing a superior resource: a team of efficient engineers.

If we step back and see this through our theoretical model, we notice a great external opportunity that anyone can seize, with only one entry barrier, the network effect. The only way to defend a leading market position is to be better and faster than competition, and leverage your network. There is simply no other choice. It is a very challenging situation to be in, and a risky business. MySpace would have done the best of the best by hiring and organizing the entire governance of the company around one idea: innovate, accept only perfection, monitor all what competitors do, integrate, and do it better. Be fluid and reactive. This is what Facebook has been doing when it comes to Google + innovations, hence managing quite well to defend its position. Facebook does not have the engineering power of Google, but they lead the social network market and thus can afford not leading innovation on every front at a time.

Outcome and conclusion

MySpace story presents itself as an interesting case as we observed how they obtained their initial success strictly via capturing an external opportunity: people were willing to share their music and films, gossip, be social, and brand themselves online. Users kicked off MySpace and artists soon joined using MySpace as a "cool online display window". MySpace was one of a kind if not the first network. But unlike Google, they did not win as they did not own a superior resource , in the case of Google a superior search algorithm. They probably assumed that the market was what it was, with its potential, and that whoever went after it got his share. Tom Anderson's[45] speech is quite eloquent: "*Facebook gradually got better than MySpace at realizing all these basic ideas."*

Indeed, Facebook grew that resource when MySpace leaders did not integrate any of the strategic aspects mentioned above. Google at the same time knew that they existed thanks to an algorithm and that no matter what enormous amount of cash it was generating, they needed to diversify and build the amazing resource package they now have in order to remain in the leading position. Otherwise they would become another Yahoo.

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[44] Appendix A: Tom Anderson's G+ profile: https://plus.google.com/+myspacetom/posts/HpG4ZDQz2dd

[45] Appendix A: Tom Anderson's G+ profile: https://plus.google.com/+myspacetom/posts/HpG4ZDQz2dd

To some extent, we can say that Facebook got very lucky in terms of timing: they were never attacked when they were vulnerable (around 2008 when they were passing MySpace but not yet capable of generating significant earnings). Why? Because no one believed back in the days, in conjunction with the financial crisis, that a social network could be profitable. Facebook had time to grow and when Google+ came out, Facebook was already an established and profitable business. Google+ was indeed a wake-up call for Facebook saying that they had to be at least as good from a development standpoint in order to complement the network effect barrier.

MySpace is now the shadow of what it could have been and with the owners like Justin Timberlake, one can argue that they are still not well equipped when it comes to the strategic vision. They are clearly dead as a generalist social network: they are too far in terms of users, product and financial capacities. Their only option is to become the niche music and video promotion site that they used to be. But then again..., why them instead of a fan page on Facebook or Google+? Only with greatly superior artist dedicated feature they could stand a chance, but what would prevent the 2 giants from integrating that? Clearly, MySpace resembles more a car with no engine that keeps going thanks to inertia, but we do not believe an instant that it stands a chance to bounce in the future.

3.3. Android

Facts

Even though it has been less than 4 years ago[46] since Google launched its first Android powered smartphone, this open-source OS soon became #1 in the world[47].

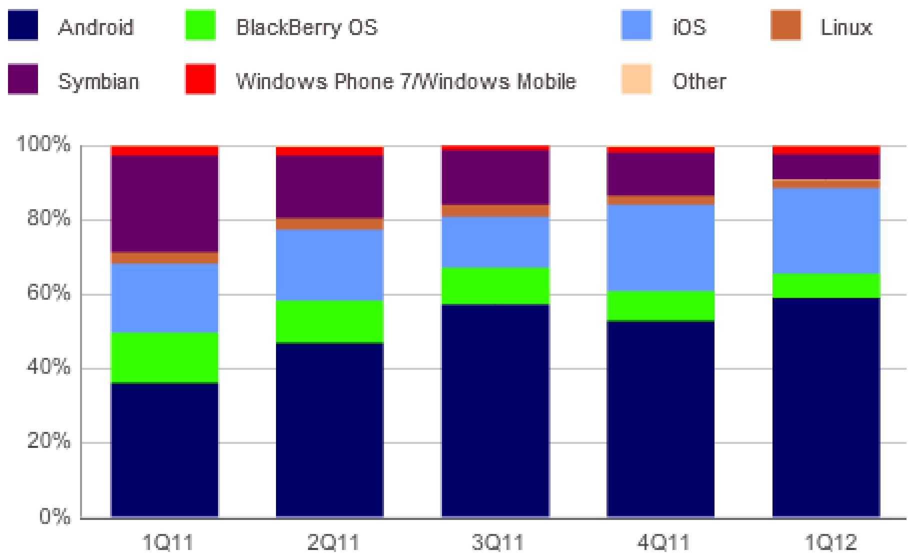

Figure 9: Worldwide Smartphone OS Marketshare, 1Q2012, source IDC: http://www.idc.com/getdoc.jsp?containerId=prUS23503312

In fact in the very beginnings of Android, many business analysts have doubted why Google is entering this domain. Does Google really want now to produce mobile phones? To this concern Google's Director of Mobile Platforms answered following[48]:

"We see Android as an important part of our strategy of furthering Google's goal of providing access to information to users wherever they are. We recognize that many among the multitude of mobile users around the world do not and may never have an Android-based phone. Our goals must be independent of device or even platform. For this reason, Android will complement, but not replace, our long standing mobile strategy of developing useful and compelling mobile services and driving adoption of these products through partnerships with handset manufacturers and mobile operators around the world."

In order to better comprehend the factors of Android's success, let us take a walk down history lane of its key milestones[49]:

August 2005
Google acquires mobile software startup called Android[50].

46 Official Google Blog: http://googleblog.blogspot.fr/2008/09/first-android-powered-phone.html
47 IDC.com: http://www.idc.com/getdoc.jsp?containerId=prUS23503312
48 Official Google Blog: http://googleblog.blogspot.fr/2007/11/wheres-my-gphone.html
49 Extracted from Google's history: http://www.google.com/about/company/history/

November 2007
Via co-operation Open Handset Alliance Google, group of 84 technology and mobile companies, launches first open platform for mobile devices.

September 2008
T-Mobile announces the G1[51], the first phone built on the Android operating system.

June 2009
Release of beta version of AdSense for Mobile Applications, which allows developers to earn revenue by displaying text and image ads in iPhone and Android applications.

November 2009
Motorola launches Droid, one of the most successful smartphones powered by Android OS.

January 2010
Launch of Google's flagship smartphone powered by Android and manufactured by Taiwanese manufacturer, HTC.

This launch has generated a rather heated debate in the media, who have been trying to understand why Google launched its own phone? Did Google want to start competing with phone manufacturers and/or beat the iPhone? But then why they didn't advertise the product and purely relied on the power of word of mouth?

Eventually, when a sales report was released on Flurry.com showing that after 74 days after launch only 135 000 Nexus One units[52] have been sold in comparison to over a million iPhones and Droids over the same period, everyone has thought this launch to be a flop.

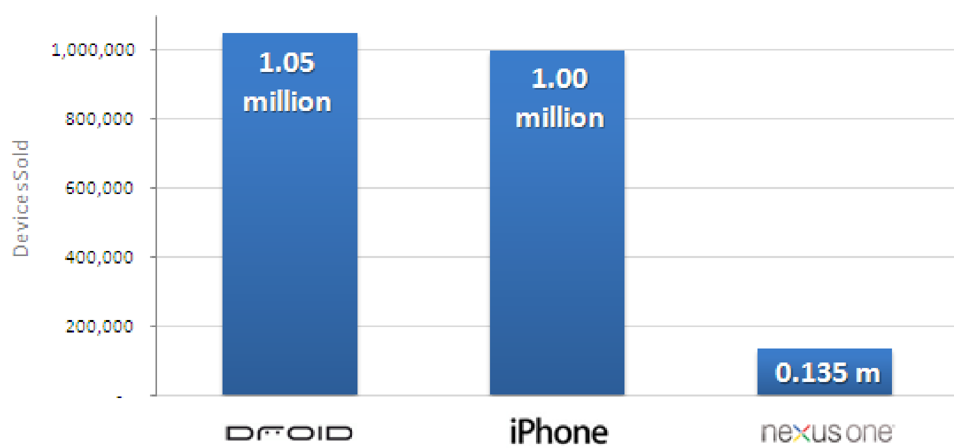

Figure 10: Sales Comparison in 74 days after launch: http://blog.flurry.com/bid/31410/Day-74-Sales-Apple-iPhone-vs-Google-Nexus-One-vs-Motorola-Droid

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50 BusinessWeek.com: http://www.businessweek.com/stories/2005-08-16/google-buys-android-for-its-mobile-arsenal

51 Official Google Blog: http://googleblog.blogspot.fr/2008/09/first-android-powered-phone.html

52 Flurry.com: http://blog.flurry.com/bid/31410/Day-74-Sales-Apple-iPhone-vs-Google-Nexus-One-vs-Motorola-Droid

This may have seemed as a failure however, Google did not really see it that way. In fact, Andy Rubin, Google's Senior Vice President and co-founder of Android said[53] that he expected ~150 000 units sold without specifying the time period.

An overall belief is that Nexus One was supposed to be a display window for Android and an additional promotion tool for the adoption of the Android OS by other phone manufacturers.

January 2011
Motorola launches Xoom tablet, first tablet with Android Honeycomb, 3.0 version of Android OS.

Here again it is rather important to clarify that even though before we spoke of Android largely as a reference to OS of smartphones, these are not the only devices that can be run on this operating system. As obvious from this data point, tablets can also run on Android and apart from Motorola, also manufacturers such as Samsung, Asus and Sony are effectively using this OS on their tablet devices.

August 2011
Google announces its intention to acquire Motorola[54].

Here again it would be useful to provide a brief commentary, as this business decision signifies a rather big turn in Google's mobile strategy. Prior this acquisition Google had been purely a software player, however, based on Google CEO's statement[55] this acquisition had a twofold meaning:

- supercharge Android ecosystem
- strengthen Google's patent portfolio to better protect Android from anti-competitive threats from Apple and Microsoft

October 2011

Google and Samsung unveil their first phone powered by Android 4.0, a.k.a. Ice Cream Sandwich

December 2011
Android Market exceeds 10 billion app downloads[56] - with a growth rate of one billion app downloads per month.

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53 Gigaom: http://gigaom.com/2010/01/05/andy-rubin-on-google-phone-android/
54 Official Google Blog: http://googleblog.blogspot.fr/2011/08/supercharging-android-google-to-acquire.html
55 Official Google Blog: http://googleblog.blogspot.fr/2011/08/supercharging-android-google-to-acquire.html
56 Official Google Blog: http://googleblog.blogspot.fr/2011/12/10-billion-android-market-downloads-and.html

June 2012
At the Google I/O 2012, Google announces its newest version of Android OS, Jelly Bean and Nexus 7 tablet.

July 2012
Samsung smartphone sales trump iPhone sales for 2Q 2012[57].

This although not directly linked to Android is a milestone from a perspective of a competitive position on the market.

Vendor	**2Q12 Unit Shipments**	**2Q12 Market Share**
Samsung	50.2	32.6%
Apple	26.0	16.9%
Nokia	10.2	6.6%
HTC	8.8	5.7%
ZTE	8.0	5.2%
Others	50.7	32.9%
Total	**153.9**	100.0%

Figure 11: Top Five Smartphone Vendors, Shipments, and Market Share, Q2 2012 (Units in Millions): http://www.allaboutsymbian.com/flow/item/15365_Q2_2012_statistics_released_by.php

External opportunity

The first layer of opportunity came from Apple and its iPhone as they created a market demand for a new type of device:

- a performant touch screen
- a fast intuitive operating system
- an application market
- synergies with other traditionally desktop functionalities such as mailing
- desirable hardware

57 Allaboutsymbian.com: http://www.allaboutsymbian.com/flow/item/15365_Q2_2012_statistics_released_by.php

They created a market for something they were already best at, by transferring a strong skill set to an older market. Now that consumers craved for iPhones, the product became a product category, and first competitors were only “like an iPhone but not an iPhone” at best. Apple took the premium segment and occupied that position for a while, leaving all the mid and lower range available.

Second layer of opportunity originated from the fast mobile network spreading (3G) which allowed proper browsing: internet could now spread to mobile phones. However, the mobile terminals and software were not up to date with an exception of iPhone and its IOS that had one major disadvantage, being locked and made to be used only with other Apple products and services.

The third layer of opportunity came from the fact that many manufacturers could make a very good phone, but none were remotely close to compete with Apple on the operating system. They were all eager to catch up on the OS before entering the market of true iPhone like smartphones.

Internal opportunity

Google had no experience in the production of hardware. So it has nothing to offer in the field of mobile devices to go after the iPhone. But when Apple was strong on the hardware and software side, Google had a tremendous amount of resources where they were in a dominant position:

- online services (Gmail, Picasa, Maps, apps and much more) that could benefit from a mobile integration, and vice versa: a Google operating system could greatly benefit from the integration of existing services
- strong engineering experience in client / server online based softwares
- Google Search
- millions of advertisers willing to expand their campaigns to mobile
- sufficient finances to invest in development and purchase of the missing technologies
- a business model that consisted in giving away services and monetize with advertising

In addition to that, a softer resource yet key to the equation was the vision of the leaders at Google, who always tried to link the development of today in line with the market behavior of tomorrow: they strongly believed that Mobile devices would generate sufficient traffic within a decade, and since the desktop operating system market was saturated, Google wanted to make a move on mobile.

Match between internal and external

Not a very obvious move for business analysts back in the day: many articles have been written on how Google would fail because they knew nothing about the business of phones or operating systems. Now that we have laid down the opportunities, it becomes clear why that reasoning was incorrect: Google leaders were perfectly aware of what they could do better and what they could not. They were aware of what mobile phone players could do better and what they could not: they came in and filled the gap, they went after the missing element - a powerful yet open operating system - because what they could do best, was missing most in the industry.

Thanks to its business model and belief in its capacity to monetize it no matter what, Google gave away Android for free to all smartphone manufacturers, allowing them to come back at Apple with competitive, and lately even on the top of the range products such as Samsung Galaxy S2 and S3. The move was brilliant and no skilled analyst could possibly doubt of its success: they removed the main entry barrier for all competitors, making it possible to unlock the low and middle range smartphone segments. Google created synergies with its online services, created new traffic for its advertisers and brought healthy competition. All without ever attempting to do something they were not good at.

More recently, Google acquired Motorola. The reason being, quite obviously that Apple makes considerable profits with the sales of a hardware / software package. The strategy of Google is unclear for the moment and how will other manufacturers react? Google leaders believe in the virtues of an open market place, hence it is likely that they will offer the same operating system to everyone, privileging Motorola phones. Another likely reason for Google to make that move is the continuous patent threats from Microsoft and Apple (documented in the fact section of Android) and acquiring Motorola enabled Google to significantly strengthen its patent portfolio.

Outcome and diagnosis

Now we can summarize the outcome by 3 key facts:

1. Microsoft missed its opportunity: although being the first one on the mobile OS segment more than a decade ago, it missed the turn and only recently launched a mobile operating system. Sales are below expectations and the external opportunity is moderate to low with the spread of Android. They were too bureaucratic, slow, and not structured for innovations.

2. Nokia took 2-3 years to figure out what it wanted to do. After a completely unrealistic match between its resources and the opportunity, Nokia finally relied on Microsoft to provide an operating system. The image of “late dinosaurs” of both companies added up to the inferior performance of their product and led to disappointing sales.

3. Google is the world leader in mobile operating system and could afford Motorola mobile as an entry door to the field of hardware. Android is very positively regarded by the critics and users, and in Q2 2012 Samsung sold more Android phones than Apple (see figure 11).

If we think of the operating system market on desktop and laptops, only 2 players managed to emerge: Microsoft and Apple. Linux remains very confidential. It appears that Apple took a similar segment in the mobile world, and Google clearly stole the spot to Microsoft as the dominant player, leaving little room for a third player. Some might say that Google does not make a profit with Android. There are three points answering the concern:

- Google acquired Motorola, allowing itself to make similar profits as Samsung and Apple
- What Google aspirations for mobile are in line with what they have done so far with AdExchange: a platform to connect all the advertising networks together, a stock market for online advertising. Google's belief is that in a completely open marketplace, they are the best equipped to provide the ad serving and analysis tools to navigate that open market. They provide the market structure and are a market player at the same time. They make money both ways, but by playing their own game they also maximize their market share
- Google Glass: smartphones are not the last device to come up and be mobile and connected. The most recent innovation from Google in this field, Google Glass[58], computerized glasses designed to let wearers use apps, capture images and video, use the internet and social networks on the move, proves that more innovative products are yet to come allowing stronger interaction with the human body. No one will be in a better position to exploit those technologies. Google is leading innovation and yet takes its time because it has other revenue sources. Android is one example among others that there is no need to rush when your resource position is that strong

[58] Guardian.co.uk: http://www.guardian.co.uk/media-network/media-network-blog/2012/jun/28/google-glass-mobile-smartphones-tablets

3.4. Nokia

The facts

How did the leading mobile phone manufacturer dropped from 50% market share (Q2'07) down to below 10% (Q1'12) and remained under dark skies in only 4 years, under the pressure of Apple and Google's Android operating system?

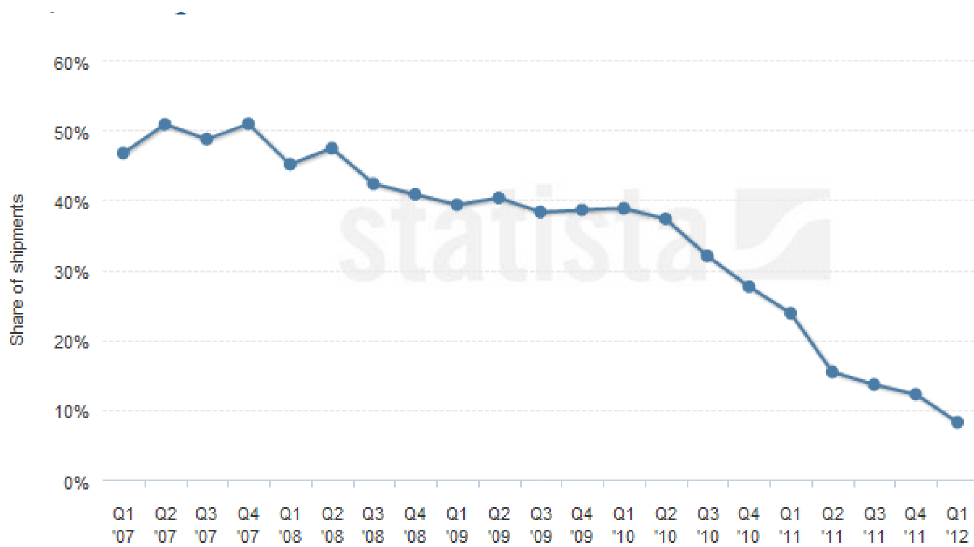

Figure 12: Global market share of Nokia smartphones from 1st quarter 2007 to 1st quarter 2012: http://www.statista.com/statistics/12861/market-share-of-nokia-smartphones-since-2007/

After attempts in various industrial fields in the 80's (personal computers, IT equipment), Nokia decided in 1992 to entirely focus its effort on mobile phones. It dominated the market of mobile phones for several years, then of smartphones with the N series working on the Symbian, home-made, operating system.

In 2007 however, Apple launched the iPhone. A terminal that provided customers a much better, radically well marketed experience. Stephen Elop, appointed Nokia CEO in early 2011 stated:

"*The first iPhone shipped in 2007, and we still don't have a product that is close to their experience. Android came on the scene just over 2 years ago, and this week they took our leadership position in smartphone volumes. Unbelievable.*"

External opportunity (Porter's Forces)

At the time Nokia started losing the edge, the market was transitioning from classic phones demand, to smartphones. Let's look at the phone market when Apple launched the iPhone and Nokia was in a leading position:

- Phones were mostly used for calling and texting, as MP3 players, personal agendas, sometimes for "waiting for the bus" gaming and photography
- Mobile internet speed was not sufficient to browse desktop sites, and some WAP sites or GPRS very light sites existed, but nothing worth calling a actual website
- The key features of a smartphone were hardware related: how much built in memory for MP3, how light, how good looking, what battery life etc.

Apple changed the landscape by providing a much superior smartphone experience with its first attempt at the market. They anticipated the launch of 3G networks that would allow proper web browsing, and suddenly, new cards had been dealt: Apple used their key resources, did what they did best, and applied them to another market: designed hardware with a intuitive operating system, with the Apple brand image.

However, if Apple's move was to be seen as a competitive variable, it also created an opportunity: by creating a highly demanded top end product, Apple created the demand for middle range smartphone. In addition, no market could be satisfied with one single dominant player, customers always crave differentiation. When Apple entered that market, it created, de facto, the "job opening" for the second player. Consumers would crave for iPhones, the product becomes a product category, and first competitors are only "like an iPhone but not an iPhone" at best.

At that stage, Nokia had a year and a half to react, to produce an operating system that could compare to the IOS experience yet with significant differentiating elements. It had the know-how to make proper hardware for a long time, it was in the backbone of the company. It had a home-made operating system, Symbian, which was though comparably inferior to IOS, hard for developers to work on and in the end much harder to be widely adopted.

That second player role could have been Nokia's, but a year and a half later, Google took it away by launching the Android OS, a system that provided a similar experience to Apple's product, with key differentiating elements (to be discussed in the section on Android).

Back then, Nokia had another alternative to play its cards right, and a solution to one of its main problem: the inferiority of its OS. Indeed, Android was a strange product: it was open and free to any phone manufacturer. Google had a vision, to generate and organize information, and then monetize it. Selling phones at that stage was not in Google's plans, what they wanted was to create in a gravity field around an operating system, because people might change hardware easily, but once an OS is installed in people's lives, it is hard to get it out. This had been widely demonstrated by Microsoft, maintaining top market share with significantly faulty OS for years.

The question is, why did Nokia ignored the Android opportunity? They had the know-how and reputation around hardware, they could have added a personalized layer to the OS and be where Samsung is nowadays. But they insisted on making their own OS, actually not even one but two of them: Symbian for mid range products, MeeGo for high range.

In addition, Nokia completely ignored the touch screen turn, when clearly it was one of the key success factors of the iPhone.

Later, Nokia decided to opt for Windows mobile as an operating system, with the idea in mind that it would bring key differentiation. Once again, a bad call: not only Windows Phone, an operating system developed by Microsoft, did not demonstrate performance, but the desire was little on the customer side. Opting for a different but already appealing platform could have made sense, but this was repeating the same diagnosis mistake over again.

Internal opportunity (Resource Based View)

Back in 2007 after the launch of the first iPhone, Nokia had resources:

- A first position with the corresponding revenue to finance the development of an improved OS
- They had the reputation among customers, and the customer base, that comes with years of market leadership

The match between external and internal opportunities (Resource Based View)

This is where Nokia completely failed, and it is in essence a failure of the decision makers being completely unable to match new market conditions with the internal potential of the firm. Significant elements were to be put together:

- The iPhone experience was the one to match. They had the resource to do so or not. If not, they had the opportunity to use Android from late 2008
- On the hardware side, an area Nokia historically mastered, all it had to do was to offer touch screen terminals. With the usage of Android, Nokia would have been among HTC and Samsung, benefiting from Google's OS and adding it up to its existing credibility, something neither HTC nor Samsung had back in the days

- Nokia fundamentally ignored customers' demands. Because Apple shaped them into what we know (a given type of OS with a designed touch screen hardware), Nokia though could have reshaped these demands its way

This latter point is fundamental. As mentioned earlier, an entrant with a much stronger product could conquer a market by force, disregarding the opportunity, using its benefits from a very strong resource-based competitive advantage. That is precisely what Apple did. They came up with a much better product, and took the high end segment by force. Nokia misled itself into thinking it had that resource-based competitive advantage, and that by matching it with the new born demand for smartphones, it could remain on top. The demand was there indeed, the match with a resource-based competitive advantage was not.

Outcome and diagnosis

Decreasing market share, operating profit at -487mil EUR in Q2 2012[59], the actual situation is best described by the excerpts of the memo from Stephen Elop sent to its employees[60], which speaks for itself :

Competition

In 2008, Apple's market share in the $300+ price range was 25%; by 2010 it escalated to 61%. They are enjoying a tremendous growth trajectory with a 78 percent earnings growth year over year in Q4 2010. Apple demonstrated that if designed well, consumers would buy a high-priced phone with a great experience and developers would build applications. They changed the game, and today, Apple owns the high-end range.

And then, there is Android. In about two years, Android created a platform that attracts application developers, service providers and hardware manufacturers. Android came in at the high-end, they are now winning the mid-range, and quickly they are going downstream to phones under €100. Google has become a gravitational force, drawing much of the industry's innovation to its core.

While competitors poured flames on our market share, what happened at Nokia? We fell behind, we missed big trends, and we lost time. At that time, we thought we were making the right decisions; but, with the benefit of hindsight, we now find ourselves years behind.

The first iPhone shipped in 2007, and we still don't have a product that is close to their experience. Android came on the scene just over 2 years ago, and this week they took our leadership position in smartphone volumes. Unbelievable.

Nokia

We have some brilliant sources of innovation inside Nokia, but we are not bringing it to market fast enough. We thought MeeGo would be a platform for winning high-end smartphones. However, at this rate, by the end of 2011, we might have only one MeeGo product in the market.

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59 Q2 2012 Interim Nokia report: http://www.results.nokia.com/results/Nokia_results2012Q2e.pdf

60 Appendix B, Letter from Stephen Elop to Nokia employees: http://www.engadget.com/2011/02/08/nokia-ceo-stephen-elop-rallies-troops-in-brutally-honest-burnin/

At the midrange, we have Symbian. It has proven to be non-competitive in leading markets like North America. Additionally, Symbian is proving to be an increasingly difficult environment in which to develop to meet the continuously expanding consumer requirements, leading to slowness in product development and also creating a disadvantage when we seek to take advantage of new hardware platforms. As a result, if we continue like before, we will get further and further behind, while our competitors advance further and further ahead.

At the lower-end price range, Chinese OEMs are cranking out a device much faster than, as one Nokia employee said only partially in jest, "the time that it takes us to polish a PowerPoint presentation." They are fast, they are cheap, and they are challenging us.

***And the truly perplexing aspect is that we're not even fighting with the right weapons**. We are still too often trying to approach each price range on a device-to-device basis.*

The battle of devices has now become a war of ecosystems, where ecosystems include not only the hardware and software of the device, but developers, applications, ecommerce, advertising, search, social applications, location-based services, unified communications and many other things. Our competitors aren't taking our market share with devices; they are taking our market share with an entire ecosystem. This means we're going to have to decide how we either build, catalyse or join an ecosystem.

This is one of the decisions we need to make. In the meantime, we've lost market share, we've lost mind share and we've lost time....

In addition to the points above, there is also the matter of perception and desire: from a consumer point of view, you just cannot shine with a Nokia anymore: *only 1 out of 5 people in the UK prefer Nokia to other brands*[61]. Your terminal has to be a iPhone or an Samsung Android at best, or and HTC with Android. The bet Nokia took by opting for Windows Phone has been so far a failure, which has been even further magnified by the recent news that current Nokia devices with Windows 7 and 7.5 will not be upgraded to the newer OS, Windows 8[62], an action that is seen as a default in this type of industry. Just to bring the parallel with Android, every time new OS is launched within several weeks all users get an option to get an update.

The strategic mistake is grave, not only Nokia missed an opportunity to bounce on a newly created demand, they also lost desirability and reputation in less than a few years. The failure is total in the sense that they both missed the external opportunity, but they also consumed the internal resources that, a few years ago only, were a source of competitive advantage. They are now in a position with a significantly diminished external opportunity (Samsung, HTC and recently Sony are well established as outsider on Android), but they have at this stage nothing to offer in terms of unique resource capable of creating consumer desire.

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61 Appendix: letter of Nokia CEO

62 Mashable.com: http://mashable.com/2012/06/20/no-upgrade-windows-phone-8/

4. Practical Implications

Such empirical work is pointless if it does not lead to prescriptive recommendation. Indeed, the theory used in this thesis is very well known when it comes to Porter's 5 forces, and predominant in the field of strategy research when it comes to the Resource Based View of competitive advantage. The link between both has already been formulated partially and in most cases the theoretical considerations are somewhat known to the decision makers.

As often, the real challenge is how to articulate concepts when embedded in a complex environment. This and more will be covered in the following chapter, where we will describe the method used to allow interpretation in complex situations.

We will then lay down a checklist that every decision maker should have in mind in order to run the proper strategic diagnosis. And finally, conclude by highlighting how Google as an example of resource management and matching resources to opportunities.

4.1. Shape and form of the method

We will try to make it prescriptive, and flexible enough to allow fluid reasoning. Indeed, how come some decision makers with the highest standard of business education, in charge of some of the most desirable companies, could not identify those elements and match them together? There is no doubt that other fields of expertise closer to the individual level of decision making would state that the leader's profile is key, and that his/her own abilities and experience can explain a lot. However, there has to be a way to process that reasoning to make it accessible to others.

The decision maker, as smart and educated as he is, is caught in a web of stakeholders and situations that can obscure his sight. Personal relationships with other CEOs, conflicts of interest, emotional bias towards some solutions or products due to personal history are as many other factors likely to blur his judgment. A typical case of misjudgment due to the human factor would be an escalation of commitment. One makes an initial decision, and commits to that course of action no matter what in order to justify that original decision. We have seen in the past how this has lead to disasters much more important than a company failure (the Vietnam War is often used as an example of such decision maker's bias).

What we will try to do in this section is dismantle the reasoning, turn it into a checklist, a process that leaves as little room for emotional interpretation as possible. We do not intend to deliver an equation, a rigid system that would never apply properly to any real situation. A suitable solution must allow iteration and integration of a complex reality. This is why it will consist in a series of questions organized into a process that the decision maker should ask himself, in order to bring clarity and shape to his reasoning.

Finally, those questions will be adapted for network industries, where competitiveness can rise and fall in much shorter time period than older industries due to the previously mentioned specificities.

4.2. The opportunity assessment questionnaire

We will focus here on the scenario that came up as the most interesting: how to defend a successful market position in the network industries against new entrants or competitors willing to conquer your market share. As stated above we want to address the protection of the competitive advantage. The core concept here being that the external opportunity must be met by a superior resource position, it opens the door to different types of threat:

A/ You are being attacked on your resource position

B/ The external opportunity has switched

How to answer each of those situations is the ultimate goal of this questionnaire. Before the decision maker can address these possible situations, he needs to have constantly a clear vision of the status of his resource position, and of the external opportunity. The resource position is probably the most important, as it is the one you can truly act upon. In many cases leaders completely misunderstand what the real strength of their business is, or think wrongfully that any business is equally equipped to conquer an external opportunity, provided that the later has been identified.

Consequently, we will first see how to answer the following questions:

- What is the internal opportunity? Does my company have something better to offer than competition, and can competition easily copy my successful product?

- What is the external opportunity? In other words, is there a market opening that one can conquer and then sustain position?

Once this pre-diagnosis has been done, the decision maker will then be able to address the 2 possible types of threats above mentioned.

4.3. Analyse your resources position

This sub-chapter we can fragment in 4 sub-steps:

1. List the necessary resources for the production of your product

2. Rank them by importance in the creation of a competitive advantage

3. Analyse them with Porter's grid from a resource standpoint: what is the opportunity for someone else to get a stronger competitive advantage on that resource

4. Figure out what it takes to defend that competitive advantage, using the same mechanisms as described by Porter

1. The first thing you ought to do here is list all the resources necessary for the production of whatever it is that your company does. "Resource" is not to be taken as "production input", it can includes any element such as customer support, a recognisable design, a reliable part of your product, a engineering team of specialist, a superior sales force, a brand image etc (see figure 2 in chapter 2) .

2. Then rank your resources, making the top of your list, the ones that are the true source of your competitive advantage.

3. For the top of the list, using Porter's model, figure out how easy it is to defend that competitive advantage. The big difference here is that you will look at the defendability of your resource position. For example, when looking at the threat of new entrant, you are considering "entry as a competitor for your unique resource". Let's consider a couple of made up cases to illustrate to illustrate this point:

- ***What made us gain market share is our long lasting strong brand image of premium specialist in our field***. The nature of the product is irrelevant to my clients, they buy my brand: you have a hard to copy asset that protects you considerably from entrants. As long as you continue to grow the brand, and make sure your product does not become obsolete due to a technological revolution, you are rather safe

- ***What made us gain market share was our innovative design (back in the days) and experienced team of engineers who after years of hard work cracked how to make the product reliable***. You must then consider that your advantage has a life expectancy as others will also be able to catch up, and do the same maybe even better. Technology can destroy your resource competitive advantage in a few months. If this is what you rely on to maintain market share, you ought to maintain that edge by investing considerably in R&D and mostly, be very well aware of technological changes. Always assume that any new or innovated products are potentially better than what you are currently offering.

Find a way to integrate new features / functionalities into your products or services. Use communication to embed into consumers' mind the idea that you are the technological leader

4. Estimate the costs of defending your competitive advantage and get your organization ready to react (both functionally and financially). If we take for example the last mentioned advantage, it would mean that you need to be structurally organized for fast innovation. This is a very specific type of process you would then put in place in order to become such company: little micromanagement, flat organization, bandwidth for personal ideas, cash allocated to entrepreneurial projects, a particular profile of employees etc.

In an ideal situation, a very hard to attack firm in the network industries would be combining the following elements:

- A strong brand, enabling to obtain consumer's consideration rather easily when launching a new product
- Generate multiple sources of income to mitigate risks
- A resource competitive advantage that is not only hard to replicate, but also applicable to a lot of markets or products. For example, an innovative organization with quick reaction time and strong engineering is well equipped for a lot of markets. By playing the innovation card on multiple markets where it provides an advantage, you not only maximize the return on investment of your resources, but also limit the risks of losing the edge on all fronts at the same time. This gives you the option to bounce from one market to another depending on where you resources remain valuable, while at the same time financing the necessary research to become competitive again where you lost the edge
- Presence on multiple fast growing markets at a time
- Considerable financial and structural assets, necessary to roll out products at scale, protecting your share from smaller entrants

It is hard not to notice how Google corresponds nearly ideally to the description outlined above. This is not a chance, everything in the company leads to believe that the founders are very well aware of why they succeeded, and their strategic moves always appear to be a quest for the match between what Google can do best and an external opportunity. The company's organisation (flat, flexible, decentralized) is also ideal to maintain a dominant resource position.

It now becomes clear that conventional concepts such as the Porter's analysis are insufficient for a complete analysis of the next strategic move, yet are very useful as a part of more comprehensive approach that would include taking into consideration the internal competitive advantage of the firm.

4.4. Analyse the external opportunity

To commence this step, we recommend starting by running a classic Porter analysis, as obvious as it seems, it does not appear to be used often enough in practice.

Unlike more traditional industries, opportunities show up much faster in the network based fields. Take the automotive industry for example; the emergence of hybrid vehicles or of SUVs did not occur in 1 or 2 years. Product cycle is typically 7 years for a car, parts are interchangeable and it is rare that a manufacturer gets fully left aside of a large market trend for too long. It is then important to mention that timing matters much more in those new network industries. In order to enter with the right assets on the right market segment, one must react and mobilize forces in time. That implies having the proper amount of resources allocated to monitoring the market. To conclude: a top player can go all the way down in a few years, since trends and technology can evolve even faster than product life cycles, in a sense that a given investment cannot even have time to be profitable, that a significant evolution has already made that investment obsolete. Here is a checklist of indicators to monitor:

1. ***Consider every new product as the one that will cause your doom***

2. ***Monitor public opinion very closely, on the internet users can communicate and exchange with a reach and frequency that will overcome your capacity to influence them through advertising***

3. ***Keep a very close eye on technology: the environment might evolve quicker than you can make your offer evolve***

4. ***Keep an eye on competitors who are after your market share, and monitor what their resource position is***

1. Consider every new product as the one that will cause your doom

Never disregard the importance of a distinctively new product. It might be a complete failure, but it also might define the demand of tomorrow. In that case you might want to assess how strong you would be at answering that demand. For example, when Apple launched the iPhone, Nokia should have regarded the Apple operating system as the immediate new standard for user interaction with a smartphone. By denying its superiority, Nokia prevented themselves from reacting in a timely manner.

2. Monitor public opinion, and the level of desire that soon-to-come product generates

Internet makes it easy. The fact is: people check reviews, exchange between each other, and joke about any product you might put in the spotlight. In other words, by trying to create a lot of attention around your product with advertising, what you really achieve is just that users/consumers are more likely to notice you, however, this in no way reassures you that they will be more likely to purchase your product or have a positive feedback on it. The internet users will make of it what they wish: if a trend occurs in public opinion, it becomes an internet truth and you will not be able to do much about it.

What you can do however, is use that tremendous amount of unsolicited feedback to improve your offer. As an example: Microsoft launched its “I am a PC” campaign, showing essentially that the real everyday efficient, cool and smart computer users would trust PCs instead of Mac, because PC are down to the point and not fashion objects. The fact is, someone figured out the ads themselves have been done on a Mac computer[63]...and for a few weeks running online gags making fun of Microsoft not liking its own product enough to use them. On a more serious note, reading comments on future Microsoft launches on review sites is eloquent: they are essentially being made fun off: “this is going to be another flop”, “great a new source of jokes” etc. Why monitoring public opinion is important? If Microsoft decided a long time ago not to disregard public opinion (they were in a monopolistic position), they would not have that nearly impossible to correct negative image online. By being oblivious to public opinion, we can also say that Microsoft created its own competitive disadvantage. Funny enough, their CEO was elected the worst CEO of the USA[64] by Forbes for not being able to take any of the important turns of the past 10 years.

3. Keep an eye on technologies:

- Be ready to switch fast or integrate: is there a lot of activity around a key component of your product such as operating system for mobile phones? If yes, you might want to internalize the best resource by overtaking a specialized smaller player, or abandon yours if you see that a better resource is available externally (yours becoming in that case a source of disadvantage). In order to know where to look at, go back to the resource position questions: anything that concerns your top 5 most important resources should be under close examination

- Is there a major switch in the technological landscape that will allow such a strong product evolution that the category you are strong in becomes irrelevant? In other words, you might be the untouchable best horse carriage manufacturer, with the strongest

63 http://allthingsd.com/20080919/hi-im-a-pc-and-i-was-made-on-a-mac/

64 http://www.forbes.com/sites/adamhartung/2012/05/12/oops-5-ceos-that-should-have-already-been-fired-cisco-ge-walmart-sears-microsoft/3/

reputation and brand, but when one invents a petrol engine, will your brand and reputation transfer to this new market, or do you have to start it all over again? A question, leaders at Nokia could have asked themselves with the arrival of fast mobile internet: “Are our phones up to the new technological environment?”

4. Keep an eye on who else is after your market share

First, there is the matter of financial resources: if during your diagnosis you will realize that there is an emerging technology that eliminates your competitive advantage and that several large players can afford purchasing it (take over, license or else), you may want to redefine your strategy and avoid getting into a fight you will not be equipped for anymore. We are insisting on “anymore”: do not let your history lead you into thinking you will remain the best no matter what, simply because you are used to being in a leadership position. Capitalize on your reputation, but be ready to fight for that competitive advantage all over again from scratch if necessary. We will see in the last part what the possible options are.

Looking at another scenario: your competitor is really small and has no cash cow business or home market to support its attempt? That does not mean you are safe either, depending on the conditions: is your service or product easy to reproduce and is your success based on notoriety and brand recognition or network effect? Those assets take skills to acquire, not only financial resources. See how Facebook overtook MySpace in a few years. Depending on what is the true nature of your competitive advantage, you might be totally vulnerable to any entrant unless you keep evolving fast enough. That leads us to the final part of our guided reasoning for decision makers: how to back-fire at the various types of attacks you might face.

4.5. Resist the threats by matching your resource set to the external opportunity

At this stage, you should already have a clear idea of where you stand. Let's take our 3 hypothetical situations. Keep in mind that we cannot list every possible situation. Our goal is to combine a complete enough series of action-reaction scenarios that the decision maker can use as a reference point to articulate his own reasoning.

A/ You are being attacked on your resource position

Is it realistically defensible? If your competitor is confronting you with a directly superior product from a feature standpoint, you will not have too many options:

- You can adopt a different positioning*:* for example, Apple took the premium segment away from Nokia, and Nokia still cannot compete with modern operating systems. There is however room in the entry level segment, especially considering the economic situation. Google and Amazon understood it well with their <200$ tablets

- You cannot adopt a different positioning*:* you provide for example a web browser. Your software is either faster, more reliable and easier to use, or it is not. You must get back at your competitor by integrating his innovation to your future version of the product or figure your own. Ideally, you would have structured your organisation to never lose the edge by being super reactive to user comments and communicating aggressively to opinion leaders. Last but not least, if your business lays on such an easy to compete with product: diversify. Your organization is talented at doing client / server web based softwares? Find external opportunities that you can address well with that skill set, make your software complementary to one another to create entry barrier

Here again, remember that Google was in the beginning a web page provider, a single service. Keep in mind that the diagnosis made on the Nokia example too corresponds perfectly to that scenario.

Luckily the market can be large enough or growing fast enough for you to bounce back: your market share can be shrinking, it does not mean that the volume of business you are doing is going down if the market is growing fast. When getting back at competition, use the time to consolidate your activities and refocus your resource allocation where it matters. If the market is not large enough and steady, decreasing massively, or so crowded that there is not enough space for new positioning, you might have missed some strategic moves a long time ago. A good example of this is Microsoft and mobile operating softwares: 10 years ago they were the only mass market offerer, now they are fighting as an outsider to take a little market share from Google and Apple.

- Last but not least, you give up that resource competitive advantage and refocus on a stronger one: for example, you might not have the best product, but you have the strongest customer service & value for the money due to your superbly managed organization. Let this be your competitive advantage: you would be the Dell when the premium spot is left to Apple and Lenovo

B/ The external opportunity has switched

You are Kodak and digital sensor made most your business irrelevant. You are universal and internet and MP3 are crushing your sales. Your are Nokia and Apple launches the iPhone, projecting your company directly into the future 5 or 6 years too early for you. What are your options?

- Your resource position allows you to sustain competitive advantage in some other way. For example, Kodak has a very strong reputation in the world of photography, they could have capitalized on their brand, a powerful resource, and integrated the digital sensor technology (sensors are essentially made by Sony and a few other manufacturers). None of the actually top players in the field of digital compact cameras were historically from the photography equipment industry (Sony, Panasonic etc.). But those companies had a resource: know-how and infrastructure for the manufacture of electronic equipment. Camera becoming a pure piece of electronics, they naturally transferred the use of their resources where the opportunity and the growth was and simply outsourced sensors. Kodak was making film cameras and was in a position to anticipate that evolution early enough to grow that manufacturing capacity. They would have been in the same situation as other, with the brand name on top. We can see clearly that without the monitoring step, this defensive move is impossible to achieve

- You can grow develop that resource. In a new market created by a technology switch, you traditionally have years of fast growth due to the low level of equipment of users. This gives you time and margin to acquire that resource, and even sometimes overcome the first entrant (first entrant advantage is a myth, it has been demonstrated that second entrants benefit greatly from the learning curve of the first in many cases)

- You cannot restructure your resource position and acquire that resource (lack of monitoring, financial means, etc.), your margin lays in adjusting the match between what you can do best and the external opportunity. Refocus on a different market segment in other words. Nokia was too late in developing a superior operating system and did not benefit from the superior Apple brand image and desirability. In other words, they were beaten in every domain where they used to have resource competitive advantage. Instead of blinding themselves into thinking that they could catch up, they should have focused on hardware manufacturing, to create reliable (a key Nokia attribute in the past) mid to low priced phone using Android as an operating system. They left those segments to Samsung and HTC

We can never insist enough on the value of anticipation. Most of the roadblocks mentioned above are avoidable if treated in time. Also, no matter what the situation out of those stated earlier, it is very unlikely that if you diversify your activities, you lose your resource / external opportunity pairing on every market at a time. If you do something really well, use it anywhere that it brings extra customer value. This is something Google excels at.

Google has been working at conquering advertising budget far beyond the Search pages. They simply could not depend on such a hard to defend position. Google has been spending most of its efforts into growing the display and mobile market which are proportionally generating a lot less revenue per working hour. They know they can do one thing better than anyone: deploy a vast server infrastructure to process information and serve ads in a complicated yet automated manner. Television web based ads do not generate revenue yet? It does not matter: Google is building a unique resource set. Buzz and wave were complete flops? It does not matter; Google was developing know-how in social software, for it becomes an essential resource to attack a market. Google does not sell a lot of Chromebook (the pure cloud based computer), it does not matter, when cloud becomes the way to use computing, they will have a unique resource and know how.

What do all these statements have in common? They require tremendous engineering skills and server capacity, Google has both. Not only they use it anywhere that it is relevant for example search, emails, photosharing, social network, office aps, maps and browsee, they also use it to grow unique resource for yet to come markets. This is where the strategic performance really is: journalists with limited vision may comment on the poor short term value of those softwares, but they do not see that Google is in fact creating a skill set and synergies between services like few other companies ever did before. Those synergies become a unique resource too, why switching to Internet Explorer if all your softwares and devices are synced up with Chrome?

Google is exemplary at managing competitive advantage from a resource standpoint: they understood that a market opportunity is nothing if your resource does not allow competitiveness. As a consequence, they cultivate those resources, which puts them into position where they can even lead the industry, create external opportunities where they are the strongest: in advertising, their main source of income, they are years ahead of competition in creating the first fully open ad serving marketplace that would simplify the life of all agencies, become at the same time the trader and the stock exchange. In the field of user / machine interaction, they now dominate the mobile market, they position themselves as the number one provider of 100% cloud machine, and Chrome is now first web browser at a global scale. Keep in mind those 12 years ago, this company had one and only service, a web page, google.com.

5. Conclusion

The difficulty of daily business management is that life is not a case study. We could compare it to the situation where you can see all the flows in other people's personalities and the way they manage their life, when you are poorly capable of analysing yours. Where running a business, company culture and history, conviction of executives and shareholders, escalation of commitment, pride, information overload and personal experience are as many disturbance factors that prevent you for seeing clearly.

The fact is, we are trying to think analytically complex and dynamic situations. It is close to impossible, as figuring out the equation that would rule all physics. What can be done however, it reducing complexity and add a little structure to the reasoning by knowing what questions to ask yourself, and what the answers imply. It is like being a sailor, you cannot know every wave and wind, but you can learn to recognize that a combination of certain factors will lead to a corresponding set of sailing conditions. This is precisely what we have tried to achieve here:

1. Have the decision maker understand where the competitive advantage truly comes from

2. Have the decision maker anticipate how to sustain it, and recognize what can be threatening it

We chose the field of what we defined as network industries because they are dramatic: companies are born as giants and die in a few years. What we observe is that because they are very volatile, one cannot explain competitive advantage simply with an external approach: it is not about being there at the right time. It is about being there at the right time, matched with the right skill set. Anyone can produce nearly anything, users can replace nearly any product or service by another as they wish: ***the one way to maintain your market share is to ensure that whatever you do, you do it best and you make it hard to replicate.*** The competitive advantage lies in your resource structure: it is not important to know if the market segment has entry barriers, it probably has little. What is important is knowing that what resource you have in order to occupy that market segment has strong entry barriers, few potential entrants and little substitution options.

In the field of network industries, we mentioned briefly in the Android case that “many companies lacking the strategic vision or being too annoyed by the volatility of competitive advantage in those industries decided to create entry barriers with patents and lawyers.” This clearly is symptomatic of decision maker lacking the strategic method to navigate in a volatile environment. Clearly shareholders also dislike the lack of predictability in the industry, and probably push for legal ways to secure competitive advantage. This is highly detrimental to the brand image of companies harassing competition with patent wars, and this is detrimental to innovation and the customers in the end. We are also convinced that focusing on such defensive mechanisms creates a company and strategic mindset that gets your organisation unprepared for a fair fight when it comes to resources. We know that the best way to sustain a competitive advantage is to build a resource position that allows you to provide a superior user experience in several markets, and reinvest your earnings into building the resource position that will generate the advantage of tomorrow. Monitoring and anticipation are key, and even though vision cannot be bought, asking yourself the questions we suggested above, should remove some of the fog.

It seems like the existing theories on competitive advantage now offer great explicative value if connected to one another as we did in this work. However, there is still room for more insights:

- By integrating heterogeneity of resources the Resource Based View got a lot closer to reality; however the dynamics of creating and sustaining competitive advantage are to be explored deeper. Indeed, market demand and resource creation are correlated but the causality between the two is complex: one can create market demand by inventing a unique resource; or develop a unique resource to answer a market demand. Google's strategy could be seen as a pure exercise of growing a consistent resource set over the past 10 years. It was to protect itself from the high risks of a single product revenue at first, but the way Google is shaping internet use via the creation of that resource set is striking: when cloud computing will emerge as a mass market solution, it will greatly look like what Google made it (Chrome books, Android and all Google online services all together). There is room to analyse this new opportunity creation mechanism via the growth of a resource set

- Research theories are in essence explicative. Experimentation is here to test them until they are proven wrong, and then comes the need for a larger theory that can absorb the first one and explain new phenomenon. In the field of business however, theories are closely linked to prescriptive recommendation and the world of consulting. Porter using his model in order to support his consulting business is the best illustration. The fact is, strategy research exists to allow better training of decision makers, and here comes a new challenge: an integrated theory that would contain Porter's work and the Resource Based View gives us a solid analytical framework to explain successes. This leads us to the last question: why smart and educated decision makers, even though trained appropriately, cannot translate that knowledge into accurate strategies? We believe there are two fields of research that could bring us closer to an answer:

  - The analysis of decision making at the individual, psycho-sociological level. For example, how to make rational reasoning overcome escalation of commitment?
  - Analysing how we approach complex problems: business is not physics, we tend to research and educate with analytical models, probably also because they are simpler to commercialize. However, business management is an exercise of a constant decision making in a soft dynamic and complex environment, with partial and biased information mixed with imperfect human decisions.

6. Resources

Offline resources

Strategic management literature

- Michael Porter's 5 forces model,
  Harvard Business Review March-April 1979, pp 141
- Jay Barney, Firm resources and sustained competitive advantage,
  Journal of Management 1991, Vol.17 No 1,99-120, pp 99-120
- Contemporary Strategy Analysis, 7th Edition,
  Robert M. Grant 2009, ISBN-10: 0470747102, pp 123-168
- The corner stones of the competitive advantage, a Resource Based View,
  Margaret A. Peteraf, Strategic Management Journal Vol.14 No. 3, 1993, pp 179-191
- Strategic factor markets: expectations, luck and business strategy,
  Management science, 42, Jay B. Barney 1986, pp 1231-1241
- The Innovation Journey,
  Andrew H. Van de Ven, Douglas E. Polley, Raghu Garud, Sankaran Venkataraman 1999
  ISBN-10: 0195133072, pp 223-290

Main online resources

Online news press

www.bbc.co.uk

www.guardian.co.uk

www.forbes.com

www.reuters.com

www.businessweek.com

Specialized online press

www.techcrunch.com

www.mashable.com

www.gizmodo.com

www.neowin.net

www.gigaom.com

www.idc.com

7. Appendix

Appendix A[65]

I sat back in awe watching Zuckerberg at F8 today. Facebook has done it again -- they are always reinventing themselves, always pushing toward the future. They're so good at incorporating other ideas at the right time (http://on.mash.to/rkpYna) and leaving out ideas, when the're too early.

Many people have messaged me on G+ saying that the new Facebook looks like MySpace of 2008. Customizing profiles with modules, music, video, news. There's some truth to that. But MySpace (even under my leadership) was a rudimentary and often poor implementation of those ideas. It's also true that people may have not been ready for MySpace back then. (Not to mention that web standards and bandwidth may have not been ready.)

The thinking behind Facebook and MySpace have always shared some basic tenets, if not from the outset, at least by late 2004:

1) Everyone will be online. Some old folks will learn. The young will swim in it.
2) Everything gets better online when you can socialize around it / talk about it.
3) People want a "place" on the web, to be found, to communicate, and represent themselves.

These are some of the basic reasons these sites are so popular. Facebook gradually got better than MySpace at realizing all these basic ideas. The one they were never that good at was "representing" the individual. That will probably change with this new launch. There's a chance Facebook could execute poorly and things won't work as well as they hoped, but that's not likely. Facebook generally gets things right over time.

So if Facebook keeps getting better & better, and keeps delivering on the basic promise of "social networking," how is that good for Google+? It's good because with the changes announced today, Facebook becomes quite different. I wouldn't say that today's Google+ is too much like today's Facebook. But I will say, that ***to succeed in the long run, it'll have to be different.*** *And it just got easier to be "different."*

+Vic Gundotra and +Bradley Horowitz and crew have a challenging, rewarding and completely awesome task set before them. They're working on a project that is so fun, because it means so much to so many people. When you work on something like Google+, Facebook, or Twitter, and millions of people use it, and you know it'll keep growing, and you see it upsetting the power balance in businesses, politics, and life, it's an awesome feeling... you can't help but think lofty thoughts. You feel like you're changing the world, contributing to society, and it makes you feel

[65] From Tom Anderson's G+ profile: https://plus.google.com/+myspacetom/posts/HpG4ZDQz2dd

more connected to that world. You have the feeling that must inspire politicians in the beginning of their careers -- "I'm going to make this world a better place." And you get that feeling without all the nasty stuff that politicians must face. You didn't have to compromise to get there. You just made something cool and people responded and used your creation. Maybe they used it in ways you never dreamed of, but you see it making an impact in people's lives.

I wrote a few days ago about what kind of humanity different social sites encourage (http://bit.ly/nLj66l -- same as the shared link at the bottom of this story). Now is the time for the Google team to dig deep, and think about what they want for humanity. What's the best way to live? What's the best way to interact with our brothers and sisters across the globe? Connecting human beings in this way was simply not possible before the Internet. How can this powerful tool be refined to encourage the kind of relationships that will inspire us, behavior we ***should*** *strive for, and the memories we will treasure? How can you create a platform to better humanity?*

Facebook has just announced their vision for this platform. It's now becoming more & more different from Google's. This is good for Google because it encourages the Google team to reflect and consider how they are different: to uncover the philosophical underpinnings of what they've created, and to refine the design of something that embodies the values they want to encourage. It's not about Facebook and Google "copying" each other. It's about defining the vision behind the code, features, and website, so that everyone working on the product lives & breathes it.

As a user, I look forward to seeing the various online "countries" created by Google, Facebook & Twitter. In the online world, we can choose to be a citizen of any digital country we want. In fact, we can even choose to hold dual or triple citizenship, without the hassle of passports & travel. We all benefit as each country becomes more of a unique place to live online.

I'll end this by linking to / sharing my earlier post that I coupled with a Steve Jobs video, "Good artists copy. Great artists steal."

It's time for Google to refine it's vision so it sings like a simple and perfect poem. (Maybe it already does.. as outsiders, we can't know that yet. Websites like Google+ aren't built in a day, or even a year.) From that poem, the Google+ team will be able to put together an elegant website that suggests an ideal for humanity. To paraphrase something from my earlier post I just shared, this all may sound a little too heady. But we are talking about ***social*** *networks here. Why do you think people spend so much time on these sites? Why is there an uproar when they change? Social sites speak to our deepest needs, and, our souls, even. Enjoy Google, I bet you folks are having the time of your lives right now :-)*

Appendix B[66]:
Hello there,

There is a pertinent story about a man who was working on an oil platform in the North Sea. He woke up one night from a loud explosion, which suddenly set his entire oil platform on fire. In mere moments, he was surrounded by flames. Through the smoke and heat, he barely made his way out of the chaos to the platform's edge. When he looked down over the edge, all he could see were the dark, cold, foreboding Atlantic waters.

As the fire approached him, the man had mere seconds to react. He could stand on the platform, and inevitably be consumed by the burning flames. Or, he could plunge 30 meters in to the freezing waters. The man was standing upon a "burning platform," and he needed to make a choice.

He decided to jump. It was unexpected. In ordinary circumstances, the man would never consider plunging into icy waters. But these were not ordinary times - his platform was on fire. The man survived the fall and the waters. After he was rescued, he noted that a "burning platform" caused a radical change in his behaviour.

We too, are standing on a "burning platform," and we must decide how we are going to change our behaviour.

Over the past few months, I've shared with you what I've heard from our shareholders, operators, developers, suppliers and from you. Today, I'm going to share what I've learned and what I have come to believe.

I have learned that we are standing on a burning platform.

And, we have more than one explosion - we have multiple points of scorching heat that are fuelling a blazing fire around us.

For example, there is intense heat coming from our competitors, more rapidly than we ever expected. Apple disrupted the market by redefining the smartphone and attracting developers to a closed, but very powerful ecosystem.

In 2008, Apple's market share in the $300+ price range was 25 percent; by 2010 it escalated to 61 percent. They are enjoying a tremendous growth trajectory with a 78 percent earnings growth year over year in Q4 2010. Apple demonstrated that if designed well, consumers would buy a high-priced phone with a great experience and developers would build applications. They

66 Stephen Elop's letter to Nokia employees: http://www.engadget.com/2011/02/08/nokia-ceo-stephen-elop-rallies-troops-in-brutally-honest-burnin/

changed the game, and today, Apple owns the high-end range.
And then, there is Android. In about two years, Android created a platform that attracts application developers, service providers and hardware manufacturers. Android came in at the high-end, they are now winning the mid-range, and quickly they are going downstream to phones under €100. Google has become a gravitational force, drawing much of the industry's innovation to its core.

Let's not forget about the low-end price range. In 2008, MediaTek supplied complete reference designs for phone chipsets, which enabled manufacturers in the Shenzhen region of China to produce phones at an unbelievable pace. By some accounts, this ecosystem now produces more than one third of the phones sold globally - taking share from us in emerging markets.

While competitors poured flames on our market share, what happened at Nokia? We fell behind, we missed big trends, and we lost time. At that time, we thought we were making the right decisions; but, with the benefit of hindsight, we now find ourselves years behind.

The first iPhone shipped in 2007, and we still don't have a product that is close to their experience. Android came on the scene just over 2 years ago, and this week they took our leadership position in smartphone volumes. Unbelievable.

We have some brilliant sources of innovation inside Nokia, but we are not bringing it to market fast enough. We thought MeeGo would be a platform for winning high-end smartphones.

However, at this rate, by the end of 2011, we might have only one MeeGo product in the market. At the midrange, we have Symbian. It has proven to be non-competitive in leading markets like North America. Additionally, Symbian is proving to be an increasingly difficult environment in which to develop to meet the continuously expanding consumer requirements, leading to slowness in product development and also creating a disadvantage when we seek to take advantage of new hardware platforms. As a result, if we continue like before, we will get further and further behind, while our competitors advance further and further ahead.

At the lower-end price range, Chinese OEMs are cranking out a device much faster than, as one Nokia employee said only partially in jest, "the time that it takes us to polish a PowerPoint presentation." They are fast, they are cheap, and they are challenging us.

And the truly perplexing aspect is that we're not even fighting with the right weapons. We are still too often trying to approach each price range on a device-to-device basis.

The battle of devices has now become a war of ecosystems, where ecosystems include not only the hardware and software of the device, but developers, applications, ecommerce, advertising, *search, social applications, location-based services, unified communications and many other things. Our competitors aren't taking our market share with devices; they are taking our market share with an entire ecosystem. This means we're going to have to decide how we either build, catalyse or join an ecosystem.*

This is one of the decisions we need to make. In the meantime, we've lost market share, we've lost mind share and we've lost time.

On Tuesday, Standard & Poor's informed that they will put our A long term and A-1 short term ratings on negative credit watch. This is a similar rating action to the one that Moody's took last week. Basically it means that during the next few weeks they will make an analysis of Nokia, and decide on a possible credit rating downgrade. Why are these credit agencies contemplating these changes? Because they are concerned about our competitiveness.

Consumer preference for Nokia declined worldwide. In the UK, our brand preference has slipped to 20 percent, which is 8 percent lower than last year. That means only 1 out of 5 people in the UK prefer Nokia to other brands. It's also down in the other markets, which are traditionally our strongholds: Russia, Germany, Indonesia, UAE, and on and on and on.
How did we get to this point? Why did we fall behind when the world around us evolved?

This is what I have been trying to understand. I believe at least some of it has been due to our attitude inside Nokia. We poured gasoline on our own burning platform. I believe we have lacked accountability and leadership to align and direct the company through these disruptive times. We had a series of misses. We haven't been delivering innovation fast enough. We're not collaborating internally.

Nokia, our platform is burning.

We are working on a path forward -- a path to rebuild our market leadership. When we share the new strategy on February 11, it will be a huge effort to transform our company. But, I believe that together, we can face the challenges ahead of us. Together, we can choose to define our future.

The burning platform, upon which the man found himself, caused the man to shift his behaviour, and take a bold and brave step into an uncertain future. He was able to tell his story. Now, we have a great opportunity to do the same.

Stephen.