

STRAND<sup>2</sup>CONSULT

**The moment of Truth**  
**– a portrait of the iPhone**

**Press Edition**



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## Introduction

A lot has been said and written about Apple's iPhone, but very few have actually been objective and critical about the reality that the media has created.

Strand Consult is well-known for not beating about the bush, we have been critical countless times about the media-created reality that often characterises the mobile industry and on multiple occasions it was us that opened the mobile operators' eyes to the real world - based on real financial key figures - a reality that is much more interesting from a shareholder point of view.

Strand Consult was the first company to report that NTT DoCoMo and i-mode were not the fantastic success that many were trying to portray them. We published the first reports about the enormous opportunities in using Premium SMS and WAP billing, and we documented through our analyses and reports, that Korea was a far more advanced mobile market than Japan.

We were the first to publish information about the MVNO market, the structure of the market and how it would develop in the future. We predicted that the new no-frill MVNOs would radically change the mobile market and very precisely predicted the changes that the Finnish, Norwegian, Dutch, Belgian, German and Spanish mobile markets subsequently experienced.

Time and time again, it is Strand Consult that questions the media created reality that many technology providers are trying to create together with the press. We state our opinions and have nothing against criticism, as long as it is based on fact - and not what people think.

When the iPhone was initially introduced, we were also very critical about the product and Apple's strategy. Even at that early stage, we predicted a lot of what has subsequently happened, but that the media has "forgotten" to describe. We never believed that the iPhone was an opportunity for operators and we stated at a very early date that the closer relationship an operator had with Apple, the worse business case they would end up with.

There is no doubt that the iPhone has an attractive design and user interface. In this report we study the myths surrounding the iPhone and whether they can be documented, or whether they are simply myths created by the media. The most significant myths surrounding the iPhone are:

1. The iPhone creates data traffic in mobile operator's network
2. The iPhone helps operators attract new customers
3. The iPhone is good business for mobile operators

4. The iPhone is dominating the mobile services market
5. App stores are a huge success that has revolutionised the services market
6. There is money to be made by developing iPhone applications
7. iPhone customers are creating the majority of the current online mobile surfing traffic
8. The iPhone has a large market share
9. The iPhone was the first mobile to launch with a touchscreen
10. The iPhone is a technically advanced mobile phone

We believe that this report discredits most of the 10 largest iPhone myths. We can simply not find any documentation that justifies the myths that are surrounding the iPhone and the iPhone's business case.

We believe that there is a need for an objective view on the iPhone, both regarding advantages and disadvantages, and in relation to whether the iPhone actually creates shareholder value for the operators - and not just Apple. There are many factors to take into consideration, when an operator is contemplating whether or not to offer the iPhone. They need to be aware of the iPhone effect.

We have collected data from many different sources in order to create a complete portrait of the iPhone. Part of the information has been gathered from various Investor Relation departments, and we have been in close dialogue with many operators while researching this report. Our client base includes 160 different operators, in other words; our knowledge on the topic is extensive and goes beyond the shallow analyses that have so far been published about the iPhone.

We have gathered sufficient information and data, to allow us to contribute valuable knowledge to the operators. By providing a more comprehensive picture of the iPhone, we will enable operators to assess the effect that the iPhone has had on their business, and it will allow operators who are considering the iPhone to assess the iPhone effect that they will be exposed to - if they choose to offer this product.

Since the introduction of Apple's iPhone, this product has received a tremendous amount of media attention. Apple is without doubt a unique company that understands the craft of industrial design and that has been successful in integrating this with their outward communication and their corporate image. Apple has thereby been able to create an unquestionably loyal fan base, that has been helpful in boosting the media hype around the iPhone. That the iPhone is a handsome and trendy product is hard to question. However, how attractive is the iPhone from an operator's perspective? Apple and the media have created a one-sided image of the iPhone and the effect it has on an operator.

AT&T, who has a market share of 29%, has also publicly stated that 40% of their iPhone purchases are made by new customers on their network, which means that

60% are their own customers switching to the iPhone, thereby cannibalizing other AT&T product offerings. With this in mind, it is important that one does not become completely mesmerized and dumbstruck by the hype surrounding the iPhone.

According to the research we have conducted on the operators, not one of these have increased their market share, revenue or earnings as result of introducing the iPhone. On the contrary, some operators have sent out profit warnings, because of the iPhone, e.g., AT&T and SingTel. As one chairman of a multinational operator stated: “ The iPhone effect is the effect that comes from moving our management’s focus away from the 99% of our customers that generate the cash flow that pays our bills.“



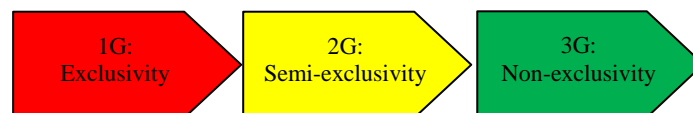
# 1. Apple's Distribution and Sales strategy

In order to understand how the iPhone will affect the operator's business, it is interesting to compare the distribution power and the sales trajectory that the iPhone has followed. According to Apple, the initial sale of the iPhone was limited to a select number of operators around the world, as this would ensure the quality of the product that was sold, and the services that followed it. With the launch of the iPhone 3G in Q3 2008, Apple's distribution power was strengthened, adding more than 90 new operators to the list of operators that offer the iPhone. At that time, Apple chose to change their distribution strategy, moving from exclusive distribution to non-exclusive distribution.

With the introduction of the iPhone 3GS the distribution power will be further expanded, e.g., in Denmark the number of operators carrying the iPhone will increase overnight from 1 to 4. Apple's distribution power has the following trajectory:

- **1<sup>st</sup> Generation iPhone**  
Initially, a limited number of operators had exclusive rights to sell the iPhone, which was launched in Q3 2007. Among these operators were AT&T, T-Mobile, Orange and O2.
- **2<sup>nd</sup> Generation iPhone (3G)**  
With the introduction of the iPhone 3G in Q3 2008, the number of operators grew considerably, but in every market only one operator had the rights to sell the iPhone. Among the new operators were Vodafone, SingTel, Teli-aSonera and Hutchinson etc.
- **3<sup>rd</sup> Generation iPhone (3GS)**  
With the launch of the iPhone 3GS in Q3 2009, Apple's distribution power has been greatly expanded. Multiple operators on each market will sell the iPhone 3GS, intensifying the fight over market shares. New operators now have access to the iPhone, e.g., Telenor in Denmark, Sweden and Norway.

This is illustrated in the following figure:



**Figure 1: The three phases of iPhone's distribution**

(Source: Strand Consult)

There are alternative explanations as to why Apple chose this strategy. Given the hype that surrounded the iPhone before its release, Apple was able to play the different operators out against each other, thereby ensuring the best deal from an Apple perspective. Selling the iPhone would undoubtedly benefit an operator, by being associated with a trendy and innovative product. One could argue that operators have been very eager to become exclusively associated with the iPhone. The eagerness of the operators has made it easy for Apple to sell the iPhone, and has allowed Apple to be very selective in choosing distribution channels, allowing them to charge a higher price for their product.

The shortcomings of the “securing quality” argument that has been put forward by Apple, is reflected in the examples of some of the operators that were chosen as iPhone distributors. In Denmark, the Swedish-Finnish operator, TeliaSonera, was chosen as the first distributor, despite the fact that the operator has a poor network coverage reputation. At the same time, TeliaSonera was also the first iPhone distributor in several other countries, e.g., Sweden, Norway, Estonia, Finland etc, indicating that an agreement with Apple was reached on a group level. However, this still compromises the “securing quality” argument, supporting the idea that Apple has been able to sell their product at a premium price and allowing the operators to use the iPhone as a differentiator.

### **1.1. Operator Partnerships and Shipments of iPhones**

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If you want to evaluate the success of a product, you need to examine the sales figures based on a number of parameters ranging from the size of the total market, how many customers use the distribution channels that the product is available in, and the total number of customers on the markets where the iPhone is available.

This section will provide an overview of how Apple’s distribution power has evolved from the launch of the 1<sup>st</sup> generation iPhone and up until now. The purpose of this section is to illustrate that the primary method that Apple has increased their iPhone market share, is by widening its distributional reach.

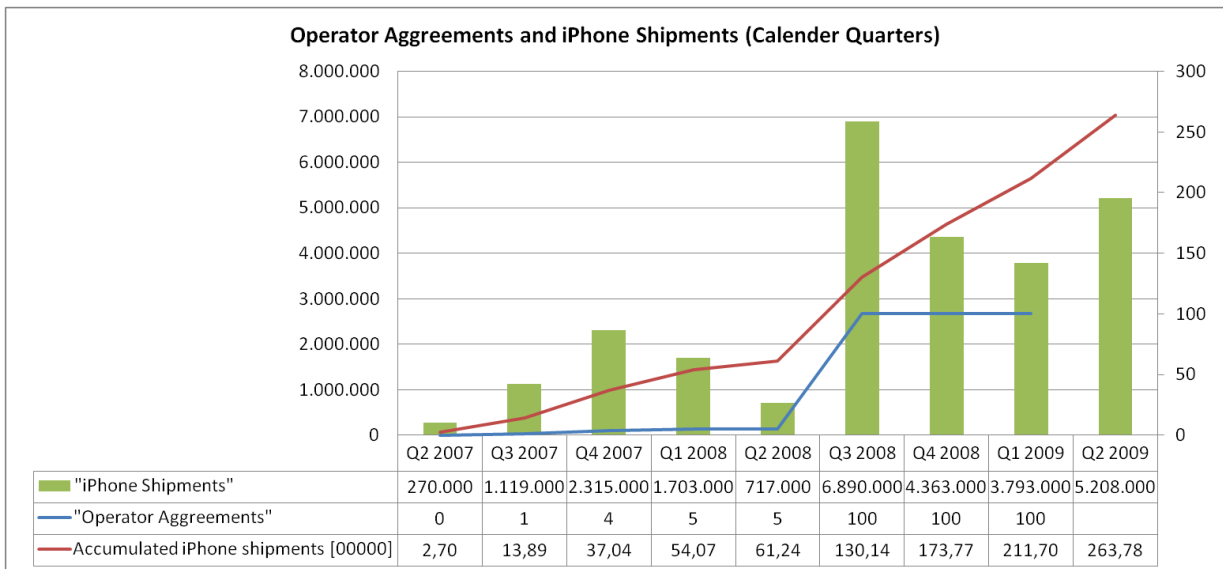
In order to compare Apple’s shipments with data from the operators, one has to take into account that Apple’s financial year ends September 27<sup>th</sup>, in other words, Apple’s financial year does not match calendar quarters. So, the financial numbers in the figures below are advanced a quarter, in order to make them comparable with calendar quarters.

When looking at the figures below, it looks like iPhone sales might not have been the tremendous success that the media hype has claimed. You can see a weak increase in the quarterly sales in the first three quarters, and thereafter sales subside. The decline in sales can be attributed to a temporary saturation in the iPhone market, and also expectations about the introduction of the iPhone 3G. This explains Apple’s

secrecy regarding product roadmaps - the attention that the iPhone 3G received resulted in a severe drop in the sales of the iPhone 2G.

With the launch of the iPhone 3G, impressive short-term sales were realized that in Q1 2009 were still higher than the iPhone 2G. The reason for the impressive sales should however be viewed in light of the expanded distribution that followed the iPhone 3G. The sales are not necessarily due to more people demanding the iPhone, but rather more people having access to purchasing it.

With the launch of the new iPhone 3GS, it will become more difficult to increase sales by widening distribution. It is hard to imagine that a large share of current iPhone 3G users will replace their phone with the new model, which is why we do not expect as significant an increase in sales as we saw with the launch of iPhone 3G.

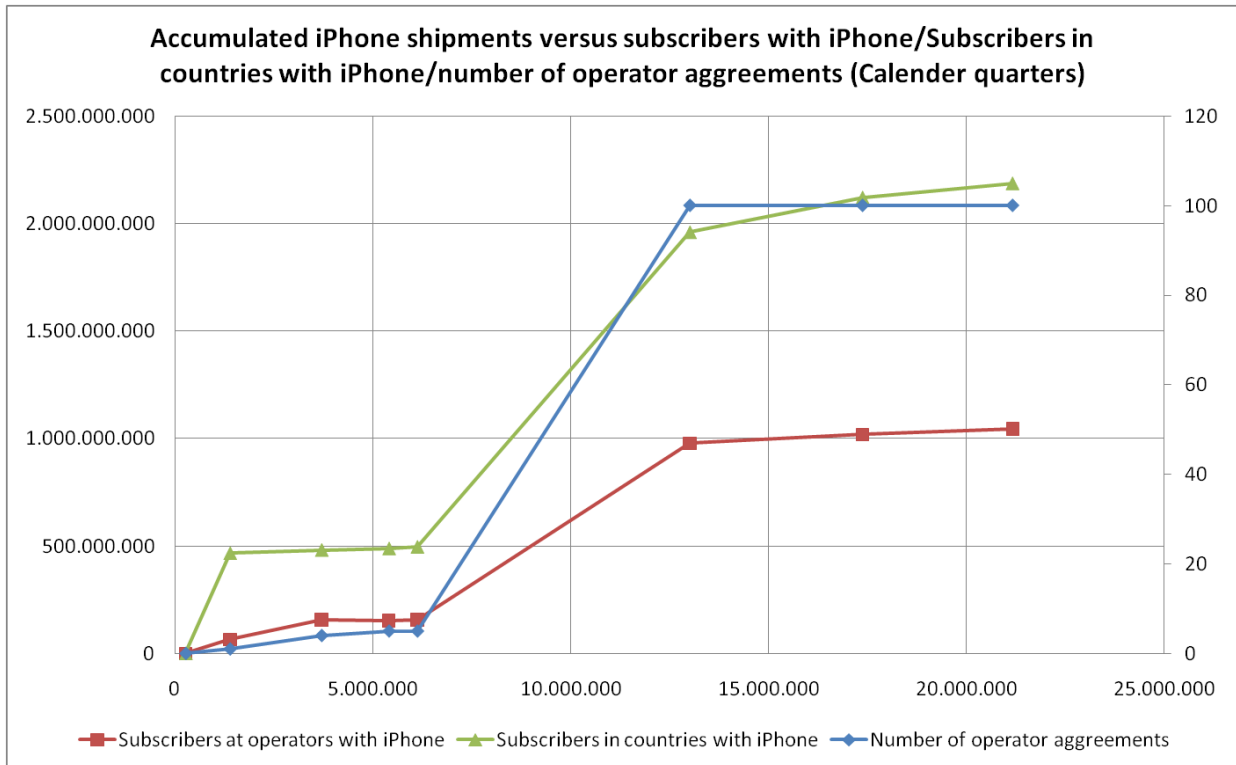


**Figure 2: Number of Partner Operators & iPhone shipments**

Note 1: Apple's financial year ends September 27, so quarters for Apple do not match the calendar quarters. Apple's financial numbers are in these figures advanced one quarter in order to make them comparable with calendar quarters.

Note 2: Operator agreements for Q2 2009 are not known

(Source: Various operators, Apple and Strand Consult estimates)



**Figure 3: Accumulated iPhone shipments vs. operator agreements/subscribers in countries/number of operator agreements**

Note 1: Apple's financial year ends September 27, so quarters for Apple do not match the calendar quarters. Apple's financial numbers are in these figures advanced one quarter in order to make them comparable with calendar quarters.

Note 2: The axis to the right shows number of operator agreements

Note 3: Operator agreements and mobile subscribers for Q2 2009 are not known  
 (Source: Various operators, Apple and Strand Consult estimates)

One could expect that the enormous media attention and the expanding opportunity of buying applications would lead to accelerating, accumulated growth in iPhone sales, so that the graph above will show an exponential growth. However, this does not seem to be the case.

With the introduction of the new iPhone 3GS, a similar pattern will emerge. The launch of the iPhone 3GS will create an initial increase in sales, whereafter sales will presumably decrease. However, given the already wide distribution, the likelihood of a growth in sales as explosive as when the iPhone 3G was launched is questionable.

If you examine iPhone 3GS sales in Q2 2009, Apple write in their press release that sales have increased by 626% compared to Q2 2008, but they forget to mention that:

1. In the quarter that Apple is comparing to, one could only purchase the iPhone on five markets that had a total of only 496 million mobile customers.
2. Today the iPhone can be purchased on over 100 markets, that have a total of over 2.18 billion mobile customers.
3. In Q3 2008, the iPhone could be purchased on 100 markets. In that quarter there were 1.95 billion mobile customers on those markets and Apple sold 6,890,000 iPhones during that quarter.
4. The 3GS model has only been on the market for 20 days in Q2 2009, on the other hand Apple is not reporting the number of end user sales, but instead handset shipments to their partners for that quarter.
5. If you compare Apple's figures for Q3 2008, with their sales figures for Q2 2009, they have experienced a decrease in sales of 1.682 million handsets, corresponding to a drop in sales of 24.4% since Q3 2008 - and this has happened despite the enormous increase of their distribution power.

Quite simply it is safe to say that the iPhone 3GS has not experienced the same customer demand as the iPhone 3G, back in Q3 2008. We believe that unless Apple experiences enormous growth rates in the next quarters, it does look like the iPhone is under pressure from the market, which is having a negative effect on sales.

One of the main factors that will influence the sale of the iPhone 3GS in the future is whether current users will replace their older iPhone model with the new one. The users most likely to replace their current iPhone with the 3GS are those that have the 1<sup>st</sup> generation model. As can be seen in the graph above, this is a relatively small number, approximately 6.1 million, compared to the around 15 million users who have the 2<sup>nd</sup> generation model. From these numbers should be deducted the natural decrease of units due to broken units, theft etc. Assuming a natural exit of the 1<sup>st</sup> generation iPhone of 12%, this results in an installed base of approximately 5.3 million. The iPhone 3G is newer and has overcome some of the children's diseases that invariably accompanies new, high-technology products, so we have assumed a natural exit of 4%, resulting in an installed base of 14.4 million.

Given the average replacement cycles for mobile telephones, the iPhone 3G users will presumably be more reluctant to replace their current phone with the 3GS. Taking into consideration that the iPhone 3G was launched in Q3 2008 and that average replacement cycle of mobile telephones is 2-3 years, most 3G users will probably hang on to their older model for while. In addition, many users have a subscription

contract of between 12-24 months, making it more difficult to switch phone without considerable cost. Among the countries with these subscription periods are Germany, Great Britain, Sweden and Norway. On the other hand, the typical Apple customer may not be comparable to an average mobile phone customer, as they are typically more open to new technology and many could be characterized as early adopters, that might replace their older model as soon as they are able to.

## **1.2. Mobile subscribers on the market and iPhones Shipments**

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If you want to evaluate the number of iPhones that Apple ships, you need to bear in mind that Apple does not disclose national or regional sales figures, but only global iPhone shipping figures.

In this section we will take a closer look at Apple's shipments compared to the number of customers their partners have and the total number of mobile customers on the markets where the iPhone has been launched.

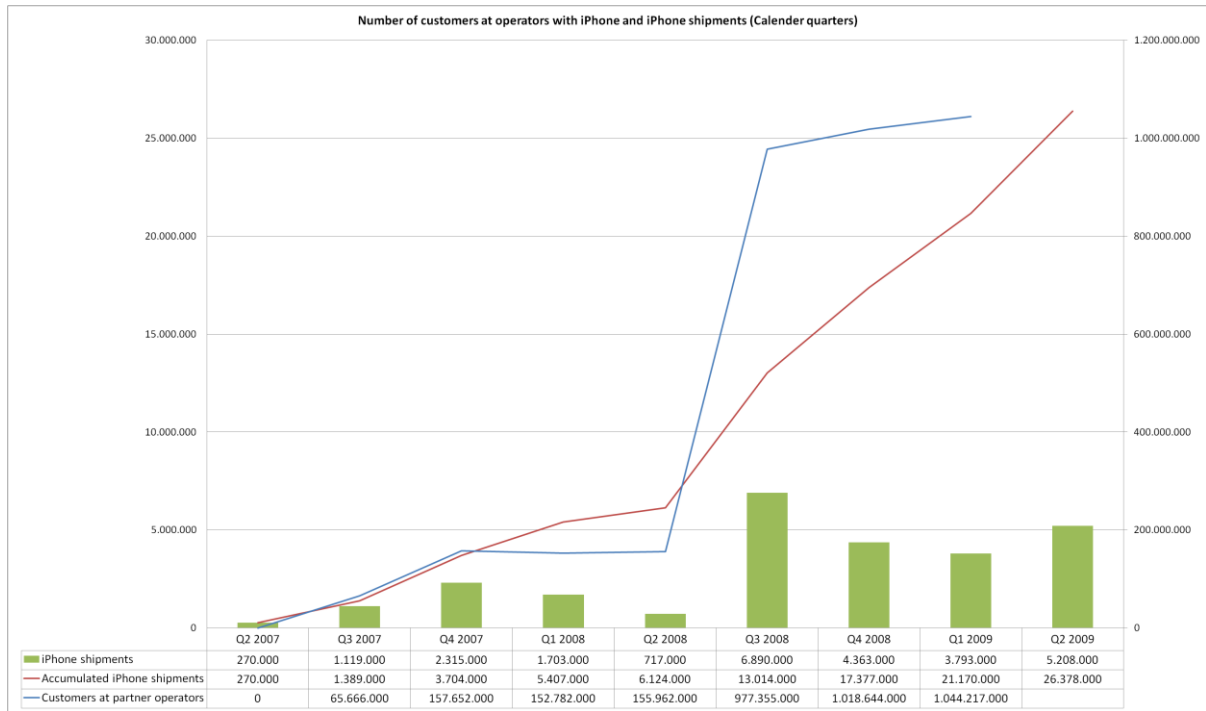
When viewing these figures, you should bear in mind that many of the large markets that Apple has launched on during Q2 and Q3 2008 are mostly markets with many customers, a low average ARPU and a relatively small share of customers that have the ability to pay the price of an iPhone. Simply put, even though India has a population almost 4 times larger than the USA, Apple's sales potential is not four times larger than in the USA.

Similarly it is also important to remember, that despite Apple currently having deals on markets that represent over half of the world's mobile customers, this does not mean that they have the same market potential in that part of the world, as the potential they had on their original markets. Apple's sales potential in countries like e.g. China, is limited compared to the size of the country.

The figures below illustrate the same point as the previous section. The number of subscribers follows the iPhone shipments, as the number of agreements that have been signed between Apple and operators increase. However, if you compare subscription growth of operators offering the iPhone, to the total subscriptions growth in the market - shown in Figure 6 - it is evident that the iPhone operators have experienced a smaller market growth than the overall market.

The fact that operators offering the iPhone have not been able to keep up with the rest of the market in terms of subscription growth is highly relevant, as one of the most important reasons for offering the iPhone, is that it can attract customers. As stated above, the operators naturally want to benefit from the association with the iPhone, but as the figures below show, the iPhone has not helped the operators acquire more customers compared to the rest of the market.

## The Moment of Truth – a portrait of the iPhone

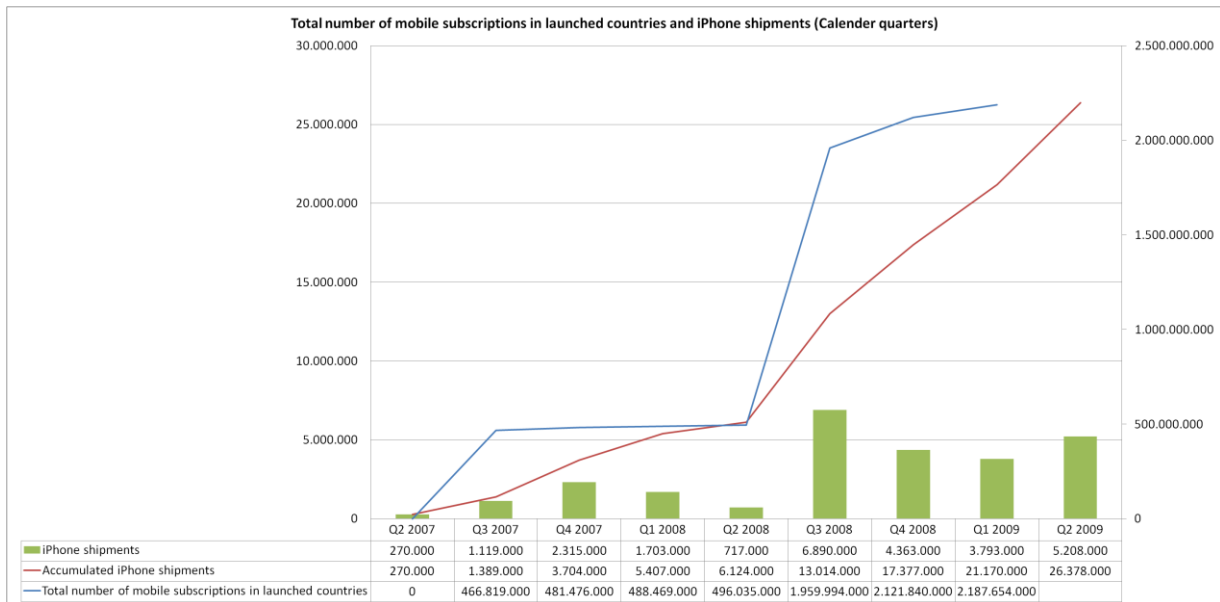


**Figure 4: Operator Subscriptions & iPhone Shipments**

Note 1: Apple's financial year ends September 27, so quarters for Apple do not match the calendar quarters. Apple's financial numbers are in these figures advanced one quarter in order to make them comparable with calendar quarters.

Note 2: Operator agreements for Q2 2009 are not known

(Source: Various operators, Apple and Strand Consult estimates)

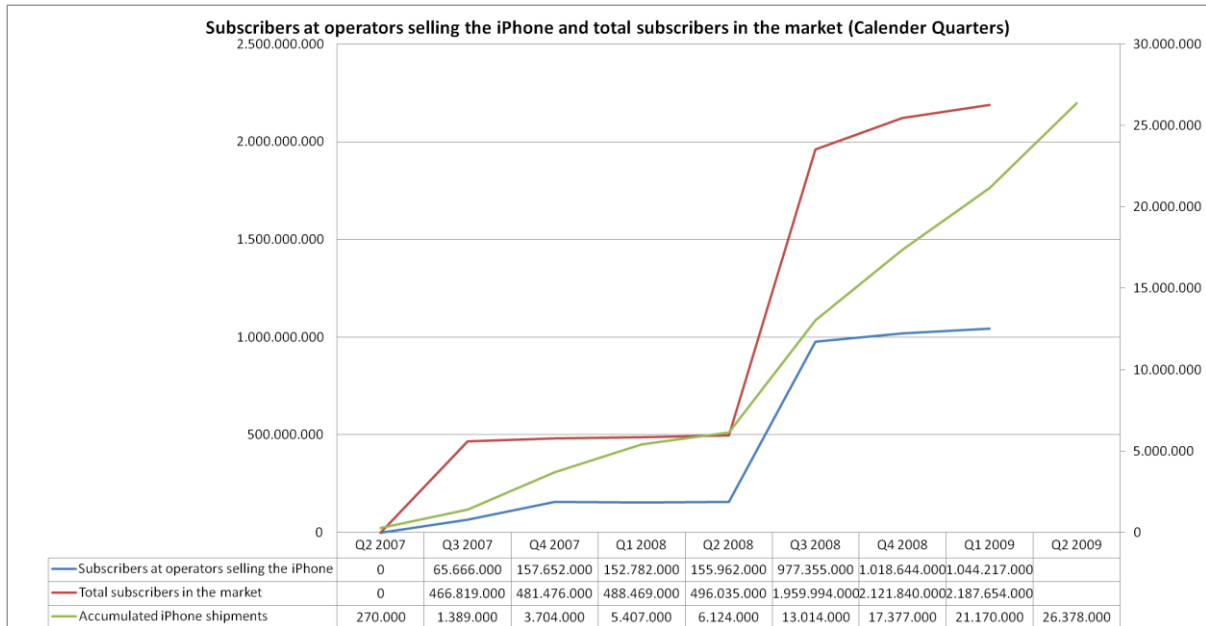


**Figure 5: Total Number of Mobile Subscriptions in Launched Countries and iPhone Shipments**

Note 1: Apple's financial year ends September 27, so quarters for Apple do not match the calendar quarters. Apple's financial numbers are in these figures advanced one quarter in order to make them comparable with calendar quarters.

Note 2: Operator agreements and mobile subscribers for Q2 2009 are not known.

(Source: Various operators, Apple and Strand Consult estimates)



**Figure 6: Operator Subscriptions (iPhone Resellers) and Total Subscribers in Market**

Note 1: Apple's financial year ends September 27, so quarters for Apple do not match the calendar quarters. Apple's financial numbers are in these figures advanced one quarter in order to make them comparable with calendar quarters.

Note 2: Operator agreements and mobile subscribers for Q2 2009 are not known  
(Source: Various operators, Apple and Strand Consult estimates)

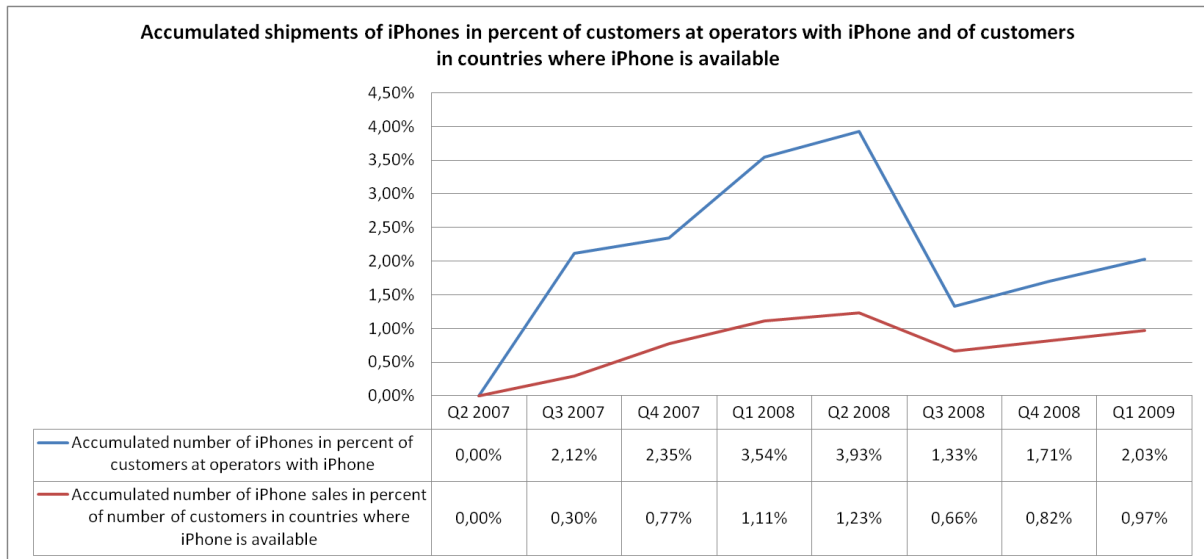
This might also be an indication of mobile operator managements' focus being redirected and spending excessive energy on the iPhone, resulting in losing market shares in other areas of the mobile telephony market.

### 1.3. The iPhone's share of the installed base

When you look at Apple's sales over time and compared to the size of customer base they are targeting, it is also important to compare Apple's sales to the number of mobile phones on the markets where the iPhone is being sold.

We believe that Apple's share of the installed base shows how attractive the product is in reality and also illustrates how difficult it is for a handset market player to enter this market - and especially a handset market player like Apple that is marketing expensive handsets.





**Figure 7: Accumulated shipments of iPhones in percent of customers at operators with iPhone and of customers in countries where iPhone is available**

Note: Apple's financial year ends September 27, so quarters for Apple do not match the calendar quarters. Apple's financial numbers are in these figures advanced one quarter in order to make them comparable with calendar quarters.

Note 2: Operator agreements and mobile subscribers for Q2 2009 is not known

(Source: Various operators, Apple and Strand Consult estimates)

The development of iPhone's share of the installed base is very steady and far from explosive. This is primarily due to the five following reasons:

1. The number of people that have the necessary purchasing power and are willing to purchase a product in the iPhone price range is limited.
2. Many of the new partner agreements that Apple has signed, have resulted in Apple launching on a number of large markets, on the other hand many of those markets are characterised by large populations with low spending power.
3. The iPhone is a niche product targeted at a niche segment and there is a limit to how many customers that exist for the form factor that the iPhone represents.
4. A number of competitors (Nokia, Samsung and LG) have launched products that resemble the iPhone, but are significantly lower priced, which has increased competition.
5. The phone has been launched on new markets and has only been available for a short period of time.

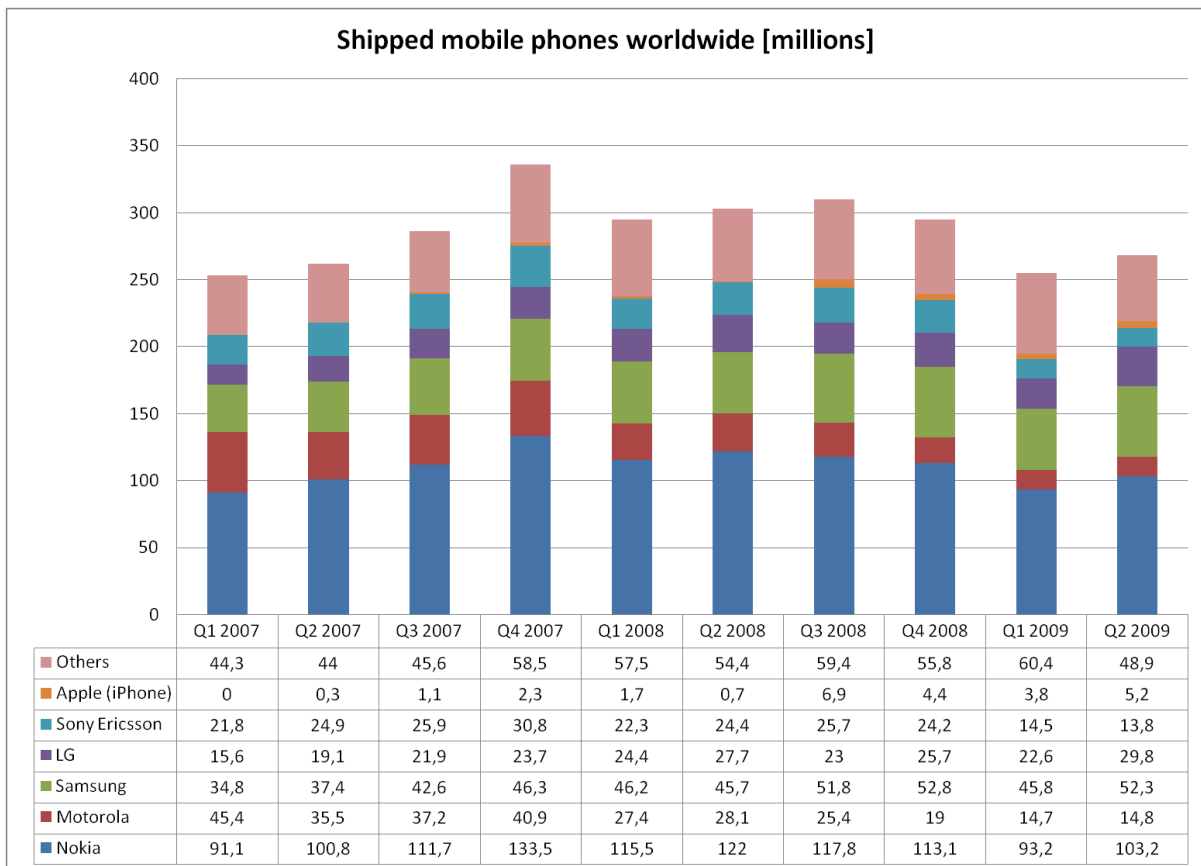
At the end of the day, even a market player like Apple has the same limitations as other handset manufacturers and the massive media coverage they have created has not been able to compensate for these limitations.

### 1.4. Total shipments of mobile phones

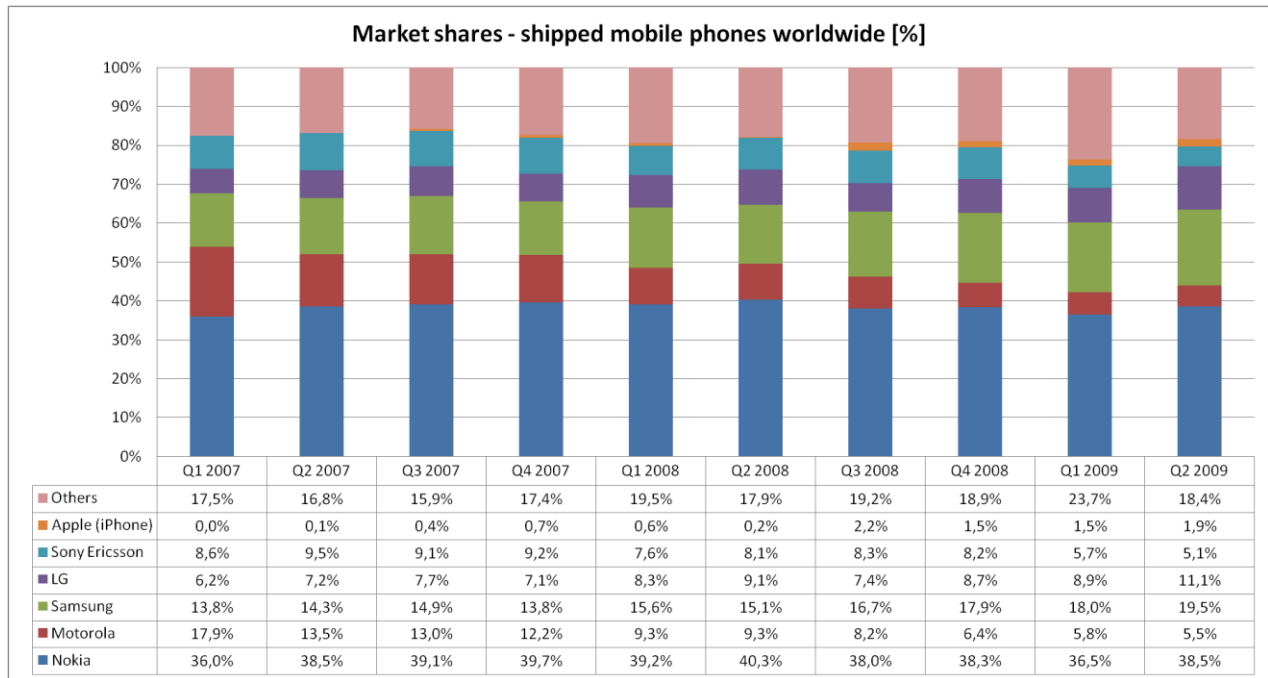
When we examine the total mobile phone market, there is no doubt that it is dominated by five players that sell between 14 and 100 million handsets every quarter and that measured in that context, Apple is a small player.

It is no secret that the iPhone is more expensive than the average mobile phones that e.g. Nokia and Samsung sell, and it is a fact that expensive products are targeted at narrower segments than inexpensive products.

Handset sales have developed over time and the handset manufacturers sales have varied a great deal from quarter to quarter, in a world where the financial situation and therefore the customers spending power also influence sales. The figures are as follows:



**Figure 8: Shipped mobile phones worldwide [millions]**  
(Source: Various terminal manufacturers and Strand Consult estimates)



**Figure 9: Market shares - shipped mobile phones worldwide [%]**

(Source: Various terminal manufacturers and Strand Consult estimates)

If you measure the number of sold devices and market shares, there is no doubt that the iPhone is a small player. On the other hand there is no doubt that the iPhone is well positioned on the smartphone market.

When people talk about the smartphone market, it seems like many market players view this market as a segment in its own right, and with its own growth rate, and that this growth rate follows a market development that shows the customers demand for smartphones.

Strand Consult disagrees with this view. We believe that only a few customers actually demand smartphones and that most customers are interested in a smart mobile phone that is reasonably priced. We believe that in most cases it is more or less a coincidence whether a customer actually ends up owning a smartphone or a feature phone.

If you take a closer look at how large a share of the phones that Nokia distribute that are based on Series 30 (45 %), Series 40 (40 %) and Series 60 (15 %) and take a look at the focus Nokia now has on GPS after purchasing Navteq and in addition their focus on music and applications, there is no doubt that many of the phones that are today based on Series 40, will in the future be based on Series 60, and thereby be considered to be smartphones.

If Nokia chose to launch a Series 40 replacement, would the reason be to ensure that the Smartphone market explodes, or would the reason be that Nokia is quite simply shifting technology? We believe it is the latter, and we believe this will happen.

If Nokia chooses to shift technology and subsequently experiences an explosion in their sales of smartphones, would that result in people saying that Apple is experiencing pressure from the competition and that their platform is not as successful as it used to be? We believe the answer to that is yes - people would start saying that.

One thing is certain, and that is that many people have a very narrow-minded view about the smartphone market and this is contributing to distorting the mobile reality: that Apple measured in devices, is a small market player that is fighting against a number of huge market players with high device volumes.

### **1.5. The iPhone as a differentiator**

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One of the largest challenges for operators in the mobile world, is to be able to differentiate themselves to their competitors - and with the iPhone, Apple launched their first generation mobile phone where they attempted to give operators what the traditional mobile phone manufacturers seldom had been able to offer them - an exclusive product that they could use to differentiate themselves on the market.

One of the important questions that operators carrying the iPhone should ask themselves, is whether or not they believe that iPhone will continue to help differentiate themselves from other operators. With the launch of the 2<sup>nd</sup> generation iPhone there was a considerable increase in distribution power, and with the launch of the new iPhone 3GS, this will increase even more. In Denmark, the number of operators carrying the iPhone has jumped from one to four, with the recent launch of the 3GS.

In the UK, O2 has had an exclusive right to the iPhone for two years. This agreement expires in September 2009 and according to market sources, both T-Mobile and Orange will then commence selling the iPhone. The UK distribution will thereby be similar to distribution in for example Denmark, where Apple is prioritising wider distribution higher than having exclusive agreements.

Operators around the world have now realised that Apple is prioritising wider distribution higher than the previous exclusive agreements and that Apple has been using time-limited exclusive distribution agreements to open doors to other operators on the market.

With this increase in distribution power on all markets, differentiating oneself becomes more difficult. The iPhone will no longer be a differentiating factor in itself, instead, operators will presumably start competing on e.g. who can deliver the most lucrative service offering at an affordable price. As illustrated above, selling the iPhone does not necessarily result in an increase in customers and with the increased

numbers of operators carrying the iPhone on each market, the attractiveness of the product might decrease.

The figures above illustrate that the iPhone is a niche product for a niche segment. Apple's shipments are proportional with their distribution power, which reflects the fact that Apple is not necessarily increasing market share on each market, but are expanding their customer base by being present on more markets. So, it could be argued that the growth that Apple has experienced so far is a result of the increased distribution power, and not a result of increased market shares on the respective markets.

With the recent release of the iPhone 3GS, there seems to be change in this pattern. Apple has two options when it comes to increasing their sales:

1. Increasing distribution power on existing markets
2. Increasing market shares on existing markets
3. Increasing distribution via new markets
4. Targeting new customer segments via new concepts/types of agreements

Increasing distribution power could be achieved by signing new operator agreements, or alternatively launching on some of the markets where Apple is currently not represented - like the Chinese market. Using distribution power to increase sales will not continue to be a success, as Apple could run out of new markets to enter.

When this happens, Apple will need to change strategy to increase their sales - by increasing market share on current markets. This alternative strategy could be highly harmful for the operators currently carrying the iPhone. These operators will lose the differentiation that the iPhone provided, as more and more operators on each market start offering the iPhone.

If Apple chooses the model they already have launched in a number of countries, where they are focusing on a number - or all - of the operators on the market, competition will move from the actual iPhone and over to the iPhone subscriptions. Simply put, this will result in subscription prices coming under pressure and that the MVNOs selling cheap traffic using the business model "Bring your own iPhone - we can offer cheap traffic" will easily end up winning. This is a scenario we have already seen in countries like Denmark, Norway and Germany.

Another important point is that when the iPhone becomes standard in the operators' product range, the product will have lost its "magic" differentiating effect. Apple will continue to rake in percentages of the revenue generated by the iPhone, as operators fight for market shares in a niche segment with a niche product.

### **1.6. The myth that the iPhone is a magnet that attracts new customers**

Many people believe that the iPhone is an effective tool to attract new customers for those operators selling the phone. Our analyses show that the PR people that have put forward these allegations know more about writing than they do about figures. You really do not need to use advanced maths to prove that the iPhone is not a magnet that attracts new customers and that it does not help increase an operator's market share.

When you examine the figures it is important to focus on three parameters to measure the iPhone effect:

1. What size market share does the operator have on the market in question?
2. How many of their new customers usually come from other operators?
3. Are the number of customers from other operators greater than the total market minus the operator's market share?

Basically, if an operator has a 20% market share, 80% of his customers will come from other operators and 20% of his customers from his own customer base.

In many of the press stories that the media has been publishing, one has heard about operators that claimed that the number of iPhone customers from other operators, was greater than their market share on the market in question - and that they therefore perceived the iPhone as a magnet that was attracting new customers.

But you shouldn't evaluate the number of customers coming from other operators based on your own market share, but instead on the combined market share of the other operators. There is no other method to evaluate whether the iPhone is in reality a magnet that is attracting new customers.

We have examined a number of the statements that a number of operators have published and cross checked them with the operators' market shares - and, based on these figures evaluated whether or not the iPhone is a magnet that attracts new customers to Apple's partners.

Operator	Period	Claimed iPhone customers from other operators	Claimed iPhone customers from own network	Claimed ARPU/data impact	Claimed EBITDA impact [#]	Claimed EBITDA impact [%]	Market share
Singtel Australia	Q3 2008	About 50%	<b>About 50%</b>	About 50% higher ARPU than average	Reduced about 44 million Australia Dollar	Actual: 23,2%. Excluding iPhone: 26,2%	<b>32%</b>
Singtel Australia	Q4 2008	-	-	-	-	Actual 26% Excluding iPhone 31%	<b>32%</b>
Singtel Singapore	Q3 2008	About 30%	<b>About 70%</b>	About 50% higher ARPU than average	Reduced about 27 million Singapore Dollar	Actual: 37,5%. Excluding iPhone: 40,1%	<b>46%</b>
Mobistar Belgium	-	About 40%	<b>About 60%</b>	10 times more mobile traffic than average	-	-	<b>31%</b>
Orange Austria	Summer 2008	Above 50%	<b>Below 50%</b>	ARPU well above average	-	-	<b>20%</b>
Telia Denmark	-	About 73%	<b>About 27%</b>	Much higher ARPU than average	-	-	<b>23%</b>
AT&T USA	2008	About 47%	<b>About 53%</b>	-	Profitwarning	-	<b>29%</b>
AT&T USA	Q2 2009	About 33%	<b>About 67%</b>	-	-	-	<b>29%</b>

**Figure 10: Operators claims and their market share**

(Source: Various operators and Strand Consult)

If you take a closer look at these operators market shares, none of them have experienced any significant growth or decline in their market share. Simply put, their normal sales are resulting in new customer numbers that correspond to their market share and their customer mix also corresponds to their market share on the markets they are doing business on.

The figures clearly show that all the operators we have analysed and published our findings about in this report are finding it significantly easier to sell the iPhone to their existing customers, compared to selling it to new customers.

In fact, it would not be wrong to claim that the iPhone is helping stimulate operators' churn on their own customer base - and thereby negatively influencing their business case. The bottom line is that the iPhone is not the customer magnet that many have been claiming - quite on the contrary.

## 2. The iPhone as a traffic creator

Many people have referred to the iPhone as being a huge traffic generator in the operator's networks. On the other hand very few have actually examined alternative methods of creating traffic, or whether the traffic the iPhone is generating is actually profitable. Selling flat rate data traffic is not always a healthy business case and will not become healthier as competition on the market shifts from being the operator that has the iPhone, to being the operator that can offer the most inexpensive mobile traffic for the iPhone.

In a number of articles, so-called experts have claimed that the iPhone is the phone that kicked off the whole mobile broadband market and that the iPhone is helping educate users in using the mobile Internet. Many of these people have not examined the size of mobile traffic being generated by the iPhone on different operators' networks, compared to traffic coming from other devices, including mobile broadband.

We believe that the iPhone's share of the total traffic is marginal and that the many articles published in the press about the iPhone and mobile data is an excellent indicator of the extremely narrow-minded point of view that many people have of the mobile market.

In chapter 2.1.1, we examined the amount of mobile broadband traffic on the Swedish operators' networks, where over 1 million customers currently use mobile broadband, and consumed 13.720 Terabyte data in 2008. The 2008 consumption corresponded to a growth of 526% - with only a marginal part of that traffic coming from iPhone customers. In fact in Sweden, the operator selling the iPhone (Telia) is the operator with the lowest average Swedish mobile data customers.

One of the big questions that need to be answered regarding the future of the mobile market, is what will generate traffic in the operators network? The roll out of mobile broadband has - and will have - an influence on the data consumption in the operators' networks. In several countries, mobile broadband has experienced explosive growth. In some countries, 60% of broadband connections currently being sold are mobile broadband connections. In Finland, Norway and Austria, mobile broadband is cannibalizing regular DSL connections.

The growth in mobile broadband is having a tremendous effect on the personal computer market. Laptops and netbooks are being sold with built-in mobile broadband, providing users with instant on-line access anywhere and anytime. So, the question is whether consumers will prefer using a netbook or a smartphone while on the move, and which product will generate most traffic and revenue for the operator?



Another important question that many operators ought to ask themselves, is whether the mobile broadband traffic being generated on an iPhone is in reality traffic resulting from mobile customers becoming more advanced in their use of their mobile handset due to the iPhone, or whether it is traffic being generated because the iPhone is moving customers' traffic from their PCs and over to their iPhones? We believe that a great deal of the traffic is traffic coming from the PC world and that only a small part of the traffic is being generated by mobile consumers that have become more advanced in how they are using their mobile due to the iPhone.

In the following section, we will address the issue of what is going to create traffic in the operator's network in the future. Furthermore, we will discuss what impact the iPhone and similar products will have on regular PC usage, and which type of device will emerge as the winner, the smartphone or the netbook?

### **2.1. What will generate mobile broadband traffic today and tomorrow?**

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There is a great deal of focus on mobile broadband and this market is developing into one of the fastest selling products in mobile history. Likewise, there is also a great deal of focus on the smartphone market and especially the iPhone and how many experts view its role regarding the development of mobile broadband.

Strand Consult's focus is on mobile development and our analysts are closely monitoring the mobile industry. Through our analyses we have reached the conclusion that the picture often painted by the media about the mobile broadband market is very misleading and that there is no connection between which devices create traffic in the mobile operators' networks and which devices are receiving press coverage.

According to Apple, the iPhone is a breakthrough Internet device that allows you to utilize the Internet while on the move. However, how is the Internet experience on an iPhone compared to a netbook with built-in mobile broadband? The netbook provides the user with a bigger screen, easier-to-use keyboard, more capacity and the ability to run programs such as Office. We are now seeing a tendency towards operators beginning to sell subsidized netbooks with built-in mobile broadband and this will definitely have an effect on the smartphone market.

The iPhone also has some advantages over netbooks. Firstly, the iPhone combines online access and mobile telephony, in other words users only need to carry one device. This is definitely an advantage for the users on the move that do not necessarily want to bring their laptop or netbook every time they need to check their email.

If you look at what is happening on the mobile broadband market, it is in a great many countries developing to become a serious alternative to the traditional broadband products that are dominated by the DSL technology. In countries like Austria and Slovakia, over 30% of today's broadband connections are mobile.

In Norway and Finland, DSL penetration is dropping and mobile broadband has proved that it is a real alternative to DSL for many customers. Customers are purchasing a combination of wireless routers with built-in 3G, PCs with built-in 3G modems and dongles that can be used with older PCs. Mobile broadband is here - and it is a success.

It is no secret that an increasing number of people are purchasing smart phones, but why are they purchasing these devices? Is it because they want an advanced mobile phone to access the Internet, or is it because the telephone manufacturers are trying to move focus over to these devices, to thereby raise the average price (ASP) they are receiving on each telephone? We believe it is the latter.

It is a fact that the traditional Internet functions best on a PC. There is a great deal of online content and most content is designed for devices that are marketed and sold as computers. Only a small part of the content market has been designed for mobile devices with small screens. The telephone manufacturers have some very serious challenges regarding content.

So the big question is where the mobile operators' focus will be in the future? Will it be on sales of new smartphones to current customers, or on sales of portable PCs with built-in mobile broadband to new customer segments? We believe that many operators are currently moving subsidies away from phones and over to PCs.

In our report "Successful Strategies for the Mobile Broadband Market" we have taken a closer look at these issues and have concluded that the sales of portable PCs with built-in mobile broadband will cannibalise the sales of smartphones. On the other hand the price developments on the mobile broadband market are working against subsidising portable PCs.

We know for a fact that on many markets, mobile broadband traffic is being sold at up to 50% below the price that it actually costs to produce that traffic. On that kind of market there is simply no room for the subsidies that are currently being offered on many markets.

In reality many operators around the world have moved focus away from smartphones and over to mobile broadband and therefore moved subsidies away from smartphones that cost €400 - €500 wholesale, to netbooks that cost €350 wholesale.

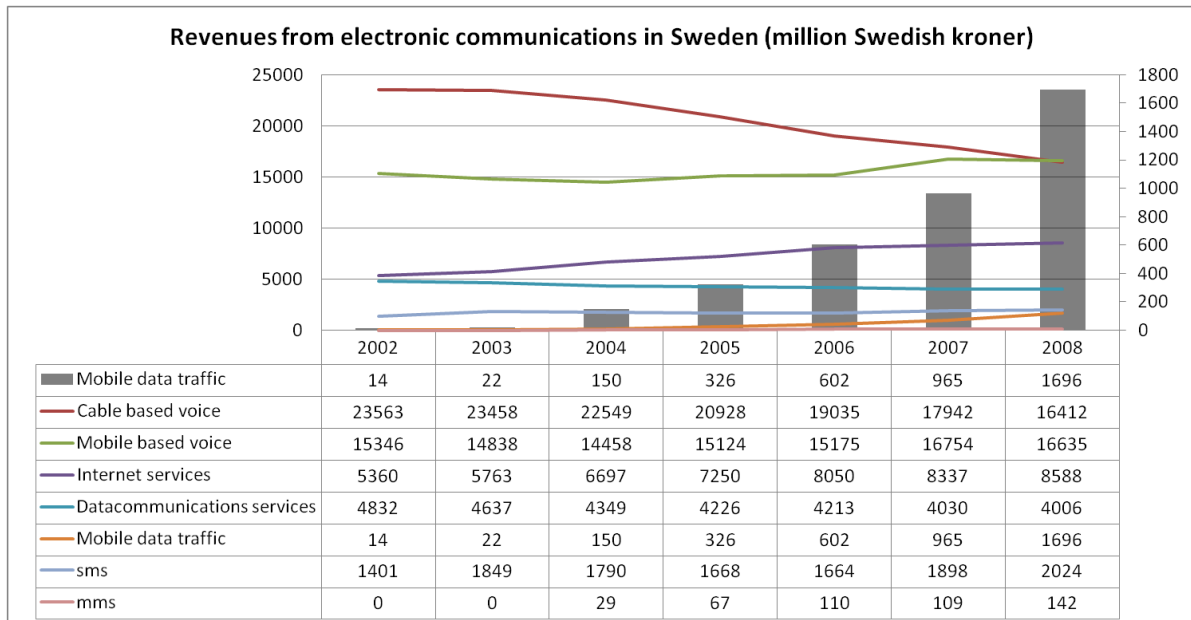
There are a number of reasons for this shift, but one of the primary reasons is that the mobile broadband market is a new market where operators are targeting new customers and market revenue, whereas the Smartphone market is a market where operators are using money to subsidise and market new handsets that are being sold to existing customers and that are not generating any larger revenue growth.

**2.1.1. Case: The Swedish mobile broadband market**

If you want to look at what will create traffic in the future on operators’ networks and evaluate the iPhone's role on the mobile market, you most definitely should take a closer look at the Swedish telco market. In Sweden, 73% of all households have broadband, 12% have fibre to the home and around 1 million Swedes out of a total population of 9 million, have a mobile broadband connection. Today in Sweden, 20% of all broadband connections are mobile.

Simply put, Sweden is not only an advanced mobile market, it is also an advanced broadband market and in many ways a market that gives an excellent indication of how the telco market will develop in the future.

The figure below illustrates the development of revenue shares generated from electronic communication in Sweden.



**Figure 11: Sweden: Revenues from electronic communications. 2002-2008**

Note 1: Mobile data traffic are shown both as sticks and lines for better illustration

Note 2: 10,6 SEK=1 Euro

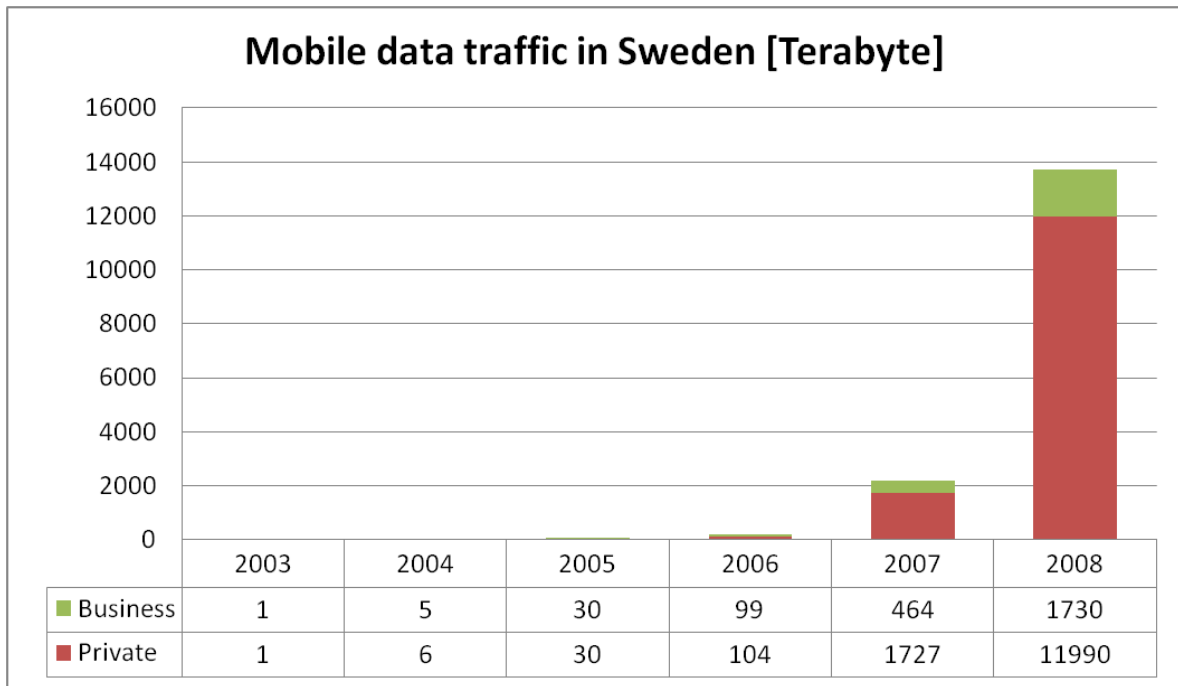
(Source: Swedish Telecom Agency and Strand Consult)

While revenue from fixed line telephony is heavily decreasing, revenue from mobile telephony is increasing. A certain amount of traffic from fixed line telephony has moved to the mobile networks, concurrently with prices per minute significantly decreasing.

Like in other countries, the total revenue from Internet services in Sweden has significantly increased, primarily due to the growth in Internet connections and more recently the growth of mobile broadband.

Alone in 2008, the Swedish mobile operators' revenue from mobile data increased by 76%, from 1 billion to 1.7 billion SEK (10,6 SEK=1 Euro) and that figure does not include SMS data revenue (2 billion SEK). This is only data traffic, primarily generated by mobile broadband connections. Basically, mobile broadband has grown in just two years from being very small compared to SMS traffic, to becoming the same size as SMS. During 2009, broadband traffic will continue to grow, resulting in it becoming around 50% larger than SMS traffic.

The figure below illustrates mobile data traffic growth.



**Figure 12: Sweden: Mobile data traffic. 2003-2008**  
(Source: Swedish Telecom Agency and Strand Consult)

The growth is massive - more massive than the turnover and is especially due to traffic from portable PCs that emerged on the market in 2007 and 2008 and that are connected to a mobile broadband connection.

It is also important to note that a large part of the traffic is generated by the private market and that corporate customers are only contributing a small share of the total mobile broadband market.

The figure below illustrates mobile data development per subscriber on mobile broadband.

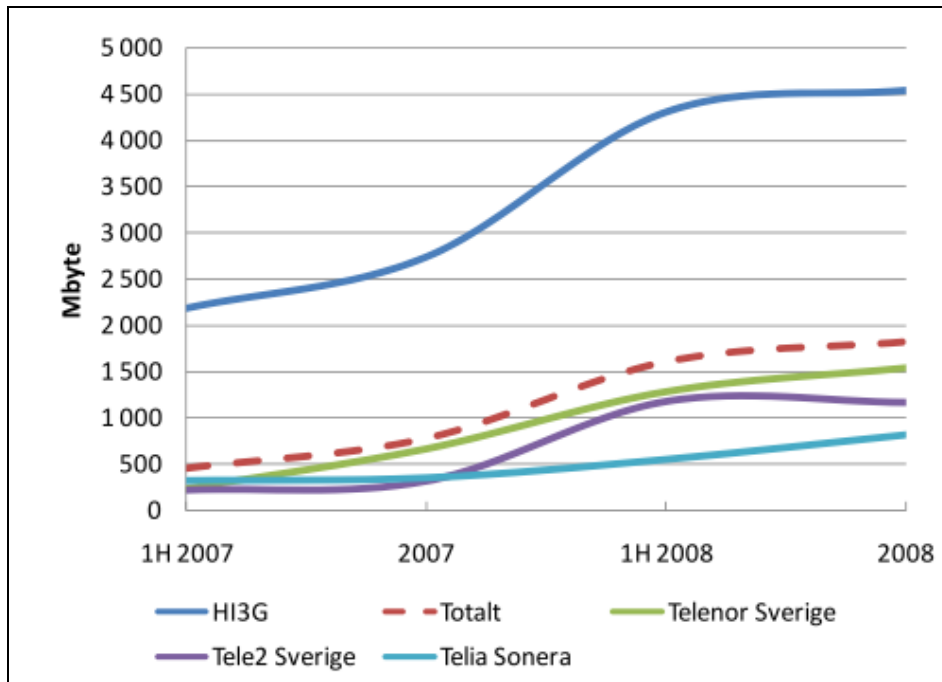


Figure 13: Sweden: Mobile data traffic per mobile broadband subscription. 2007-2008

(Source: Swedish Telecom Agency and Strand Consult)

If you examine how individual operators' mobile data traffic is developing over time, it is very clear that TeliaSonera is not only Sweden's largest operator, but also the operator that has had the lowest data consumption per customer during the period they have been carrying the iPhone.

One should however remember that the number of iPhones in Sweden is very limited, compared to the number of customers using mobile broadband, resulting in both the iPhone and traffic generated by the iPhone being rather invisible in the above figures.

## 3. Application Stores

With the launch of the iPhone and its Application Store, Apple has launched a fantastic user-friendly solution that makes it easy for customers to download applications to their iPhone. In fact, Apple has proved that usability is one of the areas that they fully master. The applications that are offered fall in categories such as games, weather, stocks, travel etc.

In one year, the App Store has reached more than 65.000 applications and has handled more than 1.5 billion application downloads. This is a highly impressive result taken into consideration that Apple is not a first mover on this market - something many still believe they are. Since 2007, Handango InHand has delivered mobile software for an array of handsets including Palm handhelds, Windows Mobile devices, Symbian OS devices, and BlackBerry devices. Apart from the App Store and Handango InHand, there are many other application stores of varied sizes. Given the fact that Apple are not first-movers and are not alone in the application market, why has the App Store received the incredible amount of attention that it has?

In the following section we will dig deeper into why the App Store appears to be so successful, and we will compare the App Store to other applications stores such as Handango InHand, Ovi, Windows Market Place and BlackBerry App World.

We will also examine the value of the traffic in Apple's App Store and compare it to the value of mobile services that are sold daily for all the other mobile phones being used around the world. It is important to remember that the iPhone is currently creating around 1% of the world's mobile phone sales and that 0.5% of the world's mobile phones are iPhones.

In addition, we will also view the App Store from the application developer's point of view, and discuss how application stores will influence the future smartphone market and the applications market for other phones.

The million dollar question is whether app stores will have a central role on the future application market and whether Apple's App Store will be good business for companies developing, marketing and selling applications?

### 3.1. The App Store

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One of the main advantages of the App Store, from Apple's perspective, is that it has assisted the sales of both the iPhone and iPod Touch. The App Store has helped drive incremental hardware sales, and it seems to be a strategic differentiator within the consumer product download industry.

Another advantage Apple has had, is their success with iTunes, where millions of customers have been used to using Apple's shop to purchase and pay for music. As many of the iPhone customers are also iPod customers, they are already familiar with this type of store and with the provider that is offering applications for their iPhone. This is an advantage other phone manufacturers do not have.

According to Apple, there are approximately 22m iPhone users and 16m iPod Touch users that on average downloaded 27 applications each. According to Merrill Lynch, an estimated 20% of these applications cost an average price per app of \$1 each, resulting in Apple having gross revenues of \$123m in 2010. Apple will keep 30% of this, letting the application developers take the rest. In other words, the operators carrying the iPhone will not receive a share of revenue, and as previously mentioned, many applications will divert attention away from some of the services that operators offer their customers.

As mentioned earlier, concurrent with Apple strengthening its distribution power, operators will be forced to differentiate their iPhone offerings. This will presumably be done through more lucrative subscriptions, e.g., flat-rate subscriptions and favourable prices on voice and SMS. The former might pose the largest problem for operators, as iPhone users would be able download advanced applications that require a substantial amount of data traffic capacity when used. The operators will in this way be offering lucrative subscriptions, with high production costs, in order to make people purchase their iPhone, while Apple and the app developers profit from downloads that are enabled by inexpensive subscriptions with unlimited data usage.

Some applications are not popular with the operators, which is illustrated by the fact that some of these have been removed from the App Store on request from the operators. The operators are not interested in iPhone users downloading applications enabling, e.g., video and audio streaming, which considerably burdens the network. Also applications that enable VOIP and instant messaging are unpopular with the operators, as these might limit the use of regular voice and SMS, which are important sources of income for the operators.

### **3.2. Are App Stores simply one of many solutions that are being over hyped?**

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Apple is by no means the first handset manufacturer to launch an application store. Handango has been on the market for years, and have in fact been offering mobile software for more than eight years. However, Apple seems to have been able to create an unprecedented hype surrounding the App Store, mainly by creating a more modern design and user-friendly interface.

People are talking about Apple's App Store for the iPhone - but is it really such a large success as the media write, or is it simply one of the many solutions that are being over hyped?

The media are giving App Stores a lot of coverage and most phone manufacturers and mobile operators are in the process of launching their own App Stores, with the dream of thereby being able to create a commercial success.

When you read the many articles that are being published about this subject, there is no limit to the optimism and how impressed people are about the many free downloads offered on Apple's App Store.

However in the world that Strand Consult does business in, we do not have many customers that can make a living from giving customers free applications for their mobile phones and we are for example more focused on the 8,6 billion dollar USD market (2008 figures according to the Mobile Entertainment Forum) for premium value added services, of which 10 billion services were services being sold off-portal through third-party providers.

Taking a closer look at the market for various types of services, the mobile phone games market generates around 44% of the total premium mobile services market, corresponding to sales of \$3.75 billion USD.

With over 2.5 billion phones that support Java on the market, there is no doubt that many application developers prefer to develop Java applications that can be potentially used on 2.5 billion phones, thereby targeting the mass market and a market that already has an enormous turnover, rather than developing for the narrow iPhone segment - a segment/market with few customers and very little cash flow.

But as previously mentioned, one of the oldest players on this market is Handango, that has been focused on delivering applications for smart phones and PDAs across various platforms for eight years.

Back in October 2005, Nokia launched their concept Preminet, which has today evolved into OVI and has so far been pre-installed in over 200 million Nokia mobile phones with limited success. If you take a closer look the concept behind Preminet, you will see that it is similar to Handango's concept, apart from the fact that it is pre-installed on the mobile phone, in the same way as Apple's App Store.

Basically, Apple has simply copied what others were already doing and created a nicer user interface. On the other hand the cash flow generated by Apple's App Store is rather limited compared to the global cash flow from content sales created on top of the business model that derived from the premium SMS market.

When evaluating Apple's App Store and the cash flow it is generating, compared to the global premium mobile application market, our analyses show that the value of the premium mobile services market in Norway is larger than the total global value



of the premium services being sold via Apple's App Store. The Norwegian population of 4.3 million people spent 140 million Euros on premium mobile services.

Strand Consult believes that the path forward for premium value added services is not to build App Stores. What we believe will create the market is a healthy business model combined with massive marketing of mobile services to the end users. The success of this strategy has already been proven by the ring-tone and Java game market. In an App Store the primary focus will be on the few services being marketed on the front page and the path to success could be very long for most application developers.

An App Store can be compared to a bookshop. The mobile industry does not lack booksellers, it lacks the people that can educate users and teach them how to use mobile phones for other things than just voice and SMS. We need to educate the many billions of illiterate mobile users, rather than focusing on building bookshops.

If you want to reduce the number of illiterate people you will need to teach them to read and write and experiences from the premium SMS market have shown that for example SMS voting on television has had an extremely positive influence on especially older end-users' use of SMS. Today there are countries where a large part of the over 50 age group of mobile end-users are very active SMS users.

In our report "Show me the money - The future Business models for mobile Broadband Services" we have examined how the mobile broadband services market is developing and which business models will help drive this market in the future - both regarding smartphones and ordinary PCs.

We believe that the premium VAS market will explode from the 8,6 billion USD in 2008, as an increasing number of new services for the more advanced mobile phones enter the market and as mobile operators launch micro-billing on the mobile broadband connections they are selling. We know that many operators will copy their mobile phone strategy, by implementing premium billing on mobile broadband connections. The big question is not whether there will be a market, or whether it will be huge, but rather who will dominate the market? We do not believe it will be App Stores or other similar solutions you read about in the media.

There is no doubt that an app store makes it easy for customers to purchase applications for a certain type of handset, but it doesn't help teach customers how to use the applications or understand the potential value of the applications. If a bookshop doubles the number of books in their store, that will not increase the share of population that are able and willing to purchase and read books.

### **3.3. Facts about the mobile services market and mobile marketing**

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There is no doubt there has been a great deal of hype surrounding the App store and the many applications available for the iPhone. On the other hand it is sad that many of those that pretend to be authorities on this market forget to enter into dialogues with the companies that are developing, marketing and selling various mobile services and those that are using the mobile phone as a marketing channel.

Strand Consult has always believed that before you evaluate a market, it is important to assess the total market, what it looks like and how it is developing.

When you look at the enormous attention that Apple's app store has received and how various companies have developed, marketed and sold mobile applications to the iPhone, it is surprising how few companies have had a dialogue with Mobile Entertainment Forum ( [www.m-e-f.org](http://www.m-e-f.org) ), who together with Informa and KPMG are tracking the mobile services market.

Likewise there are also many stories about how one can use the iPhone platform as a mobile marketing platform. Once again many seem to forget that the iPhone only has a 0.4% share of the world's mobile phones.

We have difficulty understanding why people that are writing about the iPhone as a mobile marketing platform do not enter into a serious dialogue with the Mobile Marketing Association ( [www.mmaglobal.com](http://www.mmaglobal.com) ), who represents companies working in mobile marketing and who are tracking this market. They have a great deal of knowledge that is well worth examining and their members have a second to none insight in this market.

#### **3.3.1. The mobile services market**

When you look at the mobile services market, it is important to remember that the revenue being generated from non-voice traffic is coming from many different sources, ranging from various messaging technologies (SMS, MMS, IM etc), sales of music/ring tones for mobile phones, sales of Java games, TV voting etc.

<b>Total Revenues</b>		<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Service Event Revenues	P2P Messaging	\$81,71	\$92,37	\$102,75	\$110,92	\$117,72	\$124,07	\$130,44
	Other Messaging	\$5,52	\$6,08	\$6,71	\$7,33	\$7,96	\$8,60	\$9,23
	Music	\$7,85	\$9,39	\$11,05	\$12,78	\$14,81	\$17,35	\$20,44
	Games	\$3,15	\$3,75	\$4,38	\$5,00	\$5,61	\$6,28	\$6,99
	Images	\$2,18	\$2,55	\$2,91	\$3,22	\$3,52	\$3,84	\$4,15
	TV	\$0,71	\$1,37	\$2,34	\$3,41	\$4,29	\$4,93	\$5,27
	Video	\$1,45	\$1,93	\$2,48	\$3,12	\$3,92	\$4,91	\$6,08
	Gambling	\$0,12	\$0,15	\$0,19	\$0,24	\$0,29	\$0,35	\$0,42
	LBS	\$0,31	\$0,54	\$0,87	\$1,37	\$2,12	\$3,12	\$4,32
	Social Networking	\$0,26	\$0,40	\$0,55	\$0,73	\$0,97	\$1,26	\$1,59
	Mobile Payments/Banking	\$0,61	\$0,88	\$1,30	\$1,91	\$2,84	\$4,35	\$7,02
	Enterprise	\$0,18	\$0,32	\$0,53	\$0,80	\$1,18	\$1,67	\$2,19
	Mobile Internet Access	\$43,29	\$54,30	\$64,47	\$74,80	\$86,83	\$101,06	\$116,83
Portable Internet Access	\$5,43	\$8,14	\$12,25	\$17,24	\$23,44	\$31,31	\$41,51	
<b>Total</b>	<b>\$152,75</b>	<b>\$182,19</b>	<b>\$212,78</b>	<b>\$242,86</b>	<b>\$275,49</b>	<b>\$313,08</b>	<b>\$356,47</b>	

**Figure 14: Global Non-Voice Cellular End User Revenues, USD Billions, 2007 to 2013**

(Source: Informa/Mobile Entertainment Forum and Strand Consult)

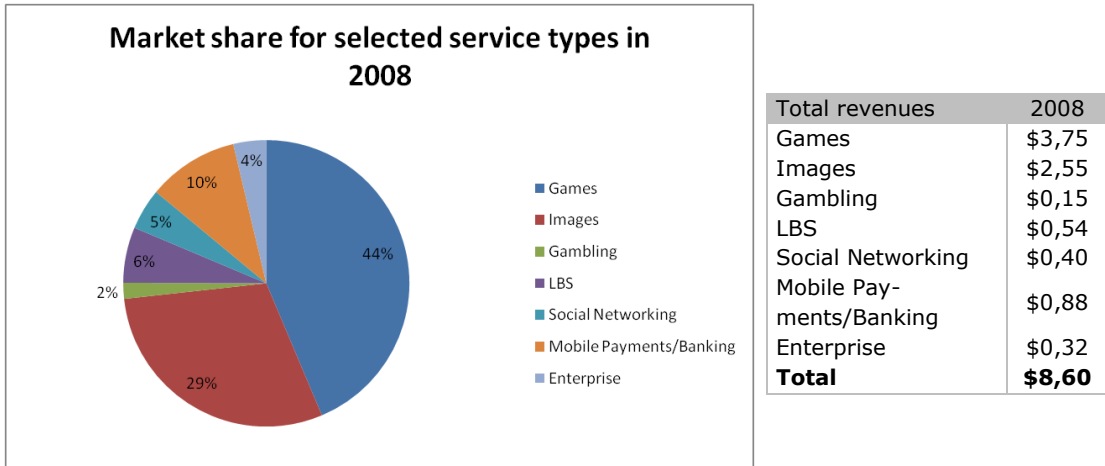
If you want to evaluate the above figures compared to the sales we - and many others - have estimated are being generated by Apple's App store, it is important to remove the messaging figures and ensure that the figures can be compared.

<b>Total Revenues</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Music	\$7,85	\$9,39	\$11,05	\$12,78	\$14,81	\$17,35	\$20,44
Games	\$3,15	\$3,75	\$4,38	\$5,00	\$5,61	\$6,28	\$6,99
Images	\$2,18	\$2,55	\$2,91	\$3,22	\$3,52	\$3,84	\$4,15
TV	\$0,71	\$1,37	\$2,34	\$3,41	\$4,29	\$4,93	\$5,27
Video	\$1,45	\$1,93	\$2,48	\$3,12	\$3,92	\$4,91	\$6,08
Gambling	\$0,12	\$0,15	\$0,19	\$0,24	\$0,29	\$0,35	\$0,42
LBS	\$0,31	\$0,54	\$0,87	\$1,37	\$2,12	\$3,12	\$4,32
Social Networking	\$0,26	\$0,40	\$0,55	\$0,73	\$0,97	\$1,26	\$1,59
Mobile Payments/Banking	\$0,61	\$0,88	\$1,30	\$1,91	\$2,84	\$4,35	\$7,02
Enterprise	\$0,18	\$0,32	\$0,53	\$0,80	\$1,18	\$1,67	\$2,19
<b>Total</b>	<b>\$16,81</b>	<b>\$21,29</b>	<b>\$26,60</b>	<b>\$32,57</b>	<b>\$39,55</b>	<b>\$48,05</b>	<b>\$58,47</b>

**Figure 15: Global Cellular End User Revenues for mobile services, USD Billions, 2007 to 2013**

(Source: Informa/Mobile Entertainment Forum and Strand Consult)

If you clean up the figures from Informa/Mobile Entertainment Forum so they only contain premium mobile services consumed via the phone, remove music sales, TV voting etc, you end up with a total premium services mobile market of 8.6 billion USD. Most people in the industry believe that Apple's share of that market in 2008 was approximately 150 million USD, which corresponds to a market share of 1.75% in 2008. Here are the figures:



**Figure 16: Global revenues for selected service types, USD Billions, 2008**

(Source: Informa/Mobile Entertainment Forum and Strand Consult)

There is no doubt that iPhone customers download a lot of mobile services. But when Apple talks about their download figures, we believe they are including their software updates in their statistics. Additionally, Apple does not distinguish between free downloads and premium downloads which allow application developers to earn money.

We believe it is important to distinguish between free services and services that customers are paying for. Evaluating who is actually successful and the size of their success, is only possible by portraying all the facts surrounding the value added services market.

If you examine the value of the total mobile services market, and compare it to the value of the premium services being sold via App store, Apple and their iPhone customers are only contributing tiny amounts, both measured by the number of services and the value of the services that customers are purchasing.

Quite simply there is no connection or balance between the media hype surrounding App stores and the sales generated by this channel - especially considering the amount of revenue generated by the other 99.6% mobile phones in the world.

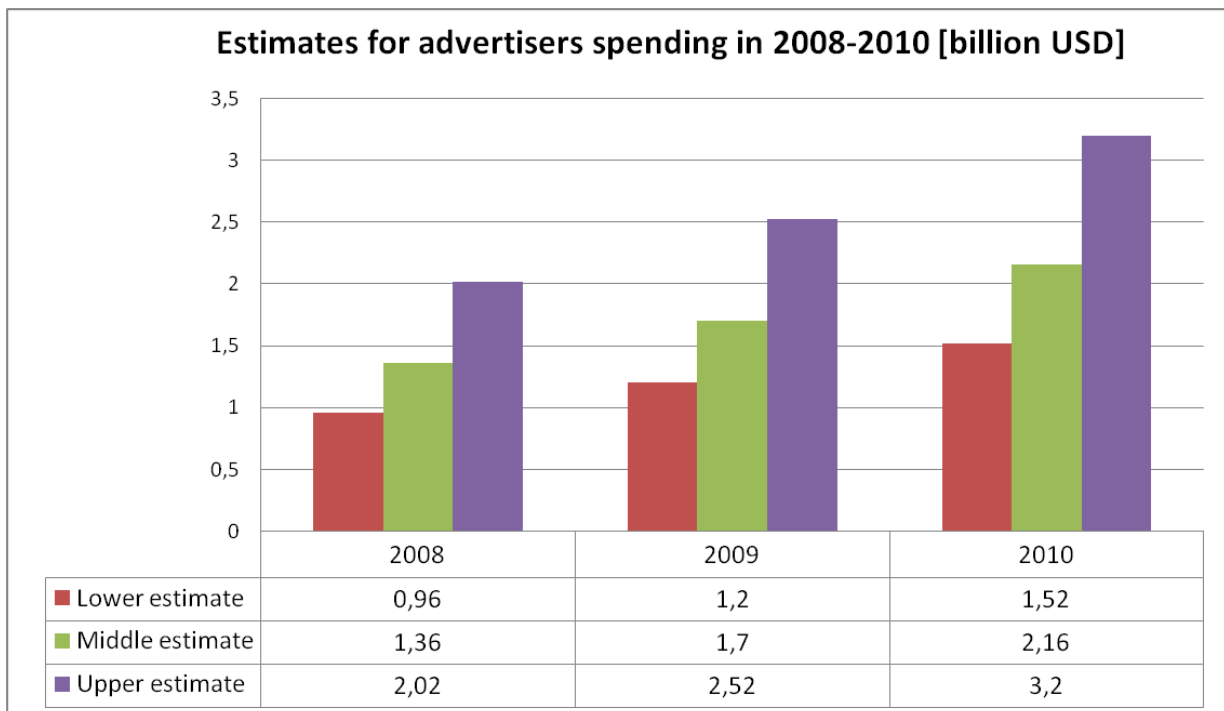
### 3.3.2. The mobile marketing market

Many people know that there is a large global market for mobile marketing, but very few people actually know the real size of this market, how advanced the market is and the width of available solutions that are being used to initiate a dialogue with the many consumers that own and are using mobile phones.

In the USA, the Mobile Marketing Association ([www.mmaglobal.com](http://www.mmaglobal.com)) regularly conducts surveys among American agencies and major US brands, regarding their use of mobile marketing and future expectations.

We believe that these surveys and the knowledge that the Mobile Marketing Association has gathered is very important. It is sad that many people that are talking and writing about marketing campaigns targeted at iPhone users, are forgetting to examine and analyse the many other campaigns that are running around the world and that are targeted at all mobile customers, rather than a narrow segment like the iPhone segment.

The total value of the US mobile marketing market was an impressive estimated 0,96 to 2,02 billion USD in 2008 and the middle estimates for 2009 are that the market will grow to 1,7 billion USD and reach 2,16 billion USD in 2010.

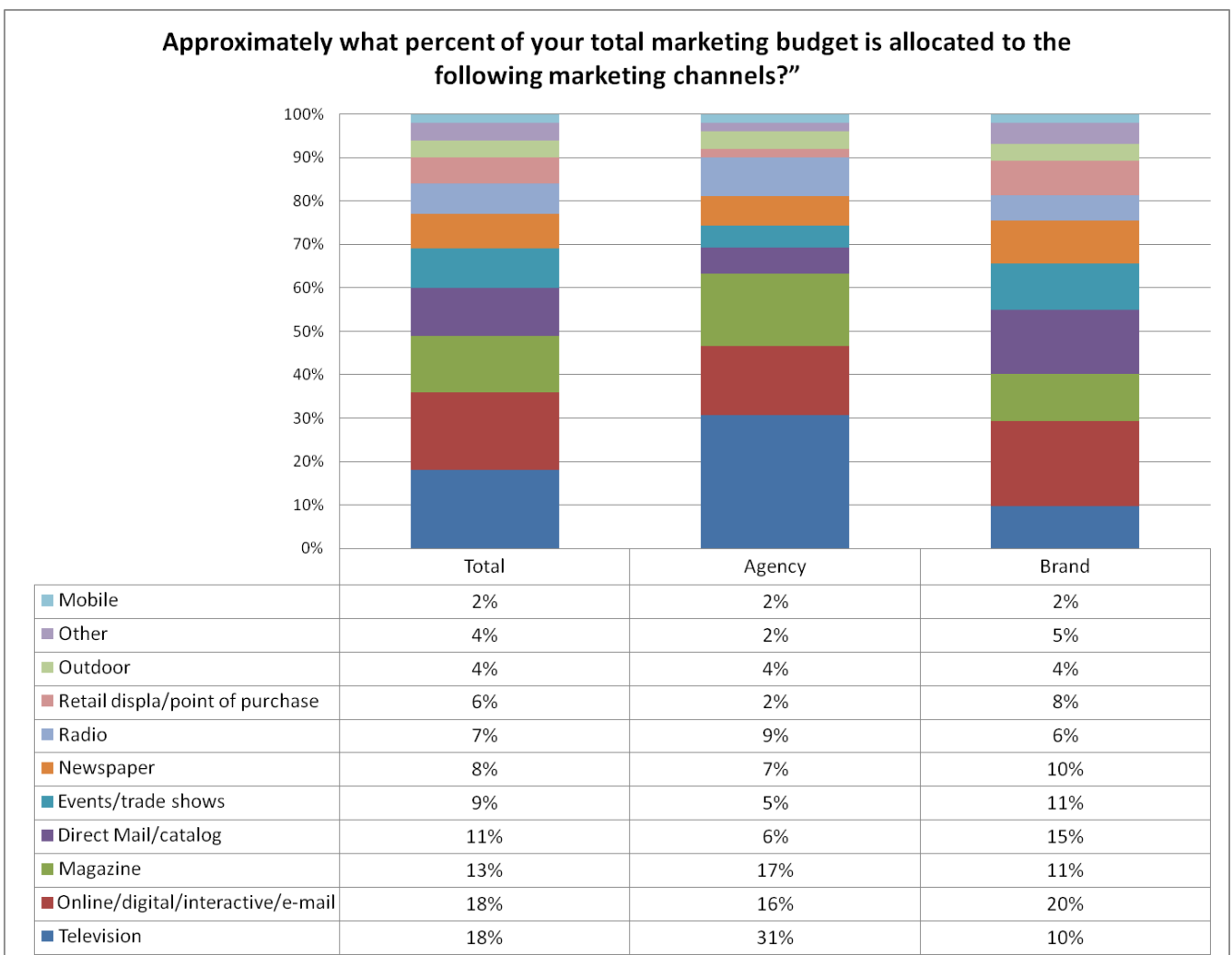


**Figure 17: Estimates for advertisers spending in 2008-2010 [billions USD]**

(Source: Mobile Marketing Forum and Strand Consult)

When we look at the money being spent, the number of American mobile consumers and the iPhone’s share of the US mobile handset market, there is no doubt that the iPhone and iPhone consumers is a small niche segment on equal terms with the many other niche segments that are natural in a country the size of the USA and that has such a diversified population.

These figures should be compared to the money that the different agencies and brands are allocating to different types of marketing. The figures from the Mobile Marketing Association show that around 1,8% of marketing budgets are being used on mobile marketing.

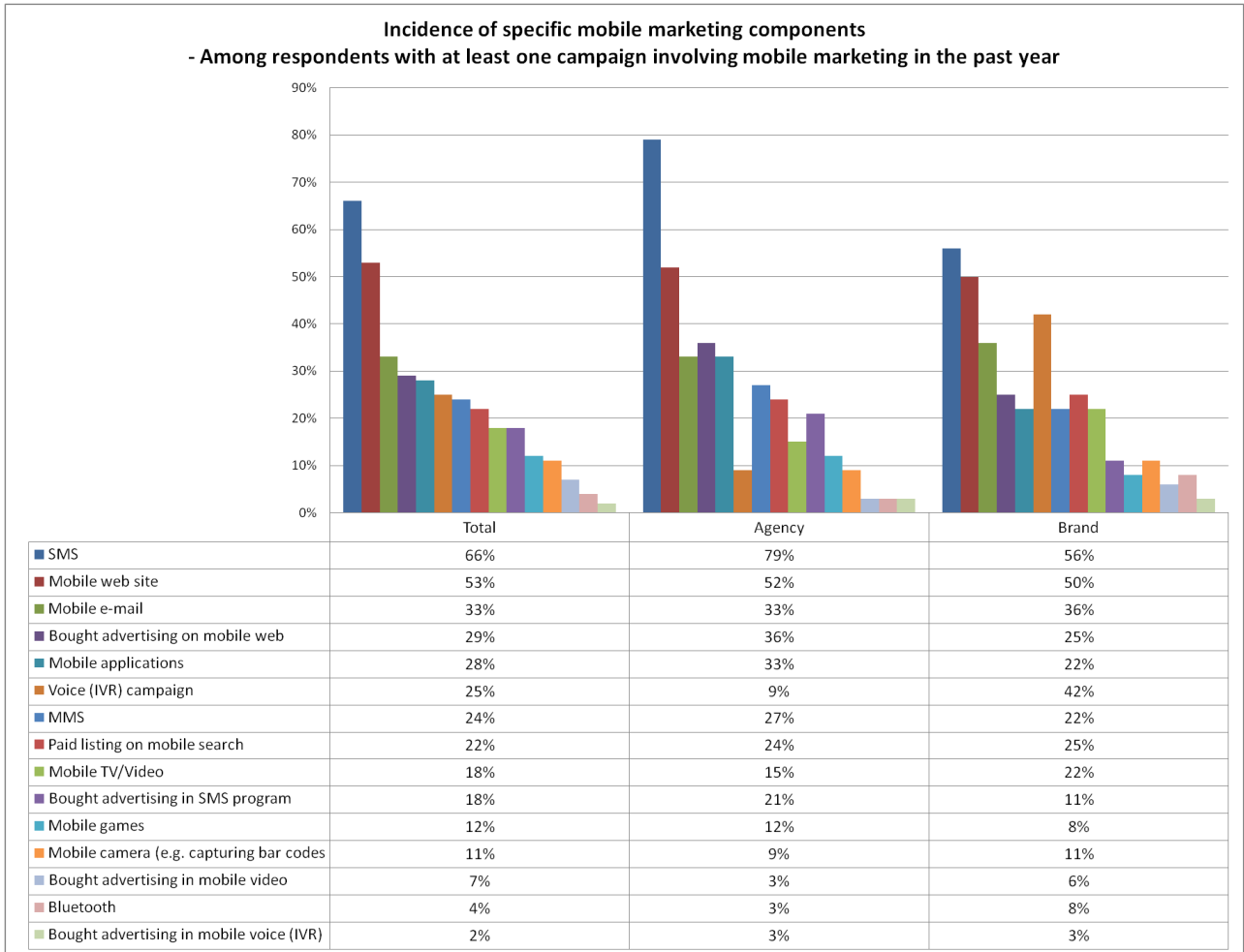


**Figure 18: Survey - Shows what percent of total marketing budget is allocated the different marketing channels**

(Source: Mobile Marketing Forum and Strand Consult)

The mobile marketing market is big, but it is still a market in its infancy and a market that needs to increase its level of professionalism – which will take time.

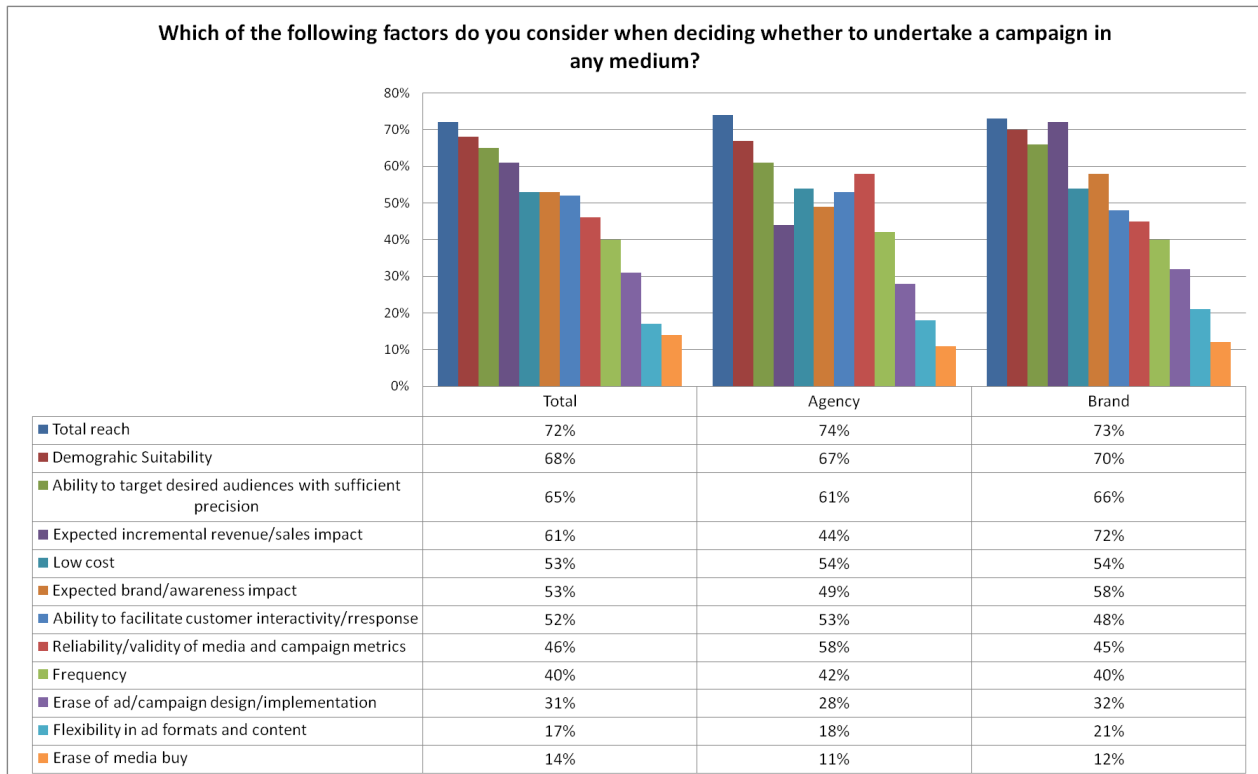
When we look at which tools are being used for mobile marketing, it is still SMS and browser-based technologies that are the dominating solutions and that are being used by both the agencies and brands in their marketing campaigns.



**Figure 19: Survey - Incidence of specific mobile marketing components**

(Source: Mobile Marketing Forum and Strand Consult)

When we examined what the advertisers were focusing on when conducting their mobile marketing campaigns, it was mostly traditional reasons that were triggering a mobile marketing campaign – in other words very identical reasons to those being used for other types of media channels.



**Figure 20: Survey - Which of the following factors do you consider when deciding whether to launch a campaign in any medium?**

(Source: Mobile Marketing Forum and Strand Consult)

The figures speak for themselves and when we look at the segments that the iPhone is attracting and the size of the iPhone market compared to the total mobile phone market, there is no doubt that the iPhone segment alone is not large enough for professional advertisers. They need to think big and across the many models and makes of devices on the market, to ensure that they can reach the desired customer segments.

We have no problems at all if advertisers want to experiment with campaigns targeted at the iPhone, but if that is the only experience they have in mobile marketing and those results are the foundation of their company’s mobile marketing strategy, there is a very good chance that they will not be a successful mobile marketer.

At the end of the day it is safe to say that the iPhone is a small player on the mobile services- and mobile marketing market, and that those people that are giving this platform significantly more attention than the numerous other platforms on the market will marginalise their position in today’s world of 4 billion mobile phones – where only 0,4% of those are iPhones.



### 3.4. Business models for value added services via application stores

Today there are a number of application stores on the market and their business models vary from player to player. Some companies are focusing on billing customers directly, others are focusing on a combination of operator billing and direct billing and some companies are only focusing on operator billing solutions.

On the mobile services market there is often a great deal of focus on the size of revenue shares that operators, app stores and third-party billing providers are taking. It seems like many of these market players believe that a low revenue share is a good business case for the company that is marketing and selling the applications.

Strand Consult has been working on this market for many years and we have analysed the whole mobile services value chain, including examining where the costs lie and the types and sizes of costs in connection with selling content to mobile customers.

The conclusion is very clear; the largest costs do not come from the billing company, but from the sales and marketing of the individual applications. Simply put, one could say that the marketing costs of contacting 100,000 iPhone users in a country, are very similar to the costs of contacting the 5 million other mobile customers in the same country. The question is where an application provider can reach the most customers and how much they will have left over when they have paid their marketing and billing costs?

The figure below shows revenue shares for selected application stores.

	iPhone App Store	Ovi Store	Windows Market Place	Android Market	Blackberry App World	Handango	Palm App-Store
Content provider startup fee	99 USD	0	99USD and fee for adding applications	25 USD	200USD and fee for adding applications	0	-
Content provider revenue share	70%	70%	70%	70%	80%	60%	50%
Store-owner revenue share	30%	30%	30%	30%	20%	40%	50%
Number of applications	65.000+	About 3000	10.000	6000	2000	140.000+	5000
Average selling price per application	2,65 USD	1,99-4,99 USD	0	-	-	18,93USD	-
Number of content partners	-	-	0	-	-	23.000+	1500
Number of downloads	1,5 billion+	-	0	-	-	-	-
Revenues	70-160 million USD	-	0	-	-	-	-

**Figure 21: Revenue share for selected application stores**  
(Source: Various app store owners and Strand Consult estimates)

When you compare the different business models, it is very obvious that the revenue shares offered by the different players are very similar, on the other hand none of the small players (measured by number of phones they are targeting) take into account that their partners will have higher marketing and developing costs when developing, marketing and selling applications to a narrow segment - including companies targeting the iPhone segment.

How attractive are Apple's almost 26 million users, compared to Nokia's hundreds of millions of users? It requires the same resources to develop an application for the iPhone, as to develop applications for far more popular phones. So for an application developer there can be no doubt - their best business opportunities will be targeting the mass market. This will result in the best developers avoiding Apple's App Store.

At the same time there are no indications that Apple's App Store will become more open, thereby allowing the market to decide which application the end-users want, rather than Apple or the mobile operators.

When examining various app stores, it is important to note the current differences on the average application prices of the different stores. One end of the scale is Handango, with an average application price of almost 19 USD, while Apple applications only cost on average 2.65 USD. Many cheap applications will naturally have a positive influence on sales, which Apple is experiencing. On the other hand there is no doubt that the many free applications available from Apples app store are cannibalising the sales of premium applications.

We believe that the "Walled Garden" business model that Apple is using will not be a success in the longer run. Experience shows that the premium mobile services market was not created until the mobile operators chose to introduce the open garden strategy - which is the whole foundation of today's premium SMS market. Operator portals like Orange World, Vodafone Live and T-Zone and never became the successes the operators had hoped.

There is no doubt that there will be a market for app stores, but we believe the winners will be those that can offer customers applications across many different device types and that can offer a combination of operator billing, billing via PayPal or Bango and direct billing relationships via banks and credit cards.

The future app store is a shopping mall, where customers can purchase their applications, store a copy and perhaps for a small additional fee, take the application with them to their next device.

### 3.5. Analysis: Revenue streams between mobile operators, service providers and end-users

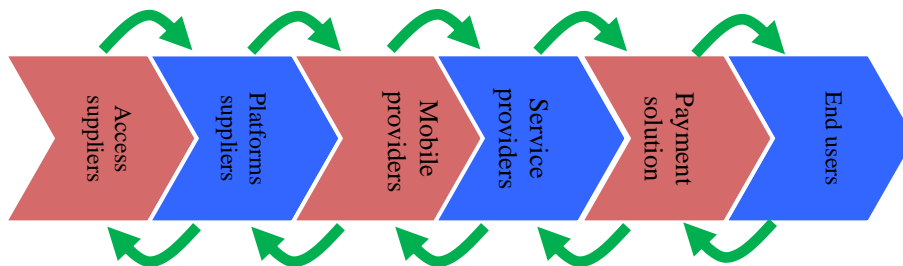
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There are many ways to bill mobile services. In this chapter we will not only examine the model being used in Apple’s app store, but also the models being used for billing mobile services.

The most widespread model today is using the operators’ billing systems to charge for services that are either sold through operators’ portals, or through third parties that are marketing and selling services off-portal and using the operators to invoice their services.

According to Mobile Entertainment Forum, the global services market where operators are handling payments was in 2008 8,6 billion USD. The model is based on operators invoicing payments and revenues being split between the operators and content providers using fixed percentages.

We believe that the size of the revenue split ought to be variable and should depend on customer appeal, the service provider’s brand, generated network traffic etc. This would promote quality services that both appeal and add value to end users. Services with high customer appeal will not only generate increased revenue, but will also help mature the market by acquiring new users to payment solutions and by adding value to existing user’s mobile subscription. If service providers have a strong brand, services based on their brand will have an increased value for many consumers and the service providers should therefore receive a larger share of the generated revenue. If the service uses a strong brand, it will additionally be a seal of quality that can encourage new consumers to use the payment solution.



**Figure 22: The revenue streams on the mobile market**

(Source: Strand Consult)

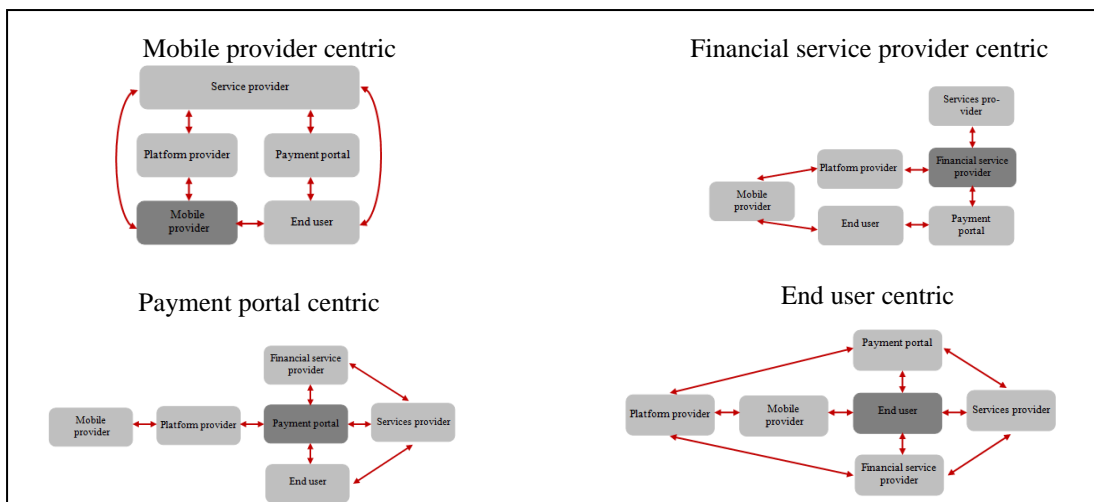
As shown in the figure above, the revenue streams flow in both directions.

The above value chain could give the impression that the value chain has a fixed structure, ensuring all players a share in revenue. This is however not the case.

The revenue streams between the service providers and customers could change with an integrated payment solution. The mobile operator or service provider could for example for a limited period, pay customers to use services that have a high level of network effect, to more quickly reach a critical mass of users. This service will thereby have a greater value to customers and could result in the possibility of charging a higher price for the service at a later stage - in other words it could be considered as an investment.

The service provider can offer customers money or free services. Experience shows however that advertising only generate a certain level of revenue and the business model can therefore not only be based on advertising. The first step in getting customers to accept advertising, is by developing more advanced advertising applications. These applications will - to a greater extent than traditional advertising - deliver an actual value to the customer, for example advertising-financed computer games. In a computer game, the advertiser's brand could be integrated into the application, thereby increasing the effect of the advertisement and especially the customer's attitude towards the advertisement. The issue with this type of marketing is the short span of customer attention and one cannot usually expect customers to pay for using this type of application. Instead it becomes a type of reverse-charging, whereby the service provider makes the application available free of charge. One could also imagine that the battle for the customer's attention becomes so tough that advertisers start paying customers to receive advertisements. This could both be in the form of traditional adverts and in the form of for example advertising financed games as previously mentioned. This type of marketing already exists in the form of "permission marketing", where subscribers to these services accept receiving advertisements or participating in surveys.

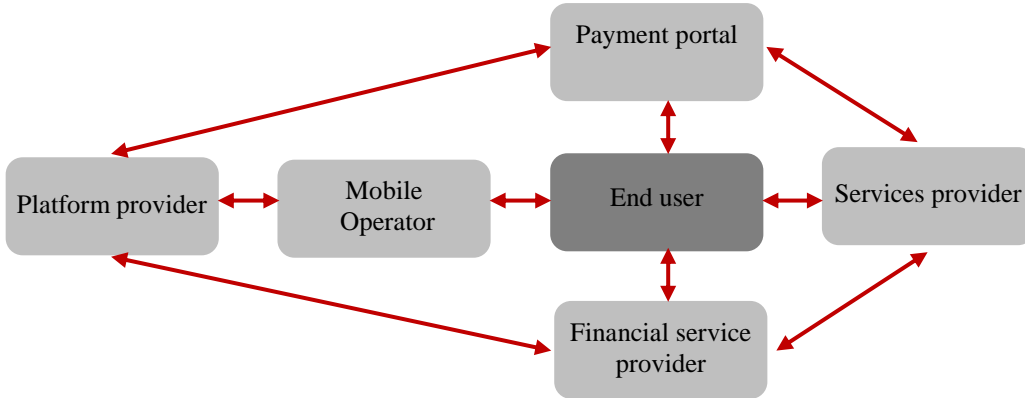
The figure below illustrates five typical revenue streams.



**Figure 23: Overview of four revenue flow models**  
(Source: Strand Consult)

### 3.5.1. The end-user centric market

The figure below illustrates an end-user centric revenue flow model.



**Figure 24: An end user centric revenue flow model**

(Source: Strand Consult)

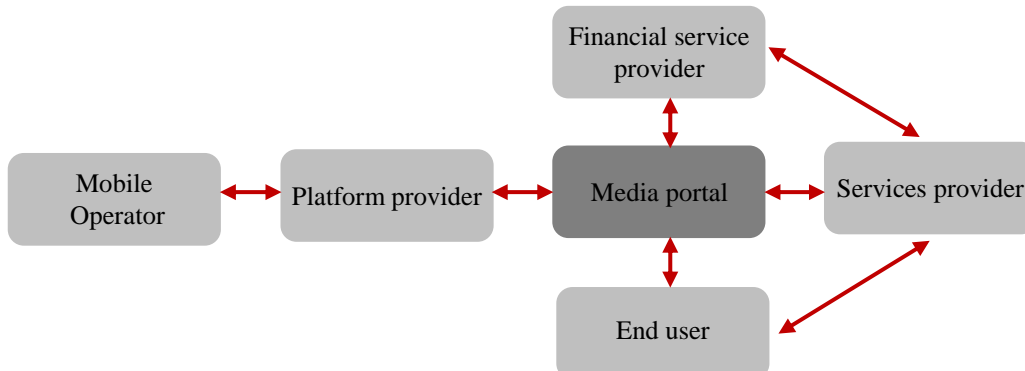
In this model no payment solution or market player has successfully established themselves as the end-users preferred choice. Customers choose between different payment solutions every time they purchase a product, from situation to situation and from service to service.

In this case mobile providers are bitpipes and do not necessarily have access to a share of the revenue generated on services. This is basically identical to the situation on today's services market.

Examples of service providers that use their own or various types of payment solutions are iTunes, Google and App Store, where the latter sells programs for the iPhone. Nokia also operated a web store called OVI, where customers with Nokia phones could purchase ring tones and logos. This web store bypassed in some cases operators by selling services using credit cards in OVI stores.

### 3.5.2. The media centric market

The figure below illustrates a media-portal centric revenue flow model.



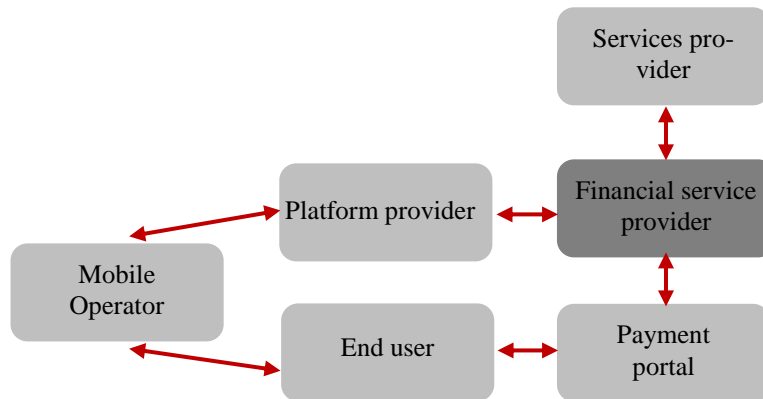
**Figure 25: A Media-portal centric revenue flow model**

(Source: Strand Consult)

In this model that Apple is using, competing payment solutions battle for the end-users attention and payment solutions from mobile operator have not become a standard. Media portals have however reached the position of being the payment solution that almost everybody uses. Media portals can generate revenue directly from end-users to service providers, bypassing the mobile operators' billing systems.

### 3.5.3. The financial centric market

The figure below illustrates a financial centric revenue flow model.

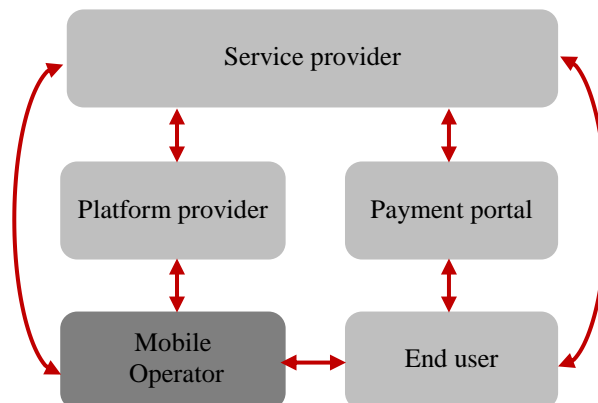


**Figure 26: A financial service provider centric revenue flow model**  
(Source: Strand Consult)

In this model mobile providers solely refer customers to the financial players' payment solutions. The payment portal is operated by the financial players and the mobile provider can only refer customers to the solution. The financial players receive a share of revenue generated by services and the mobile providers miss out on some revenue streams.

### 3.5.4. The mobile operator centric market

The figure below illustrates a mobile operator centric revenue flow model.



**Figure 27: A mobile operator centric revenue flow model**  
(Source: Strand Consult)

In this model, the mobile operator owns the payment portal and thereby receives a share of the revenue that flows through the portal. Likewise, the mobile operator receives a share of the revenue generated by the various platforms. In this scenario the mobile operator basically functions as a financial player, doing business on equal terms with credit card companies etc.

If you examine today's mobile services market, there is no doubt that the operator centralised model has won and that application and the fact that service providers can market services across networks and devices significantly helps reduce marketing costs.

The historical facts show that no alternative models to the operator centralised model have so far been successful and that content providers receive their revenue from the operators' billing systems.

## 4. Alternatives to the iPhone

There is no doubt that Apple has manufactured a product with a fashionable design that at the same time is highly user friendly. There has been an abundance of media attention surrounding the iPhone and its technological capabilities, however, how many of these are actually new, and is it not possible to find similar features in other handset devices, that are less expensive than the iPhone, both for the end-user and for the operator?

We believe that the iPhone is simply one of the many devices on the market and we don't mind operators carrying the iPhone as part of their range of mobile phones. But we do not believe that the iPhone deserves more attention than its business case justifies. We believe that operators should move focus away from the iPhone and over to a wider selection of phones, or a combination of phones and mobile broadband solutions.



**Figure 28: Alternatives to the iPhone**

(Source: Various mobile terminal manufacturers and Strand Consult)

Quite simply there are many alternatives to the iPhone and this report shows very clearly that the iPhone has received far more attention than its business case justifies. We believe that many operators have an unrealistic view regarding the iPhone effect - especially if you view the iPhone from a shareholder's point of view.



There is no doubt that the iPhone is an attractive product, but operators ought to contemplate whether they would not have a better business case in selling the iPhone without any subsidies and instead ensuring that they can offer some attractive traffic subscriptions, thereby ensuring that the iPhone generates a positive cash flow from day one. This is a model that a number of MVNOs in Denmark, Norway and Germany have used very successfully.

Today there are many alternatives to the iPhone and there will be more in the future. There are both products in the same price range as the iPhone, but also products that are significantly cheaper. The figure below compares functionality in a selection of iPhone competitors.

Phones	Battery	Camera	Screen	Network	3rd Party Development API's	Java	Capacity
<b>iPhone</b>	5 hours talk time, 300 hours standby	3mp and Video	3,5 inch, touchscreen	UMTS/HSDPA, GSM	Restricted third Party development	No	16GB or 32GB flash drive
<b>BlackBerry Storm 9500</b>	5,5 hours talk time, 360 hours standby	3,15mp and Video	3.25 inch, touchscreen	UMTS/HSDPA/ GSM	Blackberry OS	Yes	1GB onboard memory, 128MB flash memory
<b>Nokia 5800</b>	5 hours talk time, 408 hours standby	3,15 MP and video	3.2 inch, touch screen	UMTS/HSDPA /GSM	Series 60	Yes	8 GByte Flash, 81 MByte on-board, 128 MByte ram
<b>Samsung I8910 Omnia HD</b>	6,3 hours talk time, 450 hours standby	8MP and video	3,7 inch touchscreen	UMTS/HSDPA/ GSM	Series 60	Yes	8/16 GByte , 256 MByte ram
<b>Sony Ericsson Satio</b>	-	12MP and video	3,5 inch touchscreen	UMTS/HSDPA/ GSM	Series 60	Yes	8GByte flash, 128 MByte ram
<b>Nüvifone M20</b>	3 hours talk time/-	3 MP and video	2,8 inch touchscreen	UMTS/GSM	Windows Mobile	-	4 GByte or 8 GByte
<b>HTC Touch Diamond</b>	5,5 hours talk time/285 hours standby	3,15 MP and video	2,7 inch touchscreen	UMTS/HSDPA/ GSM	Windows Mobile	Yes	4 GByte, 192 MByte ram
<b>LG KM900</b>	3,8 hours talk time/300 hours standby	5 MP and video	3 inch touch-screen	UMTS/HSDPA/ GSM	UI: S-Class OS: Windows Mobile	Yes	8 GByte
<b>Palm Pre</b>	-	3,15 MP	3,1 inch touchscreen	UMTS/HSDPA/ GSM	Palm WebOS	-	8 Gbyte
<b>HTC Magic</b>	6,6 hours talk time/660 hours standby	3,2 MP	3,2 inch touchscreen	UMTS/HSDPA/ GSM	Android	-	MicroSD/288 Mbyte RAM

**Figure 29: Selected functions on selected iPhone competitors**  
(Source: Various mobile terminal manufacturers and Strand Consult)

The mobile phones in the above graph are technically at least on the same level as the iPhone, as indicated by the selected functions. The iPhone's technical platform is therefore not superior, although Apple never claimed this. The lack of functionality in the early iPhone models has often been mentioned by experts as a weakness. On the other hand many iPhone fans have claimed that the lack of for example MMS functionality was a deliberate choice by Apple.

#### 4.1. The technical Evolution of the iPhone

When Apple launches a new version of a product there is always a lot of press coverage. There is probably no other mobile phone that has received so much attention and publicity as each of Apple’s iPhone models.

We believe it is important to look at the changes in each new iPhone, and whether we are actually talking about a new version, or just a facelift of an older version.

By looking at how the specifications of the iPhone have evolved, from the 1<sup>st</sup> to the 3<sup>rd</sup> generation, we will get a more complete picture of the product, and thereby better be able to comment on whether the hype surrounding the new models is justifiable.

2G		3G		3GS	
2G Network	GSM 850 / 900 / 1800 / 1900	2G Network	GSM 850 / 900 / 1800 / 1900	2G Network	GSM 850 / 900 / 1800 / 1900
3G Network	No	3G Network	HSDPA 850 / 1900 / 2100	3G Network	HSDPA 850 / 1900 / 2100
Announced	2007, January. Released 2007, June	Announced	2008, June	Announced	2009, June
Status	Discontinued	Status	Available. Released 2008, July	Status	Available. Released 2009, June

**Figure 30: General features - Comparison of the three iPhone generations**

(Source: Apple and Strand Consult)

2G		3G		3GS	
Type	TFT capacitive touchscreen, 16M colors	Type	TFT capacitive touchscreen, 16M colors	Type	TFT capacitive touchscreen, 16M colors
Size	320 x 480 pixels, 3.5 inches	Size	320 x 480 pixels, 3.5 inches	Size	320 x 480 pixels, 3.5 inches
	- Multi-touch input method		- Multi-touch input method		- Multi-touch input method
	- Accelerometer sensor for auto-rotate		- Accelerometer sensor for auto-rotate		- Accelerometer sensor for auto-rotate
	- Proximity sensor for auto turn-off		- Proximity sensor for auto turn-off		- Proximity sensor for auto turn-off
	- Scratch-resistant surface		- Scratch-resistant surface		- Scratch-resistant surface

**Figure 31: Display - Comparison of the three iPhone generations**

(Source: Apple and Strand Consult)

2G		3G		3GS	
Dimensions	115 x 61 x 11.6 mm	Dimensions	115.5 x 62.1 x 12.3 mm	Dimensions	115.5 x 62.1 x 12.3 mm
Weight	135 g	Weight	133 g	Weight	135 g

**Figure 32: Size - Comparison of the three iPhone generations**

Note: The specifications that we believe need improving are highlighted in red  
(Source: Apple and Strand Consult)

2G		3G		3GS	
Alert types	Vibration; Downloadable polyphonic, MP3 ringtones	Alert types	Vibration; Downloadable polyphonic, MP3 ringtones	Alert types	Vibration; Downloadable polyphonic, MP3 ringtones
Speakerphone	Yes	Speakerphone	Yes	Speakerphone	Yes
	- 3.5 mm headset jack		- 3.5 mm headset jack		- 3.5 mm headset jack
Voice Control	No	Voice Control	No	Voice Control	Yes (Dialing and Music Control)

**Figure 33: Sound - Comparison of the three iPhone generations**

The specifications of the iPhone that have improved are highlighted in green  
(Source: Apple and Strand Consult)

2G		3G		3GS	
Phonebook	Practically unlimited entries and fields, Photocall	Phonebook	Practically unlimited entries and fields, Photocall	Phonebook	Practically unlimited entries and fields, Photocall
Call records	100 received, dialed and missed calls	Call records	100 received, dialed and missed calls	Call records	100 received, dialed and missed calls
Internal	4/8/16 GB	Internal	8 GB/ 16 GB storage, 128 MB RAM	Internal	16 GB/ 32 GB storage, 256 MB RAM
Card slot	No	Card slot	No	Card slot	No

**Figure 34: Memory - Comparison of the three iPhone generations**

Note: The specifications that have improved are highlighted in green  
(Source: Apple and Strand Consult)

2G		3G		3GS	
	Standard battery, Li-Ion		Standard battery, Li-Ion		Standard battery, Li-Ion
Stand-by	Up to 250 h	Stand-by	Up to 300 h	Stand-by	Up to 300 h
Talk time	Up to 8 h	Talk time	Up to 10 h	Talk time	Up to 12 h (2G) / Up to 5 h (3G)
Music play	Up to 24 h	Music play	Up to 24 h	Music play	Up to 30 h

**Figure 35: Battery - Comparison of the three iPhone generations**

Note: The specifications that we believe need improving are highlighted in red  
(Source: Apple and Strand Consult)

2G		3G		3GS	
Primary	2 MP, 1600x1200 pixels	Primary	2 MP, 1600x1200 pixels	Primary	3.15 MP, 2048x1536 pixels, autofocus
Video	No	Video	No	Video	Yes, VGA@30fps, video geo-tagging
Secondary	No	Secondary	No	Secondary	No
	-		-	Features	Touch focus, geo-tagging

**Figure 36: Camera - Comparison of the three iPhone generations**

Note: The specifications that have improved are highlighted in green  
 (Source: Apple and Strand Consult)

2G		3G		3GS	
OS	iPhone OS (based on Mac OS)	OS	iPhone OS (based on Mac OS)	OS	iPhone OS (based on Mac OS)
CPU	ARM 11 412 MHz, PowerVR MBX-Lite graphics	CPU	ARM 11 412 MHz, PowerVR MBX-Lite graphics	CPU	ARM Cortex A8 600 MHz, PowerVR SGX graphics
Messaging	SMS (threaded view), Email	Messaging	SMS (threaded view), MMS(threaded view), Email	Messaging	SMS (threaded view), MMS, Email
Browser	HTML (Safari)	Browser	HTML (Safari)	Browser	HTML (Safari)
Radio	No	Radio	No	Radio	No
Games	Downloadable, incl. motion-based	Games	Downloadable, incl. motion-based	Games	Downloadable, incl. motion-based
Colors	Black	Colors	Black(8/16 GB), White (16 GB)	Colors	Black, White
GPS	No	GPS	Yes, with A-GPS support	GPS	Yes, with A-GPS support
Java	No	Java	No	Java	No
	- Google Maps		- Google Maps		- Digital compass
	- Audio/video player		- Audio/video player		- Google Maps
	- TV-out		- TV-out		- Audio/video player
	-		-		- TV-out
	-		-		- Voice command/dial

**Figure 37: technical features - Comparison of the three iPhone generations**

Note 1: The specifications that we believe need improving are highlighted in red  
 Note 2: The specifications that have improved are highlighted in green  
 (Source: Apple and Strand Consult)

2G		3G		3GS	
GPRS	Yes	GPRS	Yes	GPRS	Yes
HSCSD	No	HSCSD	No	HSCSD	No
EDGE	Yes	EDGE	Yes	EDGE	Yes
3G	No	3G	HSDPA	3G	HSDPA, 7.2 Mbps
WLAN	Wi-Fi 802.11b/g	WLAN	Wi-Fi 802.11b/g	WLAN	Wi-Fi 802.11b/g
Bluetooth	Yes, v2.0, headset support only	Bluetooth	Yes, v2.0 with A2DP, headset support only	Bluetooth	Yes, v2.1 with A2DP, headset support only
Infrared port	No	Infrared port	No	Infrared port	No
USB	Yes, v2.0	USB	Yes, v2.0	USB	Yes, v2.0

**Figure 38: Data - Comparison of the three iPhone generations**

Note: The specifications that have improved are highlighted in green  
(Source: Apple and Strand Consult)

In the tables above, the specifications of the iPhone that have improved are highlighted in green, whereas the specifications that we believe need improving are highlighted in red.

There is no doubt that the iPhone in many areas is a highly unique product. It has an attractive design and the joy of using it is considerable for many users. However, we still believe that the iPhone has some vital shortcomings.

We believe that a mobile phone in that price class, targeted at that particular segment, should have a considerably better camera, a radio, and ought to support Java. We also believe that the iPhone platform should be more open, so that the end-user can decide for themselves, which applications they want to download to their device. Currently, Apple has to approve each application before it can be sold and purchased in the App Store.

On all other mobile phones it is up to the end-user to decide, which applications he wants to purchase and use on his own device. There are many examples of Apple blocking applications that undermine their business model or that they feel are inappropriate. We do not believe that this is a viable strategy in 2009, in a time when users want freedom of choice over the hardware that they have purchased and paid for.

#### **4.2. What will it take for the iPhone to continue to be special?**

---

What has been special about the iPhone handset is its attractive design and the UI's focus on usability. But this is also becoming increasingly common in many competing phones

Today, many handset manufacturers are focused on designing phones that are similar to the iPhone and that appeal to the same target group as the iPhone.

From an end-user perspective, these phones are just as attractive as an iPhone, especially when you consider the prices. It makes sense for an operator to expand their handset portfolio with competing devices, to thereby give the iPhone customer segments more devices to choose from and additionally create competition to the iPhone.

On a number of the competing handsets, the end-user actually has a larger freedom of choice regarding applications and is not limited in the same way as an Apple customer regarding which applications the customer can use. They can not only use the app store created for the handset in question, but also a number of competing app stores and all the additional possibilities available in the form of Java applications, or for example special Series 60 applications for their handsets.

The iPhone has not changed much during the last two years and the improvements launched in this period are difficult to label as anything else than facelifts of the same phone - and this has been happening on a market where competitors are falling over each other to compete on who can deliver the best iPhone clone.

We believe that if Apple does not expand their product range, it will become increasingly difficult for Apple to compete against the many iPhone clones, that will make Apple increasingly less visible in stores and on mobile providers' websites.

Right now Apple is seeing their lead disappear and they are quickly being caught up by a number of competing phone manufacturers that have spent a great deal of time and energy on developing and manufacturing iPhone clones.

## 5. Case Studies

When you examine the iPhone and how it is influencing the market and the different market players in the mobile value chain, it is important to examine the players that are focusing on the iPhone and benchmark them against those that are not selling the iPhone.

We have chosen to examine a number of countries: Denmark, Sweden, Norway, Singapore, USA and Germany. We have examined both operators and MVNOs regarding the iPhone and have benchmarked the different players against each other.

In the next section we will show how the different operators' key figures have developed after they launched the iPhone and compare them to their competitors' figures during the same period.

The objective of this exercise is not to point our fingers at Apple or the iPhone, but to contribute with knowledge that is seldom part of the ongoing debate about the positive effect that iPhone is supposed to be having on the market.

Strand Consult will ensure that the market has access to this knowledge - knowledge that has so far not been part of the iPhone debate and knowledge that shows that the iPhone is such a narrow product that it is not visible in operators' key financial figures. Other types of mobile phones and devices are generating more traffic and business from a financial viewpoint.

### **5.1. The iPhone's influence on operators' SAC**

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One thing is analysing how operators' business cases are developing, but it is more difficult to evaluate an individual iPhone customer, what the customer costs to acquire, how much revenue the customer generates during their subscription period and the total business case from an operator's point of view.

We have had an ongoing dialogue with a number of operators and there are two statements we keep on hearing:

1. An iPhone customer's SAC is significantly higher than an ordinary customer.
2. An iPhone customer's ARPU is significantly higher than an average customer.

T-Mobile in Germany says that their SAC from an iPhone customer is €317, compared to €198 for a normal postpaid customer and that an iPhone customer's ARPU is €77, compared to €30 for an average postpaid customer.

By themselves, the above figures seem like a reasonable business case, especially with a 24 month subscription. On the other hand, there are two important factors we do not know:

1. What is the value of a €77 iPhone customer, when you have deducted the costs of the free traffic included in the customer's subscription and the terminating costs in connection with handling traffic?
2. What is the usual SAC for a postpaid customer that generates a monthly revenue of €77 and what are the underlying financial figures for this type of customer?

Based on our experiences, we know that SAC can vary from customer segment to customer segment and similarly we also know that ARPU can vary a great deal. There are no rules that state that a customer with a €77 ARPU must have a SAC of €317.

During our talks with SingTel, they told us that the higher SAC they have had on their iPhone customers has resulted in their EBITDA margin in Singapore ending at 37.5% instead of 40.1% and in Australia ending at 23.2%, instead of 26.2%

The higher iPhone subsidies have reduced SingTel's EBITDA by 27 million S\$ in Singapore and 44 million A\$ in Australia. On the other hand SingTel says that their iPhone customers have an ARPU 1.5 times higher than normal postpaid customers.

The big question is whether the higher subsidies and the lower EBITDA is a temporary problem, that will be compensated for in the longer run when the revenue from these customers' higher ARPU has accumulated?

One could fear that the the increased subsidies on the iPhone is a permanent problem, that SingTel will have to live with and that SingTel, in the same way as Telia in Denmark has experienced, will see competitors focusing on acquiring SingTel's iPhone customers with SIM-only concepts, offering iPhone customers cheap traffic if they bring their own iPhone.

If we look at a country like Austria, Orange Austria is selling an iPhone that includes a data package with 3G data and 100 SMS/MMS for €14 monthly. This price is significantly lower than the price most iPhone customers are paying for a data package of that size in most other countries.

Strand Consult believes that Apple's distribution strategy, where they have moved from exclusive distribution to wide distribution by using more operators on the same market, will result in competition moving from being able to offer the actual iPhone handset, to who can offer the cheapest traffic.



In practice this type of competition will result in operators finding it difficult to increase their EBITDA, resulting in the iPhone generating increased costs for higher SAC and less traffic revenue for the operators. Apple will thereby be a far less attractive partner, than many are currently trying to portray.

At the end of the day, it could prove that from a financial viewpoint, the iPhone customer segment will be expensive to attract, retain and manage.

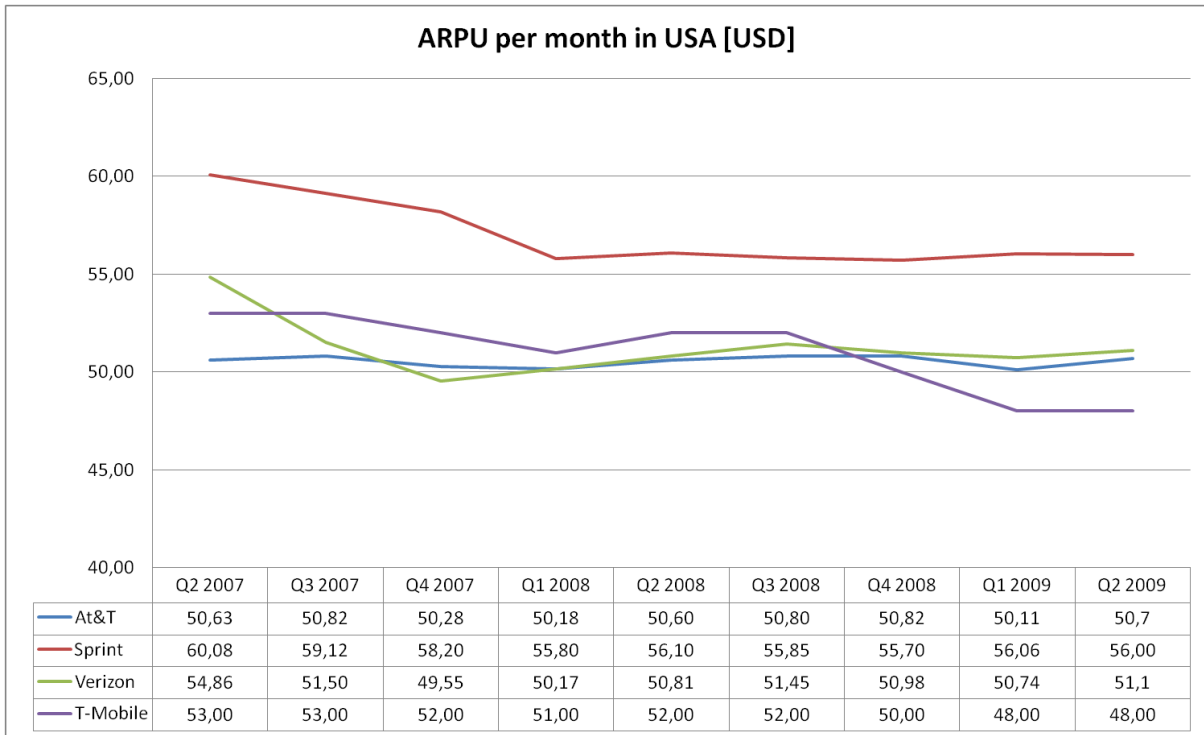
## **5.2. Case: AT&T in the USA**

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AT&T has on many occasions publicly announced the advantages they have gained from carrying the iPhone and how the iPhone has helped acquire customers from other operators. As examined in chapter 1.6, AT&T's iPhone figures actually show that the iPhone has not helped acquire customers from other operators. AT&T recently published their Q2 2009 figures that showed that they had sold 2.4 million iPhone subscriptions in Q2. But as Figure 10 in chapter 1.6 shows, only a third of those customers came from other operators.

If you want to examine how AT&T are really handling market competition and whether the iPhone has positively influenced their total business case, you should not only examine AT&T, but also the other operators on the market that are not selling the iPhone and that are fighting over the same customers as AT&T.

We have chosen to analyse a number of key figures from the most important US operators. We have only added brief comments, as we believe that the figures speak for themselves.



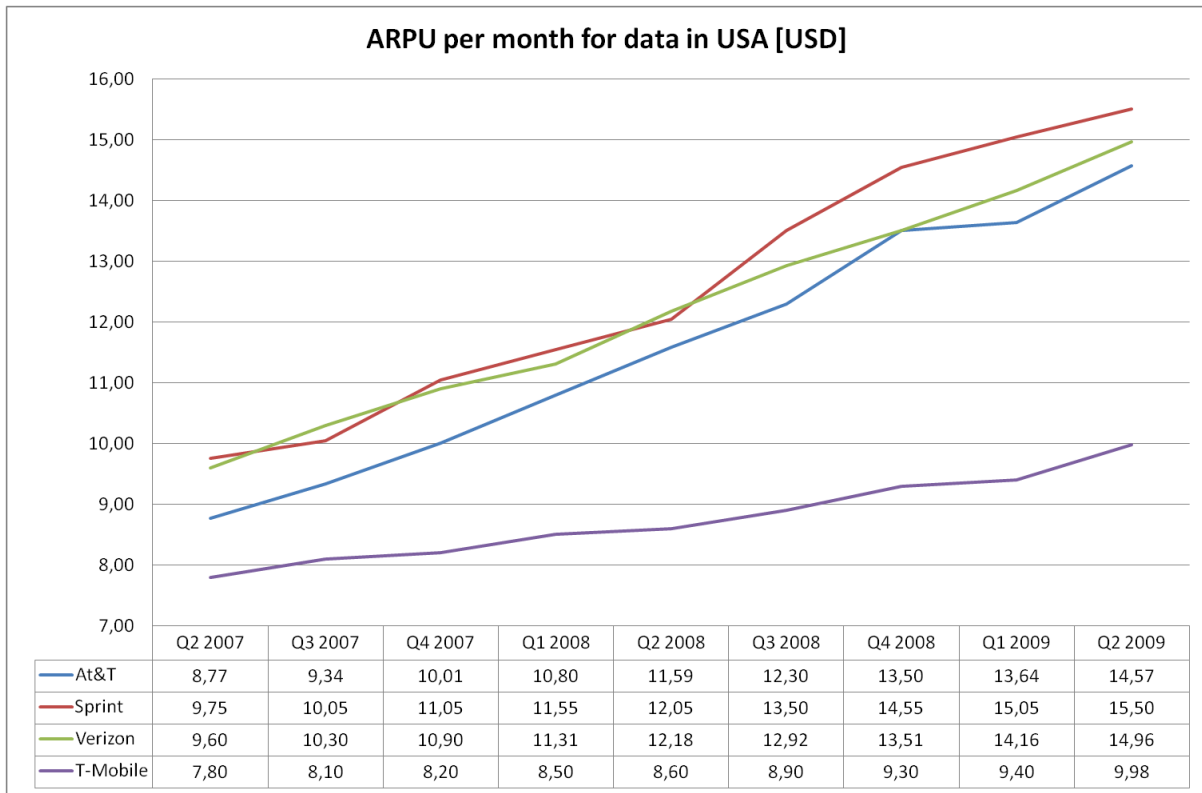
**Figure 39: ARPU per month in USA [USD]**

Note: Sprint's ARPU figures are postpaid only

(Source: The mobile operators and Strand Consult)

If you look at the four large operators' ARPU it is very consistent over time. This is primarily due to voice being sold in packages in the USA. Competition is not on the price of a package, but the amount of traffic included in a certain package.

In other words operators are competing on how much a customer receives for a certain amount, instead of doing what most of the rest of the world is doing - competing on the price of a minute or SMS.



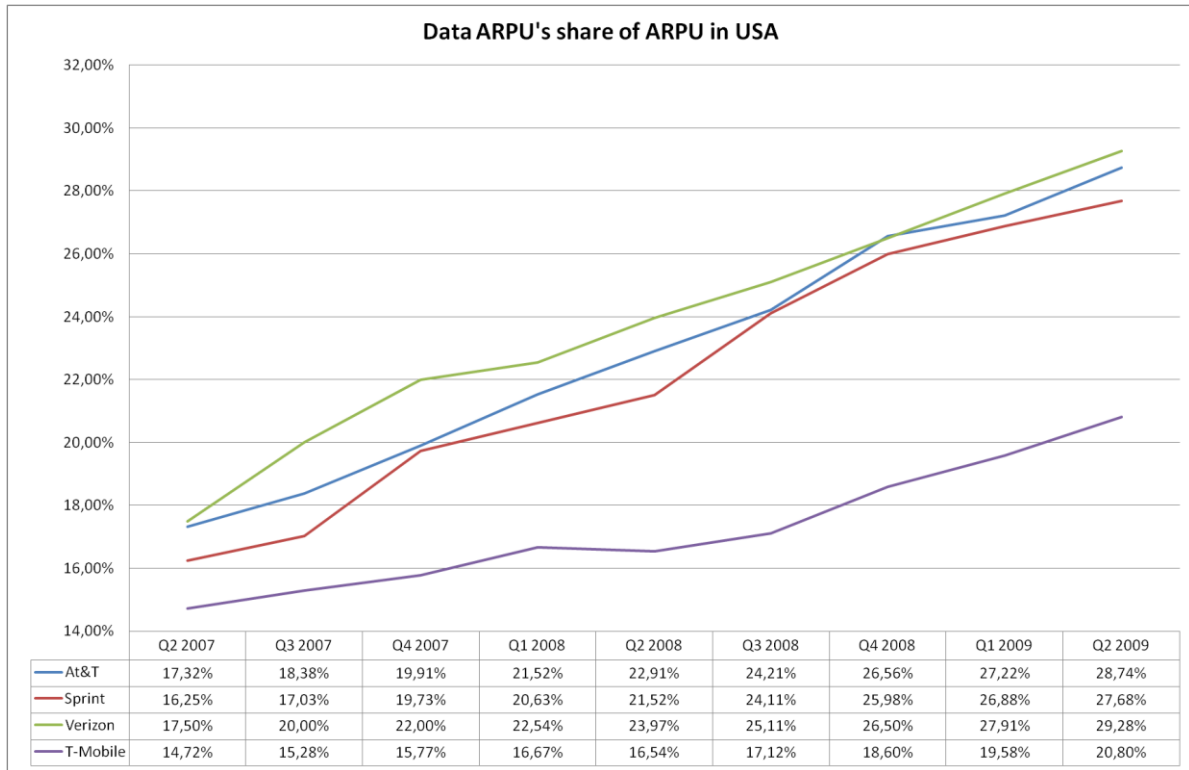
**Figure 40: ARPU per month for data in USA [USD]**

Note: Sprint's ARPU figures are postpaid only

(Source: The mobile operators and Strand Consult)

If you examine how data ARPU is developing in the USA, it is clear that AT&T, Sprint and Verizon are developing very similarly and that T Mobile is also here lagging behind the three other players.

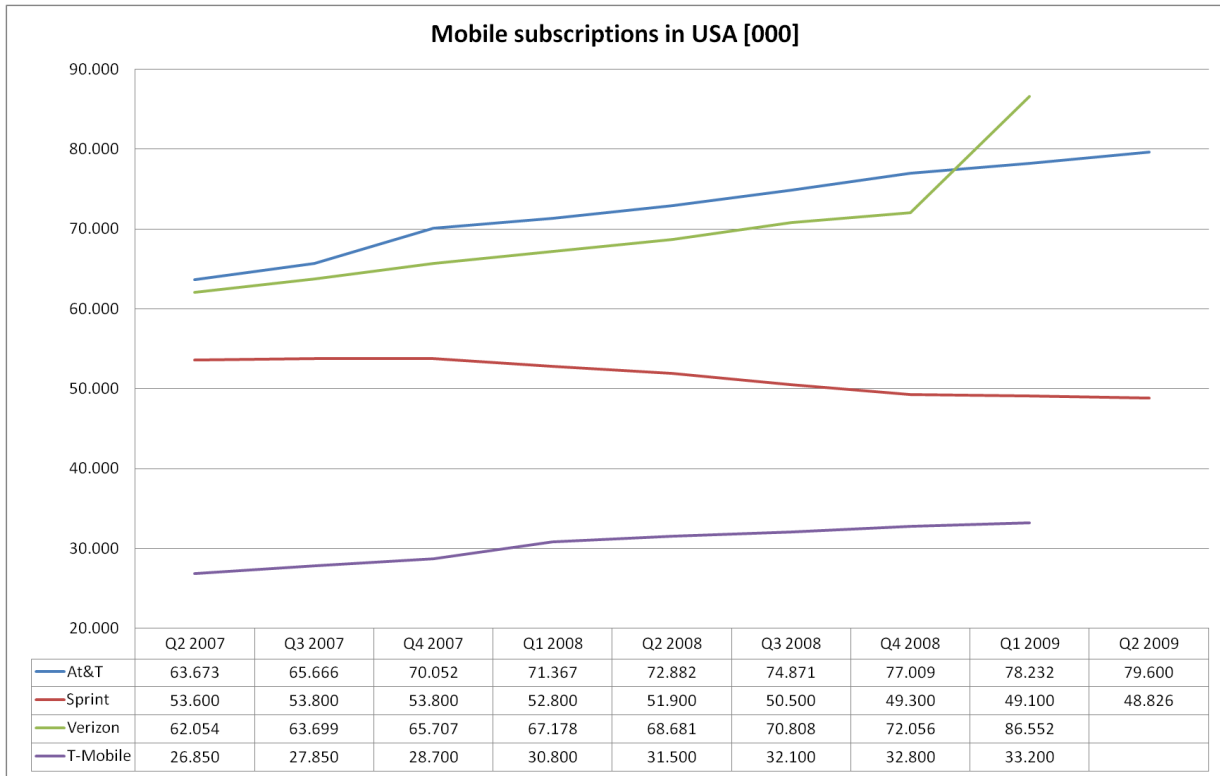
If you look at AT&T's figures, it is very clear that they have not experienced any improvement in their data ARPU compared to their most significant competitors, during the period after they launched the iPhone,



**Figure 41: Data ARPU's share of voice in USA**

Note: Sprint's ARPU figures are postpaid only  
 (Source: The mobile operators and Strand Consult)

If you examine the operators' data ARPU as a share of their ARPU, it is clear that once again the three large operators are following each other and again, it is not possible to see any iPhone effect in the AT&T figures.



**Figure 42: Mobile subscriptions in USA**  
 (Source: The mobile operators and Strand Consult)

Regarding attracting customers and increasing market shares, the American market has seen its share of consolidations over the years with smaller operators being purchased and sold, all resulting in America's current market which is primarily dominated by the four market players: AT&T, Sprint, Verizon and T-Mobile.

If you examine the number of iPhones sold by AT&T in the USA to customers from other operators, and compare the figure to their churn and the development of their customer base over time, it is again not possible to see any iPhone effect.

At the end of the day, the iPhone has such a small share of the American market and the amount of voice and data traffic it is generating is simply not enough to change any of the total market figures.

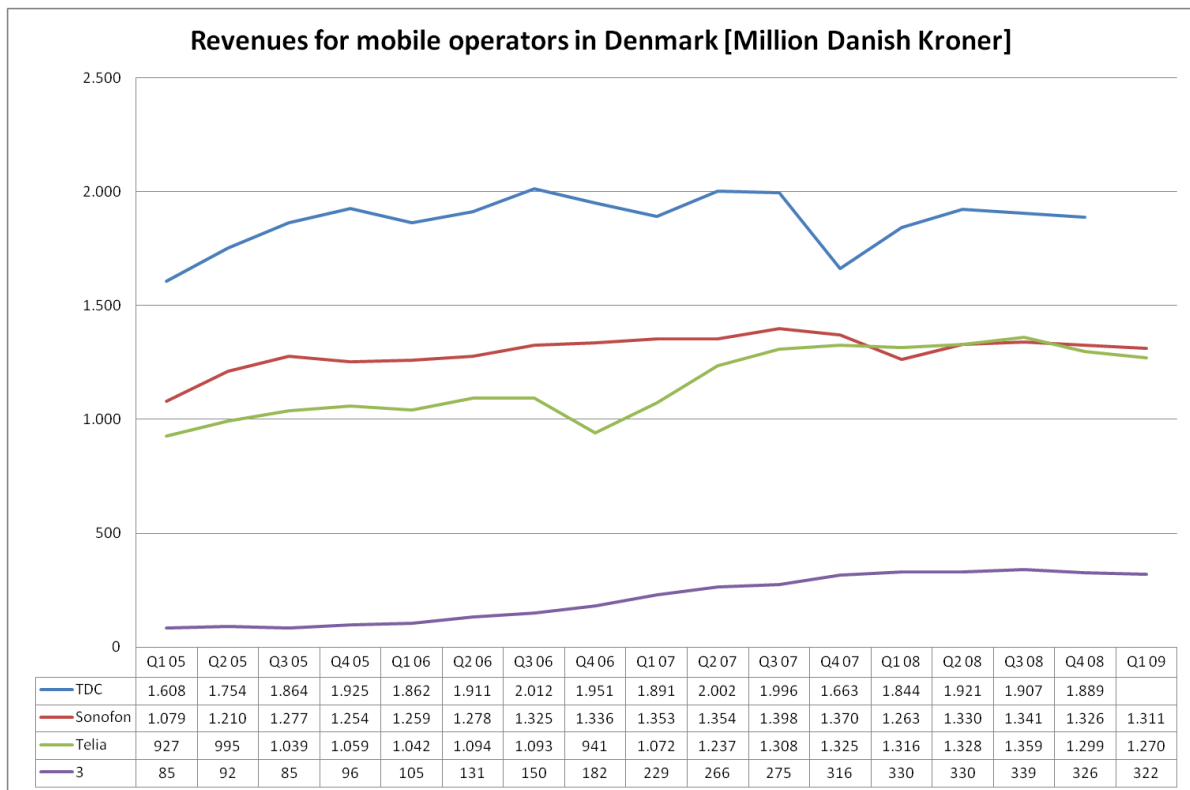
### 5.3. Case: TeliaSonera in Denmark, Sweden and Norway

One of the operators that has focused a great deal on the iPhone is TeliaSonera. TeliaSonera has in a number of media explained all the advantages they have gained by carrying the iPhone - advantages that primarily consist of improving their image and having the possibility of differentiating themselves on some very competitive markets, where they are up against some very strong and professional companies like Telenor, TDC, Tele2 and the operator 3.

In their press releases, TeliaSonera claimed that the iPhone is one of their bestselling mobile handsets and that their iPhone users are heavy users of mobile data and most importantly, that they are receiving a far higher ARPU than from their average TeliaSonera customer - an ARPU that is double the size than from other smartphones.

The question is whether the iPhone has actually had any positive influence on TeliaSonera's finances and whether there is a connection between TeliaSonera's press statements and the financial figures they have published.

The figures below illustrates the revenue development for all mobile operators in Denmark, Sweden and Norway.

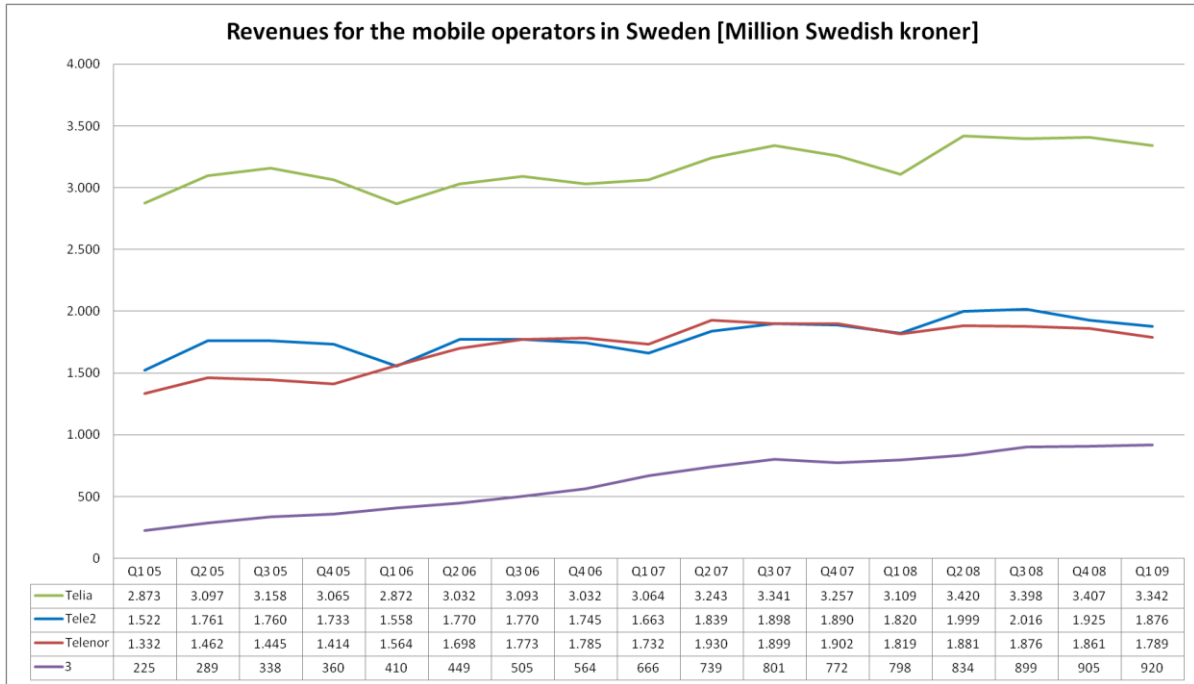


**Figure 43: Revenues for the mobile operators in Denmark [Million Danish Kroner]**

Note 1: 7,44 DKK=1 Euro

Note 2: Some data is missing

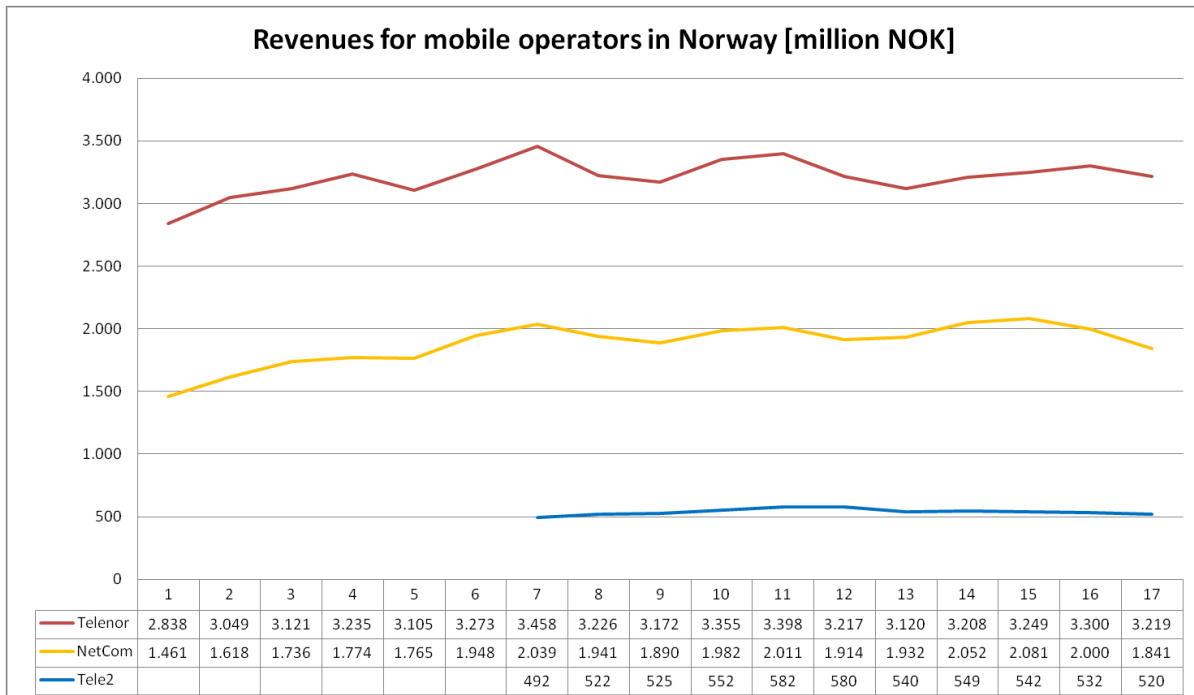
(Source: The mobile operators and Strand Consult)



**Figure 44: Revenues for the mobile operators in Sweden [Million Swedish Kroner]**

Note: 10,6 SEK=1 Euro

(Source: The mobile operators and Strand Consult)



**Figure 45: Revenues for the mobile operators in Norway [Million Norwegian Kroner]**

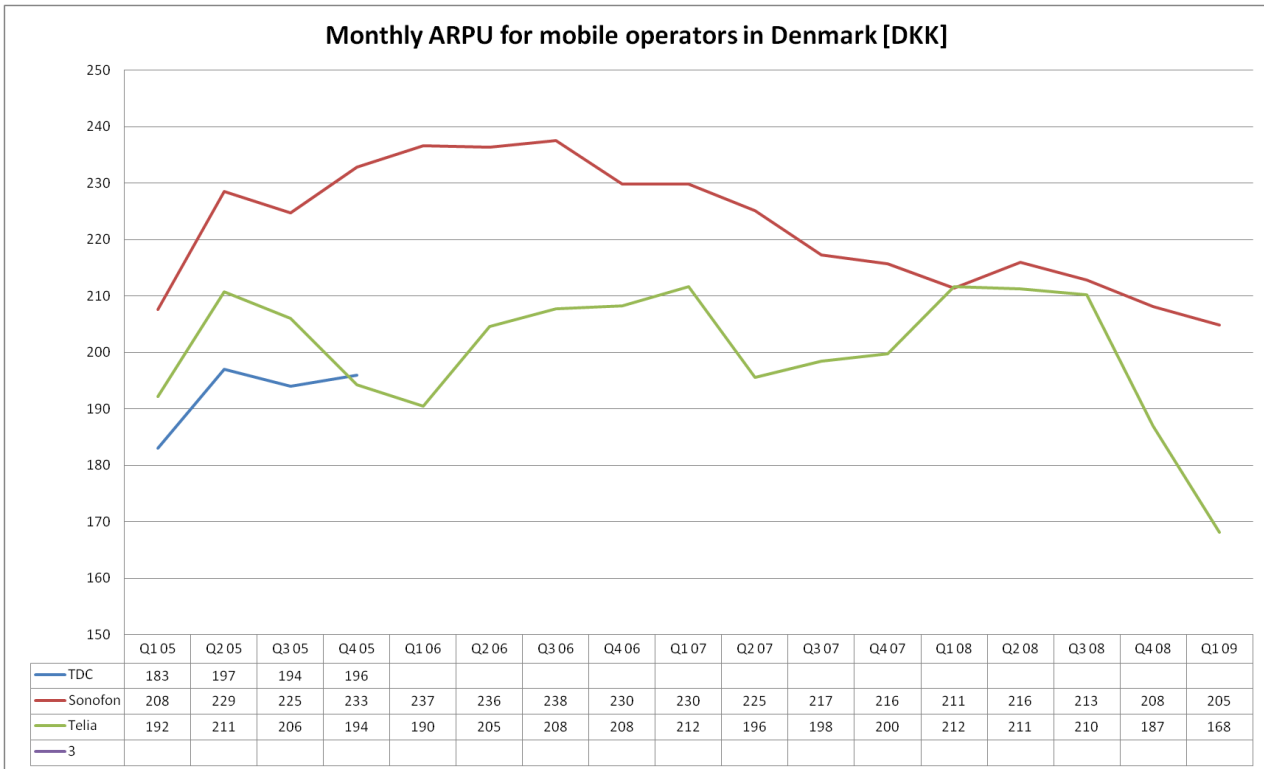
Note 1: 8,86 NOK=1 Euro

Note 2: Some data is missing

(Source: The mobile operators and Strand Consult)

If we look at how TeliaSonera's revenue has developed on the different markets, it is not possible to see any iPhone effect - in fact there are a number of markets where TeliaSonera has developed more poorly than all their competitors, this is for example the case in Denmark.

When we examine ARPU development on the different markets, it is characterised by the competition on the markets. The iPhone's role in that competition is very limited - or should we say non-existent. ARPU development is illustrated below.



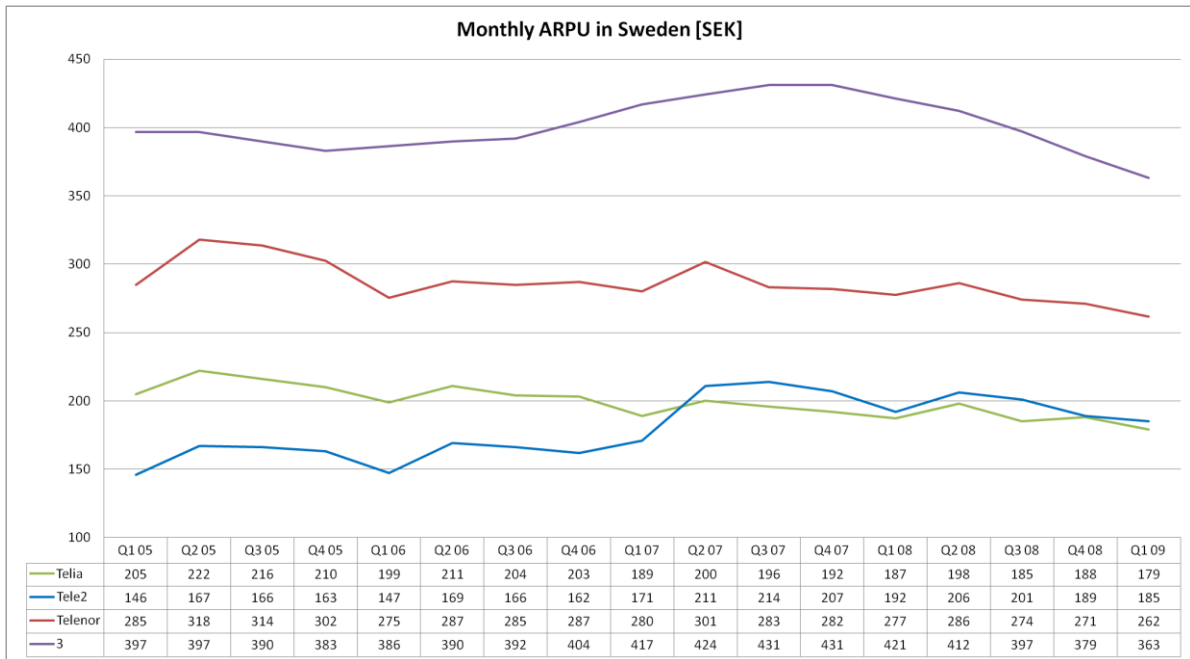
**Figure 46: Monthly ARPU for the mobile operators in Denmark [Danish Kroner]**

Note 1: 7,44 DKK=1 Euro

Note 2: Some data is missing

(Source: The mobile operators and Strand Consult)

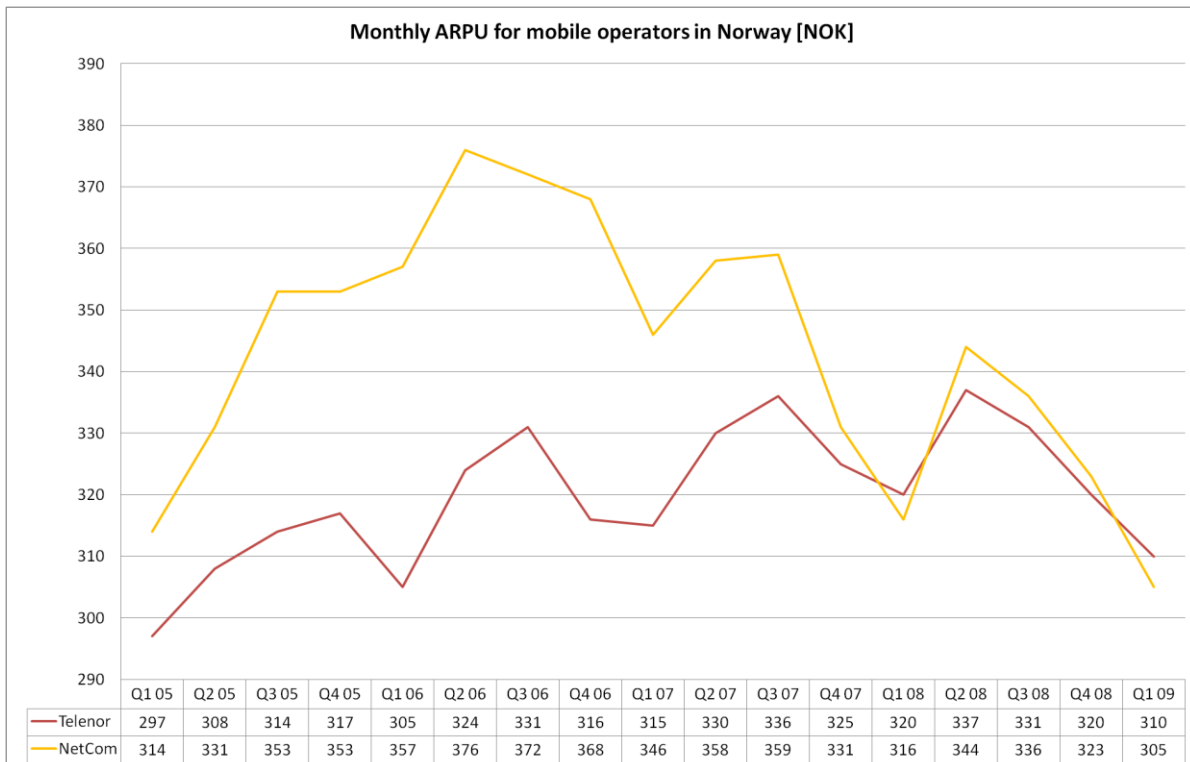




**Figure 47: Monthly ARPU for the mobile operators in Sweden [Swedish Kroner]**

Note: 10,6 SEK=1 Euro

(Source: The mobile operators and Strand Consult)



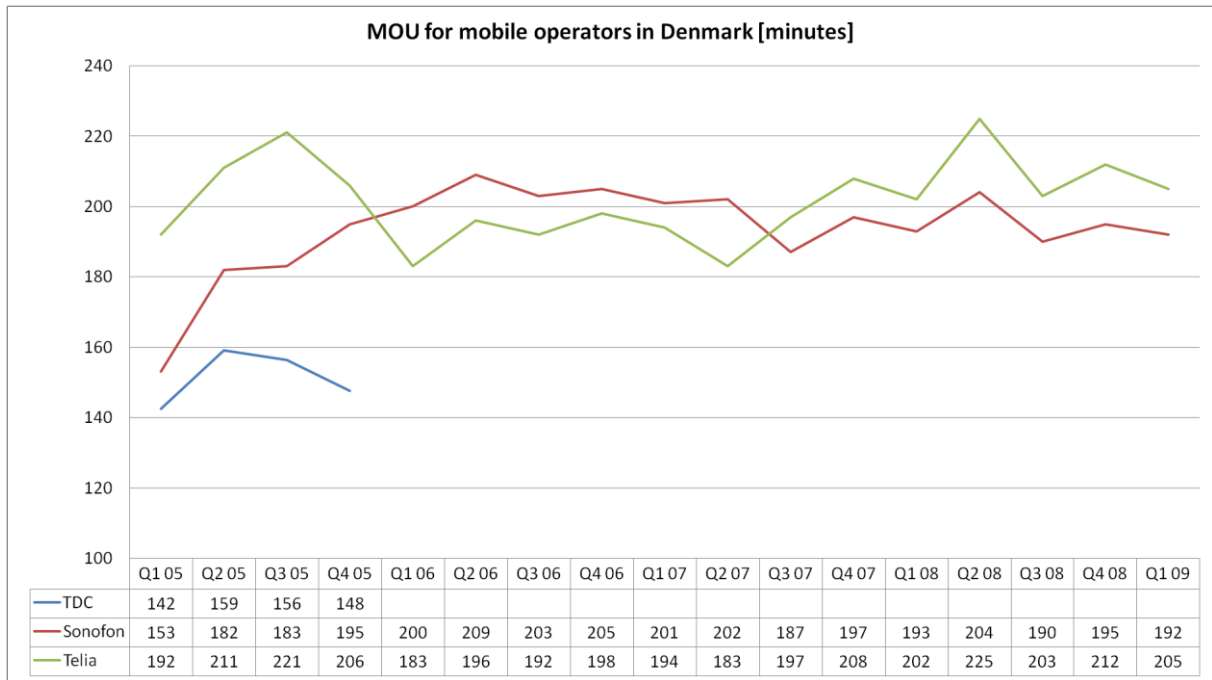
**Figure 48: Monthly ARPU for the mobile operators in Norway [Norwegian Kroner]**

Note: 8,86 NOK=1 Euro

(Source: The mobile operators and Strand Consult)

When we examine TeliaSonera's ARPU development in Denmark, Sweden and Norway, it is obvious that TeliaSonera is the operator that has had the poorest ARPU development over time. We cannot see any iPhone effect in TeliaSonera's financial figures and if there really is an iPhone effect - it is negative.

If we examine how minutes of use (MOU) has developed per user per month, the story is the same in all countries:



**Figure 49: Monthly MOU for the mobile operators in Denmark**

Note: Some data is missing

(Source: The mobile operators and Strand Consult)

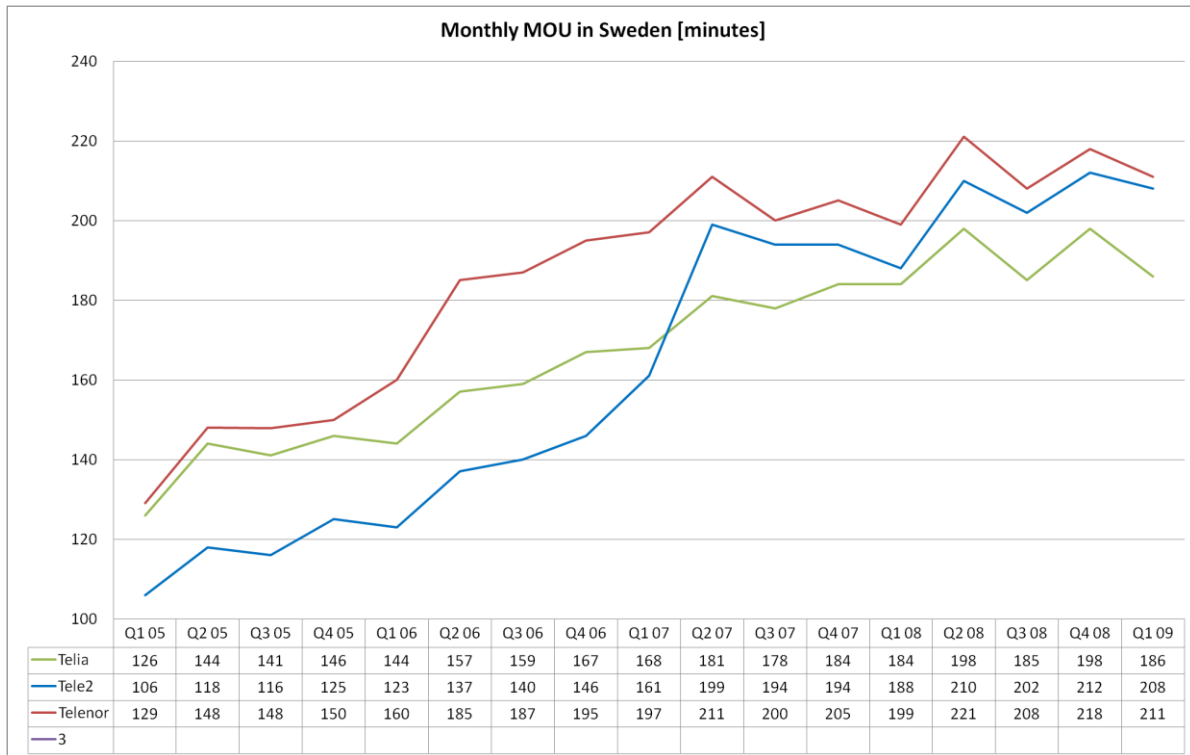


Figure 50: Monthly MOU for the mobile operators in Sweden

Note: Some data is missing

(Source: The mobile operators and Strand Consult)

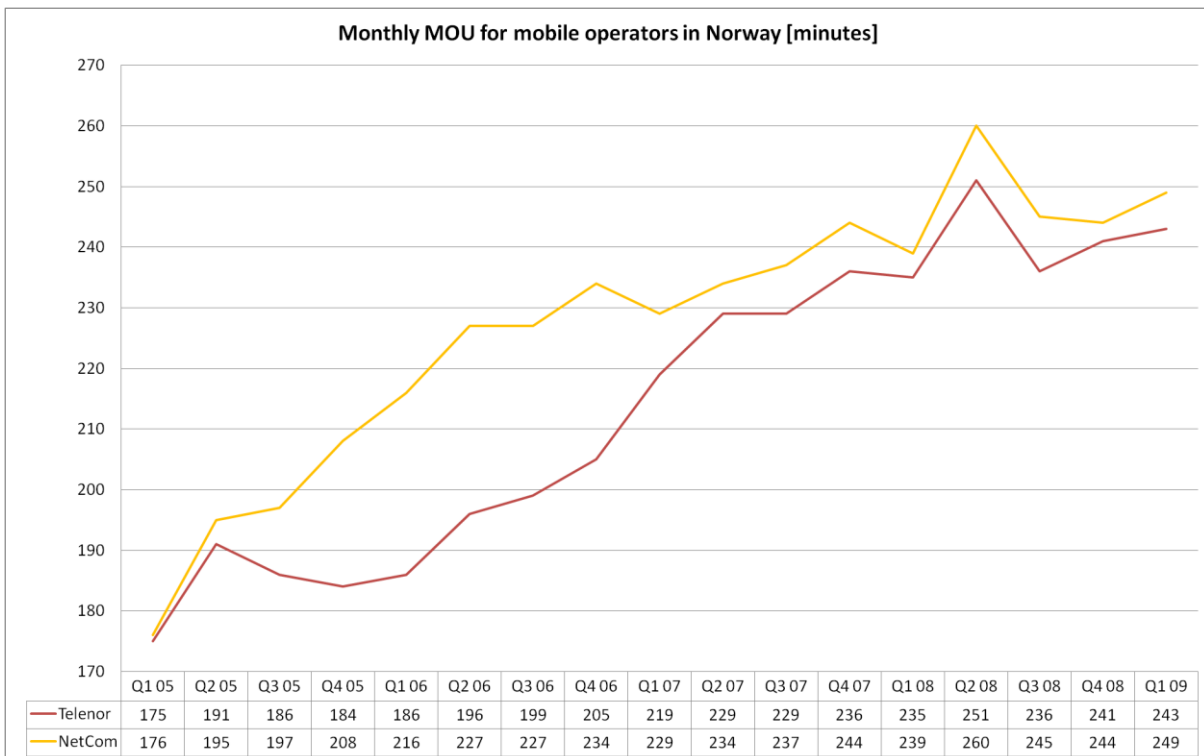
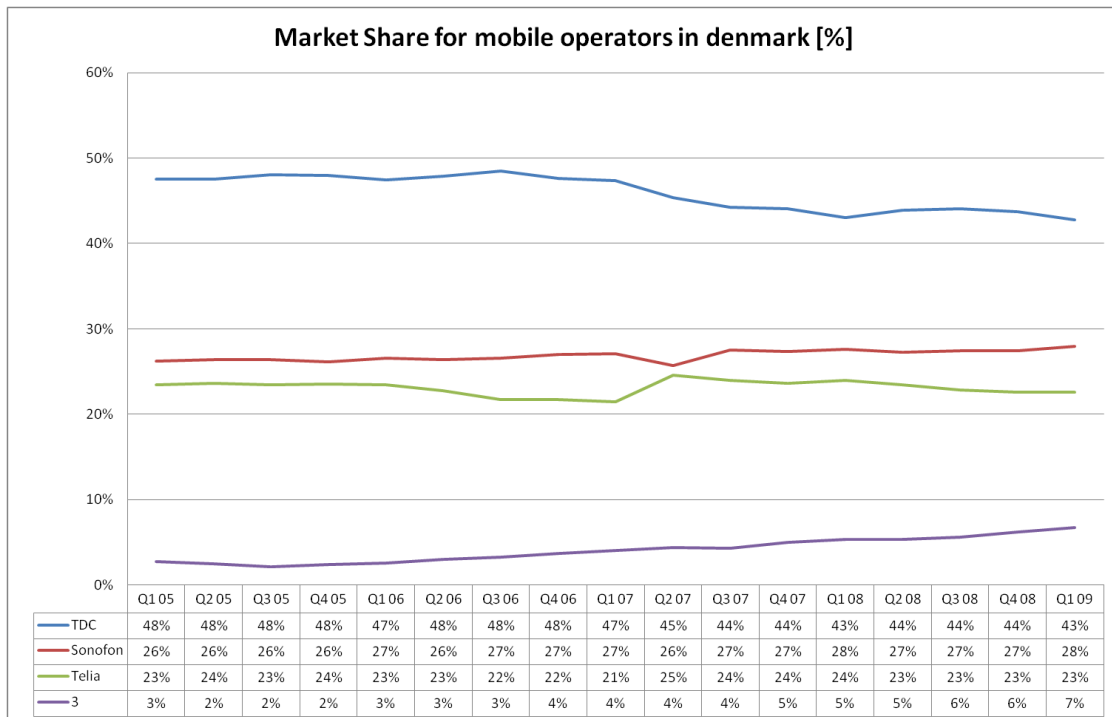


Figure 51: Monthly MOU for the mobile operators in Norway

(Source: The mobile operators and Strand Consult)

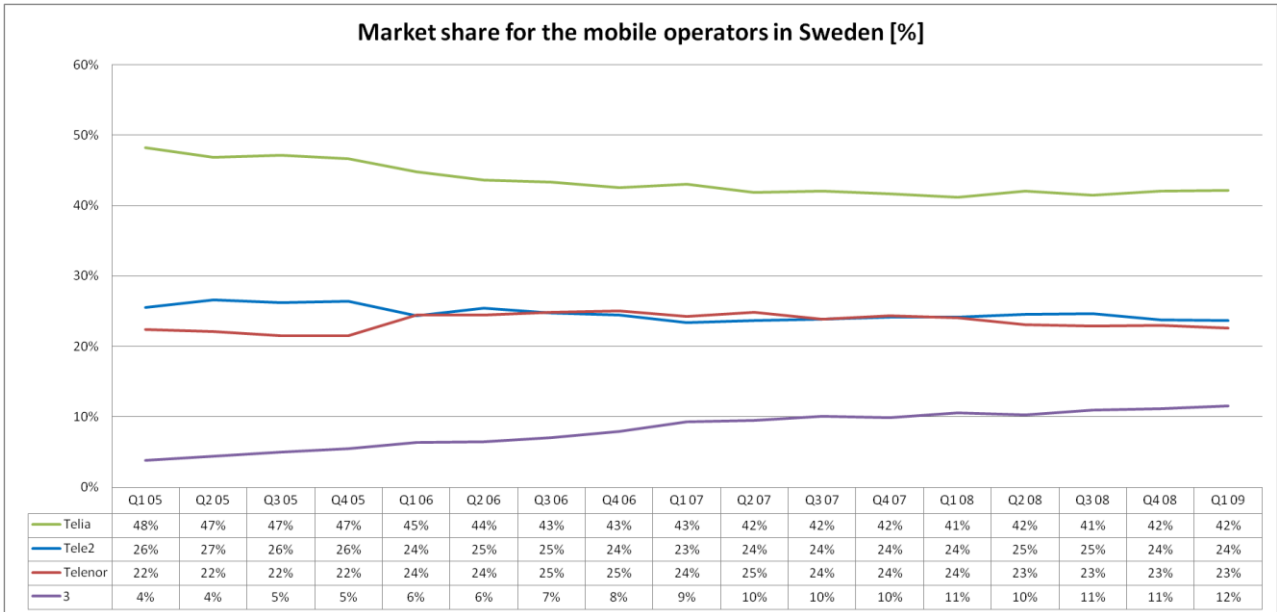
We cannot see any iPhone effect in Telia's financial figures from Denmark, Sweden or Norway regarding voice traffic. Again, TeliaSonera's figures have developed more poorly than their competitors on all markets.

Many people are talking about the iPhone's ability to attract new customers. One of the operators that has been talking a great deal about this is TeliaSonera. It will therefore be exciting to see how their market share has developed over time in Denmark, Sweden and Norway.



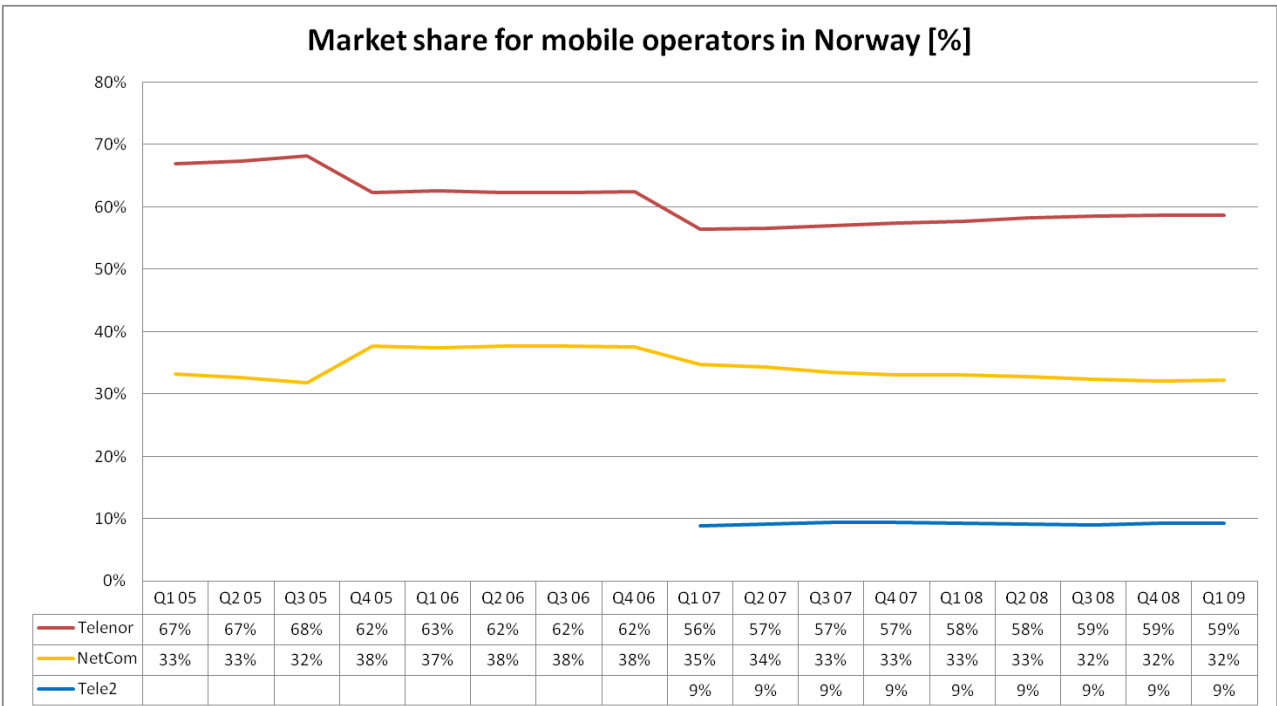
**Figure 52: Market share for the mobile operators in Denmark [%]**

(Source: The mobile operators and Strand Consult)



**Figure 53: Market share for the mobile operators in Sweden [%]**

(Source: The mobile operators and Strand Consult)



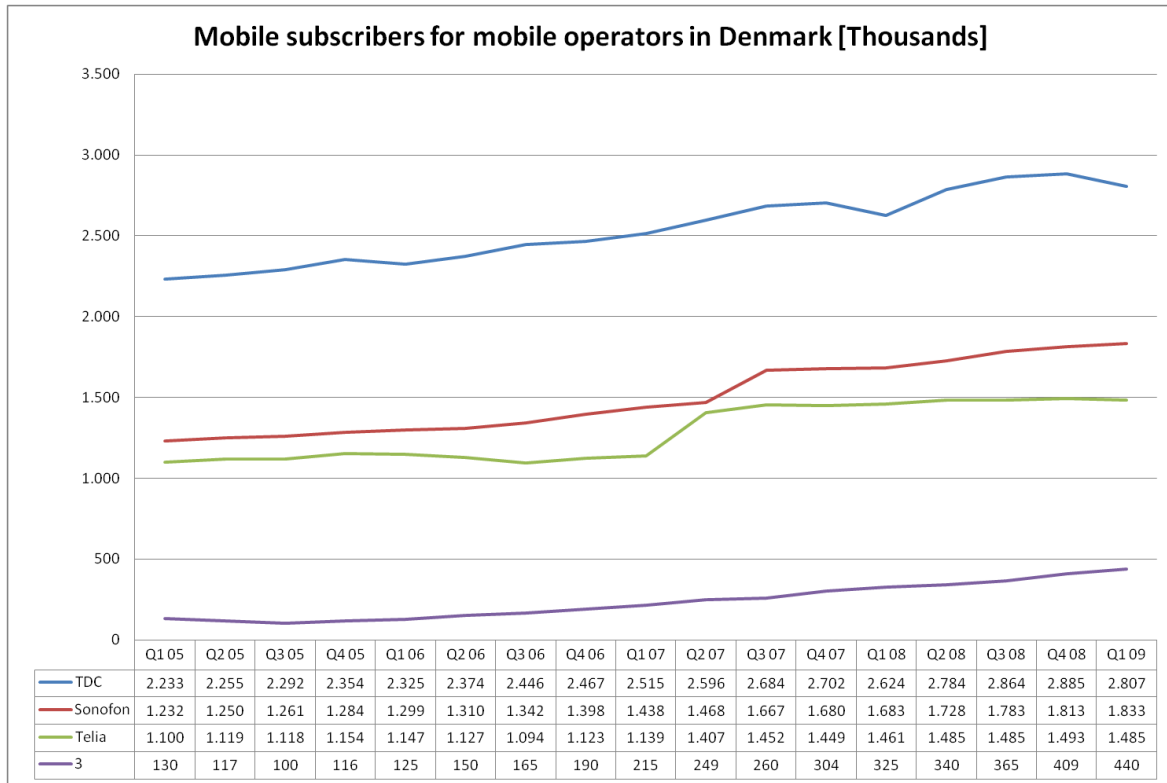
**Figure 54: Market share for the mobile operators in Norway [%]**

Note: Some data is missing

(Source: The mobile operators and Strand Consult)

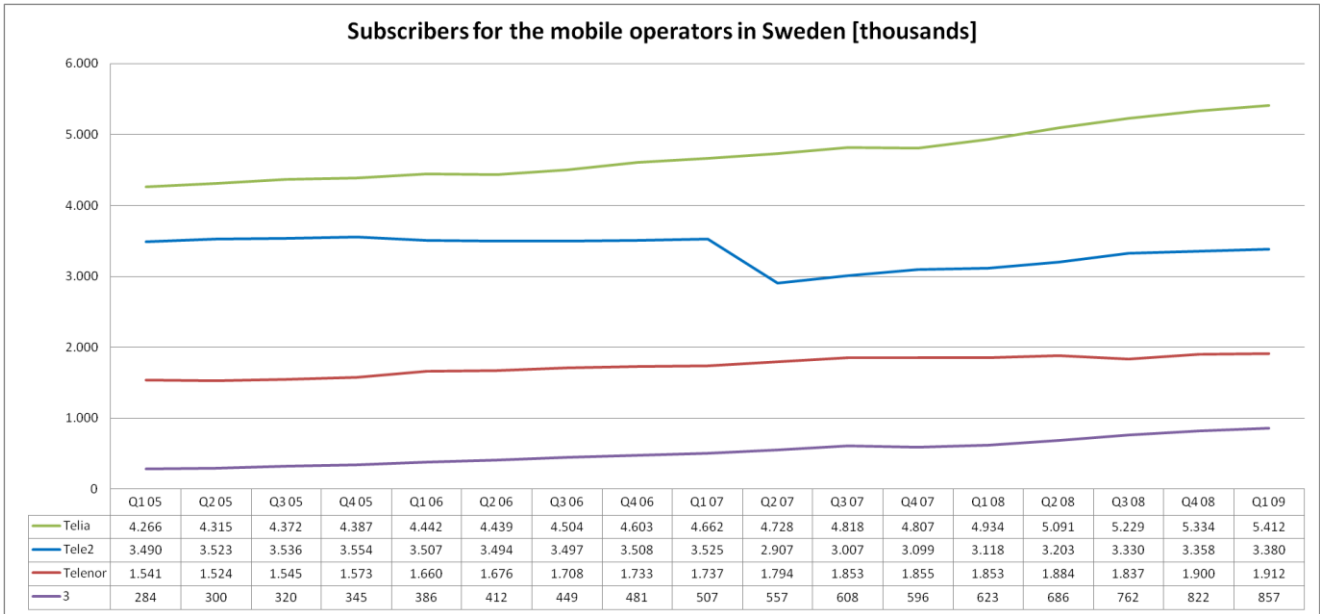
Once again we are seeing the same trend, that TeliaSonera has not been able to increase their market share having launched the iPhone. Again this is a repetition of what we have seen on other markets.

If you take a closer look at the figures you can see that TeliaSonera is not gaining customers or market shares by selling the iPhone.



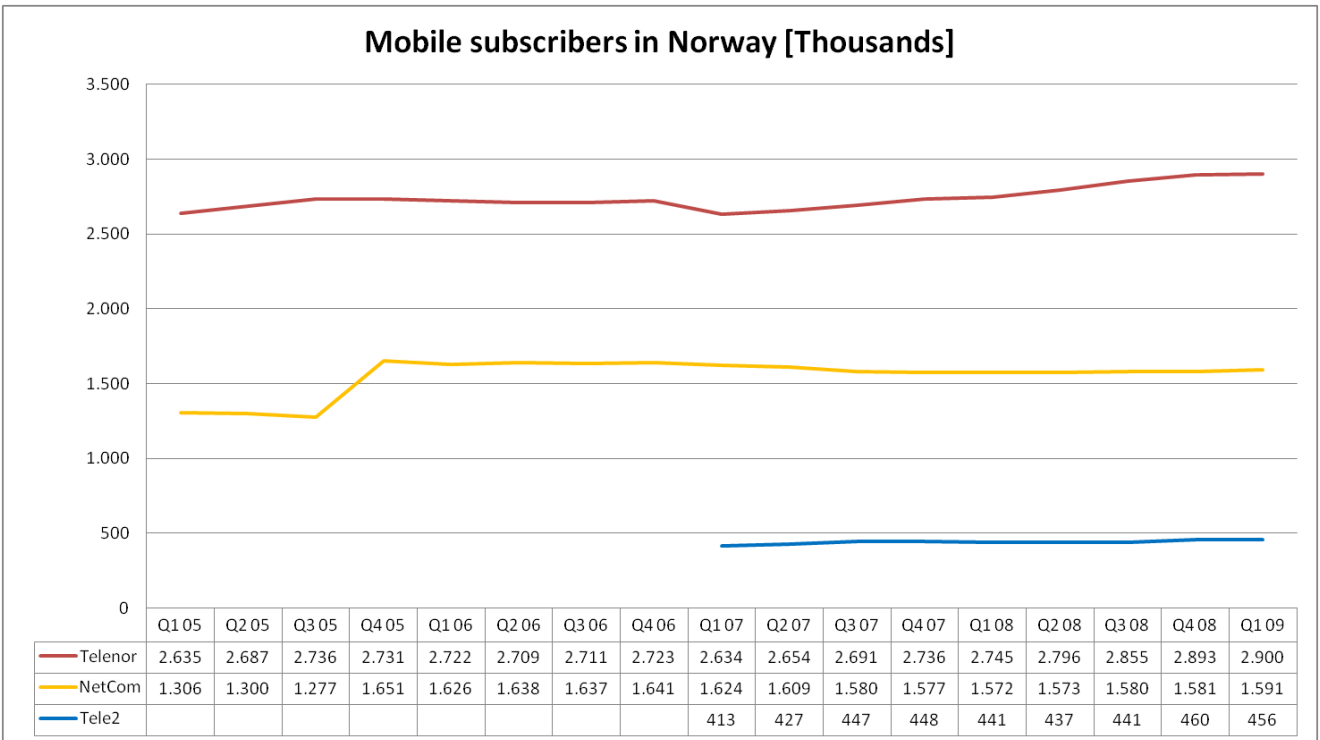
**Figure 55: Subscribers for the mobile operators in Denmark [thousands]**

(Source: The mobile operators and Strand Consult)



**Figure 56: Subscribers for the mobile operators in Sweden [thousands]**

(Source: The mobile operators and Strand Consult)



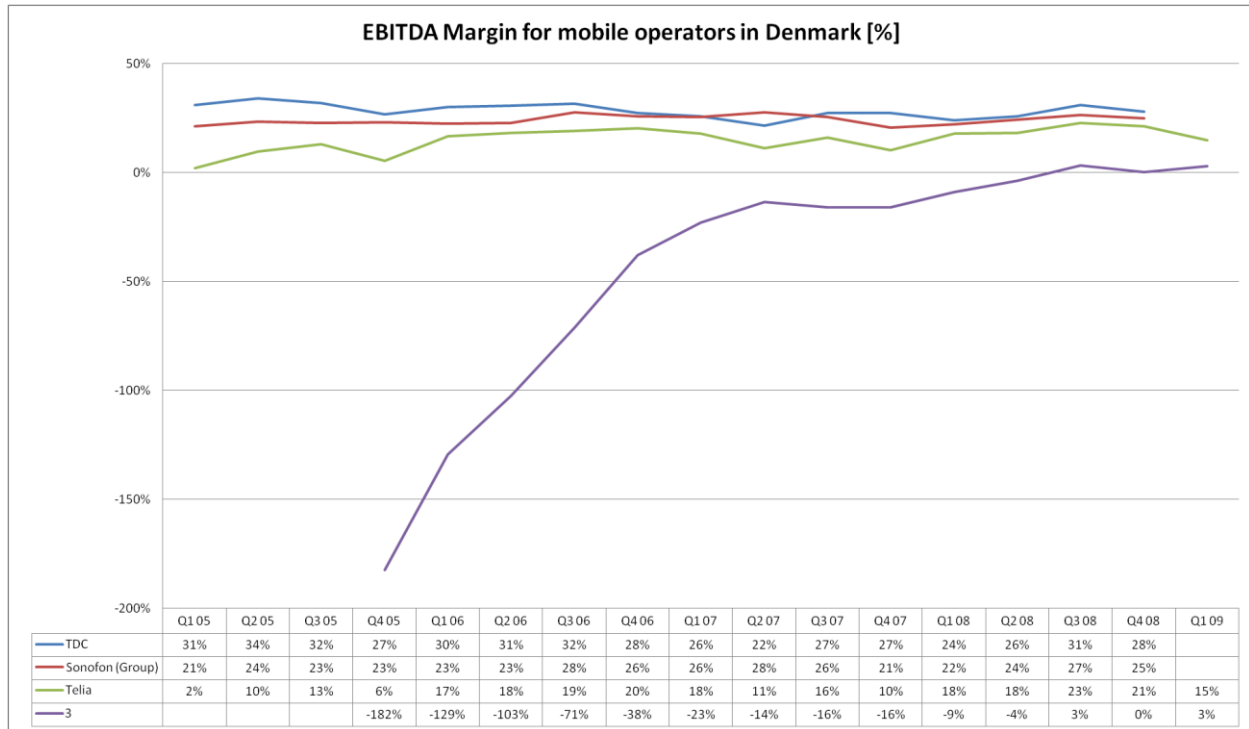
**Figure 57: Subscribers for the mobile operators in Norway [thousands]**

Note: Some data is missing

(Source: The mobile operators and Strand Consult)

Again we are seeing the same scenario and it is interesting to note that TeliaSonera is under-performing all their competitors in Denmark, Sweden and Norway.

If we examine the development of the EBITDA margins for operators in the region, TeliaSonera is following the market and again there is no sign of any iPhone effect, apart from the general effect resulting from ordinary market competition.

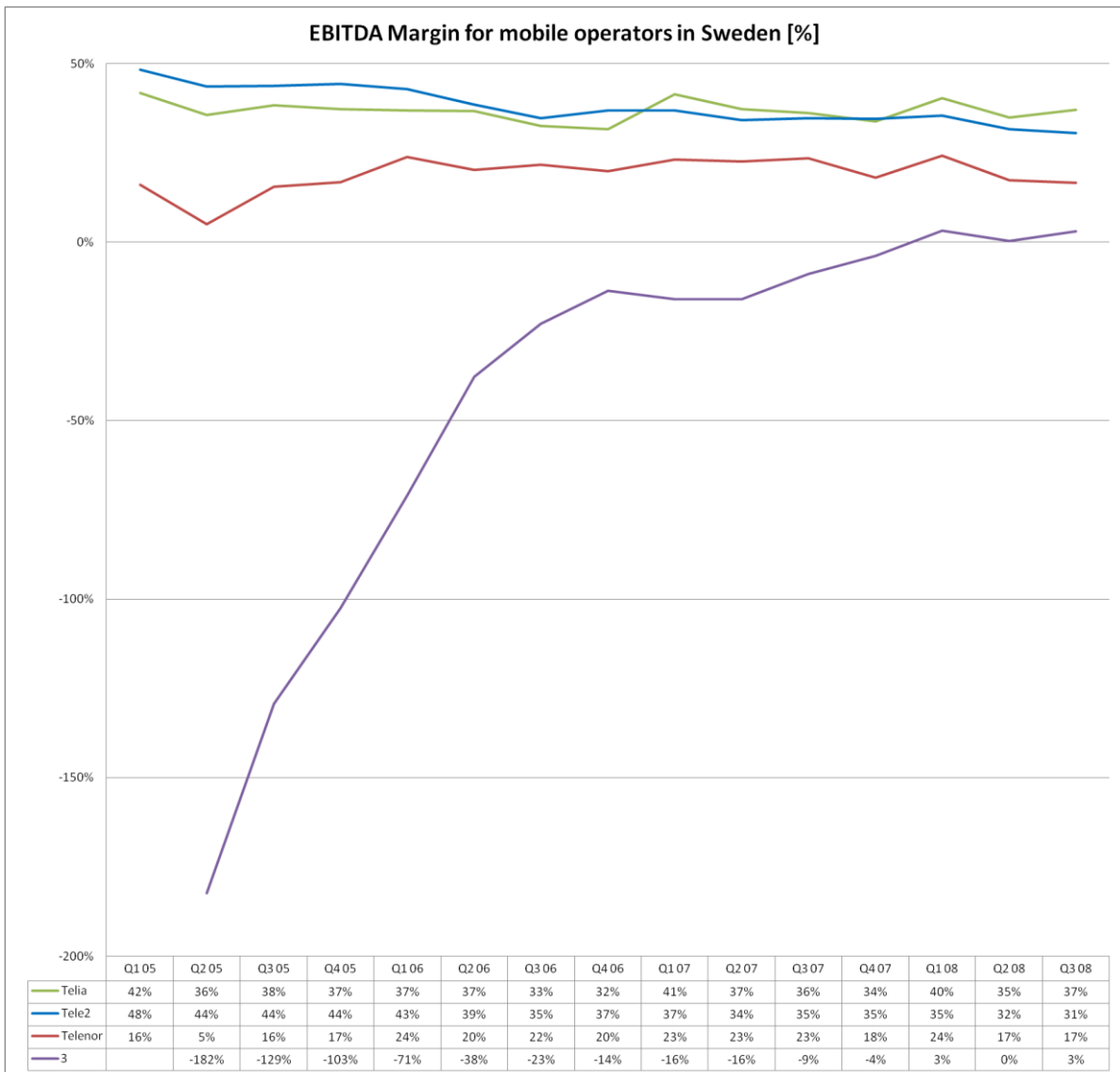


**Figure 58: EBITDA Margin for mobile operators in Denmark [%]**

Note: Some data is missing

(Source: The mobile operators and Strand Consult)

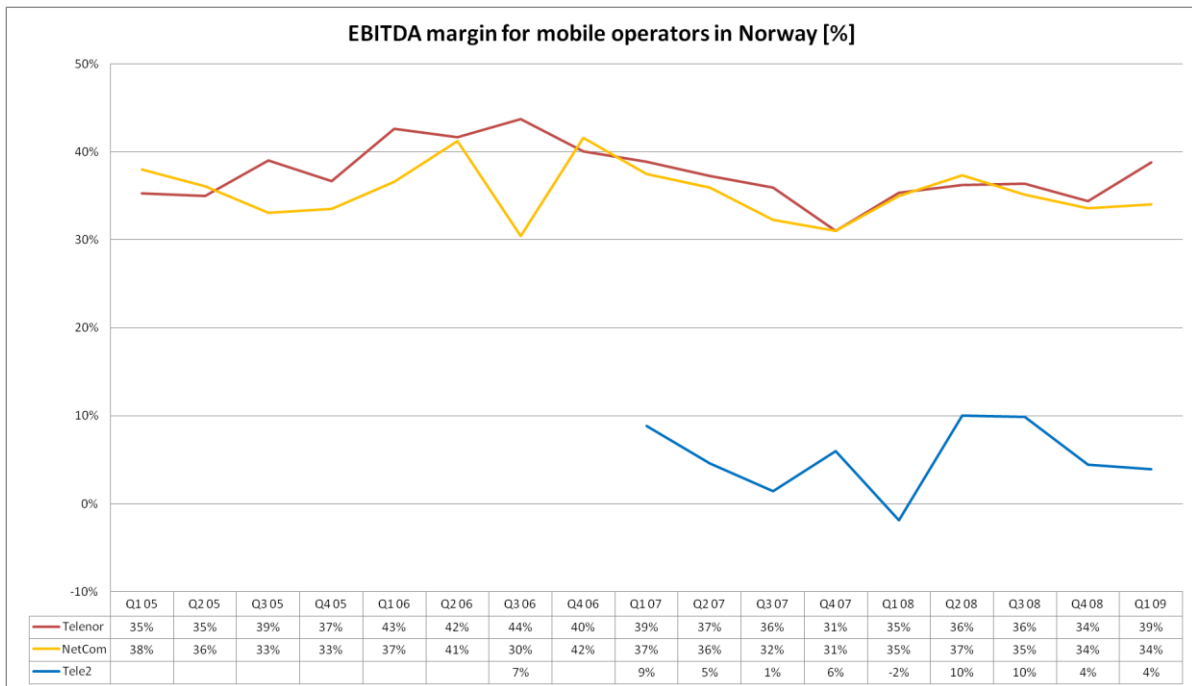




**Figure 59: EBITDA Margin for mobile operators in Sweden [%]**

Note: Some data is missing

(Source: The mobile operators and Strand Consult)



**Figure 60: EBITDA Margin for mobile operators in Norway [%]**

Note: Some data is missing

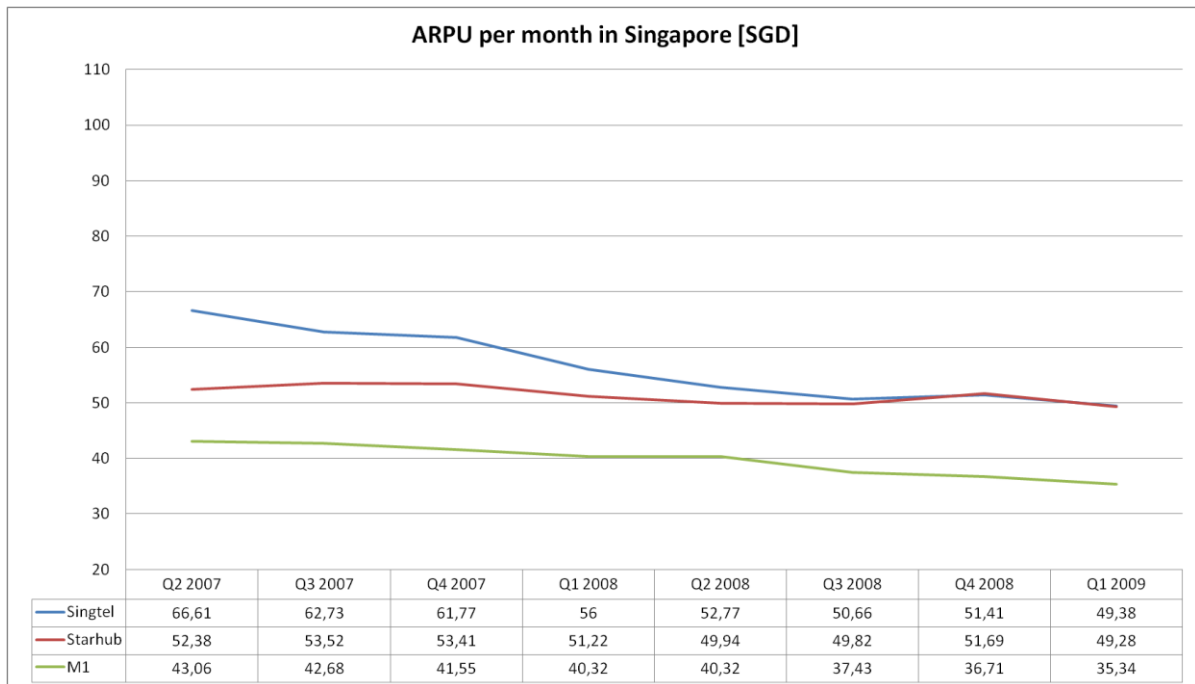
(Source: The mobile operators and Strand Consult)

We cannot see any iPhone effect in TeliaSonera’s financial figures in Denmark, Sweden or Norway. A more simple way to put this would be by concluding that TeliaSonera has managed to under-perform all their competitors after they launched the iPhone.

We do not believe that the negative development of TeliaSonera's financial figures is solely due to the iPhone, but rather due to the competition on these markets and possibly also that TeliaSonera's management on a number of markets has moved too much focus away from daily operations and over to launching and selling the iPhone.

#### 5.4. Case: SingTel in Singapore

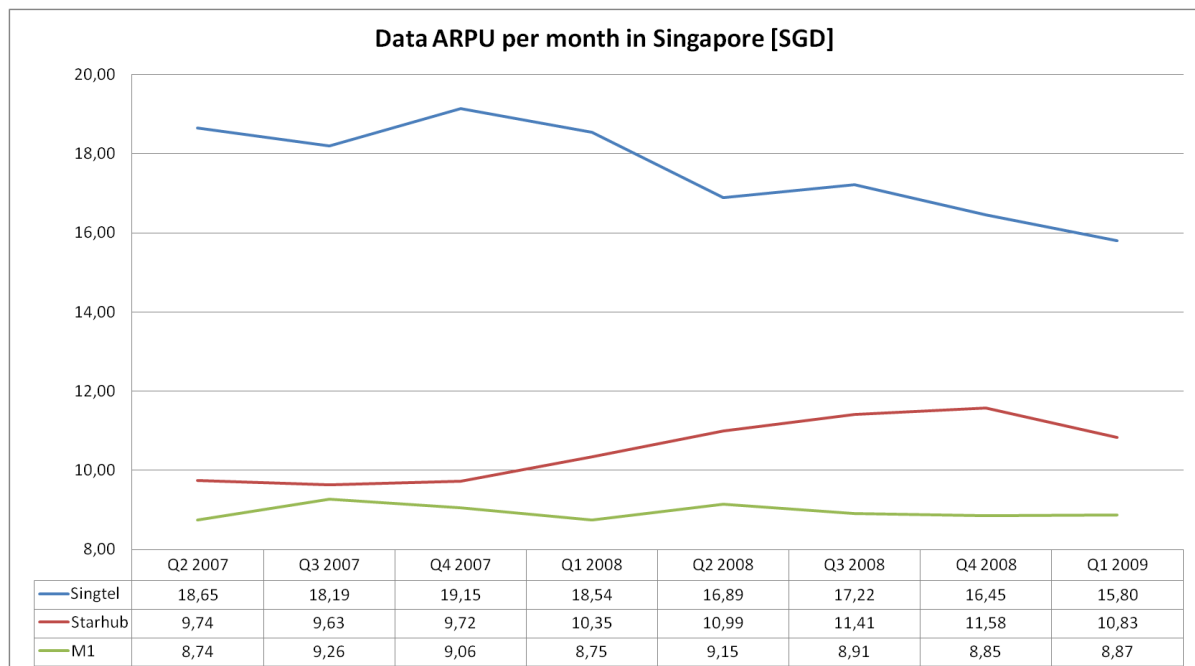
When we examine an operator like SingTel in Singapore, the above trends from the USA and Nordic countries repeat themselves. We cannot find any visible iPhone effect in SingTel's financial figures, apart from the profit warning they issued due to large iPhone subsidies. Here are their figures:



**Figure 61: ARPU per month in Singapore [SGD]**

Note: 2,05 SGD = 1 Euro

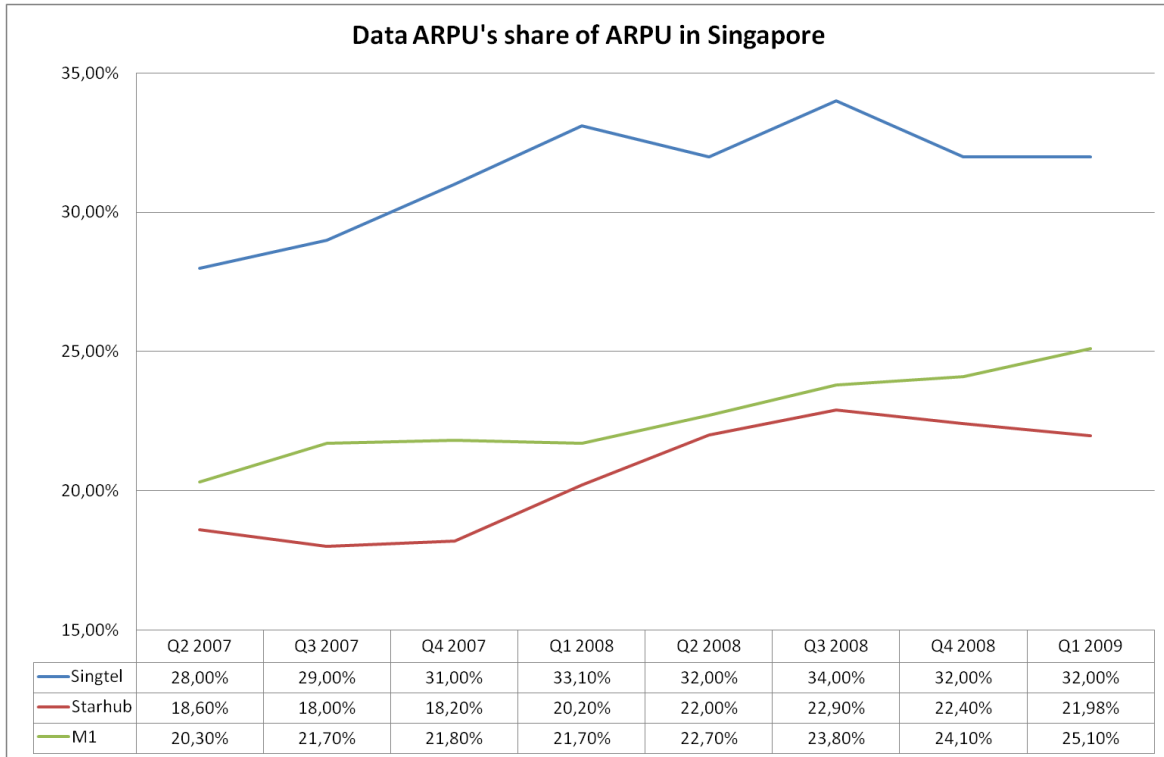
(Source: The mobile operators and Strand Consult)



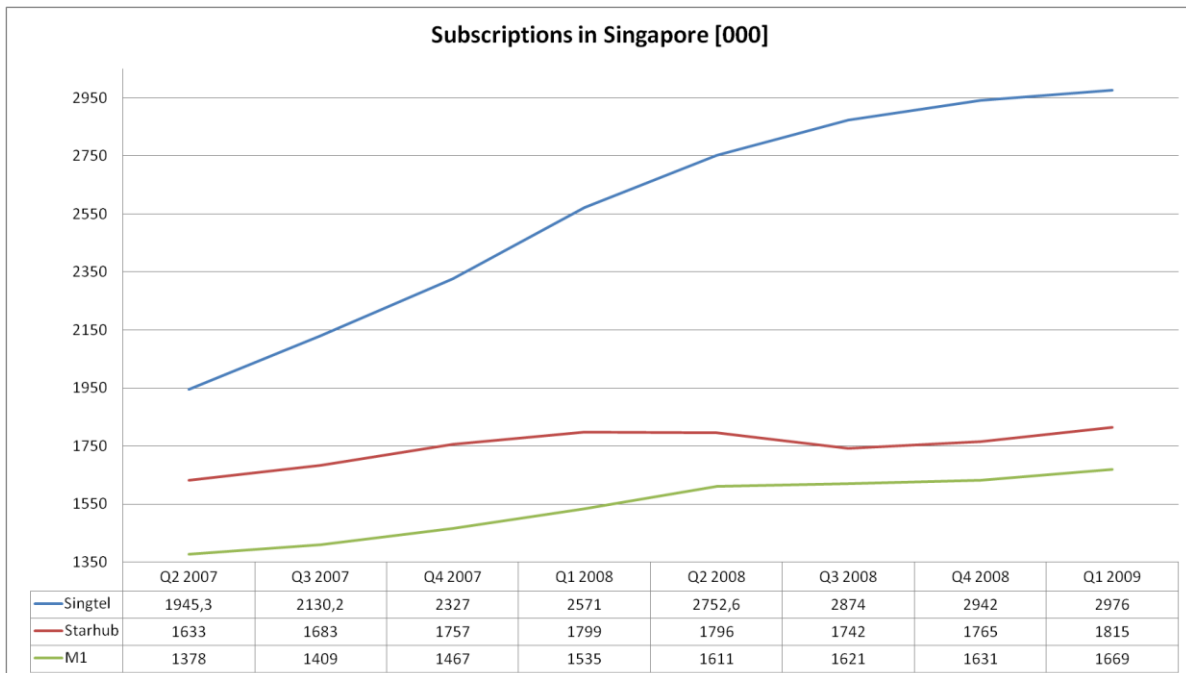
**Figure 62: Data ARPU per month in Singapore [SGD]**

Note: 2,05 SGD = 1 Euro

(Source: The mobile operators and Strand Consult)



**Figure 63: Data ARPU's share of ARPU in Singapore**  
 (Source: The mobile operators and Strand Consult)



**Figure 64: Mobile subscriptions in Singapore**  
 (Source: The mobile operators and Strand Consult)

The conclusion is very clear. The development in Singapore is very identical to the other markets we have analysed - SingTel has not been successful in showing any development that is better than their competitors regarding ARPU or data ARPU etc. In fact, SingTel is underperforming their competitors in a number of areas.

Regarding SingTel's business relationship with Apple and the iPhone, it is obvious that it has so far not been a profitable business from the SingTel shareholders point of view and in the same way that we doubt that AT&T will achieve any positive iPhone effect over time, we also doubt that SingTel will.

### **5.5. MVNO Cases: Simyo in Germany, One Call in Norway and BiBoB and Telmore in Denmark**

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Around Europe a number of MVNOs have chosen to focus on the iPhone segment using the strategy: "Bring your own iPhone and we will give you cheap traffic". The philosophy behind this strategy is to offer customers the best deal, when customers are looking for a SIM only solution. Many of these players have been marketing themselves via aggressive PR, telling potential customers that they cannot offer cheap phones, but that they instead have the market's best prices on voice, SMS and data.

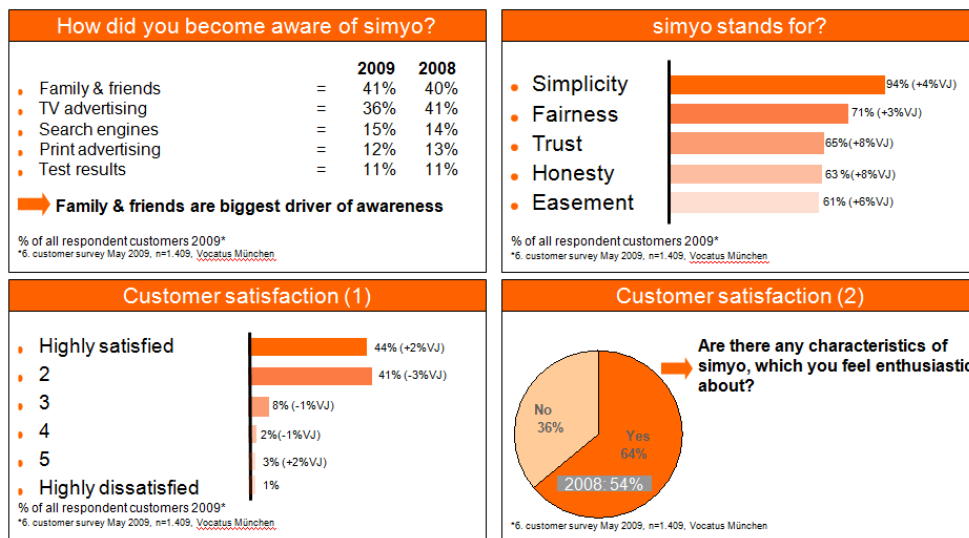
On a market with a great deal of hype surrounding the iPhone and with a number of aggressive MVNOs using an aggressive PR to profile and attract customers, there are many possibilities to combine these two businesses. This is especially the case when iPhone partner operators choose to sell heavily subsidised iPhone's at high monthly costs. Simply put, a market player that does not have expenses for subsidies or retailers and that is using the Internet to offer their customers primarily SIM-only solutions, has the possibility of portraying themselves as the iPhone customer's best friend.

In this section we have examined how four successful MVNOs have focused on the iPhone and been very successful at attracting high consuming new customers, but without the same expenses as operators using the Apple partner strategy. The four MVNOs we have examined in this report are Simyo in Germany, One Call in Norway, and BiBob and Telmore in Denmark.

#### **5.5.1. Case: Simyo – Germany**

Simyo was the first Web-based no-frill MVNO that saw the possibilities of combining the iPhone and cheap mobile data, to thereby attract attractive new customers. Historically, Simyo is a copy of the famous Danish no-frill MVNO Telmore. From day one they focused on selling voice, SMS and data based on some simple principles; prices should be cheap, products should be simple and there should be no hidden costs when customers choose to switch to Simyo.de.

Simyo's business model is very simple and traditional and a number of MVNOs around the world have used this model to attract and retain the customer segments that are willing to purchase and pay for mobile services via the Internet and that find it attractive to be offered inexpensive and transparent prices without subscriptions, instead of purchasing cheap mobile phones on 24 month subscription contracts. There is no doubt that Simyo is a success. Today's Simyo has over 1.3 million customers in Germany and the level of loyalty among these customers is very high, as illustrated in the following survey:



**Figure 65: Simyo's customer Survey**  
(Source: Simyo and Strand Consult)

It is very clear that Simyo has a very satisfied customer base, which has been primarily acquired through friends and family that are recommending Simyo.de. It is also clear that these customers have chosen Simyo as their mobile provider, both because they are delivering value for money, but also because they are selling an honest product.

Simyo.de's customers are also very loyal. Simyo's loyalty ratings are higher than the other most significant players on the German market:

	simyo	E-Plus	Base	TM	VF	O2
<u>total satisfaction level</u>	60%!	51%	54%	43%	44%	38%
<u>brand sympathy</u>	64%	63%	68%	60%	63%	71%!
<u>intention of repurchase</u>	70%	70%	79%!	63%	69%	62%
<u>it is advantageous to be customer of ...</u>	74%!	57%	71%	55%	57%	58%

! = benchmark

**Figure 66: Simyo's customer Survey and other mobile suppliers**

(Source: Simyo and Strand Consult)

The different market players' SAC (sales and acquisition costs) varies a great deal on the German market.

	Postpaid ARPU [Euro]	iPhone ARPU [Euro]	SAC [Euro]	iPhone SAC [Euro]
T-Mobile	30	77	198	317
e-Plus	27	-	129	-
Simyo	-	-	40	-

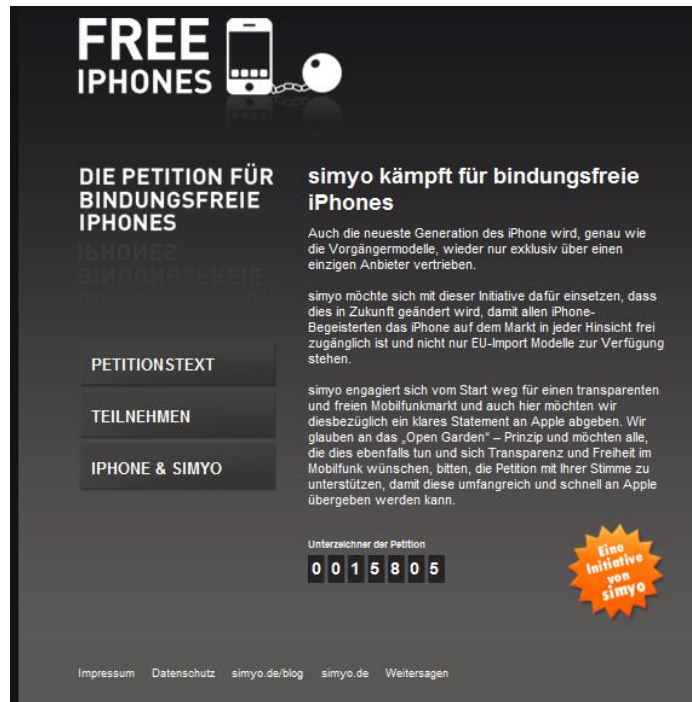
**Figure 67: Sac and ARPU for T-Mobile, e-Plus and Simyo**

(Source: Strand Consult and Strand Consult)

There is no doubt that iPhone users have a higher ARPU and correspondingly higher SAC. But more importantly, what does the underlying business case looks like and how good a business have the phone's that T-Mobile has sold during the past years been for T-Mobile? And while we're on the subject, how many of their customers have subsequently chosen to switch to a player like Simyo.de, that offers cheap traffic?

### 5.5.1.1. Free iPhone campaign

To attract iPhone customers, Simyo.de has launched a number of initiatives, including launching the website <http://www.iphonesfree.de>.



**Figure 68: Homepage of iPhonesfree**

(Source: iPhonesfree.de and Strand Consult)

The purpose of the website was to fight for the iPhone to become a free product that can be sold without the current close operator ties. This campaign was combined with the following instructions to Simyo customers, shown in the figure below, explaining how an iPhone customer can successfully switch to Simyo.de. Simyo was trying to take advantage of the hype surrounding the iPhone, to attract new customers and to show customers that Simyo is liberating iPhone customers from their stifling operator relationships.





Figure 69: Homepage of Simyo

(Source: <http://www.simyo.de/de/informieren/aktuell/iphone.html> and Strand Consult)

When we examined the advantages an iPhone customer has by using Simyo.de’s network, it became obvious that there is a great deal of money to be saved when using an existing iPhone handset.

If the customer does not have an iPhone, Simyo has external partners that sell an unlocked iPhone 3G (second generation) for €588.90 for the 8 GByte version (€674.90 for the 16 GByte version). T-Mobile sells the same 8 GByte phone second-hand with a guarantee for €59.95 with the cheapest subscription and for €1 with the other subscriptions.

The figure below shows the prices for T-Mobile’s subscriptions and for Simyo's standard subscription, with and without a data package.

## The Moment of Truth – a portrait of the iPhone

	T-Mobile Complete XS	T-Mobile Complete S		T-Mobile Complete M	T-Mobile Complete L	Simyo	Simyo with 1 Gbyte data package
		T-Mobile	Fixed network				
Monthly subscription [Euro]	24,95	44,95	44,95	59,95	119,95	0	9,9
Subscription start fee [Euro]	0	0	0	0	0	9,9	9,9
Price per minute for calls to own network [Euro]	0,29	0	0,29	0	0	0,09	0,09
Included number of minutes per month for calls to own network	0	unlimited	0	Unlimited	Unlimited	0	0
Price per minute for calls to other networks [Euro]	0,29	0,29	0,29	0,29	0	0,09	0,09
Included number of minutes per month for calls to other networks	0	0	0	0	Unlimited	0	0
Price per minute for calls to fixed network [Euro]	0,29	0,29	0	0	0	0,09	0,09
Included number of minutes per month for calls to fixed network	0	0	Unlimited	Unlimited	Unlimited	0	0
Startup fee [Euro]	0	0	0	0	0	0	0
Minute-/second rating	Second	Second	Second	Second	Second	Second	Second
Price per sent sms in own network [Euro]	0,19	0	0	0	0	0,09	0,09
Price per sent sms to other networks [Euro]	0,19	0,19	0,19	0,19	0	0,09	0,09
Included number of sms in own network	0	Unlimited	Unlimited	Unlimited	3000	0	0
Included number of sms per month to other networks	0	0	0	0		0	0
Price per sent mms in own network [Euro]	0,39	0,39	0,39	0	0	0,39	0,39
Price per sent mms to other networks [Euro]	0,39	0,39	0,39	0,39	0	0,39	0,39
Included number of mms in own network	0	5	5	Unlimited	100	0	0
Included number of mms per month to other networks	0	0	0	0		0	0
Price per megabyte data Data [Euro]	0,49	0	0	0	0	0,24	0,24
Included data per month [Mbyte]	200	300	300	1000	5000	0	1000
Price for iPhone 3GS (3. Generation) with 16 GByte (with subscription)[Euro]	129,95	99,95	99,95	39,95	1	-	-
Price for iPhone 3G (2. Generation) with 8 GByte (with subscription)[Euro]	59,95	1	1	1	1	588,90	588,90
Binding period [Months]	24	24	24	24	24	0	0

**Figure 70: Mobile phone fees for T-Mobile's iPhone subscriptions and for Simyo**

Note: Simyo's 1 GByte data package can be renewed when the 1 Gbyte are used

(Source: T-Mobile, Simyo and Strand Consult)

We know that an average e-Plus postpaid mobile customer in Germany had a MOU (minutes of use) of 283 minutes/month in Q2 2009. An average customer had an ARPU of €27, of which 27% was non-voice in Q2 2009. Based on this we have described three consumption patterns for three different types of customer:

The low consuming iPhone customers have been defined with the following monthly consumption:

- 40 minutes calls on own network
- 40 minutes calls to other networks
- 40 minutes calls to fixed line phones
- 30 SMSs on own network
- 30 SMSs on other networks
- 0 MMSs on own network
- 0 MMSs on other networks
- 100 MByte data

The medium consuming iPhone customers have been defined with the following monthly consumption:

- 95 minutes calls in own network
- 95 minutes calls to other networks
- 95 minutes calls to fixed line phones
- 100 SMSs in own network
- 100 SMSs to other networks
- 5 MMS's in own network
- 5 MMS's to other networks
- 500 MByte data

The heavy user iPhone customer has been defined with the following monthly consumption:

- 150 minutes calls in own network
- 150 minutes calls to other networks
- 150 minutes calls to fixed line phones
- 300 SMSs in own network
- 300 SMSs to other networks
- 10 MMS's in own network
- 10 MMS's to other networks
- 1 GByte data

That results in the following total phone bill after the 24 month subscription period that T-Mobile is selling the iPhone with expires. Simyo has no minimum subscription period.

	T-Mobile Complete XS	T-Mobile Complete S	T-Mobile Complete M	T-Mobile Complete L	Simyo	Simyo with 1 Gbyte data package	
		T-Mobile	Fixed Network				
Low end customer	1707,6	1772,4	1772,4	1854	2878,8	974,7	636,3
Middle end customer	7116	2904	2904	2556	2878,8	4031,1	1388,7
High end customer	16062	4675,2	4675,2	3850,8	2878,8	8225,1	2702,7

**Figure 71: Total phone bill after the 24 months binding period for three different user segments [Euro]**

Note 1: The red area shows a very expensive subscription that no rational mobile user would choose.

Note 2: The yellow area shows a situation where the fair use limit for data is exceeded

(Source: T-Mobile, Simyo and Strand Consult)

When you compare the figures in the chart above, it is clear that all three types of customers in the example will get a cheaper subscription by choosing Simyo, and that a low end customer and a middle end customer will get most value for money by purchasing their iPhone from a Simyo partner over a 24 month period.

It is only the heavy user customer that will have saved money at the end of the 24 month subscription period, by choosing an iPhone at T-Mobile, rather than Simyo.

In other words, customers can quickly and easily calculate how many months it will take before they will save money by purchasing both their mobile phone and mobile traffic from a market player like Simyo.de.

### 5.5.2. Case: One Call in Norway

The Norwegian MVNO OneCall.no has also focused on targeting Norwegian iPhone customers, using the same strategy as Simyo, BiBoB and Telmore. They are both targeting Netcom's customers (TeliaSonera) and customers that have parallel imported an iPhone to Norway. In practice, One Call has been aggressive with their PR and spent a great deal of time and energy telling customers that they have a good offer for iPhone customers, while at the same time launching products that are interesting for an iPhone customer on a market where Netcom has been charging high prices in a number of areas.

An iPhone customer can choose between two solutions, one where they pay 0.99 NOK for 1 MByte data, or alternatively to purchase a number of data packages described below.

Data package	Included data per month [MByte]	Price per month [NOK]	Usage above included data [NKR/MByte]
<b>Data package 1</b>	<b>50</b>	<b>25</b>	<b>0,99</b>
<b>Data package 2</b>	<b>100</b>	<b>50</b>	<b>0,99</b>
<b>Data package 3</b>	<b>200</b>	<b>100</b>	<b>0,99</b>
<b>Data package 4</b>	<b>1000 (fair use)</b>	<b>399</b>	<b>-</b>

Figure 72: One Call's data packages

Note: 8,86 NOK = 1 Euro

(Source: <http://www.OneCall.no/index.php?content=price&product=mobile> and Strand Consult)

On top of these data packages, the customer can choose various traffic packages that include voice, SMS and MMS. One Call offer packages starting with a package that includes 120 voice minutes and 93 SMSs for free, whereafter a voice minute costs 0.65 NOK, (connection charge 0.59 NOK) and SMSs costs 0.40 NOK. If the customer does not want that package they can choose between the following packages:

"Full Pakke" – A complete package	
Monthly subscription [NOK]	299
Included calls per month [minutes]	1500
Included sms per month	150
Included mms per month	15
Included data traffic per month [MByte]	25
Calls per minute [NKR]	0,30
Sms [NOK]	0,39
mms [NOK]	1,98
Data per MByte [NOK]	0,99

Figure 73: One of One Calls packages

Note: 8,86 NOK = 1 Euro

(Source: <http://www.OneCall.no/index.php?content=price&product=mobile> and Strand Consult)

In comparison, Netcom's traffic prices for the iPhone are as follows:

Subscription	Monthly subscription [NOK]	Price per minute [NOK]	Price per sms [NOK]	Price per mms [NOK]	Startup fee [NOK]	Data price per Mbyte [NOK]	Subsidised price for iPhone [NOK]
NetCom FlexiTalk 199	199	0,45	0,45	1,99	0,89	9	1999
NetCom FlexiTalk 149	149	0,45	0,45	1,99	0,89	9	2499
NetCom FlexiTalk 99	99	0,45	0,45	1,99	0,89	9	3099
NetCom FreeText	289	0,89	0	0	0,69	-	2899
NetCom YoungTalk Plus	400	0,99	0,69	1,99	0,69	20	2899
NetCom YoungTalk	200	1,49	0,69	1,99	0,69	20	3399
NetCom iTalk Small	399	0,39	0,69	1,99	0,69	5	1399
NetCom iTalk Medium	699	0,39	0,69	1,99	0,69	5	699
NetCom iTalk Large	999	0	0	0	0	-	1
NetCom iConnect	349	0,45	0,59	1,99	0,89	-	998

Figure 74: nCom's subscriptions for iPhone

Note: 8,86 NOK = 1 Euro

(Source: NetCom and Strand Consult)

Quite simply, customers can save a great deal of money by switching from Netcom to One Call and without experiencing any deterioration in network quality, as One Call is using Netcom's network to deliver their services.

Norway's largest newspaper VG published a comparison of nine customer profiles (low, medium and high consuming customers) that either purchased an 8 GB or 16 GB iPhone and one of the subscriptions being offered by the various operators/MVNOs in Norway.

The survey included Netcom (TeliaSonera), Telenor (Telenor launched the iPhone in Q2 2009), Netcom's discount brand (Chess) and One Call. The results for a mobile consumption during the initial 12 months are very clear:

High end user Number of minutes per month: 1000, number of calls per month: 200, number of sms per month: 200		
Total price for iPhone and usage in one year	iPhone 8 GByte [NKR]	iPhone 16 GByte [NKR]
Downloaded data per month: 25 MByte		
One Call – "full pakke"	8617	9485
Telenor - "Surfprat L"	10983	11853
NetCom – "iTalk Large"	11989	12887
Chess "iTouch"	14487	15387
<b>Largest saving</b>	<b>5870</b>	<b>5902</b>
Downloaded data per month: 100 MByte		
One Call – "full pakke"	9469	10337
Telenor - "Surfprat L"	10983	11853
NetCom – "iTalk Large"	11989	12887
Chess "iTouch"	14487	15387
<b>Largest saving</b>	<b>5018</b>	<b>5050</b>
Downloaded data per month: 500 MByte		
Telenor - "Surfprat L"	10983	11853
NetCom – "iTalk Large"	11989	12887
Chess "iTouch"	14487	15387
<b>Largest saving</b>	<b>3504</b>	<b>3534</b>

Figure 75: High end user: Comparison of total price for an iPhone for a year in Norway

(Source: Verdens Gang – Dine penger (<http://www.vg.no/dinepenger/artikkel.php?artid=543752>) and Strand Consult)

Middle end user Number of minutes per month: 300, number of calls per month: 100, number of sms per month: 100		
Downloaded data per month: 25 MByte		
One Call – "Faktura"	7237	8105
Chess - "iTouch"	8355	9255
Netcom - "iConnect"	8666	9567
Telenor – "Surfprat M"	8899	9768
<b>Largest saving</b>	<b>1662</b>	<b>1663</b>
Downloaded data per month: 100 MByte		
One Call – "Faktura"	8101	8969
Chess - "iTouch"	8355	9255
Netcom - "iConnect"	8666	9567
Telenor – "Surfprat M"	8899	9768
<b>Largest saving</b>	<b>798</b>	<b>799</b>
Downloaded data per month: 500 MByte		
Chess - "iTouch"	8355	9255
Netcom - "iConnect"	8666	9567
Telenor – "Surfprat M"	8899	9768
<b>Largest saving</b>	<b>544</b>	<b>513</b>

Figure 76: Middle end user: Comparison of total price for an iPhone for a year in Norway

(Source: Verdens Gang – Dine penger (<http://www.vg.no/dinepenger/artikkel.php?artid=543752>) and Strand Consult)

Low end user		
Number of minutes per month: 100, number of calls per month: 10, number of sms per month: 30		
Downloaded data per month: 25 MByte		
One Call – "Faktura"	5161	6029
Chess – "iTouch"	5974	6874
NetCom – "iConnect"	6074	6975
Djuice – "explore"	6458	7327
<b>Largest saving</b>	<b>1297</b>	<b>1298</b>
Downloaded data per month: 100 Mbyte		
Chess – "iTouch"	5974	6874
NetCom – "iConnect"	6074	6975
Djuice – "explore"	6458	7327
<b>Largest saving</b>	<b>484</b>	<b>453</b>
Downloaded data per month: 500 MByte		
Chess – "iTouch"	5974	6874
NetCom – "iConnect"	6074	6975
Djuice – "explore"	6458	7327
<b>Largest saving</b>	<b>484</b>	<b>453</b>

Figure 77: Low end user: Comparison of total price for an iPhone for a year in Norway

(Source: Verdens Gang – Dine penger (<http://www.vg.no/dinepenger/artikkel.php?artid=543752>) and Strand Consult)

The figure clearly shows that 5 out of 9 customer profiles can save a great deal of money by switching to One Call. In fact it is only the heavy user iPhone data customers that will not save money by switching to One Call.

The value of this type of press coverage that a market player like One Call received from this survey is unique and almost impossible to purchase for money. The value of this free marketing should be divided into three elements:

1. New iPhone customers that see an advantage in choosing One Call
2. Existing iPhone customers that see an advantage in switching to One Call
3. Existing and new customers that do not own an iPhone, but that have chosen or will choose One Call as their future voice, SMS, MMS and data provider without using an iPhone.

One Call is taking advantage of the hype surrounding the iPhone to market themselves as one of Norway's most aggressive providers and has received massive press coverage. Below is an example from Norway's largest newspaper's consumer section:



Figure 78: The Norwegian newspaper "Verdens Gang"

(Source: vg.no)

The headline of the article is "Save 5000 NKK on your iPhone subscription" and with the subtitle of "Dine Penger (the title of the newspaper) has compared the annual costs of purchasing and using an iPhone. In 5 out of 9 cases, it proved to be cheapest to switch subscription to a One Call subscription.

One Call's results are impressive. Out of the 200,000 customers One Call currently has, (there are 4.5 million people in Norway), 5% of their customers are iPhone customers, corresponding to One Call attracting 10,000 iPhone customers - without having to pay one single Euro in iPhone subsidies.

There is no doubt that One Call has understood how to profile themselves at the expense of Netcom's iPhone venture and that many customers have left Apple's Norwegian partner and switched to this market player that has focused on selling a combination of SIM cards and inexpensive traffic. The results speak for themselves and are very similar to the results achieved by Simyo.de, BiBob.DK and Telmore using the same strategy in countries like Denmark and Germany.

### 5.5.3. Case BiBoB in Denmark

The Danish MVNO BiBob.DK, which was started by Frank Rasmussen (the founder of the MVNO Telmore), has from its launch focused on simple and transparent prices for their customers. When they originally launched, their primary message was that they sold voice without any connection fee and where customers pay one Danish Øre per second (€0.08 per minute). They have also focused on cheap data



and SMS prices using the same simple model that characterise no-frill MVNOs around the world. BiBob offers the following prices:

BiBob	
Subscription [DKK]	0
Startup fee with connection [DKK]	0
Startup fee without connection [DKK]	0
Price per second [DKK]	0,01
Rating	Per second
SMS prices [DKK]	0,01
MMS prices [DKK]	2
Data prices per megabyte[DKK]	2

**Figure 79: BiBob's end user prices**

Note: 7,44 DKK = 1 Euro

(Source: BiBob and Strand Consult)

For their PR, Frank Rasmussen has chosen the same aggressive strategy that characterised Telmore. In relation to the iPhone, he has chosen to use three main elements in his PR strategy:

1. BiBob uses Sonofon's network, which is better than Telia's network - Telia has a reputation of having Denmark's worst 3G network.
2. BiBob can offer better traffic prices than Telia - Telia needs to compensate their high SAC via their traffic prices and have only six months - which is the minimum subscription period in Denmark - to achieve this.
3. BiBob want to offer customers parallel imported iPhones.

In Denmark an operator is only allowed to bind a mobile customer for six months. This is a very short period for operators to recuperate their SAC and there is thereby a large risk of customers perceiving operators as cheap handset providers and after six months switching to one of the many Danish no-frill MVNOs that are primarily focusing on SIM-only solutions. Today, 25% of all Danish mobile customers are using SIM-only solutions from an MVNO.

Just before the six-month anniversary of Telia's Danish iPhone launch, BiBob and a number of other MVNOs launched on the market, offering customers to switch from Telia's poor 3G network to a better network and at the same time offering significantly cheaper prices. From a PR point of view, Frank Rasmussen and BiBob took the best possible advantage of the situation. With their offer of customers being able to choose data at 2 DKK per megabyte or alternatively 1 GB data for 48 DKK, BiBob were in reality delivering unlimited data for 48 DKK, although it does state in their terms that the 48 DKK only covers 1 GB data.

If you compare this to Telia's prices, there is no doubt that many iPhone customers can save a great deal of money by moving their traffic away from Telia and over to BiBob. Telia's prices are as follows:

	iOn – before the 6 months bindings periode has ended	iOn – when the 6 months bindings period has ended
Subscription [DKK]	599	399
Startup fee with connection [DKK]	0	0
Startup fee without connection [DKK]	0	0
Price per minute [DKK]	0,99	0,99
Included fixed network calls	Unlimited	Unlimited
Included calls in own network	Unlimited	Unlimited
Included calls to other mobile networks [minutes]	300	300
Rating	Second	Second
SMS prices [DKK]	0	0
Included sms's	Unlimited	Unlimited
MMS prices [DKK]	0	0
Included mms'	Unlimited	Unlimited
Data prices per megabyte [DKK]	0	0
Included data usage per month	10 GByte	10 GByte
Price for iPhone 3G with 16 GByte [DKK]	1499	-

**Figure 80: Telia in Denmark's prices for their iOn subscriptions**

Note: 7,44 DKK = 1 Euro

(Source: Telia and Strand Consult)

The results of BiBob's efforts are impressive. BiBob currently has 60,000 customers, of which over 7% are iPhone customers, corresponding to 4700 customers. In comparison, TDC claimed to have 20,000 iPhone customers on their network (June 2009) and this is on a market where TDC has 2.056 million customers. Quite simply, BiBob has used a combination of cheap traffic and aggressive PR to thereby attract a large number of iPhone customers that have either come from Telia's network, or alternatively with phones that have been parallel imported to Denmark.

Telia's countermeasures came exactly 6 months after they launched the iPhone. They introduced an offer to iPhone customers called iOn, a product specially designed for the iPhone as shown in the figure above.

The basic idea was that the subscription price would decrease by 33% after the initial six months, which was the minimum subscription period, whereby the customer's monthly subscription would drop from 599 DKK to 309 DKK (7,44 DKK = 1 Euro).

There is no doubt that Telia's offer of reducing prices after the initial six months had expired, has helped reduce their churn on iPhone customers. On the other hand

many of Telia's customers did leave Telia after the initial six months and switched to a no-frill MVNO, giving them both better 3G coverage and avoiding having to sign a new subscription at 399 DKK per month.

#### 5.5.4. Case: Telmore in Denmark

Telmore has also had an aggressive focus on the iPhone market in Denmark and their website not only shows how to configure iPhone Internet, MMS, e-mail, SMS, voicemail and Tethering settings, they have also published an online instruction on how to unlock your iPhone.

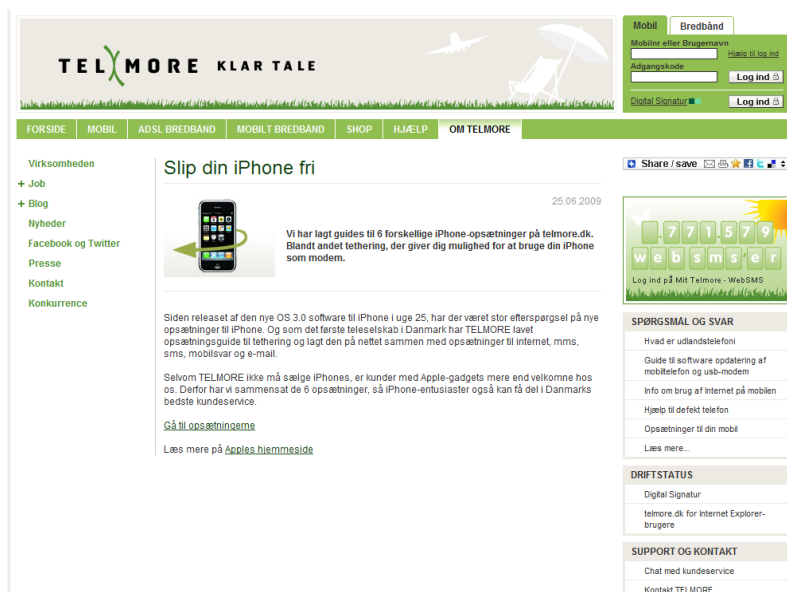


Figure 81: Telmore's homepage

Source: Telmore

Basically, Telmore is helping customers escape the clutches of the operators trying to bind customers into long subscriptions at high prices. There is no doubt that their campaign has been a success, especially considering the thousands of iPhone customers Telmore has acquired without increasing their SAC. Customers found Telmore in the same way as they found Simyo in Germany; via recommendations and the positive image that Telmore has on the market.

Telmore's iPhone customer figures are as follows:

Telmore – june 2009	ARPU	MOU	SMS	GPRS (2G) data	UMTS (3G) data
Average customer	100	100	100	100	100
iPhone customer	208	148	108	2088	652

**Figure 82: Consumption Data on registered iPhone Users at Telmore (Indexed Numbers)**

Note 1: Mobile broadband through dongle's is excluded

Note 2: Some of Telmore's customers have bought a data package on the top

(Source: Telmore and Strand Consult)

If you examine these consumption patterns, the prices Telia are offering iPhone customers (see Figure 80) and the prices that market players like Telmore are offering the same customers, a customer will need to have a voice minute consumption of over 300 minutes per month, before they can save money by using Telia's IOn product.

When we measure the iPhone effect over time, it is clear that many medium and low consuming iPhone customers can save a small fortune, by switching from Telia to a market player like Telmore.

If you then take into consideration that Telia has a very high SAC on iPhone customers, far greater than the €40 SAC that Telmore is operating with, the conclusion is that Telmore is one of the many MVNOs that can see an advantage in targeting Apple partners iPhone customers

## 6. Conclusion

Strand Consult has compiled this report to help contribute knowledge and information that can give a more varied picture of the iPhone and the iPhone effect. The report "The moment of truth – a portrait of the iPhone" is our contribution in a world where we believe many media are describing the iPhone and iPhone effect in a manner that is far from the financial reality that the iPhone is a part of.

Strand Consult's customers include over 160 mobile operators worldwide and many of our customers are Apple partners and are selling the iPhone. It is no secret that we have been critical about the iPhone and iPhone effect from the beginning. It is also no secret that a great deal of the press coverage the iPhone has received, has been based on what people believe, or what various market players in the mobile value chain surrounding the iPhone have claimed.

Strand Consult has never been in the business of simply pleasing our customers - we say things as we see them and we believe it is our job to deliver objective information to our customers, making it easier for them to navigate a complex mobile world.

With this report it was our goal to contribute a great deal of statistical information about the mobile market, critically examine the available financial market figures and collect additional inside information and figures, that others usually cannot access. We wanted to give our customers access to a more varied picture of the market that the iPhone is now part of, so our customers can evaluate the iPhone based on actual financial figures, deciding for themselves whether the iPhone is a good or bad business case, and whether there are alternative business cases that they should consider focusing on.

### 6.1. Myths about the iPhone

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There is no doubt that the iPhone has an attractive design and user interface, one is tempted to call it the mobile phones answer to Paris Hilton. But as soon as the iPhone launch, a number of myths appeared surrounding the product. In this report we have studied these myths and whether they can be documented, or whether they are simply myths created by the media. We have examined the figures and judged the results based on facts and not what people believe. The most significant myths surrounding the iPhone are:

1. The iPhone creates data traffic in the mobile operator's network
2. The iPhone helps operators attract new customers
3. The iPhone is good business for mobile operators
4. The iPhone is dominating the mobile services market
5. App stores are a huge success that has revolutionised the services market
6. There is money to be made by developing iPhone applications

7. iPhone customers are creating the majority of the current online mobile traffic
8. The iPhone has a large market share
9. The iPhone was the first mobile to launch with a touch-screen
10. The iPhone is a technically advanced mobile phone

We believe that this report discredits most of the 10 largest iPhone myths - we can simply not find any documentation that justifies the myths that are surrounding the iPhone and the iPhone's business case. The report "The moment of truth – a portrait of the iPhone" takes a close look at most of the iPhone myths and examines the underlying financial figures, comparing them to the financial figures from operators competing with Apple's partners.

## **6.2. Background and methods**

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When a company like ours has over 160 operators in our customer base and holds over 50 workshops a year on CxO and board level around the world, it is unavoidable that you get access to a great deal of information and knowledge. Some of that knowledge is naturally confidential, while other knowledge can be shared. For the past 15 years, Strand Consult has collected knowledge, analysed it and combined it with facts and information from other sources, with the sole purpose of helping mobile operators optimally navigate a complex mobile world where ever-increasing competition, decreasing prices and more advanced technology is making it increasingly difficult for a company to create value for their shareholders and customers.

Our report "The moment of truth – a portrait of the iPhone" combines knowledge from operators financial figures, with general market figures and the knowledge we have gained from our close relationships with market leaders in the mobile industry. We believe that it is only possible to objectively view the iPhone by combining all these different types of information and thereby evaluate whether the iPhone has positively influenced the mobile market over time. It is also necessary to examine alternatives to the iPhone and the business cases of alternative solutions, before an iPhone report can be taken seriously.

When examining Apple's distribution strategy, it is important to evaluate the sales results Apple have achieved compared to the distribution power they originally started with and have today. This starts giving an indication of the iPhone's ability to attract new customers to operators that have partnered with Apple.

## **6.3. Apple's sales versus their distribution power**

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Let's get one thing straight, Apple has succeeded in selling the iPhone in impressive numbers, especially when considering that the sales figures have been created based on a mobile phone that has been specially designed for a narrow customer segment. With the current sales figures of 5,208 million in Q2 2009, the iPhone is one of the best selling mobile phones in its category, but is still very far from reaching the sales

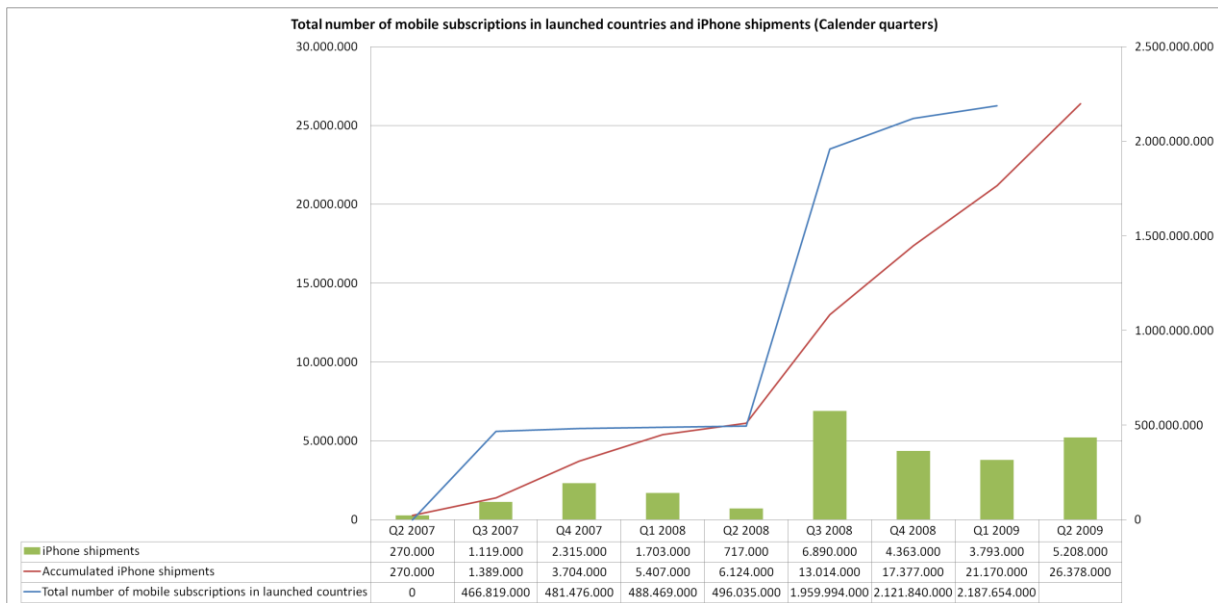
volume of for example the Motorola Razr phone, or the volume that Nokia reached with their 3310/3330.

This aside, it is important to note that the iPhone sales have been driven by two main factors:

1. The introduction on new markets
2. Launching new versions - 2G, 3G and 3GS

Especially launching "new" versions has given Apple a great deal of media attention, that they have taken advantage of to drive the hype surrounding the product to new heights in the mobile world - especially considering that the new versions have generally contained very few actual updates.

If you examine these figures over time and compare Apple's sales to how many operators they have agreements with, how many customers these operators have and how many customers are on the market that iPhone is now available on, there is a connection between iPhone sales and the size of the markets the iPhone is being sold on. This connection can be clearly seen in the figure below:



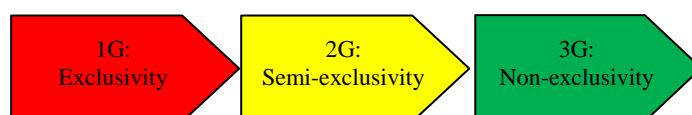
**Figure 83: Total Number of Mobile Subscriptions in Launched Countries and iPhone Shipments**

Note 1: Apple's financial year ends September 27, so quarters for Apple do not match the calendar quarters. Apple's financial numbers are in these figures advanced one quarter in order to make them comparable with calendar quarters.

Note 2: Operator agreements and mobile subscribers for Q2 2009 are not known.

(Source: Various operators, Apple and Strand Consult estimates)

The strategy that Apple has had from the start is very straightforward. First they offer an operator exclusive rights to the iPhone, then they expand the number of operators and launch new models. By creating competition between operators, they increase focus on the product, increase distribution power and ensure that the operators and MVNOs start competing on who can offer customers the best deal.



**Figure 84: The three phases of iPhone's distribution**

(Source: Strand Consult)

There is no doubt that the iPhone is the mobile industry's baby cuckoo and that by using this strategy, has managed to make over 100 mobile operators give their product extra focus. The focus that operators have given the iPhone can be divided into four areas:

1. Extraordinarily high subsidies
2. Better exposure in marketing material
3. Better exposure in distribution
4. Better PR and more focus on being seen in the media with the iPhone

If you examine the level of attention that the iPhone has received from the mobile operators, there is simply no connection to the actual volume it is selling in, the costs involved in selling the iPhone, or the revenue the iPhone is generating for the operators in the short, medium and perhaps long-term. We do not think that iPhone customers are price sensitive regarding hardware, but we do believe that they are very price sensitive regarding the price of the voice and data traffic they are consuming. In other words, even though iPhone customers are very loyal towards Apple, they are not especially loyal towards the operator that sold them their iPhone.

When we read some of the statements that operators have published regarding the iPhone, there is no doubt that Apple has excelled with their strategy of seducing operators and making them believe that the iPhone deserves that extraordinary attention that many operators have given it. In The Guardian one could read that Vodafone's chief financial officer, Andy Halford has said that they are keen to offer the iPhone. We can only recommend that Andy Halford reads this report and then decides whether he still believes the iPhone is such a good business case from a shareholder's viewpoint.

#### **6.4. The myth of the iPhone as a traffic creator**

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A lot has been said and written about the iPhone as a traffic creator in the operator's mobile broadband networks. Countless articles have stated that it is the iPhone that



is driving the mobile data market and that it is the iPhone that is making customers use mobile data more than ever before. We are not questioning whether the iPhone is being used to surf online, read e-mail etc. But we believe that our analyses document that mobile data is not being driven by the iPhone, but instead by mobile broadband.

If you examine the growth in mobile broadband and data sales and examine the many markets where great numbers of customers are purchasing and using mobile broadband connections on their portable PCs, it is very obvious that it is not the iPhone driving this market. In fact, if you take the total global mobile broadband traffic, the traffic the iPhone is generating is simply marginal.

According to the mobile operators' organisation GSMA, sales of HSDPA connections worldwide passed the 150 million mark in the summer of 2009 and is continuing to grow daily at an explosive pace. In fact, the GSMA believes that over 200 million people will have a HSDPA based mobile broadband connection by Q1 2010. We could rephrase that last statement by saying; more mobile broadband connections are being sold globally every quarter than the total number of iPhones sold by Apple during their first two years on the market.

When we look at the Swedish market, it is evident that there are many mobile broadband customers (10% of all Swedes already have one and 20% of all broadband connections are mobile in Sweden), and that these customers are generating a great deal of traffic and furthermore, that traffic grew in 2008 by 526% and will most probably continue to grow significantly in 2009. When we look at the iPhone's share of this traffic, it is marginal and when we then examine TeliaSonera, who have had exclusive rights to the iPhone in Sweden, they are in fact the operator that has had the poorest development in their mobile broadband traffic on the Swedish market.

Of course if you compare an iPhone customer to a normal mobile customer, the iPhone customer will have a larger data consumption and use the Internet from his mobile to a greater extent. But when you examine the American market, all operators on the market have seen growth in voice and data ARPU. Of course, the iPhone's share of AT&T's customers is just a few percent, but at the same time we have to conclude that operators that do not carry the iPhone have managed to create corresponding growth. Or you could say that AT&T has not been able to use the iPhone to create a larger growth than their competitors.

#### **6.5. App store is an attractive and functional solution, but what are the alternatives?**

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Many believe that it is Apple's App store that has launched the mobile services market and is driving innovation on mobile services. The problem is that many of the views people have regarding Apples App store are based on what they believe and not on how customers are currently behaving. According to Mobile Entertainment

Forum, the world market for mobile services was 8,6 billion USD in 2008, and Apple's contribution to that market is approximately 150 million USD. Quite simply, Apple's share of the mobile services market is almost invisible and amazingly small compared to the 3 billion USD mobile games market.

The question is not whether App stores are the business that many are trying to portray them, but whether they will ever reach that far? We believe that App stores are an exciting concept, but they are most certainly not a new concept and the App stores' share of the global services market is marginal compared to the total value of services being sold.

We believe that the future services market will be driven by a combination of innovative market players and media companies that have access to cheap marketing. We believe that services and applications will be sold via app stores, portals and in a great many other ways. This will create a dynamic market where the size of provider, access to cheap marketing and ability to deliver services across different devices, will decide who wins and who loses.

#### **6.6. SAC contra ARPU**

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When an operator examines the iPhone's business case, there is no doubt that the iPhone generates a higher ARPU than an average postpaid customer. On the other hand we know for a fact that the operator's SAC is correspondingly high. For example, take an iPhone operator like T-Mobile in Germany; their SAC for an iPhone customer is 317 Euro and an average iPhone customer's ARPU is 77 Euro. It is interesting to ask an operator, whether a customer that generates 77 Euro ARPU can be purchased at a lower cost than 317 Euro, or whether one should purchase a customer that has a higher ARPU than 77 Euro for 317 Euro?

When we examine an operator like SingTel in Singapore, their figures speak for themselves and despite the fact that they state that their iPhone customers have higher ARPUs, the money they have spent on marketing, selling and subsidising the iPhone has been an extremely poor business for their shareholders. The slide below we received from SingTel speaks for itself:



**Figure 85: Singtel slide about the iPhone**

(Source: Singtel)

There is no doubt that many operators are fighting high acquisition costs on the iPhone and as an increasing number of operators offer the iPhone, competition will increase and both the price of the handset and traffic will become the most significant competitive parameters. If you have been following how a number of MVNOs have been entering this market, it is evident that they have discovered the advantage of attracting iPhone customers using SIM-only products and cheap mobile traffic.

We know that the MVNOs' low acquisition costs, combined with their competitive traffic prices mean that these market players can create a healthy business case from an iPhone customer that brings his own phone. On the German market, an iPhone customer, depending on their consumption, can easily save about 500-1000 Euro on a two years period on their mobile bill by choosing Simyo.de instead of one of T-Mobile's products. In Denmark, BiBob has used an aggressive strategy resulting in over 8% of their customers now being iPhone customers. An impressive figure that none of Apple's partners can match.

### 6.7. The iPhone around the world - is it visible in operators financial figures?

We have no doubt that operators around the world that are iPhone partners are having difficulty in documenting an iPhone effect. In reality the iPhone is not visible in their financial figures and none of the operators we have analysed have increased their market share, traffic or earnings due to the iPhone.

When we look at the USA and how AT&T has fared compared to their competitors, we cannot see any iPhone effect in their financial figures. We have compared AT&T to Spring and Verizon and all three companies figures are following the same patterns. No matter which way we examined the figures, it was not possible to see any effect from the millions of iPhones that AT&T has subsidised and sold on the American market.

We have seen the same situation in Singapore, where the results from SingTel in Singapore and Australia clearly show that there is no iPhone effect, other than SingTel has had higher costs in acquiring iPhone customers.

When we examine the underlying economy, only the future will show whether the enormous subsidising costs that SingTel and AT&T have had will be regained, or whether the introduction of the iPhone will have increased these operators' SAC over time.

When we examine our own region, Denmark, Sweden and Norway, there is no doubt that TeliaSonera has been generously giving away new iPhones and that their revenue and traffic figures from those iPhones are totally invisible in their financial statements.

In actual fact, TeliaSonera is the Nordic operator that has achieved the worst results in a number of areas. Despite their good iPhone sales figures in this region, there is no doubt that it is the mobile broadband market that is driving mobile data.

The Nordic region has historically been considered one of the most competitive mobile markets in the world. This was the region where the no frill/discount MVNO's first launched and this is the region where prices plummeted by almost 60% in just six months.

When we examined the iPhone market in this region, it was evident that a number of MVNOs have taken on a central role on the iPhone market and by using targeted campaigns have been able to attract customers that spend more than their average customers. Furthermore they have achieved this without increasing their SAC. The bottom line is that while the iPhone is poor business for the Apple partner operators, it is very good business for MVNOs that are targeting the existing iPhone customers on the market.

We find it extremely impressive that an MVNO like BiBob can attract almost 8000 iPhone customers, corresponding to close to 8% of their customer base, especially considering that BiBob does not sell or subsidise handsets. Likewise there is no doubt that the German MVNO Simyo.de has an extremely attractive offer to many customers that are contemplating purchasing a subsidised iPhone from T-Mobile. By

using Simyo, customers can easily save 500-1000 Euro over a two-year period. Very few customers will not find that size savings very attractive.

There are countless examples around the world of subsidised handsets finding customers that would like to own an iPhone and that subsequently purchase a Sim-only product with cheap traffic, as an alternative to the iPhone products being sold by Apple's partners.

It would not be far off the mark to state that the iPhone is bad business for operators, but rather good business for MVNOs that are focusing on selling SIM cards with cheap traffic.

### **6.8. Strand Consult's operator recommendations**

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If you view the iPhone through the eyes of an operator, there is no doubt that it in many ways is an attractive product, provided that the operator does not give it more attention than it deserves and that the operator focuses on how to create a healthy business case in the short, medium and long term. Operators that have moved a great deal of marketing activities, subsidies, etc to the iPhone, will experience the iPhone in itself being a poor business case and that the focus they gave the iPhone will result in the operator forgetting to service their 99% remaining customers, customers that are in reality generating the cash flow that is paying the operator's bills every day. We recommend that operators carrying the iPhone do the following:

1. Reduce or discontinue subsidies - The iPhone is not as price sensitive as other mobile handsets. There is no money to be made in selling handsets under cost prices. Revenue should come from traffic.
2. Ensure that the iPhone is a healthy business case during the subscription period. Operators have no guarantee that customers will stay after their subscription expires.
3. Ensure that you have a wide handset focus. The iPhone is just one of many handsets on the market and is far from being the best cash cow.
4. Become better at measuring where revenue is coming from and where the costs are - do not view the iPhone isolated, but in a larger perspective.
5. Analyse the iPhone segment more closely and find out which customers are churning and why? It is important to know your iPhone customers, the good, the bad and all the others.
6. Analyse which channels are producing the best iPhone customers and contemplate selective distribution of the iPhone.
7. Ensure that you offer SIM-only products, targeted at the iPhone segment and go hunting in competing operators' customer bases.
8. Accept that MVNOs are a bigger competitor than the other MNOs on the market that are offering the iPhone.

9. Use CRM actively and ensure that you have an ongoing dialogue with your customers. Ensure that you have an overview of your customers, when their subscriptions expire and how they are reacting to new iPhones etc.
10. Place demands on Apple. Ask for a revenue share from Apple's app store, or alternatively ask Apple to implement operator billing. Operators are currently being bypassed from receiving a revenue share from revenue that is being generated on devices they have marketed, subsidised and sold.

We can easily understand that operators have viewed the iPhone as a product that could help differentiate themselves from their competitors. On the other hand it is obvious that in Apple's strategy, the operator is not so much a partner, but rather a naive friend that is helping Apple reach their goal - regardless of whether their "friend" benefits from their friendship.

And there is no doubt that the operators have been naive, which makes it even more frightening to see how operators on the one hand are praising the iPhone, while at the same publishing financial key figures that show that the iPhone is costing them money.

#### **6.9. The future, what should Apple do?**

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If Apple wants to have a long-term role on this market, they will have to radically change their strategy in a number of areas. When you have read this report, which many operators will, there is no doubt that the mobile industry will be more critical about Apple and the iPhone's role on the mobile market.

This is for example the case in America, where operators were suspicious about Nokia and their enormous market shares and strength in the rest of the world. This resulted in operators being reluctant to promote Nokia and Nokia therefore only being a shadow of itself in the USA.

With Apple's market position on the mobile market and the competition they are facing, they are not in a position to continue to dictate what role operators should have regarding Apple.

We believe that during the next six months, a number of operators will publicly announce very clearly their honest views about Apple and the iPhone.

We believe that Apple should follow these guidelines in the future, if they want to create a long-term and sustainable business in the mobile market:

1. Offer wider distribution on existing markets - partly through operators but also via non-subsidised products.
2. Increase focus on selling the iPhone as a prepaid handset - there is a large market for customers that want to purchase the iPhone as a prepaid product.

3. Launch more products. Having one phone with two memory sizes is not enough on a market where competitors are launching over 300 new mobile handsets every year.
4. Shorter product lifespan. Customers need to be able to see larger differences between new models, than between the 2G, 3G and 3GS updates
5. Improve the operators' business case. If Apple cannot show an operator how to make money from their product, the amount of attention the product receives will suffer.
6. Have a better understanding of the operators' business case. In Apple's world there are currently three partners; Apple, Apple and Apple.
7. Implement operator billing as part of the app store - direct billing.
8. Open their strategy regarding which apps are available in the app store - a modern world does not like censorship.
9. Improve the dialogue with their distribution channels. Apple is not a particularly open company. Perhaps that works fine in the computer industry, but there are other rules in the mobile world.
10. Improve dialogue with the press. Apple's attitude towards journalists could hit back like a boomerang, if a number of operators start publicly criticising the iPhone.

There is no doubt that Apple has done a very good job in many areas, but we believe that they have overestimated their own strength and underestimated their weaknesses. When we speak with operators around the world, we have noticed an increasing number that are starting to view Apple and the iPhone in a completely different light compared to just one year ago.

This can be a very dangerous cocktail, especially for a market player of Apple's size. Nokia is big and operators have difficulty avoiding Nokia. On the other hand, Nokia knows full well that the operators have played a central role in their success - especially in the high-end handset market - the same market that Apple is targeting.

Only the future will show whether our analyses and expectations regarding the future were correct. On the other hand, we have a unique track record about predicting how the mobile market will develop. You can read more about our predictions here: [www.understandingmobile.com](http://www.understandingmobile.com).

## 7. Feedback

When you have read this report, it is important for us to receive your feedback. We are very interested in learning what you think about the report, what was missing in your opinion and any information you may have that you think is relevant to other readers of this report.

We will publish a second edition of this report in the autumn of 2009. Part of the second edition will be based on the feedback and information we get from this report.

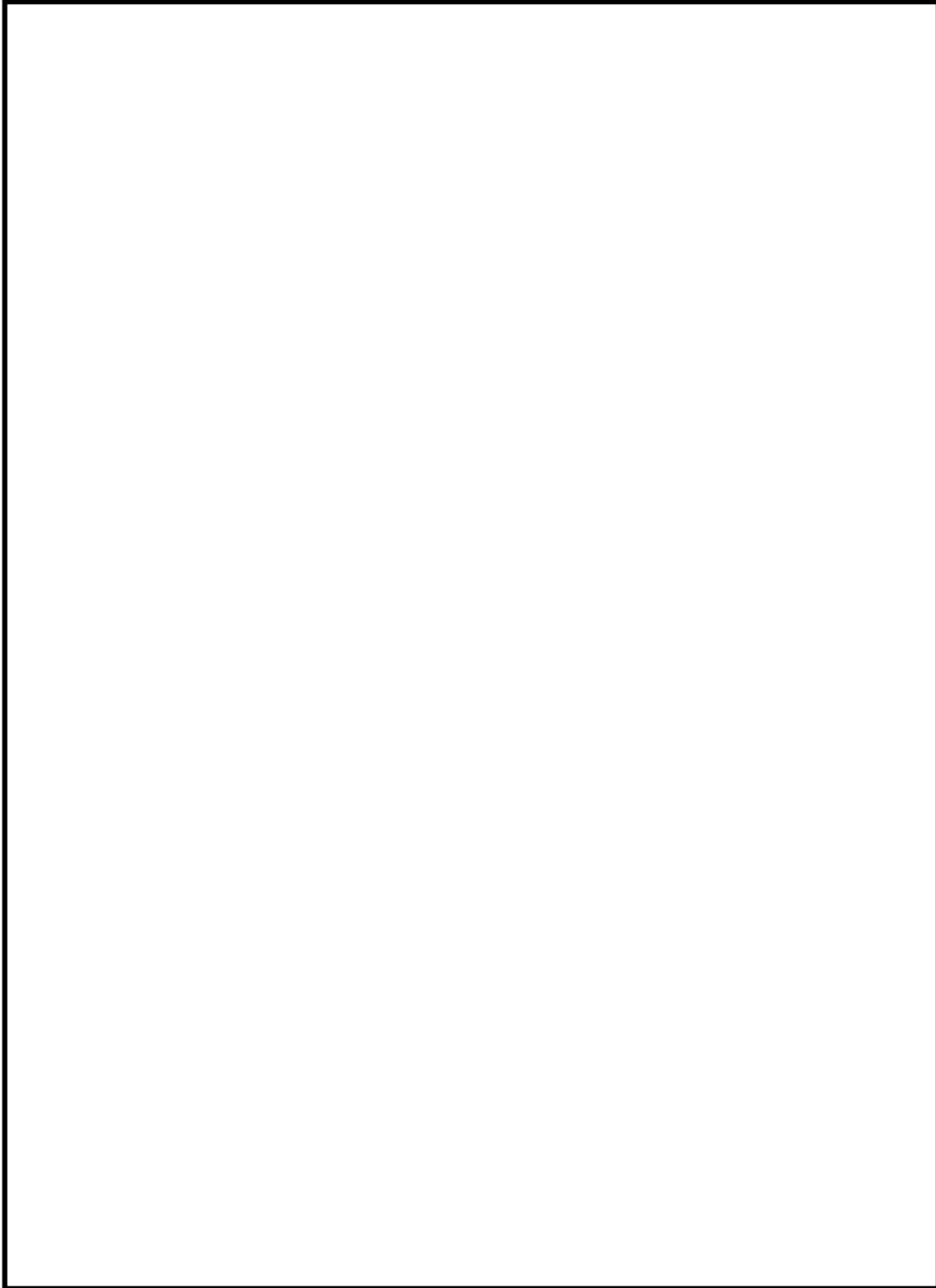
### 7.1. What was missing in this report:

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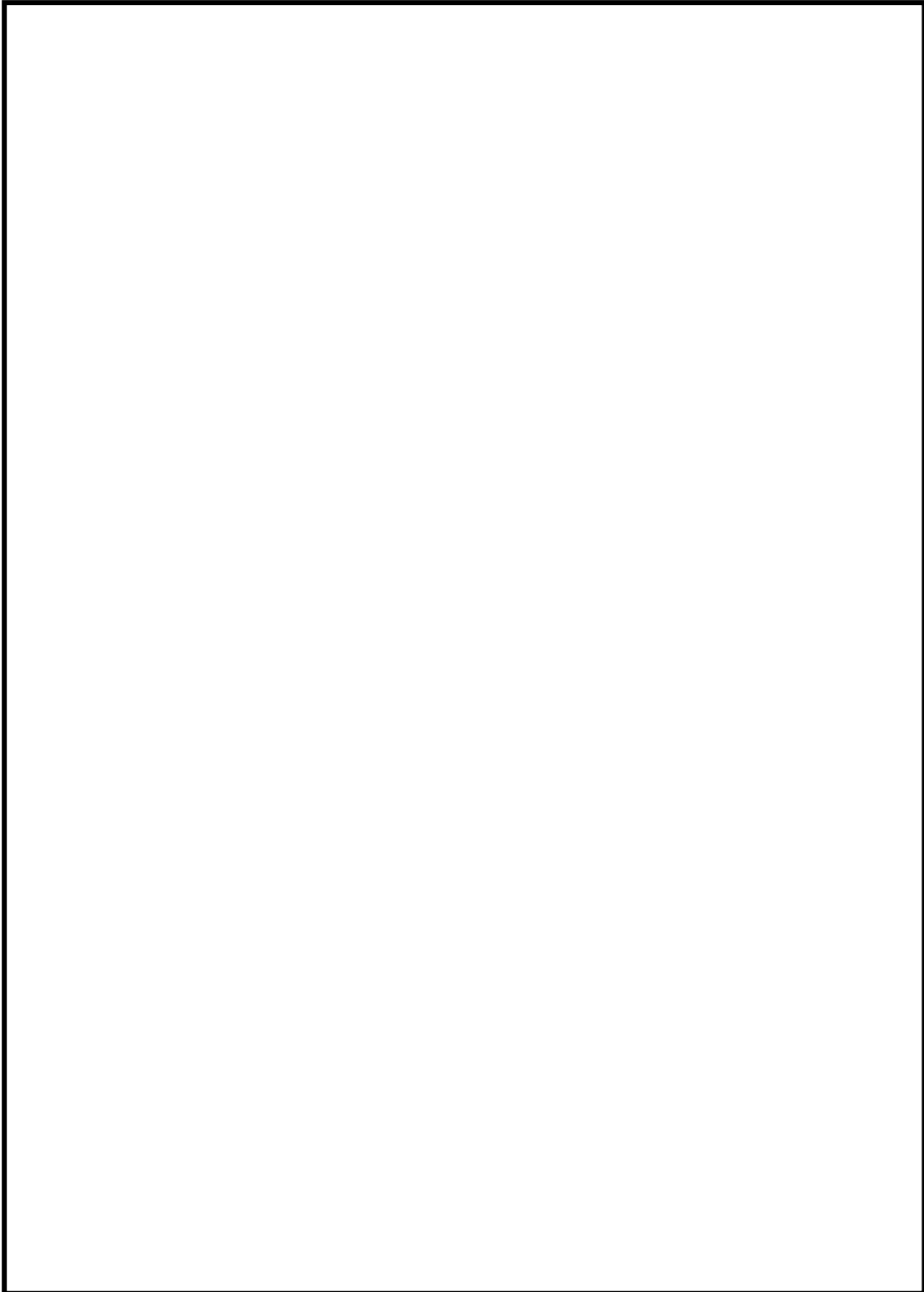
**7.2. Information you would like included in the second edition.**

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**7.3. What you liked about the report**

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