

# Delivering new growth and new wealth in the mobile phone sector with disruptive breakthrough innovation?

**By Pete Thomond**

A Briefing Paper written for:



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In February 2005, 40,000 of the world's leading mobile phone industry executives met at the 3GSM World Congress in Cannes. Their mission: to unveil and envisage the state-of-the-art handsets, software and services that will define the industry in the coming months and years.

The mood was generally positive; the leading mobile phone players appear to have convinced the stock-market that there is still room for growth and company valuations have benefited. However, it was clear that saturation of European markets and the slowing of global growth in this sector has forced two pertinent questions onto the lips of many: "what technology or convergence of technologies will deliver the next breakthrough profits?" and "how can leading mobile companies seek to justify the billions spent on 3G networks".

The industry still does not know how it is going to answer these questions, it does not know if these high-tech developments will provide companies with the market lead they so desperately seek. Nor does it seem clear just how these firms should invest their resources in order to pioneer the next breakthroughs.

To shed light on these issues we can turn to the findings of cutting edge research into a concept known as 'disruptive innovation'<sup>1</sup> and compare these to the recent developments in the mobile phone sector:

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<sup>1</sup> The author, Pete Thomond PhD, recently co-delivered a €3million, 39 month programme of research into disruptive breakthrough innovations. The purpose was to develop management tools that help business leaders and their teams to identify, pursue and deliver disruptive breakthrough innovations. Pete was based at Cranfield University, the remainder of the consortium consisted of companies from across Europe and Israel. It was known as Disrupt-it and was co-funded by the European Commission's IST Directorate. Other fascinating and valuable research in this field is being conducted at Harvard University and Cambridge University. Please contact Pete if you require any further information on [pete@insightcentre.com](mailto:pete@insightcentre.com).

## ***Disruptive breakthrough innovation:***

My work in this field defines a disruptive breakthrough as: “A *product or service that has changed the basis of competition, by changed the performance dimensions along which organisations compete, with the introduction of new performance attributes, based upon one or more new business approaches, technologies and/or processes*”.

Examples of disruptive breakthrough innovations include:

- ◇ No frills, point-to-point passenger air travel (e.g. easyJet) vs. traditional air travel (e.g. British Airways).
- ◇ Personal desktop computers vs. mainframe computers with VDU terminals.
- ◇ On-line stocks and shares brokerage (e.g. Charles Schwab) vs. traditional retail brokerage (Merrill Lynch).
- ◇ Digital mp3 music vs. compact disks vs. vinyl records.
- ◇ Angioplasty treatment vs. traditional open heart surgery for blocked arteries.

The research shows that a key driver of disruptive breakthroughs is the existence of performance oversupply. This is where competitive pressures and new technological possibilities drive organisations to improve their products or services beyond a level that most customers can absorb. Performance oversupply literally creates a vacuum into which simpler, more convenient products and services are drawn. This process allows established mainstream customers to access new products and services, which have new performance attributes that are now more relevant than those offered by the traditional mainstream customer offerings.

Disruptive breakthroughs create both opportunities and threats for business leaders. For example, they offer avenues to new-wealth creation, but provide a vehicle for new market entrants to disrupt the basis of competition in existing markets.

The five most frequently cited characteristics of disruptive breakthrough innovations are:

1. The new performance offered by disruptive breakthroughs is initially neither expected nor desired by lead users; in fact, in the beginning mainstream customers and suppliers may often perceive an unwanted reduction in functionality.
2. The disruption begins by taking a foothold in an over-served low-end market or an overlooked new customer segment that currently chooses non-purchase as an alternative. Thus, potentially disruptive innovations should never be launched directly into the mainstream market.
3. The process of disruption is enabled through niche marketing. Where being patient for growth but impatient for profitability forces management teams to stay focused on customer niches with a compelling reason to buy. This allows the disruptive breakthrough offering to establish a base of customers from which it can organically grow.

4. Businesses that focus heavily on traditional mainstream customers and historical trajectories of performance limit their ability and desire to identify or recognise disruptive opportunities or threats.
5. Relationships between customers and suppliers are transformed as customers are enabled to do things in a more convenient setting that could have only been achieved with specialists in the past.

### ***Current focus of the mobile phone industry leaders:***

Many of the leading thinkers in the mobile phone sector want to realise the benefits of 3G – desperate to find another mass-revenue ‘data service’ other than text messaging. Most are pinning their hopes on following the latest technology and popular trends by jumping on the mobile music bandwagon, following the lead of Apples’ iPod. As such, there was significant focus upon the integration of media players and services into mobile devices:

- ◇ Nokia renounced its suspicions of Microsoft and revealed that some of its future devices will integrate their popular Media player.
- ◇ Emblaze Mobile is planning on offering phones with preloaded music.
- ◇ ScanDisk’s vice president, Richard Chernicoff, was at Cannes to launch a one-gigabyte miniSD memory card for mobile phones – ideal for music and media with as much storage capacity as Apples mini iPod.
- ◇ Sony Ericsson is bringing music centre stage and will soon manufacture phones under the “Walkman” brand.
- ◇ Vodafone is placing a significant emphasis upon “Vodafone Live”, which offers a music download service where customers can obtain single tracks to their handsets at a cost of £1.50 each (although Apple’s iTunes only costs 79p).

Moreover, a multitude of software companies were battling to supply an infrastructure for these advancements not to mention those of digital imaging, video streaming and document handling.

### ***A disruptive breakthrough in Japan?***

Whilst the technophiles were trying to grab headlines at their conference in the South of France, people in Japan were marvelling over mobile phone subscription figures compiled and published by Merrill Lynch. Their analysis included a summary of new Japanese customer subscriptions for the month preceding Christmas.

The mobile phone market in Japan is highly sophisticated and dominated by a handful of large players. The British firm ‘Vodafone’ has been a leading force, whereas Japan’s ‘Tu-Ka’ has suffered from a dismal few years. It had become a small, ailing network desperate for a breakthrough that could disrupt the strangle hold of the big players.

The month preceding Christmas is traditionally important for this sector and the Japanese people were inundated by a mass of media campaigns. Vodafone's pre-Christmas marketing hype was mostly focused on its high-tech 3G services, for all its efforts it gained just 900 new subscriptions – Japan is a tough market. However, Tu-Ka did not have such a bad Christmas; it outstripped Vodafone's new customer subscriptions by over 17 times, netting an additional 15,500 customers.

Did Tu-Ka find the killer application for 3G services?

Did Tu-Ka introduce the latest convergence of new technologies?

The answer to these questions is a resounding 'NO!'. But how can an ailing company disrupt the traditional sales pattern so significantly? To find out, knowledge on disruptive breakthrough innovations can be used to analyse these developments. It can show areas where new-wealth-creating growth could be achieved, and highlight organisations that may have a disruptive impact on the current make-up of the industry:

### ***Understanding Tu-Ka's Japanese breakthrough:***

Tu-Ka's success was based upon the release of their "S-Phone". The decision to launch this new breed of handset benefited from the key principles of disruptive breakthrough innovation. Whether this was intentional or accidental is not known, but Tu-Ka recognised three important insights:

1. All people have a limit to the amount of technology they can usefully adopt.
2. Today, there are many mobile phone users who fail to exploit all the functionality of their handsets and network services – technology and service performance oversupply is common.
3. Most people will only use new technologies when there is a compelling reason to do so; novelty cannot be relied upon to generate new customers.

Tu-Ka's focused its pre-Christmas drive on their new S-Phone concept - a mobile phone with the following characteristics (Figure 1):

- ◇ Its functionality is based upon a basic landline telephone.
- ◇ Unlike other mobile phones, it does not have a screen.
- ◇ Its buttons are large and each has only one function.
- ◇ There is no text messaging service.
- ◇ There is one volume setting – high.
- ◇ There is only one ring tone.
- ◇ The phone is larger than other handsets to make room for a battery that will allow it to operate even when it has not been used or charged for a month.

Unsurprisingly, Tu-Ka's S-Phone was designed to appeal to Japan's growing elderly population, which consists chiefly of technophobes.

The massive S-Phone advertising campaign uses the products complete lack of sophistication as its primary asset. Its simplicity is summarised in bill board and internet banners which show a sequence of pictures that can be understood even by non-Japanese speakers (Figure 2).

By focusing on an over-served low-end market, Tu-Ka has been thrust ahead of many leading mobile phone organisations in the Japanese rankings of subscriber growth. This has created a disruptive effect in the market place, at least in the short term. In fact, Vodafone has currently stumbled to last place; and since the introduction of the technophobe-friendly foolproof-phone, Tu-Ka has reversed its poor performance record.

Research into disruptive breakthroughs can also be used to assess whether Tu-Ka's S-Phone has created a defensible disruptive market shift:



Figure 1: Tu-Ka's S-Phone



Figure 2: Tu-Ka's on-line advertising campaign

### ***Can Tu-Ka defend this potentially disruptive market position?***

Research shows that a market is primed for disruption when incremental improvements to products or services seem to be valued less and less by mainstream customers. And even more so when companies are witnessing the loss of relatively low-value customers in small market niches or low-end market segments. To understand whether Tu-Ka can defend its potentially disruptive market position we must consider four issues:

#### **1) What are the strengths and weaknesses of this new foothold market?**

Designed to appeal to Japan's growing elderly population the S-Phone has tapped into a previously overlooked market segment and Tu-Ka has now developed a market lead in this area. However, subscriptions to the S-Phone are not likely to provide large revenues – the market segment is comparatively small and service usage will be low. Nonetheless, this is still a tangible market base from which to grow the simplistic S-Phone concept.

## **2) Are there barriers that could influence initial market growth?**

The theory of disruptive innovation suggests that the success of the S-Phone is based upon the notion of low-end market entry and not 'a focus upon the elderly'. If Tu-Ka's business leaders accept this notion, they could face few barriers in sustaining their entry into other low-end sectors of the mainstream mobile phone market - especially those that are currently viewed as less profitable by the larger network operators. It has experience in the industry and can reinvest profits to support growth of its market share in this low-end customer sector. From this low-end customer base, Tu-Ka could attempt to penetrate the more sophisticated market with the S-Phone concept. They must be prepared to seek appropriate technological convergences, whilst remembering to remain faithful to delivering the simplest possible offering. However, the firm already has experience in other mobile and handset technologies, with its attempts to compete in the traditionally technologically advanced handset arena; thus technology convergence should not be a significant barrier.

## **3) What are the most likely customer reactions and will they switch?**

A significant proportion of mobile phone users world wide face technology and service oversupply. Tu-Ka's S-Phone concept can benefit from this, by focusing on easier functionality and greater reliability to entice subscribers. However, handsets now double up as fashion accessories in many nations. Therefore, for a technologically simpler phone to succeed, Tu-Ka must ensure that they employ polished design that delights and low price points to reflect the lower functionality.

## **4) What is the possible retaliation of industry incumbents?**

Tu-Ka's disruptive market shift does face a major problem. When mainframe manufacturers, IBM, first witnessed the early success of "low-quality" personal computers, they chose to ignore it. AT&T chose to ignore the communications potential in the emergence of the internet. British Airways chose to ignore Ryanair's early success, and then launched their low cost airline ("Go") too late and with the wrong strategy. However, not all the large mobile phone networks have ignored the success of the S-Phone. Senior Vodafone officials have said that Tu-Ka's achievement clearly demonstrates that a valid market exists for a handset aimed at the elderly. And now Vodafone is now planning to introduce its own version in Britain later this year. If Tu-Ka acts now with a low-end market strategy (as outlined above), then it could beat the laggards to the remainder of the low-end market and maybe in partnership with other network providers it could even expand the S-Phone concept from the Japanese market place – but will its leaders see this potential?

## ***Final Thoughts:***

It would seem that the large mobile phone companies are in love with the technology that they develop and sell; sadly, more so than the average person who buys it. Incremental innovations are generating less and less additional revenue. Yet still the large mobile phone players such as Vodafone are responding to this trend by trying to introduce even more functionality. The development of Tu-Ka's S-Phone, is receiving attention but whether Vodafone and other see it as more than a small market glitch remains to be seen. Too many companies in the past have ignored losses at the low-end with a focus upon high revenue customers. Remember, Xerox failed to fight off Cannon's low-tech attack! Will Tu-Ka's potentially disruptive development be taken seriously by competitors or will Tu-Ka leverage the advantage they have developed?

It is unlikely that your latest product or service innovation will enable you to outstrip the market leader's new customer acquisitions by over 17 times. Perhaps insights from this story could benefit your business. Do you want to know more about disruptive breakthrough innovation?

... if so contact Pete Thomond at [pete@insightcentre.com](mailto:pete@insightcentre.com)

### ***Further Information***

For more information on the S-Phone handset and how it has revolutionised the fortunes of its Japanese makers Tu-Ka see:

The website of "The Times" – one of Britain's broadsheet newspapers:

◇ <http://entertainment.timesonline.co.uk/article/0,,14935-1488045,00.html>

◇ <http://entertainment.timesonline.co.uk/article/0,,14935-1498248,00.html>

Halvard Halvorsen's private web log:

◇ <http://www.halvorsen.org/business/telecommunications/wireless/>

And if your Japanese is good:

◇ <http://www.tu-ka.co.jp/>

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