Algebra, slide rules and hammers – a mobile telecoms segmentation

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Abstract
In this paper the authors share their experience of developing Orange's European mobile consumer segmentation and applying it to the UK market. The process started in 2003 with a major study in Orange's 6 main European markets. In 2006 the segmentation was fully operationalised in the UK and formed the basis of Orange UK's highly successful Animal tariffs campaign. The paper highlights the main learnings from this process and shows how research provided a sound platform for the segmentation at the outset and kept the implementation process on track when initial setbacks threatened to derail it.

The role of segmentation in a maturing market

Mobile telephony has been one of the fastest growing markets of the last decade. But by 2003 the period of rapid growth in Western European consumer mobile markets was coming to an end. These markets were approaching saturation point with only low value late adopters and laggards still to be reached. The new CEO of Orange at that time was Sol Trujillo. In his previous role as CEO of US West, a US mobile operator, he had seen the very rapid commoditization of the US market for network services as the market there approached maturity. He feared that the same fate lay in store for Western European markets. His worries proved well-founded.

In the UK, the market had moved on significantly from a market of rapid growth in the late 1990's to a mature market where consumers were placing far more value on the handset brand rather than the network brand. At the same time, mobile operators were responding by offering increasingly rich deals to consumers in an attempt to capture market share. As a result, the proportion of consumer spend allocated to telecommunications was beginning to plateau (see Figure 1 below).

Figure 1. Percentage of household spending on communications services

Operators were therefore looking to new segments of the market to drive revenue growth and were developing increasingly complex tariff portfolios in an attempt to capture every single point on the demand curve. Figure 2 below shows the rapid growth in the number of tariffs available through the Carphone Warehouse in the UK.

Figure 2. Number of different tariffs available at the Carphone Warehouse - UK (NVision)

However, this exponential increase in the number of price points available has resulted in a confusing and cluttered market, exacerbated by the structure of the sales model with indirect channels offering increasingly competitive promotions.

None of this has worked out very well for the consumer who wants neither a complex array of tariffs nor the give away prices offered by networks to be heard above this noise. What the consumer wants is a trustworthy provider, fair pricing and simplicity as can be seen from Figure 3 below which shows the key drivers of mobile phone network choice calculated using jacquards coefficients from a series of brand image statements.

Figure 3. Key drivers of choice of mobile phone network – UK, H1 2006, Jacquards coefficients (n=2, 400)

The Orange Context

Orange was also going through a period of significant change internally. Having been launched as the last entrant into the UK mobile market in 1994, it had established a clear position as a challenger brand that had helped shape the category not only through its innovative marketing campaigns but also through ground breaking propositions such as per second billing, Orange Value Promise and No Ouch prepay vouchers.

Having been acquired by France Telecom in 2000, Orange needed to transform itself from a challenger brand in the UK with a small international franchise business to a major European cellular operator. As a result, it had embarked on an aggressive rebranding programme between 2000-2003 as France Telecom rationalized its brand portfolio under the single Orange brand.

However, whilst from an external perspective, the brand looked similar to the consumer, each individual market still had different approaches to tackling the market and proposition development.

The Strategy

Trujillo saw the benefits of a clear segmentation strategy as three-fold; firstly, to address the consumer needs outlined in the market context above; secondly, to embed his strategy of customer intimacy within Orange; and thirdly, to create a common language within the organization to help generate multinational propositions.

Trujillo brought over his marketing general, Bill Stewart from the US and Stewart immediately initiated a programme of research to create a single segmentation across all of Orange's European markets. ***The objective of the segmentation was to enable Orange to maximize retention of current, high margin customers and attract new high value customers by developing and targeting offerings tailored to the current and emerging customer needs of these segments. In other words, to identify those customers who are interested in something other than just lowest price, identify the services they want and need and target them with these services.*** To do this the segmentation had to inform brand communications, proposition development, the introduction of new applications and services as well as tariff design and development.

In a recent article in the Harvard Business Review, Daniel Yankelovitch criticized much current segmentation work for depending entirely on psychographic variables (Yankelovitch and Meer 2006). Yankelovitch, who introduced the idea of non-demographic segmentations in the 1960's, claims that the resulting segmentations are useful only for populating advertising agencies' imaginations with credible customer archetypes and that they have strayed from the true purpose of segmentation, which is to inform not only advertising but all aspects of the marketing mix. The Orange segmentation did not fall into this trap. It set out to cover a number of aspects of the marketing mix and to do this it would use not only psychographic variables but category usage and attitude variables as well.

The need for a pragmatic approach

In conducting such a large segmentation as this, one which would deeply influence everything the Orange business did over the coming years, it was not always possible to follow the counsel of perfection. Compromises on the ideal approach were required to meet the demands of the context in which the segmentation had to be delivered.

In order to target communications to the key segments, the segmentation needed to be flagged on the customer database. Linking the segments to usage data on the customer database would also provide a powerful way of designing tariffs to suit each segment which would greatly simplify tariff selection for consumers. There were initial discussions about the possibility of combining customer database variables with survey variables in order to facilitate flagging the segmentation on the database. However, there were barriers to taking this approach. Orange had expanded rapidly into many different European markets, most of them acquisitions which in a fast-growing, opportunistic market had been allowed to develop their own approaches to segmentation and customer database systems. Moreover, the segmentation had to be created quickly. The market was changing rapidly and large-scale segmentations such as the one we were planning take time to complete. We simply could not wait for comparable variables to be captured and identified on the various local databases. Flagging the databases would have to be done retrospectively, after the segmentation had been created entirely from survey variables.

Another aspect of the ideal approach to segmentation which had to be set aside in light of circumstances, was obtaining initial buy-in, from the different local users of the segmentation. This compromise had rather more serious consequences. As outlined above, at the time the segmentation was being created the very diverse local businesses were accustomed to a fairly decentralized approach in many aspects of marketing. The idea of a single segmentation was intended to unify marketing practice across the group. However, a decision was taken to conduct only a fairly cursory consultation exercise before embarking on the segmentation study. This meant that when the study was complete a lot of work had to be done to get buy-in from the local marketers to the whole idea of the segmentation.
Whilst this was eventually successfully completed, a case could definitely be made for undertaking a more extensive initial consultation to inform the local markets about what was being done and how this would or would not fit with what they were currently doing. The decision was taken on the basis that the whole process could have got bogged down in potentially rather 'political', discussions about objectives and methodology before it even got started. The eventual outcome probably justified this approach, but it meant that the research team had to be very light on their feet when it came to selling the segmentation in to the organization.

Describing the process of building and implementing a segmentation Trujillo drew an analogy from the aviation industry. A segmentation, like an aeroplane, is designed with algebra, built with a slide rule and flown with a hammer. You start by being as precise and scientific as possible, but at some point you have to take risks and take a few liberties with the original idea in order to get the thing off the ground. If the initial design is not robust enough, it won't withstand the pressures and strains of practical application: but if you aren't prepared to knock the thing into the shape you need, and to persevere in its implementation, you'll never get it airborne.

'Designing' the segmentation – fieldwork and questionnaire

The first step in ensuring that we had a robust segmentation vehicle was to design and conduct a programme of research from which the segmentation could be constructed. The target countries for the segmentation were the UK, Switzerland, France, Belgium, Netherlands, Slovakia and Romania. Slovakia and Romania were included as they were the main emerging markets for Orange at that time.

In each country the following interviews were conducted:

- 1,500 25 minute CATI interviews with customers drawn from Orange customer sample – to enable entire Orange customer database to be populated with segment membership.

- 1,000 25 minute CATI interviews with non-customers drawn from lists or identified by Random Digit Dialing – to enable measurement of Orange market share of each segment.

These sample sizes were sufficiently large to enable up to segments to be created and analysed at the individual country level. Quotas were set within these two sub-samples for each country in terms of Pre-pay vs. Contract and region where appropriate. The final data were weighted back to match known country profiles in terms of age, gender, payment type and network. This involved quite heavy down-weighting of Orange customers in countries where Orange had a fairly limited market share. A proportion of interviews in all countries were conducted by mobile phone to ensure that we included those without a landline.

Given the need to produce a rich segmentation which contained within it the necessary resources for a wide range of applications across the marketing mix, a diverse range of variables were included the questionnaire. These included

- Usage of mobile phone – frequency and purpose
- Brand affinity and loyalty questions
- Attitudes towards mobile phones and mobile phone technology
- Channels used/preferred when purchasing mobile phones
- Media preference/influence
- Product needs and benefits
- General lifestyle attitudes and psychographics
- Demographics

The main component of the psychographic section was a battery of statements to measure respondents' values. A value is "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially the preferred way of living" (Rokeach, 1973). Values reflect the social orientation, life-goal conceptualisation or deeply held ethics or morals of an individual and it is claimed are distinct from attitudes, which are beliefs about a specific object, person or situation, and as a result, are less enduring. The advantage of using values in a multi-country segmentation is that they tend to be more enduring and more universally applicable than attitude measures. In addition, they have been found by many researchers to be better predictors of consumer behaviours than other personality measures (See for example, Wells and Atkin, 2007).

The value measurement system that we used was that devised by Rokeach (Rokeach, 1973). Rokeach values are normally measured using a rank ordering approach which requires respondents to be interviewed face-to-face so that they can read and arrange the statements. As we were using a telephone methodology, we drew on work by Herche, 2002 to produce a values battery that used a rating scale and so could be conducted over the telephone. The work by Herche had the added advantage of being focused specifically on social values. As we have already mentioned, we needed to include a wide range of types of variables and did not want to be over-dependent on psychographics. Thus we made a pragmatic decision to focus on social values, which felt were the most relevant to telecoms, and to exclude those categories of value which pertain to more abstract matters such as spirituality (salvation, inner harmony, wisdom), aesthetics (a world of beauty), justice (a world at peace, equality or national security) or love (mature love, true friendship).

Herche identifies a list of some 40 key social value statements, each of which load heavily on one of 9 factors with names such as 'security', 'social recognition', 'self-fulfilment' and 'fun and enjoyment'. From Herche's list we selected 20 by removing those items from the list which were:

- Semantically indistinguishable or very similar to other statements which load highly on the same factor.

- Awkwardly expressed or expressed in a way which might be inappropriate for European respondents.
- Likely to apply only to a very small proportion of respondents.

We adopted a seven point semantic scale instead of the nine point numeric scale used by Herche, in order to make the questions easier for respondents to answer in a telephone interview and to sharpen the interpretation of the data.

‘Building’ the segmentation – analysis and interpretation

The strategy when designing the segmentation solution was to ensure that the segmentation contained within it the necessary resources to meet the diverse requirements that it had to fulfill during its active service in the business.

Some members of Trujillo’s marketing team had hoped that the Rokeach values would be able to predict mobile behaviours and needs in some detail. However, the researchers working on the project - Rosemary Hadden who headed up the Orange research team and Illuminas, the lead research agency working on the project - were more skeptical about the ability of a purely psychographic segmentation to deliver what the business needed from it. This skepticism was borne out when initial analysis of the data revealed that the Rokeach value statements on their own were poor predictors of mobile behaviour and attitudes.

Instead we decided to define the segmentation using a blend of different types of variable. The general types we used and the reasons for using them are shown in Table 1, below.

Table 1. Key question areas used in defining the segmentation and reason for their inclusion

Principal components analysis with Varimax rotation was used to produce the factors on which the cluster analysis was based. Factor analysis is used to standardize the data - i.e. to place variables with different scales on a comparable scale. Cluster analysis on unstandardized data can give misleading results. Using factor analysis also serves to reduce the ‘weighting’ or dimensionality of the data. This compensates for any bias in the selection of variables used to define the segmentation. Perhaps most important of all in the context of a multi-country study, by identifying, deeper underlying dimensions derived from a number of statements, factor analysis avoids the over-reliance of the final segmentation on single statements which, even with the best translation possible, may be understood in different ways in different countries.

In all, 50 variables from across the three question areas shown in Table 1 were included in the factor analysis, which yielded 15 factors in total. The first 7 of these were used to define the final segmentation. Table 2 below summarizes these 7 factors and gives examples of the variables that were positively and negatively loaded on them.

Table 2. Principal components factors used to define the segmentation

We used a K-means clustering technique to produce a number of different cluster solutions based on these factors. In deciding which of the 40 or so solutions that we ran would eventually become the final segmentation a three step iterative approach was adopted. Figure 4 below illustrates this approach.

Figure 4. Iterative approach to optimizing the segmentation solution

As shown here, the process is highly iterative, with failure to matriculate at one of the steps resulting in having to go back to the first step. If a solution does not pass the tests for statistical robustness, then it will be rejected and another solution must be created. If it passes the statistical tests then it must be interpretable – that is it must make sense. If it does not then you have to go back to the drawing board again and create another new solution. If it does make sense, then it must still prove that it is actionable by the business – i.e. that they feel they can use it to improve the efficiency and effectiveness of their marketing operation. If they feel they cannot use it, then you have to right back to square one and produce a revised solution.

Fortunately there are a number of mitigating factors which mean that in practice this process is not quite as onerous as it might at first appear:

- Statistical software programmes make the generation of cluster solutions very quick.
- Success at an earlier step generally reduces the risk of failure at a later step. A solution that passes the statistical tests is more likely to be interpretable than one which fails them. And an interpretable solution is more likely to be actionable than one that does not really make sense.
- You rarely have to go back and start entirely from scratch. If a candidate solution fails at a particular step you generally learn quite a lot about what would succeed at that step and can build that learning into your revised solution, training your next solution to meet the criteria at that step. Indeed, the more the agency knows in detail, in advance about what the client wants from the segmentation and the more the client knows in detail and in advance about what it wants, the fewer iterations will be required.

Decisions at the statistical stage are generally down to the agency and client researchers. At the interpretation stage and to an even greater degree at the actionability stage, the involvement of others within the client business is usually essential.

It is sometimes permissible to trade off a degree of failure in some of the statistical tests in favour of greater interpretability and actionability. However, this was not really an option in devising the solution for Orange as the final segmentation was going to have to be put to so many different uses that it would have to be as robust as possible.

Step 1. Statistical tests

The following **statistical tests** were applied to the solutions

1. **Substantiality test** – solutions with very small clusters (i.e. with less than 30 cases in them) were eliminated automatically.
2. **Country fit test** – in multi-country solutions it is important to check that a solution does not include clusters which are either dominate, or are dominated by, a single country. In the Orange study Slovakia and Romania (which at that time were still fairly immature mobile markets) could not be made to fit any European-wide solution. These countries were removed from the analysis and alternative solutions were created for them.
3. **Differentiation test** – ensuring that there are major differences between the segments on a range of variables. We aimed on each of the main segments to achieve differentiation in all the main areas (i.e. usage, values and attitudes towards mobile phones). Typically, we are looking for differences between two segments on a variable to be:
   - About two thirds agree/ one third disagree vs. one third agree/ two thirds disagree, or greater OR
   - About 30 percentage points or more on agreement or disagreement.

Differentiation was also checked with an ANOVA test on the significance on the factor scores for each segment. In order to ensure genuine differentiation of segments we set a higher standard and looked for deflections from the overall mean (each factor mean = 0), of at least +/- 0.4.

4. **Split sample test** – varying proportions of randomly selected cases in the sample are removed and the cluster solution is re-run on the reduced samples. The majority (80%+) of the remaining cases should stay within the same cluster as they originally appeared in.
5. **Profile validation test** – the cluster solution was profiled in terms of variables which were not included in the list of potential defining variables. Significant, interpretable differences between the clusters on at least some of these variables are an indication of the robustness of a solution. Some of the main results of this test for the final segmentation solution are shown in Table 3 below. The segments show clear differentiation on a range of variables not used to define the segments.

Table 3. Profile validation test results on final segmentation

In addition to these Seven segments an eighth, ‘Entropy’ segment (comprising respondents with low-mid range scoring across all attributes) was identified which accounted for about 10% of the total sample. This was excluded from subsequent analyses and entropic cases were allocated to the closest of the remaining seven segments.

Step 2. Interpretability tests

The requirement of **interpretability** is, of course, less a matter of passing a series of strict tests and more a question of being judged to meet certain general criteria of fitness. Whilst no hard and fast rules for this exist a number of general ‘rule-of-thumb’ requirements can be identified.

Dimensions should be genuinely blended within the segments

Segments should not be defined or differentiated along a single dimension. If a segment is only defined in terms of one type of particular behaviour or one type of attitude then its explanatory power will be very limited and it will lack the resources needed to make it adaptable and applicable across a range of business functions. For an account to have explanatory power it needs to link or correlate diverse dimensions, some of which can be seen to have causal power over the others. For example one of the Orange segments scored very high on the general social attitude and value dimension, ‘Insecurity and emotional dependency’ and also very high on the category attitude dimension ‘Mobile enthusiasm/ emotional dependence on mobile’. Clearly, it was highly likely that there was a causal link between these two – the general insecurity and emotional dependency giving rise to a strong need to stay in touch with friends and family through the mobile phone.

The combination of different, correlated variables in a single cluster also allows for the possibility of ‘emergent’ properties to reveal themselves as the segment is explored in different contexts – that is characteristics which are not contained in either of the properties in themselves but emerge when the two are found in combination. Another of the Orange segments had very high scores on the ‘Safe and Sound’ factor – a conservative value dimension which encompasses risk aversion, the need for self-respect and a belief in doing the right thing. We concluded from this combination that this group had a sense of duty which was probably the result of a social role – parenthood - that they had assumed. Sure enough when they were researched in groups they started out as quite reserved and proper, but as the group progressed and they relaxed (and had a little wine) the more fun-loving types they had been before becoming parents emerged.

Blending dimensions is a particular challenge if you are using a diverse range of variables or factors to define the segments. And this can sometimes result in segments with attributes which are in apparent tension or conflict. Which brings us to our second rule-of-thumb.

Paradox is interesting: but outright self-contradiction means something has gone wrong. Sometimes clustering throws up a segment which has attributes which appear to be in tension with one another. If this tension can be explained by reference to fairly well-established psychological, sociological or marketing knowledge (or common sense) then this adds to the interest and appeal of the segmentation. In their recent book 'Made to Stick' Chip and Dan Heath (Heath and Heath, 2007) identify 'unexpectedness' as one the characteristics of ideas that stick – i.e. memorable, readily communicable ideas. 'Stickiness' is a virtue in segmentations which have to be used very widely across a large organization. A certain amount of tension between attributes can also be revealing and is often a hallmark of consumer insight.

Economy is a virtue in theoretical descriptions of data: lengthy, unsupported chains of reasoning and *ad hoc* explanatory 'patches' are a vice. Thus, if elaborate accounts or theories are required to explain the tension between attributes, then it is probably best to abandon the solution entirely and try again. If these contradictory clusters keep coming back in all subsequent solutions then check the data. If the data are correct then either attempt to sub-segment it into separate, coherent variables or cast your net for potential explanations more widely. Fortunately this doesn't happen very often.

In the Orange study one of the segments in particular exhibited this kind of tension. The segment was attitudinally very fun-seeking and youthful in attitude but included a fair proportion of older individuals. Our confidence in this as a segment was supported by common sense such as the idea that some people are very 'young at heart' for example; as well as sociological knowledge such as the evidence of increasingly youthful behaviour amongst older adults in post-industrial societies (see Fletcher and Kenway, 2007, for a summary of this evidence).

You should be able to communicate the segment in a coherent, one or two sentence summary.
One final test for whether a segment is 'healthy' is the 'man in the pub' test: can you describe the segment in a way which would be understood by someone who didn't know anything else about the study? If not, then the segmentation solution may need more work.

Step 3. Actionability tests

The **Actionability** requirement was to some extent already built into the segmentation, with clear objectives set out in terms of the types of marketing activity that it would be needed to support. One aspect of actionability which had been built into the segmentation was that it had to be flagged on customer databases. Initial algorithms were run which showed that in some countries such as the UK the segmentation could be flagged on customer databases with a fairly high degree of accuracy (70%+) without further work. This was not true in all countries, due to differences in the data collected on customer databases in those countries and, as expected, more work would have to be done to ensure accurate flagging. But it had been shown that the segmentation had sufficient usage and behaviour content to be operationalized on customer databases.

Another initial parameter that was built into the segmentation was that it had to be fairly simple to ensure that it could be widely communicated and adopted within the business. Thus we produced only one segmentation with a fairly small number of segments to cover a number of countries and a range of aspects of the marketing mix. Producing multiple interlocking segmentations – e.g. one for brand and one for product – can be a useful in certain circumstances, particularly where usage of the segmentation will be confined to a small central marketing or sales and marketing function. But in organizations with decentralized sales or marketing functions which need to be able to use the segmentation in their day-to-day work, a single segmentation with a limited number of segments is preferable.

Naming the segments is a vital step in achieving adoption and usage. To be used in the day-to-day work of a variety of functions within a business, segments have to work as 'hooks' or mnemonic devices to which people attach a collection of attributes. Thus, the names must be memorable and must not mislead people about the nature of the segments. The names selected for each of the Orange segments were chosen to summarize the characteristics of each segment as concisely, concretely and 'graphically' as possible. Thus, names were short – one or two words – with strong adjectival content such as 'Playful' and 'Upmarket aces'. If names have to be longer than one or two words then it is a good idea to try to use techniques borrowed from poetry to help make them memorable. 'Alliteration' and 'metre' are particularly useful here. Thus one of our segments was called 'Leisurely Late Adopters' which is both alliterative and has a rhythmic metre.

The final segmentation met the original brief: it had predictive and explanatory power across the whole marketing mix, from the use of basic applications through attitudes to new technology and applications to likely receptiveness to different brand and communications approaches. Moreover, by exploring underlying values, attitudes and motivations the segmentation went beyond merely predicting current behaviour and highlighted ways in which behaviour could be changed by the use of targeted marketing to potentially receptive segments.

'Flying' the segmentation – the phases of implementation

The implementation of the segmentation involved a 'divergent stage' and then a 'convergent stage'. In the divergent stage a number of actions were taken to help people in all key functions to understand the segmentation, get used to using it and ultimately take ownership of it. In the convergent stage the intention was to align the efforts of these different functions by pulling together brand and core product into a single unified through-the-line communication campaign. The multi-dimensional nature of the segmentation meant that the segmentation could be used as the basis of a unified brand and product campaign which appealed to both rational and emotional consumer needs.

Below we consider each of these stages in more detail. Different challenges were faced in different national markets but in the remainder of the paper we will focus mainly on the implementation in the UK.

The 'Divergent' implementation stage

There were two main stages to the Divergent phase of implementation

1. Getting buy-in.
2. Operationalizing the segmentation by flagging membership on customer databases.

In the event, it was found that getting full buy-in actually required the segmentation to be operationalized.

Getting buy-in

As little time had been spent on initial consultation the segmentation had to be sold-in after it had been created. Selling a segmentation that you have already built is like selling a car – get people into it and then show them what it can do.

INSET BOX. Getting buy-in to segmentations: the lessons of learning theory
Communicating a segmentation is a major exercise in organizational learning – one of the largest single such exercises most organizations will ever undertake. When undertaking such a large-scale internal communication exercise it is essential to 'work with the grain' of human learning biases.

In general, people learn things quickest and most comprehensively by taking action – by interacting immediately and directly with the material they have to learn. The next most effective method of learning is through the use of concrete visual and audio examples. The least effective way for most people to learn is through the use of abstract text and data. Whilst there are some differences between people in their preferences for each of these types of learning (i.e. different learning styles) these general preferences apply to most people.

Another important principle when communicating a segmentation is to approach the unfamiliar through the familiar. Educationalists often describe the role of the teacher as being to assist their students to discover new knowledge and skills for themselves. This method of 'assisted discovery' involves the teacher helping the student to make connections between the ideas or techniques to be learnt and knowledge or experience which the students already possess. The teacher starts with what the students already know and then shows them a path from their current knowledge to the new knowledge to be acquired, encouraging the students to make the steps along that path themselves. This process is sometimes described as 'scaffolding'.

Throughout the process of communicating the segmentation, exercises and initiatives which worked with these biases were consistently more effective than those which did not.

'Getting people into the segmentation'
The initial communication of the segmentation focused on three main streams of activity:
- Firstly, summarizing the key outputs of the segmentation exercise into a series of short quantitative snap shots that could be used by each of the local markets;
- Secondly, an extensive programme of videoed qualitative in depth interviews which were used to 'bring the segmentation to life';
- Finally, an internal communications programme which delivered a 'customer spotting' booklet (see Figure 5 below. This piece of internal communication was designed to allow staff of all levels to engage with the segmentation and to serve as the stimulus for proposition development workshops etc.

<u>Figure 5 'Customer spotting' booklet</u>

The following lessons were learned or reinforced during the communication process.

The full range of communication styles and techniques should be considered *but these must be appropriate to the particular internal audience and the culture of the organization*. For example, a day long interactive workshop was conducted with the brand communications team. A range of interactive exercises were included during the day, including projective techniques such as getting participants to imagine which segment characters from a popular

UK soap opera would fall into, or which segment members of the British Royal family would belong to. This exercise worked very well with this group, but when one of the marketing department attempted to include it in a presentation to senior managers it was rather less successful.

Not only the style but the content for each audience also needs to be considered very carefully. Three general principles relating to what was communicated about the segments were followed:

- Start by communicating the archetypal core of each segment. Only share details about the wider range of types of members once these archetypes have been digested. For example, two thirds of one of the segments was made up of consumers aged under 35. We generally started by talking about this as a 'youthful' segment, contrasting it with those segments where two thirds or more of the members were *over* 35. Only once this general difference had been established in the minds of audiences did we start to talk about the minority of the segment that was older than 35.
- Only those closest to the segmentation and likely to use it most regularly *need* to know about the non-core segment members at all. The minority or peripheral parts of a segment do not need to be drawn to the attention of all audiences. Only those who are going to have to work with the segments to some depth really need to be directed to consider these less central members of a segment.
- For many of those in the frontline of the organization who have to use the segmentation only occasionally, too much information can actually be counterproductive. For example, staff working in Orange stores were given a small number of questions to help them identify different target segments. They were not given a more complete picture of the segments. As the store staff have a great deal of other information to retain and many other factors to attend to in their working day, the task of segment identification, if it was to work, had to take up only a fairly small part of their time and attention. If the wider picture of the segmentation had been shared, they would have been forced to distill it down to its bare essentials – i.e. they would have had to work with potentially misleading stereotypes of the segments. Thus, the use of a more mechanistic, rule-governed approach to identifying segments in store, ensured accurate and consistent segment allocation leaving staff free to deploy their judgment in other matters where a more rule-bound approach could not be deployed.

'Showing them what it can do'

Given Trujillo's organizational goals, there was a focus on quick wins that could be delivered to the market place. Orange UK had already begun looking at high value segments and this proposition was expanded into a more rounded proposition targeting Upmarket Aces. Called Orange Premier, this new tariff was targeted at one of the key segments. It proved highly successful from the time it was launched and has now been transformed into Orange's new Panther tariff.

The segment identifier algorithms were also very useful in showing people what the segmentation could do. These enabled local researchers and marketers to conduct their own research using the identifiers and to answer for themselves a series of questions which they needed answers to if they were going to feel comfortable with the new segmentation. Questions such as the following:

- **How does this segmentation solution compare with the segmentation we have been using until now?** One of the best ways for people to learn is to approach the unfamiliar through the familiar. Thus, being able to translate the new segmentation into the terms of existing segmentations speeded up the transition to the new solution.

- **How do these segments compare on the types of consumer dimensions that we measure on an ongoing basis?** Again, another way of translating the new, unfamiliar segments into terms that had everyday currency for the local researchers and marketers.
- **What are these segments like in my market?** The segments will inevitably mean slightly different things in different countries. By being able to recruit segments to group discussions, local marketers can start to see what the segments are like in their own countries.

Bridging the chasm

However, despite this focus on internal communications and gaining buy in, there still wasn't widespread buy in from within the UK business. No matter how many times people 'test drove the car', the crux of the problem came down to differing expectations at a group vs. local level. Unless the local marketing teams could tag the segmentation to the database they did not see that they could build full end-to-end propositions around it. Activity therefore focused on the CRM team and attributing the segmentation variables to all of the other behavioural variables that Orange held on its customer database.

Operationalizing the segmentation on the UK customer database

Flagging the segments on the Orange customer database presented a number of challenges. Claimed behaviour did not always tally with actual behaviour for example. This was particularly the case with behaviours such as roaming (using the phone when overseas), where respondents in the study had tended to overclaim their usage. Although behaviour was a strong component of the segmentation, the segments were also differentiated on attitudinal variables, which did not lend themselves readily to replication in terms of the types of variables available on the customer database. Thus, initial attempts to identify segments met with only partial success. The objective of 80% accuracy in the attribution was not being achieved.

The solution adopted was to redefine the segments in terms of variables that were available on the customer dataset. Rather than attempting to identify the original segments, new, 'proxy' segments were identified. These proxies were created by replicating as many as possible of the defining *variables* in the original segmentation using database variables and then reconstructing the core of the original segments from these 'replica' database variables. The resulting segmentation was tested to ensure that it still captured the key attitudinal differentiators from the original segments.

Orange now had a new version of the segmentation, one that could be identified with the same high degree of accuracy using database variables or survey variables – because the two sets of variables used in each these identifiers correlated very highly with one another.

The 'Convergent' implementation stage

This stage is fairly unique to Orange UK's use of the segmentation. Orange UK put the segmentation at the heart of a through-the-line marketing campaign. This exploited all the resources available in the segmentation – values plus category-specific attitudes and behaviour – in a single campaign aligning brand and core product (tariff).

The specific advantage of the Orange UK approach was that it addressed head-on the overriding consumer needs when purchasing a mobile network – trust, fair pricing and simplicity. Simplicity and fair-pricing were to be addressed by producing tariffs which were most suitable to each of the segments; trust and fairness were reinforced by linking the brand very closely to each of the tariffs through the use of strong visual symbols standing for each tariff.

'Hammering it Home' – the role of research in the UK Implementation

The UK research team's involvement really began in earnest once the database tagging issues had been resolved. The main outstanding barrier to adopting the segmentation had been addressed and there was now a real appetite at a senior level within the UK business to use segmentation as a key lever by which to differentiate the Orange brand and product. The concerns that Trujillo had expressed around an increasingly commoditised market back in 2003 were coming true… the market was becoming increasingly competitive as operators continued to fight over an ever shrinking acquisition pool.

A rapid fire research programme was kicked off with three main stages to restart the segmentation in the UK:

a. Market profiling – a quantitative study of 5,000 UK consumers to cover all key profiling statistics (segment size, revenue, potential, usage behaviour etc). Analysis of this data led to the prioritization of four key segments based on revenue potential.
b. Qualitative workshops – a mixture of traditional focus groups (4 for each of the target segments) and 'day in the life of' video diaries.
c. Brand Imagery and drivers of brand preference – a quantitative study of 2,000 UK consumers to understand the key drivers of brand preference in each segment and Orange's performance on these key drivers relative to its competitive set.

These three surveys formed the basis of a workshop for nearly 200 Orange sales and marketing staff in October 2005. Under the sponsorship of Jean Pascal Van Overbeke, the Chief Marketing Officer, the segmentation activity began apace in the UK.

Follow up workshops were held by the PAYM propositions team who used the CRM and research data to flesh out what potential tariff packages could look like for each of the target segments. The challenge then became how to communicate them.

Segmenting the brand offering without losing core brand identity

When implementing a segmentation strategy in a tariff range, Orange had to decide whether to make the segmentation explicit to the consumer or not. Whilst many data driven segmentation tools were already at use within the business (churn propensity, offer propensity, value bands etc) these were used to drive campaign activity or for analytical purposes – none were ever explicit to the consumer.

It was at this point that the UK marketing team went back to two key principles:-

1. Having clear and simple tariffing is a key driver of brand choice in the UK mobile market
2. The segmentation should be a key pillar in Orange UK's differentiation strategy

In order to meet these objectives, the segmentation had to become customer facing, a key part of Orange's identity. This did, however, present additional challenges. Orange had always followed a mono-brand strategy, with one core identity in the market. Whereas other operators (e.g. KPN) had used a brand portfolio approach to target different segments (see Figure 6 below) this would not be possible for Orange.

<u>Figure 6. KPN's multi brand strategy</u>

Nearly 30 different devices were considered to represent segmented offers in the UK market – in the end three were considered for research purposes: a simple naming strategy, fabrics and animals (see Figure 7 below).

<u>Figure 7. Devices considered for representing the UK segmented offers</u>

Using research to support the implementation of the Tariffs

Researching these different creative routes would not be easy. The Fabric and Animals routes were so different to anything currently on the market that simply using traditional stimulus material and asking customers to respond would not work. It was therefore decided to include a strong observational element in the initial qualitative research – to let customers browse and interact with the different routes and assimilate their views in their own time.

It was clear from this observational work that the animals routes prompted something quite different from most tariff research. Whereas before the Orange marketing team had seen customers quickly become fatigued by tariff tables in traditional pricing research, all of a sudden customers were more engaged – they were laughing & joking and enjoying the task of choosing a tariff.

But most importantly, they were beginning to choose their plan in a different way. Rather than focusing straight on the minutes and texts, customers were thinking about how they actually *used* their phone and were using this information to take a judgement on what would be the best package for them.

In summary, across all the groups the animals moniker was felt to:-

- Provoke clear intrigue/fascination/fun…with customers generally keen to work out 'who I am'
- Provide rich associative potential, hence fertile territory for the projection of values
- Be a refreshing change from boring tariff tables
- Provide a useful shortcut to the ideal tariff
- Help customers choose their tariff – whilst some animals overlapped, the majority can categorise themselves as being one or another
- Be visually very strong with abstract representations working better than more realistic renderings

Evaluating the Success of the Animals

The Animal tariffs were launched in April 2006 but were not an immediate commercial success. The marketing team were concerned. The initial research had shown that the creative route would appeal to target consumers. Furthermore, the tariffs fared well when run through conjoint simulators used within the Orange insight team.

However, the UK market had moved on. The FlexT tariff launched by T Mobile just a few weeks before had captured the imagination of the channel and was seen as being an easy sell to consumers. It also increased the competitiveness of the T Mobile offer in a way that was hard to simulate through the existing conjoint models.

The marketing team turned to customers again and an extensive programme of research was begun to attempt to understand what was happening:

a. Omnibus research to sense check the original insights and to check awareness of the offers
b. Accompanied shops and intercepts to understand how the segmentation was working in store
c. Qualitative work to understand how the animals worked in key POS eg the Orange retail magazine

The research revealed a number of key challenges for the animal tariffs:

- Firstly, overall awareness – the choice of media (no TV advertising) meant that in a cluttered market the campaign was struggling to cut through (see Figure 8, below). This was despite Orange having the highest overall brand awareness in the category.

<u>Figure 8. Awareness of mobile tariff packages (April 2006)</u>

- Secondly, the actual execution of the idea meant some of the initial key elements of the creative were now lost in store. There was no POS that compared the four animals.

- Thirdly, for some consumers the initial creative was hindering rather than helping the shopping experience (exactly the insight the marketing team had been looking to overcome). This was primarily driven by the lack of any clear tariff table where a consumer could compare all four animals side by side. Whilst some consumers were willing to trust they knew which plan was best simply by referring to the icons, for many they wanted to sense check their choice with a traditional tariff table.

- Fourthly, for some the creative simply wasn't clear enough - the reliance on balloons rather than simple icons meant it was hard for consumers to understand what the animals were.

Redressing the Balance

The marketing team clearly knew they had to take action. Whilst awareness of the offers was higher amongst key target groups (PAYM customers, higher value customers, those in priority segments), overall sales were suffering.

The research was used to drive changes to the marketing mix and a 'relaunch' was scheduled for August with the following key changes made to the structure of the proposition:

1. Address the competitiveness of certain areas of the tariff portfolio and, in particular, to react at the £35 price point which was driving most of the volume in the market.

2. Secondly, to create a single unifying element to all tariffs, irrespective of which segment they were targeting. This was in response to feedback from indirect sales partners. Whilst the segmentation tool was easy to position in an Orange retail store were customers were only choosing between Orange packages, it was hard to translate this experience into a store selling multiple tariffs from multiple operators. An 'unlimited' element was therefore added to each tariff package. Whilst these were still tailored to individual segment needs, they provided an additional layer of consistency.

3. Thirdly, to address awareness issues by launching the tariffs on television. A series of innovative commercials featuring real Orange customers was commissioned which clearly explained the benefits of the tariff packages to consumers.

4. Finally to address the instore issues by restoring the tariff table and making it easier for customers to understand how the new animal packages related to the traditional PAYM vs PAYG segmentation..

Once again, it was customer insight that drove the development of these initiatives. Rather than rely on traditional creative development research, the Orange team exposed eight groups of respondents to the initial advertising idea and then took the consumers on a shopping journey. The groups were then reconvened allowing customers to comment not only on the advertising scripts but also on key elements of through the line integration. It was critical that the campaign worked in store as well as in the commercial break.

The Results

We are unable to share all of the commercially sensitive data within the context of this paper. However, the key highlights are that by the end of August 2006:

- Orange led the PAYM sales market (source: GFK Retail Audit)
- Orange retail had its highest footfall and sales since records began (internal data)
- Over 90% of consumers were able to link the animals advertising to the Orange brand (source: Millward Brown brand tracking September 2006 n=400 interviews per month, rolling 8 weekly data)
- Over 80% of consumers were choosing to take a longer 18 month contract when buying through Orange retail (source: internal sales data)

It had been a long journey but the segmentation had finally arrived in the UK. What had started as a group wide vision to move the organization closer to the customer had ended up forming a fundamental part of Orange's success. Not only that but the animals had become embedded in the consumer psyche – nearly a year on, not only is there still strong recall of the campaign but customers are still able to play back the rational benefits of the propositions (see Figure 9, below)

Figure 9. Spontaneous verbatims on content of orange advertising (Millward Brown brand tracking april 2007)

Moving Forward

The segmentation continues to be a key part of Orange's marketing strategy and the research and marketing teams constantly need to find ways to bring the consumer to life. As the focus within the organization changes from convincing people to employ segmentation in the first place to inspiring marketers to use the segments as the basis for idea generation so the focus of the research agenda needs to change.

In the early stages of the journey, quantitative measurement was vital. Marketers needed to understand the logic behind the segmentation and to validate their assumptions against quantitative targets. Similarly, in the telecommunications market, the hard and fast links to the internal data an organization holds on its database are key – finding clear links between values, attitudes and behaviour are key.

However, as the dialogue changes from 'why should we use this?' to 'how can we use this?', so the role for qualitative research becomes more important. Internal communications can shift from convincing to inspiring. To continue this process, the Orange team has established a qualitative panel of customers from each segment which can be used by both internal teams and external agencies as the basis for workshops. The segmentation model will continue to live on…

Conclusions and wider lessons learned

It is clear from the Orange experience that segmentation should be seen as a journey rather than a one off task. Inevitably, the process will be an iterative one to arrive at the right solution for the organization. The Orange journey highlights a number of key lessons for organizations who are about to implement a segmentation study:

Firstly, as an industry, we focus a lot on getting research in the boardroom and achieving senior management buy in. The Orange segmentation study shows that, while this kind of senior management vision is key to generating visibility and energy at the start of the project, buy in is needed from the whole organization if a research programme is to flourish in the longer term. We need to consider the full range of audiences when embarking on a complex piece of research such as this and need to tailor the deliverables accordingly.

Secondly, it is key to have clearly established objectives from the start. This may sound obvious but can have major implications for how the data is to be used (or integrated with other datasets) at the end of the project. Where will the focus for any segmentation model lie? In acquisition? To serve as a framework for proposition development? Or ‘in life’ as a tool to grow revenues and help drive customer loyalty? Once again, achieving buy-in from all levels and ensuring that all levels of the organization with how the segmentation tool is to be used is key. However, there is no need to be blown off course should things change! In fast moving technology markets it is likely that, as in this case, the actual implementation differs from the original inception. The main reason for sharing this case study was to highlight that pragmatic implementation and nimble thinking are as important as theoretical excellence in the first instance. Start with a clear vision in mind but, should those goal posts change, take the time to think about how the tools you have created can be adapted to the new circumstances.

Thirdly, the crux on which segmentation models fly or fail in a service category is that crucial bridge between internal and external data. Getting this right adds so much extra richness to the segmentation by the inclusion of additional variables that you would otherwise have been unable to access. However, this bridge is the most complex element to achieve. This is particularly true when key elements of the segmentation don’t even relate to the category. Whilst personal values are hugely important in understanding an individual’s general outlook and motivation, it is unlikely to be that predictive of their SMS usage. As outlined above, this is where a pragmatic approach and having a clear view on which elements of the mix it is crucial that the segments discriminate on are key as, invariably, this matching approach may end up flattening segment profiles in certain regards.

Fourthly, there is no substitute for practical implementation. In an ideal scenario, the Orange UK team would have been able to test market their animal tariffs prior to a full commercial launch. This would have allowed them to discover some of the executional issues earlier in the process. However, in a fast moving and competitive market such as mobile telecoms, this simply is not practical. In such an environment, conducting a full and thorough post launch implementation (using the full range of research tools available in the armory) is key as is the ability of the organization to act quickly upon these findings.

Finally, segmentation should not and cannot be for segmentation’s sake – there needs to be a clear consumer benefit. It was only when the revised Orange offers were really felt by consumers to address the category’s key customer frustration (complicated tariff choice) that the marketing campaign was truly effective.

References

Fletcher, J.H and Kenway, J. (2007). *Marketing to the Inner Child.* ESOMAR Insight Conference Papers, 2007.

Heath, C. and Heath, D. (2007). *Made to Stick. Why Some Ideas Take Hold and Others Come Unstuck.* Random House Books.

Herche, J. (1994). *Measuring Social Values: A Multi-Item Adaptation to the List of Values (MILOV)*. Marketing Science Institute, Working Paper.

Rokeach, M. (1973). *The Nature of Human Values.* New York: The Free Press.

Sousa, D.A. (2001). *How the Brain Learns.* Corwin Press Inc.

Wells, C. and Atkin, M. (2007). *Value Systems: Demographics for the 21st Century?* Conference Papers, 2007 MRS Conference.

Yankelovitch, D. and Meer, D. (2006). *Rediscovering Market Segmentation*. Harvard Business Review, February, 2006.

Figures and Tables

<u>Figure 1. Percentage of household spending on communications services</u>

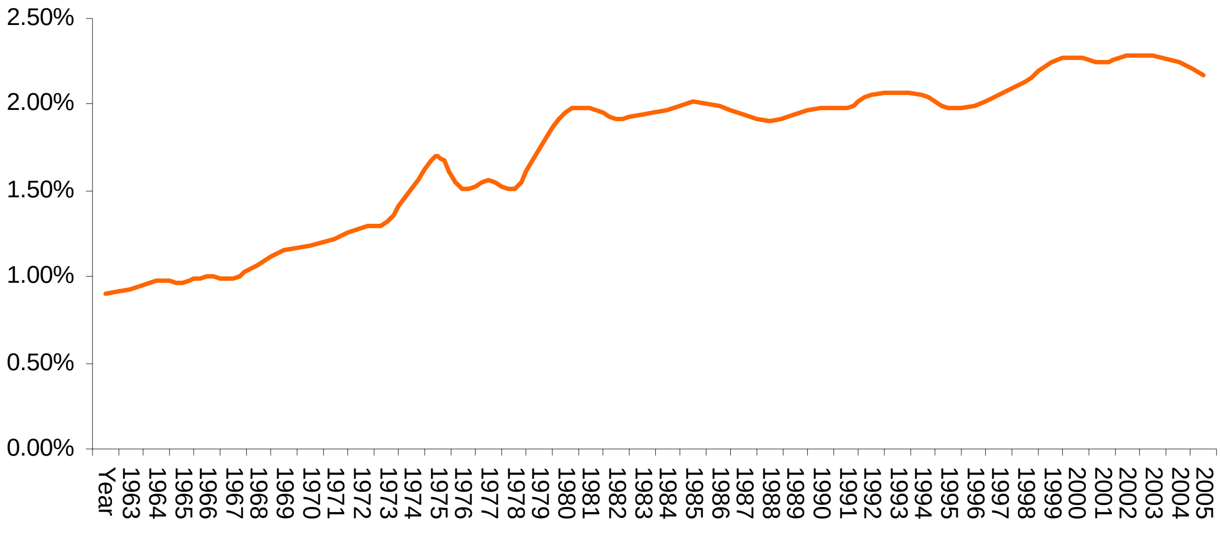


Figure 2. Number of different tariffs available at the Carphone Warehouse - UK (NVision)

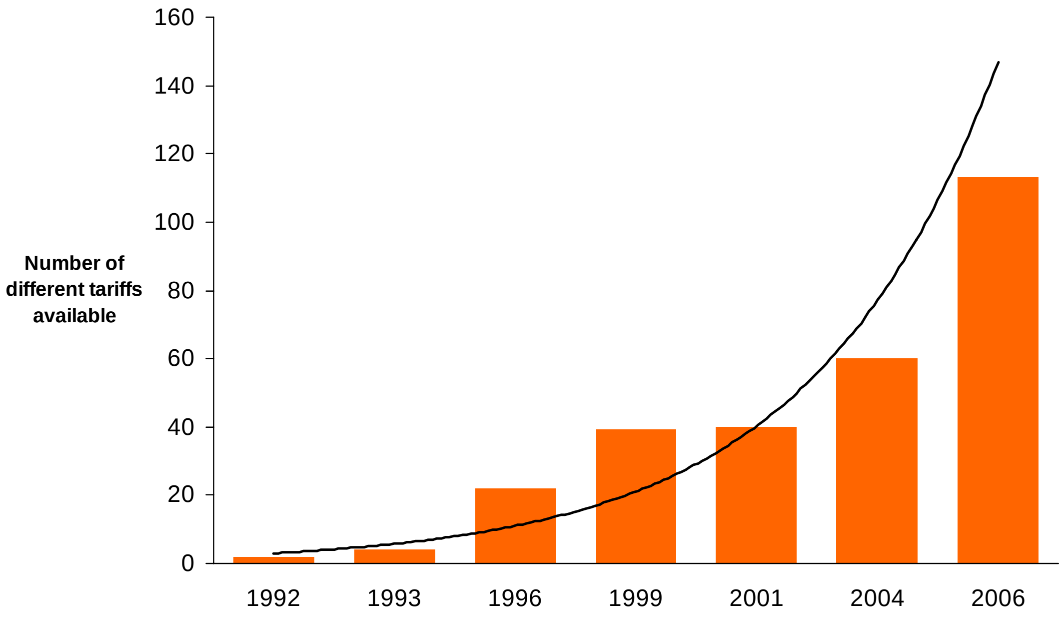
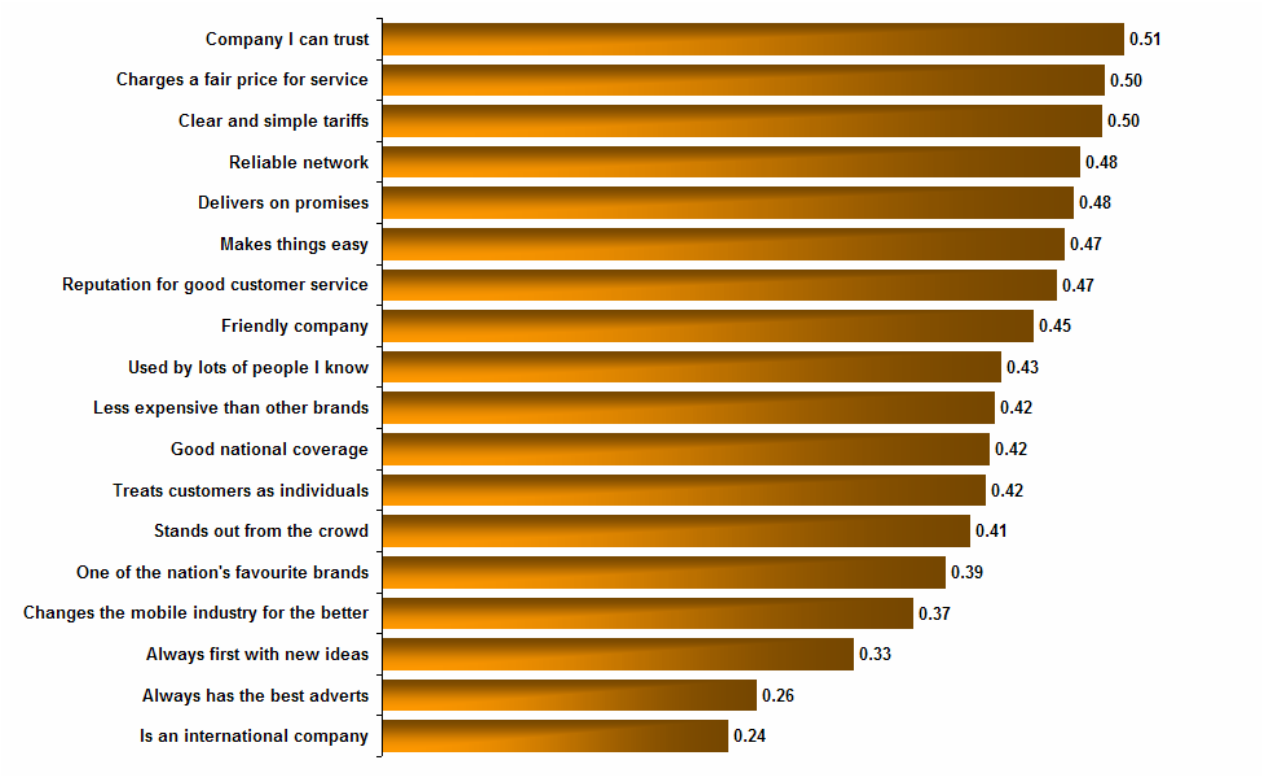


Figure 3. Key drivers of choice of mobile phone network – UK, 2007, Jacquard coefficients



Base: all UK consumers with a mobile (N = 2, 400)

Table 1. Key question areas used in defining the segmentation and reason for their inclusion

Question area	Reason for inclusion
Mobile phone usage and behaviour	To maximise the likelihood that the segments could be identified from data available on Orange's customer databases
Needs and attitudes with respect to mobile phones	To assist with application and proposition development
Wider values and attitudes (including the Rokeach values)	To assist in guiding brand and communication development

Table 2. Principal components factors used to define the segmentation

Factor		Examples of variables positively loaded on	Examples of variables negatively loaded on
1	**Predominantly social/ family usage of mobile**	Mainly call close friends; using mobile for organising social life	Making calls for business; Using the phone frequently at work
2	**'Safe and sound'**	Must be able to respect who I am; Knowing I am physically safe is important; Financial security is very important to me; I will always do what I know to be right.	
3	**Social usage/ reliance**	Making calls to friends and family; Sending text messages to friends and family; I'd be lost without a mobile phone	I like to have 'quiet times' when my mobile phone is off and people can't get through.
4	**Mobile enthusiasm/ emotional dependence on mobile**	I like to stay abreast of advancements in mobile phone technology; I like to work out how to use all the features of my phone as soon as I get it; I like my mobile to reflect my personality	
5	**Roaming**	Use phone a lot outside of Europe; Use phone a lot in Europe; Making calls to other countries, Use phone at airport	
6	**Self-centred hedonism**	Having fun is important to me; Strive to fill my life with exciting activities	I want to be on the same network as friends and family
7	**Insecurity/ emotional dependency**	I am easily hurt by what others say about me; I care what others think of me; Success in life is mainly a matter of luck	

Table 3. Profile validation test results on final segmentation

All countries (unweighted data) Base	Segment 1 (2,161)	Segment 2 (386)	Segment 3 (1,980)	Segment 4 (2,556)	Segment 5 (3,027)	Segment 6 (1,632)	Segment 7 (732)
Gender	%	%	%	%	%	%	%
Male	43	73	43	28	36	67	41
Female	57	27	57	72	64	33	59
Age							
16-19	19	7	16	5	2	3	8
20-24	25	10	15	9	3	10	15
25-34	24	21	18	13	15	19	23
35-44	19	25	23	27	27	32	23
45-54	9	22	15	26	23	24	19
55-64	3	11	8	15	19	9	8
65+	1	3	3	5	11	2	4
Refused	0	0	0	0	0	0	1
Payment method							
Pay As You Go	36	22	55	49	59	31	29
Normal contract	64	78	44	51	41	69	70
Boxed	0		0	0	0	0	0
Spend on mobile							
Low spenders	28	10	41	51	77	28	21
Medium spenders	45	28	40	36	16	38	46
High spenders	24	58	16	10	2	29	31
DK/RF	3	5	3	3	5	5	3

Figure 4. Iterative approach to optimizing the segmentation solution

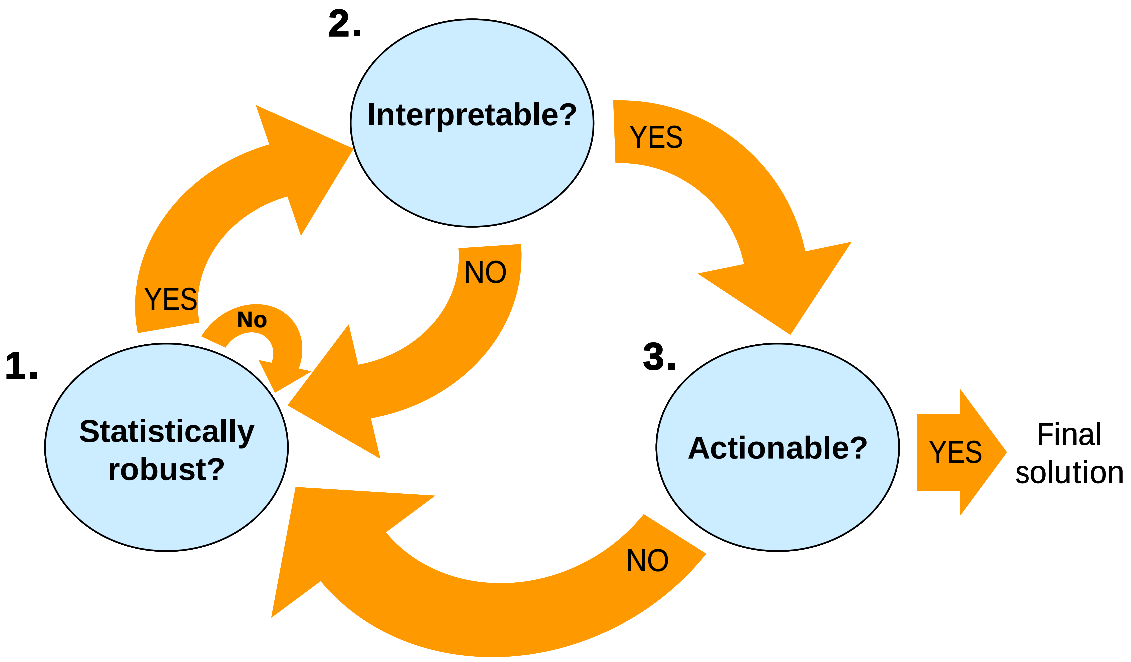


Figure 5 ‘Customer spotting’ booklet

Figure 6. KPN’s multi brand strategy

Figure 7. Devices considered for representing the UK segmented offers

Figure 8. Awareness of mobile tariff packages (April 2006)

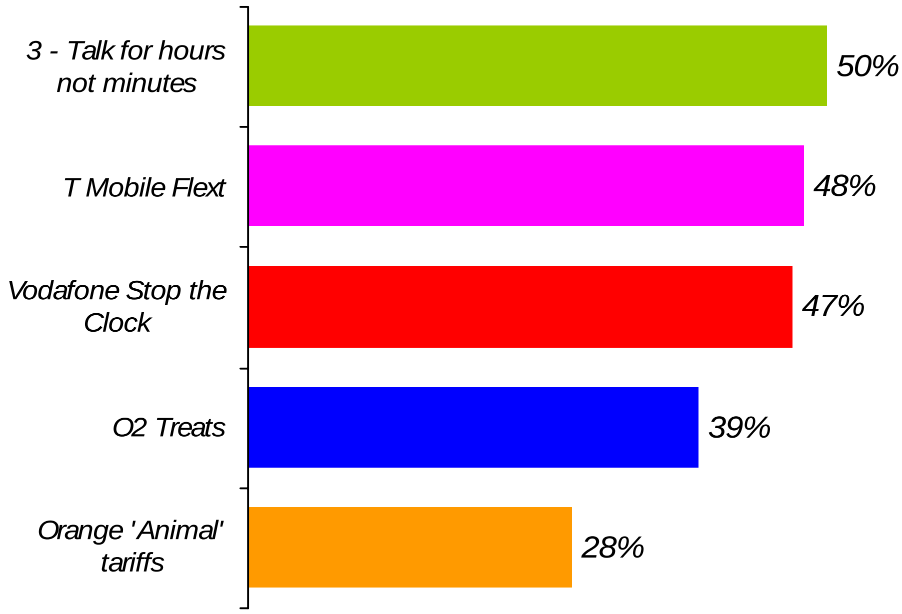


Figure 9. Spontaneous verbatims on content of orange advertising (Millward Brown brand tracking April 2007)