

Technologies Futures

"I think the turbulence is going to last much longer than most of us might think"
[Burke, 1998]

The digital age will be reached when adaptive and natural behaviours achieve critical mass. Currently roughly 30% of the population were born 'post PC' and even fewer were born 'post mobile'. The so called 'digital age' has not yet arrived and cannot truly arrive until the majority of the population are born 'post mobile'. Currently we are living in a time of extreme turbulence, a time that will be looked back on as 'linking' two ages – the analogue one with the digital one. A time that is worth describing as the 'digital interregnum'¹.

For contact centres, this 'linking time' is best thought of in a 3-5 year time frame. However, please note that the changes that we will see and be challenged with over the coming few years are only the beginning, acting only as the 'first act' or 'preamble' to the real turbulence of the new digital age. This time will itself bring significant change through technology. It is also worth noting that these changes are *already* happening, it is not a question of when do we need to be ready for them because the changes are already around us and have been for a number of years. It would even be worth arguing that the contact centre world is actually 1-2 years *behind* and needs to catch up; the time of turbulence has already begun.

Short term (1-3 yrs): The focus during this time is on adoption, with the creation of new disruptive technologies creating vast uncertainty, altering the existing balance. It is a time characterised by uncertainty, with little clarity of what works and what doesn't. The danger of this time is spending time and resource creating solutions for the 'status quo', for the customer of yesteryear or of the current-year and not for the customer of tomorrow.

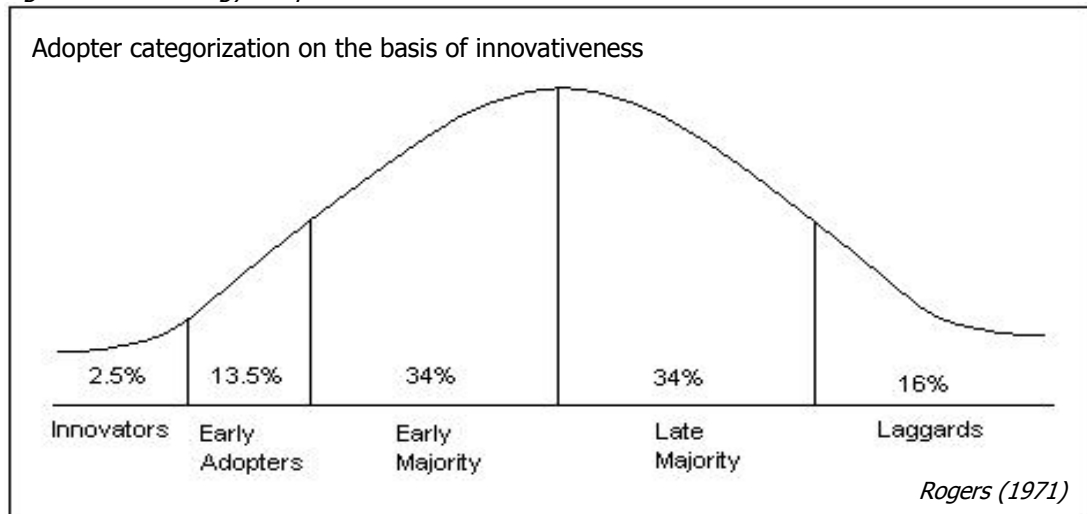
It is only in very recent times that the Internet has been open to 'mass market', and even now it is discriminating. Whilst in 2006 over 62% of the population were enjoying broadband use, 13% were still using dial up Internet and 25% didn't have any Internet access at home. Internet behaviours are still very much changing and we are in a very early stage of adoption. 2006 also saw the introduction of wireless broadband networks at home and although only 21% of the population had such a network, their behavioural use of the Internet began to change as a result, becoming much less 'directed' and time-sensitive as well as becoming less of a private experience and more of a social, shared experience - instantly creating a new 'subset' of customer behaviours. Within Internet use there are now 4 distinct categories of consumers – no Internet access, dial-up access, broadband and wireless broadband.

Clearly, consumer's rate of adoption is different. Figure 1 provides an illustration of the technology adoption curve and demonstrates how rates of adoption vary across the population.

¹ Latin *Inter*, "between" and *rex, Regis*, "king": "between kings". From 1649 to 1660, England was a republic during a period known as the Interregnum ('between reigns'). A time of political and civil unrest as the country's rulers tried to redefine and establish a workable status quo.



Figure 1: Technology adoption curve



It must also be remembered that behavioural adoption is not the same as looking at the pure penetration or purchasing statistics – in fact behavioural change is considerably slower than the pace of technology change. For example, whilst penetration of mobile phones is well over 90%, the use of a mobile phone's functions is more varied – figure 2 illustrates the 'mobile food chain', contrasting the varied and increasing use of mobile functionality.

Figure 2: The mobile food chain (statistics relate to % of population frequently using functions)

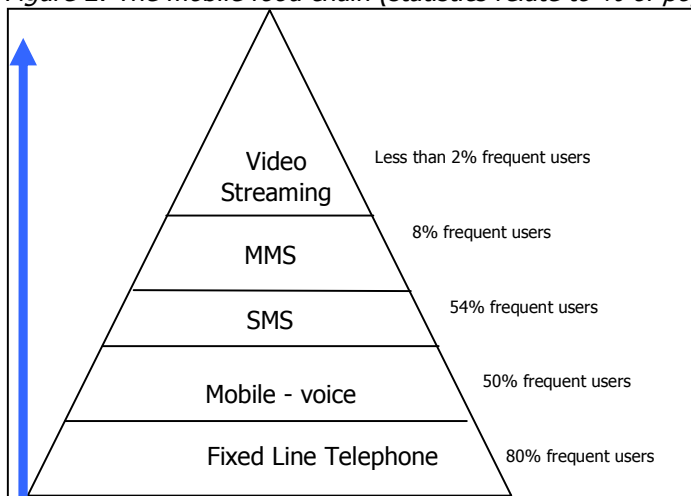


Figure 2 demonstrates how much slower behavioural change is compared to the 'pure' adoption of a device in itself. It is also a good illustration of just how much behavioural change we are still yet to see.

The short term is therefore very much characterised by an increasing 'range' and 'contrast' of behaviours, with some people demonstrating rapidly changing profiles of technology use, radically changing their views of trust, their purchasing patterns and their servicing needs. For example, in 2006 24% of over 55s didn't trust technology at all, whilst 71% of those under 35 trusted it greatly. And, whilst there were similar profiles of preference for telephone communication, 72% of under-35s had a strong preference for Internet communication but only



intersperience

27% of over 55s stated such a preference. There is a danger that we design services only for the digitally empowered masses. This group is likely to be the most financially affluent and we can therefore expect that a 'digital divide' may also become a vivid reality. This time is very much characterised with the majority of behaviours in a rapid state of 'adaptive behavioural change'.

This time is also characterised by focusing on the technology itself, its features, rather than its benefits to the customer. During this current and short term horizon, technology will be very much an 'addition' or 'adjunct' to the consumer and our services, by which I mean we will focus on the experience of *using* the technology rather than the experience that is created *because* of it. For example, current focus is on the features of a system and whether we can minimise the frustration of its introduction to the customer, checking that satisfaction doesn't fall. This is a natural and correct approach during a phase of adoption – for to get a new technology adopted, its barriers to use must be as low as possible, but it doesn't tell us significant amounts about the *resulting* experience or impact on the individual's life or emotions. Satisfaction of its use is measured in isolation, away from the impact of the experience.

*'You think because you understand one you must understand two, because one and one make two. But you must understand **and**'*

[Donella Meadows, Whole Earth Models and Systems, 1982]

In operational terms, organisations will come to terms with the changing contact landscape, recognising an extreme range of customer needs – a challenge for a contact model that historically can be best described as 'one size fits all'. Such a wide range of customer needs will provoke many difficulties for a model of operation that was not designed for such range and contrast. As such it is highly likely that overall satisfaction with servicing will come under greater pressure over the short and medium term than at any time before.

Technology implications

Given such a range of customer needs, technologies such as skills-based routing will increasingly become a significant tool, although its use and implementation will need much more considered and careful design than is currently the case. Unfortunately, rules based on product knowledge or based on simple demographic data will be very quickly exposed as not truly helping to support the different needs of the customer, which are increasingly situationally driven. A new approach to customer segmentation will be needed. Routing based on the advisors product knowledge is a short-term solution and much more complex routing will be needed. Nevertheless, a significant technology to meet the immediate demands.

The introduction of new channels such as Internet, automation, voice recognition and SMS are likely to result in a vast range of customer reactions and perceptions. The introduction of such new technologies is likely to create considerable customer 'angst'. Greater focus on understanding how they are used is needed.

Medium term: The medium term could be re-termed the Mobile-Age. A time which is characterised by the 'M-Agers' becoming commercially active (a definition used to characterise the vast differences in behaviour of teenage users of mobile devices). Behaviourally very different, those born into an age of mobile digital technologies have also been termed 'digital natives' by Rupert Murdoch. Simple existing caricatures for this group are 'thumb culture' and 'media multi-tasking'. In the medium term, these become normative behaviours, where mobile devices are central to everything, not just voice and simple data but provide a mobile, information rich experience.



Their behaviours and perceptions of the world are radically different to our own. Examples include their ease with which devices are linked together, with expectations that information will be passed, 'uploaded', consolidated and shared. The way in which experiences are shared and become part of an individual's identity; the way in which they collaborate and create new shared experiences online; communication across cultural borders, in a virtual arena where new identities are created and 'real world' prejudices are blurred; their experiences of global communications altering their perception of time and distance; their perceptions of what constitutes location, co-habitation of space will lead to very different expectations of physical or voice support.

This time becomes synonymous with simple, automatic 'syncing' of information, in a highly connected world, where information is highly transferable and devices automatically connecting and transferring information. Where the 'meanings' of devices merge and blur. Use of technology for highly situated specific needs (i.e. voice, automation, web, video calling all used for highly specific, situated tasks) becomes paramount. Our thinking about technology as 'channels' will be fundamentally challenged; what looks like 1 single channel will in fact be morphed into many different locations, spaces and uses.

For example, today, broadband has significantly changed the 'meaning' and experience of the Internet. What was once a lean forward, very focused and task-orientated experience has now become much a more complex combination of sometimes being lean-forward, task-focussed and at other times being a lean back, less time-critical experience. Alongside this we have also seen quick uptake of wireless networks in homes, so what was once a very 'private' experience alone in the study is now becoming much more of a shared experience in a living room with a laptop. We are also beginning to see 3G connections bring Internet to laptops whilst on the move and in transit - trains, buses, airport lounges etc. And now the Internet is emerging in the mobile – suddenly what is a very young technology (Internet) is growing up and going mobile – its umbilical cord cut. Each and every one of these uses of the Internet is a significantly different experience, each with its own characteristics, needs and expectations. Each heavily situated. Should we therefore really consider the Internet as 1 channel? It appears that its characteristics, needs and expectations are very changeable and dynamic.

At present, only 4% of the UK population use VOIP networks for personal calls and even fewer have experience of using video calling or of making calls from a laptop. However, with the rapid expansion of both broadband and wireless networks we can expect to see VOIP and video calling becoming increasingly prevalent. We can also expect the use of mobile video streaming to become considerably more popular. This scale of change has yet to scratch the surface and the behavioural differences and impact for servicing companies will be dramatic.

Technology implications

In this timescale, VOIP, the use of Skype and video calling will have significant impact; fundamentally challenging the notion of a voice call.

Significant impact will also be felt from wireless networks. Wireless broadband is already bringing about significant behavioural change, but as the M-Age become commercially active, the change we see today will be made to look like kindergarten! Wireless VOIP and video calling will bring about much more public and shared interactions with organisations – fundamentally changing the dynamics of calls and service relationships.

Mobile Internet will come of age and change the use and experience of all interactions – be they text, email, chat, voice or Internet based.



Organisationally, VOIP will provide a significant opportunity to move towards a much more 'flexible' networked approach to best using our knowledge workers.

Organisationally, we will also see service operations embracing collaborative software to provide a powerful tool in building a 'bottom-up' organisation where the knowledge and intelligence gathered at advisor level can be more easily fed up, quantified, shared and explored in a very dynamic and powerful way. Potentially, this will provide management the means to move from a 'command and control' model to a bottom-up approach, representing a brave new world of service management and a long way off from the way in which organisations are currently structured.

Longer term: Technology will become far more intuitive, merging into the environment, becoming seamless. This time will see service re-focus on the individual rather than the technology. Technology can be seen as being adopted when it merges into the background, when we as users 'make it disappear'- for example, the radio stopped becoming a standalone device and became integrated into many others.

'In cyberspace, I can change myself as easily as I change my clothes. Identity becomes infinitely plastic in a play of images that knows no end. Consistency is no longer a virtue but becomes a vice; integration is limitation. With everything always shifting, everyone is no one'

(Hine, 2000)

This time will be characterised by considerably less focus on 'devices' as standalone 'things'. The Internet will no longer be talked about, it will be merely 'everywhere', built in, providing the 'glue' behind many different applications, uses and services. VOIP, SMS, MMS, uploading, downloading will all be terms confined to the past when 'things' had to be joined together and installed. Technology vendors currently talk about 'convergence', but this itself is a misleading term – convergence is not an end goal, some future 'super device'. Convergence is really about a time when technologies are made to disappear into the background, being subsumed (or converged) into many different places and uses. Information and sharing of experiences will become the central aspect of our world, requiring the servicing industry to focus much more heavily on supporting and enabling the individual.

Technology Implications

In this timescale, the 'service industry' will be radically different from even the models we now talk of as 'future'. I would expect that as the 'digital natives' become the 'mass market', we will need to consider the use of 'collaborative' technologies, which potentially, will totally change the model of customer service, indeed if embraced by organisations, it might offer a much more supportive, well received and transparent approach to servicing than the model currently used.

Concluding remarks

As the contact centre world begins to come to terms with the disruption caused by the emergence of new technologies, it is worth reflecting on the quote at the start of this text – whilst we might begin to comfort ourselves that we can now at least see and begin to predict the impact that the disruption is likely to have over the coming 3-5 years, it is likely that this turbulence will go on much longer than we think and have impacts than we have yet to even imagine.