



Future Technology: Customer Contact in the years to 2012

A paper for CCA Industry Council



GALLUP



Ipsos MORI



CCA INDUSTRY COUNCIL

CCA Industry Council drives the contact centre industry’s research agenda, by sharing information from all sectors to ensure the research approach, debate and output provides the pathway for the future in terms of new thinking and strategies.

An initial meeting was held when 30 leading players from industry debated ‘Changing the Rules’. From this debate it is clear there is a need to create ‘Beyond Operational Efficiency’ – a new vision for how customer contact centres should be repositioned within organisation, placing the customer at the heart of the business.

The Industry Council consists of an exclusive group of representatives from leading organisations who are committed to providing this input whilst themselves benefiting from a unique package of: leading edge research, networking, government influencing opportunities and establishing their profile as ‘Leaders of the Future’.

Expert academic and private sector facilitators will draw on leading edge debate and invite participation from other recognised research houses and agencies to engage with Industry Council to ensure the group deliver leading edge analysis.

As the independent professional body, CCA has a partnership with leading organisations and groups to access relevant research and information for the development of the Industry Council. CCA’s vision is for contact centres to be repositioned within organisations to reflect the increasing complexity and competitor challenges arising from the dominance of this channel.

CCA are indebted to the efforts of the Foundation Partner Group who have formed the backbone of activity in taking forward the development of the CCA Global Standard[®] and creating the vision for CCA Industry Council. These organisations from all sectors, public and private, each have a significant impact on the contact centre market-place.

FOUNDATION PARTNERS



Foreword from Rob Pike, Chair of CCA Industry Council



During the past 18 months CCA Industry Council has looked at many key questions facing the contact centre industry. Several topics have been covered, from getting the DNA of the customer into the boardroom, to understanding the impact of automation on the agent. We have carefully considered the impact of change with the able assistance of the Research Council.

For this quarter, we set out to answer the question “is there an iPod equivalent for the customer contact industry?” In doing so, we were conscious that there may not be something as significant as the iPod in customer contact, but an exploration of key technology changes is the first step in understanding how the future might develop.

Our time horizon being the next 3 to 5 years, we wanted to understand what technological developments have the potential to impact end-to-end customer contact. Obvious areas include front-end channel interface, workflow management and scheduling, database management and analysis, networks and virtualisation. We also sought to share learnings about successful deployment of new technology in customer contact and also to remember the changing customer.

The results of our debate and the contributed papers have centred on how people communicate with a company, how they are handled, and followed up by the organisation when the call gets through. The first is all about what external channels of communication the organisation provides and the second is concerned with the quality and level of support provided to agents and web-based processes.

Although we have not (knowingly!) identified the equivalent of the iPod for customer contact, we have established that the future is already here in terms of technology. Advanced contact centres today are using the technologies, such as IM and voice analytics, which the majority will be using in five years time. For the director needing to develop strategy, I’m sure the papers will provide useful guidance and advice.

Once again we are indebted to the work of CCA Foundation Partners who have been the catalyst of CCA’s evolution to become the present day Customer Contact Association. Their dedication has helped create CCA Industry Council, a unique think-tank which is challenged with finding solutions to ensure that the customer is placed at the heart of an organisation’s operations.

We would like to extend our grateful thanks to CCA Research Council, which has been strengthened with the addition of Ipsos-MORI and Ventana, for again providing very insightful findings into this critical issue.

Rob Pike
Chair, CCA Industry Council

Rob is Director of Operations, Ulster Bank Group and European Consumer Finance at the Royal Bank of Scotland

Customer Contact Centre Emerging Technologies

Myths and Realities

Prepared by Michael Anderson and Larry Tampkins, Cap Gemini

1. Executive Summary

As companies seek to service more customers and market more diverse offerings, the contact centre technology required to support delivery excellence to its customers becomes increasingly complex. Consumers are becoming more technology literate and the adoption rate of new technology is on the increase. This in-turn enables companies to engage their customers through a broader range of technology channels than ever before. How successful this broader channel mix will be however is still unknown, it was not that long ago that the internet was being heralded as the end of the contact centre as we knew it. The death knell for the telephony channel was sounded as some companies rushed to embrace the internet with its email, web chat, and collaborative browsing. However, more than five years after these claims were made and telephony traffic is still on the increase, adoption of all but the email channel has been lethargic at best and even email isn't anywhere close to challenging the telephone as the primary contact channel as was once predicted.

As the telephony industry moves forward in both fixed and mobile markets, we will look at the 'sub-channels' this creates; the likes of internet ready mobile phones and the potential for multi-modal transactions, the SMS boom and whether this is a realistic transaction or service channel and with the latest generation mobiles being compatible with Instant Messaging products such as Microsoft's MSN Messenger™, whether the era of collaborative chat sessions has really arrived.

As the Government drives to improve citizen connectivity and the number and speed of broadband connections continues to rise, it is clear to see a consumer VoIP market beginning to emerge. The technology 'stack' found in today's contact centres, from the base protocols (or delivery methods) for the calls themselves, through to the advanced speech recognition systems that make 'virtual agents' and complex self-service solutions possible, is becoming a reality.

2. What Constitutes a Contact Centre?

A Contact Centre is a centralised facility designed specifically to handle high volumes of customer communication, both inbound and outbound. The term 'Contact Centre' is an evolution of 'Call Centre' with the key difference being a Call Centre provides contact through the telephone only, whereas a Contact Centre supports a mix of contact methods.

2.1 A Technology Baseline

In order to look to the future of Contact Centre technology, it is important to understand where Contact Centres are now from a technological point of view. We are taking a viewpoint that extends out to 2012 and given that every Contact Centre in the UK is developing at a different rate; we need to define a baseline. This baseline is an arbitrary levelling of technology advancement across the UK market and a number of companies will be ahead, or indeed, behind this point.

For the purposes of this document we will assume the following as a minimum technology baseline:

- Automated Call Distribution (ACD)
- Interactive Voice Response (IVR)
- Computer Telephony Integration (CTI)
- Customer Relationship Management (CRM) application
- Voice Recording
- Integrated Reporting Environment
- Automated Workforce Management Process
- One additional integrated channel supported

2.2 Contact Centre Characteristics

Contact Centres in the UK fall into one of four categories.

- Volume Reactive
- Multifunctional
- Transactional
- Helpline

2.2.1 Volume Reactive

Volume reactive centres are the typical Customer service centre performing simple inbound service issues. There is a possibility that these may be operated by an Outsourcing provider.

2.2.2 Multifunctional

Multifunctional Centres are the current 'leaders' in terms of evolution. They are centres that have multi-skilled agents

performing a number of different roles for callers, potentially on a single contact through one of a multiple number of channels.

2.2.3 Transactional

Transactional Centres are focused centres that support limited number of actions on behalf of a customer. E.g. a utility company with a centre to manage customers moving house and/or registering meter readings.

2.2.4 Helpline

Helpline centres are centres providing support to callers on a company’s products or services e.g. product retailers with a technical support line for their products.

3. The Capability/Functionality Envelope

Figure 1 shows a quadrant demonstrating the technology challenge, the development ‘space’ yet to be filled by today’s Contact Centres.

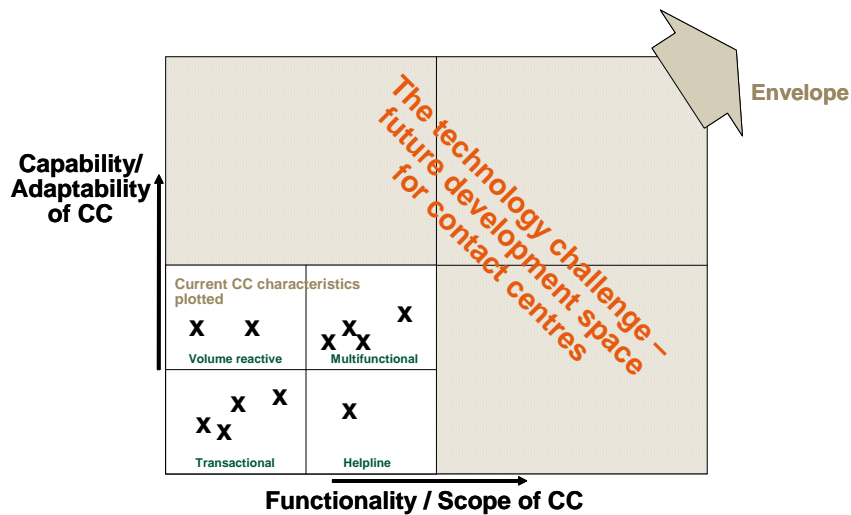


Figure 1 - The Functionality/Capability Quadrant

The four contact centre types have been placed in a quadrant in the bottom left corner in this diagram, with the remaining three areas depicting the opportunities to grow that the UK Contact Centres are currently facing¹. As organisations improve

¹ It is important to realise that this is inline with the baseline established earlier. It is likely that some organisations have already progressed into the grey ‘opportunity’ area on this quadrant.

either their flexibility or capability they will progress through the quadrant. A company's business and strategic goals will determine the direction they take through the quadrant and the technology they implement will enable the improvement; an example of this is shown in Figure 2.

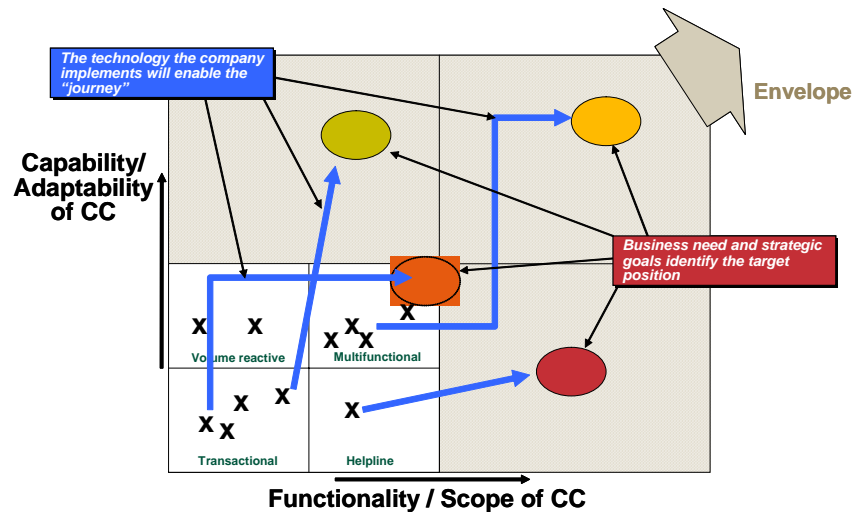


Figure 2 - Demonstrating future states

3.1 Technology as an enabler

The business needs will drive the direction an organisation wishes to take and the technology that is implemented will enable those ambitions to be met. The technology baselined earlier suggested a core technology pattern for all contact centres, regardless of their role in an organisation and the market or sector that organisation operates in. It is the peripheral technology, therefore, that makes the difference between a simple call centre with a low level of evolution and an advanced, highly evolved contact centre. This trend is likely to continue into the future.

4. 'What's that coming over the hill?'

As with any market, the technology is continuously evolving and there are many attempts to identify the 'next big thing' on the horizon.

In developing the Capability/Functionality Quadrant Model we have mapped the baseline technology as well as the technologies we believe that are key to the next iteration of contact centre evolution.

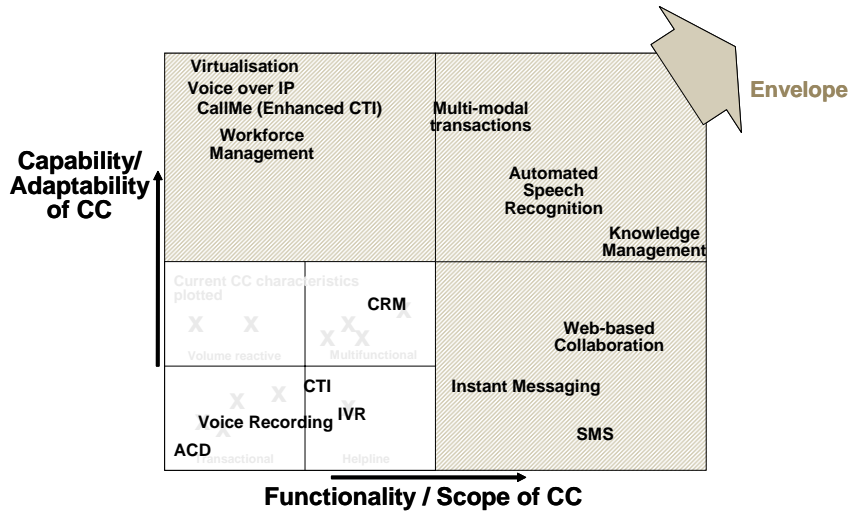


Figure 3 - The technology overlay

The technologies shown in Figure 3 have been placed to represent the impact they have the potential to make, on an organisation. These technologies and how they may be used in the future can be found below:

4.1 Virtualisation

Virtualisation represents a huge opportunity for any organisation with multiple teams/sites. It offers the chance to manage the call traffic in a far more balanced way. Virtualisation means that an organisation can bring together all of the logic and routing rules to one place and have the call traffic truly balanced across the organisation, flattening out localised demand peaks and troughs and better managing seasonal peaks by offering the complete resource pool to match the demand.

If virtualisation is combined with VoIP it becomes even more powerful. With a truly virtualised environment delivering calls via VoIP, your Contact Centres can become more cellular. At present it is not uncommon for large contact centre organisations to have a number of sites with over 100 seats in each location, resulting in additional infrastructure costs, particularly when these locations are often separate from the organisations' traditional office locations. With virtualisation this pattern can be broken down to the individual agent. The travel industry for example is experiencing a huge shift toward home working, where individual agents work from home, log

onto a secure website and are immediately part of the call handling resource as if they were sat in a purpose built building.

However not all organisations are necessarily well positioned to have agents homeworking; it may be a company culture issue, a security issue (you can't control who else is in the room and viewing the records over an agents shoulder) but if there is a reason it won't work, why not look to smaller satellite offices? Why not have individual teams located across the country, or countries, of operation? Big contact centres have to be carefully positioned to ensure an adequate flow of expertise can be found. It is far easier to find staff for a team of 10 than a centre of 300 and economies of scale once the USP of large centres can now be leveraged using VoIP technology.

Where this combination of Virtualisation and VoIP could really benefit is an organisation with the need to support multiple languages. Consider a global manufacturer. They sell the same product in numerous countries across the world. In each country they have local after sales service contact centres for technical support etc. At present that organisation may well employ specialists within their local centres who speak additional languages. Wouldn't it be better to route the French speaking customer in England to the French centre in France?

4.2 Voice over IP

Three years ago VoIP was positioned as the next big thing by a number of industry bodies and vendors, yet the take up has been agonisingly slow and there are still very few organisations with VoIP based capabilities. There is a potential reason in that VoIP is simply a protocol; there isn't a 'killer application'; the main selling point has been the telephony cost saving it offers.

We strongly believe that the reason VoIP will become a key technology in the future, due to a better appreciation of other technologies and what they can offer (virtualisation for example). Virtualisation and homeworking make VoIP a pre-requisite, as attempting to implement those technologies and working practices are prohibitively expensive using traditional telephony. As Contact Centres move toward virtualisation, home working and better use of

outsourcing partners (we call it *Rightsourcing*), then VoIP becomes a critical piece of the architecture.

4.3 Enhanced CTI

By 2012 the increased use of self-service and speech recognition will see CTI passing far more data to the back end solutions and on to the agent desktop applications. Full details of the callers time in the IVR, including options chosen, speed to choose, voice stress levels, will mean the agents will be provided far more information about the caller and their current disposition prior to actually receiving the call. In addition, customer profiling and preference information will be combined with call information to give the richest possible experience for both the agent and the caller. Consider the implications on the agent of the future in having to deal with this range of information.

4.4 Multi-modal transactions

Recent developments in mobile phone technologies e.g. 3G have lead to an upsurge in the potential for Multi-modal transactions. In the future, an agent will be able to transfer data to a caller's handset whilst remaining on the line to discuss through the content as it arrives.

Imagine negotiating a new service or product with a contact centre agent and having them sending you the product brochures or service plan details to your handset while you discuss it. Half way through the conversation, you see something on the downloaded content you don't understand, but it has a hyper-link to click for further information. Clicking on the link takes you to some more detailed information, but additionally updates the agent screen to reflect the change.

Multi-modal transactions could be considered collaborative browsing for mobile handsets.

4.5 Workforce Management (WFM)

By 2012, WFM will have become part of the core technology pattern for contact centres; the difference is the depth at which it pervades the organisation. The drive to improve customer service, soon to be the only differentiator in a number of markets, will mean that organisations will be working harder and harder to offer better conditions to their staff.

Technology such as bidding for shifts, using 'fairness rules' to allocate the

more attractive shifts and offering almost immediate approvals for holidays etc. will make huge differences to agents. The ability to manage time with the level of detail that WFM offers, means that the amount of training offered can increase; WFM also supports homeworking by providing schedule adherence information for those agents managers can't even see. In addition, in an environment that encourages a closer alignment to outsource partners, we would suggest an opportunity exists to have visibility of their resource via your own WFM solution.

4.6 Automated Speech Recognition (ASR)

ASR is one technology that is being used in an increasing number of organisations. The future of this technology offers even more opportunity and benefit to both the business and customers of the organisations that use it.

One of the most common uses is to automate the identification & verification for calls into an organisations contact centres. Today this is performed via a caller speaking either a pin number or some recognisable known facts about their account. By 2012 we expect a much wider uptake of voice based biometric authentication. The technology is reaching a level of accuracy that is accurate enough for use by any organisation who wants to offer a self-service capability for its customers. The ability to implicitly authenticate people as they give their information, thus removing the need for additional password or 'known facts' questions, is a huge 'step change' in service.

In addition to the introduction of biometric authentication, the use of natural language recognition in call steering applications will allow systems to measure the stress in people's voices, providing clues to their disposition at the time of the call. This means that through the enhanced CTI link, agents can be told if a caller sounds tense or angry resulting in anticipating a call that may require more sympathetic handling than normal.

ASR self-service applications will also be able to write directly to the organisations CRM and knowledge (KM) tools meaning that simple requests will be handled without any recourse to an agent. Customers calling for information that exists with the organisations KM solution will have the option of hearing the stored solutions 'read' back to them, exactly the

activity an agent would perform. If the solution doesn't exist, they will have the option of describing their problem and the ASR solution will create a service ticket directly in the CRM solution for routing to the correct service team. Customers calling for updates and status reports for open service 'tickets' will be able to hear exactly what is being done with their request with an option to be put through to the person currently working on it.

4.7 Knowledge Management (KM)

KM will feature heavily for those organisations that support more than one product or service. The system will support the numerous channels that are used to communicate with its customers. Agents will use it to drive customer service calls by diagnosing the callers issue or providing the information to handle their enquiry. The voice self-service applications will use it to deliver FAQ style responses to callers looking for simple support and it will also receive customer feedback and complaints for interrogation by the organisations customer experience team. SMS and MMS requests for information will also be supplied from the KM solution. KM will provide the basis for any 'next-best' style activities such as new offers, up-selling and cross-selling when in contact with the customer.

4.8 Web-based Collaboration

Over the next few years we will see a sharp increase in the level of integration between the web channel, a traditionally unattended medium, and the telephony channel. The first of these is supported by the enhanced CTI 'CallMe' capability by including a link for the visitors to a website to request a call back from agents immediately or at a scheduled time. As we approach 2012 however, this integration will become far more dynamic and collaborative browsing with the customer will be via web and email. As such we should consider a new position for some of the web based tools from the perspective of the contact centre. Co-browsing could reap huge benefits if it was used as a tool triggered by an agent. The ability to have an agent talk through the information on-screen simultaneously with the customer, bring enormous increases in service and may well drive up sales and sales value, particularly if there are complicated business rules around which options can be taken together.

4.9 Instant Messaging

Instant messaging tools have the potential to launch web-chat further up the preferred channel ladder alongside telephony, as well as a possible channel to customers, with the increase of virtualisation, home working and geographically diverse teams. The fact that this technology offers a channel, direct from an agent to a manager, a back office administrator and a second line product specialist means that it directly supports a common objective of most centres; the 'one and done' call. A well thought out implementation of this technology will ensure an agent is connected to everyone in the organisation he or she needs, to solve any issue a customer may have.

4.10 SMS/MMS

The commercial usage of SMS and MMS continues to rise, with all mobile networks offering affordable tariffs with huge, and in some cases unlimited, SMS allocations included in their monthly fee. Currently the only organisations making real use out of this technology as a service channel are the mobile networks themselves² and even that is very limited. Other organisations with simple SMS services include Transport for London and British Airways.

If there is demand enough in the market to warrant unlimited SMS allowances for mobile customers, it suggests that people are comfortable using this as a communication medium. The next step for this technology is for organisations to think a more laterally in its use.

By 2012 organisations will be sending automated updates via SMS on service enquiries, order processing, and ongoing support questions. These SMS's if replied to will generate a call-back from the person currently working on the item to the customer to explain in-depth what is happening. In the case of MMS, it can be used to deliver discount vouchers, offers etc.

5. 2012

As this document suggests, by the year 2012 the contact centre technology pattern we see now will have evolved into a pattern far more focused on achieving service excellence. It is our view that service and 'Customer Experience Transformation' is the 'must have' strategic imperative for organisations pursuing customer retention

² We are not including quiz-lines, competitions, participating in television or radio events as in scope of this paper, although clearly these are the largest uses outside of person to person contact.

and loyalty. Existing technologies will be adapted and developed to provide a richer customer experience; new technologies will have to ensure they support customers and the channels they choose to use in their everyday lives.

Within the centre itself, more will be done to improve the situation of the front-line. Technology to support them more effectively when dealing with customer queries; technology that supports the ‘work-life’ balance challenge and so aid them work the hours they want to work without impacting service levels; technology to finally remove the lower value contact and monotonous tasks that they have to perform at present.

The drive toward this new technology pattern will be dictated by the market and the sector the organisation operates in, but if, and as, it is implemented correctly, the achievement of the goals and objectives of the company become ever closer to being achieved.

For further information please contact:

Michael Anderson
0870 904 4946
Michael.anderson@capgemini.com

Larry Tampkins
0870 904 8669
Laurence.tampkins@capgemini.com

Cost: Members - £150
Non-Members - £200

