



The future

# Project Avatar: The Future of Customer Service

## Literature Review

31 March 2017



# **CONTENTS**

<b>GLOSSARY</b>	<b>4</b>
<b>FOREWORD</b>	<b>5</b>
<b>1 EXECUTIVE SUMMARY</b>	<b>5</b>
<b>2 CUSTOMER NEEDS AND EXPECTATIONS</b>	<b>6</b>
<b>3 CONTACT CENTRE INNOVATION: EMPLOYEES AND BUSINESS MODELS</b>	<b>14</b>
<b>4 TECHNICAL INNOVATION</b>	<b>16</b>
<b>5 NEXT STEPS</b>	<b>24</b>
<b>6 BIBLIOGRAPHY</b>	<b>25</b>

# VERSION HISTORY

Version	Date	Author	Status	Comments
1	13 March 2017	Impact Research	Drafted	
2	31 March 2017	T. Kennelly/ K. Quigley	Version 1	

## GLOSSARY

Abbreviation	Term
AI	Artificial intelligence
CX	Customer experience
DER	Distributed energy resources
DSO	Distribution system operator
DNO	Distribution network operator
IDR	Interactive display response
IoT	Internet of things
IVR	Interactive voice response
NIA	Network Innovation Allowance
RIIO-ED1	Electricity distribution price control 2015 to 2023
RIIO-ED2	Electricity distribution price control 2023 to 2031
UKCSI	UK Customer Service Index

# FOREWORD

The customer service landscape is changing. A wide range of political, economic, social, demographic and technological factors are accelerating a shift in customers' needs and expectations, with some sectors adopting radical customer service solutions to match to their customer bases. Customers today are better informed and more empowered than in the past.

Distribution network operators (DNOs) need to understand and predict customers' current and future needs to ensure that they improve upon or at least maintain the level of customer service they provide. Continuous investment is required to identify and implement the right technologies and approaches to best meet the needs of different customers. An understanding of functional and emotional service needs, by specific customer group, will be key to informing DNO policies and investment plans for the second electricity distribution price control (RIIO ED2) review and beyond.

Project Avatar will develop a comprehensive understanding of the future of customer service, and provide a range of innovative solutions that best meet customers' increased servicing expectations. It will also demonstrate how innovative technologies and solutions can assist DNOs to better plan their customer investment strategy.

The project is funded by the Network Innovation Allowance (NIA), introduced as part of the RIIO-ED1 price control, which provides an allowance for RIIO network licensees to fund projects that have the potential to improve network operation and maintenance, and to deliver financial benefits to the licensee and its customers.

The project commenced in October 2016 and will be conducted over a 38-month period. It will culminate in the formulation of a customer service blueprint for Electricity North West and other DNOs.

The key findings set out in this document, which is one of a series of project dissemination documents, specifically reference the learning from a literature review relating to the future of customer service.

## 1 EXECUTIVE SUMMARY

### 1.1 Introduction

A literature review typically incorporates current knowledge including substantive findings in addition to theoretical and methodological contributions to a particular topic.

This literature review draws on a broad range of sources covering existing data and future predictions, from the UK and globally, relating to the customer service industry. It examines customer service provision generally, not simply that specific to the utilities sector and more explicitly, the energy sector. This is relevant, as learning can be drawn from across the wider industry because, irrespective of the type of organisation with which customers interact, they have an intrinsic expectation of a 'best-in-class' service, regardless of the sector.

### 1.2 Summary of key findings

The key findings of the literature review are:

- Customers' needs and expectations are continually increasing
- Customers expect to be able to contact organisations through a number of different channels but they also expect these interactions to be integrated

- The largest differentiators in customer service between the highest-scoring organisations and others relate to complaint-handling and over-the-telephone experiences
- The UK population is growing and ageing, the expected future impact of which is a higher volume of customer service interactions and changes in the way certain segments of the population might expect to interact with customer service providers
- Smartphone ownership is high, enabling a broad range of contact options
- Although telephone contact remains popular, some age groups prefer to communicate in other ways, including via messaging apps
- There is a general expectation of being able to access customer services 24/7
- Employees in high performing call centres will become increasingly skilled customer service professionals who work hand-in-hand with technology, and may be based in multiple locations, including their own homes, and work flexible shifts
- There is a wide range of new and emerging technologies that will eventually enable largely automated customer contact points, which are so personal, fast and effective that customers may prefer them to human contact.

### 1.3 Next steps

This document provides contextual understanding regarding the future of customer service from a range of different industry sectors and will be referenced throughout the project. It will help to guide engagement with customers, particularly around the exploration of their needs. Any prototypes and concepts developed during subsequent stages of the project will be cross-referenced with the societal changes and technological developments described here, ensuring consistency in approach.

## 2 CUSTOMER NEEDS AND EXPECTATIONS

“The social media revolution... has fundamentally shifted the balance of power towards the customer. Customers are in control, defining how, when and where they interact with brands, content and services.”<sup>1</sup>

### 2.1 Key expectations

Society has now come to expect high levels of customer service. They want it to be personalised<sup>2</sup> and fast<sup>3</sup>. They expect organisations to be proactive in contacting them, in contrast to the traditional, reactive, customer service model of a contact centre, which only acts in response to an approach from the customer. Customers also expect to receive the same level of service across multiple modes of contact that include the latest technological developments they use in their personal lives (such as mobile device apps, rather than a traditional website accessed from a computer), in addition to face-to-face, phone and FAQ web pages, with responses fully integrated<sup>4</sup>.

Customers today expect all organisations with which they interact to respond at the level of the best suppliers, irrespective of sector<sup>5</sup>. For example, if they have a fantastic customer experience (CX) with Amazon.co.uk – perhaps because they value the personalised

---

<sup>1</sup> ‘Customer Service 2020 | Points of View | Capgemini Consulting Global’, <https://www.capgemini-consulting.com/customer-service-in-2020>.

<sup>2</sup> ‘Customers Want More: 5 Expectations You Must Meet Now | Customer Experience Insight’, <http://www.customerexperienceinsight.com/customer-expectations-you-must-meet-now/>.

<sup>3</sup> UK Customer Satisfaction Index: The state of customer satisfaction in the UK, The Institute of Customer Service, January 2016.

<sup>4</sup> ‘Is Your Contact Centre Future Ready? Asks Aspect - Contact-Centres.com’, <http://contact-centres.com/aspect-software-is-your-contact-centre-future-ready/>.

<sup>5</sup> ‘Expectations Are Rising. Can Your Customer Experience Keep Up? - Salesforce UK Blog’, <https://www.salesforce.com/uk/blog/2016/07/expectations-rising-can-your-customer-experience-keep-up.html>.

shopping recommendations it provides or its very fast delivery times – they expect their energy supplier or DNO to deliver at the same level.

In addition, ‘challenger brands’, such as Uber, Airbnb, Metro Bank and OVO Energy, have recently entered well-established industries such as transport, banking or utilities, precisely because they have seen an opportunity to deliver relatively commoditised products or services with radically different levels of customer service. In some ways, it can be easier for new entrants to provide enhanced service than for established brands to transform their customer service levels, because they are unencumbered by legacy systems. However, the fact remains that challenger brands have redefined customers’ expectations of all suppliers. Established brands that adapt to deliver top-level customer service can capitalise on this competitive advantage.

Customer engagement is a two-way process. Customers should no longer be treated as passive receivers of services. They ought to be actively engaged and educated about how they can support suppliers’ delivery of services, in different ways that meet their preferences and create value for themselves. The manner in which companies engage with customers and ask for feedback must change to achieve this.

### 2.1.1 Communication channels

The UK Customer Service Index (UKCSI) demonstrates that customers are using a growing range of channels to interact with organisations, although ‘in person’, websites and the telephone remain the core modes of contact<sup>6</sup>. While some sources predict a decline in the use of the telephone for customer service, for the 35+ age group worldwide, it is currently the preferred contact method. 51% of those aged 35-54, 87% of those aged 55-70 and 91% of those aged over 70 choose telephone ahead of other channels<sup>7</sup>.

With the prediction that the future will see customers having access to, on average, nine different ways to contact a company<sup>8</sup>, it is essential that multiple, disconnected contacts are avoided. The migration to systems that can deliver ‘omnichannel’ – integrated, multi-channel – responses will require considerable work. Currently only 5% of companies are able to offer this, 27% have no integration of channels at all and just a third of contact centres are able to track customer journeys as they cross multiple channels<sup>9</sup>. This is apparent to customers, with almost half (44%) feeling that companies have no way of viewing their data in a connected manner. In many organisations, different teams handle the various touchpoints and companies are not always willing to invest money into the technology that would connect these touchpoints<sup>10</sup>.

Deploying different teams to manage each channel may also make it more difficult for companies to deliver a consistent level of experience and maintain the same level of employee skills, attitudes and behaviours across all channels<sup>11</sup>.

When customers use more than one channel to communicate, it may indicate that a problem or complaint has not been resolved<sup>12</sup> at the first contact. A connected view of customer data allows companies to monitor this. Without it, customers are left to engage repeatedly through

---

<sup>6</sup> ‘UKCSI: The State of Customer Satisfaction in the UK - July 2016’, <https://www.instituteofcustomerservice.com/research-insight/research-library/ukcsi-the-state-of-customer-satisfaction-in-the-uk-july-2016>.

<sup>7</sup> ‘Consumers Demand More Multichannel Customer Service - eMarketer’, <https://www.emarketer.com/Article/Consumers-Demand-More-Multichannel-Customer-Service/1014397>.

<sup>8</sup> ‘Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMI Mobile’, <https://imimobile.com/creating-the-digital-contact-centre/>.

<sup>9</sup> Ibid.

<sup>10</sup> ‘Customer-Experience-Blueprint.pdf’, <http://skylinemarketingsolutions.co.uk/wp-content/uploads/2016/02/Customer-Experience-Blueprint.pdf>.

<sup>11</sup> ‘UK Customer Satisfaction Survey, Insights & Sector Report’, <https://www.instituteofcustomerservice.com/research-insight/uk-customer-satisfaction-index>.

<sup>12</sup> Ibid.

many channels in the hope that they will get a satisfactory response from at least one, which has the impact of reducing overall channel capacity, driving up the costs for business<sup>13</sup> and creating increasingly negative customer perceptions.

### 2.1.2 Security

A further challenge for the omnichannel environment is maintaining the security of customers' data. Institute of Customer Service research suggests that 85% are worried that they will become a victim of cybercrime<sup>14</sup> and therefore, organisations with rigorous security structures can achieve market differentiation from the provision of enhanced data protection systems.

### 2.1.3 Vulnerable customers

Customers with vulnerabilities have a wide range of needs, which many organisations are working to meet. This remains an area in which both organisations and regulators judge that there is scope for further improvement. Delivering this improvement requires appropriate customer service policies, such as more proactive contact during service supply interruptions; training to help employees recognise cases of vulnerability; and recognition structures that reward those who take actions that support these customers. Such policies need to consider the needs of *all* vulnerable customers.

The way in which vulnerable customers are defined is important. For many customers, vulnerability will be a fixed state, related to age, disability or long-term physical or mental health problems, poverty, caring responsibilities, language issues or low literacy. However, organisations should use a definition that includes those in a temporary state of vulnerability, such as being geographically isolated in poor weather conditions, having short-term medical needs, an infant in their household or short-term unemployment.

The trend towards an ageing population in the UK (discussed in Section 2.3) inevitably means that the volume of vulnerable customers will increase and therefore, optimisation of customer service strategies will become increasingly important going forward.

Low literacy is also an important factor in vulnerability. It is estimated that one in seven adults in England have the literacy skills of a child aged 11 or younger<sup>15</sup>. This has a profound impact on written communication and the provision of personalised customer service.

DNOs must continue to find ways to ensure that vulnerable customers are signed up to their respective priority service registers, and that the unique needs of this group are addressed by an appropriate customer service strategy.

### 2.1.4 Association with business success

There is strong evidence that good customer service is associated with business success<sup>16</sup>, yet many companies, sector-wide, still use a traditional, reactive approach to customer service<sup>17</sup>. Those able to adapt their current resources and processes to meet customer needs can significantly benefit from the competitive advantage brought about by enhancements in customer service.

---

<sup>13</sup> 'Introducing the Definitive Guide to Social, Mobile Customer Service', <http://www.conversocial.com/blog/the-definitive-guide-to-social-mobile-customer-service>.

<sup>14</sup> 'Customer of the Future - Wakefield Event 17 October 2016', <https://www.instituteofcustomerservice.com/search?q=the+customer+of+the+future>.

<sup>15</sup> 'Illiterate Adults in England', [http://www.literacytrust.org.uk/adult\\_literacy/illiterate\\_adults\\_in\\_england](http://www.literacytrust.org.uk/adult_literacy/illiterate_adults_in_england).

<sup>16</sup> James Caan, 'First-Rate Customer Care Is Key to Making Your Business a Success', *The Guardian*, 20 June 2013, sec. Guardian Small Business Network, <https://www.theguardian.com/small-business-network/2013/jun/19/customer-care-business-success>.

<sup>17</sup> 'Is Your Contact Centre Future Ready? Asks Aspect - Contact-Centres.com'.

Increasingly complex customer needs and expectations are a significant challenge for providers, but they also offer opportunities. In sectors such as utilities, and more specifically energy, where there is little scope for organisations to differentiate their offerings on features or price; customers' satisfaction<sup>18</sup> is primarily based on actual experience of interacting with the supplier/provider. This is an important determinant of initial and continued product purchase or service choice, where alternative providers are available. Customer service and contact centres are therefore no longer a necessary addition; instead they represent the key differentiator between service providers<sup>19</sup>.

For DNOs, adopting a model of excellent and proactive customer service in a non-competitive sector is also beneficial. Consistently good communication across a range of touchpoints ensures customers not only receive an appropriate and timely response to their query, but that they are also educated about the role and responsibilities of a DNO, along with the challenges they face. This, in turn, creates realistic expectations.

## 2.2 Trends in customer satisfaction

The UKCSI has been increasing since 2013. The overall score across all sectors in the index published in 2017<sup>20</sup> was 77.8, up 0.8 on 2016; the score for utilities was 74.4, up 1.6 on the previous year. The highest-performing organisations were Amazon.co.uk (87.3), ASOS.com (85.8) and John Lewis (85.4). The highest-performing utility company was OVO Energy with a score of 82.5. It was the only utility company in the top 50 organisations.

65% of utilities that received a UKCSI score in both January 2016 and January 2017 improved their rating by at least two points.

This statistic suggests that utility providers will need to improve their customer satisfaction scores continuously in order to simply retain their position in their respective marketplace, and that rising up the league table will require considerable change. This finding has particular significance for the investment decisions of DNOs, which will inform their customer service strategies and will influence how increasing customer expectations are met in RIIO ED2 and beyond. The biggest differentiators between the top 50 and the other 194 organisations appearing in the UKCSI relate to complaint handling and over-the-telephone experiences. The importance of complaint handling is more acute for older customers than for younger individuals: an ageing UK population means that optimising the manner in which complaints are handled will become increasingly important.

Ofgem also considers complaint handling to be important. It is one of three measures (the other two being customer satisfaction and stakeholder engagement) in its overall customer service scores for DNOs. Electricity North West was ranked 13<sup>th</sup> out of 14 DNOs for complaint handling by Ofgem<sup>21</sup>.

Other areas of customer service where the top 50 performing organisations in the UKCSI were furthest ahead of the remainder were:

- Employees doing what they say they will do
- Speed of resolving the complaint
- The outcome of the complaint
- The attitude of employees
- Ease of getting through on the telephone.

---

<sup>18</sup> Diva Telecom, 'CCE-Whitepaper - Better Inbound Call Management', n.d., <http://www.divatelecom.co.uk>.

<sup>19</sup> 'Introducing the Definitive Guide to Social, Mobile Customer Service'.

<sup>20</sup> 'UKCSI: The State of Customer Satisfaction in the UK - July 2016'.

<sup>21</sup> 'RIIO Electricity Distribution Annual Report 2015-16 | Ofgem', <https://www.ofgem.gov.uk/publications-and-updates/riio-electricity-distribution-annual-report-2015-16>.

However, every organisation should identify the drivers of customer satisfaction and likewise, the barriers to satisfaction among its current and target customer base. For example, a study conducted by Impact Research for Electricity North West established that communication was the primary driver of overall satisfaction (in particular, the timing of notifications about planned supply interruptions and the quality of the information provided about these), ahead of knowledge, response time and helpfulness. This provided key areas upon which to focus improvement, specifically when engaging with customers about planned and unplanned supply interruptions and those seeking a new connection to the electricity network<sup>22</sup>.

The UKCSI found that customers who expressed a preference for either fast, efficient service or proactive help and advice (even if this took longer), tended to have higher satisfaction than those whose preference was for a balance of the two. This suggests that it may be easier to achieve high levels of customer satisfaction by focusing intensely on the needs of customers who have a strong preference for either type of service. However, large organisations with a diverse customer base, such as utility companies, need to develop their ability to offer customer service that is fast, efficient and empathic, in addition to providing a means of moving seamlessly between prioritising each of these key requirements, to serve different customer groups with different needs and expectations equally well.

Another approach to increasing customer satisfaction is to enhance employee engagement. A comparison of organisations' UKCSI scores with employee engagement index scores suggests that a one point increase in employee engagement is likely to give a 0.41 point uplift in customer satisfaction.

The UKCSI is an aggregate of several different measures. One of these is 'customer effort'. Only 24 of the top 50 organisations for customer satisfaction in the UKCSI achieved top-50 scores for customer effort, indicating that there is potential, even for organisations leading the customer satisfaction rankings, to increase business benefits from their customer service performance by focusing on making the customer experience easier.

## **2.3 Societal changes – what is expected to change in RIIO-ED2 and beyond?**

### **2.3.1 Demographic changes and the challenges facing different generations**

The Office of National Statistics (ONS) has projected that the UK population will grow by 7% (or 4.4 million) from 64.6 million in 2014 to 69.0 million in 2024 and it is set to increase by 15%, or nearly 10 million, between 2014 and 2039. This will inevitably increase the demands placed upon customer service providers.

Within this overall increase, the most significant demographic change is the ageing of the population. The proportion of the population of pensionable age will rise by 33% or 4.1 million between 2014 and 2039, by which time more than one in 12 of the population is projected to be 80 or over<sup>23</sup>.

The impact of ageing affects more than 80% of touchpoints in the average customer journey<sup>24</sup>, including deterioration in sight, hearing and cognitive abilities. This means that businesses need to understand how to adapt their services to meet customers' changing needs.

---

<sup>22</sup> 'PowerPoint Presentation - 8c6170\_9a79841ff2554f0e98cbd5fb39ae15c3.pdf', [https://media.wix.com/ugd/8c6170\\_9a79841ff2554f0e98cbd5fb39ae15c3.pdf](https://media.wix.com/ugd/8c6170_9a79841ff2554f0e98cbd5fb39ae15c3.pdf).

<sup>23</sup> 'National Population Projections - Office for National Statistics', <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2015-10-29>.

<sup>24</sup> 'Serving an Ageing Population', <https://www.instituteofcustomerservice.com/research-insight/customer-service-news/article/serving-an-ageing-population>.

Younger generations require a particular set of customer service responses. Generation X<sup>25</sup>, for example, are the most likely to share customer service experiences on Facebook<sup>26</sup>, so providers may wish to prioritise that channel. The Millennials<sup>27</sup> and Gen Z<sup>28</sup> have had access to the internet from a very early age, but face greater challenges than earlier generations in paying for education, housing, welfare and pensions. As a result, they are less likely to feel an affinity with institutions and more likely to display attitudes that emphasise self-reliance. This translates into a preference for services that are as tailored and personalised as possible. Companies are therefore likely to find it more difficult to attract loyal customers from younger generations, and will consequently need to adapt their customer service strategy to focus on the things that satisfy these customers, to avoid the risk of alienating them<sup>29</sup>.

In summary, providing age-friendly customer experience relies on attention to detail and knowledge of age-related trends.

### 2.3.2 Patterns of mobile usage and the rise of messaging

The latest generation of smartphones have more computing power than a desktop computer had a decade ago<sup>30</sup>. Ownership of such technology is increasingly commonplace, with 72% of the UK population currently owning a smart mobile device<sup>31</sup>, and this impacts consumers' behaviour considerably. Smartphones allow easy, on-demand and instantaneous access to large amounts of information. They also provide the tools to find, filter and understand data, enabling consumers to make more informed choices.

The incorporation of mobile devices in people's day-to-day lives is reflected in how they choose to contact businesses. Service providers are beginning to recognise that mobile device-based communication methods are increasingly the channels of choice for many customers and they therefore need to design the customer experience to meet this expectation.

However, there has been a decline in the use of mobile devices for making voice calls, as younger generations appear to find it more natural to send a text or a WhatsApp message than to call a telephone number<sup>32</sup>. Latest figures indicate that around 31% of mobile phone users do not make a single call in any given week<sup>33</sup>. Around 90% of time spent on mobile phones is on email and messaging platforms, including text, Facebook Messenger, WeChat and WhatsApp<sup>34</sup>. This is reflected in research which suggests that 77% of 18-34-year-old consumers are likely to have a positive perception of a company that offers a customer service delivered through text messaging.

The importance of privacy has meant that many organisations, particularly those in regulated industries, have been wary of interacting with customers on public social media. However, these mobile messaging apps solve this issue by enabling customers to exchange confidential information with providers privately, yet via a platform that they prefer to the traditional channels of telephone, email, or webchat<sup>35</sup>.

Messaging apps are, by nature, accessible by the customer on their mobile device at all times and, coverage permitting, wherever they are. The development of 4G has led to

---

<sup>25</sup> 'Those born between 1964 and the mid-1980s' n.d.

<sup>26</sup> 'Serving an Ageing Population', <https://www.instituteofcustomerservice.com/media-centre/customer-service-news/article/serving-an-ageing-population>.

<sup>27</sup> 'Those born between the mid-1980s and 2000 Who Reached Young Adulthood in the Early 21st Century' n.d.

<sup>28</sup> 'The Post-Millennials Born in the Early 2000s, Also Known as the iGeneration' n.d.

<sup>29</sup> 'Customer of the Future - Wakefield Event 17 October 2016'.

<sup>30</sup> 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMImobile'.

<sup>31</sup> '7 in 10 People in the UK Now Own a Smartphone - Mobile Marketing', <http://mobilemarketingmagazine.com/7-10-people-uk-now-own-smartphone/>.

<sup>32</sup> 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMImobile'.

<sup>33</sup> 'Deloitte Mobile Consumer 2016', <https://www.deloitte.co.uk/mobileuk/>.

<sup>34</sup> 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMImobile'.

<sup>35</sup> 'Introducing the Definitive Guide to Social, Mobile Customer Service'.

customers having almost continuously available super-fast mobile internet access<sup>36</sup>. This has allowed richer applications to be run on mobile devices, giving customers the ability to access and share documents, place video calls, and make payments at high speed while on the go<sup>37</sup>. As a result, customers who are used to the personal, contextualised responses provided by virtual assistants such as Siri, Cortana and Alexa now expect to be able to interact with organisations through messaging channels at any time. They also expect to receive personalised and automatically location-based services and information, which saves them time and meets their needs more efficiently<sup>38</sup>.

### 2.3.3 Technology usage by older generations

It is of note that older demographic groups are also embracing the latest technology, with 2016 ONS data indicating that 40% of over 75s had used the internet in the three months before the research<sup>39</sup>. In 2015, 68% of those over 55 owned a smartphone, up from 40% in 2013, and in August 2016 59% of those over 50 used WhatsApp<sup>40</sup>. These figures suggest that older technology users are becoming more comfortable with these platforms and this may result in a preference to use them, beyond the confines of social interactions, as a more convenient means of contacting product and service providers in the future.

These platforms should also be available to the nominated representatives of vulnerable customers on priority services registers. As such, secure systems and processes are needed to ensure that contacts made via these channels can be validated as being from authorised representatives.

### 2.3.4 Lifestyle changes

Traditional call centre opening hours from 9am to 5pm were a convenience for organisations and their employees, rather than for working customers. In recent decades there have been fundamental changes to the traditional operational hours of many business sectors, which include the rise of part-time work, flexitime and homeworking. Consequently, a greater proportion of customers have the flexibility to contact call centres during the 9-5 period. However, the advent of the internet, mobile devices and other aspects of the 'always on' culture mean that 9-5, Monday to Friday availability is no longer acceptable to many customers, particularly when they contact an organisation by messaging app: the ability to message 24/7, creates an expectation of 24/7 responses. Many organisations now provide 'extended hours' cover late into the evening on weekdays, and daytime availability at weekends. Organisations with a regulatory responsibility to provide a 24 hour service, such as DNOs, provide skeleton cover overnight, but the challenge of providing omnichannel responses 24/7, and the resources this entails, remains considerable across all sectors.

### 2.3.5 Social media

The rise of social media has led to a shift in customers' behaviour. There are currently around 31 million Facebook users in the UK<sup>41</sup> and 13 million 'Tweeters'<sup>42</sup> who are now accustomed to openly venting their frustrations online in a public arena; with an expectation

---

<sup>36</sup> 'D016633748.pdf', 4 May 2017, <http://www.iosrjournals.org/iosr-jbm/papers/Vol16-issue6/Version-3/D016633748.pdf>.

<sup>37</sup> 'What 4G Means for Business', <http://www.information-age.com/what-4g-means-for-business-2129033/>.

<sup>38</sup> 'Executive Summary: The Future of Customer Service: A Blueprint for 2020', <https://www.instituteofcustomerservice.com/research-insight/research-library/the-future-of-customer-service-a-blueprint-for-2020-executive-summary>.

<sup>39</sup> 'Internet Users in the UK - Office for National Statistics', <https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2016>.

<sup>40</sup> 'Main Findings - UK Social Media Demographics 2016', *We Are Flint*, <https://weareflint.co.uk/uk-social-media-demographics-2016-main-findings/>.

<sup>41</sup> 'The Latest UK Social Media Statistics for 2016 - Avocado Social', <http://avocadosocial.com/the-latest-uk-social-media-statistics-for-2016/>.

<sup>42</sup> 'TV Sports, Entertainment Get UK Twitterers Typing - eMarketer', <https://www.emarketer.com/Article/TV-Sports-Entertainment-UK-Twitterers-Typing/1012370>.

that organisations will quickly respond and resolve their issue. Companies that fail to do so risk a loss of reputation and a social media backlash.

Brands should also recognise that customers may reach out on social media platforms because they have exhausted other traditional means of communication, in their quest for a resolution. Therefore, it can be detrimental to guide a customer back to a call centre. Instead, they should be engaged through their channel of choice. Personal messaging provides the ability to answer customer queries in a secure manner, using their preferred channel. As a result, companies need to adopt systems that can identify whether there has been previous contact with an individual on social media, to avoid repetition of response<sup>43</sup>.

The importance of interactions on social media has been recognised by many companies and these have engaged 'social media executives' to manage the highly public queries raised on these platforms and to proactively keep customers informed. There is now an expectation that any comment made on these sites will receive a quick response and a satisfactory resolution. This leads to the idea of 'the brand as a person' where companies can show that they are human, responsive and alert to customers' concerns. These social media executives can respond to four to eight times as many queries per hour as telephone operators, making this a cost-effective option as well as meeting customers' desires for how they want their issues resolved<sup>44</sup>.

### **2.3.6 Review culture**

Customers from all sectors are now constantly bombarded with requests to rate their experiences. This might be by providing reviews or comment through emoticons at the end of online interactions; by text message or email; or even via interactive screens placed at strategic locations, such as airport egress points. TripAdvisor's entire business model is based on a review culture and eBay was one of the earliest online examples of it.

Good reviews help to create trust in a company and they also provide the organisation with 'free' feedback<sup>45</sup>. However, this review culture and the ease with which 'warts and all' information can be publically accessed, can present organisations with significant challenges. Any expressions of dissatisfaction or complaint are available for all potential customers to see. This requires damage limitation strategies which can deliver a rapid response and an appropriate resolution to maintain reputation and confidence. The transparency of social media platforms exposes organisation to public criticism in an unprecedented manner and when credibility is openly tarnished, the process of rebuilding brand confidence is very difficult and slow.

## **2.4 Conclusion**

Projected increases in the size and age of the population will require customer service organisations to adapt and improve simply to 'stay still'. However, maintaining current levels of customer service is not enough. There is no reason to expect that the pace of technological change will slow. With evidence that the customer experience offered by the latest technology in one sector has the effect of defining customers' expectations in others, the extent of the adaptation and improvement required is considerable and will be ongoing.

---

<sup>43</sup> 'Introducing the Definitive Guide to Social, Mobile Customer Service'.

<sup>44</sup> Ibid.

<sup>45</sup> 'Review Culture Improves Businesses for the Benefit of Customers | The New Economy', <http://www.theneweconomy.com/business/review-culture-improves-businesses-for-the-benefit-of-customers>.

### 3 CONTACT CENTRE INNOVATION: EMPLOYEES AND BUSINESS MODELS

“Standing on the sidelines isn’t an option. The market is shifting... without the right contact center you could be looking from the outside in.”<sup>46</sup>

#### 3.1 The role of employees and the human resource function

The future of customer service is about more than just technology, it is also about the people who respond to customers, irrespective of whether the channel of communication is via telephone, messaging app, email or text.

As outlined in Section 2.2, the UKCSI found that several of the key differentiators between the 50 top-performing organisations and the remaining 180 were employee-related: the handling of the complaint, employees doing what they say they would do, employees understanding the issue and the attitude of employees. Customers today expect “authentic, responsive and personalised relationships with the organisations and employees they deal with”<sup>47</sup>.

In the past, customer contact centres were sometimes seen as little more than a necessary overhead; however, the growing importance of good customer experience places them at the heart of the organisation<sup>48</sup>. As a result, it has never been more critical for organisations to deploy best practice in recruitment, employee development, customer service training and employee engagement strategies,<sup>49</sup> as core elements of a commitment to customer service.

##### 3.1.1 Skills and skill levels required

Along with all business functions, customer service centres are being asked to do more at a lower cost and, while the implementation of technologies such as interactive voice response (IVR) can be helpful, contact centre agents are perhaps the most influential resource at their disposal<sup>50</sup>.

As highlighted in Section 2.2, employee engagement is positively correlated with customer satisfaction. The successful customer service centres of the future will therefore need employees who are capable, experienced, well trained, well supported and rewarded as the CX professionals they need to be. This should result in contact centre agents who are more engaged than traditionally low-paid ‘operatives’ who have been restricted by having to follow on-screen scripts and rigid procedures. For many organisations, this means that the profile of customer service agents will change, but increased costs may be partially mitigated by reduced turnover. For regulated organisations such as DNOs, additional costs might be offset by reward payments for raised customer satisfaction levels, measured against incentive criteria.

Employees will need to have a mix of specialist and general skills in CX:

- The ability to use technology to achieve genuine insight (for instance, in seeking out issues and grievances on social media, particularly where the customer does not use an ‘@’ or other tag to trigger direct notification to the company involved).
- Emotional intelligence to understand customers’ needs and the empowerment to openly acknowledge mistakes where they exist

---

<sup>46</sup> ‘Building\_the\_Contact\_Center\_of\_the\_Future\_Whitepaper.pdf’.  
[http://www.incontact.com/sites/default/files/resources/Building\\_the\\_Contact\\_Center\\_of\\_the\\_Future\\_Whitepaper.pdf](http://www.incontact.com/sites/default/files/resources/Building_the_Contact_Center_of_the_Future_Whitepaper.pdf).

<sup>47</sup> ‘UKCSI: The State of Customer Satisfaction in the UK - July 2016’.

<sup>48</sup> ‘The Call Center of the Future’, <http://www.crmsearch.com/call-center-of-the-future.php>.

<sup>49</sup> ‘UKCSI: The State of Customer Satisfaction in the UK - July 2016’.

<sup>50</sup> ‘2017 Benchmarking Report | Top 50 Companies for Customer Service’,  
<https://www.top50companies.co.uk/2017-benchmarking-report/>.

- The creativity and flexibility to manage the complexity of the problems raised while maintaining the organisation's overall commercial objectives and the ability to embrace working in an evolving environment.

Proficiency in applying these CX skills across multiple channels will also be essential to optimise load-balancing of employees and to deliver consistent responses to customers, whatever contact method they choose. This not only benefits the customer but can increase employee satisfaction<sup>51</sup>. It also enables the same multi-skilled CX practitioner to respond to an individual customer in a variety of ways, should the customer use more than one contact channel to communicate about a particular issue.

Customer service centres also need agents with language skills that match the organisation's customer profile in today's multi-lingual society<sup>52</sup> and these skills need to be available across all channels at all times. In addition, websites need to be available in multiple languages: this is a challenge that has already been met by DNOs and other organisations operating in areas where it is a legal requirement to do so (for example, SP Energy Networks which covers parts of Wales, and organisations in Canada). The practicalities for achieving this are well-established but are constantly evolving. Technology to store language preferences on a device can be linked with apps and browsers enabling the user's first language to be automatically presented, rather than having to be self-selected from an English-language first page.

### 3.1.2 Human resources

The human resources function needs to play a pivotal role in the future of customer service, in supporting the recruitment, development and retention of professionals in the workforce. Continuous training is particularly important in the contact centre environment to ensure that regular innovation in processes is reflected in their implementation, resulting in the delivery of excellent service and tangible business benefits.

## 3.2 The structure of the call centre

Job-sharing and part-time working have long been common practice in call centres as they fit well with the nature of the work, ensure that more agents are made available at peak contact times and provides organisations with the flexibility to call on additional, experienced resources during unforeseen times of heightened demand.

Developments in technologies that support virtual service facilities, rather than one central hub, where all agents are located, mean that service centres could be based in multiple locations across a region, country or even internationally. Each location would have the same access to all necessary information to ensure consistent customer experience, while also harnessing the benefit of local knowledge.

These platforms also provide greater flexibility for agents to work from home. As well as the usual advantages of homeworking, which include reduced office costs for the employer and elimination of travel time and cost for the employee; this model provides a means of delivering enhanced services, with more personal interaction, based on very specific local knowledge. It also introduces even greater potential for flexibility in working times to cover busy periods or unexpected events, which for a DNO often arise during adverse weather conditions. This is because it becomes cost-effective for an employee to do very short shifts, perhaps of only two hours. Homeworking may also facilitate the provision of alternate-language customer service. However, homeworking does present challenges, in terms of training and the inability to immediately share information, assistance, and guidance between agents. This personal interaction can be extremely valuable for delivering an excellent CX and maintaining cohesive team relationships and good morale.

---

<sup>51</sup> 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.

<sup>52</sup> Ibid.

### 3.2.1 Vertical or horizontal reporting

An alternative to the traditional customer centre as a vertical silo would be to place dedicated customer service agents in each department of the company<sup>53</sup>. For example, a question on billing would be routed directly to a CX agent in the billing department.

The advantage of this approach is that the agent would have a comprehensive knowledge of that particular business area, supplemented by information sharing with non-CX colleagues from that department. This contrasts with the vertical call centre model, where agents handle a wide range of issues, from across a number of specialisms but are less likely to have a detailed knowledge about each area. While this approach has obvious benefits it could conversely, result in customers being passed around multiple departments, should they have more than one query, with a resulting decline in their overall experience<sup>54</sup>.

A compromise solution could be achieved by screening incoming queries and matching them to the appropriate agents, with the corresponding knowledge and skills profile. An even greater CX could be achieved by adopting a screening process, which is able to provide the agent with knowledge about the customer, derived from previous contacts<sup>55</sup>.

### 3.3 Conclusion

The customer contact centre of the future will be shaped by customers' needs and requirements, which are themselves influenced by the technologies they experience elsewhere. To meet customer expectations, organisations need to develop solutions that blend technology, human resources and structural elements in partnership.

The resulting solution will need to be supported by a robust workforce management (WFM) platform, underpinned by dedicated technology that enables the effective and efficient delivery of payments and benefits, training and development, timekeeping, recruitment, performance management and scheduling<sup>56</sup>.

## 4 TECHNICAL INNOVATION

### 4.1 The impact of technology on DNOs

There are a number of technical advances that have already had a large impact on the role of a DNO, and are likely to continue to do so. These include the increase in distributed generation and distributed energy resources (DER), the increasing proliferation of smart meters being installed in customers' homes and the greater adoption of electric vehicles. As DNOs move towards a role of distribution system operator (DSO), there are increasing opportunities for proactive grid management and proactive communication with customers.

Such developments provide valuable context when considering the latest advances in customer service and how they can be applied.

Each of the six mainland UK DNOs has its own customer service strategy which is delivered by its own, specific, evolving technology infrastructure. However, the resulting performance of all DNOs is measured by Ofgem in the same way, with a survey-based customer satisfaction score and a separate complaint handling score published annually<sup>57</sup>.

---

<sup>53</sup> 'The Call Center of the Future'.

<sup>54</sup> Ibid.

<sup>55</sup> Diva Telecom, 'CCE-Whitepaper - Better Inbound Call Management'.

<sup>56</sup> 'What Is Workforce Management', <https://www.callcentrehelper.com/what-is-workforce-management-57249.htm>.

<sup>57</sup> 'Data Portal | Ofgem', <https://www.ofgem.gov.uk/data-portal/network-indicators>.

The sections below discuss technology innovations that have 'disrupted' traditional practices in a range of sectors and which may have implications for customer services in the utility sector.

## **4.2 Specific technologies**

### **4.2.1 Online self-service**

Online self-service is a widely used approach in customer service that allows customers to access information (such as downloading a manual or checking flight arrival times) or conduct straightforward tasks (such as inputting meter readings) via the internet. As the customer interacts directly with the supplier's systems there are multiple benefits to the business, which arise from the absence of direct interaction with a representative, thereby reducing resourcing requirements. Self-service activities also often require no further processing by an employee, automatically generating an output, for example the production of an accurate bill based on actual meter readings.

### **4.2.2 On-demand services**

On-demand services are on the rise and this has been particularly evident in the transport and travel sectors, examples of which include technology-enabled variants of traditional taxis such as Uber for individual journeys, UberPool for shared journeys or Zipcar for pay-per-use self-drive car hire.

Possible ways that this concept could be extended to the customer service sector include the use of cloud computing rather than dedicated technology hardware, 'bidding' by customer service agents to respond to an issue, or grouping very similar queries, to provide a single answer that serves all. One feature of on-demand technology that makes it popular with customers is provision of a personal or semi-personal service, rather than having to accept a one-size-fits-all model. The challenge for contact centres is providing this customisation in a cost-effective manner.

### **4.2.3 Remote interactive services**

Remote interactive services are technologies that automatically notify a service provider when a problem occurs. They allow the organisation to proactively manage its customers and provide information quickly and importantly, before customers make contact. This then significantly reduces the amount of communication traffic that might historically have arisen from a given situation. For example, DNOs largely rely on customers to notify them about the loss of their supply, arising from faults on the network. However, the deployment of remote interactive services could remove this need, by allowing the DNO to proactively notify and reassure customers that they are aware of the situation, thereby negating the need for the majority to make personal contact. Such services might also provide mitigation advice, information about the cause of the problem, periodic updates about the progression of repairs and details of when a resolution is expected.

Remote interactive services would also enable the DNO to pass information automatically to the correct department and employees, ensuring seamless and efficient management of the fault.

### **4.2.4 Chatbots**

Chatbots are a web technology that enables responses to be made based on keywords used by customers during a typed interaction, such as email or instant messaging. They give the appearance of a personal interaction without any human involvement.

Chatbot applications can be used on mobile telephones, making them a convenient method of 'on the go' communication. Their functions allow conversations to be paused, allowing the customer to fit the interaction around other activities.

Microsoft's CEO recently stated that "Chatbots are the new Apps", echoing a view previously expressed by Facebook's Head of Messaging Products<sup>58</sup>. Facebook Messenger's application programming interface (API) has made the platform accessible to third parties, which led to over 11,000 chatbots being created on it within three months of launch<sup>59</sup>. It is expected that the development, application and usage of chatbots will continue to grow.

#### 4.2.5 Virtual agents

Virtual agents are computer-generated, animated figures, usually human in appearance, that are the 'face' of chatbot technology. They are sometimes referred to as virtual guardian angels, virtual reps or v-reps. One of the best-known early examples was Microsoft's 'paperclip with a face'.

They are intended to make a human-machine interaction seem more human-human, friendly and personal<sup>60</sup>, which is an important consideration because of customers' well established preference for a personalised service (see Section 2.1).

#### 4.2.6 Cloud technology

Traditionally, organisations have used static technology to provide their computer power. Data centres contained a number of fixed-capacity computers owned and managed by the organisation itself or by a technology service provider. This physical constraint has presented a constant challenge to organisations across all sectors, in managing the conflicting need for their technology's capacity to economically support existing requirements, with the capability of handling future business growth.

Cloud technology or cloud computing now offers an alternative to fixed technologies. The hardware is always externally provided, customer organisations 'pay' for as much or as little capacity as required and the actual 'disk space' used is distributed across a number of physical machines. Data resides virtually, 'in the cloud' rather than on a particular hard drive. With huge capacity available, there is no longer a need for expensive, time-consuming technology upgrades as organisations expand.

#### 4.2.7 Use of smartphones

The extensive use of smartphones has far greater implications for customer service than simply providing a platform for an increased number of communication channels, which customers can use 'on the go'. Companies need to recognise that the mobile phone represents the customer experience hub for many individuals, because it is now so firmly embedded in their lives<sup>61</sup>. Smartphones enable organisations to deliver the more personal and interactive service that customers expect, for example, using a caller's geographic location<sup>62</sup> as the starting point for identifying a network fault, when a customer calls to report a supply interruption.

---

<sup>58</sup> 'Why Facebook and Microsoft Say Chatbots Are the Talk of the Town | Technology | The Guardian', <https://www.theguardian.com/technology/2016/sep/18/chatbots-talk-town-interact-humans-technology-silicon-valley>.

<sup>59</sup> 'Messenger Platform Gets an Update!', <https://www.facebook.com/notes/david-marcus/messenger-platform-gets-an-update/10155014173359148>.

<sup>60</sup> 'Academic Paper Insights: Theo B.C. Poesz and W. Fred van Raaij, Strategic Marketing and the Future of Consumer Behaviour Introducing the Virtual Guardian Angel. Cheltenham, Glos, UK: Edward Elgar Publishing Ltd, 2007, 240 Pp. £53.96 (ISBN: 978-1-84376-772-4 [Hb])', [https://www.researchgate.net/publication/241648017\\_Theo\\_BC\\_Poesz\\_and\\_W\\_Fred\\_van\\_Raaij\\_Strategic\\_Marketing\\_and\\_the\\_Future\\_of\\_Consumer\\_Behaviour\\_Introducing\\_the\\_Virtual\\_Guardian\\_Angel\\_Cheltenham\\_Glos\\_UK\\_Edward\\_Elgar\\_Publishing\\_Ltd\\_2007\\_240\\_pp\\_5396\\_ISBN](https://www.researchgate.net/publication/241648017_Theo_BC_Poesz_and_W_Fred_van_Raaij_Strategic_Marketing_and_the_Future_of_Consumer_Behaviour_Introducing_the_Virtual_Guardian_Angel_Cheltenham_Glos_UK_Edward_Elgar_Publishing_Ltd_2007_240_pp_5396_ISBN).

<sup>61</sup> 'The-Contact-Center-of-the-Future.pdf', <http://www-935.ibm.com/services/us/gbs/bus/pdf/the-contact-center-of-the-future.pdf>.

<sup>62</sup> The Future of Customer Service – a blueprint for 2020: executive summary, The Institute of Customer Service, November 2016.

As almost half of calls made to contact centres are from smartphones, the capabilities of these devices can be integrated with the voice call functionality to provide a more enhanced experience, and potentially a shorter interaction. For example, customers would be able to look at their screens while talking to an agent or automated system and see additional information, such as a diagram of plane seating enabling them to choose a seat<sup>63</sup>, or a table showing the prices of different tariffs. In short, organisations should adopt a 'mobile-first' mindset<sup>64</sup>.

#### 4.2.8 Custom apps

Integrated service offerings are likely to be delivered via a provider-specific app. Apps have the benefit of being able to deliver succinct mobile interactions that can be stopped, restarted or switched to another device without loss of context<sup>65</sup>.

However, the disadvantage is that customers have to download the appropriate app before contacting the service centre. For organisations where customers may not remain loyal, this is a considerable barrier and customers are likely to question whether it is worth the effort, particularly for what might be a single or extremely infrequent interaction. Conversely, once a customer has downloaded an app, it can result in a barrier to them switching to an alternative provider. This is less of an issue for DNOs, which have a geographical monopoly. However, the main barrier to app adoption for a DNO's customers is that they rarely need to contact their electricity distributor. Furthermore, there is significant evidence that customers remain uncertain about the structure of the electricity industry, particularly the relationship between the DNO and suppliers. As such, any direct communication with customers should address the public's lack of awareness of the existence, name and role of their DNO. Brand awareness should be delivered in a simple, friendly, customer-facing manner, clearly delineating the DNO role from that of energy suppliers<sup>66</sup>.

An alternative solution could be for organisations to collaborate and create a universal app that provides a platform for all of their customer service needs. This collaborative approach has been adopted by DNOs to deliver an effective fault reporting mechanism via the national three digit telephone number. Any future collaboration in the field of mobile applications could have the impact of making customer service a greater priority for investment.

#### 4.2.9 Interactive voice response

IVR is an automated telephone system that interacts with callers through the use of voice and dual tone multi frequency (DTMF) signals, generated via a telephone's touch keypad. The technology gathers information and routes calls to the appropriate team or recipient and provides automatic responses in the form of a pre-recorded voice, fax, callback or e-mail. IVR was first developed in the 1960s and has been widely used in contact centres since the 90s, following advancements in hardware and increased affordability. It does not require interaction with an agent and avoids leaving customers in a queue. Therefore, it presents a cost effective tool for managing large volumes of telephone traffic. However, IVR is generally only deployed as a front-end menu or used for simple enquiries such as balances or payment queries<sup>67</sup>. This is because it can incorrectly recognise information, which results in callers being erroneously routed into a queue, making it unpopular with customers<sup>68</sup>. Callers can also bypass the self-service functions of IVR and elect to speak to an employee. This

---

<sup>63</sup> 'Future of the Call Center Blends Agents and Technology', *What's next*, 30 April 2015, <http://whatsnext.nuance.com/customer-experience/future-of-call-center-is-automated/>.

<sup>64</sup> 'Top 10 Trends: The Future of Customer Service | ServiceNow', <https://www.servicenow.com/lpayr/top-10-trends-the-future-of-customer-service.html>.

<sup>65</sup> *Ibid.*

<sup>66</sup> 'Closedown Report', <http://www.enwl.co.uk/c2c/knowledge-and-learning/closedown-report#>.

<sup>67</sup> 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMI mobile'.

<sup>68</sup> 'Why Facebook and Microsoft Say Chatbots Are the Talk of the Town | Technology | The Guardian'.

has led to a decline in IVR, especially for those companies that were using it for more complicated functions<sup>69</sup>.

Improvements have been made in automated speech recognition for other applications, for example, Amazon Echo, which has been programmed to recognise a number of regional accents in the UK. This may lead to a revival in IVR but customers are generally wary of this channel due to previous poor experiences<sup>70</sup>.

Interactive display response (IDR), sometimes incongruously referred to as 'Visual IVR', enables customers to touch their way through the same kind of menu used by IVR systems, allowing users to input complex data and to go back and make changes easily<sup>71</sup>. This is a step beyond pushing the dial pad for options and instead uses an app to integrate information<sup>72</sup>. Customers do not have to listen to long menus and can skip ahead to the relevant information. IDR also routes the caller to the agent most qualified to answer the specific question<sup>73</sup> and is cheaper for organisations to set up and run than traditional IVR systems. It also reduces the amount of time agents need to spend on the call as information is automatically provided<sup>74</sup> by the system<sup>74</sup>. However, there is speculation that customers may be resistant to this technology due to the legacy of traditional IVR systems causing a barrier to consumer acceptance<sup>75</sup>.

### 4.3 Pulling technologies together

#### 4.3.1 Omnichannel

As discussed in Section 2, customers have a large number of channels through which they can contact a company, ranging from the traditional telephone, letter and email to the internet-enabled options of social media, messaging apps, online chat, virtual agents and self-service. Web-based services are where the majority of interactions start and were the most used platform in 2014<sup>76</sup>.

Companies must embrace these new channels, specifically those that are accessed through mobiles. The rise of smartphones is a key factor in channel proliferation, with apps and mobile commerce allowing more targeted, persistent interaction<sup>77</sup>.

A successful omnichannel experience allows the customer to choose the contact method at all points of the journey and provides a consistent experience throughout<sup>78</sup>. This is in contrast to a multi-channel system which may offer all of the same contact channels but without integration so, for example, a call centre agent would have no visibility of a customer's contacts via WhatsApp and might also be unable to respond via that channel.

Companies must ensure that these channels do not operate as independent silos<sup>79</sup>. Customer information should be securely shared among the channels so that customers avoid the frustration of having to repeat information at each point. This requires a sophisticated approach to identity management that gives organisations a single view of each customer<sup>80</sup>. This technology allows customers to be more easily identified, each time

---

<sup>69</sup> 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMI mobile'.

<sup>70</sup> Ibid.

<sup>71</sup> 'Visual IVR by Jacada', <http://www.visual-ivr.com/>.

<sup>72</sup> 'Why Visual IVR Is a Bad Idea - Aspect Blogs', <http://blogs.aspect.com/why-visual-ivr-is-a-bad-idea/>.

<sup>73</sup> <https://plus.google.com/+Vocalcom1/posts>, '5 Ways Visual IVR Enhances the Self-Service Experience', *Vocalcom Blog*, 13 October 2016, <http://www.vocalcom.com/en/blog/cloud-computing/5-ways-visual-ivr-enhances-the-self-service-experience/>.

<sup>74</sup> Ibid.

<sup>75</sup> 'Why Visual IVR Is a Bad Idea - Aspect Blogs'.

<sup>76</sup> 'Top 10 Trends'.

<sup>77</sup> 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.

<sup>78</sup> Ibid.

<sup>79</sup> 'Is Your Contact Centre Future Ready? Asks Aspect - Contact-Centres.com'.

<sup>80</sup> 'Customer-Experience-Blueprint.pdf'.

they initiate contact, even if the subject matter and touchpoint differs from previous interactions. It also allows organisations to understand the unique customer's preferred method of contact and how this changes over time or according to the nature of the query<sup>81</sup>. This single view of the customer creates the possibility for proactive engagement through their channel of choice, facilitating a more effective mechanism for delivering updates about important information in a timely, yet non-intrusive manner<sup>82</sup>. For example, regular updates about the progression of a fault repair during a power cut with the latest estimate of restoration time.

However, an omnichannel approach can easily become over-complicated and difficult for customers to navigate. Organisations must develop the correct mix of channels for their customer base, and if they cannot provide a consistent experience across all channels then it may be beneficial to reduce the number available<sup>83</sup>. It is also important that customers are able to switch channels at any point of the interaction, without any detriment to the customer experience or the repetition of information. This fluidity should not slow down resolution of the query or increase the number of contacts that need to be made<sup>84</sup>. Therefore, while an omnichannel has the potential to significantly improve the customer experience by offering a slick, multi-functional platform, which eases the frustrations traditionally associated with a contact centre; it is not the only element required to ensure heightened customer satisfaction and more effective resolution of issues<sup>85</sup>.

### 4.3.2 Automated call centres and artificial intelligence

Artificial intelligence (AI), also known as machine learning, is poised to fundamentally change the future of contact centres. It is envisaged that they will become almost fully automated and, crucially, that customers will come to prefer this self-service model to the traditional one, involving personal interaction with a human agent<sup>86</sup>. AI technologies, enabling this automation, already exist and systems such as Amelia<sup>87</sup> are currently being trialled by a number of organisations to assess the feasibility of cognitive, digital employees replacing functions currently performed by call centre agents. The deployment of AI technology, able to interact with customers using natural language and via text-based Instant Messaging (IM) platforms, provides a quicker, efficient route to solutions for customers and reduced costs for organisations.

AI systems can also identify trends and monitor contact caused by a deficiency in another channel, such as the inability to easily access a crucial piece of information. The role of agents in such contact centres will change considerably and they will be required to work hand-in-hand with technology to ensure errors are not being made<sup>88</sup>. The role of these agents will often be in the background and the consumer may not realise that a person has aided the transaction. While organisations across all sectors are likely to embrace the business and cost efficiencies presented by AI technologies, there is likely to be some resistance from the existing workforce, as automation will inevitably lead to a reduction in customer-facing employees. Agents would remain available to handle the most complex, niche or escalated enquiries/complaints, and, until customers truly trust and prefer automated contact centres, they will be reassured to have the support of a human to fall back on<sup>89</sup>.

AI is likely to be the key piece of technology that allows contact centres to provide a more automated system without having a detrimental effect on customer satisfaction. The capacity

---

<sup>81</sup> 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.

<sup>82</sup> 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMIImobile'.

<sup>83</sup> 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.

<sup>84</sup> 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMIImobile'.

<sup>85</sup> '2017 Benchmarking Report | Top 50 Companies for Customer Service'.

<sup>86</sup> 'Future of the Call Center Blends Agents and Technology'.

<sup>87</sup> 'Amelia | IPsoft', <http://www.ipsoft.com/amelia/>.

<sup>88</sup> 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.

<sup>89</sup> 'AI and Customer Service', <http://rainbird.ai/>.

and speed with which information and communication can be processed is developing rapidly, allowing systems to recognise patterns of speech, strategise and produce a diagnosis or solution<sup>90</sup>. This will extend their capabilities far beyond the current, narrow ability of function based chatbots, which operate on a programmed set of rules. These can only cope with simple transactions involving minimal choices, such as checking balances or placing an order<sup>91</sup>.

Investment in AI technology is expensive, but this cost is offset by a reduction in the number of agents needed as people would only be required for highly complex queries. This could transform the experience for customers, with long wait times eliminated and contact centres always 'open'<sup>92</sup>. Intelligent software would be able to filter information based on its relevance and urgency, while initiating processes that meet the need automatically<sup>93</sup>. AI also provides a means of proactively messaging a high volume of targeted customers, for example by type, demographic or region, with important information, using their unique channel of preference.

Even before the implementation of a fully automated contact centre becomes a reality, AI systems can assist agents by speeding up the resolution of customers' queries and improve the quality and consistency of the response. Agents currently expand on their own knowledge and experience, by using various information repositories to provide answers to questions. However, locating the correct information, particularly where enquiries are multi-faceted, can be difficult and might not always be contextualised<sup>94</sup>. AI can help to find the relevant information and prioritise content.

#### **4.3.3 Prediction**

AI could also be used to help anticipate customer needs in addition to their mood, desire and probable thoughts about a particular subject. This will be aided by the range of technologies that are expected to be interconnected through the 'internet of things' (IoT) in the future. Everyday objects such as washing machines and home energy thermostats are now commonly embedded with electronics, software, sensors, actuators, and network connectivity that enable them to collect and exchange data, and receive instructions. Accurate predictions of customer needs can be made with only three or four data points and it is likely that far more data points will be available in each contact through the IoT. This could lead to pop-up boxes suggesting help, IVR or chatbots starting the interactions with "Do you need help with X?" While the prediction might not necessarily be correct; it is likely that most customers will appreciate the personalisation of the service and the fact that the company recognises them. Nevertheless, positive perception will be dependent on predictions being credible and reasonable even when they are incorrect<sup>95</sup>.

The predictive capability of AI to reveal patterns, trends and associations that will, in time, fundamentally change contact centre interactions can now be developed with the relatively small amounts of data currently available to organisations about their customers. The large and complicated data sets that are expected to be available with the advent of the IoT (often referred to as 'big data') are not required to commence trials<sup>96</sup>, as many organisations believe.

#### **4.3.4 Future technologies**

There are a number of technology advancements, currently in the early stages of development, which could help shape the future contact centre model.

---

<sup>90</sup> 'ICS\_Customer\_of\_the\_Future-22-WEB\_FINAL\_JUNE\_2016.pdf', , [https://www.ageas.co.uk/documents/ICS\\_Customer\\_of\\_the\\_Future-22-WEB\\_FINAL\\_JUNE\\_2016.pdf](https://www.ageas.co.uk/documents/ICS_Customer_of_the_Future-22-WEB_FINAL_JUNE_2016.pdf).

<sup>91</sup> The Definitive Guide to Social, Mobile Customer Service, Volume 4, 2016-2017 Edition

<sup>92</sup> AI and Customer Service, Rainbird, January 2017.

<sup>93</sup> 'Top 10 Trends'.

<sup>94</sup> Ibid.

<sup>95</sup> 'Future of the Call Center Blends Agents and Technology'.

<sup>96</sup> Ibid.

One emerging technology is voice print analysis. This allows customer authentication through voice analysis, removing the need for secure logins or passwords. This type of voice recognition system is being introduced by HSBC alongside biometric identification<sup>97</sup>. Speech recognition can transform the customer's experience by capturing and processing key pieces of information, which are processed by AI, leaving the agent to focus on resolving more complex enquiries, using their problem-solving skills and providing an empathetic ear for the customer.

Another emerging technology is around advanced wait time management and call forecasting. This involves monitoring the current level of call traffic and that expected in each 15-minute period, allowing the dynamic adjustment of agent numbers. Agents can be quickly brought online if call waiting times are predicted to increase or released through flexible buy-back arrangements. The wait time can also be managed through customer priority, meaning that vulnerable or high value customers, for example, are prioritised, thus resulting in a shorter wait time.

The customer service 'technology ecosystem' involves a set of integrated, mature technologies that fall into three main software categories: queuing and routing, customer relationship management and workforce optimisation. Suppliers of these end-to-end systems are expected to consolidate, so a competitive advantage can only be gained by the organisations that use these the most effectively.

#### **4.3.5 Segmentation to allow for personalisation**

As noted in Section 2, customers are demanding increasingly personalised services and this has the effect of not only making them feel valued by the organisation, but also tends to make them more forgiving about any negative issues they experience. However, companies need to balance customers' desire for personalisation with the cost of providing it<sup>98</sup>.

One solution involves segmentation of the customer base using information about demographics, behaviour and customer history to understand the service that specific customers are most likely to appreciate<sup>99</sup>. In future, depending on the information customers agree to share<sup>100</sup>, segmentation could also take into account aspects of their lifestyle, age and emotional intelligence.

Segmentation is already widely used in the customer service industry, grouping customers according to lifetime value, 'recency' and frequency of contact or purchase, geography, or sector for business customers<sup>101</sup>. Segmentation models are likely to develop further, enabling strategies for interaction, shaped specifically to reflect customers' needs. These developments will also provide a means to measure any changes in the requirements of segments. Agents could be prompted, at the appropriate point of the interaction, to make customised offers, based on the context of the interaction and the segment to which the individual belongs. It is also likely that segments that have the greatest attachment to the organisation will be provided with a higher level of personalisation<sup>102</sup>.

#### **4.4 Conclusions**

The position of the DNO in the energy sector, as largely a 'behind the scenes' company, remains confusing for customers, in particular, the relationship between DNOs and suppliers.

---

<sup>97</sup> 'Voice ID | HSBC UK', <https://www.hsbc.co.uk/1/2/contact-and-support/banking-made-easy/voice-id>.

<sup>98</sup> 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.

<sup>99</sup> 'The-Contact-Center-of-the-Future.pdf', <http://www-935.ibm.com/services/us/gbs/bus/pdf/the-contact-center-of-the-future.pdf>.

<sup>100</sup> 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.

<sup>101</sup> 'How Leveraging an Omni-Channel Strategy Can Improve Your Customer Experience', <https://www.callcentrehelper.com/how-leveraging-an-omni-channel-strategy-can-improve-your-customer-experience-87966.htm>.

<sup>102</sup> 'The-Contact-Center-of-the-Future.pdf'.

Customers are generally unaware of their regional distribution company until they experience a supply interruption, require a new electricity connection or alter an existing supply arrangement. This adds an additional complexity to customer interactions, with implications for how technology is incorporated into DNOs customer service strategies. New technologies which have been embraced by customers in other sectors, such as apps, will need careful consideration and modification to ensure they address customers' needs when interacting with a (potentially previously unknown) DNO.

DNOs have a responsibility to promote greater awareness and are making significant improvements in the services they provide to customers. This includes enhancing the help and information available, the platforms on which this information is delivered and the ease with which customers can access it. In addition to embracing social media platforms, the introduction of a free '150 power cut telephone number' in September 2016 is now helping customers to report and receive advice about power cuts more efficiently. Improved visibility and accessibility will inevitably result in increased contact and advanced systems will need to be integrated to manage future demand and ensure consistency in CX, irrespective of the method of contact.

This document demonstrates that customer service technology is both mature and evolving. Smartphone and app-based technologies are expected to be at the heart of the customer experience in the future and organisations, including DNOs, now need to consider their evolving customer servicing strategies, based on the capabilities of these technologies, rather than regarding them as simply add-ons to more traditional models.

In addition, new innovations provide opportunities for DNOs to further develop the customer service they provide. While the customer contact centre remains key, it will be transformed by new technologies, for example AI can instantly equip DNO call centre agents with the key information necessary to respond to customer queries. The ability for chatbots to resolve simple queries, for example 'when will power be restored'? should be exploited, freeing up resource to address more complex queries and handle complaints. Furthermore, incorporating remote interactive services and data from the IoT has the ability to transform the focus of a DNO contact centre from reactive to proactive.

To ensure they continue to meet customer expectations:

- DNOs will need to react more quickly to opportunities arising from new technologies or risk losing competitive position
- CEOs and senior managers will need to increase their awareness and understanding of technology applications to assess where to invest and how to apply them
- Organisations, including DNOs, will be under continuous pressure to achieve cost reductions through innovation in technology and processes to improve their customer experience.

Systems and strategy need to be devised in conjunction to optimise both.

## **5 NEXT STEPS**

Customers' needs, when interacting with a DNO, will be explored in detail, through direct engagement with customers and employees. Conceptual models and/or bespoke prototypes will be designed to test these needs and expectations. These models will be refined and optimised through customer feedback. Finally, a customer service blueprint will be developed which meets existing and future needs of specific customer groups, leverages higher levels of customer satisfaction, and, critically, is accepted. This blueprint is expected to assist DNOs to better plan their customer investment strategy. There will be ongoing learning as the project progresses and the approach will therefore be reviewed regularly to reflect any pertinent feedback and adapted in response to lessons learned.

## 6 BIBLIOGRAPHY

- '7 in 10 People in the UK Now Own a Smartphone - Mobile Marketing'.  
<http://mobilemarketingmagazine.com/7-10-people-uk-now-own-smartphone/>.
- '2017 Benchmarking Report | Top 50 Companies for Customer Service'.  
<https://www.top50companies.co.uk/2017-benchmarking-report/>.
- 'Academic Paper Insights: Theo B.C. Poesz and W. Fred van Raaij, Strategic Marketing and the Future of Consumer Behaviour Introducing the Virtual Guardian Angel. Cheltenham, Glos, UK: Edward Elgar Publishing Ltd, 2007, 240 Pp. £53.96 (ISBN: 978-1-84376-772-4 [Hb])'.  
[https://www.researchgate.net/publication/241648017\\_Theo\\_BC\\_Poesz\\_and\\_W\\_Fred\\_van\\_Raaij\\_Strategic\\_Marketing\\_and\\_the\\_Future\\_of\\_Consumer\\_Behaviour\\_Introducing\\_the\\_Virtual\\_Guardian\\_Angel\\_Cheltenham\\_Glos\\_UK\\_Edward\\_Elgar\\_Publishing\\_Ltd\\_2007\\_240\\_pp\\_5396\\_ISBN](https://www.researchgate.net/publication/241648017_Theo_BC_Poesz_and_W_Fred_van_Raaij_Strategic_Marketing_and_the_Future_of_Consumer_Behaviour_Introducing_the_Virtual_Guardian_Angel_Cheltenham_Glos_UK_Edward_Elgar_Publishing_Ltd_2007_240_pp_5396_ISBN).
- 'AI and Customer Service'. <http://rainbird.ai/>.
- 'Amelia | IPsoft'. <http://www.ipsoft.com/amelia/>.
- 'Building the Contact Center of the Future Whitepaper.pdf'.  
[http://www.incontact.com/sites/default/files/resources/Building\\_the\\_Contact\\_Center\\_of\\_the\\_Future\\_Whitepaper.pdf](http://www.incontact.com/sites/default/files/resources/Building_the_Contact_Center_of_the_Future_Whitepaper.pdf).
- Caan, James. 'First-Rate Customer Care Is Key to Making Your Business a Success'. *The Guardian*, 20 June 2013, sec. Guardian Small Business Network.  
<https://www.theguardian.com/small-business-network/2013/jun/19/customer-care-business-success>.
- 'Closedown Report'. <http://www.enwl.co.uk/c2c/knowledge-and-learning/closedown-report#>.
- 'Consumers Demand More Multichannel Customer Service - eMarketer'.  
<https://www.emarketer.com/Article/Consumers-Demand-More-Multichannel-Customer-Service/1014397>.
- 'Creating the Digital Contact Centre - Overcoming Digital Customer Engagement Challenges - IMImobile'. <https://imimobile.com/creating-the-digital-contact-centre/>.
- 'Customer of the Future - Wakefield Event 17 October 2016'.  
<https://www.instituteofcustomerservice.com/search?q=the+customer+of+the+future>.
- 'Customer Service 2020 | Points of View | Capgemini Consulting Global'.  
<https://www.capgemini-consulting.com/customer-service-in-2020>.
- 'Customer-Experience-Blueprint.pdf'. <http://skylinemarketingsolutions.co.uk/wp-content/uploads/2016/02/Customer-Experience-Blueprint.pdf>.
- 'Customers Want More: 5 Expectations You Must Meet Now | Customer Experience Insight'.  
<http://www.customerexperienceinsight.com/customer-expectations-you-must-meet-now/>.
- 'D016633748.pdf'. <http://www.iosrjournals.org/iosr-jbm/papers/Vol16-issue6/Version-3/D016633748.pdf>.
- 'Data Portal | Ofgem'. <https://www.ofgem.gov.uk/data-portal/network-indicators>.
- 'Deloitte Mobile Consumer 2016'. <https://www.deloitte.co.uk/mobileuk/>.
- Diva Telecom. 'CCE-Whitepaper - Better Inbound Call Management', n.d.  
<http://www.divatelecom.co.uk>.
- 'Executive Summary: The Future of Customer Service: A Blueprint for 2020'.  
<https://www.instituteofcustomerservice.com/research-insight/research-library/the-future-of-customer-service-a-blueprint-for-2020-executive-summary>.
- 'Expectations Are Rising. Can Your Customer Experience Keep Up? - Salesforce UK Blog'.  
<https://www.salesforce.com/uk/blog/2016/07/expectations-rising-can-your-customer-experience-keep-up.html>.
- 'Future of the Call Center Blends Agents and Technology'. *What's next*, 30 April 2015.  
<http://whatsnext.nuance.com/customer-experience/future-of-call-center-is-automated/>.
- 'How Leveraging an Omnichannel Strategy Can Improve Your Customer Experience'.  
<https://www.callcentrehelper.com/how-leveraging-an-omnichannel-strategy-can-improve-your-customer-experience-87966.htm>.
- <https://plus.google.com/+Vocalcom1/posts>. '5 Ways Visual IVR Enhances the Self-Service Experience'. *Vocalcom Blog*, 13 October 2016.

- <http://www.vocalcom.com/en/blog/cloud-computing/5-ways-visual-ivr-enhances-the-self-service-experience/>.
- 'ICS\_Customer\_of\_the\_Future-22-WEB\_FINAL\_JUNE\_2016.pdf'.  
[https://www.ageas.co.uk/documents/ICS\\_Customer\\_of\\_the\\_Future-22-WEB\\_FINAL\\_JUNE\\_2016.pdf](https://www.ageas.co.uk/documents/ICS_Customer_of_the_Future-22-WEB_FINAL_JUNE_2016.pdf).
- 'Illiterate Adults in England'.  
[http://www.literacytrust.org.uk/adult\\_literacy/illiterate\\_adults\\_in\\_england](http://www.literacytrust.org.uk/adult_literacy/illiterate_adults_in_england).
- 'Internet Users in the UK - Office for National Statistics'.  
<https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2016>.
- 'Introducing the Definitive Guide to Social, Mobile Customer Service'.  
<http://www.conversocial.com/blog/the-definitive-guide-to-social-mobile-customer-service>.
- 'Is Your Contact Centre Future Ready? Asks Aspect - Contact-Centres.com'. <http://contact-centres.com/aspect-software-is-your-contact-centre-future-ready/>.
- 'Main Findings - UK Social Media Demographics 2016'. *We Are Flint*.  
<https://weareflint.co.uk/uk-social-media-demographics-2016-main-findings/>.
- 'Messenger Platform Gets an Update!' <https://www.facebook.com/notes/david-marcus/messenger-platform-gets-an-update/10155014173359148>.
- 'National Population Projections - Office for National Statistics'.  
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2015-10-29>.
- 'PowerPoint Presentation - 8c6170\_9a79841ff2554f0e98cbd5fb39ae15c3.pdf'.  
[https://media.wix.com/ugd/8c6170\\_9a79841ff2554f0e98cbd5fb39ae15c3.pdf](https://media.wix.com/ugd/8c6170_9a79841ff2554f0e98cbd5fb39ae15c3.pdf).
- 'Review Culture Improves Businesses for the Benefit of Customers | The New Economy'.  
<http://www.theneweconomy.com/business/review-culture-improves-businesses-for-the-benefit-of-customers>.
- 'RIIO Electricity Distribution Annual Report 2015-16 | Ofgem'.  
<https://www.ofgem.gov.uk/publications-and-updates/rrio-electricity-distribution-annual-report-2015-16>.
- 'Serving an Ageing Population'. <https://www.instituteofcustomerservice.com/research-insight/customer-service-news/article/serving-an-ageing-population>.
- 'Serving an Ageing Population'. <https://www.instituteofcustomerservice.com/media-centre/customer-service-news/article/serving-an-ageing-population>.
- 'The Call Center of the Future'. <http://www.crmsearch.com/call-center-of-the-future.php>.
- 'The Latest UK Social Media Statistics for 2016 - Avocado Social'.  
<http://avocadosocial.com/the-latest-uk-social-media-statistics-for-2016/>.
- 'The Post-Millennials Born in the Early 2000s, Also Known as the iGeneration', n.d.
- 'The-Contact-Center-of-the-Future.pdf'. <http://www-935.ibm.com/services/us/gbs/bus/pdf/the-contact-center-of-the-future.pdf>.
- 'The-Contact-Center-of-the-Future.pdf'. <http://www-935.ibm.com/services/us/gbs/bus/pdf/the-contact-center-of-the-future.pdf>.
- 'Those Born between 1964 and the Mid-1980s', n.d.
- 'Those Born between the Mid-1980s and 2000 Who Reached Young Adulthood in the Early 21st Century', n.d.
- 'Top 10 Trends: The Future of Customer Service | ServiceNow'.  
<https://www.servicenow.com/lpayr/top-10-trends-the-future-of-customer-service.html>.
- 'TV Sports, Entertainment Get UK Twitterers Typing - eMarketer'.  
<https://www.emarketer.com/Article/TV-Sports-Entertainment-UK-Twitterers-Typing/1012370>.
- 'UK Customer Satisfaction Survey, Insights & Sector Report'.  
<https://www.instituteofcustomerservice.com/research-insight/uk-customer-satisfaction-index>.
- 'UKCSI: The State of Customer Satisfaction in the UK - July 2016'.  
<https://www.instituteofcustomerservice.com/research-insight/research-library/ukcsi-the-state-of-customer-satisfaction-in-the-uk-july-2016>.
- 'Visual IVR by Jacada'. <http://www.visual-ivr.com/>.

- 'Voice ID | HSBC UK'. <https://www.hsbc.co.uk/1/2/contact-and-support/banking-made-easy/voice-id>.
- 'What 4G Means for Business'. <http://www.information-age.com/what-4g-means-for-business-2129033/>.
- 'What Is Workforce Management'. <https://www.callcentrehelper.com/what-is-workforce-management-57249.htm>.
- 'Why Facebook and Microsoft Say Chatbots Are the Talk of the Town | Technology | The Guardian'. <https://www.theguardian.com/technology/2016/sep/18/chatbots-talk-town-interact-humans-technology-silicon-valley>.
- 'Why Visual IVR Is a Bad Idea - Aspect Blogs'. <http://blogs.aspect.com/why-visual-ivr-is-a-bad-idea/>.