The Future of Customer Experience (CX) in a 5G World

How 5G is powering the future of customer engagement

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Summary

Although the 5G transformation begins with global Communications Service Providers (CSPs), 5G will evolve much more than the telco space. 5G-powered AI and intelligent automation will touch every enterprise, every vertical, it will influence how we buy, connect, consume, it will touch everyone, and it will be revolutionary. Yet, the story we so often hear around 5G relegates this transformation to nothing more than increased speed and bandwidth, but that only represents the beginning.

The role that AI and analytics can play at the network level, coupled with emerging technologies poised to enhance customer engagement, will also gain further prominence as 5G takes hold. By delivering proactive, hyper-personalized engagement that meets customers' real-time and personalized demands, they will more easily differentiate their content and services. Those CSPs that embrace and quickly adopt the emerging cloud-based technologies will enable frictionless experiences, personalization, and automation, and therefore, create long-term sustainability as 5G rapidly becomes commoditized.

> **"Omdia estimates that there will be 1.9 billion 5G connections by 2024, covering 40% of the global population or about 2.7 billion people. The impact of 5G will be enormous on society and businesses."**

In the quest to understand the impact of 5G on the customer experience and the challenges and opportunities CSPs face when enabling a 5G-enabled customer experience, Omdia interviewed seven executives from global communications service providers (CSPs) in the areas of digital strategy, customer journey design, and customer experience. They discussed their strategies for customer engagement, their progress around 5G rollouts, and how 5G will serve as the foundation for next-generation customer experience that will be delivered through emerging technologies that enable frictionless experiences, hyper-personalization, and automation. This whitepaper highlights the insights from those discussions.

The race to next-level CX runs through 5G

5G is poised to deliver engagement that meets customers' real-time and personalized demands while creating a frictionless customer experience. 5G's successful future must first start with a strong foundation—one that focuses on network deployment, maintenance, and fulfillment of customer engagement activities. To thrive in this real-time, right-time future, CSPs must evaluate their operating models, automate, optimize, and add agility to their processes through robotics, conversational AI, AR, data integration and democratization, and end-to-end automation.

As CSPs invest billions of dollars modernizing and upgrading their networks to 5G, an opportunity presents itself for CSPs to reposition themselves as leaders not only in terms of network speeds, but also in terms of customer experience. The introduction of 5G is creating a paradigm shift for some CSPs that is prompting them to think differently about engaging with customers and serving them in new ways that will enhance relationships, improve loyalty, and increase monetization.

In the journey to optimize customer engagement, CSPs are undergoing a radical change to better meet the expectations and digital needs of their customers. Staying relevant with customers requires CSPs to gain AI-enabled real-time insights to accurately determine who the users are, understand their behaviors

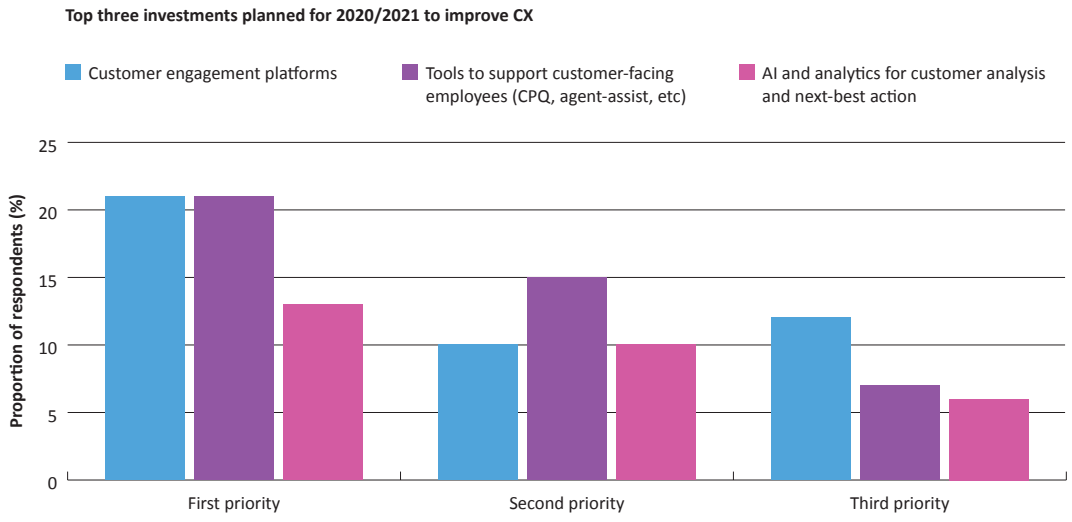
and preferences to engage with them in personalized ways at the right time, right place, and through the channel or manner they prefer. It also requires automating routine interactions via all relevant channels to create frictionless customer experiences.

> **We are trying to transform our processes and our customer experience based on real-time relationships with customers and 5G is the way we will do it.**
>
> *a British multinational CSP*

In fact, Omdia sees CSPs prioritizing CX orchestration and engagement technologies in 2020/2021, which will prepare them to dynamically leverage 5G architecture to enhance CX with real-time personalization. According to an ICT Enterprise Insights study by Omdia, CSPs are prioritizing investments in real-time customer orchestration technologies and enhanced functional support for customer-facing operations (applications that support customer-facing employees outside the contact center with capabilities that enable real-time insights and next-best actions, i.e., mobile alerts about customer preferences) (see Figure 1).

When asked about the top three investments they plan to make to improve the customer experience over the next 18 months, a combined 43% cited real-time customer engagement platforms in their top three investments, another 43% said tools to support customer-facing employees, and 29% said AI and analytics for customer analysis and next-best action.

Figure 1: CSPs prioritize real-time customer engagement orchestration investments



Source: Omdia

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The introduction of these customer orchestration technologies on top of 5G networks will present CSPs with more opportunities around fast-moving, streaming data, which will drive intelligent connectivity. Gaining such real-time customer insights will improve their understanding of their customers from all facets and enable them to engage with customers in hyper-personalized ways.

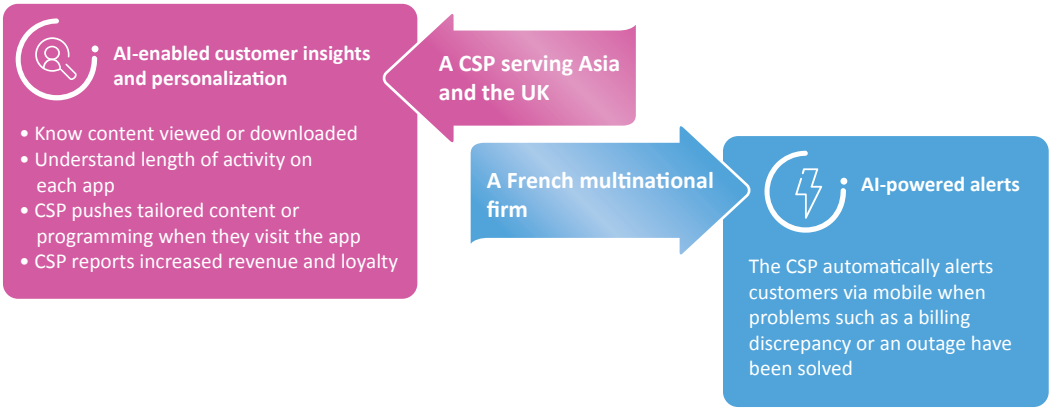
For example, the Hong Kong-based CSP knows when and where its customers travel and can push a roaming subscription to them based on their prior viewing habits through the streaming service app. 5G-enabled, cloud-based network slicing allows the CSP to then act on real-time insights on content being streamed and from which platform (Netflix, Disney Plus, Amazon).

> **“There are literally hundreds of applications that 5G will enable to support personalized enterprise and customer use cases.”**
>
> *a US-based CSP*

Many CSPs interviewed said they are already steering their 5G deployments paving the way to personalization and driving customer-facing technology investments (see Figure 2). In fact, a US-based CSP is overseeing hundreds of new projects aimed at enabling personalized, omnichannel engagement.

However, to achieve desired outcomes, CSPs need to eliminate data silos, and integrate with enterprise systems through API-first cloud native services. Then, 5G-enabled networks essentially will serve as a bridge to maximize sales opportunities and deliver right-time, right-place interactions, content, and offers. Using AI in dynamic network slicing, for example, will prove critical to 5G CSP operators as it enables them to offer different qualities of service for both subscribers and business customers. This allows operators to better monetize their infrastructure by offering multiple service tiers at different prices.

Figure 2: CSPs are on the path toward personalization



Source: Omdia

5G will unleash AI and automation

Processing speeds will enable real-time, proactive decision-making

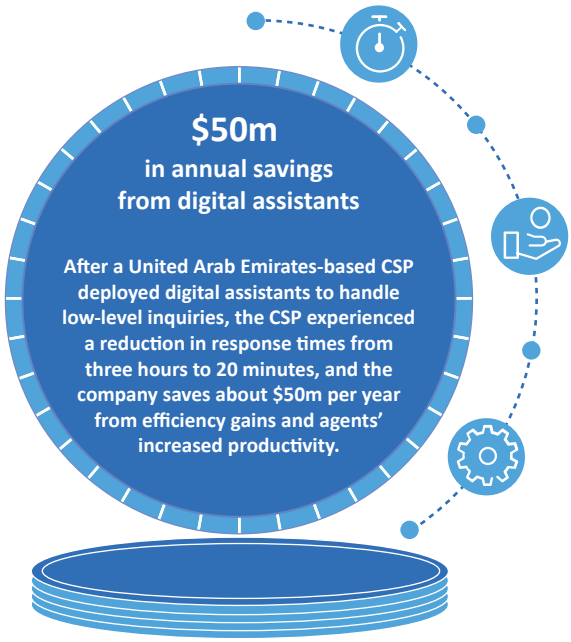
AI holds tremendous promise for so many applications, but processing speed has been a limiting factor against more widespread proliferation. With the advent of 5G wireless technology, this processing limitation will be less of a factor going forward. Put simply, 5G reduces latency of applications and services. AI can help CSPs identify and react to problems as well as propose the right service at the right time based on analyzing customer data.

In addition to increasing employee engagement and satisfaction with having accurate, real-time data, the resulting personalized service can help companies develop products and services aligned to what customers want. The Hong Kong-based CSP, for example, applies AI to understand which network apps customers have downloaded. When they enter the app, the CSP offers personalized gaming services, content subscriptions, and peer-to-peer streaming.

5G-enabled AI, therefore, will create new, exciting opportunities for CSPs to rethink how they monetize their networks, create new revenue streams, and engage with customers proactively and in personalized ways. But doing so will require new approaches and technology deployments that are dynamically enabled by 5G.

It will pave the way for new paradigms of network operation and service creation by enabling differentiated services at specific locations. AI and machine learning analyze volume-heavy data streams, in real time, to provide the insights needed for data-driven decision-making to enable proactive notification to customers. This is helping CSPs drive unique use cases and realize desired outcomes. A United Arab Emirates CSP, for example, is reporting substantial savings (see Figure 3).

Figure 3: Digital assistants yield huge savings and efficiency gains



Source: Omdia

Personalized, right-time engagement becomes paramount

Conversational AI, digital assistants: from "nice-to-have" to a necessity

As communication becomes constant, the future of digital interactions will give way to a more familiar interface: conversation. AI-powered digital virtual assistants can understand the intent of a question, ask clarifying questions, personalize responses based on context, and answer common inquiries. Conversational AI has the potential to change how enterprises conduct business, as the practical applications of AI for improving customer experience and resolving challenges are realized. Most CSPs also plan to equip their live agents with AI-powered agent assist (when AI shadows the human agent and automatically provides real-time response guidance) to achieve more tailored responses and rapid resolution.

According to the results of Omdia's *ICT Enterprise Insights 2019/20 – Global: IoT, Cloud, AI, and 5G*, which surveyed 4,800 IT professionals about their specific investment plans for AI over the next 12 to 18 months, 24% of CSPs reported having fully deployed digital assistants/chatbots, 33% said they are trialing them, and 23% are in the planning stage.

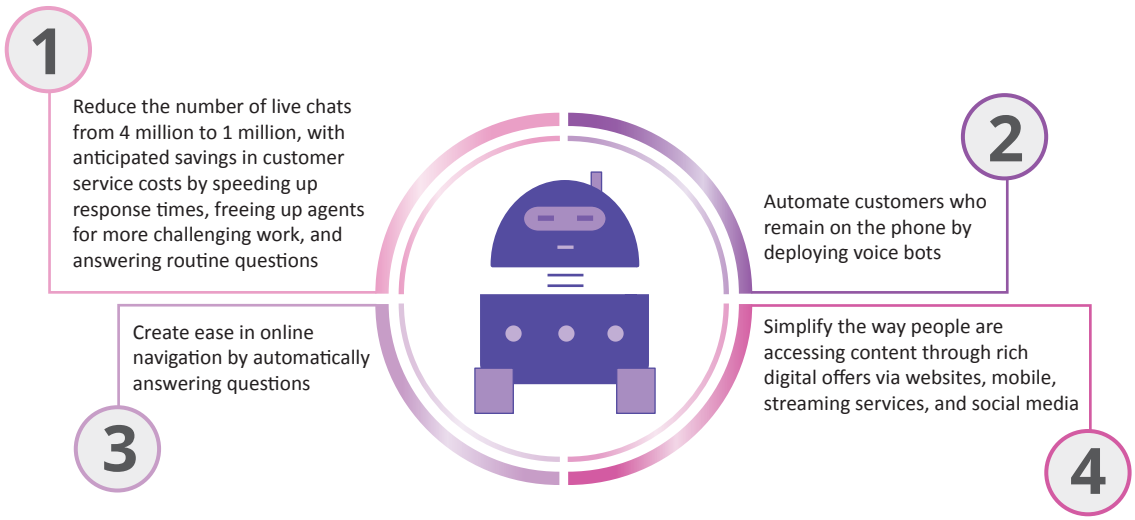
The CSPs interviewed for this research align with those results. They have either already deployed virtual assistants or have placed them on their roadmaps and dedicated for specific use cases. The British multinational CSP, for example, has launched chatbots on its website and in WhatsApp to answer queries (see Figure 4). Over the next fiscal year, the company plans to evolve the digital assistants to enable more transactional interactions and manage sales.

Many planned use cases aim to triage the massive number of support requests for installation, as well as setup, troubleshooting, and maintenance, which often overwhelm customer service centers. Using AI in conjunction with a 5G network, operators can intuitively meet customers where they are and implement self-service capabilities. AI-powered virtual assistants enable 24/7 availability, real-time response, lower operating costs, and the ability to focus agents on higher-value tasks.

CSPs also gain valuable data about a customer. By combining existing customer data streams and AI with the data collected through conversational AI, information can be collated, filtered, analyzed, and acted upon. CSPs will be better informed about how to engage customers. Such insights derived from conversational AI can help CSPs understand how their customers are interacting and the factors that are driving their behavior. This "conversational intelligence" leverages data from customer interactions to identify key behaviors that impact outcomes and replicate them across future conversations to improve performance and make informed decisions. For example, a CSP may discover that low-level queries are better handled by conversational AI interfaces rather than live agents. Also, having the flexibility to prioritize use cases for when to assign agents to handle customer interactions versus digital assistants, is also important.

Over time, these collected insights from conversational intelligence will lead to right-time marketing as CSPs gain valuable behavioral information on customers and can respond with tailored offers. By gaining real-time descriptive insights on how customers behave, CSPs can increase revenue as customers and prospects are more likely to purchase when offers are personalized and timed for right-time communications.

Figure 4: A UK-based CSP aims to achieve four primary outcomes via digital assistants



Source: Omdia

Customer-facing interactions will become "channel-less" and frictionless

Intelligent automation, AI-powered "agent assist" boosts efficiencies and customer retention

A common mistake enterprises make is thinking of the customer journey as a channel journey or product journey. This methodology interrupts the customer experience as they navigate across enterprises and often introduces friction along the way. If you keep looking at these narrow perspectives, you will draw the wrong conclusion.

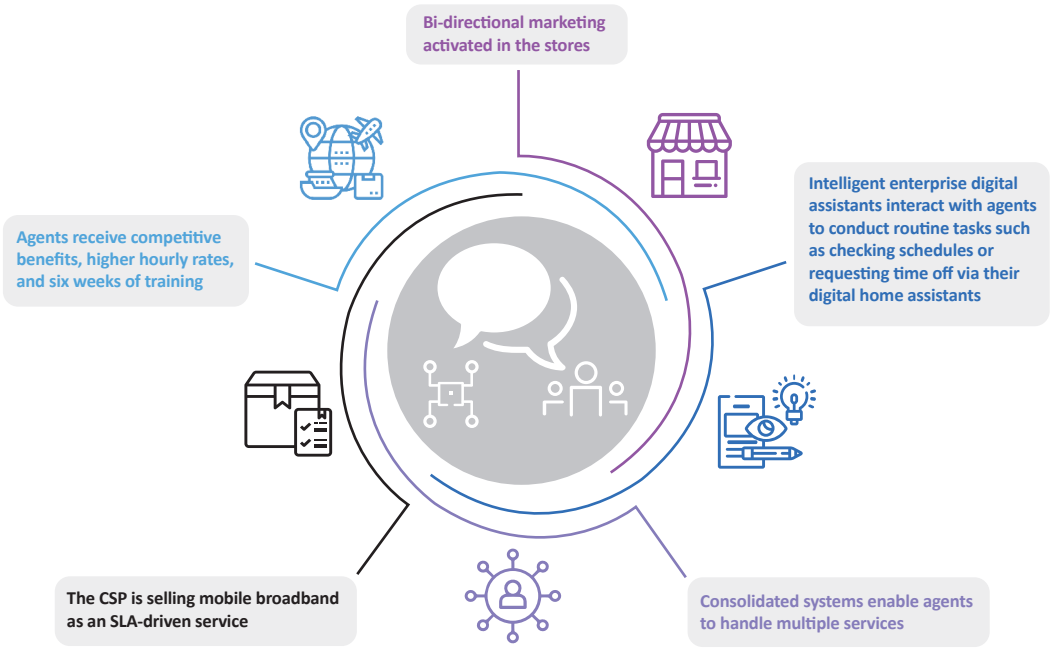
Emerging technologies are helping to close gaps along customers' journeys to create seamless experiences. The British multinational CSP, for example, is applying intelligent automation to eliminate the process of manually calling customers impacted by outages, for example. Instead of receiving a call, an SMS informs them and sends a customized offer like a bonus gigabyte to make up for the outage. The intelligence is achieved via a recognition engine integrated into the billing system which proactively informs the customer that the problem has been solved.

AI-enabled agent support technology is designed to prepare the live agent to anticipate the customer's inquiries or needs prior to and during the live agent customer engagement, get the customer to the best available agent to field the call, and deliver information to that agent, which will facilitate a more rapid and accurate solution to meet the customer's needs. This has been proven to improve both the user experience as well as increase agent satisfaction and retention.

This is true for the Hong Kong-based CSP, which is repositioning its customer-facing agents on complex or high-value interactions and automating routine transactions. The goal is not to eliminate human touch altogether, but to assign digital assistants to handle routine queries to reduce tedious tasks performed by agents. This has been shown to improve the customer experience and allow agents to focus on more complex queries and higher-value tasks. Also, the French multinational CSP anticipates that digitizing calls through conversational IVR and deploying digital assistants to assist customers with website navigation, the company will simplify the way people are interacting with the brand as well as accessing content. "It creates value from a customer loyalty perspective," said the CSP.

Such digitization in customer support can serve as a differentiator that will enhance customer experience and NPS in what will likely become a commoditized 5G market. For example, future analytics-based digital support centers are already in use by some of the CSPs, including a US-based CSP that reports extensive use of analytics as it creates next-generation contact centers (see Figure 5).

Figure 5: A US-based CSP is piloting a next-generation contact center



Source: Omdia

Asynchronous messaging channels help improve customer and agent retention

The COVID-19 crisis has presented a moment of truth for companies and brands in how well they harness their communications with customers and interaction channels. Those that pivoted quickly to make the most of that time to connect with their customers in meaningful ways likely boosted customer loyalty and reduced revenue losses or churn.

Companies that turned to messaging channels like WhatsApp, or chat, and social media as channels for engaging with their customers, have seen huge spikes in volume and support. That represents a de facto way that customers want to engage with the brands that service them.

> **"It's about being able to communicate with our customers on any channel they are most comfortable with. We are starting to blur lines with chat to use the communications vehicle that customers are most comfortable with."**
>
> *a Canadian-based CSP*

Rich Communications Services (RCS), a protocol that rolls up capabilities from Facebook Messenger, WhatsApp, and iMessage into one platform, will advance in a 5G environment. RCS enables CSPs to

offer asynchronous messaging so that a customer may start an engagement via a voice channel or from a website and continue minutes or hours afterward in a text-based channel. This reduces call volumes while giving customers the freedom and flexibility to interact at their own pace and it provides customer-facing employees or digital assistants the context of previous interactions so they can respond relevantly. Together, 5G and RCS allow marketers and agents to deploy digital experiences in real time. Therefore, a customer receiving an alert regarding a change in service or programming, could check on the status from within the message itself.

With 5G, biometric authentication transcends

Authentication is a cornerstone of cybersecurity because it is the means of verifying that individuals are who they claim to be. However, attacks on traditional authentication methods such as usernames and passwords have increased significantly in recent years. This is a direct result of the growing number of data breaches that have taken place.

Biometric authentication is being used with greater frequency as it provides additional security while placing the fewest requirements on the user. Some of the most prevalent examples of biometrics authentication solutions allow users to authenticate themselves through unique physical characteristics such as fingerprints, facial scans, voice recognition, and eye scans.

> **“Customers’ data is being further safeguarded with the advent of 5G.”**
>
> *a US-based CSP*

CSPs are ramping up investments in cutting-edge authentication techniques, such as biometric technology. Biometrics allows moving from the detection stage of the fraud management cycle to the preventative state, allowing for much greater financial savings, at a much lower operational cost because biometrics can identify a suspicious behavior before the fraud is committed.

From voice biometrics in the contact center to behavioral biometrics in digital channels, biometric authentication is now enabling a seamless customer experience with invisible security. For example, instead of the frustration of answering security questions or remembering PINs, voice biometrics can authenticate customers within the first few seconds of a conversation, delivering tangible benefits including increasing customer satisfaction, reducing average call-handling time, and reducing fraud losses.

Conclusion

5G represents a route to more personalized and agile service provision beyond gains in low latency and capacity. The CSPs interviewed for this research report reduced expenses, increased efficiency gains, and as a result, they anticipate increases in loyalty and NPS, as well as market share, for the long term.

As the global race to 5G advances, enterprises will need to continue their digital transformation journeys. The three key takeaways for any organization looking to make an impact are:

- Every customer interaction should be **frictionless, personalized, and automated.**
- Deploying emerging CX applications that can easily integrate into enterprise systems, providing the ability to **anticipate potential problems and orchestrate customer outreach** is a best practice.
- **Personalized, right-time engagement** becomes paramount.

CSPs that can quickly configure to the dynamic requirements of 5G by ridding their data silos and replacing outdated legacy systems with cloud-based applications, APIs, and open-source approaches for deeper integration with enterprise systems, will win the race to differentiate with CX. They will elevate their brand and positioning as leaders not only in network experience, but also the CX. This shift to CX will serve as a sustainable competitive differentiator even after other CSPs launch their own 5G-enabled products and services. As evidenced by the global interviews for this research, the carriers that put the customer at the center of meaningful engagement will be the ones to make the most of 5G.

Appendix

Methodology

During the months of February and March 2020, Omdia interviewed leaders from CSPs from Canada, the United Kingdom, France, Hong Kong, United Arab Emirates, and the United States to determine their progress in deploying 5G networks and how that will serve as the springboard for launching emerging technologies like AI, intelligent automation, analytics, and AR/VR.

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Omdia consulting

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We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help your company identify future trends and opportunities.

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