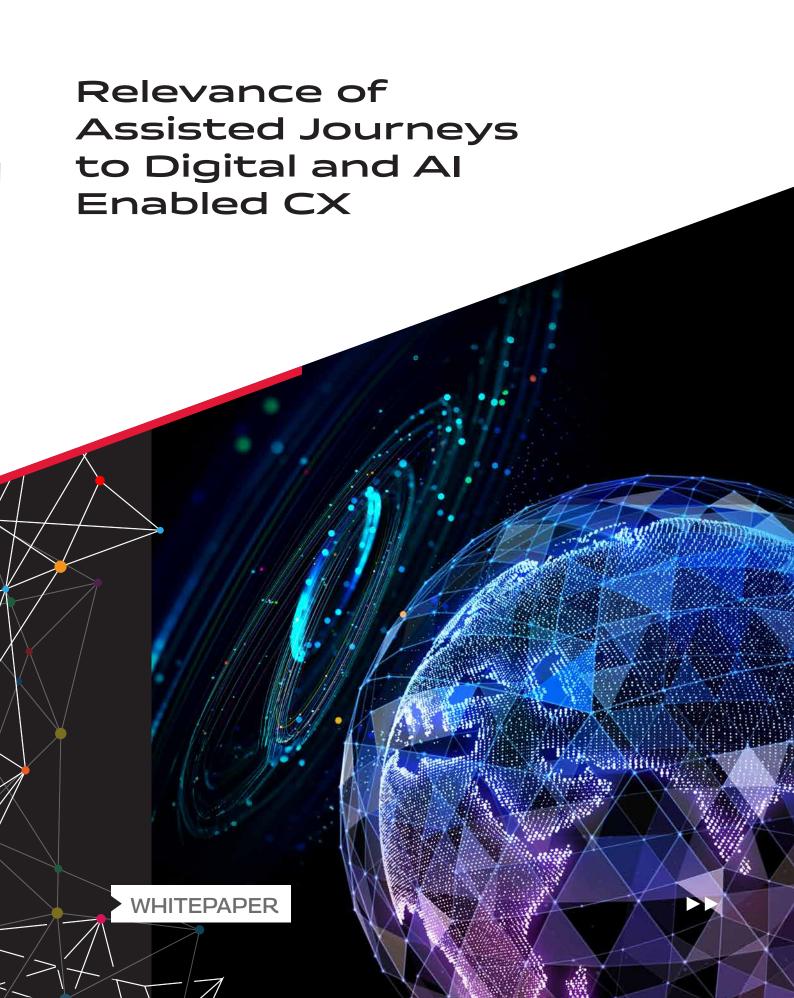
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Abstract

This whitepaper explores the key technology and industry trends on customer expectations and experience management in the telecom sector and reflects upon the relevance of agent assisted channels, even in today's age of digital and AI. It provides our perspective on how agent assisted journeys can complement present day digital and self-service channels, enabling telcos to implement comprehensive, well-balanced, and successful customer experience strategies and solutions in the market.

Key Takeaways

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Introduction

The telecommunications (telecom) industry is one of the most dynamic and fast-evolving sectors globally. With increasing competition each day, customer expectations are also rising. This is driving the need for Telcos to provide not only seamless but differentiated customer experiences.

As digital technologies continue to transform the way customers interact with businesses, telcos are exploring new channels such as mobile apps, social media, chatbots, and self-service Applications to provide faster and innovative customer service. To stay relevant as well as competitive in such dynamic nature of the industry, operators must respond in a quick yet effective manner to rapidly evolving market needs, trends and dynamics. Thus, it is becoming crucial for Telcos to not only innovate their service offerings but also expand their value propositions and business models.

The motivation to reduce the cost to serve customers is driving the shift for customer experience towards do it yourself (DIY), self-help, or self-service models, thereby limiting or eliminating agent or customer care interactions. While digital native is being considered to be "The New Normal", telcos must anticipate the risks associated with this approach as well. In subsequent sections of this whitepaper, we have delved into the relevance of agent-assisted telecom journeys in today's age of digital and AI, and how they can be used to complement the digital or self-service channels to provide comprehensive, seamless and personalized customer journeys. We have also then shared our perspectives on how telcos can try achieving a fine balance between human interactions viz-a-viz autonomous approaches and how Tech Mahindra can help with the same.

Digitization Industry Trends

With respect to owning smartphones and accessing mobile apps in general, the dispersion is seen to be highest among millennials and youth categories of customers. When it comes to managing their services, most customers are increasingly searching for answers themselves through digital channels, such as websites, mobile apps, chatbots or social media – whether that is for finding information, resolving their issues, or purchasing products and services. Add to this the evolution of generative AI to further explore services with contextual inputs and get things done with comprehensive back-end integrations. Moreover, in recent years, the pandemic has changed the way people buy, subscribe, and manage services. Online transactions have soared and are being adopted by more and more customers. Figure 1 depicts the end-to-end digital customer journeys generally prevalent today.

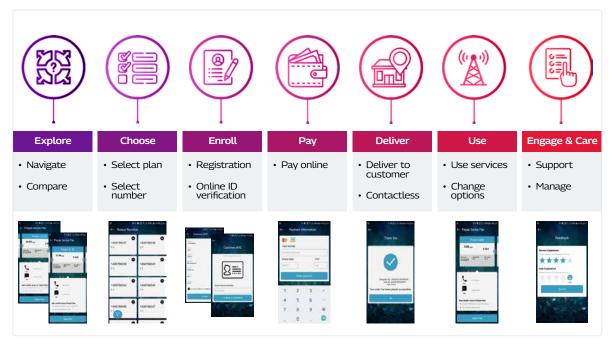


Figure 1: Digital Customer Journey

Some of the top telcos are offering new brands which are completely digital and agentless. Most of them are designed for specific categories of customers, typically the youth or GenZ-ers, to enable a completely autonomous experience. Figure 2 highlights a few examples:



Figure 2 Digital Strategies by Some Top Telcos of the World

In the above examples, we see that large operators have typically created a separate digital brand or MVNO targeting a specific segment of customers to offer 100% digital experiences. In these cases, chat-bots, FAQs and DIY or self-serve facilities have been provided to manage and resolve most of the customer queries or grievances. While these digital brands can serve as excellent testing grounds for digital transformation and innovation, the original or flagship brands still operate agent supported journeys and customer care processes. As of now, more of this phenomenon is being seen across the more developed telecom markets, and predominantly so for the consumer or retail segment.

The Digital CX

Digital CX is the enabling interactions required by the customers across learn, buy, get, use, pay, and support journeys in a complete digital manner. It comprises of the CX/UX journey map, intuitive UI design, decoupled and API based back-end integrations enabled with coherent data that ensures "customers are able to get things done" that they intend to.

Why Digital CX?

- 1. Accessibility: Customers demand anytime, anywhere customer service.
- 2. **NPS Boost:** Customers expect Telcos to deliver the highest level of digital interaction, convenience and personalization across all channels.
- 3. **Revenue Growth:** Telcos can aim at increasing customer stickiness and wallet share by providing intuitive and delightful customer experiences, value additions and options.
- 4. **Transform Data to Insights:** With digital enablement, Telcos have more access to customer data which can be utilized for predictive analysis and contextual offerings leading to data driven marketing.
- 5. **Market Share:** Telcos can also enhance their reach to attract new or potential customers through various super apps.
- 6. **Low Cost to Serve :** Digital access points for customers, seamless and comprehensive chat, self-service tools, social media support are expected to significantly bring down (or perhaps even eliminate the need for sales and care agents and physical stores) cost of operations.

Key Enablers for Digital CX

The paradigm shift towards the digital CX will demand a shift in the areas of technology, process improvements as well as infrastructure. Here are some of the key enablers of bringing a 100% digital native experience.



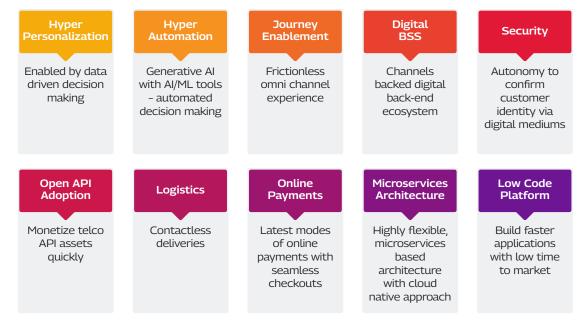


Figure 3 Key Enablers for Digital CX

Trade-offs For Going 100% Digital CX?

While we observe that customers today are demanding more and more self-service options, it may not be possible to go completely Agentless. There are emotional, cultural and situational considerations that Telcos need to keep in mind. Below are some trade-offs to be considered while delving into a 100% Digital CX strategy.

Personal touch / Empathy

- Traditionally, agents have always been there to help consumers with any queries, issues, guidance, or support required. Be it about their payment options, resolving a service-related issue, modifying their services and so on, some things just feel better to be coming from an actual human as compared to an automated machine. A little empathy goes a long way.
- For use, such as collections or settlements, each interaction the end customer has with an agent must evoke a sense of mutual understanding and positive emotions, something that may not be perceived through self-service channels or a chat-bot.

Customer segmentation driving digital adoption

- Age is also an equally important parameter to consider the requirements of both agents assisted vis-a-vis digital journeys.
- Out of 1.1 billion connections, Smartphone penetration in India as of 2023 is 70 % [4]. Remaining retail consumers still use traditional keypad based mobile devices with limited or no availability of digital channels.
- Most of these customers belong to the older generation. These customers are generally not 'digital savvy', they prefer to speak to a human to resolve their issues. This helps them build trust and relationship with the brand.

Developing countries challenges

Demography - In countries like India there are diverse cultures and multilingual complex demographics along with geographic segregation in terms of rural and urban areas. Many customers primarily in rural areas would prefer an Agent to help them solve their problems and assist them as they may not be able to utilize the digital channels due to language barriers.

Relevance of Agent Assisted Journeys

Below are some reasons why agent-assisted journeys may still be useful in today's digital world:

Complex issues	Some customer issues may be too complex to be resolved through self-service channels & may require the expertise of a live agent.
Personalization	Live agents can provide a personalized experience by understanding the customer's needs and providing fitted solutions as they will be able to comprehend better in situations where the customer may be using local dialect or is new to the region/ country/ culture.
Human touch	Some customers may prefer to interact with a live person, as it can provide a sense of reassurance and trust.
Fraud detection	Live agents can play a key role in detecting and preventing fraud by verifying the customer's identity and detecting suspicious behavior.
Sales and upsell	Live agents can help cross-sell or upsell products or services, by providing recommendations best suited to customer's patterns.
Segment specific scenarios	While B2C can be driven in a more digital manner, B2B business is more relationship driven right from choosing the appropriate offering, designing solution, negotiations and service management. The degree of digitization has been a trade-off between the ability to create and offer standardized products/contracts V/S the ability to support custom needs driven by business models.

Table 1 Cases where Agent-Assisted Customer Journeys may be useful or preferred

According to Gartner research, only 47% of what happens in a live service interaction determines the customer's perception of that specific encounter. The rest of it is often determined by the remnants of the past. The research shows 53% of the customer's service rating is driven by something that happened before the actual interaction [3].

Customers have emotional baggage that affects their perspective of the services

Customer baggage isn't pretty, but that's the reality that service organizations have to face

To deal with such emotional baggage, it requires human involvement and empathy. Perhaps, this is where agent assistance systems can provide full insights about the customer and suggestions in real-time which can aid the agent to resolve customer queries or requirements better, resulting in customer delight and stickiness.

Digital V/S Agent Assisted CX - Our Perspective

In times to come, we can envisage that people and enterprises will be able to simply avail and manage the services that they require without possibly interacting with a real human from the provider's side. While a large percentage of basic transactions or tasks can happen digitally, agent-assisted services are likely to not totally become extinct, at least not in the near future.

For telcos, the balance between automation v/s agent-assistance may seem daunting at times. There may be many what-if scenarios that need to be taken care of as shown in Figure 4.



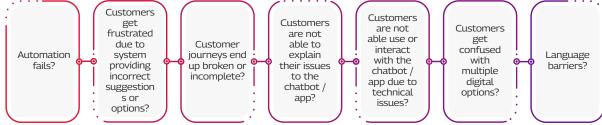


Figure 4 Key Scenarios to Consider for Planning or Implementing CX Tool or Strategy

These may have an impact on the overall customer experience and may even result in loss of business if customers are not able to find or purchase the products and services that they need. In such cases, the use of data analytics and AI-ML tools can help augment the capabilities of customer engagement systems and agents to meet the customer demands with greater efficacy. These can help analyze customer data and predict the customer's next likely action, almost in real-time. This approach can help agents anticipate the customer's needs and provide personalized recommendations or solutions proactively. These can also help agents identify potential issues before they occur, allowing agents to take timely actions.

The Way Forward

While customer self-service and CX digitization have become key customer engagement pillars for many brands, contact centers and agents are not going to completely go away anytime soon. One size doesn't fit all. The key is to leverage the best of both worlds and adapt a blended and complementary approach. The approach can be based on factors such as geography, culture, market, customer segment, and line of business, in alignment with the vision and mission of the respective telco. Combining human interaction with the latest technology is what's going to help Telcos deliver the quality of service that consumers expect and drive the business towards success by reducing the cost to serve.

Automation and AI/ML tools can certainly aid assisted journeys in making more personalized and contextualized service discussions with the customers as compared to unsolicited machine-based NBA/ NBO options. Embracing such digital tools can thus take off some burden from the agents thereby improving agent productivity, ability cross-sell or up-sell and reducing costs to serve.

How can Tech Mahindra help

At Tech Mahindra, as a system integrator we understand the importance of both agent-assisted and unassisted journeys required by Telcos today. Our solutions are designed to provide a seamless and personalized customer experience across all channels. By leveraging industry best practices, our catalog of offerings can help telcos to achieve the CX success via any channel. We have built dedicated internal capabilities in areas such as digital BSS, generative AI, advanced data and analytics, AI-Ops and ML to help telcos take a leap towards CX transformation.

Tech Mahindra has a focused competency group delivering customer experience and BSS transformation solutions. Below are some of our offerings that can be used in conjunction with the existing telco stack and would help telcos solve specific issues and elevate the CX.

1. Digital Transformation Consulting, Customer Experience, User Experience, Front-End and UI Development, API and Microservices Solutions.

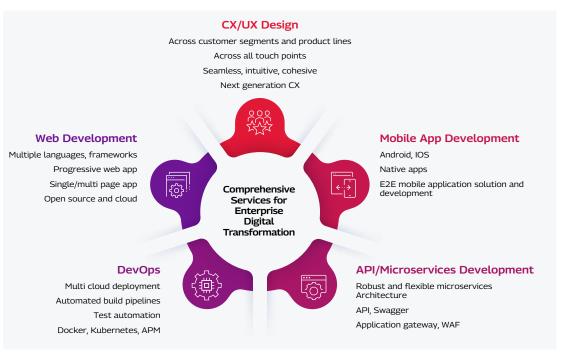


Figure 5: TechM Capabilities for Digital Transformation



- **a. UX and UI:** Create UI solutions that solve business problems for the clients.
- b. Web and Mobile App Development: Dedicated web application development capability with custom development offering using all the new age technologies such as Angular, React JS, View JS, Node JS, etc. with low code/no code approach.
- c. API and Microservices Based Solutions: Help telcos with Legacy Modernization and Application Rationalization. This can be utilized for both assisted and un-assisted journeys, to decouple the front end from backend, improve the overall experience and reduce the dependencies from the backend applications.
- 2. **BlueMarbleTM** BlueMarble is a cloud-native, microservices-based omnichannel solution enabling digital customer journeys encompassing entire order to cash process [5]
 - a. Supports the entire digital customer lifecycle from discovery, shopping, ordering, and billing to payment and care.
 - Offers Assisted and Unassisted Channels for retail as well as enterprise customers.
 - c. Commerce journey enablement with a rich library of micro-services and TM Forum certified digital assets (Open API Platinum Badge).

3. Generative AI Capabilities to Reduce Overall Cost to Serve

With a holistic view of building AI capabilities, we help our clients to achieve hyper-automation by leveraging the power of emerging technologies in the field of AI. This will drive significant improvements in CX and agent efficiency by solving challenges of high cost of operation, turn-around time, and volume of emails.

a. Generative AI for Agents and Unassisted Journeys

Generative AI shows promise for customer service management by bringing automation for agents and unassisted customer journeys. It can provide capabilities like LLM powered chat/ call handling, information / entity extraction, auto response, sentiment, and intent based queue management for enhanced self-help.

In terms of Agent Assistance, it can enable capabilities like Chat or Call Summarization, Information from issue description or Email, and LLM based response generation or enhancement. These helps minimize agent frustration and time consumption by readily delivering customer query solutions at their fingertips, streamlining the knowledge retrieval process.

b. AmplifAI

TechM's AmplifAI solution provides a well-defined approach & framework for AIOps led transformation of IT and business operations by leveraging the existing tools investments and bringing additional capabilities from our IPs/Accelerators and from our partner solutions.

The solution amplifies the efficiency of the agents and support engineers with a single pane integrated view with all the contextual information and tools to resolve issues, along with team collaboration and generative AI capabilities for root cause, assistance, and code.



Below is a snapshot of the key capabilities we have enabled through our transformation engagements with our customers.



Figure 6 Key Capabilities Enabled During Some of Our CX Transformation Projects

To know more on how Tech Mahindra can help you achieve the best blend and balance of digital v/s agent-assisted channels or for any other queries, please reach out to us at DBSS.NXT@TechMahindra.com.

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Abbreviations

All Artificial Intelligence API Application Programming Interface B2B Business To Business B2C Business To Customer BSS Business Support Systems CSP Communication Service Provider CSR Customer Service Representative CX Customer Experience DIY Do It Yourself DSP Digital Service Provider eSIM Embedded Subscriber Identity Module FAQ Frequently Asked Questions	Abbreviations	Definition
B2B Business To Business B2C Business To Customer BSS Business Support Systems CSP Communication Service Provider CSR Customer Service Representative CX Customer Experience DIY Do It Yourself DSP Digital Service Provider EMBERGAL Service Provider EMBERGAL Service Provider EMBERGAL Service Provider	Al	Artificial Intelligence
B2C Business To Customer BSS Business Support Systems CSP Communication Service Provider CSR Customer Service Representative CX Customer Experience DIY Do It Yourself DSP Digital Service Provider EMBED EMBED EMBED EMBED Identity Module	API	Application Programming Interface
BSS Business Support Systems CSP Communication Service Provider CSR Customer Service Representative CX Customer Experience DIY Do It Yourself DSP Digital Service Provider eSIM Embedded Subscriber Identity Module	B2B	Business To Business
CSP Communication Service Provider CSR Customer Service Representative CX Customer Experience DIY Do It Yourself DSP Digital Service Provider EMBED EMBED Subscriber Identity Module	B2C	Business To Customer
CSR Customer Service Representative CX Customer Experience DIY Do It Yourself DSP Digital Service Provider eSIM Embedded Subscriber Identity Module	BSS	Business Support Systems
CX Customer Experience DIY Do It Yourself DSP Digital Service Provider eSIM Embedded Subscriber Identity Module	CSP	Communication Service Provider
DIY Do It Yourself DSP Digital Service Provider eSIM Embedded Subscriber Identity Module	CSR	Customer Service Representative
DSP Digital Service Provider eSIM Embedded Subscriber Identity Module	CX	Customer Experience
eSIM Embedded Subscriber Identity Module	DIY	Do It Yourself
	DSP	Digital Service Provider
FAQ Frequently Asked Questions	eSIM	Embedded Subscriber Identity Module
	FAQ	Frequently Asked Questions

Abbreviations	Definition
LOB	Line/s of Business
LLM	Large Language Model
ML	Machine Learning
MVNO	Mobile Virtual Network Operator
NAAS	Network As A Service
NBA	Next Best Action
NBO	Next Best Offer
NLP	Natural Language Processing
OEM	Original Equipment Manufacturer
PoP	Point of Presence
UI	User Interface
UX	User Experience

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Hardik heads Presales and Solutioning function APJI region for Digital BSS practice at Tech Mahindra. He is responsible for driving revenue growth by building value propositions and strategies around BSS modernization/simplification, digital transformation resulting into enhanced CX, reduced costs and enabling new revenue streams for monetization. He has 18+ years of experience working with leading telcos globally in various roles such as business consulting, product management and presales – solutioning.



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