



Perspective

The platform approach to transforming CSP customer experience

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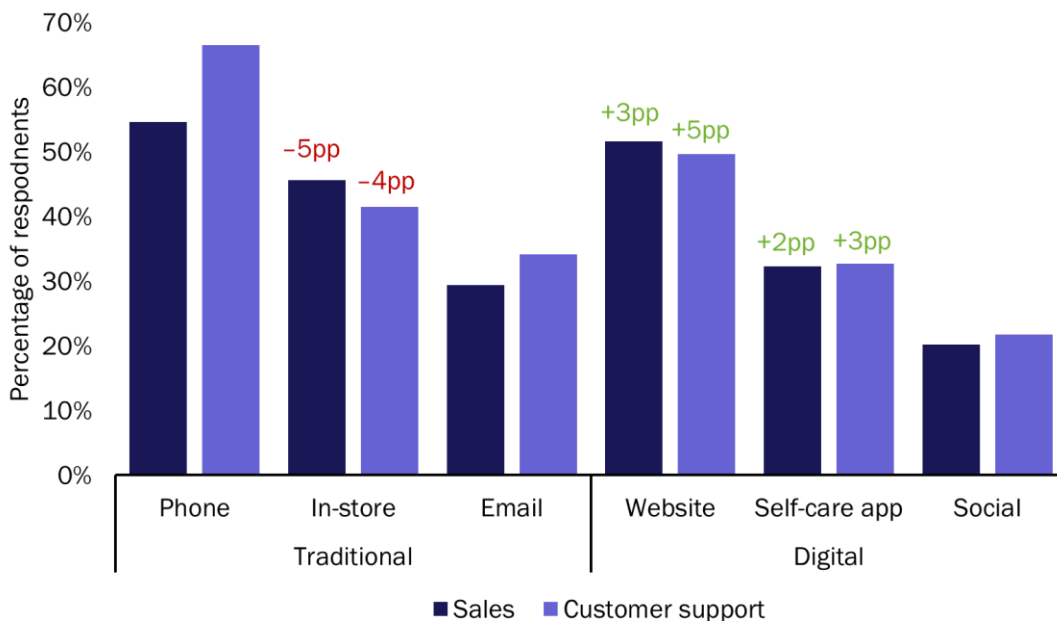
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1. Executive summary

Customer experience is a strategic priority for communications service providers (CSPs) today. Customer behaviour and expectations are undergoing a seismic change; customers have been significantly influenced by their experiences in engaging with digital-native companies such as Amazon and Netflix. Traditional, assisted channels for customer engagement (such as in-person visits to large stores and phone calls to expansive call centres) have long been considered to be a strength of large CSPs, but these are becoming unfashionable because customers are shifting to digital, unassisted channels en masse (Figure 1.1). The COVID-19 pandemic has further accentuated this shift thanks to the social distancing and working-from-home norms that the crisis has brought about.

Figure 1.1: Channels used by consumers for sales and customer support, Europe and the USA, 2020¹



Source: Analysys Mason, 2021

The COVID-19 pandemic has also highlighted the importance of agility, in order to swiftly respond to market changes or competitor initiatives. An agile architectural foundation that can accelerate CSPs' ability to swiftly make changes to their core offerings and comprehensively engage with customers over digital channels is a necessity, especially when digital-native companies (who are increasingly competing with CSPs) already have this ability. CSPs remain considerably behind digital natives when it comes to offering real-time, personalised and streamlined digital engagement, despite their increasing emphasis on customer experience. Many CSPs were late to start their digital channel transformations, so most still have much to do in order to provide a digital experience that is comparable to that of a digital-native company. The majority of CSPs have invested in basic self-care functionalities, but these are far from being self-contained and are insufficient to drive deep

¹ Data labels show the percentage point (pp) difference in penetration between 2019 and 2020. For more information, see Analysys Mason's [Connected Consumer Survey 2020: mobile customer satisfaction in Europe and the USA](#).

engagement with customers. Most CSPs also have large call-centre operations (either outsourced or directly owned) that are responsible for capturing and responding to customer queries and complaints. The cost of these operations is quite high, especially when compared to those of OTT service providers that operate at a comparable scale.

CSPs need to take radical steps to overcome the technical debt that has accrued through underinvesting in the customer engagement platform. They must undertake a comprehensive and swift transformation of their customer experience systems to enable them to quickly respond to market changes and experiment with new engagement models at a low cost. To do so, they will need to embrace a platform-centred environment where business and marketing teams are functionally independent and are not dependent on IT support for assessing or launching new features, products or services.

The platform transformation model uses a low-code framework and an end-to-end portfolio and enables CSPs to swiftly address the challenges of legacy customer experience solutions and embrace emerging best practices. Low-code platforms are essential because they democratise software development and use a graphical user interface-based modelling approach to build applications and functions. They use visual modelling tools and standardised templates to help users with limited technical backgrounds to configure and set up new products and services. Low-code platforms also give business teams increased levels of control due to the reduction in software development complexity, which will help to incubate a culture of experimentation and innovation.

This paper provides a brief overview of the state of CSPs' customer engagement systems today and outlines how they can use the platform approach to leapfrog systemic bottlenecks and provide a seamless and engaging digital customer experience.

2. Recommendations

CSPs that are planning to transform their customer experience and engagement systems should consider the following.

- CSPs should take a low-code, configuration-based approach to software development that empowers business and marketing functions and reduces the load on IT personnel. Low-code platforms are a type of software development framework that use a graphical user interface-based modelling approach to build applications and functions. The low-code approach is reliant on a configuration-based framework and does not require knowledge of traditional coding or software development languages, which improves its accessibility in terms of both time and cost. It also provides business teams with high levels of control and encourages experimentation with different engagement models. The low-code approach is a powerful enabler of agile architecture framework that can help CSPs to advance their digital transformations.
- CSPs should prioritise working with solutions providers that offer an end-to-end portfolio that can be deployed from a single unified platform. The platform model for transformation uses a low-code framework and an end-to-end portfolio and enables CSPs to swiftly address the challenges of legacy customer experience solutions and embrace emerging best practices. It aligns business and technology demands under a single domain, while also incorporating operations best practices such as DevOps and CI/CD pipelines and support for standardised interfaces to interconnect with third-party ecosystems and marketplaces. It ensures the long-term agility and extendibility of the platform without weighing down the infrastructure with rigid and inflexible architecture frameworks.

- CSPs should prioritise working with solution providers that enable a phased approach to the transformation of customer experience functions, but still provide a holistic transformation over the long term. A full customer experience transformation may not be a feasible option for many CSPs with incumbent legacy systems. A phased approach offers the opportunity to mitigate risk while experimenting with different engagement models, which may be helpful in the initial stages. A phased approach can also follow an accelerated timeline in order to avoid long delays to launch.

3. Proprietary, disaggregated and bespoke customer engagement functions have a high cost

CSPs' approach to customer engagement has evolved substantially over the years; customer engagement is now a clear strategic priority for many. However, improvements to customer engagement and the customer experience have been slow and have not quite kept pace with best practices and customer expectations, despite CSPs' best intentions and urgent initiatives. There are multiple reasons for the slow adoption of modern customer engagement practices, but an important factor is the state of the incumbent systems. Incumbent customer engagement systems are usually procured from multiple vendors and are deployed in stages over many years. These systems often rely on proprietary technologies and are interconnected through customised interfaces that are specific to the deployment. They have become highly complex to manage over time as their scope and footprints have increased, and often represent a barrier to a seamless digital experience.

CSPs across the board are now prioritising the transformation of their digital customer experience. The following five factors have played an important role in driving a shift in how CSPs approach digital customer engagement.

- **Changing customer behaviour.** Customer behaviour has undergone a paradigm shift over the past decade as the internet and smartphones have become commonplace. Digital natives such as Amazon, Netflix and Uber have played an important role in shaping and reinforcing a new way of interacting with service providers that is frictionless, intuitive, highly personalised and always on. Digital-native companies went down this path from the outset because they could not afford to use the traditional model of serving customers across multiple channels involving several touchpoints. Digitising all (or almost all) customer interactions was the only way for digital-native companies to achieve scale at a low cost without compromising on customer experience. The leading digital-only companies undertook multiple initiatives to drive customers onto their digital channels, and this has resulted in the large-scale transformation of how customers perceive and interact with digital channels. Indeed, many end users now prefer to be in control of their interactions with their service providers and expect a completely digital experience, without the need to make direct contact.
- **Market perception and valuations.** CSPs' legacy frameworks and process models come with a high cost of operations that significantly exceeds that of digital natives that are of a similar or larger scale. This has implications for how CSPs are perceived and valued. Generally, it is believed that digital technology companies are better able to embrace new business and revenue models than traditional CSPs are. This is borne out in the large differences in enterprise value for digital companies and CSPs. A comprehensive and seamless digital experience is considered to be an important factor in public and market perception.

- **Evolution of digital channels.** The nature and capabilities of digital channels are evolving swiftly as customer engagement with these channels increases. Simple websites that offer static information for customers are a thing of the past; CSPs' digital engagement channels of today are hyper-personalised and include more than just their own offerings. Chatbots and voicebots are increasingly common, and augmented and virtual reality channels are expected in the medium-to-long term. The dynamic shift in the use of engagement channels, which has been amplified by the COVID-19 pandemic, is a concern for CSPs that are not used to such a rapid adoption of new technologies.
- **Delayed time to market.** CSPs' ability to respond swiftly to market changes is an important metric in determining their ability to compete effectively. For many CSPs, new launches and updates to products and services often have a long lead time due to their dependency on IT teams to make extensive code changes. Even when the IT team is on standby to make relevant changes, the complexity of the system often limits what can be done and how quickly it can be achieved. Incomplete customer information is also a factor; relevant customer information is often missing because of poor information management practices.
- **Total cost of operations.** The absence of a homogeneous architecture framework and the need to support ad-hoc interfaces between systems and functions increases the architectural complexity significantly and limits CSPs' ability to extract benefits from software upgrades. The support and maintenance of disparate multi-vendor systems can be complex and customised software is often required to ensure disruption-free operations. This increases the cost of maintaining legacy systems significantly. In addition, ineffective systems often increase the strain on assisted channels such as call centres and stores, where the cost per interaction is much higher than on digital channels.

4. Low-code platforms democratise software development and redefine how digital experiences are designed and delivered

The low-code development approach is a critical part of the platform model for transforming the digital customer experience. It uses a software development framework that relies on graphical user interface-based modelling to build applications and functions. Low-code platforms abstract the relevant functions and flows into a simplified interface without exposing the complexity of the underlying application or its dependencies. They offer capabilities such as visual modelling tools and standardised templates to help users with limited technical backgrounds to configure and set up new products and services. These systems are usually designed to receive continuous updates so as to maintain an accurate reflection of the underlying systems framework and process flows.

Low-code platforms are key to the end-to-end transformation of CSPs' customer experience and engagement frameworks, which include systems, processes and organisational behaviours. They allow CSPs to swiftly make changes to well-established legacy processes while also deploying new systems. A mature low-code platform combined with a full-stack solution that addresses essential customer engagement capabilities can be a potent force in accelerating turnarounds in customer experience. Low-code platforms offer CSPs the three following fundamental benefits.

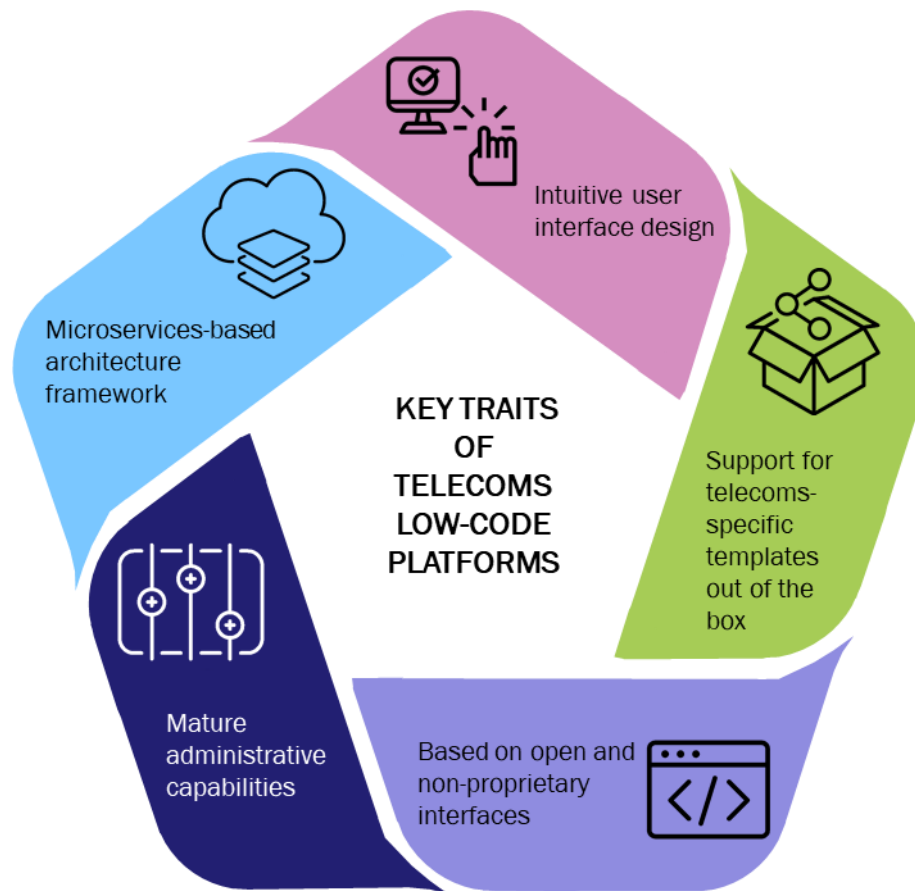
- **Remove the complexity associated with software development.** Low-code platforms do not require knowledge of traditional coding or software development languages, which make them suitable for the swift development of new applications. The availability of personnel with a good understanding of software development methodologies is growing concern for CSPs. By adopting configurable platforms that require limited coding knowledge, CSPs are able to avoid having to hire a large number of expensive software development specialists. Cutting the complexity of software development may also help CSPs to accelerate the use of AI and automation across their infrastructure in the long term.
- **Provide better control to business teams.** Business teams are typically responsible for strategies and go-to market plans, but they have historically been overly reliant on IT teams to implement their plans. IT has become a major bottleneck for business teams, especially as many CSPs have been unable to add resources to keep up with increased demand. Low-code platforms radically alter this equation by giving business users greater control over system configuration. This also helps in the creation of coherent customer experiences because a single unit has control and responsibility over the design and process flow.
- **Incubate a culture of experimentation.** CSPs have historically had limited latitude to experiment with different engagement and experience models. The cost of experimentation has been prohibitively high because multiple teams had to work in tandem to create a prototype. Low-code platforms can help CSP teams to embrace a culture of rapid testing and fast, almost painless failures. In the long term, this approach of trying new things swiftly will be crucial to effectively compete against web-scalers and digital natives.

CSPs should prioritise the following five essential traits when assessing low-code platforms (Figure 4.1).

- **Microservices-based architecture.** Cloud-native-compliant, loosely coupled, microservices-based architecture framework is essential for futureproofing. It allows for the dynamic scalability of independent microservices without affecting other adjacent systems. The key benefits of this architecture are the ability to respond dynamically to changes, a lower cost of operations and the support for extensive process and workflow automation. It is also significantly easier to add new capabilities in such an environment because the independent nature of the microservices means that there is little risk of operations disruption.
- **Intuitive user interface.** Low-code platforms are likely to be used across departments and teams by both technical and non-technical users. The intuitiveness of the user interface is a vital factor in ensuring wide adoption and acceptance. Modern low-code platforms provide ‘guided tours’ of key functions and step-by-step instructions on how to define, design and deploy low-code applications.
- **Support for telecoms-specific functions out of the box.** Telecoms processes and workflows are different to those for other industries. The provision of telecoms-specific applications (such as the ability to design a new journey or modify personalisation criteria) out of the box will help to drive broad acceptance and quick wins in the short term. It will also help in bringing a range of teams on board (such as the business, marketing and IT teams), which will be essential to successfully reap the benefits of low-code platforms.
- **Open and non-proprietary interfaces.** Extensive extendibility is foundational for the success of low-code platforms in the long term. This requires adherence to industry-standard interfaces (such as REST APIs) and compliance with open architecture frameworks (such as TMF Open Digital Architecture), and will improve the efficiency of plugging into adjacent ecosystems and marketplaces.
- **Mature administration capabilities.** Low-code platforms are likely to be used by a very large number of users across multiple departments and teams, so it is important to have dashboards and administration panels that can track, control, co-ordinate and restrict users and actions. This will be an important selling

point, especially in telecoms environments where IT teams retain significant responsibility for the overall systems architecture.

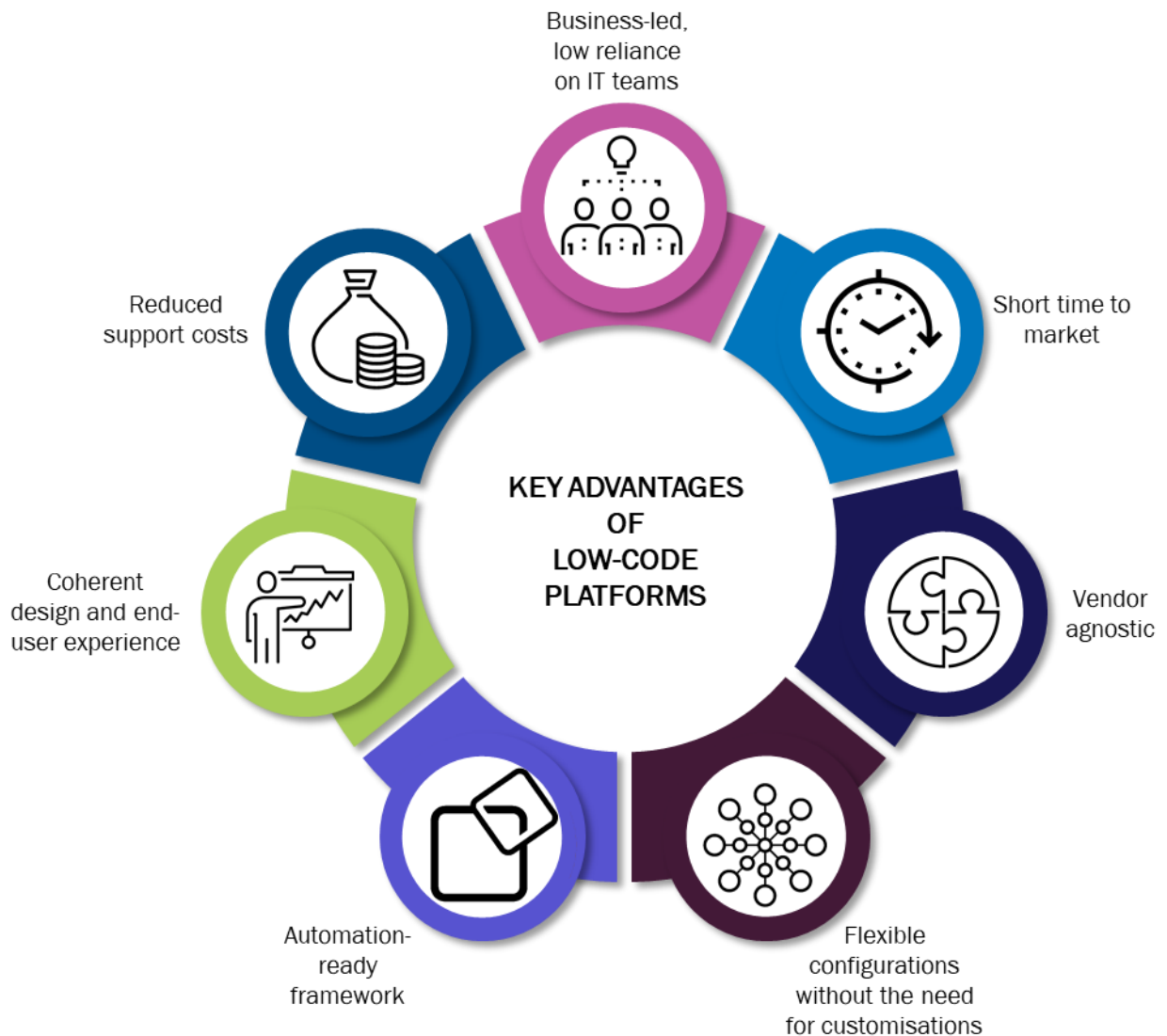
Figure 4.1: Key traits of telecoms-specific low-code platforms



Source: Analysys Mason, 2021

The reduction in the cost of operations remains one of the main benefits of low-code platforms. Cost savings are realised mainly through improved efficiency due to faster times to market, a reduction in spending on maintenance and the need for less IT support personnel. CSPs can also expect to achieve a simplified and seamless customer journey, which will in turn increase the loyalty and lifetime value of the customer. Low-code platforms offers multiple other advantages (Figure 4.2), which can be transformative for CSP operations.

Figure 4.2: Overview of the key benefits of low-code platforms



Source: Analysys Mason, 2021

5. The platform approach to customer experience transformation may be a game-changer for CSPs

The platform model for transformation uses a low-code framework and an end-to-end portfolio to enable CSPs to swiftly address the challenges of legacy customer experience solutions and embrace emerging best practices. It aligns business and technology demands in a single domain that includes user interface design, business logic definition and monitoring, and also incorporates operations best practices such as DevOps and CI/CD pipelines.

The platform model is predicated on openness and is built on standardised and industry-defined interfaces to enable seamless interconnection with external applications and ecosystems.

Some of the distinct advantages of the platform approach are as follows.

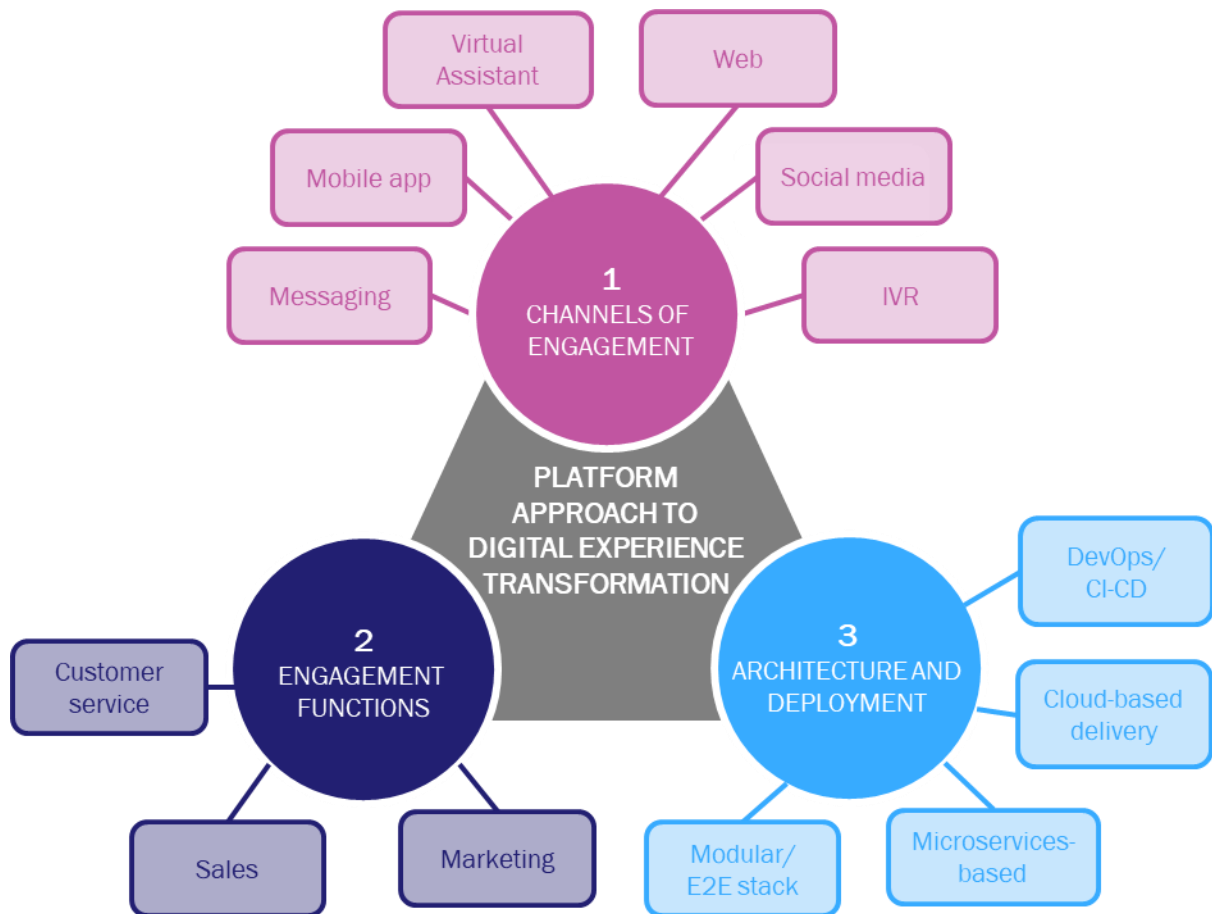
- It offers a single, unified user interface platform that can be used to serve multiple channels, which provides a consistent experience across the customer lifecycle.
- Business users can manage the system with less reliance on IT teams, which reduces the time to market and enhances competitiveness.
- The framework allows for the reuse of tools and rules across channels, which significantly cuts down launch timelines.
- Tools can be used to create new experiences and business logic as well as new, dynamic integration points as required.
- It supports hyper-personalised experiences by tracking and differentiating user journeys and contexts and making use of AI capabilities.
- It provides access to relevant, end-to-end tooling for building a complete application.
- It enables open and modular frameworks through the use of standardised APIs, which also helps in the creation of ecosystems and marketplaces.

5.1 The platform approach is customer-centric

The platform approach to transformation is very different to CSPs' traditional approach to transforming customer engagement systems. CSPs have historically adopted a system-centric approach to transforming their touchpoints. This involved identifying the capabilities of existing systems before new functions were built around them. The primary advantage of this approach was that it kept costs low, but it seldom resulted in any significant improvement in engagement with the end customer.

In the platform approach, the emphasis is on building and enabling an end-to-end experience through a uniform framework. In order to ensure a seamless customer experience, CSPs need to prioritise using a consistent and homogeneous architecture framework. This allows them to first identify the end customers' preferred digital media for engagement, which will help CSPs to prioritise investments into the relevant digital channels. This in turn will help to drive richer customer interactions and an improved customer experience. This approach can be disruptive in the short term, but embracing the platform approach for transforming the customer experience can be highly beneficial in helping CSPs to futureproof their engagement systems. It can also help to increase the quality of customer engagement in the long run. The three key steps in the platform approach are shown in Figure 5.1.

Figure 5.1: Three key steps in the platform approach to digital engagement transformation



Source: Analysys Mason, 2021

- **Channels of engagement.** The prioritisation of various channels of engagement should be based on customer behaviour and preferences. Digital channels such as the mobile app and website tend to be popular choices, but customers' preferred channels of engagement can vary by region and type of service, and may include assisted channels as well. CSPs should ideally start by focusing on any two channels.
- **Engagement functions.** In this step, CSPs must identify the purpose of the customer engagement. This is usually influenced by subscriber demographics and/or CSPs' strategic priorities. Customer service tends to be the most in-demand, followed by sales support. CSPs should focus on just one engagement function in the initial roll-out.
- **Architecture and deployment.** CSPs need to establish the architecture and delivery framework after giving due consideration to the planned transformation strategy and provisions for expansions and automated operations in the future. It is vital to align and integrate the framework with the low-code platform because this is where the benefits of the platform model are fully realised.

The customer-centric approach to platform transformation dovetails with the use of a low-code platform and end-to-end solution portfolio. This will help to improve the usability, operability and long-term viability of the platform, which will be a game-changer for CSPs' customer engagement.

6. Conclusion

CSPs are lagging significantly behind web-scalers in terms of offering personalised and engaging digital interactions, and must use the platform approach to accelerate the transformation of their customer experience systems in order to overcome long-standing bottlenecks related to legacy systems and obsolete processes. The platform model uses a low-code framework and an end-to-end portfolio to enable CSPs to swiftly address the challenges of legacy customer experience solutions and embrace emerging best practices. Low-code platforms will be essential because they democratise software development by using a graphical user interface-based modelling approach to build applications and functions. This gives business and marketing teams greater independence, which will help to improve CSPs' response times to market changes and will incubate an environment of innovation, especially for the digital channels. In the long term, CSPs' ability to have strong engagements with the end customer will be vital and can have implications on their market perception and valuation.

7. About the author



John Abraham (Principal Analyst) leads our digital transformation research, including three research programmes: *Customer Engagement*, *Monetisation Platforms* and *Digital Experience*. His areas of focus include customer journeys and experience, the impact of 5G on BSS systems, telecoms enterprise opportunities, cost transformation, ecosystems and value chains, and micro-services-based architecture models. John has over 10 years' experience in the telecoms industry. At Analysys Mason, he has worked on a range of telecoms projects for operators in Africa, Europe, India and the Middle East. Before joining the company he worked for Subex, a BSS vendor, and before that for Dell in India. John holds a bachelor's degree in computer science from Anna University (India) and an MBA from Bradford University School of Management (UK).

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