



# chief marketing officer's guide to artificial intelligence

**An AI roadmap for CSPs**

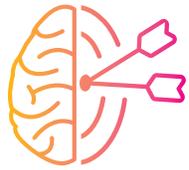
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# AI is driving CSP digital transformation

Artificial intelligence (AI) is a key component supporting CSPs' current and future IT systems, platforms, and processes. CSPs are transforming their business to create more streamlined and agile operations that can scale and respond to complex customer and business needs in near real-time. Network and service performance needs to be flawless, and CSPs need to provide rapid onboarding, access to content, accurate billing, and personalized customer engagement all the time. AI can help CSPs keep pace with these demands. CSPs can leverage solutions that use AI (both machine learning and deep learning) analytics tools and automation to systematically respond, operate, and improve their operational and business support systems.



# intelligent marketing

## **Personalized customer experiences are a priority for CSPs – and a major challenge**

Customers desire and appreciate personalized services, particularly millennials. When well executed, personalization ensures that relevant services are targeted to match the needs and desires of particular customer segments, eliciting deeper engagement, satisfaction, and loyalty.

But CSPs are struggling with personalization, as revealed by Ovum's 2016–17 ICT Enterprise Insights survey. CSPs in the survey said that creating personalized customer experiences is their biggest business challenge. Almost 84% of CSPs in the survey said this was either a very important or important business challenge. The problem is that many CSPs lack sophisticated data analytics, which in turn means superficial customer insights that hinder their efforts to personalize customer experiences. Another major challenge is in fusing a wide variety of first-party data with third-party data in real-time to provide a single unified view of the customer.

## **The role of AI: from “one size fits all” to personalization at scale**

The application of machine learning to CSP big data makes possible automated but personalized services that serve millions of customers at a time. Customers can be profiled with multiple characteristics, and an AI system can analyze this data to create a customized engagement tailored to the individual needs of the user. Since this process is automated, it becomes possible to move from standard tiered contracts, with their built-in compromises, to unique contracts designed around the needs of each customer. Only machine learning and automation can produce such a service at the scale of many millions of customers.

## **Intelligent agents can take personalization to the next level**

AI-powered intelligent agents in the form of online virtual assistants, device-based digital assistants, and chatbots on messaging platforms can greatly enhance personalization. The deep data insights generated by intelligent agents combined with a conversational interface enables a highly interactive, personalized form of engagement with consumers. Intelligent agents can support one-to-one, automated conversations with consumers at scale – the nirvana of customer relationship marketing. Intelligent agents also have the ability to tap into and create very detailed consumer data sets, and to leverage this to understand how and why people use services, as well as their anticipated needs and intent.

Telefonica has announced a cross-platform, AI-powered virtual assistant called Aura, which will carry out a wide range of functions including customer care, device management, security, product/service recommendations, and information. Aura will also support what Telefonica calls a “personal data space,” which will store the digital trace that a user leaves when interacting with Telefonica services and allow customers to personalize their experience. Orange has announced a similar offering called Djingo.



# how AI can help CSPs transform marketing engagement

## **The challenge: marketing engagement is disjointed**

Today's consumers engage with service providers and brands across multiple channels (e.g. websites, email, social media, messaging platforms, mobile apps) and yet marketing interactions with customers lack integration and are typically specific to a single channel and usually based on static segmentation. Interactions with customers will become even more complex and demanding going forward as potential touchpoints – wearable devices and technology, smart TVs, connected cars, and household appliances – proliferate. CSPs not only have to engage in a personalized, consistent way with consumers across multiple channels, but must also determine marketing attribution across the different touchpoints.

## **The solution: supporting the all bound customer journey**

AI solutions are data-driven and can provide a fully contextual view of customers in real-time, meaning AI can enable adaptive, personalized marketing across multiple channels in an integrated manner. AI ensures the customer journey is automatically tuned, is interactive, and is continuously evolving, with integrated feedback collection. This enables more targeted, contextually relevant customer interactions. This will in turn improve customer satisfaction (as evidenced with higher net promoter scores), and will also make upselling and cross-selling across different channels more effective.

## **The challenge: recommendations, upselling, and cross-selling are missing the mark**

Recommendations, upselling, and cross-selling are closely related activities that in the communications sector are unsophisticated and often poorly executed, and as a result are ineffective. These activities are typically based on high-level demographic segmentations with limited insights into subscriber network and service usage, and equally limited insights into information about customer interests and intent. Recommendations are usually based on past actions rather than future needs and intent; for example, product bundles are defined by historic packages with little reference to existing performance. Marketers are operating in the dark, with little insight as to how customer decisions can be influenced by the right bundles and prices. Another problem arises when solutions are unable to integrate the content and outcome of previous marketing interactions with ongoing conversations. The net result of all these shortcomings is that recommendations, upselling, and cross-selling are poorly targeted and not relevant or compelling for customers.

## **The solution: contextual insights for deeper personalization and targeting**

AI systems have access to a wealth of data and can analyze it to enable marketers to make better decisions. AI solutions can combine first-party and third-party data to better understand customers' needs, preferences, and interests. AI algorithms can combine historic patterns and behavior (plus "look alike" patterns) with ongoing real-time engagement to provide the right next best action to the customer at the right time and in the right context of their journey. The outcome for the consumer will be recommendations and offers that are personalized, well targeted, and relevant. The result for the CSP will be an increase in revenues and ARPU. The image on page 6 is a vignette showing how this has worked for a CSP in the context of data bundles.



### **The challenge: customer offering data is scattered**

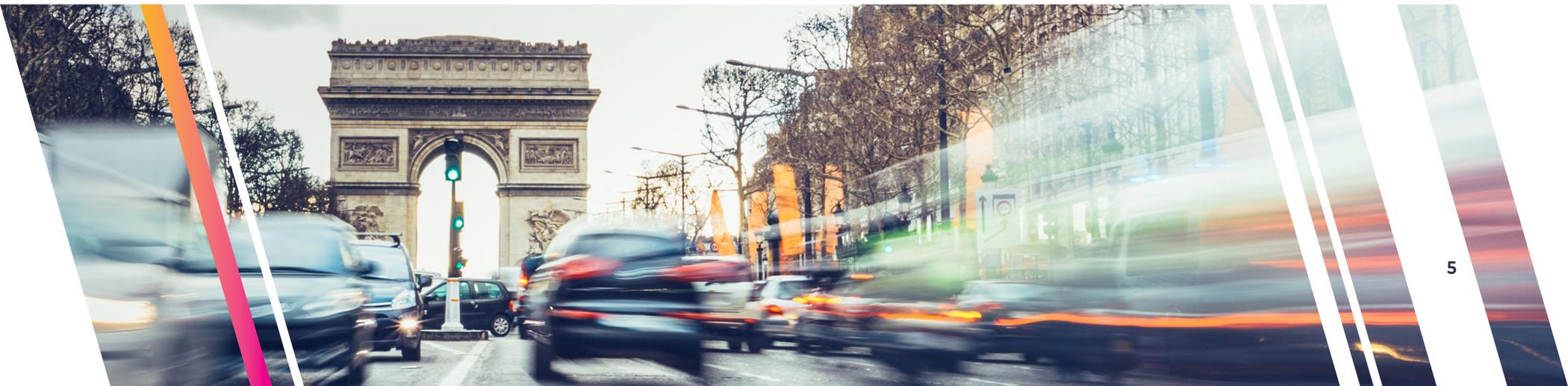
Data about the performance of product and service offerings is scattered across distributed systems, meaning there is no one single view of customers or any easy way for marketers to gain a historical perspective. Marketers are in effect acting in the dark when building the most important asset of the CSP: customer offerings, bundles, and promotions. Instead of being able to focus on innovation, they are burdened with operational tasks to generate data insight.

### **The solution: AI from the bottom up to power an intelligent catalog**

Catalog data must be constantly tracked and analyzed to circle back and highlight the best options for the marketer when defining customer offerings, applying discounts, setting prices, bundling services, or terminating customer plans. AI should broaden the marketer's view, offer comparison to past data, offer analysis of performance versus targets, identify trends, and monetize the BSS system's data.

Catalog AI will highlight the right channels and segments and assist with pricing recommendations and the best period of time to exceed targets.

Catalog-driven intelligence ensures that no matter which campaign system the CSP uses, customer offerings performance data is documented in one place and is available to be analyzed to assist with the constant business optimization the marketer is accountable for: one single place of data, one single view of marketing BI – an engine for marketing intelligence.



## Customer success story



### The challenge

A tier 1 CSP, serving over 20 million customers, wanted to identify when customers were about to use up their data bundle allowance so that it could provide timely and relevant offers to boost usage and revenues.

The CSP used to approach this task by sending generic communications to all users. Conversion rates left much to be desired.

### The solution

The CSP adopted a solution that enables automatic, proactive, personalized offers based on a customer's individual needs. The system identifies when a customer is about to finish the data in their plan and cross-references this with strategic customer insights, including usage and past behavior.

### The outcome

**Response rates and purchases of bundles have grown by 250%**

**Out-of-bundle revenue has increased by over 10%!**

### Intelligence in action – personalized data plan bundles

Source: Amdocs/Ovum

# recommendations

## **Act now or be left behind**

Personalization in the hands of CSPs is a blunt instrument, which is dangerous when OTT service providers are upping the ante on the personalization front and raising consumer expectations. This is particularly noticeable with increasingly fine-tuned recommendations provided by music streaming services such as Spotify and Pandora. CSPs need to improve their game or risk being left behind.

## **Seek out solutions that support a horizontal approach**

The traditional approach to analytics is based on vertical, and often siloed implementations that address specific use cases. The most effective AI platforms will be those that can access multiple data streams in real-time to produce intelligence that can feed into and enhance cross-domain business processes. This enables integrated, joined-up outcomes – for example, leveraging user behavior and engagement data across different parameters to fine-tune the product catalog offerings and make tailored recommendations.

## **Opportunities for intelligent agents beyond customer care**

There is a strong and immediate use case for AI-powered intelligent agents in the customer care domain, as we will explore in the next chapter. But intelligent agents can also play a compelling part in broader marketing activities of CSPs. The interactive, personalized forms of engagement enabled by intelligent agents are perfectly suited for service recommendations, cross-selling, and upselling. Telefonica and Orange have both announced AI-powered virtual assistants that support a wide range of marketing and customer care functions.

## **Use AI to fine-tune the product catalog**

AI can fine-tune the product catalog like never before. AI can propose the optimal price, content, size, validity, or other parameters of a product catalog entry and configure it based on analysis of available data such as competitor analysis, advertising, customer feedback, and BSS data. This intelligence in action empowers the marketing team to build personalized customer offerings. Once proven, this whole process can be automated to scale out.

## **Major on data privacy**

AI can leverage very granular consumer data insights, with an understanding both of how and why people use services and of their anticipated needs and intent. These capabilities will accelerate and deepen going forward, enabling AI systems to become highly efficient profiling tools. This can benefit both consumers and CSPs, as seen in this paper, but data privacy in the AI context is already attracting attention and this will intensify going forward. CSPs should be proactive and visible in demonstrating how their AI solutions safeguard data privacy, building a reputation for trust that can act as a point of differentiation.

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