



X by Orange's digital business services brand is built on OpenShift and AWS

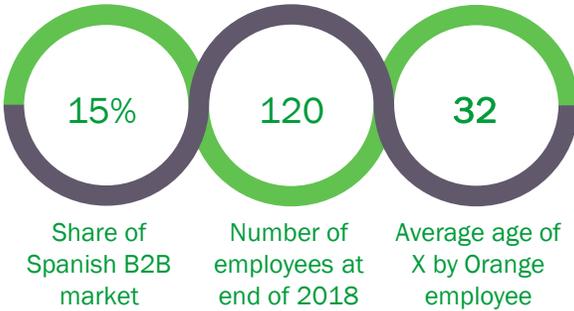


Caroline Chappell



X by Orange

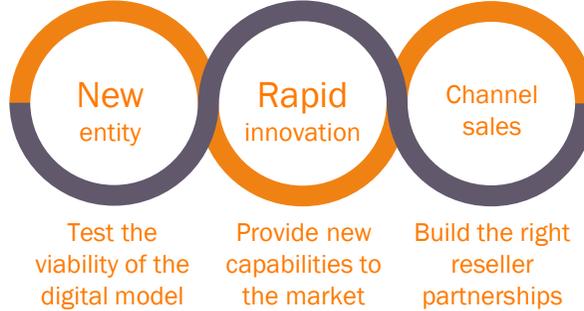
STATE OF THE BUSINESS¹



BUSINESS DRIVERS

- Enter the Spanish SME market, which was not well served by parent company Orange Spain, and increase share of B2B market.
- Prove the new OTT business model and the B2B market appetite for digital products.
- Acquire digital skillsets and culture as a future model for Orange.

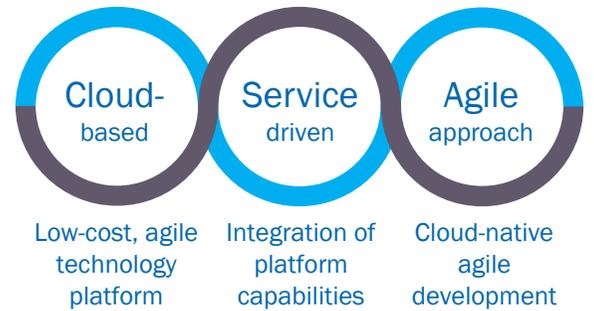
FOCUS OF THIS EFFORT



STRATEGY

- Create a new digital business with an agile mode of operation unfettered by the structures and systems of parent company.
- Bring new, innovative products to market faster than the traditional business.
- Work with traditional resellers initially to bring customers on board with a flexible value proposition.

PROJECT APPROACH



ANALYSIS

- Uses a cloud-native, digital infrastructure to support the rapid development, deployment and delivery of services.
- Architects platform capabilities, including third-party-provided functions, such as billing, 'as a service' for ease of integration.
- Acquires the right developer skillsets and tools to ensure business agility.

BENEFITS

'As-a-service' integration model supports fast start-up and lean operations

Use of Red Hat OpenShift platform accelerates integration and enables multi-cloud deployment

OTT business model should enable Orange to rapidly penetrate new markets

Source: Analysys Mason



Business challenges and key drivers of the project

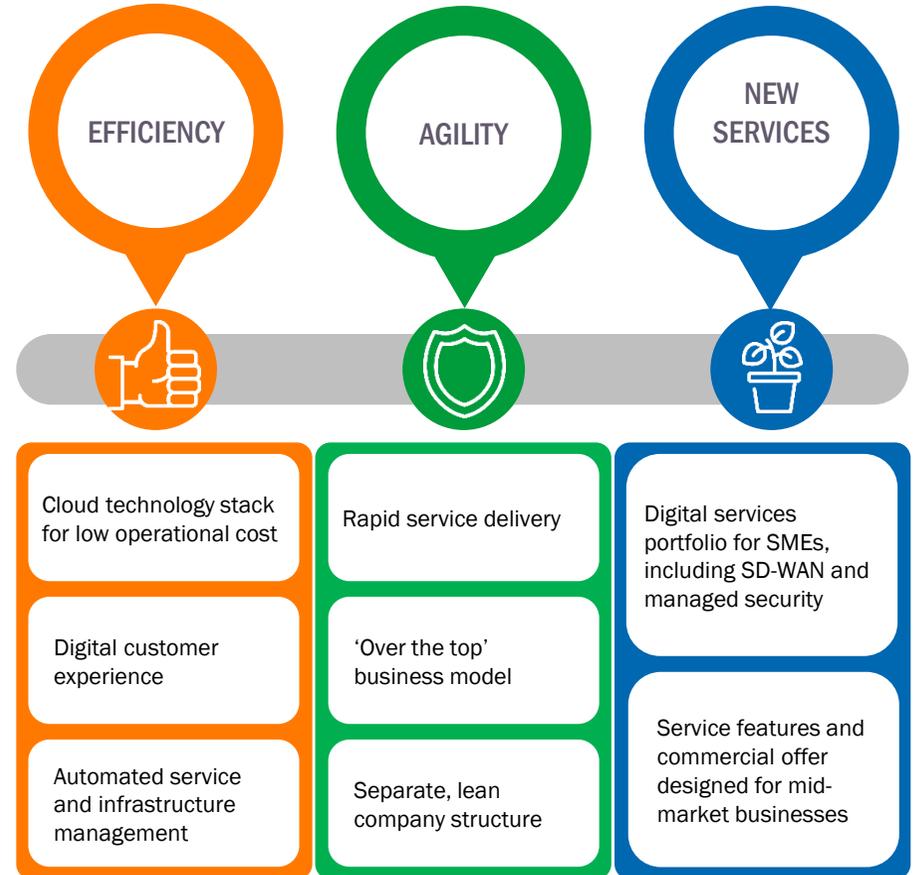
Orange has built a new company that uses digital infrastructure and a digital services portfolio to increase its presence in Spain's small and medium-sized enterprise (SME) market.

Orange is the second operator in Spain with a strong position in the consumer and micro-business markets. It has a 15% share of the enterprise market and a business product portfolio aimed at large enterprises and multinationals. As a challenger in the business services market for SMEs, it decided to test a new business model enabled by a new cloud technology stack. Orange's own digital transformation will not be completed quickly enough to enable the traditional business to behave in a digital way. X by Orange was therefore set up as a separate company, charged with building an all-digital business and free from any obligation to integrate with Orange's systems.

X by Orange's cloud-based systems were put in place under the supervision of a CTO from the financial services industry and by a freshly recruited, young staff with the right IT skills. The company opened for business in September 2018, less than 8 months after it started building its platform and products.

Orange is using X by Orange to test a digital, 'over-the-top' business model and strategy, supported by flexible and portable cloud-native digital infrastructure. Lessons are being fed back into the traditional Orange business and, if successful, the concept and platform could be rolled out to other countries where Orange wishes to expand its B2B market share.

Figure 1: Business factors that are driving the transformation project



Source: Analysys Mason

¹ For more information, see Analysys Mason's *X by Orange presents a radically new operating model for operators delivering digital services*. Available at www.analysismason.com/x-by-orange-ren01-ren02-rdmz0.

X by Orange chose to build its digital operations and platform using a mix of SaaS providers, in-house development and open-source components

X by Orange was set up as a lean start-up with a mission to bring new products to market quickly to test customer reaction.

To fulfil this mission, X by Orange decided not to use a traditional telecoms IT stack and suppliers when building its operational platform and processes due to the slow time to implement and high cost. Instead it adopted a webscale 'as-a-service' model, buying services such as billing, inventory and CRM from third party providers including Comarch and salesforce.com. Where X by Orange wants to differentiate its speed of service delivery and customer self-service, it has build its own fulfilment and assurance systems using open source components including Kafka, Hadoop, Prometheus and others on top of Red Hat's OpenShift Container Platform (OCP).

X by Orange chose OpenShift to support its cloud native, microservices-based software development both to ensure the portability of its code across multiple clouds, and for parity with Orange Group, also an OpenShift customer. Although it is a separate entity, X by Orange has benefited from the long-standing relationships its parent company has with vendors such as Red Hat, Nokia and Cisco since it can count on these suppliers' attention and support. X by Orange is using OpenShift to support the deployment of container-based and virtual machine (VM) workloads.

X by Orange considered building its own OpenStack-based cloud infrastructure, as its parent company has done. However, to meet

its time to market goals, the start-up chose to buy infrastructure as a service (IaaS) from the AWS public cloud. X by Orange has OpenStack expertise in-house but for the moment, the company prefers to innovate in areas of greater value than IaaS. If in future, the X by Orange concept is expanded to other geographies, the company could move to other cloud providers; if its volume of business grows sufficiently, it may revisit its decision to buy rather than build a cloud platform. X by Orange has the option to migrate workloads to Orange Group's OpenStack-based platform, which Orange is rolling out to edge data centres in different geographies. OpenShift gives X by Orange the flexibility to deploy its services in OpenShift instances across multiple clouds.

X by Orange regards orchestration as critical to its competitive differentiation. The company wants full control over orchestration to ensure it can rapidly onboard and deploy services and regards commercial orchestrators as 'telco-specific black box' systems which would be difficult to modify for its purposes. X by Orange uses Terraform and Red Hat Ansible tools in its orchestration arsenal and is targeting less than 48 hours as the time to deploy new services to customers. It envisages customers launching and configuring IP/PBX services in 15 minutes, for example.

X by Orange's orchestration knits together third party billing, inventory and CRM services running in data centres in France with its internal systems running in different AWS data centres, following the company's 'everything as a service' approach.

X by Orange centralises control of products and uses software-defined networking and firewalls to deliver them securely on a per-customer basis

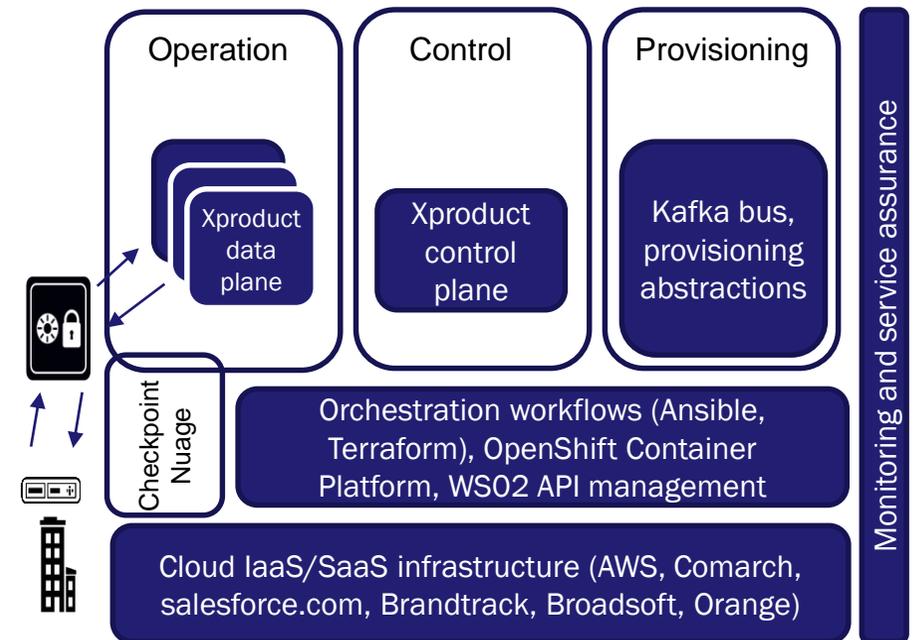
X by Orange is connectivity-provider agnostic, using SD-WAN technology to provide SME customers with secure over-the-top access to its cloud-based digital services portfolio.

X by Orange can provide OTT connectivity across Orange Spain's footprint, the internet and third party mobile and fixed access services. Its SD-WAN product, based on Nokia Nuage, is its foundational offering. X by Orange worked with Nuage to tailor the product for an SME market, improving ease of use and separating out features. X by Orange disaggregates control and data plane functionality in the services it offers, including unified communications (Cisco, Broadsoft) and a managed Checkpoint firewall service. It runs product control planes in the cloud and uses SD-WAN to deliver data plane traffic securely between cloud services and customer premises.

X by Orange's agile development team creates digital services, such as Xmusic, for retail stores, and is exploring further vertical market opportunities in retail, transport and health. Managed Wi-Fi and customer analytics services are on the company's roadmap. X by Orange's 'as a service' architecture and orchestration supports fast onboarding of new products through their rapid integration with its management systems. Its target is less than a month to bring new services from concept to launch.

Keeping costs low is important given the price-sensitivity of the SME market so X by Orange has put a stringent RFP process in place to ensure that it obtains the best value from its suppliers.

Architecture of X by Orange's product platform with virtual customer function (VCF) onboarding



Source: Analysys Mason and X by Orange

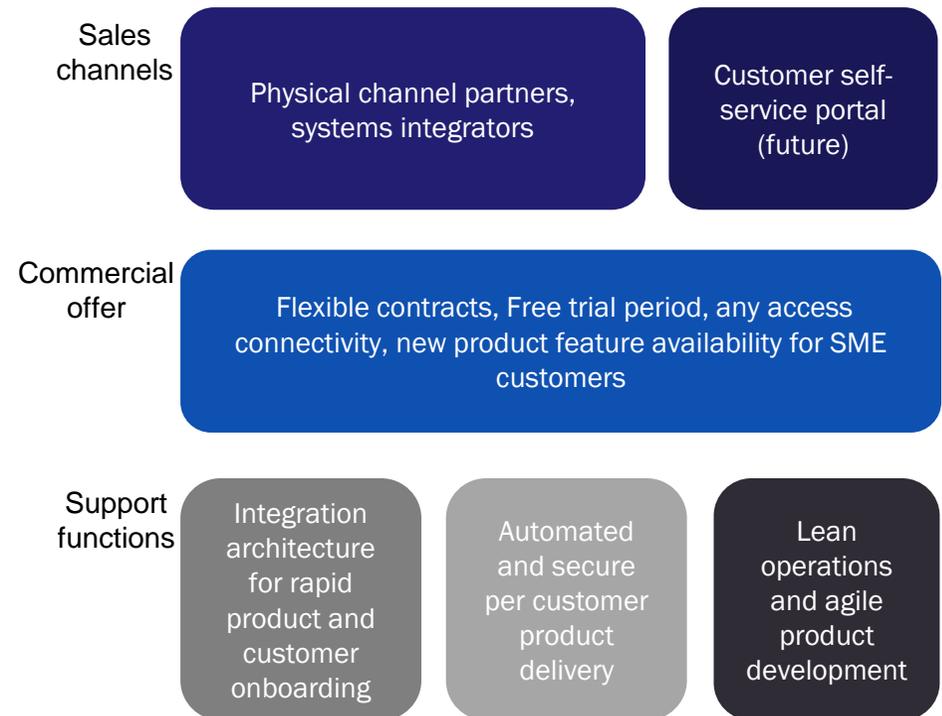
X by Orange has the right capabilities in place to support its business model but success will depend on its ability to educate the market and sign up resellers

X by Orange's value proposition to the SME market is based on flexible product features, bundles and commercial terms, not price.

X by Orange believes its market offer is disruptive because customers can switch services on and off on-demand, they can have 15 days' free trial over any connectivity and they have access to product features which have only been available to large enterprises to date. The company's commercial offer is underpinned by its lean operations, service automation and digital delivery of complex products. X by Orange has a customer portal for digital interactions but expects customers to use this to discover other products once they are onboard, rather than as an initial sales channel. The portal is a key focus for further investment and improvement.

X by Orange faces significant commercial hurdles in establishing its brand and business in the Spanish market, including the need to educate customers about SD-WAN, its potential and benefits versus traditional MPLS connectivity. It needs to recruit and educate its own local IT resellers, in addition to the physical sales channels used by Orange Spain, which must buy into X by Orange's portfolio and commercial differentiators if the start-up is to succeed. Signing up resellers is a work in progress and the new company is feeling its way into the market. The level of interest that large enterprises are showing in X by Orange's SD-WAN offer has surprised the company, which is evaluating with Orange the best way to coordinate this.

X by Orange's commercial proposition and supporting approach



Source: Analysys Mason

Key benefits

1

'As-a-service' integration model supports fast start-up and lean operations

X by Orange has demonstrated an impressive time-to-operations of less than 8 months as a result of using an 'as-a-service' integration approach where all the components of its platform are modelled as reusable services. This has enabled the company to buy in third-party services to fulfil non-value-added functions with the option of replacing them with services developed in-house or from alternative providers in future. This model keeps X by Orange lean and agile.

2

Use of OpenShift platform accelerates integration and enables multi-cloud deployment

X by Orange is future-proofing its back office architecture and product development by running on the OpenShift Container Platform which gives it application portability across multiple clouds. X by Orange benefits from the efficiencies associated with having a unified test, development and deployment experience for container-based workloads and a consistent integration platform for back office functions.

3

OTT business model should allow Orange to rapidly penetrate new markets

X by Orange's SD-WAN capabilities and its advanced OTT architecture enables it to provide customised and secure business services over any connectivity. This is a repeatable approach which X by Orange could easily use to extend its footprint into other geographies. By testing the concept first in Spain, X by Orange will gain valuable insights into the feasibility of being a digital service provider which can strengthen its execution elsewhere.

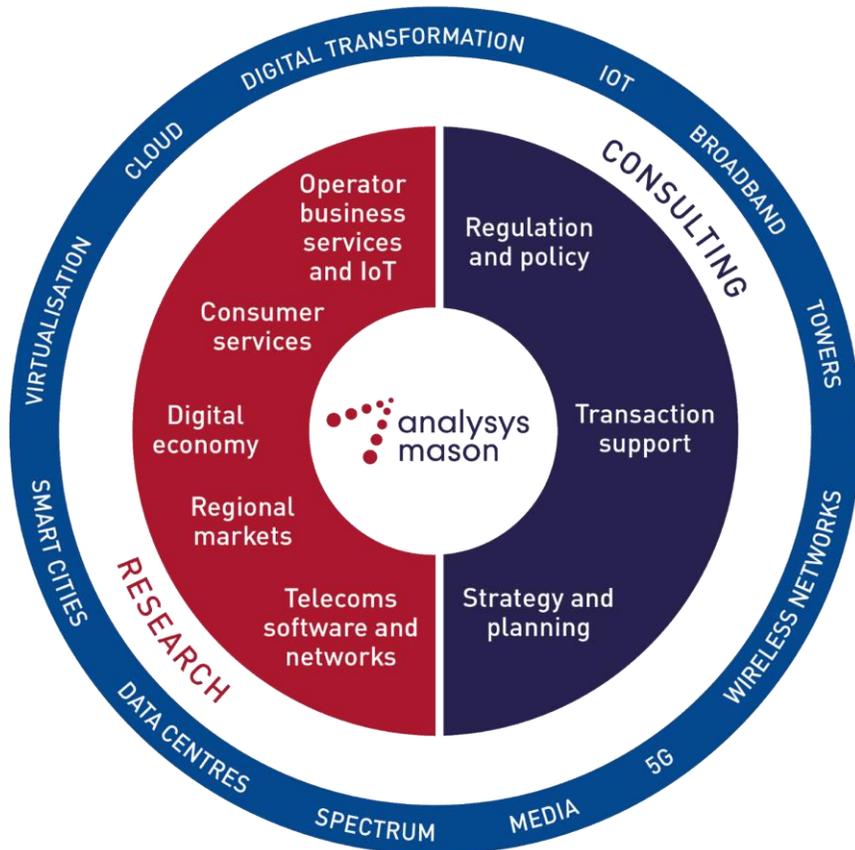
About the authors



Caroline Chappell (Research Director) is the lead analyst for Analysys Mason's *Digital Infrastructure Strategies* research programme. Her research focuses on service provider adoption of cloud, and the application of cloud technologies to fixed and mobile networks. She is a leading exponent of SDN and NFV and the potential that these technologies have to enhance business agility and enable new revenue opportunities for service providers. Caroline investigates key cloud and network virtualisation challenges, and helps telecoms customers to devise strategies that mitigate the disruptive effects of cloud and support a smooth transition to the era of software-controlled networks.

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