CSPs need modern product catalogues to improve their ability to provide new services

Communications service providers (CSPs) use product catalogues to keep track of the products that they offer to their customers and the way those products are offered. CSPs expect to offer many new types of services, particularly those built on 5G capabilities. These new services will place new demands on product catalogues, most of which are not prepared to support the rapid introduction of new types of services. As part of their efforts to introduce these new services, CSPs should upgrade their product catalogues.

Product catalogues enumerate the services that CSPs offer and the capabilities that the services depend upon. The product catalogue gives a CSP flexibility to set out specific product offers. As CSPs push into more extensive enterprise services with 5G, the range of features around performance, reliability and security will rapidly expand, requiring more extensive product catalogue support.
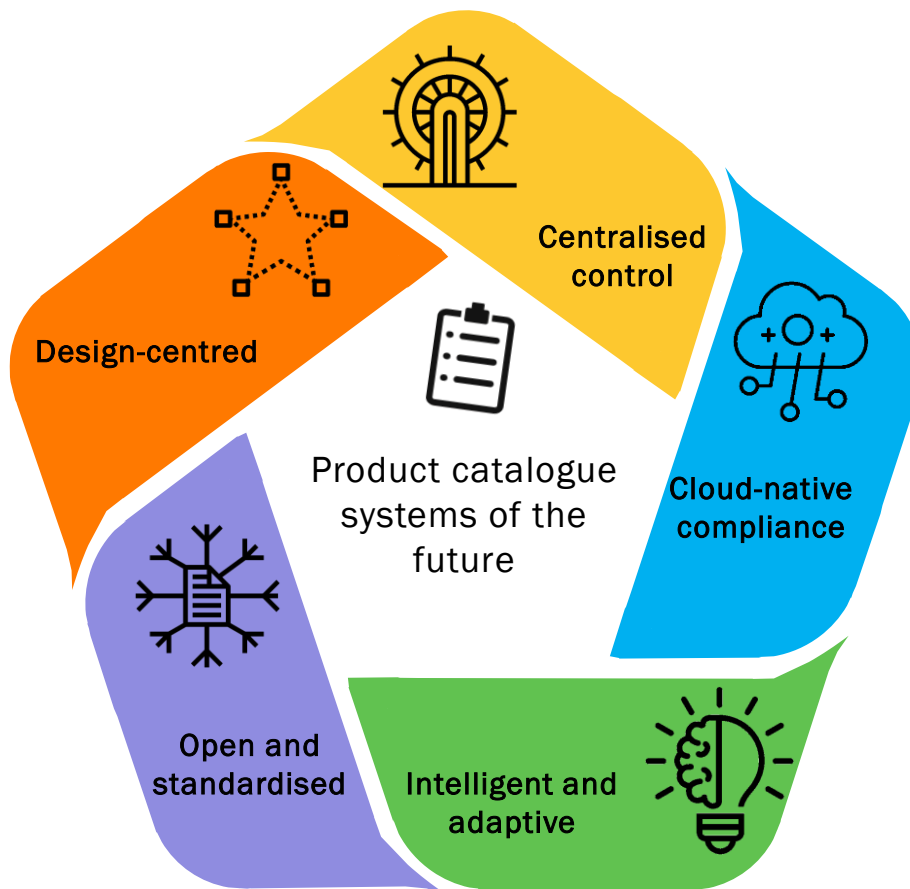
Most product catalogues are closely tied to billing or customer care systems. Most CSPs have a great many of these systems owing to their history of incrementally offering new services and acquiring more businesses. This proliferation of systems and catalogues is only getting worse as CSPs introduce more automation for more types of services. Modifications to this set-up, such as adding new products, bundles or partner offerings or including exception conditions, can be expensive and time consuming. This has led to slower response times, and blunted the competitiveness of many CSPs.

The challenges that CSPs face with legacy product catalogue systems will be exacerbated with the advent of 5G, which is expected to transform telco business and operating models. Further, 5G will require extensive product catalogue capabilities for supporting new business models, optimising usage of network resources and engaging with external ecosystems and third-party partners, in order to effectively monetise new enterprise opportunities. In addition, CSPs' growing emphasis on lean operations and cost control will drive demand for collaborative and configurable product catalogues.

To overcome the inefficiencies of legacy systems and to be better prepared for future use cases, CSPs' approach to product catalogue systems of the future should begin with a centralised catalogue that is shared across OSS and BSS, allowing for a unified commerce, charging and service catalogue. This will enable a thriving partner ecosystem and also a cross-vendor framework, with a single source of data. These systems will ideally be cloud-native compliant (allowing for greater architectural flexibility and agility) and design-centered, so that the catalogue systems can be configured by business teams without IT support and can provide role-based access. Additionally, product catalogues that support standardised application program interfaces (APIs) will help to accelerate the interactions with third-party service and content providers and also provide a framework for extensive automation in the long term.

To embrace emerging opportunities in a timely and effective manner, CSPs need to be ably supported by an agile and futureproof product catalogue system. Product catalogue systems of the future should have five essential traits (see Figure 1). Several vendors have introduced product catalogue solutions that embody these traits.

Figure 1: Essential traits of product catalogue systems of the future

- **Centralised control.** Multiple data sources and inconsistent data between different catalogue systems often play a key role in extending time to market for new services and increasing support costs, besides having a detrimental effect on customer engagement due to inconsistent channel experience. Having a common catalogue that serves the needs of commerce, charging and network resources and that is a single source of data is essential for ensuring speed and agility, and it can also help to accelerate engagement with third-party service providers.

- **Design-centered.** Whereas in the past the product catalogue was fully managed and controlled by the IT team, in future it needs to provide shared access to multiple business and operations teams, with user-configurable workflows and support for cross-team collaboration. State-of-the-art systems take a design-centered approach to move control from IT teams to business teams.

- **Cloud-native compliance.** Cloud native developments take advantage of the best modern IT methods to gain agility, rapid enhancement and greater coordination across development, deployment and operations. Applications in a cloud-native architecture are developed as microservices that are stateless and loosely coupled. Cloud-native microservices share a common data framework, which allows for greater interoperability between compliant microservices from different vendors. An important component of cloud-native computing is the 'DevOps' operations framework. Under a DevOps model, development and operations teams are brought together, which has a huge impact on a CSP's agility.

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- **Open and standardised.** Given the multiple product catalogue systems from different vendors that are regularly in use at numerous CSPs worldwide, the interconnection between these systems is of paramount importance. The provision of support for common, non-proprietary APIs and standardised interfaces will help to accelerate interactions with third-party services and content providers.

- **Intelligent and adaptive.** As the number and complexity of offerings increase, the intelligence capabilities of the product catalogue system will become a vital tool for increasing the speed at which offerings can be optimised, improving the targeting of end customers, monitoring policy and exceptions or even simulating responses to changes – all of which can help to lower the cost of operations. In the long term, these capabilities can drive greater automation.

Product catalogue systems have become a vital ingredient in the enablement and adoption of next-generation use cases.[1] However, many CSPs have product catalogue systems that are far from adequate, are held back by complex architecture that mean slow response times and have unnecessarily high support costs.

To overcome the inefficiencies of legacy systems and to ensure that they are effectively futureproofed for the introduction of 5G-enabled use cases, CSP approaches to product catalogue systems of the future should be based on a centralised cross-vendor system with a single source of data. CSPs should prioritise a design-centered, cloud-native-compliant, open and intelligent solution that is capable of supporting new use cases, from commerce to charging, policy and network needs. In the long run, product catalogue systems that incorporate such capabilities can give CSPs an important competitive advantage.

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[1] For more information, see Analysys Mason's *Centralized product catalogs will be key to differentiation in the 5G era*.

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