



# Key operational pillars needed to prepare CSPs for the **eSIM revolution**

With eSIM gaining momentum and growth, we explore the **key operational pillars** that can prepare CSPs (Communications Service Providers) for the **eSIM revolution** and achieve seamless digital end-user experiences.



Today, more than 400 mobile operators globally are offering commercial embedded SIM (eSIM) services to smartphone users. Meanwhile consumer eSIM profile downloads increased by 109% in the last year alone (April 2024), according to Trusted Connectivity Alliance. Accelerated eSIM momentum is also underpinned by the first eSIM-only devices hitting the market in the US (iPhones 14 & 15) and the expectation for more original equipment manufacturers (OEMs) to adopt an eSIM-only strategy in the near term.

Meanwhile, more than one in three shipped smartphones are expected to support eSIMs from 2025 onwards. Additionally, OEMs such as Samsung are also launching eSIM enabled smartphones among their mid-range devices.

Combined, these developments make the adoption of an eSIM strategy a must-have for Communication Service Providers (CSPs), including MNOs and MVNOs, to stay ahead of the trend.

## eSIM benefits and applications

eSIM solutions also provide CSPs with a unique opportunity to fundamentally transform their business operations and generate new connectivity revenues.

Further, the new wave of eSIM-enabled devices can underpin telcos' digital transformation. From supply chain to profile management, the range of complete eSIM solutions and innovative end-user enrolment methods mean that operators can now fully digitize customer journeys and provide frictionless experiences with a wide variety of devices.

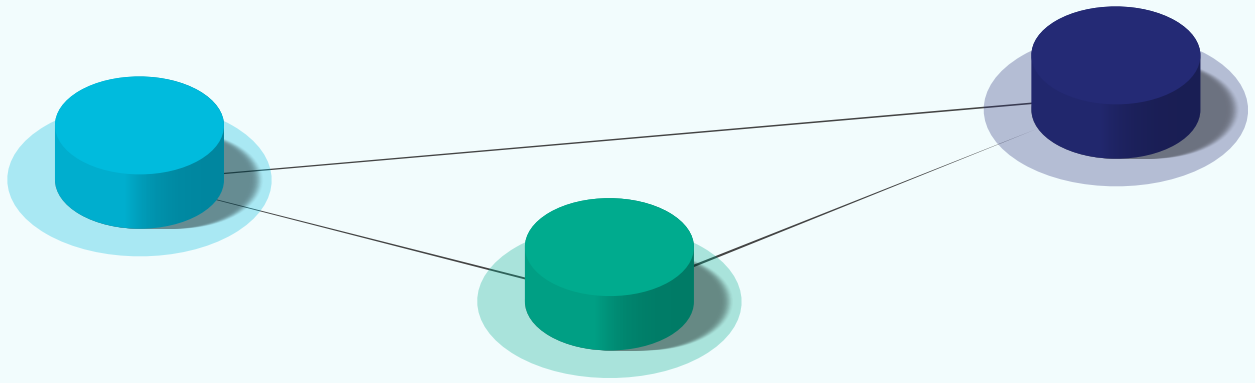
**For MNOs, eSIM technology has the potential to expand subscriber acquisitions** by allowing end-users to trial their network for free before fully committing. It can also support

service differentiation and help CSPs with a digital-first approach (i.e., placing digital technologies at the heart of telecom operations and customers).

Across wearables, the technology creates a unique opportunity for operators to build an entire ecosystem around an eSIM-enabled device with strong opportunity for customer lock-in. With international travel back on track, eSIM creates yet another opportunity to reactivate silent international roamers.

# The 3 key operational pillars

As a result, there is an increasing need for telecom operators to proactively adopt strong eSIM strategies to be able to participate in the eSIM revolution and meet the anticipated demand. To this end, there are three key operational pillars that can address this growth and provide seamless connected experiences.



## 1/ Ensure seamless and fully digital end-user experiences

With eSIM more readily accessible to end-users in this hyper digital world, seamless digital end-user experiences are imperative for MNOs to achieve customer satisfaction. These must include, quick onboarding, seamless and immediate access to connectivity and personalised services.

To achieve these with ease, MNOs need seamless digital onboarding with electronic Know Your Customer (eKYC) and they also need efficient eSIM management solutions, featuring speed of matching profiles (i.e., mobile subscriptions) with devices.

Soaring market demand for eSIM will quickly result in an increased number of different device characteristics with varying subscription profiles that need to be dealt with. In this regard **real-time profile adaptation capability** would allow the matching of the right profile with the right device. This requirement is even more critical for eSIM-only devices.

For instance, a 4G eSIM profile could be generated from a 5G profile in the CSP's inventory and be ready for a download to a subscriber's 4G device when requested.

## 2/ Secure high availability through scalable platforms

Given the growth in the volume of connected devices, and high traffic peaks, a business-critical pillar for eSIM market readiness is to create a resilient, scalable, and secure infrastructure. This can be achieved with a reliable eSIM solution with **high service level agreements (SLAs)**, offering continuity of operations and efficiencies.

By using a **public cloud framework for remote SIM provisioning**, operators can offer subscribers the speed, convenience, and efficiency of activating subscriptions remotely, especially in case of peak demand, while keeping out of it a secured environment under their control for their secret (keys) management.

## 3/ Optimise supply chain management

Optimising the supply chain management systems and processes is another key operational pillar which includes efficient stock management for subscription profiles. A tight control over profile inventory adapted to the adequate volume required "On Demand" by the market and due to many types of devices is imperative. Without adapted solutions, managing a host of different profiles for eSIM-enabled devices will inevitably add cost and complexity to the business.

As more eSIM-enabled devices come to market, CSPs need to make sure to manage their stock of profiles effectively. This stock of profiles could be managed in combination with smart solutions that are specifically designed to optimise the usage of profile stock and match new profiles to e-SIM-enabled devices.

Indeed, **smart profile stock management solutions** that enable the reuse of existing subscriber credentials held on the operator's system could optimise inventory.

To further optimise the efficiency and effectiveness of their eSIM subscription deployments, CSPs also need reliable and dynamic reporting on the status of deployments and activations. Here, **analytic tools can enable CSPs to monitor success rates, track device and service usage, and predict stock levels and customer behaviours.**

# Conclusion

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## **eSIM technology offers new use cases while drastically boosting telco service revenue.**

CSPs adopting the right approach will head to unprecedented success, leveraging the full potential of the evolving and dynamic eSIM market.



The increased momentum behind the technology means it is now time to prepare for growing demand and ensure seamless and fully digital end-user experiences.

To achieve this, CSPs need scalable and secured platforms that provide high availability and resilient services. They also need optimised supply chain management, which provides them with the right tools to manage, analyse and optimise their deployments and the quality of their services.

**Looking ahead, another area of the eSIM revolution will include the IoT segment** which is expected to have an even greater variety of use cases and devices while introducing a plethora of opportunities for telcos. The pillars and smart solutions discussed in this article also apply to the IoT segment.

# Useful Links

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- [🔗 Thales eSIM solutions for the consumer, corporate and IoT markets - video](#)
- [🔗 Thales smart profile matcher video](#)
- [🔗 Thales smart profile matcher eBook](#)
- [🔗 Thales on demand subscription dashboard video](#)
- [🔗 Thales on demand subscription dashboard eBook](#)
- [🔗 Thales Blog: how should CSPs respond to a fast-growing and increasingly diverse eSIM ecosystem?](#)

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