

Smart Connect Consumer

**Unleash the power of eSIM
with new advanced features**



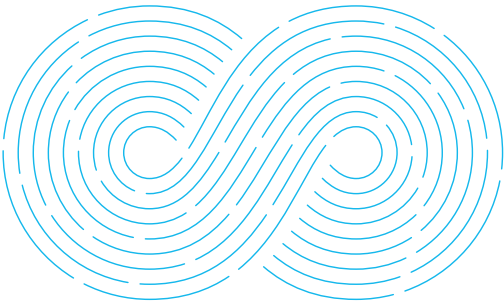
Connectivity is the foundation of the digital transformation that is changing the world in which we live.

All the devices that we use daily—phones, watches, tablets and more—are all being connected through mobile networks which are, themselves, evolving to bring us better, faster, and more consistent connectivity.

One key component to this connectivity evolution is the embedded SIM, or eSIM.

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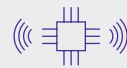
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eSIM for Consumer

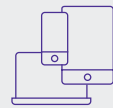
An eSIM is similar to the physical SIM card, but without the SIM card tray or removable component. Instead, a digital profile is downloaded remotely from the mobile operator network and stored on a secure element, the eUICC, through Remote SIM Provisioning. It eliminates the need for customers to go to a store to activate a subscription, allowing them to activate it anytime and anywhere—from the comfort of their own home, on-the-go, or when traveling abroad.

With 2 billion eSIM-enabled consumer devices expected by 2025¹, eSIM support can be a differentiator for mobile operators. They will be able to deliver a truly digital experience for their customers, offering on-the-spot subscription activation for eSIM-enabled devices. Logistics will be simplified, with the disappearance of SIM card distribution. Ultimately, eSIMs will enable mobile operators and Original Equipment Manufacturers (OEMs) to establish new business models and value-added services, to attract new customers, to enter new markets and to climb up the value chain.



2BN

eSIM-enabled consumer devices expected by 2025¹



80+

eSIM consumer device models available by end of 2020²



158

mobile operators supporting eSIM in 2020²



64

countries where mobile operators support eSIM in 2020²

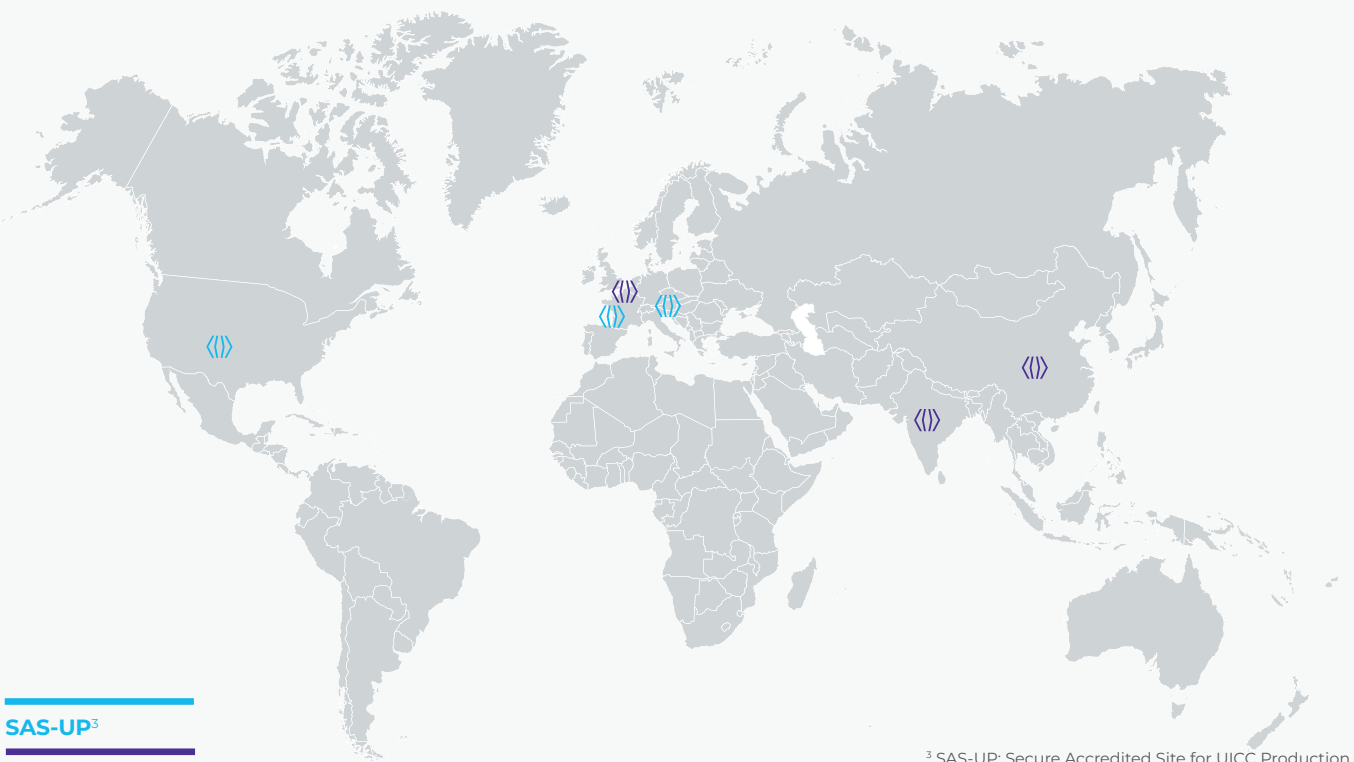
¹ ABI Research, eSIM in the Consumer and M2M Markets 2020

² GSMA Intelligence, <https://data.gsmainelligence.com/>



Your SIM & eSIM partner for today and tomorrow

Trusted by 500 mobile operators	110+ major wins in eSIM platforms	900M SIM cards shipped in 2020
€2.2B in revenues in 2020	€1B allocated to R&D over the next 5 years in cutting-edge technologies	Close to 15,000 employees including 3,000+ engineers



SAS-UP³

SAS-SM⁴

³ SAS-UP: Secure Accredited Site for UICC Production
⁴ SAS-SM: Secure Accredited Site for Subscription Management

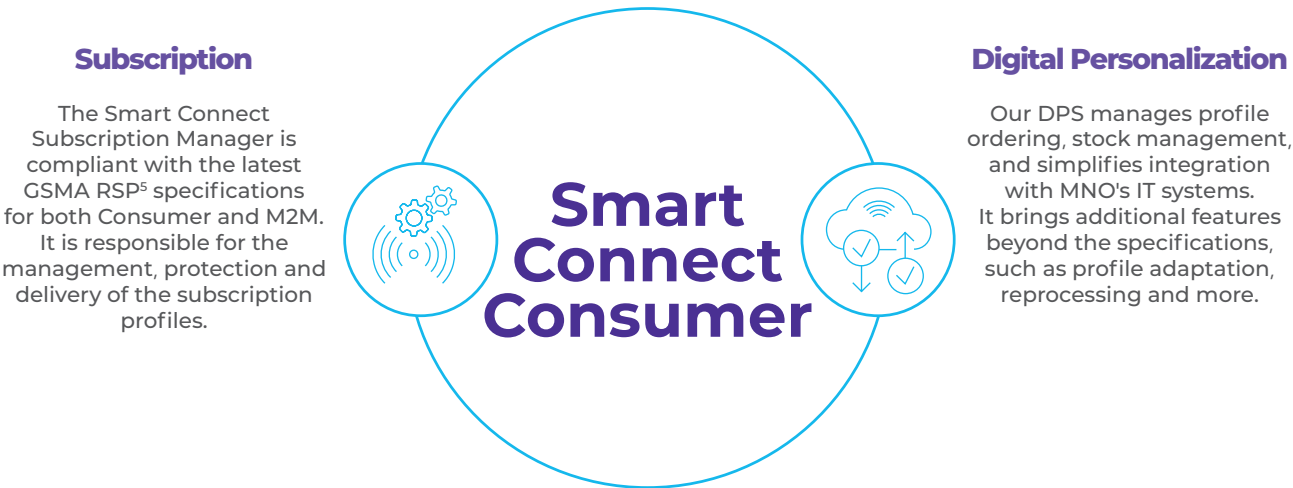
Smart Connect Consumer

With the growing number of eSIM-enabled devices, mobile operators must handle the increasing complexity in standards, specifications, and requirements for each device and their respective use cases, without investing heavily in each one separately. They need to adopt a cloud-based, flexible, and modular approach.

With **Smart Connect Consumer**, IDEMIA provides mobile operators with an end-to-end eSIM lifecycle management solution. It is made up of two major components:

- › Subscription Manager
- › Digital Personalization Service (DPS)

The Smart Connect Consumer Platform can support all eSIM consumer devices and use cases in the market today, and for the foreseeable future.



A cloud-first approach

Smart Connect Consumer takes a cloud-first approach. The platform is hosted in GSMA SAS-SM certified data centers, giving IDEMIA's customers a highly scalable and available solution that is able to meet telco-grade SLAs, as well as accommodate any data privacy and data sovereignty requirements.

⁵ Remote SIM Provisioning

Advanced eSIM Profile Features

As the number of eSIM-enabled devices grows, so do the requirements and considerations that mobile operators must take into account. However, the GSMA Remote SIM Provisioning consumer specification doesn't account for all devices and use cases.

IDEMIA's Smart Connect Consumer platform goes beyond the GSMA specifications for subscription management and eSIM profile provisioning.

Our Research & Development teams have developed new, innovative features to handle the increasing complexity in standards, specifications, and requirements for each device and their respective use cases. These features enable operators to take full advantages of digital processes and open up new opportunities to further improve the subscriber experience.



Profile Customization

Market challenge

Today, many operators are managing static eSIM profiles in the same way as they manage physical SIM card profiles—meaning that they are managing several inventories or SKU (Single Keeping Unit) of static profiles depending on their needs, increasing complexity, costs and delays.

The combination of our **Smart Connect Consumer** and its **Profile Customization** features enables mobile operators to handle dynamic eSIM profiles, which can be modified until the last moment prior to the download.

Some use cases

- › **Last minute dynamic profile personalization**, (PIN codes, vanity number...) at onboarding (remote or in-store) for an enhanced and on-demand user experience
- › **Service personalization**, for affiliates, Mobile Virtual Network Operators (MVNOs), or partners: when a need arises, the MNO is immediately able to assign and customize dynamic eSIM profiles for one of its affiliates or its “enterprise” customers
- › **Marketing campaigns**, with partners, such as enterprises or event organizers: offer their VIP customers some exclusive network services (5G network, Augmented Reality, VPN access...) for a short period of time
- › **Dynamic SIM allocation**, with last-minute profile downloading with real IMSI value

Key benefits



Simplify the management of SIM profile SKUs



Improve customer service with on-demand profile personalization



Generate new revenue streams by creating unique offers in market with affiliates, MVNOs, or partners



Profile Reprocessing

Market challenge

Today, whenever profiles evolve on a SIM card, MNOs are obligated to develop an updated profile, order new SIM cards embedding this new profile, and discard their old SIM cards. It is both time-consuming and costly. On the contrary, eSIM profiles are constantly updated with new SAIP⁶ template versions, new applets, new profile parameters, and more.

With our **Smart Connect Consumer** and its **Profile Reprocessing** features, MNOs are able to update profiles that have already been generated and provisioned on the SM-DP+⁷, without having to discard the outdated profiles.

They only need to update the profile definition without the need to exchange new input/output files to reprocess profiles.

Some use cases

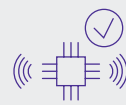
- › **Adapt to the latest devices**, and quickly address compatibility issues: SAIP template consistency can be maintained across all the profiles already generated and provisioned on SM-DP+
- › **Update provisioned available profiles**, with new profile definition without executing any new complete BAP process

⁶ SIM Alliance Interoperable Profile

⁷ SIM Provisioning – Data preparation+

⁸ Process of delivering SIM or virtual profile to the NMO according to their specifications (i.e. input/output, artwork, metadata.) Once approved, it is possible to start the production of SIM or virtual profiles

Key benefits



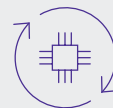
Rely on always up-to-date profiles



Improve profile interoperability



Support a wider range of eSIM devices



Avoid discarding obsolete profiles



Shorter “Bon à Produire” (BAP)⁸ time



eSIM support can enable mobile operators to deliver a truly digital experience for their customers, offering on-the-spot subscription activation for eSIM-enabled devices.





Profile Adaptation

Market challenge

Interoperability issues between eSIM profiles and the eUICC on a device can cause headaches for mobile operators. The latest eSIM devices and their respective eUICC may not be compatible with the latest SAIP profiles, forcing mobile operators to manage different SKUs per device, and increasing the complexity of the end user onboarding, due to the profile SKU's dependency on the device capability.

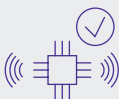
With our **Smart Connect Consumer** and its **Profile Adaptation** features, mobile operators can define profile adaption rules depending on the eUICC, the device capabilities and the end-user contract, and dynamically select the correct SAIP template.

Some use cases

- › **Dynamic 5G Profile adaption:** to support 5G-enabled devices hotels, e-travel portals....

⁹ Bon à Produire

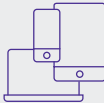
Key benefits



Increase the profile download success rate



Ensure a positive subscriber experience



Support a wider range of eSIM devices



Simplify profile inventory logistics



Single BAP⁹ to address multiple devices and use cases



Maintain support for industry interoperability standards



Group QR Code

Market challenge

eSIM enables subscribers to activate and provision their devices anytime, anywhere. Yet, most mobile operators today are not taking full advantage of eSIM. Instead, many are using QR code vouchers in the same way they would distribute physical SIM cards.

With our **Smart Connect Consumer** and its **Group QR Code** features, mobile operators can leverage a single QR code to onboard groups of subscribers. Not only does this simplify subscription management, but it also enables various marketing campaigns: a single QR code can be used to promote targeted offers to numerous potential customers, through print media, outdoor posters and digital signage, for example.

Some use cases

- › **Targeted prepaid offers for inbound travelers**, with a single QR code displayed in taxis, airports, hotels, e-travel portals....
- › **Enrollment of multiple devices under a single contract**, for the members of a family for instance
- › **Streamlined management of smartphone fleets for enterprises**, with Group QR codes assigned to specific functions in the organization (HQ staff, sales, remote employees...)

Key benefits



Capture new customers on the move, at airports, train stations, and more



Open new distribution channels and rely less on brick-and-mortar stores



Easily activate a wide variety of devices



Optimize subscriber acquisition costs



Summary & Key Takeaways

eSIM enables subscribers to activate and provision their devices anytime, anywhere, yet most mobile operators are not yet taking full advantage of eSIM capabilities.



With IDEMIA's Smart Connect Consumer and its advanced features, MNOs can take full advantage of the digital world and overcome the limitations posed by physical SIM card processes.

This enables them to go beyond the GSMA RSP specification and support as many devices and use cases as they want without investing heavily in each one separately.

Thus, mobile operators can grasp the full potential of eSIM and digital transformation, develop new services, acquire new customers, create new partnerships and business models, and drive revenue growth.





Unleashing the **power of eSIM**

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