



# How GSMA SGP.32 is revolutionizing IoT connectivity

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## Cellular IoT Market Context

The IoT ecosystem is expanding at an unprecedented pace. According to GSMA Intelligence, the number of licensed cellular IoT connections is projected to reach 5.8 billion globally by 2030, up from 3.5 billion in 2023.

By 2030, nearly 40% of these connections are expected to utilize eSIMs, revolutionizing global communications for connected devices. Additionally, Thales predicts that by 2028, there will be nearly 2 billion eSIM-enabled IoT devices worldwide.

Also, projections indicate that the global IoT market will reach over \$622 billion in revenue by 2030, efforts to bridge the connectivity gap will intensify.

This growth trajectory underscores the critical need for innovative standards and solutions to meet market demands and address evolving challenges.

# Connectivity lifecycle requirements across Key Stakeholders

The IoT ecosystem comprises diverse players, each encountering unique connectivity challenges:



## **MOBILE NETWORK OPERATORS (MNOS) AND GLOBAL CONNECTIVITY SERVICE PROVIDERS (CSPS)**

MNOs and CSPs are essential for providing and managing reliable connectivity for IoT devices over extended periods. They require robust subscription management systems and scalable infrastructures to support the increasing number of IoT connections. Ensuring long-term functionality and uninterrupted connections for IoT devices is paramount to maintaining seamless operations.



## **IOT SERVICE PROVIDERS**

IoT Service Providers oversee the deployment and lifecycle management of IoT devices, from factory production to field implementation. Their connectivity needs include seamless integration across different network types (e.g., 5G, LTE, Cat 1 bis, NB-IoT), reliable data transmission, and robust security for data integrity. Efficient lifecycle management is crucial to support diverse applications such as healthcare, smart metering, security cameras, and tracking solutions. They must ensure stable connectivity and reliable performance throughout the entire lifecycle of the devices.

Additionally, they must address challenges related to connecting and managing massive populations of IoT devices effectively and securely over multi-year lifecycles.



## **IOT ORIGINAL EQUIPMENT MANUFACTURERS (OEMS)**

IoT OEMs design and manufacture connected devices, ensuring compatibility with multiple network standards and protocols like 5G, LTE, Cat 1 bis, and NB-IoT. They require consistent performance across varied network environments, and integrated security to ensure stable connectivity and protect device data. Efficient lifecycle management is key to their operations, from device production to deployment.



## The Pivotal Role of GSMA SGP.32 in Streamlining IoT Deployments

The introduction of GSMA SGP.32 eSIM IoT Specification marks a transformative shift in IoT connectivity: it leverages field-proven GSMA consumer eSIM provisioning specifications and adapt them for streamlined large-scale IoT, addressing the key pain points faced by the main stakeholders in the IoT ecosystem.



### SCALABLE CONNECTIVITY AND SEAMLESS INTEGRATION

- **Flexible and Scalable Framework:** SGP.32 offers a robust framework to manage connectivity across diverse IoT ecosystems, enhancing interoperability across multiple operators. This scalability is crucial for accommodating the projected growth in connected devices. For Mobile Network Operators (MNOs) and Global Connectivity Service Providers (CSPs), this means more reliable and flexible subscription management, ensuring IoT devices remain connected over extended periods.
- **Streamlined Integration:** Simplified processes enable seamless switching between providers, reducing complexity for manufacturers and service providers. This integration benefits IoT Service Providers who manage IoT device lifecycles, easing barriers to integrating devices across various networks and simplifying deployment and maintenance of IoT applications.



### COMPREHENSIVE SECURITY AND OPERATIONAL EFFICIENCY

- **Enhanced Security:** The specification includes robust security measures to protect digital communication from device manufacturing through to field implementation. This addresses the growing cybersecurity concerns in the IoT space. IoT Original Equipment Manufacturers (OEMs) can ensure that devices are safeguarded throughout their lifecycle, mitigating risks associated with large-scale production and post-manufacturing customization.
- **Efficient Operations:** SGP.32 accelerates time to market with efficient provisioning processes, allowing swift growth in IoT deployments. This efficiency is vital for IoT Service Providers seeking to deploy devices rapidly to meet market demands without compromising on quality or reliability.



## RELIABLE CONNECTIVITY AND MARKET EXPANSION

- **Connectivity Resilience:** In critical industries like healthcare, utilities and agriculture, uninterrupted service is essential. SGP.32 supports secure and resilient connectivity across multiple carriers and private networks, providing a reliable foundation for cellular IoT deployments.
- **Broad Service Options:** IoT Service Providers benefit from extensive connectivity service options and subscriptions from MNOs and global operators, fostering growth and innovation across emerging markets.

By effectively tackling the challenges faced by MNOs & CSPs, IoT Service Providers, and IoT OEMs, GSMA SGP.32 is set to transform IoT connectivity with enhanced flexibility, security, and efficiency, paving the way for resilient and scalable IoT deployments

## Thales: Pioneering IoT Standardization

As the IoT market gears up for exponential growth, prioritizing compatibility with GSMA SGP.32 standards is essential. In this regard, Thales, leading standardization efforts in the industry, plays a pivotal role in simplifying IoT deployments by pioneering solutions that foster an interconnected, digital society.

Thales solutions simplify global IoT deployments by providing flexible, secure, and efficient connectivity lifecycle management. They enhance the GSMA SGP.32 experience through advanced automation, enabling IoT devices to seamlessly connect to the best local mobile networks over time and ensuring resilience.

Thales is at the forefront of digital transformation, securing cellular communications for billions worldwide. Our mission is to deliver security, reliability, and simplicity in a rapidly evolving tech landscape.



[More information on our solutions](#)

**Thales for IoT: Enabling Cyber Secure IoT Connectivity**



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