THALES

Building a future we can all trust

Cinterion® IoT Suite
Connectivity
Activation

Today's challenges for IoT Connectivity Activation

IoT connections are expanding at a record pace as the demand for industrial applications skyrockets. From smart meters and connected alarm systems to smart cars and connected medical devices, IoT demand is driving an urgent need to simplify and speed the process of getting and keeping everything connected.

The Complexity of Industrial IoT Connectivity

Traditionally, cellular service is provisioned by simply inserting a carrier-specific SIM card into a connected device and turning it on. However, for industrial applications that are engineered to last a decade or more, SIM cards need to be soldered into devices during secure process manufacturing. While this extends durability and longevity to protect IoT investments, it also complicates the IoT journey for solution providers.

An Explosion of SKUs

To connect geographically dispersed and global deployments, service providers commonly use a range of SKUs, each tailored to support a specific MNO. However, developing, manufacturing and managing logistics for multiple product variants is expensive and time consuming and it complicates installation.

Complex Installations

Each time technicians install a connected device, security cameras, smart meters, or POS terminals for instance, they usually run manual site tests to determine the best network and settings for each installation site. Then, they need to go back to the warehouse or truck to get the right device SKU before installing and configuring it in the field.

Maintaining Connectivity Continuity

Once an IoT device is installed, it must be maintained across its lifespan. Telco contracts typically last 5-6 years whereas IoT devices are in the field for 10-15 years. As contracts expire and wireless networks evolve connectivity disruptions can occur. Maintaining IoT connectivity over the long haul requires device or SIM card updates which can be both costly and time consuming.
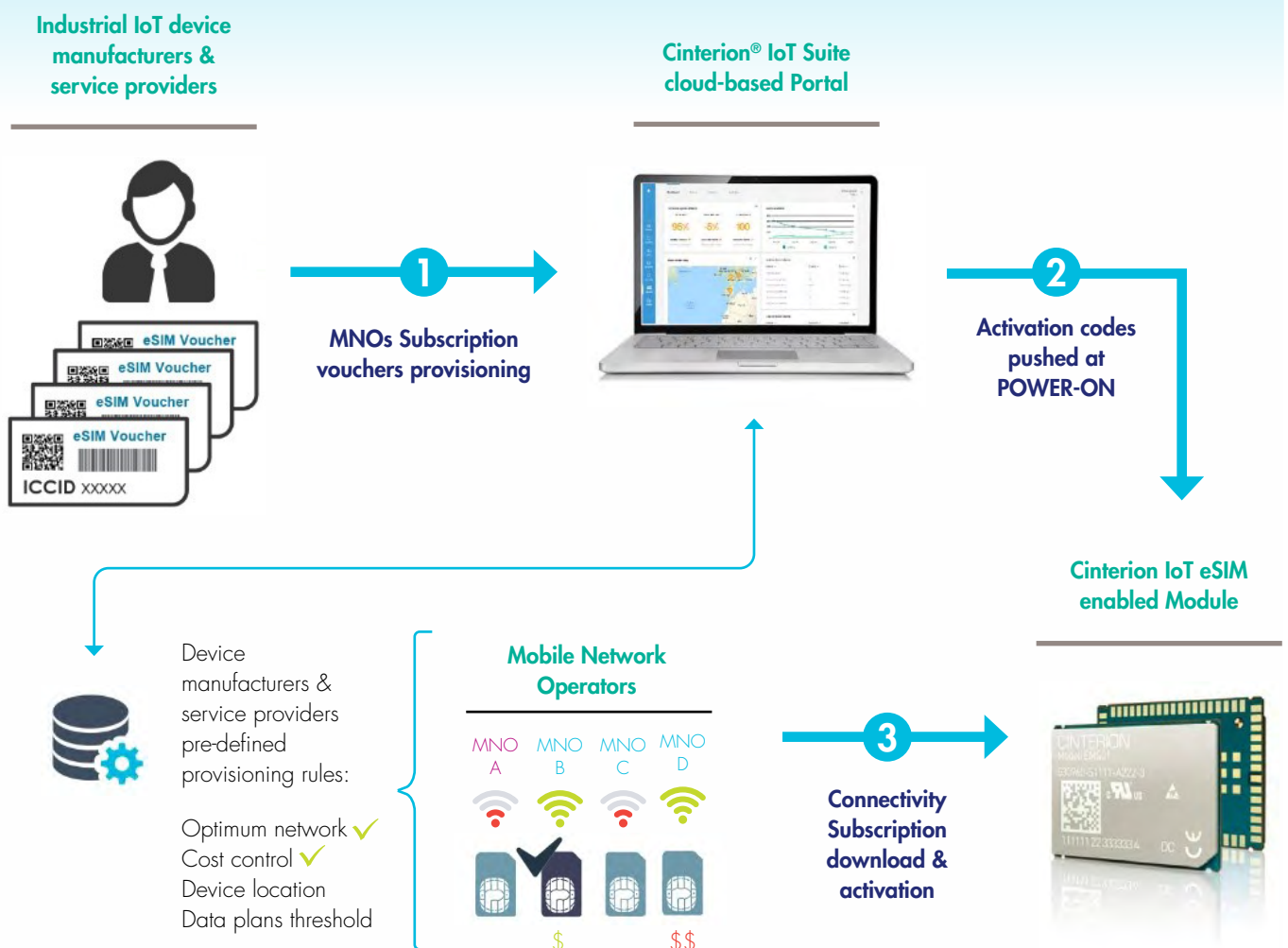
Thales has the solution!

The award-winning Connectivity Activation service provides an out-of-the-box solution to simplify cellular IoT connectivity provisioning and maintenance for any Mobile Network Operator.

A Single Solution for All MNOs

The groundbreaking Thales Cinterion IoT Connectivity Activation solution integrates a Cinterion IoT eSIM directly on a Cinterion IoT Module to enable connectivity. It leverages Thales bootstrap connectivity for first use provisioning and the Cinterion IoT Suite to help optimize and streamline Industrial IoT connectivity.

Connectivity Activation offers a standards-based, single solution for automatic, out-of-the-box connectivity to any global MNO network – from the first use of the device. What's more, it provides remote connectivity maintenance and management capabilities allowing remote service provider switching and data plan updates to preserve the long life of IoT solutions without the need for a service visit.

Connectivity Activation: How does it work?

Industrial IoT device manufacturers & service providers

eSIM Voucher
eSIM Voucher
eSIM Voucher
eSIM Voucher
ICCID xxxxx

1 MNOs Subscription vouchers provisioning

Cinterion® IoT Suite cloud-based Portal

2 Activation codes pushed at POWER-ON

Cinterion IoT eSIM enabled Module

Device manufacturers & service providers pre-defined provisioning rules:

Optimum network ✓
Cost control ✓
Device location
Data plans threshold

Mobile Network Operators

MNO A   MNO B   MNO C   MNO D

$ $$

3 Connectivity Subscription download & activation

Key Benefits

Throughout their entire lifecycle, the Cinterion IoT Connectivity Activation solution keeps IoT devices seamlessly, cost-effectively connected, 24/7, 365 days a year, for a decade or more.

No physical SIM handling required
A Thales IoT eSIM is integrated inside the Cinterion IoT Module to streamline the manufacturing process.

Optimized logistics
One single product SKU supports all MNO networks. Regional variants can be personalized at the last stage of manufacturing or even during installation.

Fast and easy device installation
A smart operator selection feature automatically identifies the best service provider for each installation site based on user-defined rules.

Always-on connectivity
IoT devices automatically switch to a fallback provider in case of an unexpected or sudden service disruption.
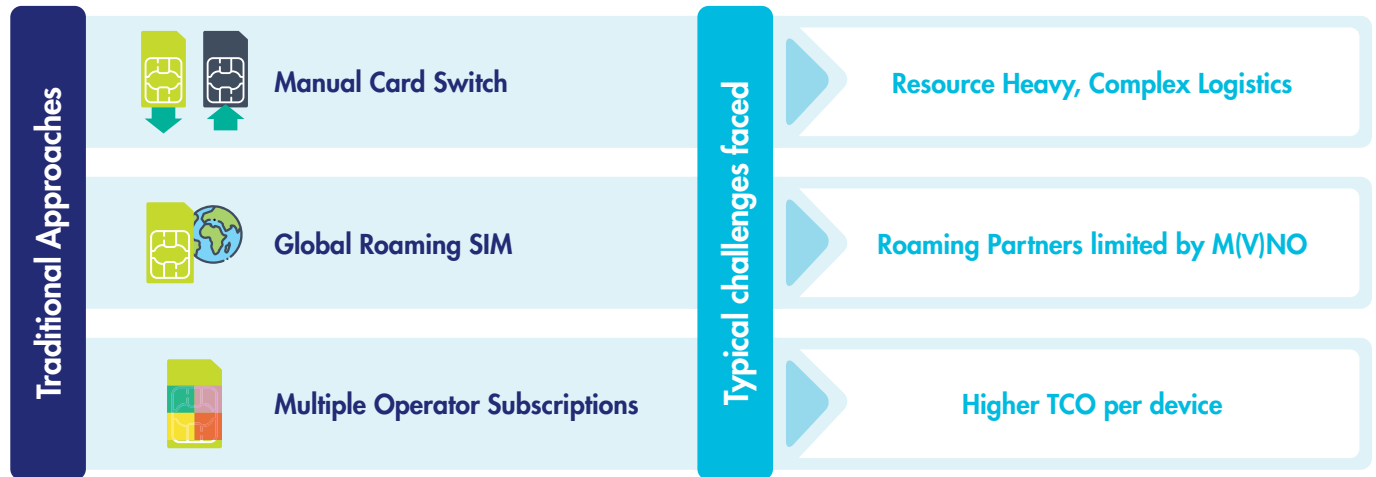
Fewer service trips
As networks and connectivity needs evolve, easily and automatically change connectivity providers from via a web portal versus a costly visit by a technician.

Thales Connectivity Activation beats traditional approaches

Traditional methods of connectivity management were designed to support the needs of consumer devices with a lifespan of 2-5 years. The Thales Cinterion IoT Connectivity Activation offer was engineered to meet the needs of industrial IoT solutions that need to operate reliably for 10-15 years. The Thales solution tackles the unique challenges of IoT connectivity head on:

Our solution provides answers to all these challenges faced by Service providers today

Traditional Approaches		Typical challenges faced	
	Manual Card Switch		**Resource Heavy, Complex Logistics**
	Global Roaming SIM		**Roaming Partners limited by M(V)NO**
	Multiple Operator Subscriptions		**Higher TCO per device**

❚ **Eliminates manual card switching**

The solution eliminates the need for SIM card switching, which can threaten the durability and security of rugged IoT solutions. Costly and time-consuming field service visits and complex logistics of managing x regional product SKUs become a thing of the past.

❚ **Reduces the need for global roaming**

IoT devices that crisscross network borders or that fall into connectivity shadows as networks evolve inevitably need MNO updates. With the Thales solution, you can easily deploy local MNO profiles to serve specific countries instead of relying on global roaming agreements.

❚ **No need for multiple concurrent subscriptions**

In order to achieve connectivity resiliency, some IoT vendors pack two or more subscriptions in the IoT device by default. This skyrockets connectivity costs. In turn, the Thales solution allows to deploy additional subscriptions only when they are needed.

❚ **Expands the power of remote SIM provisioning**

We've come a long way in simplifying cellular connectivity with remote SIM provisioning. However, the complexities of MNO-specific SIM cards and a multitude of regional product variants remain. The Thales Cinterion IoT Connectivity Activation solution takes the success of remote SIM provisioning a step further. By offering a native bootstrap connectivity along with an "empty shell" eSIM, a single device variant can be configured for the cellular operator of the end user's choice when the IoT device is first turned on.

To learn more, contact your local Thales representative or visit us online at: www.thalesgroup.com/iot

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