IST Showcases Resilient Connectivity Orchestration for Smart Meters

Enabling seamless network switching and future-ready connectivity for the smart energy eco-system.

CONNECTIVITY

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At Enlit Europe 2025, IDEMIA Secure Transactions (IST) demonstrated its advanced eSIM IoT solutions enabling always-on, secure, and quantum-era ready communication between smart meters, gateways, and energy management systems.

Interoperable IoT Connectivity for the Smart Energy Ecosystem

The "**Interoperability Demonstration Wall**" illustrated end-to-end interoperable architecture of smart energy ecosystems, from utility back-office systems and communication networks to connected residential devices. Within this ecosystem, IST's connectivity solutions ensure continuous, secure operation of smart meters and energy devices across different networks, geographies, and manufacturers.

eSIM IoT Connectivity Management

IST showcased its ability to **download, enable, and swap live telecom subscriptions in real time**, using **GSMA SGP.32 technology**. This empowers device manufacturers and utility providers to efficiently manage massive IoT connectivity, including smart metering, across diverse mobile networks.

Through eSIM IoT technology, IST enables flexible connectivity orchestration such as:

- **In-factory profile provisioning (IFPP),** allowing single SKU management to simplify manufacturing and logistics across regions
- **On-site profile provisioning (OSPP),** ensuring installation success by automatically selecting the best network at the point of deployment
- **Remote SIM provisioning (RSP),** allowing devices to be activated in the field and managed without the need for physical SIM replacement

Security for Energy IoT

With cybersecurity risks on the rise, IST's solutions ensure crypto agility of every connected element, from Head-End Systems (HES) and Meter Data Management (MDM) to smart meters and residential devices. By embedding **post-quantum cryptographic algorithms** into its solutions, IST guarantees **end-to-end data integrity** and protection against tampering or unauthorized access.

Driving Interoperable Architecture

IST provides eSIM solutions to ESMIG partners including PPC, Kamstrup, Elgama, and Meter and Control, securely connecting each member from back office to the grid edge. This enables utilities and **Distribution System Operators (DSOs)** to achieve true end-to-end interoperability while advancing the entire energy value chain towards greater digital sovereignty and long-term sustainability.

> *With SGP.32 remote provisioning, Kamstrup meters can stay online as long as any mobile network does, allowing our customers to change network provider with a simple, standard solution. That is what leadership looks like for us, making advanced technology feel simple, dependable, and built around real-world needs.*
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> Gerben Kuijpers, Commercial Product Manager, Kamstrup

> *Our goal is to make smart meter connectivity resilient from deployment to end of life. With our eSIM solutions, utilities can manage networks remotely, secure critical operations, and ensure devices perform for decades. We're grateful to our partners who helped make this demonstration a success.*
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> Delphine Sartel, Product and Offering Manager of the Automotive & IoT Business Line, IDEMIA Secure Transactions