

Case study

Scaling up a massive smart meter rollout in Indonesia with reliable IoT connectivity and management

Nokia Worldwide IoT Network Grid

NOKIA





As smart meter deployments grow around the world, power utilities are gaining real-time data and insights into their customers' energy consumption and usage patterns. But they also have many more connected devices to manage and support, located in more places than ever before. That requires secure, reliable and uninterrupted Internet of Things (IoT) connectivity, as well as a way to manage all those devices in a seamless, automated way.

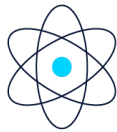
Using Nokia's Worldwide IoT Network Grid (WING) platform, Hutchison 3 Indonesia (3ID) is delivering those capabilities to the country's state-owned electricity provider — while building the foundation it needs to offer IoT services to other industries looking to deploy and connect smart devices on a massive scale.

Business benefits

For Communication Service Providers



Diversify into new markets using an IoT network-as-a-service model



Broaden service portfolio with addition of end-to-end connectivity and management

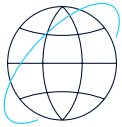


Faster rollout of IoT services to enterprise customers



Business benefits

For power utilities



Robust, reliable connectivity across multiple sites and geographies



Dynamic management and monitoring of metering and consumption



Vision

3ID is one of the leading mobile communication service providers (CSPs) in Indonesia, delivering 4G and LTE services to more than 10,000 villages across the country. It also offers network services to several enterprise customers throughout Indonesia, including State-owned Electricity Company (SEC).

Seeking to cut costs and improve the customer experience, SEC aims to roll out 79 million smart meters over the next seven years. Smart meters will reduce the need for SEC staff to recalibrate older traditional meters — a manual, costly process that has been done in a special testing lab. And by replacing most of its traditional meters (which often miscalculate power consumption) with smart meters that can collect energy usage data in real time, SEC hopes to provide its customers with more accurate information while also bringing greater automation to the billing process.

Being able to dynamically monitor consumption and usage patterns across the grid would also improve SEC's load balancing efforts as more renewable energy sources are brought into Indonesia's energy mix.

To help SEC achieve these goals and support a customer base that's spread out over Indonesia's many islands, 3ID had to deliver an IoT connectivity solution that would make it easy for SEC to support and manage millions of smart meters — anytime, anywhere.



3ID is delivering an IoT connectivity solution that enables SEC to support and manage millions of smart meters — anytime, anywhere.

How Nokia helped

Nokia WING is a managed service that lets CSPs offer their enterprise customers scalable, dynamic IoT connectivity. By taking advantage of WING's flexible, pay-as-you-go business models, 3ID was able to provide SEC with a fully managed service to handle its smart meter rollout, with its solution focusing on two key areas:

- **IoT connectivity:** Delivered through a network-as-a-service model, a fit-for-purpose, fully virtualized mobile IoT core provides all of SEC's smart meters with highly secure, reliable and robust connectivity. It can also scale up or down quickly and cost-effectively, without incremental upfront costs or ongoing local investments, so SEC can easily onboard massive amounts of new smart meters across multiple sites and varying geographies.
- **Connectivity management platform:** This cloud-based, self-service platform simplifies and streamlines the day-to-day management of SEC's smart meters. Energy consumption can be monitored in real time from one single interface, which makes it possible to track and respond to unusual or abnormal usage patterns, quickly generate up-to-the-minute usage reports, or send automated notifications to customers before they reach or exceed consumption thresholds. This real-time data also enables SEC to implement dynamic charging and billing models.

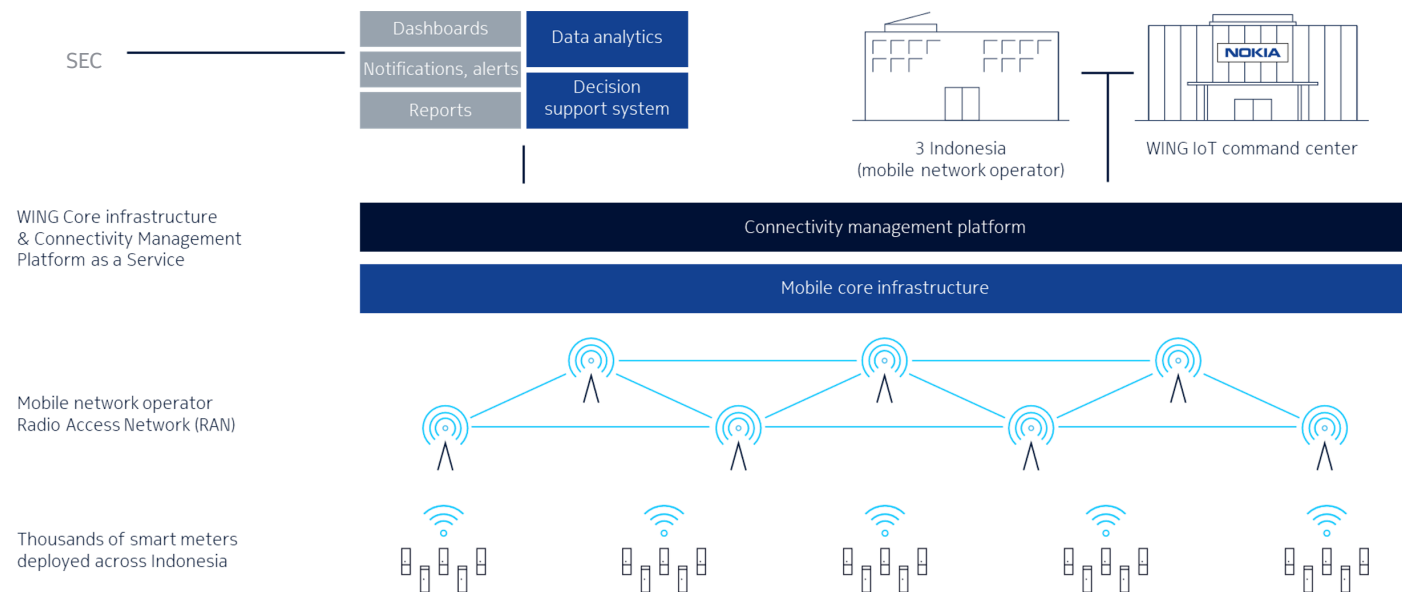


Figure1. Delivering IoT connectivity and management for SEC's smart meters

Opportunity

Through the IoT connectivity and management capabilities delivered through Nokia WING, SEC is able to:

- **Remotely monitor** users' power consumption in real time, removing the need for monthly manual inspections of traditional meters
- **Enable full visibility** of the energy grid, identifying areas of overload and underloads to manage and control power distribution more efficiently
- **Enhance the customer experience** by offering more transparent and accurate billing
- **Improve service reliability** by detecting blackouts faster and enabling preventative repairs to stop outages before they occur
- **Use real-time customer data** to inform network improvements and develop new services, such as smart time-of-use tariffs

Now that WING has been successfully deployed with SEC, 3ID has built up the foundational capabilities that will allow it to roll out IoT services quickly and cost-efficiently to enterprise customers in many other industries across the country — from agriculture and livestock management to logistics and asset management. And as part of the Nokia ecosystem, they'll also be able to work with other WING operators worldwide to further improve the delivery of IoT services to enterprise customers in Indonesia.



“Nokia WING will help us unlock the potential of IoT for our enterprise customers in a broad range of key sectors, so businesses across Indonesia can better compete on the global stage.”

M. Danny Buldansyah
Deputy President Director
and Chief Sales Officer
Hutchison 3 Indonesia



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About Nokia

We create technology that helps the world act together.

As a trusted partner for critical networks, we are committed to innovation and technology leadership across mobile, fixed and cloud networks. We create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Adhering to the highest standards of integrity and security, we help build the capabilities needed for a more productive, sustainable and inclusive world.

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