

Success story:

Empowering a smart society

Massive IoT comes to Sri Lanka



ERICSSON

In
collaboration
with



Dialog

September 2018

Expanding South Asia's digital footprint

With the ambition to make its Internet of Things (IoT) business objectives a reality, Dialog Axiata partnered with Ericsson to upgrade its network, resulting in the launch of South Asia's first Massive IoT commercial network.

About the customer

Dialog Axiata PLC is Sri Lanka's premier connectivity provider. Established in 1993, the company provides digital services to consumers and corporate markets. Operating on 2.5G, 3G, 3.5G, 4G and 4.5G networks, Dialog was the first to deploy NB-IoT in South Asia.

www.dialog.lk

"The company's objective is to empower Sri Lankan enterprises, as well as consumers, through IoT."

Pradeep De Almeida,
Group Chief Technology Officer,
Dialog Axiata

Making the first move

As Sri Lanka's largest operator, Dialog Axiata prides itself on being at the forefront of introducing new technology and value to consumers, and playing a key role in the country's digitization process.

An estimated 3.5 billion cellular IoT connections worldwide are expected by 2023.¹ With new Massive IoT cellular technologies such as NB-IoT and Cat-M1 (LTE-M) fueling market growth, there is an opportunity for service providers.

5G and IoT will be central to new business models and revenue streams for industries embracing digital transformation. NB-IoT and Cat-M1 technologies are forming the foundation of 5G's future, and have an integral role to play in most mobile operators' IoT strategies.

Dialog's business objectives include taking the first-mover advantage in the IoT value space; upgrading its network to make it futureproof; and playing a part in transforming society. Its strategy is to use standard 3GPP cellular IoT technologies for emerging Low Power, Wide Area business opportunities, which have the advantages of scalability, security and cost efficiency.

A history of looking forward

Ericsson has had a presence in Sri Lanka since 1994 and, with Dialog, has been supporting technology evolution and pioneering ICT innovations in the country for over 15 years. Together, Ericsson and Dialog have evolved networks from 2G and 3G through to 4G and 4.5G, with 5G on the horizon, and also partnered for cloudification of Dialog's core network.

Ericsson deployed the 3GPP standardized technologies Cat-M1 and NB-IoT as a software activation to Dialog's existing LTE Radio Access Network (RAN). This was a smooth activation, given Dialog's existing network and long-term partnership with Ericsson, as well as Ericsson's experience of working on a large scale, and led to the successful launch of South Asia's first Massive IoT commercial network.

The project saw Ericsson successfully activating Massive IoT RAN software on Dialog's existing LTE installed base and carrying out knowledge sharing through technology workshops and IoT deep-dive sessions.

The opportunity

- As the market leader, Dialog wanted to take the first-mover advantage in the IoT value space
- Its ambition is to improve the efficiency of society as a whole

The solution

- Dialog launched South Asia's first Massive IoT network with Ericsson
- Cat-M1 (LTE-M) and NB-IoT support was delivered by Ericsson as a software activation to Dialog's existing LTE RAN: the complementary technologies meet diverse use case needs
- Ericsson and Dialog will launch an Innovation Center for 5G and IoT use case development

The result

- The network supports the country's end-to-end IoT ecosystem development by offering superior coverage, long battery life and cost-effective solutions to enterprises
- The Massive IoT network enabled the trial of use cases, which Dialog plans to commercialize, and which will help accelerate the proliferation of IoT devices
- The network supported the first NB-IoT Hackathon in Sri Lanka

¹ Ericsson Mobility Report, June 2018: www.ericsson.com/en/mobility-report/reports/june-2018



Source: Dialog Axiata

Opening doors with IoT

South Asia's first Massive IoT commercial network paves the way for a strong end-to-end ecosystem with industry partners. Advanced technology encourages the development of innovative products and services in the IoT space.

"5G and IoT will be the engine for innovation and enhanced customer experiences. They will also inspire new business models and revenue streams for industries embracing digital transformation."

Vinod Samarawickrama,
Country Manager/Managing Director,
Ericsson Sri Lanka & Maldives

"The primary objective of the Lab is to create an environment for innovation. What we would really like to do is create solutions for local problems."

Professor Dileeka Dias,
Department of Electronics and
Telecommunications Engineering,
University of Moratuwa

Since NB-IoT and Cat-M1 are complementary technologies that meet different needs, a wider range of use cases can be explored. NB-IoT is a good fit for stationary applications requiring low data and infrequent transmission, plus has advantages of low cost and wide coverage. Meanwhile, Cat-M1 has a high data rate and supports VoLTE and mobility, as well as solutions requiring speech (e.g. vending machines) and the ability to track moving objects (e.g. pets).

The vision in action

The new Massive IoT network is already being put to good use. The first NB-IoT Hackathon in Sri Lanka was conducted in collaboration with Ideamart in March 2018; teams were tasked with creating NB-IoT solutions using Dialog's IoT platform, or to make existing solutions NB-IoT compatible.

Commercial and pre-commercial use case testing is also underway at the Dialog–University of Moratuwa Mobile Communications Research Laboratory. The lab is funded by Dialog and is the first of its kind in Sri Lanka. Its vision is to explore opportunities in new and emerging IoT markets, develop relationships with IoT device and solution providers, and roll out research and development initiatives of national and regional significance.

The solutions in development run across all wireless technologies (NB-IoT, 2G, 3G, Wi-Fi, ZigBee, etc.). A wide range of use cases are being explored. One current focus area is a smart grid use case for the power utility sector. Funded by a GSMA utility partnership grant, and in collaboration with Lanka Electricity Company (LECO), smart metering and power distribution network monitoring sends data to a utility IoT and analytics platform. Smart metering helps to enable remote meter reading and prepayment for the energy sector, while network monitoring devices monitor low-voltage electricity distribution lines' power quality and alert utility companies to disturbances. GSMA has nominated Dialog as a mobile network operator champion in its M4D Utilities program.

Another use case being trialled is smart bin monitoring. A home-grown NB-IoT solution enables the monitoring of the fill level of a garbage bin by fixing a sensor on a normal bin, instantly turning it into a smart bin. This will help optimize garbage collection, improve efficiency and reduce costs.

The future is massive

The partnership allows the companies to unleash IoT's business potential together. This will take the use cases from trial to commercialization and can be a good reference for other regions to follow South Asia's lead.

Ongoing engagement milestones and activities will continue to bring new innovations – Ericsson is partnering with Dialog and the Ministry of Telecommunication and Digital Infrastructure to set up a 5G Innovation Center and Test Laboratory for IoT devices and applications. The Innovation Center has four areas of focus: technology, business, partnership and applications. Ericsson looks forward to strengthening the partnership with Dialog in 5G, IoT and cloud, and to being a part of the digital evolution in Sri Lanka.

"Our vision is to build a technology-agnostic platform that seamlessly connects multiple IoT brands to a single platform and build a Partner Ecosystem."

Dr. Indika Samarakoon,
Head – M2M/IoT Strategy
Development & Partner
Management, Dialog Axiata

"Now with the Massive IoT island-wide network and 5G on the horizon, we have taken the first step towards the next industrial revolution."

Vinod Samarawickrama,
Country Manager/Managing Director,
Ericsson Sri Lanka & Maldives

**Activating tomorrow, today**

Ericsson delivers Cat-M1 and NB-IoT support as a software activation to Dialog's existing LTE RAN, creating the first commercially available Massive IoT network in South Asia. Deployed across Dialog's Sri Lankan network, the advanced mobile technology will help

accelerate the proliferation of IoT devices. Ericsson's Massive IoT solutions for Cat-M1 and NB-IoT devices will further develop the IoT ecosystem in the country by offering low cost, low power consumption, deep coverage, massive connections, and more secure and reliable transmission to enterprises.

Ericsson enables communications service providers to capture the full value of connectivity. The company's portfolio spans Networks, Digital Services, Managed Services, and Emerging Business and is designed to help our customers go digital, increase efficiency and find new revenue streams. Ericsson's investments in innovation have delivered the benefits of telephony and mobile broadband to billions of people around the world. The Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York.

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