

Accelerating Brunei's national growth through digitisation

Brunei has defined a national vision called Wawasan Brunei 2035 to ensure growth and prosperity. Brunei's Digital Economy Masterplan, with concrete targets for the coming years until 2025, supports the achievement of these goals. A digital economy is the key enabler to propel Brunei to a level defined as smart nation based on digital government, economy and society.

The Digital Economy Council (DEC) has selected smart metering as one of its flagship projects within the masterplan to be implemented in 2020. The project supports key strategic goals in Wawasan Brunei 2035 to ensure secure, reliable and efficient supply and use of energy and to maximise economic spin-offs from the energy industry by boosting local content and ensuring a high level of participation of the local workforce.

Key Goals

- Increase the reliability of supply (electricity and water)
- Increase the efficiency by reducing losses and improving the match between supply and demand
- Enable the seamless integration into smart city concepts of the future

The implementation of unified smart metering is carried out as a public private partnership initiative. A local Mobile Network Operator (MNO) is providing smart metering as a service to the local utilities. The local MNO engaged a global Communication Technology Provider (CTP) as supplier for the technical solution. Cuculus has provided its **zonoS** IoT Platform for smart metering and more along with support to CTP.

The initial scope of the project was to provide a system for smart electricity meters using the 4G mobile network of the local MNO. The system had to be able to work with meters from a variety of manufacturers and had to be expandable to other areas. Furthermore, the solution had to support pre-payment functionality and an interface with MNO's payment platform.



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After a proof of concept project with electricity meters, the Government of Brunei requested to extend the scope to include water metering as well. In the framework of a tender, the local MNO purchased smart electricity meters with communication modules that can act as a communications hub for wireless M-Bus water meters. The use of a standard such as W-Bus ensures interoperability and allows to combine different vendors. In a second tender, MNO selected water meters from four different vendors.

Cuculus' **ozonos™** IoT Platform manages the smart meters (both electricity and water), collects and validates data and makes it available for the customer care/payment platform. For this purpose, **ozonos™** has integrated Advanced Meter Management (AMM) and Meter Data Management (MDM) functionality. Payments received on MNO's payment platform are converted into credits that are sent by **ozonos™** to the smart meters. End customers receive information about their credits and have transparency about the consumption through the MNO's customer app.

The pre-payment functionality monitors both electricity and water consumption. Customers receive warnings when their credit is running low, followed by a disconnection if they do not make additional pre-payments. There is also a disconnection of electricity if the water credit expires. This is a fairly simple and unique approach because the use of valves to disconnect the water supply is expensive and possibly difficult to implement. This unified smart metering and customer care solution creates synergies and allows Brunei to achieve its objectives for two key sectors in one go.



Our **ozonos™** IoT Platform makes an important contribution to the implementation of the smart metering program as one of the flagship projects in Brunei's vision of a smart nation.

Vijay Gonsalves
Project Manager

The overall project, including meter installation and maintenance, will be carried out through the recruitment and training of local resources to support the participation and educational objectives of the national vision.

Although the roll-out of smart metering with the current scope has just started, Brunei has already identified additional opportunities and is now moving forward by using the data to create new applications such as solar energy and EV charging integration.

Cuculus' **ozonos™** IoT Platform enables the local MNO to take advantage of such opportunities and provides solutions that are necessary to realize Wawasan Brunei 2035.

