How a Standards-Based Approach Can Boost LPWA Revenue

Chris Meering, oneM2M MARCOM Vice Chair, EMEA, and Worldwide IoT Product Solutions Lea, Hewlett Packard Enterprise (HPE)

Chris Meering, oneM2M MARCOM Vice Chair, EMEA, and Worldwide IoT Product Solutions Lea, Hewlett Packard Enterprise (HPE)

Chris Meering has been part of the Communications Media Solutions (CMS)- IoT Worldwide Practice since its inception. He is responsible for "Go to Market" activities for the HPE Universal IoT Platform and working across industry verticals within HPE as an IoT Subject Matter Expert.

Chris has nearly 30 years of operational, consulting, and business development experience in the telecommunications sector with companies such as BT,
Eircom, and Capgemini before joining HPE. As part of the HPE IoT organization he has been working closely with HPE's Automotive Industry Vertical on the area of Connected Vehicles focusing on applications, services and connectivity.

By 2026, the GSMA expects an enormous $1.8 trillion revenue IoT opportunity to be in the offing for mobile network operators. That's about the same size as Italy's GDP, the world's ninth-largest economy.

According to analyst firm Machina Research, the total number of IoT devices worldwide, including those connected to short-range technologies, such as Wi-Fi and ZigBee®, will jump from six billion in 2015 to 27 billion by 2025. That's roughly the equivalent of four devices for every person on the planet.

These figures represent the incredible growth story for the IoT, with one accelerator being low power wide area (LPWA) networks. These are increasingly being used by communication service providers (CSPs) to complement their traditional cellular infrastructure.

Tackling IoT use cases that typically require infrequent transfers of small data payloads, Analysys Mason predicts there will be some 3.4 billion LPWA connections by 2025. That's a massive leap from the estimated 64 million LPWA connections in play by end-2016. By comparison, the research outfit reckons there will be around 1.3 billion mobile IoT connections by 2025, up from 317 million in 2016.

Return on LPWA

In terms of IoT connectivity, LPWA is where the main action currently is for many CSPs – but connectivity revenue is a relatively small component of the IoT value chain, with the bulk of this expected to come from applications. As a result, many CSPs are pushing hard on volume generation to compensate for ultra-low ARPC. By focusing only on volumes, however, it leaves large chunks of the revenue pie to other parties.

It doesn't have to be this way. To help climb up the value-chain ladder, a growing number of CSPs and network equipment providers (NEPs) are turning to an open-standards approach to IoT: oneM2M. Moreover, oneM2M helps drive economies of scale. The prospect of higher connectivity and non-connectivity revenue is now on the LPWA table.

From vertical to horizontal

CSPs can take advantage of this significant opportunity by moving from legacy IoT architecture, which are also referred to as vertical solutions. These more traditional infrastructures were implemented on a 'silo' basis. One device linked to one application, and often restricted to one connectivity method. The initial challenge was to establish an M2M connection, manage the device, then maintain appropriate data flows.

However, customers soon realised there were lots of use cases possible with M2M and IoT but to implement each one in a silo or 'vertical' way would mean system integration would need to be redone, over and over, for every new IoT and M2M implementation. Not only does this cause cost inefficiencies and lack of scale, it also stifles innovation, with sensor data limited to just one application, for example, being less likely to be of interest to application developers.

The ideal for application developers is to be able to build apps without having to worry about different connectivity requirements and device management. Instead they can focus on app logic and not have to bother about repeating app development efforts for every IoT platform.

This simplicity is essential to get app developers on-board and can be achieved through use of oneM2M's reference architecture which is based on open standards and developed in partnership with around 200 members worldwide. CSPs and NEPs that align with oneM2M can break down silos that inhibit growth. Sensor data can be reused in different applications; devices can be deployed for more than one purpose; and the sharing of software across different applications, such as device management and security, is also made possible. The need for application-specific platforms is eliminated. oneM2M creates a single, connectivity-agnostic, horizontal platform for the exchange and sharing of data among all applications.

Moving up the value chain

So, what does this mean for CSPs looking to boost LPWA revenue? In a nutshell, oneM2M allows CSPs to move up the value chain and be part of a wider eco-system to tackle a much bigger addressable market.

By being able to collect and 'normalise' data from different sources on a single platform, pretty much regardless of device hardware and connectivity type — and to expose that information to app developers through easy-to-use application programming interfaces (APIs) — the oneM2M platform provides a breeding ground for new and innovative services, including 'mashups', that can add value to the enterprise. Through partnerships with device manufacturers and app developers, via oneM2M, CSPs can play a more prominent role in the app space. Additional revenue might also be generated by leasing APIs to third parties.

One way to illustrate the business-case advantages of a horizontal platform is to consider the smart city, which can be viewed as an umbrella term for supporting multiple use cases. Smart-city oneM2M deployments provide an insight into the possibilities available for forward-thinking enterprises looking to squeeze the most out of their data assets.

The oneTRANSPORT service implemented in the UK, developed by Interdigital and based on a oneM2M-compliant platform, is a good example of multiple partners coming together to create valued-added services and different business models. Making available various data assets from multiple owners on a single platform — information from roadside sensors and data about parking spaces, for example, and even data records about planned road maintenance — innovators have been able to build multiple oneTRANSPORT apps. These include a city journey-planning app; advice for commuters on their travel routes; and helping people go to a stadium or concert. If smart cities or enterprises 'lock in' data, trapped in enclosed IT systems perhaps, its value is not fully realised and innovation gets stifled.

This project highlights the essential element oneM2M brings to the IoT – the functionality it provides to CSPs to bring together data from a variety of sources onto one common environment, accessible by app developers through easy-to-use APIs. The building of different apps, reusing the same data, is possible. Exposing various datasets to independent app developers and specialists, through the creation of so-called data marketplaces, drives innovation. No one organisation can do it all.

Conclusion

This industry collaboration is incredibly important when dealing with the enormous IoT projections we are currently seeing. It is easy to be dazzled by the large numbers, but CSPs should also focus on the smaller numbers, particularly those that show connectivity revenue that accounts for only a sliver of the overall IoT opportunity.

By driving open standards, oneM2M offers CSPs a way to boost LPWA connectivity volumes by attracting device and application providers onto their networks and to move up the value chain. There is no need for CSPs to be restricted to pure connectivity – by striking up partnerships, on the back of the oneM2M platform and a vibrant ecosystem, they can move into the applications space.

For more information visit: www.onem2m.org