

Arm and SMS Plc. Optimize Smart Meter Data Collection

arm

Case Study



Company Snapshot

Name: SMS Plc.

Industry: Smart utilities

Size: 51 to 200 employees

HQ: Glasgow, Scotland

Founded: 1995

www.sms-plc.com

Reliable Data: Remote Utility Management made possible by Pelion Connectivity Management.

- + Efficient and secure management of remote assets
- + Reliable connection to all deployed devices
- + Streamlining of processes and data feeds
- + Consultative approach to meet bespoke specification

The UK utility industry is benefiting from smart meters that are deployed and managed with ease thanks to a collaboration between Smart Metering Systems (SMS Plc.) and Arm Pelion connectivity management.

SMS deploys, owns and manages automated meter reading (AMR) devices throughout the UK, servicing the industrial and commercial gas industries. With over 162,000 active connections, being able to remotely manage the connectivity of their deployed devices is vitally important to its business and ensure operational costs are kept at a minimum. When SMS realized the coverage offered by their current connectivity partner would not facilitate their roaming requirements, they began to consider alternative solutions.

Their development team was concerned by how smart meters would behave once deployed on a network as they had little experience of provisioning internet of things (IoT) enabled devices across the UK in a bespoke roaming solution. There was concerns that deployed devices could deviate from their intended purpose of sending a small 1 to 2kb burst of data on a daily basis. Whilst sending additional packets of meter readings could be considered inconsequential, it's not insignificant when you consider how one extra transmission from thousands of devices could consume bandwidth, data plans and budgets in no time at all. Furthermore, there were concerns over how SMS's devices would exploit Arm's unique full un-steered roaming capability.

The latent state of these devices also meant that deployed devices were often 'forgotten' by cellular masts whilst sleeping, with their idle state often being mistaken for being offline, there were instances of data not being transmitted for extended periods of time.

Solution

SMS Plc. partnered with Arm Pelion connectivity management to facilitate the daily collection of meter reads, thanks to SIM functionality and VPN infrastructure with high levels of redundancy and resilience built in. They chose Pelion primarily because of the consultative approach offered and the time taken to understand their exact requirements, which could be considered niche by the UK's major mobile network operators (MNO) who's 'One size fits all' approach to connectivity did necessarily suit SMS' brief.

'The Pelion team took the time to review the business opportunity, come up with a more tailored approach to connectivity management and armed us with the information necessary to make an informed decision.'

- Ian Gilchrist, Head of Gas Data, SMS Plc.

Arm's consultative approach identified that cost savings could be made by opting for a 2G communications topology that reflected SMS' low bandwidth, intermittent approach to relaying data packets.

Pelion offers pre-negotiated tariffs with over 600 mobile network operators (MNO) providing competitively priced world-wide coverage and a single bill, regardless of how many networks are used. But Arm's Engineering teams went beyond their traditional remit and worked with the SMS device team, and interrogated their firmware code to ensure reliable roaming and guarantee that devices maintained a latent connection with cellular masts even when dormant. The team also identified that typical deployment location could pose a risk to network coverage and worked with SMS to ensure meters could leverage the optimum network to maintain connectivity, even in the depths of a concrete basement.

'Arm's technical; support, flexibility and willingness to support our business has been extremely beneficial. Over the past 4 years, Pelion connectivity management has been, and remains to be a robust partner who we work alongside on a regular basis, and I would not hesitate to recommend them.'

The resulting solution was an estate of meters that is easy to manage, cost-effective and boasts high levels of redundancy, with thousands of meter feeds consolidated into a single user interface, regardless of network connection.



To learn more about Arm Pelion Connectivity Management for manufacturing, visit www.learn.arm.com/connected-industry or email us at [PelionCM@arm.com](mailto: PelionCM@arm.com)