



SWAN Smart Metering Community of Practice

1st Meeting Recap: Jan 21, 2021

I. Malta's Smart Metering Journey

Luke Pace from Water Services Corporation (WSC) who leads the SWAN Smart Metering Community of Practice shared WSC's advanced smart water metering project in the Maltese Islands. The initiative started 12 years ago with the idea to create a robust smart metering system used by both electricity and water utilities, which would improve customer service (i.e. incorrect billing due to leaks).

Some key lessons learned:

- Get the help of neutral experts in the communication field
- Don't forget to maintain the system
- Think about integrations with other sensors in your infrastructure
- Don't over-emphasise the benefits or expected difficulties

Nav Ota (City of Bellevue, WA): We're in the early stages of our process and I was wondering if WSC found extra revenue following the implementation? Luke mentioned that it's both yes and no as it's difficult to transfer from manual readings to a totally automated system (i.e. meter installation time, the integration process, etc.).

II. Group Survey Results + Open Discussion

Amir and Luke led the survey results based on 18 responses (9 utilities and 9 vendors).

Utility Smart Metering Coverage

- **67%** of utilities responded that they have **under 25% of their network** covered.

Raghu Bharadwaj (Yarra Valley Water): From the Australian perspective, we've been doing many trials, but it takes time. As a regulated business, we need the expenditure to be approved by the regulator, as well as the government. We also have the legacy of the electricity smart metering roll-out not going well in Australia. From a customer perspective, there is a lack of confidence.

Genest Cartier (Unitywater): We're currently in pilot phases. It's hard to get approval, prove the benefits, and know the costs, but it's a way to inform the business case.

Thomas Kuczynski (DC Water): We're in the first replacement phase of our original system implemented 15 years ago. We have 98% of our system covered and 93% has been replaced over the last 3 years. For a business case, it's important to consider both direct and indirect benefits (i.e. customer service value) of a system.

Reid Campbell (Halifax Water): These implementations reach every department of a utility so it's best to use an experienced consultant (ours has been involved in about 40 implementations). We began about 4 years ago and will soon have 98% covered.

Smart Metering Technology Adoption

- AMR, AMI, and CRM were the top three surveyed adopted technologies
- Cellular and Radio were the top adopted communication technologies
- NBloT was the top choice for connectivity networks by utilities and vendors

Steven Cato (Taggle): There is a need for a mix of technologies. It's about choosing the right communication module for the specific measurement. Don't get fixated on having everything in one technology. Network-as-a-Service is a secure system (and the way to go). It's important to find someone who will be there throughout the journey.

Greg Johnson (Badger Meter): An overlooked barrier is adequate staffing and maintenance. You need to understand the full 20-year life-cycle of the equipment (i.e. interaction frequency). A Network-as-a-Service offering may ultimately be a better choice depending on the available resources.

Smart Metering Integration Ideas

- SCADA, Data & Analytics, and GIS were three common smart metering integration ideas among both utilities and vendors

Christine Boyle (Xylem): A digital transformation into hourly data usually starts with meters, but it's actually more about Smart Networks. When investing, it's critical remember the specific problem you want the Smart Network fix and that not all networks can interconnect.

Other Ideas

Rik Thijssen (Vitens): It would be great if a utility with a large number of smart meters could share data about the business case (benefits, financials, etc.) on a future call.

Thomas Kuczynski (DC Water): One other factor to be aware of is data ownership and how easy it is to extract and use the underlying raw data to deliver other services to customers. While the communications architecture may be more open (LoRa) if the data architecture is proprietary then you may still be locked into a system.

Rob Main (Hunter Water Corporation): What I would like to see from this CoP - which utilities are at each stage of the cycle - explore, pilot, 1-3 years of data/ experience, 3-7 years etc. How we have progressed, what are drivers, results of pilots/ trials, which benefits have been proven, lessons learnt etc.?

III. Next Steps

We decided to hold quarterly meetings and continue to feature unique case study and expert insights.

In future calls, we will discuss the different stages of a smart metering project (i.e. pre-planning, technology selection, piloting, implementation).