Smart meters
+ smart thinking

What problem will the data solve?

Before you make an investment in smart metering, it's best to ask just why you want the data – what problem are you trying to solve, asks Datacol CEO **Bruce Franks**.

So you've made the decision to deploy smart meters; to have 30-minute data arriving from all of your end points filling up your data base and then to invoice once a month. But just what is the point of collecting all this data and what are you going to do with it?

Perhaps examine it from a different angle. Why not ask before committing considerable sums of ratepayer's funds to a smart meter deployment, "What is the problem we are trying to solve?" While this may seem to be an incredibly simple question, in reality it can be quite difficult to answer. But asking can lead to a number of other questions around strategy, customer service, customer benefits and cost/benefits for the community.

There is a place for smart metering and the associated collected data – but the place may differ from council to council depending on 'what problem' is to be solved.

For example, one council in the South Island had high demand on its water infrastructure during the Summer periods (through an influx of tourists and holiday makers) and low demand through the off season. This placed tremendous pressure on the Water Network Infrastructure with a potential rates increase to pay for improvements. However, the council made a smart decision.

They installed 'non-smart' water meters on property connections. This meant water usage was charged fairly, i.e. a holiday home with the swimming pool filled two or three times during the summer period paid a higher proportion of water charges than the dwelling with a retired couple.

The result of the change meant peak demand was reduced which meant a less immediate requirement to invest in additional water treatment facilities. No smart metering, no vast reservoirs of collected data – just

good old pragmatic thinking and implementation.

However, there is a place for smart metering. A mix of smart and 'vanilla' meters with some smart monitoring/analytics can provide Councils with the best of both worlds at a pragmatic cost.

Placing smart meters on high-value customers serves two purposes. Firstly, it allows the Council to gather a fair revenue from consumers (this generally makes up a significant proportion of water revenue) and consumers are empowered to view their data in near real time. This means high-value customers can make pragmatic management decisions around their water usage and potentially adjust their usage to reduce overall demand on the network.

It could be that, with smart data, high users could be incentivised to draw water at off peak times, store it on their premises and use this water at peak times during the day thus reducing load on the network. This would only work with clear visible data – however the benefits to the Council could be deferred capital expenditure for additional water plant.

Another example of how data can be used smartly is in Victoria Park Market in Auckland. Retailers had water meters in each shop, but they were installed high in the ceilings. Meter readers entering the shops had to bring ladders, move equipment around in an effort to read the meters. This was unsatisfactory for the retailers, so AMR (Automatic Meter Reading) meters were installed in each shop. Now it takes around three minutes to read around 65 meters from two locations. In addition, the Gate Meter is also read at the same time. When overlaid with the collected consumption reads, a quick water balance can be calculated and show any leakages requiring further investigation.

This is an example of smart metering implemented to solve a clearly identifiable problem that provided clear benefits for the water retailer and its customers. So this is smart thinking applied in a pragmatic way.

The last challenge with collecting 'Big Data' is around the organisation.

Councils have to be prepared to change their operations to allow all stakeholders visibility, access and use of data. However, as some staff could see this as threatening, (perhaps opens up visibility on their operations) it will require careful planning and change management implementation.

So the question that needs asking is "What problem are we trying to solve"? Before launching into a smart meter deployment, and muddling through the volume of data coming arriving daily, consider the question and once the answer is clearly understood, only then should any smart meter implementation go ahead. **WNZ**