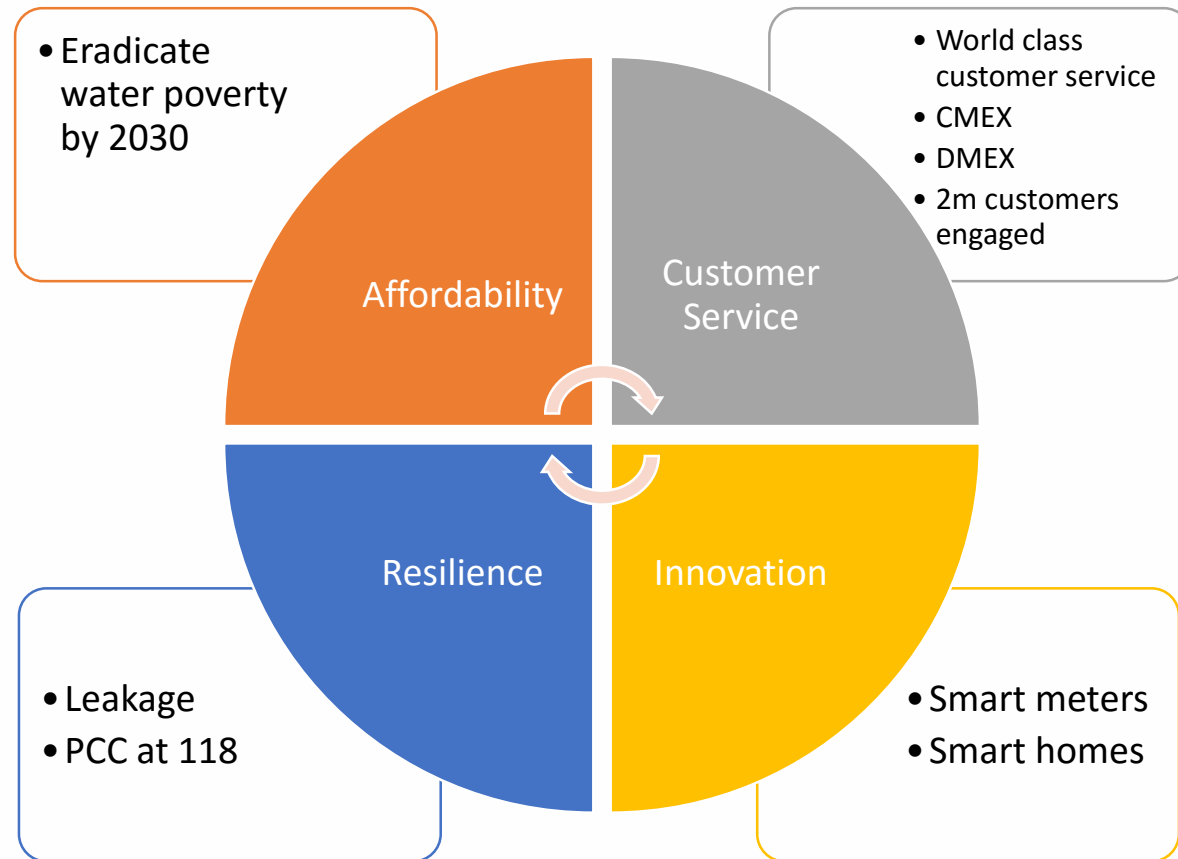

Smart Metering

Helen Lumsdon

PR19 Business Plan



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Metering - current position

- Currently 909k meters installed
- Meter options, new builds and replacements - high cost – opex and capex
- Analogue meters – read twice per year – minimal engagement
- Data only available after the event



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Roadmap

2019 – all new installations
“smart capable”

2022 – “smart capable”
linked to WAN
(340k meters)

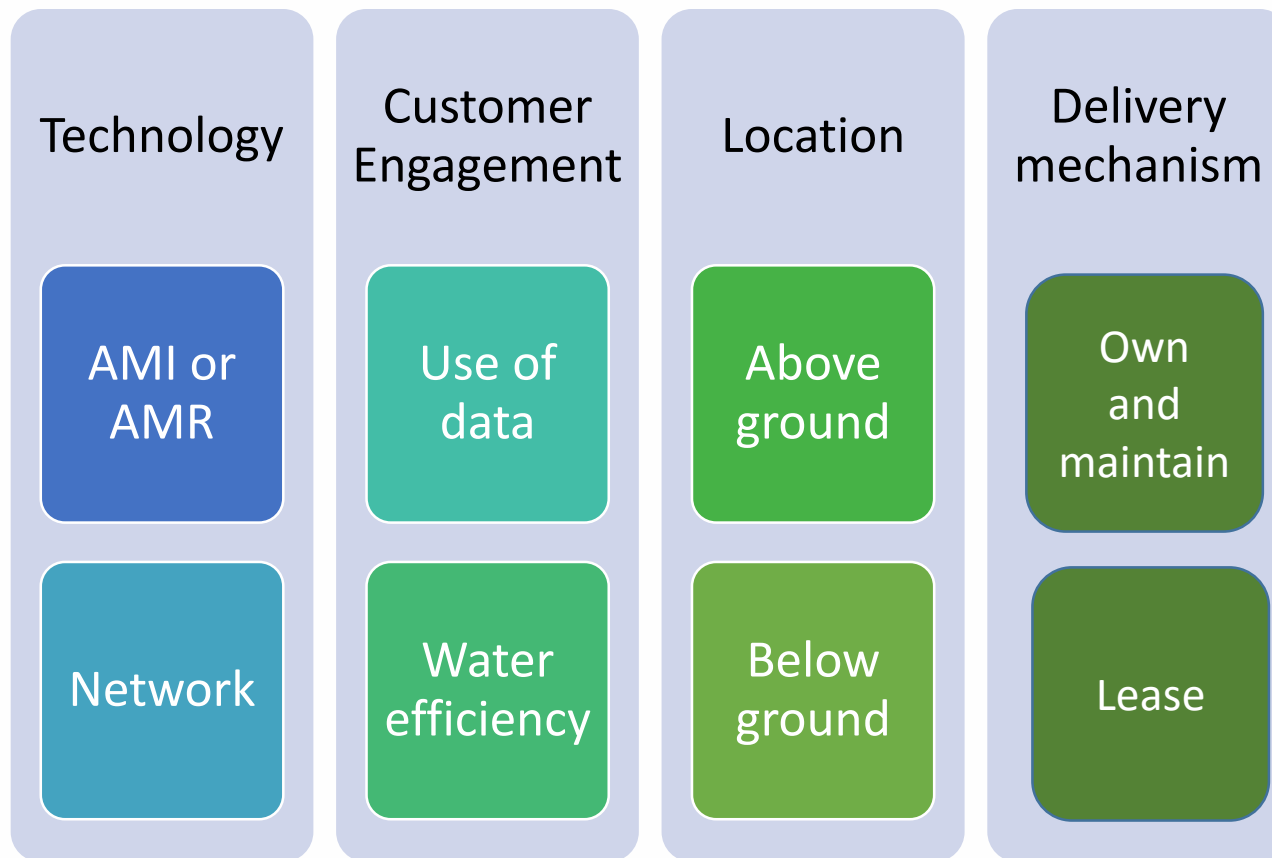
2035 – all meters
“smart”
(1.5m meters)



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Smart Metering Strategy



Smart Homes



Meter Location

Andrew Ledger

Meter Location

- Traditional approach is to either go internal or external
- Ongoing discussion as there are benefits and drawbacks to each:

Internal	External
No crossed supplies	Risk of crossed supplies
Potential access issues to NWL asset e.g. meter reading, meter exchange	No access issues
Improved range for AMR and AMI meter reading	Range for AMR and AMI reduced



Meter Location

- With the move to 'smart' meters NWL need to optimise range and connectivity of devices
- This suggest an internal fit would be preferable, however, at the same time NWL do not want to put in barriers to accessing the meter which ultimately increase cost to serve
- As a result of this we are now looking at wall box solutions. This is potentially a 'best of both worlds' solution:
 - Above ground installation giving better range and connectivity for 'smart' solutions
 - External location so no barriers to access



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Northumbrian Water Developers Conference

4th April 2019

Stephen Wielebski – Senior Consultant to HBF

WA Consultancy Ltd

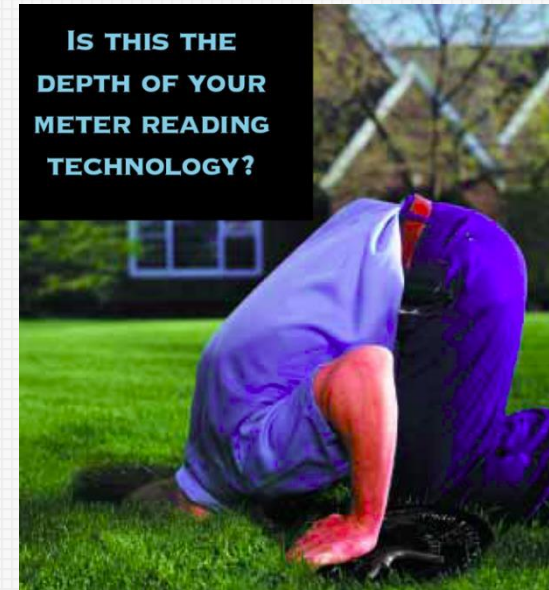
Smart Water Meters

- The HBF position - it is a basic and fundamental right that all customers, including the disabled, chronically sick, and elderly, must have the ability to easily read their water meters. In this way they can monitor their water usage, detect leaks, and make educated decisions regarding their water usage.
- For the vast majority of water customers in order to read their meters they must get down on their hands and knees in all weather conditions in either a public footpath, shared drive, or road, to access their underground water meter chamber. This is assuming they can find it and they are physically capable of undertaking the exercise.
- Smart water metering simply does not exist in the same way as electric and gas – the energy sector has provided above ground meters together with remote internal meter reading devices for years.



Smart Water Meters

- So what's the problem?
- Most water companies smart metering initiatives' are usually inhibited by:
 1. The continued use of historically installed underground meter chambers
 2. Difficulty in remotely connecting to in-home water meter displays due to a reduced signal strength
 3. Can only provide their customers with retrospective water usage information in one form or another.



Smart Water Meters

- So what's the solution?
- A major water company together with a national house builder are currently in the process of undertaking a smart meter pilot on a site of approx 180 units.
- This pilot embraces best practice guidelines using existing technologies to provide the customer with instantaneous, remote in-home meter reading capabilities.
- This is a phased concept approach with the intention of improving the pilot throughout the duration of the site. The show home will be completed around July '18 and will include the first, internal real-time customer meter reading device.

Smart Water Meter Pilot – The Advantages

- Each home is equipped with an above ground AMR meter contained within a WRAS approved on-wall meter box. This can be located on any elevation of the property.
- Provision of 'real time' usage data for the customer via a small, remote internal meter reading device.
- A transmitter, also contained within the on-wall box, supplies the water company with real time water usage data via a communications mast using 5G technology. The current mast is 2 miles distant from the site – no loss in signal strength is expected.
- It complies with agreed Water UK/HBF meter location best practice guidelines.
- Improved leak detection capabilities – leakage reduction being an integral part of the Government's Infrastructure Strategy.

Smart Water Meters

- The service pipe and meter housing are installed by a BPEC trained and accredited contractor.
- The use of a continuous and uninterrupted length of service pipe from the water main in the footpath to the dwelling minimises the risk of service pipe leakage.
(Note: 25% of all water leakage comes from service pipes)
- Easy access to above ground external stop tap located within the on-wall meter box.
- Clean street scenes with no chambers or stop taps = less maintenance and cost.

Smart Water Meters – other benefits

- Customer surveys will be undertaken during the pilot.
- Possible customer APPS to be created during the course of the pilot that can synergise with various smart devices.
- An additional advantage to the water company is that by using above ground smart meters it reduces the cost of fitting these to existing customers.
- Summary: One of many water resilience initiatives under way by HBF who will be monitoring this pilot closely and will provide updates via the HBF Water and Sewerage Futures Group.

Break out session



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