intelligent water networks 10+ years

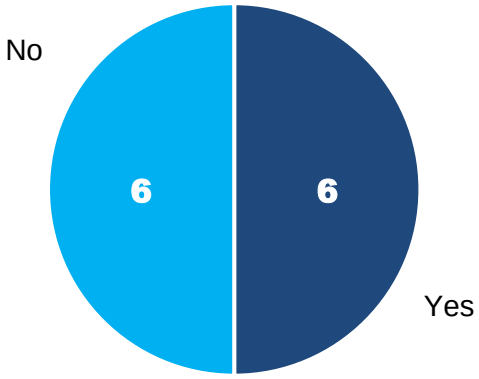
Victorian & Tasmanian Water Industry

2022 Digital Metering State Of Play Industry Report

Contents

Water Corporation Digital Metering

Does your organisation have a digital metering strategy?



What is the key outcome/value to be gained from using digital meters at your organisation (i.e., remote reads, real-time water consumption data etc.)?

Customer benefits

- Reduced customer interruptions due to earlier detection of leaks and/or low water pressure
- Increase resolution of customer consumption
- Automated and in time billing
- Behaviour change
  – customers using less water
- Fundamentally new way to interact with customers (through mature portal/app)
- Improved customer service by informing of property side leaks

Engineering and other benefits

- Optimised network modelling
- Earlier identification of network leaks and potential network failures
- Deferral of Capex
- Greater water security
- Enhanced water resource and asset management
- Greater compliance
- Optimised operations and maintenance
- Improved datasets to inform long term planning and asset management decisions
- Making meter reading easier and safer
- Automated reporting showing real-time water consumption data
- Improved hydrological modelling

Comparison with the 2021 survey results indicates that early identification of network leaks continues to be one the most beneficial outcomes gained from digital metering. Improved incident detection and consequential reduction in service failures has several organisational and customer advantages that attract water corporations to adopt digital metering.

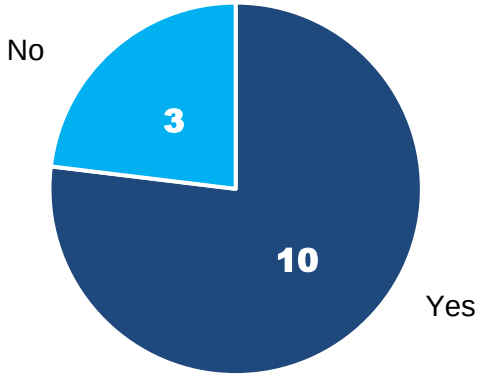
Water Corporation Digital Metering

Can you list your recommended digital metering contacts for suppliers/market players to share with other Victorian water corporations?

- Arad Technologies
- Aquiba
- Avnet
- Bermad Water Technologies
- Iota
- Itron
- Isle Utilities
- Mondo
- Sensus
- Siemens
- Suez
- Taggle
- Telstra
- Ventia
- WaterGroup

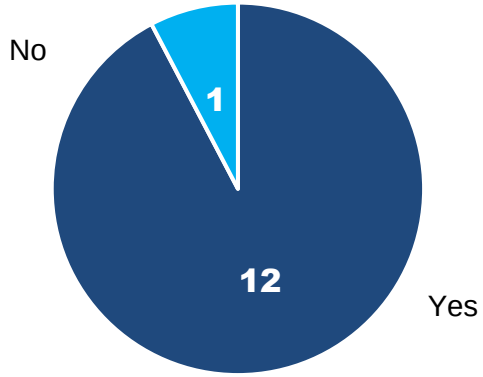
Does your organisation have an openness to trialling Small Local Metering Manufacture Meters?

- 77% of respondents indicated they would be willing to trial meters from small local manufacturers



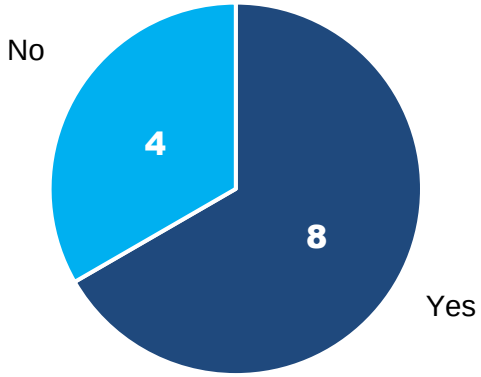
Is there value in developing Standard Digital Metering Requirements?

- 92% of respondents indicated there would be value in developing Standard Digital Metering Requirements



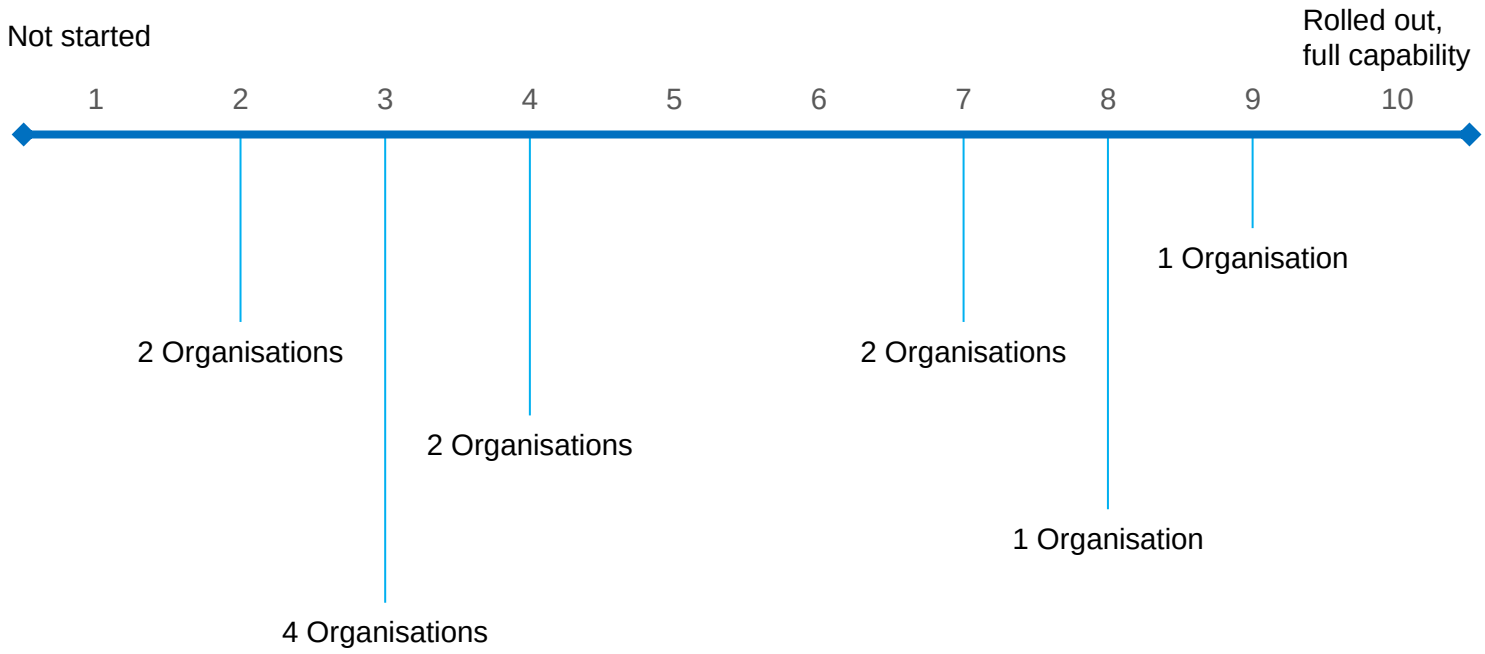
Would you like to be part of the working group to compile Standard Digital Metering Requirements?

- 67% of respondents indicated they would like to be part of a working group to compile Standard Digital Metering Requirements



Current Status

How organisations rate themselves regarding their digital metering journey:



Trends indicate that the majority of water corporations have not progressed much in their digital metering journey over the past year and rate themselves at the same stage as they were in 2021. As digital metering can require large business transformation, trends are unlikely to change much in the space of a year. Factors such as COVID-19, supply chain issues, and competing investment priorities may also play a part. Certain organisations however have experienced progression in their digital metering journey whilst others rate themselves lower compared to 2021.

Current Status

What brand/type do your organisation's digital meters fall under?

- Actaris
- Arad Technologies
- Captis
- Cybel
- Huiizhong
- Iota
- Itron – GenX
- Landis+Gyr
- Sensus
- Siemens
- Taggle Systems
- Ventia

Result indicate organisations are willing to use digital meters from a variety of different manufacturers. Siemens, Ventia, and Huiizhong are amongst the most popular manufacturers.

What brand/type do your organisation's non-digital meters fall under?

- Arad
- Elster
- Honeywell
- Itron
- Krohne
- Schlumberger

Elster and Itron continue to be the most widely used brand/type of non-digital meters.

Future Status

Where organisations see themselves with regards to digital metering in 5, 10, and 15 years (in terms of business case completed, billing processes ready, shift from manual to automated reads etc.)

5 YEARS

- Enabling work completed and business case approved
- Roll out / trial underway
- Full deployment
- Determining customer benefits achieved
- Benefits realisation
- Reporting and quantifying established
- Performing trials to develop an understanding of the cost benefit analysis
- Fully compliant for AS4747 irrigation meters and associated dataloggers
- Business case for pricing submission
- Core capabilities implemented
- Possible Pilot program

10 YEARS

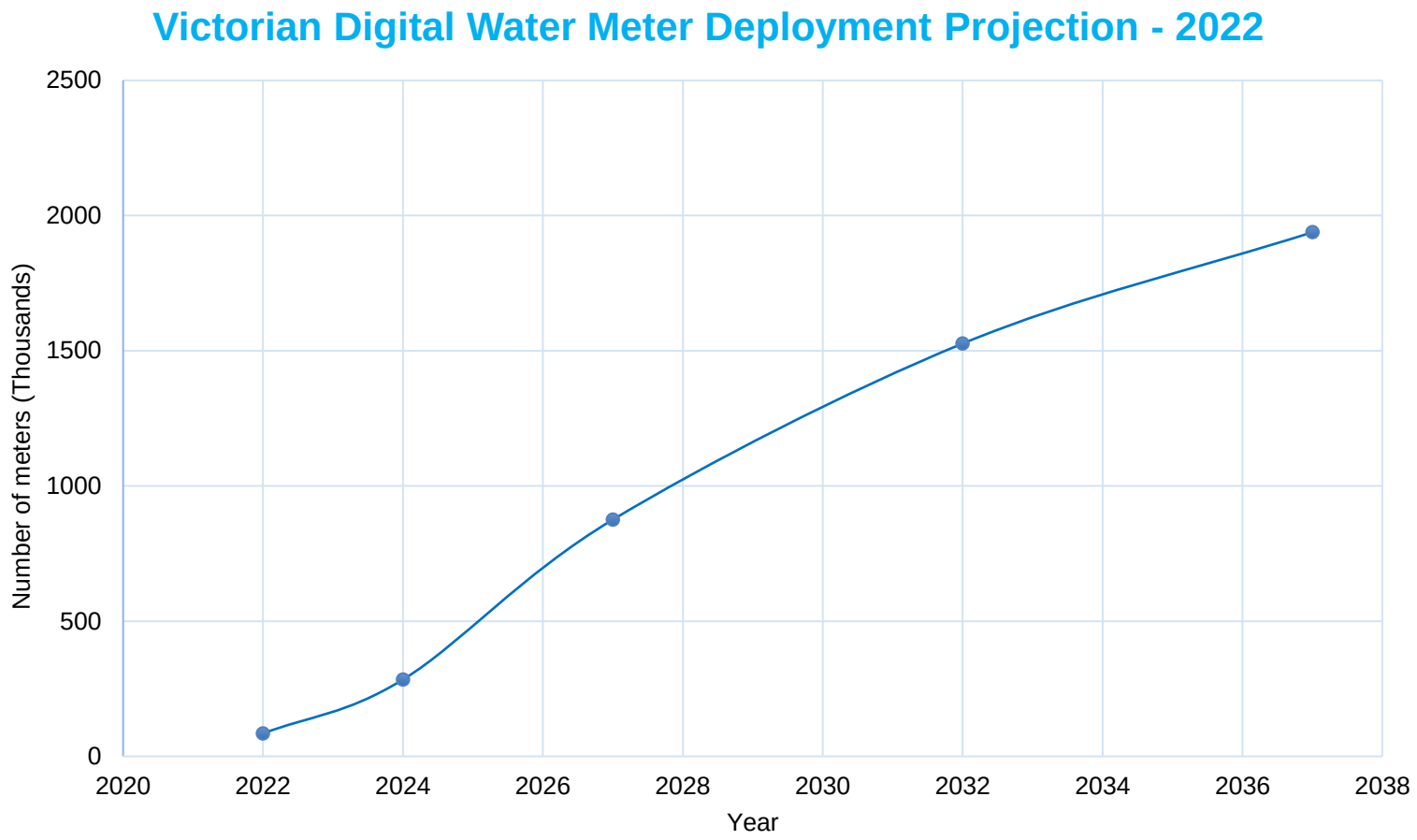
- Mechanical meters no longer supported
- Leveraging data to optimise operations and improve customer experience
- Neg gen meters installed
- Migration to digital meters (50-100%)
- Large scale deployment underway
- Deep business integration including automated billing
- Developing the long term implementation strategy from learned knowledge of trials
- Dataloggers move to more IoT devices
- Benefit realisation
- Investigate additional capabilities for digital meters

15 YEARS

- Digital analytics program in place using data to drive diagnostics and decisions
- Transition to digital metering is complete
- Digital metering is BAU
- Finishing migration
- Majority of customers will have digital meters
- Digital metering implementation dependant on the systems that best suit each water jurisdiction and its customers
- Installation of next gen digital meters installation

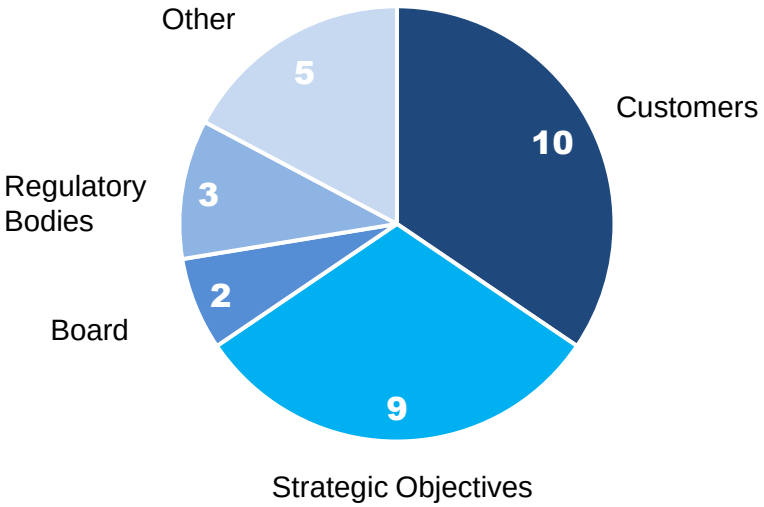
Future Status

The Victorian digital water meter deployment projection. Projection is based on the total number of digital meters Victorian water organisations believe will be installed in 2, 5, 10, and 15 years.



Drivers & Challenges

Are there any drivers for your digital metering implementation?

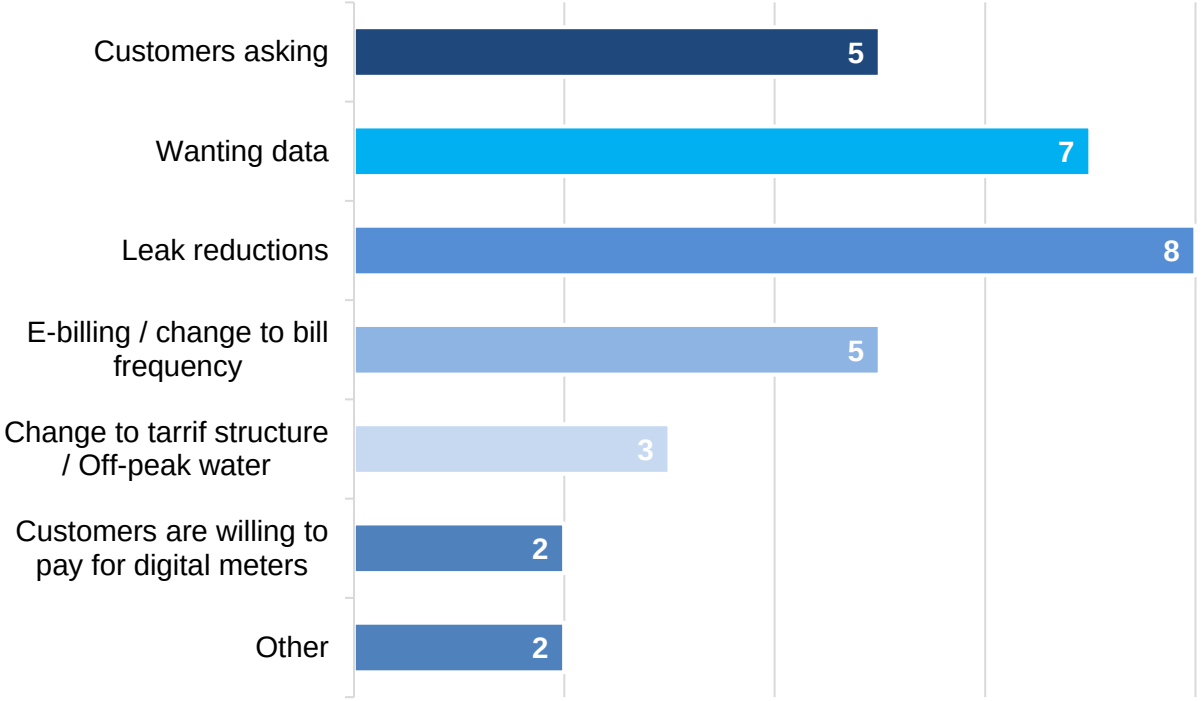


Other factors include:

- Asset management
- Water conservation
- Deferring capital investment
- Meter reading team
- Water security

Like the 2021 survey results, customers continue to be the biggest drivers for digital metering implementation, followed by organisational objectives.

What are your Customer Drivers?



Other factors include:

- Bill management
- Water security

Drivers & Challenges

What are the roadblocks/major challenges to get digital metering up and running at your organisation?

Financial	Organisational	Technology	Other
• High capital costs • Low ROI on initial trials • Budget restraints • Lack of tariff reform • Benefit realisation • Competing investment priorities • Getting a NPV+ve Business Case	• Lack of an Opportunity Risk Matrix • Differing Executive level views • Lack of urgency to change from current practice • Absence of ground level assessment and end goals • Large business transformation required • Business case approvals	• Extent of digital transformation required • Business maturity around data and data analytics	• Gaining an understanding of how larger metro authorities approach DM • Meter supply chain issues • Convincing regulators of the benefits • Geographical issues

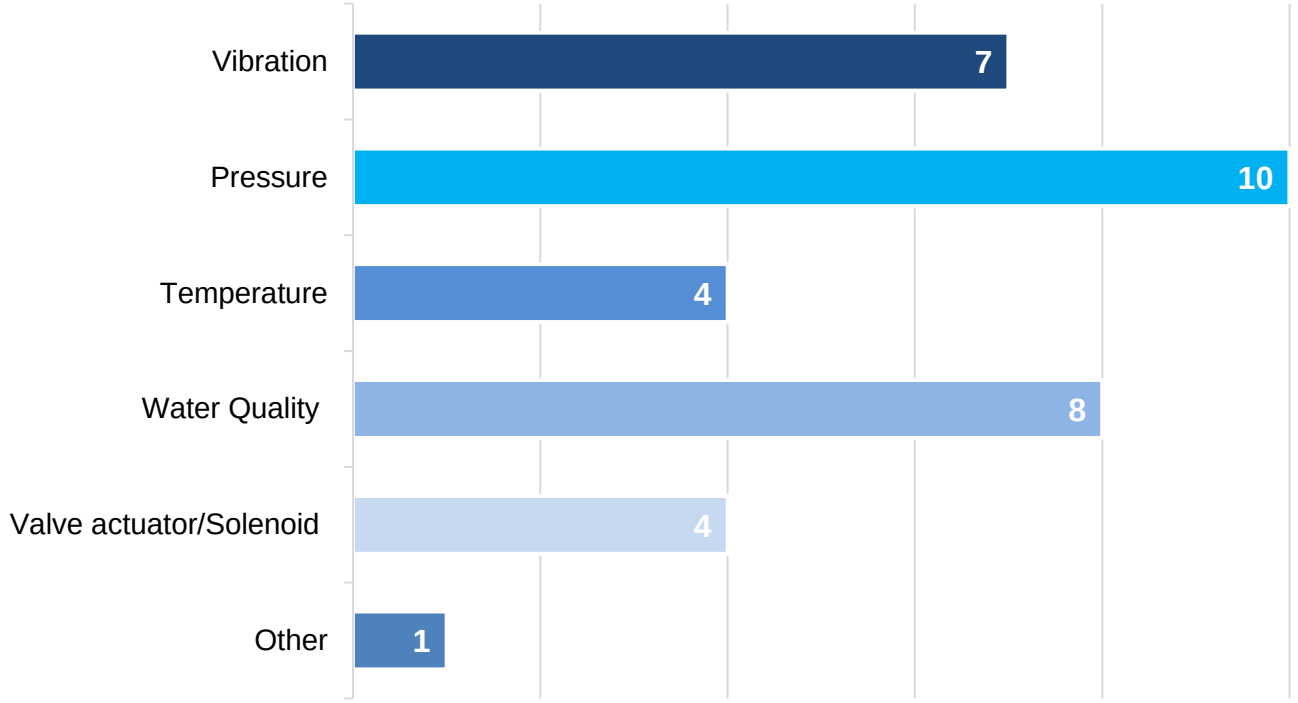
Drivers & Challenges

What can IWN/WSAA do to help get you over the line/overcome barriers?

Financial / Organisational Benefits	Knowledge	Government	Other
• Demonstrate the cost/benefits for decision makers, giving them confidence in strategies • Help in gaining ESC approval for expenditure on price submission periods • Quantify the benefits of digital metering • Provide an opportunity matrix • Increase awareness of benefits • Provide detailed analysis of successful installations with real world data	• Continue with the sharing of knowledge and artifacts • Encourage knowledge sharing and benefits realised by other utilities • Develop position papers relating to the adoption of digital metering in the Victorian Water Industry • Share the experience about digital metering between WSAA members • Support collaborative DM across organisations	• Involve governments and regulators to promote the benefits of digital meters • Help with government engagement to position the narrative around why we are adopting DM • Help to drive tariff reform	• Review the water and sewer supply codes to embed smart principles • Establish standards for digital meters • Continue to provide the digital metering platform

Drivers & Challenges

What other sensors/features would you like to see in a meter?

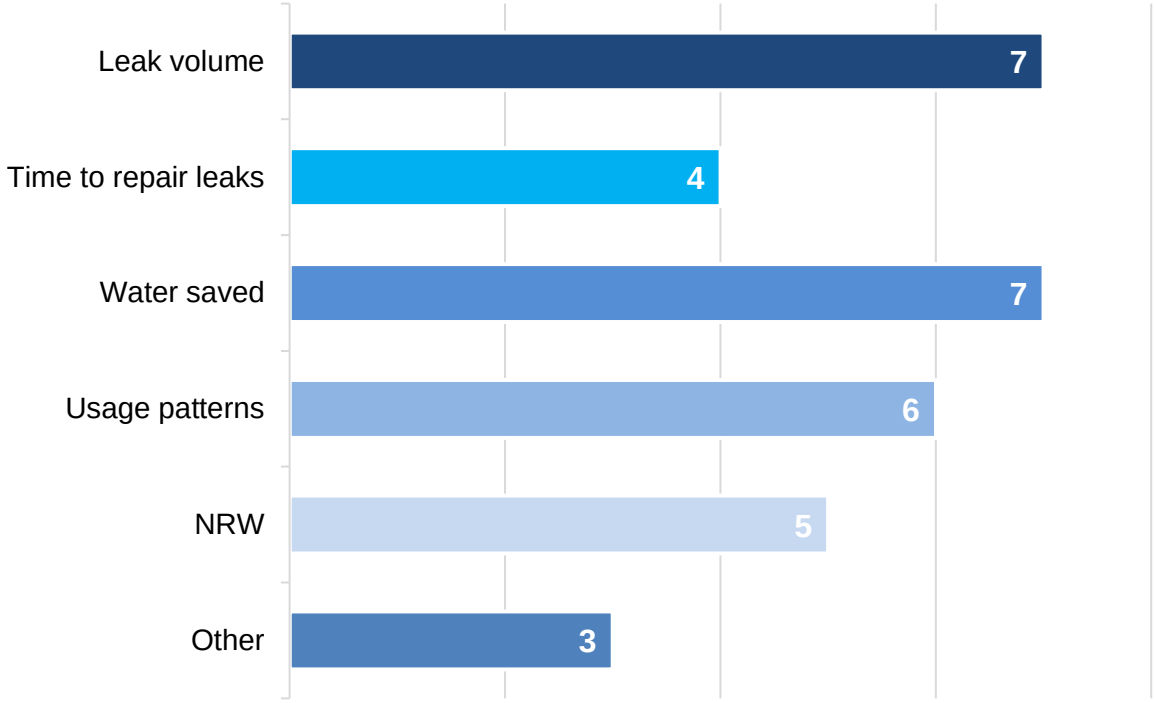


Other factors include:

- Battery life

Internal Resources/ Analytics

What analytics are you working on?

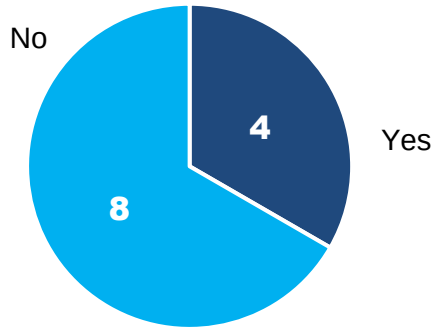


Other factors include:

- Cost benefit on using digital meters in high use sites
- Compliance and enforcement
- Customer cost per day alarming

Technology

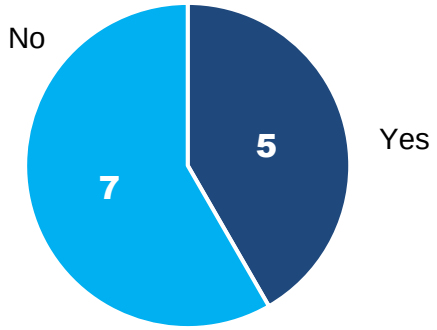
Do you have a digital metering information system?



If yes, what are the details?

- OnConnect – Suez
- Diversion Database
- Lota Lentic platform – Azure

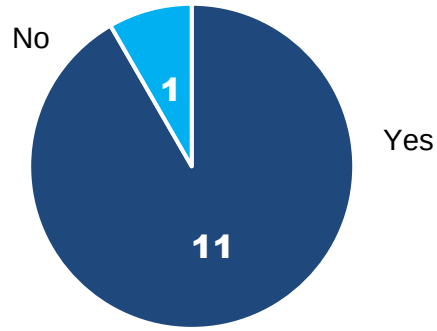
Are you sharing customer information back to your customers?



If yes, how?

- Through a detailed Power BI report
- Through an online portal provided by Entura
- SMS/email/portal
- When customers request information and leak notifications
- Online dashboard for large customers
- Through an opt in program where customers gain access to a technology platform from which their data is available

Do you plan to?



If no, why not?

- The corporation does not have a formally established digital meter program as of yet

Similar to the 2021 survey results, the majority of water corporations currently do not share digital metering information with their customers. However, nearly all corporations intend to do so in the near future.

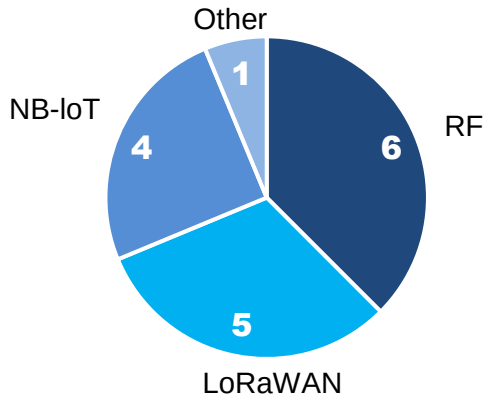
Technology

What is the desired life expectancy of your digital meter/battery?

Similar to the 2021 report, the desired life expectancy of digital meters and batteries for almost all of the water corporations still ranges within 10-15 years.

Communications Network

What kind of communication network do you have?



Other factors include:

- Taggle

Where do you see the digital metering going in terms of technology?

- Low device costs and minimal operating expenses
- Near real time demand management
- Insightful consumption patterns
- Improved reporting on network stability
- Additional device sensors and monitoring of metrics in line with pressure, pH etc.
- Sensor pack providing a variety of accurate analytics
- Internetwork capability
- Technologies to suit various geography and distribution
- Discrete/add-on radio modules
- Longer battery life
- Standardised communications
- Satellite capability

Final Comments and Thoughts

- Accessing a reliable power source for remote locations proves difficult
- High tree coverage areas can be problematic for solar powered devices
- Organisations and customer are seeing significant advantages of DM
- Collaboration amongst industry and IWN partners will strengthen in the future