Metropolitan Melbourne
Digital Metering Joint Program

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Agenda

1. Melbourne’s water utilities
2. Digital metering journey
3. Digital Metering Joint Program
4. Insights
   - Technology
   - Customer and stakeholder
   - Business case
5. Timelines
Melbourne’s water utilities
Water utilities

• Water network owned by Victorian Government

• Melbourne Water supplies, treats and transfers drinking water to three retail water companies:
  – City West Water
  – South East Water
  – Yarra Valley Water

• Combined fleet of 2 million water meters
Digital metering journey
Individual exploration and joint work

- 1664-property water use study begun in 2013
- Meters transmitting every 30 mins
- Leak management program developed / implemented

- 1000 meter DigiMesh & 3G network trial in 2013
- Portal enabling customers to monitor use, compare consumption and set targets

- 270 meters using Taggle network in 2016
- Daily data (hourly reads)
- PoC of AMR solution, DMA management and water balance within zone

- Joint technology trials commenced in 2016
- Joint customer research
- Joint business case
Digital Metering Joint Program
Collaborating to Deliver a Melbourne-wide solution

**Key Drivers**
- Ageing Assets
- Digital Utility in 21st C
- Drier Climate
- Customer Focused Solution
- Better Asset Management
- Population Growth

**Collaboration**
- Digital Devices
- Network Communications Technology
- Business Case
- Procurement
- Customer & stakeholder Engagement

**Success Criteria**
- Cost Neutral for Customers
- Deliver early, tangible customer benefits
- Security of data and systems
- Viable business cases
- Bulk purchasing benefits to lower cost
- Common Network Technology solution

**Customer & Stakeholder Support**
- Population Growth
Customer value proposition

With Melbourne’s population set to almost double within 50 years and scientists forecasting more extreme droughts, our water utilities are working together to find new ways to continue to improve our water network and ensure it operates even more efficiently.

The technology of our existing mechanical meters hasn’t changed much since the 1940s, but now we’re considering future meter replacements using battery operated digital water meters. Some Melbourne businesses are already using this technology that helps detect leaks and can alert you if your home or business has one. Along with reducing water wastage, they also provide information on how we all use water. Because it’s digital, you can simply access your daily water information online so you can have more control of your water use and bill.

We have one of the best water supplies in the world and digital meters will help protect it, now and in the future, so we can continue to rely it.
Utility requirements

- Fully integrated digital metering solution between meter and network communications
- Utilising Low Power Wide Area communications technology
- Two-way communications capability
- Support 15 year meter life
Digital metering scope

- **FIELD SERVICES**
  - Plans
  - Installs
  - Commissions
  - Faults

- **CUSTOMER**
  - Uses water
  - Views data and bills
  - Receives Alerts

- **METER**
  - Measures
  - Monitors flow
  - Stores data

- **COMMUNICATION CARD**
  - Sends data
  - Manages Meter
  - Alarms and events

- **WIRELESS NETWORK**
  - Communicates

- **IoT Platform**
  - Manages network
  - Collects meter data
  - Configuration

- **ENTERPRISE APPLICATION INTEGRATION**
  - Other enterprise level systems

- **UTILITY IT SYSTEMS**
  - METER DATA MANAGEMENT
    - Interval meter read database
  - ANALYTICS
    - Systematic analysis of data

- **IT Integration**

**City West Water**
**South East Water**
**Varra Valley Water**
Technology

- Each utility has a different starting point and a slightly different approach to the same opportunity
- Market sounding outcomes
- Technology maturity
- Market maturity
- Agreement on digital meter technology stack
- Active hands-on work with various parties
- End to end testing, including IT
Customer and stakeholder

- 69% of customers support digital meters
- Over 85% would be happy to have digital meters installed if there were no upfront or increased on-going costs
- Customers that support digital metering typically higher income earners, renters, females and millennials (aged 30-39)
- One in 10 customers oppose digital metering: typically males, aged 50-64, retired, homeowners, Culturally and Linguistically Diverse and cost is key concern
- Customers want operational efficiency, leak alerts and increased bill certainty.
**Business case**

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<thead>
<tr>
<th>Key Cost Drivers</th>
<th>Key Benefit Drivers</th>
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<tbody>
<tr>
<td>• Digital meter cost</td>
<td>• Customer demand reduction and spend</td>
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<tr>
<td>• Communications network charge (incl. alternative comms tech charge)</td>
<td>• NRW savings and CAPEX spend</td>
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<tr>
<td>• Installation cost</td>
<td>• Billing and credit management</td>
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<tr>
<td>• Digital meter life</td>
<td>• Network operation</td>
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<tr>
<td>• BAU mechanical meter life</td>
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<tr>
<td>• Customer engagement</td>
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<td>• Stakeholder engagement</td>
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Timelines
# Program timelines

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<tr>
<th>Year</th>
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<th>2019</th>
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<tr>
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<td>Jul - Dec</td>
<td>Jan - Jun</td>
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- **Customer & Stakeholder Engagement**
  - Customer Research
  - Utility Field Trials
  - IT Activity
  - Business Case Refinement
  - Procurement

- **Decision Points**
  - ESC / DTF
  - Rollout
  - Pilot

**CityWest Water**

**South East Water**

**Varra Valley Water**
Digital transformation.

The next chapter for our water utilities.
Thank you