AGENDA

• About us
• Our journey
• Benefits
• Progress to date
A little about us…

**ASSETS**
$3.9 B

**AREA**
3,640 SQ KM’S

**CUSTOMERS**
1,700,000

**SALES**
$1.1 B

**OPEX**
$0.7 B

**PIPESLINES**
24,700 KM’S

Data access key enabler for SEW

Clearly broader application beyond SEW

Other opportunities
Coverage maps of NB-IOT
“...transform the way we engage with our customers and manage our assets by acquiring and analysing data that enables us to then inform and respond in a timely manner...”
The benefits...

Informed customers
- High usage
- Leak alerts
- Bill prediction / alerts
- Behavioural change

Network Management
- Predict failure
  - Leaks / Bursts
  - Blockages / Spills
- Proactively repair
- Improved service levels

Capital Management
- Optimisation
- Deferral

Financial
- Reduced costs
- Productivity / efficiency
- Profitability

Environment
- Water losses
- Sewage spills

Safety
- Dog bites!
- Sewer entry

Community
- Traffic disruption
- Beach closure
The 5 key steps....

1 ACQUIRE
2 TRANSFER
3 CONSOLIDATE
4 ANALYSE
5 RESPOND

Business model to deliver?
- One component, some or all
- Capital investment or SaaS?
- Cost
- Risk allocation
So where are we at....end to end complete

1. AQUIRE
2. TRANSFER
3. CONSOLIDATE
4. ANALYSE
5. RESPOND
1. Data acquisition

Developed devices
• Partnered with industry
• In house development

Fully integrated / Multi purpose
• Flow, Pressure, Temp, Acoustics
• OneBox
• Blockages
2. Data transfer

LPWAN
- NB-IoT
- Lora

Terrain
- CBD
- Suburban
- Hills

Independent lab testing
End to end complete – Dec 2016
3. Data Consolidation

- IT Architecture review
- OT / IT integration
- Other data sources (API’s)
  - Temperature
  - Rainfall
- Leverage Cloud scalability
  - Data
  - Processing
4. Data Analysis

- Developed tools to identify:
  - Trends, Patterns & Anomalies
    - Holiday usage
    - Sole occupant no usage
  - Issues & Opportunities
    - Leaks
    - Blockages
- Workforce skills
- Leverage Cloud scalability
Cloud-based output
5. Respond

Near real time
Personalised
Informed

Know what is occurring ?
Why is it occurring ?
What needs to be done ?

• Now
• Future

How to do it?
• People
• M2M
End-to-End NB-IOT output
Customer leak
Reverse flow
Network leaks

![Network leaks graph](image-url)

- Combined digital volume
- Magflow vol
- Leak volume
- Combined meter and leak

Dates:
- 18/11/2016 00:00
- 23/11/2016 00:00
- 28/11/2016 00:00
- 03/12/2016 00:00
- 08/12/2016 00:00
- 13/12/2016 00:00

Volumes (L)