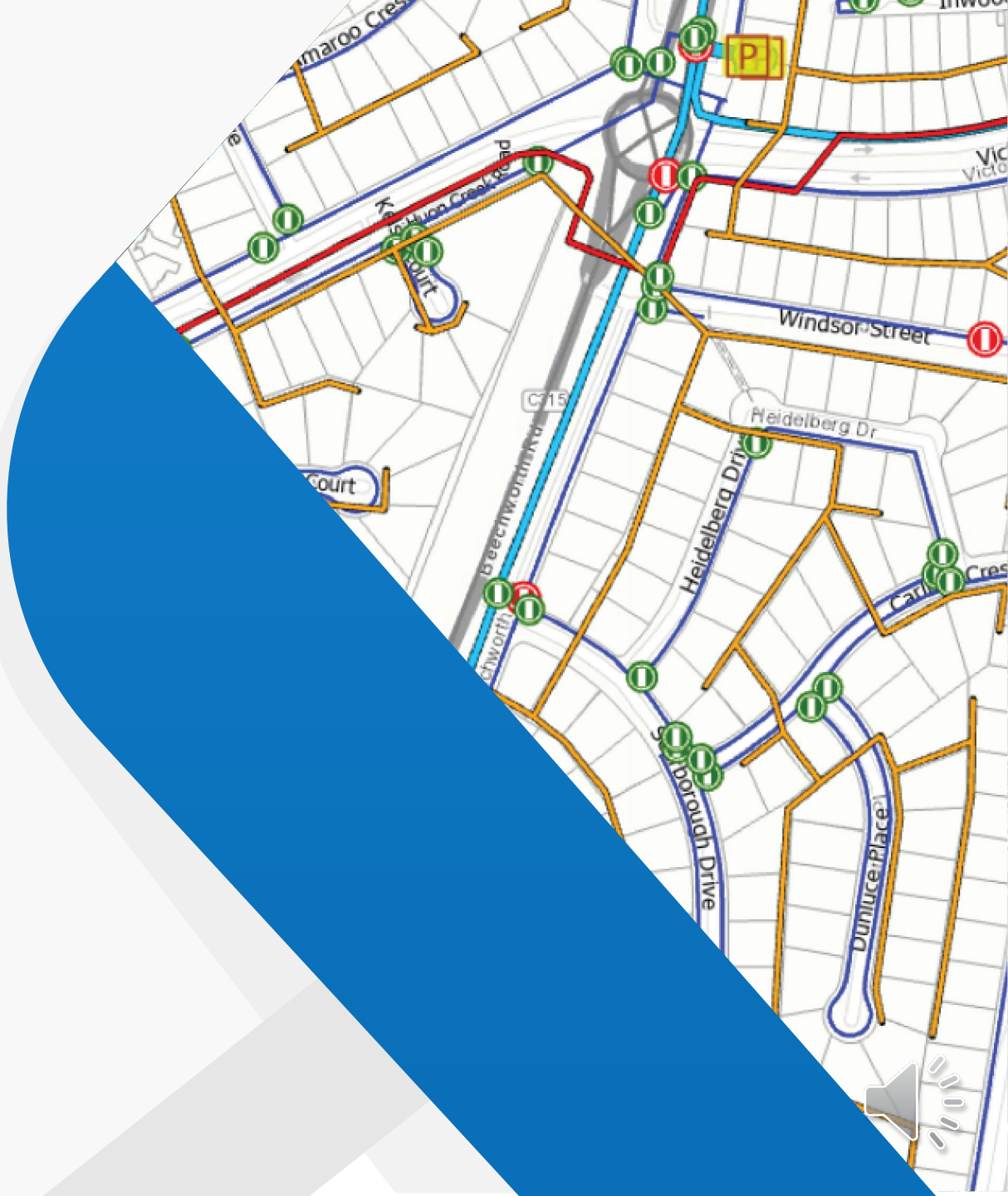
North East Water

A first - of - its - kind intelligent water network

Presenter: Paul Drummond, GIS Coordinator



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Where we are located

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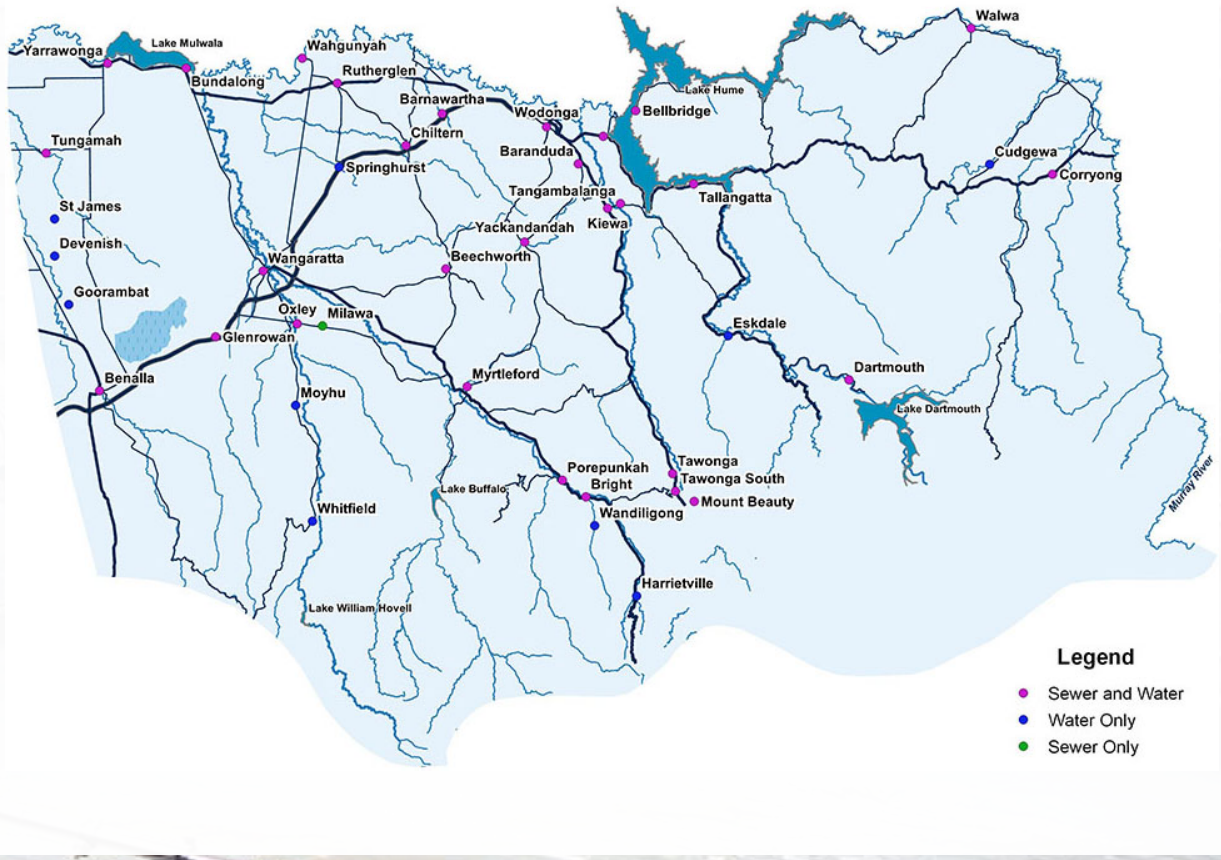
Service area map

We provide water and sewer services to over 110,000 people in 39 localities across north - east Victoria.



North East Water by the numbers...

110,000
customers

39
Townships

20,000
kilometres ^{2}

21
water treatment facilities

190
Full time staff

22
Wastewater treatment plants

Why did we move to the Esri Utility Network?

01

Upgrade to a reliable & effective GIS

We wanted more from our GIS, to meet the current and future business requirements of staff and customers

02

Asset management integration

To enable field service productivity and enable real-time geospatial data from a variety of platforms

03

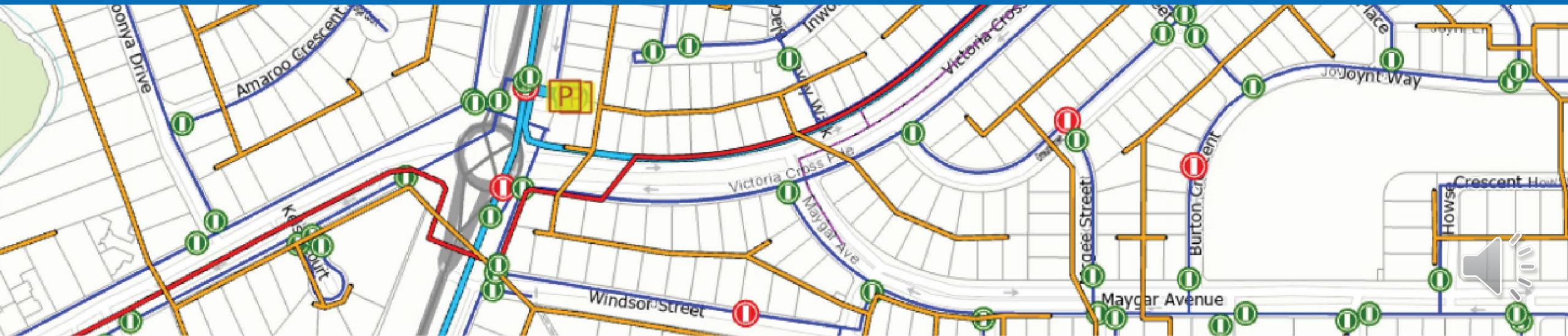
Reduce technical debt, improve support

By adopting industry standard technology, we could maintain software currency and upgrade more frequently

04

Integrate a wide range of systems

Integration with a wide range of systems (SCADA, IoT, Asset Planning, Billing, Internet) to enable improved decision-making



Why did we move to the Esri Utility Network?

05

Ability to import authoritative data

For example, Land Victoria cadastral data, As Constructed Drawings, LiDAR, Aerial Images

06

Ability to perform network tracing to support ESC metrics

Dynamic tracing capabilities help minimise disruption, identify affected customers, aid reporting

07

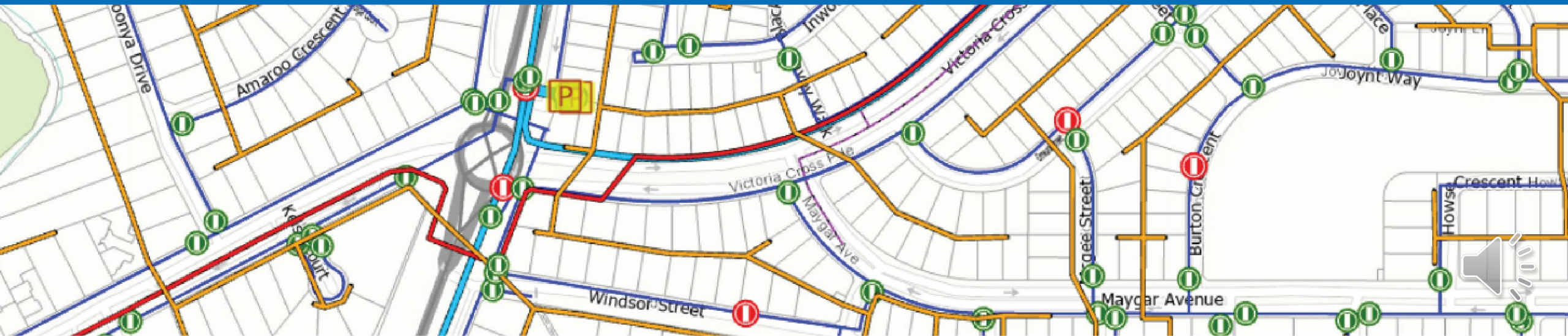
Live network status of water networks

Ability to model and display network status of water, waste water and recycled networks to improve planning and customer service

08

Ability to enable mobile access of geospatial data

By adopting industry standard technology, we could maintain software currency and upgrade more frequently



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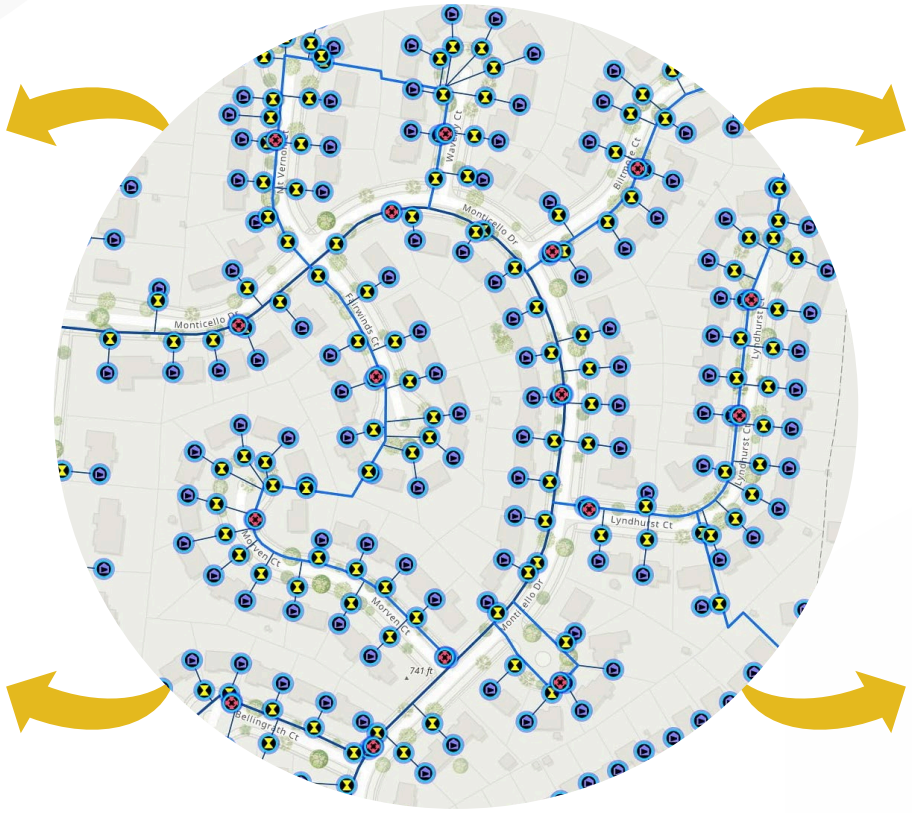
How we prepared for the transition to the Esri Utility Network

Devise training

ArcGIS Pro and Utility Network

Set project management approach

Iterative data model and application build approach



Start data cleaning

Link water meter data, customer address and GIS utility network datasets

Add new data

To prepare for a high -fidelity data model, needed direction of the water flow, devices that can control the flow, topology concepts

Utility Network project components

Resourcing

1 x data migration (Esri)

1 x data modelling (Esri)

UX/UI

Look and feel of portal matched corporate standards

Web launch kit

Training for authors of web mapping applications, portal custodians

Integrated asset management

TechOne with GIS (one-way, automated)

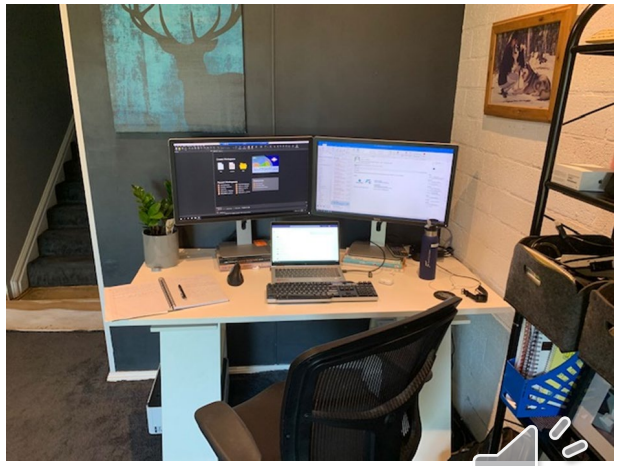
Configuration

North East Water owned configuration, Esri developed toolsets

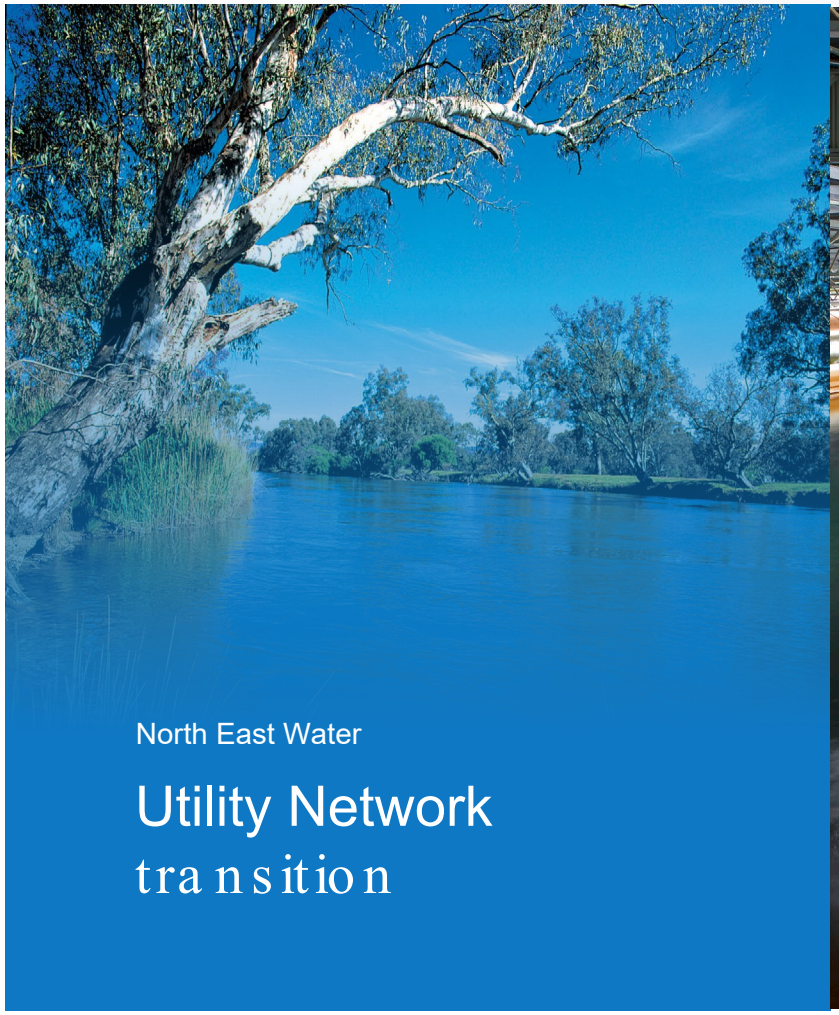
AutoCAD

Automated process to ingest AutoCAD drawings


M. Le Poidevin



Project execution



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Utility Network transition

Challenges

- No knowledge of Utility Network
- Configuration errors
- New GIS coordinator
- No ArcGIS knowledge
- Bushfires at project kick -off
- COVID-19 forced remote working
- Tyranny of distance
- NSW/Victoria hard border closures
- Maintaining Business as Usual
- Home Schooling

Resolution

- Training
- Iterative approach
- Dedicated team
- Microsoft Teams environment
- Jira board

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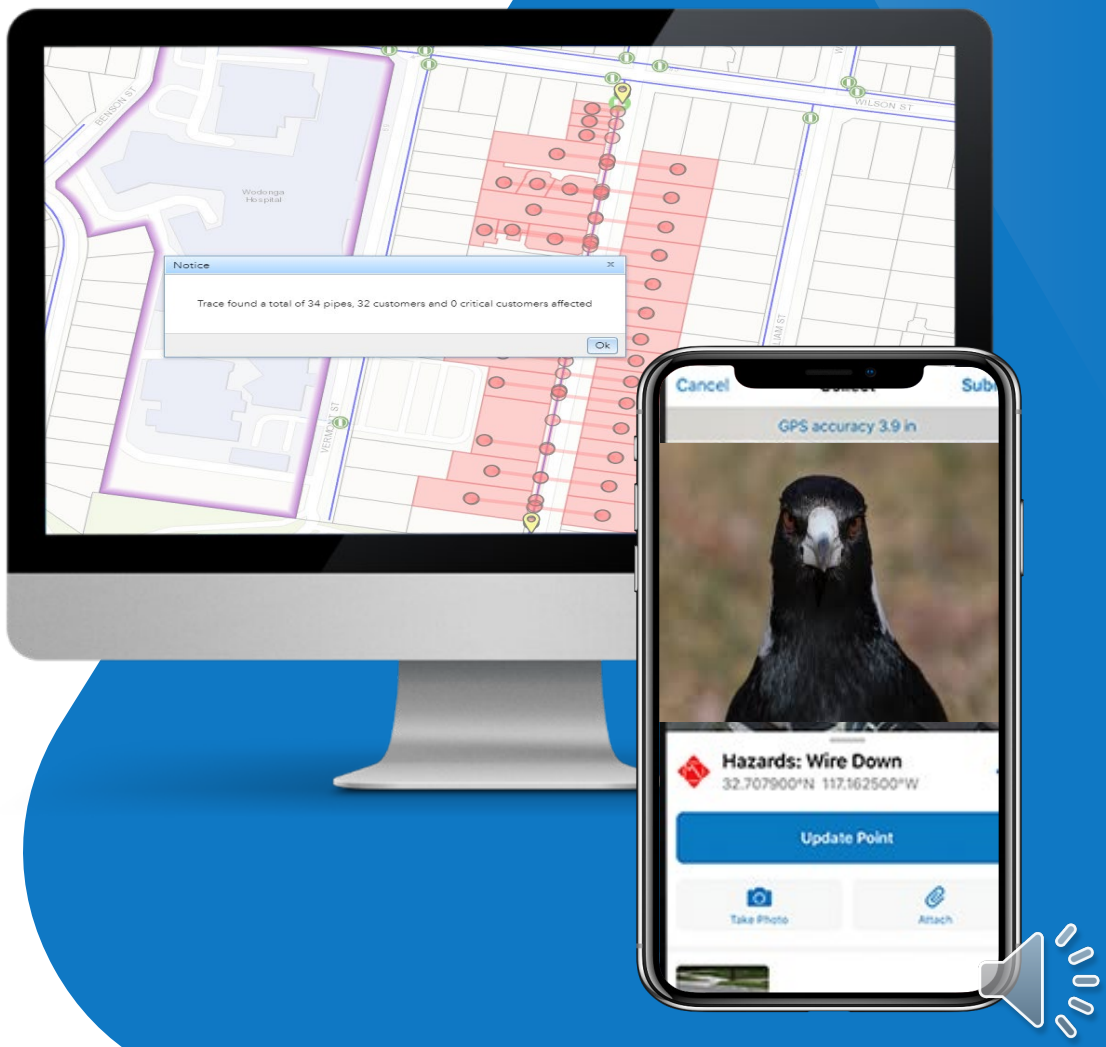
Benefits realised

- **306,000 +** synchronous assets on go live
- **Including 8 asset feature classes** — Sewer line, water line, sewer device and water device
- **Dynamic tracing** — Minimising water outages
- **Mobile deployment** — Access for operational staff



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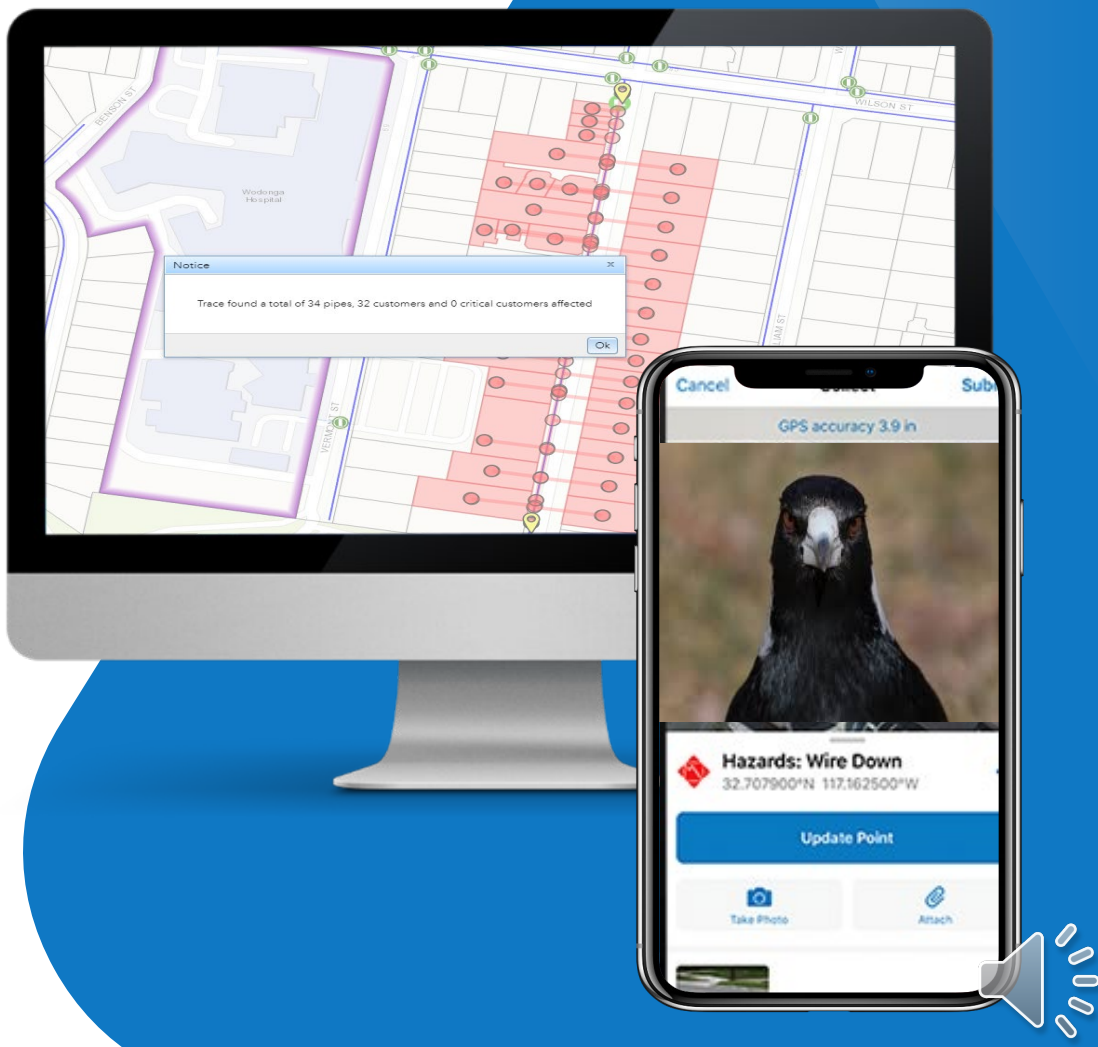
Phase Two

- **Custom Maps** — Ability to self serve
- **More Mobility Services** — Ability to update attribute data
- **Configure Model Functionality** — Tiers, Structure Boundaries, Assemblies
- **SCADA/Historian/ IoT** — Real time/ Near real time



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Questions?

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Thank You

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