

FUTURE-PROOFING GIS

Responsible for operating and maintaining essential civil infrastructure over an area of 5,223 square kilometres, accurate location information is the link between Unitywater's assets, customers and business processes.



Esri's ArcGIS platform provides location context for the water and waste-water services provider operating in one of the fastest-growing regions of Australia. This Geographic Information System (GIS) allows Unitywater to embrace a map-centric approach to manage, deliver and visualise operations. For example:

- Staff can use a map to navigate information relevant to their role, such as water infrastructure assets and work order history at a maintenance worker's current location, or measurement observations and water quality insights within a targeted zone;
- Customers can search by address to view outages affecting their home or business;
- External services, such as Dial Before You Dig, can access accurate and detailed information on the location of Unitywater's critical infrastructure.

CHALLENGE

Unitywater's GIS environment was operating on an unsupported version of the ArcGIS platform, meaning that Esri no longer issued software patches or hot-fixes. In addition to ensuring a fully supported and secured environment, upgrading would provide access to the enhanced application functions available in later released versions. The impending need to transition to GDA2020 was also front-of-mind, as a compliant version would be required.

With an Asset Management Information System (AMIS) Optimisation Roadmap outlining a program of strategic improvement initiatives, upgrade of the Esri platform was prioritised as a pre-requisite for achieving Unitywater's asset management ambitions.

SOLUTION

COSOL have been working with Unitywater on the ongoing development and support of the AMIS environment since the utility was founded. As an established, trusted partner with a unique combination of asset management and geospatial expertise, COSOL was engaged to deliver a 'like-for-like' upgrade from ArcGIS 10.3.1 to 10.6.1.

Esri Version 10.6.1 is a "step change" in architecture, as it further transitions from the traditional Client/Server model to a Web Service delivery architecture.

As such, the underlying product architecture was significantly different, with the addition of a variety of new system modules, meaning the platform upgrade required a detailed design to ensure no functionality was lost. There were a number of complexities to manage through this upgrade, including the upgrade of ArcFM and the Geometric Network which supports operational tools including Valve Isolation Tracing and network outage notification solutions. ►

Solution continued...

Working collaboratively, Unitywater and COSOL identified the opportunity to evaluate cloud versus on-premise architecture of the GIS environment by conducting a proof-of-concept within the upgrade project, deploying a hybrid solution to meet the needs of today and to scale for the future.

The scope of work included:

- Confirm implementation plan and technical pre-requisites through stakeholder workshops;
- Build Development and Pre-Production environments;
- On-premise and Hosted database build;
- Testing and Production environment build; and
- Product cutover and elevated support including user training.

Unitywater's Project Manager for the upgrade Sarah Ryder says that the advantage in working with COSOL on this project was the combination of technical expertise with project management oversight.

"Our upgrade project flowed smoothly as a result of thorough up-front planning, good communication and sound project oversight. The depth of knowledge and experience with the Esri product suite displayed by COSOL's technical experts was invaluable – issues were well researched and dealt with swiftly which kept the project on track."

The fact that COSOL brought a systematic approach to project management, while still remaining approachable and flexible was a key factor in our good working relationship and positive project outcomes.

Sarah Ryder
Project Manager, Unitywater

OUTCOMES

Unitywater's ArcGIS 10.6.1 environment went live over the weekend of 10 August 2019. Clarita's intimate working knowledge of the business and the technical environment was evidenced in the incremental improvements identified and implemented along the way, adding value through enhanced business workflows and technical settings within the Esri environment.

As a result of this project, Unitywater now enjoys the benefits of:

- ✓ Increased stability and improved performance across the entire GIS environment.
- ✓ Compliant hardware and software versions.
- ✓ Future-proofed environment ready for future geo-innovation.

"Unitywater's GIS environment is now operating on fully supported Esri products," Sarah says. "We are well-positioned to move to GDA2020 and take advantage of future GIS, ArcPro and Network Utility advances."

COSOL: When Reliability Matters

COSOL is built on one belief: in asset-intensive industries, reliability is everything. We are a trusted, Intelligent Asset Operations partner - known for our deep expertise, dependable delivery, and ability to keep critical assets performing at their best



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