

Accessing Queensland's spatial data

Utilising Esri Australia's
Managed Services.

The Department of Resources has enhanced Queensland's spatial data accessibility and economic resource business development prospects.

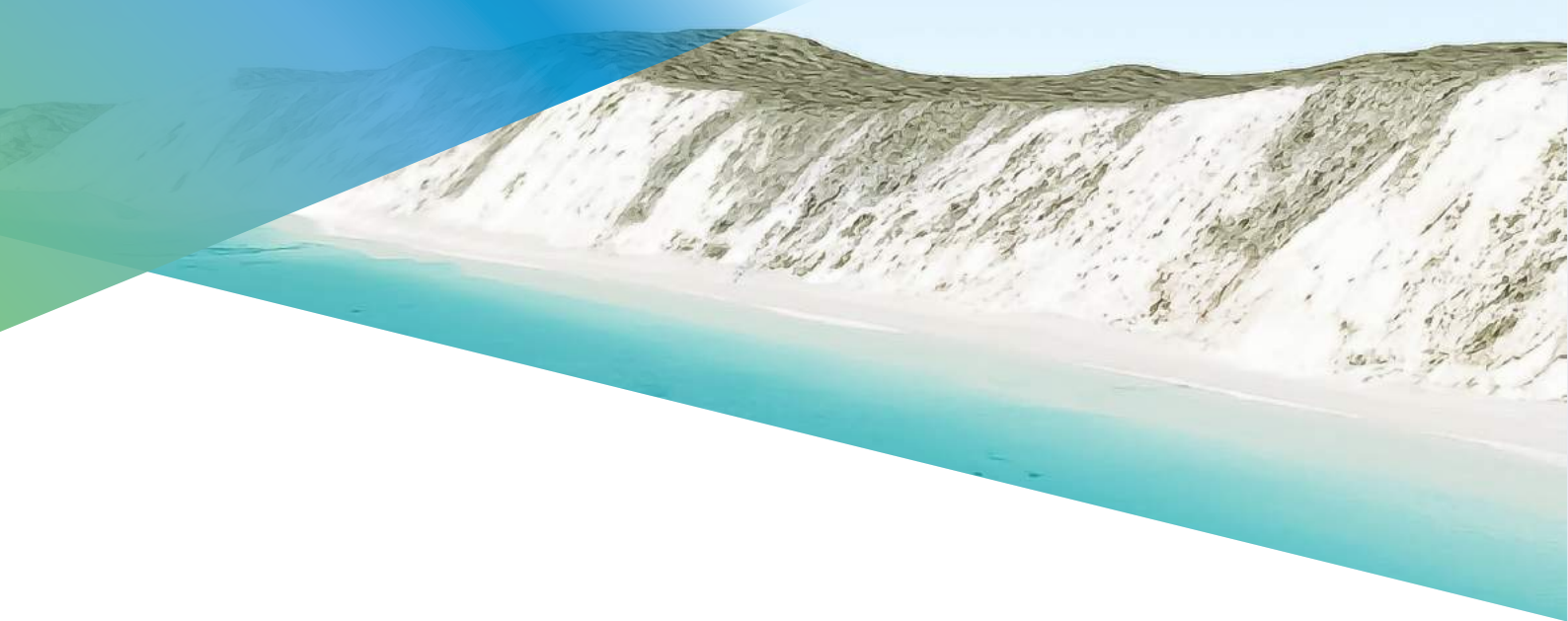
Project overview

The Queensland Department of Resources embarked on a transformative journey to revolutionise its spatial data infrastructure. In collaboration with Esri Australia's Managed Services, the initiative aimed to enhance the Department's resource management as well as set a new standard for accessible and authoritative spatial data. The Managed Services infrastructure also provided cost efficiency for the Department and reduced its reliance on internal IT resourcing to maintain complex GIS applications and databases.

Client in focus

The Queensland Government's Department of Resources is responsible for the sustainable management of the State's natural wealth spread over its vast 1.85million km² geography. The Department provides dedicated support amongst government agencies, landholders, businesses and the broader community for land and property management, mining and exploration, and data governance and mapping.

Leading the ongoing management and accessibility of the Department's spatial data, is the Spatial Systems Team, whom over the past decade have been pushing the boundaries of spatial data guardianship.



The challenge

The key remit for the Spatial Systems Team is to ensure the Department of Resources' spatial data remains supported, secure and accessible for internal Government users and external parties. Internal government users also faced system performance challenges due to Queensland's vast geography and large datasets.

In addition, as the volume of datasets were increasing, the Spatial Systems Team were challenged with the selection of suitable, scalable infrastructure and management approach that would handle the current data needs and their ongoing growth of digital transformation across additional data creation, in particular, LiDAR, Imagery and 3D rendering for Digital Twin development.

A transformative partnership

In seeking a transformative partnership, the Department and its Spatial Systems Team were very clear about their business requirements and vision. The fundamental criteria were to:

- Improve latency issues experienced by regional-based users;
- Ensure the selected solution would enhance productivity within Government;
- Continue to provide Queensland with access to an open-data culture that would encourage sustainable economic and environmental development;
- Provide a cost-effective solution without compromising data integrity and security;
- Have a centralised, future-proof database infrastructure hosted off-premises;
- Reflect a strategic "lease before you buy" approach; and
- Most importantly, support a comprehensive solution for the growing volumes of spatial data, (including imagery) while leveraging secure cloud storage for greater efficiencies.

"We regard ourselves as the authoritative source and point of truth, of spatial foundation data for Queensland."

Paul Murtagh
Director, Spatial Systems,
Department of Resources

"We want an environment that can cope with the growth, we're growing all the time at around 10% a year."

Phil Duggan
Manager, Spatial Platform,
Department of Resources

The solution

Esri Australia's Managed Services

Leveraging an existing partnership with Esri Australia provided a solution that was pivotal in the integration to the Department's ongoing Spatial Infrastructure Renewal Project. The solution that Esri Australia proposed and provided was Managed Services.

Esri Australia's solution met the Department's requirements and more. In addition, the team were already successfully delivering ongoing iterations of another large-scale assignment, the Spatial Infrastructure Resource (SIR).

Managed Services in the Cloud

Esri Australia provided a secured, scalable, low-latency cloud infrastructure and application management solution. The Managed Services infrastructure is ISO27001 certified for data handling and security. It also provides the scalability that is crucial for managing and publishing spatial data effectively.

Managed Services also reduced the Department's technical resource needs, allowing for seamless software management, troubleshooting, and updates. It also provided the mandatory data sovereignty required for Queensland Government Departments.

Transformative outcomes

The adoption of Managed Services transformed the Department's Enterprise GIS capabilities, providing them with a value-based solution that reduces reliance on internal IT resourcing and a reduction on capital expenditure. It also provides a more strategic and progressive approach to data and application implementation.

Key benefits for the Department include:

- Increased productivity among non-technical staff through a simplified and intuitive user-interface that provides access to spatial data hosting;
- Enhanced UI/UX of the external-facing platforms like QSpatial for external data access; and
- Addressed issues around data access latency, improving insights and end-user experience.



The interactive 'Queensland Globe' - providing public access to various spatial datasets.

Behind the scenes

The successful seamless integration of Managed Services is evidenced by the many thousands of visitors to the Department's online services as well as the ongoing decreased need for technical support across the Department's 1,000+ deployed ArcGIS Online licenses. These achievements underscore the enhanced accuracy, security, reliability and engagement with spatial data. Working collaboratively, Esri Australia has played an important technological and advisory role that has helped set a new paradigm in the Department's spatial data management.

Key benefits

- Application hosting of Esri ArcGIS infrastructure;
- Best Practice Architecture;
- ISO27001 certification;
- Built-in governance with central governance controls;
- Ability to scale up processing and storage quickly;
- Flexible storage options;
- Low latency access to data and imagery; and
- Data hosting across various data formats.

"Good spatial data management is something we've been strongly pushing across the agencies."

Phil Duggan
Manager, Spatial Platform,
Department of Resources

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