

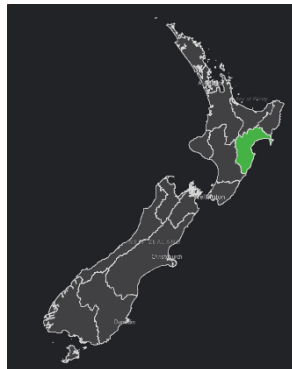
# Hawkes Bay Regional Council

Case Studies

## Embracing Change Adopting ArcGIS Enterprise

***"Geoworx has been a great consultancy to work with, Scott offers a more holistic approach to most conventional GIS consultancies."***

Hellen Simpson, Team Leader GIS (HBRC)



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*“Hellen Simpson, from Hawkes Bay Regional Council, wanted ArcGIS Enterprise to work and to work well. On-going performance and stability issues led her to reach out to geoworx and ask for help. As an early adopter of geoworx services, she has taken her team on a journey to an upgraded, optimised and enhanced state.” – Scott Tansley, geoworx limited*

Hawkes Bay Regional Council (HBRC) is a mature user of Esri GIS technology and have a wealth of experience in capturing, storing and analysing geospatial data. Having used Esri technology and ArcGIS Server for many years, they adopted ArcGIS Enterprise 10.5.1 in 2017.

The original plan for implementing ArcGIS Enterprise included replacing existing ArcGIS Desktop installs, simplifying support and reducing internal IT costs. HBRC administer many datasets of different types, everything from light vector geometries, through massive vector datasets like contours. The team also maintain large amounts of aerial imagery, and LIDAR capabilities are emerging. HBRC also has a comprehensive (Natural) Hazards Portal, which offers high-quality printing and other workflows. The methods of storing data and exposing them to the internet used established practices that were challenging to administer. Like many other Esri users, they had the typical administration overheads like database and file locks, making it hard to update database data while a service was using them.

HBRC had high-hopes for their ArcGIS Enterprise, but it's slow performance, and lack of stability caused frustration amongst internal users. It was therefore hard to encourage people away from ArcGIS Desktop, and into using more modern toolsets.

Hellen Simpson, Team Leader GIS at HBRC, had worked with other consultants to try and remedy the problems at hand. In 2019, Hellen heard about geoworx being new to the market and reached out to see how geoworx could help.

### The key aims and objectives

ArcGIS Enterprise is a fundamental, integrated, component of the Regional

Council's IRIS application. IRIS was due for an upgrade to the latest version, and a dependency to that project was an upgrade to ArcGIS Enterprise 10.7.1. HBRC knew that it was possible to install ArcGIS Enterprise 'over the top', but they did not want to continue with the same performance and stability issues. They feared, correctly, that the problems would persist with a straight over-the-top upgrade. Beyond the system upgrade, HBRC wanted to understand how they could improve data maintenance workflows, system stability and web service performance. For this reason, HBRC requested a review and consultant from geoworx.

### The delivery

geoworx undertook a lightweight documentation review and noted common deployment patterns and practices that were in use when 10.5.1 was deployed. The deployment pattern, or architecture, was industry standard at the time. It should be considered that ArcGIS Enterprise was still relatively new at that release, and was only starting to be adopted to the mainstream.

Since that release, Esri consultants, like geoworx, have learnt a lot about how to best structure, tune and optimise the technology. A detailed review of the logs provided an evidence-based approach to prove the issues at hand. Multiple tables and charts were created to show the problems that were occurring and why. geoworx documented the findings and presented them during a workshop that included relevant stakeholders from the GIS and IT teams. The presentation showed what was happening internally and why the current ArcGIS Enterprise was slow and unstable. geoworx facilitated a session to provide options and plan the best way forward.

HBRC had decided to move parts of their IT enterprise away from NZ based IaaS, and adopt Microsoft Azure. Cloud migration is a crucial consideration when planning any significant upgrade of ArcGIS Enterprise. Moving to the cloud does, however, change the existing data workflows and administration tasks. Hellen requested that geoworx guide the organisation regarding the best options for managing data in a cloud-ready environment. geoworx provided a detailed Solutions Architecture Document. Following acceptance, geoworx has deployed new pre-production (10.7.1) and production (10.8.1) environments. geoworx provided a comprehensive handover session, and on-going mentoring and remote support to guide, educate and grow the team with new methodologies.

### Moving to recovery

The mentoring approach to consultancy is the most critical component of the 'geoworx style'. Instead of stepping in, and offering to resolve the issues at hand, geoworx provided guidance and mentoring so that the team could 'own the remedy'.

HBRC saw an opportunity to step back and restructure their existing geodatabases and categorise them based on 'theme'. Each new geodatabase was focussed on a business unit, other than the core (or shared) datasets. While HBRC owned this process, they validated everything with geoworx to ensure that it would be optimal from a technology perspective. Additionally, geoworx worked with the HBRC Database Administrators to help set up the initial Enterprise Geodatabases.

During this time, HBRC set about confirming their new knowledge and using the optimised data processes. Throughout this work, they learned how to work with cloud practices due to the migration to MS Azure. COVID delayed the project to a certain degree, but the team bounced back and quickly adopted the production environment in Q3 of 2020.

The critical thing with this phase of work is that HBRC managed and implemented all the

migration activities themselves. geoworx remained a partner who would draw alongside and provide guidance when needed. When the team recognised that the platform wasn't performing quite the way they expected, geoworx dropped on to assess the matters at hand and provide guidance relating to the web service configuration that was leading to the poor performance. Rather than fixing the problem, geoworx told the team how to fix the problem. This approach is all part of the mentoring philosophy of the geoworx engagement.

### Implementing their migration

Having a side-by-side build of the new environment has allowed Hellen and the team to have the luxury of maintaining the existing web services and then migrating content bit-by-bit. They have reviewed and optimised each web service and application. This step then allows HBRC to be happy with it before switching that service/application over to the new environment. HBRC's use of Eagle Technologies LocalMaps product facilitates this steady migration of data by focussing on one application at a time and allowing more than one 'portal' to be used.

### Achievements

Hawkes Bay Regional Council knew there was more to ArcGIS Enterprise than what they could achieve from their existing environment. They wanted to adopt best practice and to be able to use modern working practices, moving beyond the old way of doing things.

They have taken the time to pull together as a team. In the last year, the HBRC GIS team has looked at how they did things, analysing their data, working practices and policies. They have migrated their methods into a form that better supports their business. They have also embraced the latest technology that Esri has to offer.

On top of this, they are well-positioned to keep abreast of technological change and upgrade software versions as needed, well into the future.

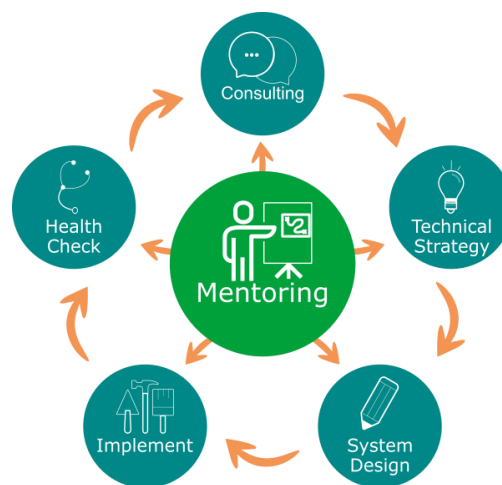
## Words about geoworx:

Hellen Simpson, Team Leader GIS, (HBRC) said:

*"The GIS team at HBRC have enjoyed working with Scott, the team values his technical and strategic advice.*

*He is very responsive to support calls and provides thorough follow-up documentation. Scott has a knack of translating GIS infrastructure 'speak' to something easily understood.*

*Scott has taken us on a mammoth GIS infrastructure journey, requiring a lot of work up front but definitely worth it for future success."*



geoworx exists to help you with your ArcGIS platform. Primarily focussed on ArcGIS Enterprise, geoworx can also help position and fine-tune all the ArcGIS components within your IT Enterprise. From initial planning, through design, implementation to on-going maintenance and health-check services. geoworx is an experienced consultancy that focuses on empowering you to deliver the very best from ArcGIS.

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