

Transport agency helps city handle massive growth with capital projects management solution



In Auckland, New Zealand, public agency Auckland Transport has big plans for upgrading the city's aging, inefficient transportation infrastructure to accommodate Auckland's rapid population growth. To manage complex capital projects such as the NZ\$2.4 billion City Rail Link, the agency teamed up with IT service provider LeapThought to implement Fulcrum, a solution based on Microsoft SharePoint Server. By using Fulcrum for a wide range of projects large and small, Auckland Transport creates both efficiencies and savings.



Customer: Auckland Transport
Website: <https://at.govt.nz>
Country: New Zealand
Industry: Government
Partner: LeapThought
Partner Website: www.leapthought.co.nz

The full story

Like all major cities, Auckland is facing the challenges and opportunities that come with urban growth. Nearly one-third of New Zealanders live in the Auckland metropolitan area, which houses 1.4 million people, and more move there every day. The city's population is projected to grow to 2.2 million by 2020. Among other things, that means a lot of demand for transportation services.

Auckland Transport, the agency responsible for the city's public transportation and infrastructure, had already implemented Microsoft technology-based solutions to deliver better service to the city's growing ridership. The agency currently offers tools such as MyStreet, an application that provides citizens online access to personalized transportation services and allows them to stay up to date about current road conditions. To discover the most popular routes and improve rider experience, Auckland Transport analyzes 4 terabytes of operational data from sensors on buses using Microsoft SQL Server 2012. The agency also hosts its heavily trafficked website on the Microsoft Azure public cloud so it can meet the city's scalability needs of more than 1 million hits per week. After these successful implementations, Auckland Transport looked to the next step in its digital transformation.

Big growth means big challenges

In addition to smart software solutions, Auckland Transport needed to overhaul its aging, inefficient transportation network to keep pace with growth and to stay competitive in the global marketplace.

"Our greatest obstacle as a transportation agency is planning for population growth," says Roger Jones, Chief Information Officer at Auckland Transport. "To accommodate the projections, we need to increase efficiency and capacity, while keeping costs down and maintaining a positive experience for residents."

Customer Profile: Auckland Transport is the agency responsible for transport functions and operations for the Auckland, New Zealand, city and region. Its responsibilities include transport services, operations, and infrastructure, in addition to the systems and facilities required to plan, design, develop, deliver, and operate an integrated transport system for the region.

Solution:

To manage complex capital projects in the rapidly growing city, Auckland Transport worked with IT service provider LeapThought to implement Fulcrum, a full-featured solution based on Microsoft SharePoint Server. The agency uses Fulcrum to efficiently manage a wide range of large and complex infrastructure initiatives, such as the NZ\$2.4 billion City Rail Link project.

Software & Services:

- Microsoft SharePoint Server

Microsoft CityNext
www.microsoft.com/citynext

Customer Success Stories
customers.microsoft.com



"The cost savings that we've seen after rolling out Fulcrum have been dramatic. The agency estimates quantifiable savings of \$3 million in the first 10 years—and it expects the savings to continue to grow as the solution is rolled out to 200-plus capital projects."

Roger Jones, Chief Information Officer, Auckland Transport

Auckland Transport set out to improve its services through an ambitious roster of more than 200 capital improvement projects. For example, it has launched City Rail Link (CRL), a NZ\$2.4 billion (US\$1.65 billion), 10-year megaproject that involves a new underground rail line beneath the city center. City Rail Link will transform the layout of Auckland's rail network from an inefficient dead end to a high-capacity loop that passes through the metropolitan area. A rail tunnel will introduce two new underground stations downtown and double the number of trains that run into Auckland's main transportation hub, Britomart.

The City Rail Link tunnel that Auckland Transport is digging beneath the city center goes through a patchwork of properties, and the agency must follow a well-established bureaucratic process to acquire the land it needs for the project. This complicated process adds time and challenges to an already difficult undertaking.

An end-to-end project solution

Auckland Transport turned to technology to help its staff better manage agency public transportation projects of all sizes. "We couldn't find an adequate system to manage the end-to-end property acquisition process for the City Rail Link tunnel," says Jones. "And we wanted a scalable solution that we could use to manage property acquisition for all our big infrastructure projects."

To meet its needs, the agency decided to work with LeapThought, 2015 Microsoft CityNext Partner of the Year. "We asked LeapThought to develop Fulcrum, its capital management solution, to help us manage each phase of the property acquisition and development process," says Jones.

Based on Microsoft SharePoint Server, Fulcrum is a customizable digital solution that organizations can use to manage capital infrastructure and construction projects. All participating parties at Auckland Transport—internal and external staff—use the cross-departmental tools in Fulcrum to collaborate and manage the processes affected by transportation projects such as City Rail Link. Project team members use a central location to store, share, and review all the construction, design, financial, and legal documents related to a given project, including large files such as two- and three-dimensional drawings.

Auckland Transport uses Fulcrum functional modules to manage key business processes across the entire project life cycle. For instance, the agency uses Fulcrum to manage complex property and land acquisitions, and to facilitate communication with interested parties, special interest groups, and communities. Auckland Transport also uses the solution to coordinate procurement-related activities, such as contracts management and negotiations, and manage issues and risks relating to health and safety.

Personalized workspaces, dashboards, and reports provide complete transparency on all projects. Project stakeholders at Auckland Transport can access information online and, because of the workflow capabilities of SharePoint Server, they can use Fulcrum to track every stage of a project with complete audit functionality.

Auckland Transport uses customizable Fulcrum modules to adapt to the unique requirements of any project. For example, the agency can use the Property and Land Acquisitions Management module to manage land acquisition for capital projects, while also working to stay compliant with local and federal legislation such as the New Zealand Public Works Act. By using Fulcrum modules, all parties involved can manage the properties impacted by transport projects.

Taking advantage of existing technology

Auckland Transport was already using SharePoint Server for its corporate intranet, but after considering its ever-increasing capacity requirements, the agency worked with LeapThought and Microsoft Services Consulting to upgrade to the latest version of SharePoint Server so it could better accommodate projected growth over the next several years, including the adoption of Fulcrum.

"Building the Fulcrum solution on SharePoint Server and other Microsoft technologies was a strategic decision for Auckland Transport, because it allowed them to leverage existing technology and platform investments," says Ratnakar Garikipati, Chief Executive Officer at LeapThought. Customers can choose from flexible deployment models for Fulcrum: on-premises, off-premises in a private or public cloud hosted on Microsoft Azure, and Microsoft Office 365, a suite of cloud-based communication and collaboration tools. While Auckland Transport currently uses SharePoint Server for Fulcrum, the agency looks forward to adopting a hybrid solution in the next two years by migrating data to Microsoft Azure while maintaining its on-premises SharePoint Server environment.

The Fulcrum open architecture also gives Auckland Transport the ability to integrate data from existing systems, such as SAP, GIS (Geographic Information System), and Microsoft Dynamics CRM. Auckland Transport staff can now make faster, more informed decisions because all the relevant information is aggregated into personalized workspaces.

Positioned for future growth

The strategic, integrated approach that Auckland Transport is using for its technology environment has translated into considerable cost savings through operational efficiency gains. "The cost savings that we've seen after rolling out Fulcrum have been dramatic. The agency estimates quantifiable savings of \$3 million in the first 10 years—and it expects the savings to continue to grow as the solution is rolled out to 200-plus capital projects," says Jones. The success of Fulcrum also led to the displacement of several third-party solutions, which has resulted in significant savings in license costs.

But the benefits extend beyond cost savings. By using the comprehensive document management and transparent, auditable workflows in Fulcrum, Auckland Transport can help mitigate risk by ensuring compliance with regulations and contracts. Staff productivity and efficiency has increased, and the aggregation of information in one central location leads to effective, data-driven decisions.

The agency continues to keep pace with the city's growth. Under Auckland Transport, patronage for public transport now exceeds 78 million boardings per year, an annual increase of 10 percent, and it continues to trend upward. Auckland Transport saw the greatest

increase in rail use. The trains on the city's efficient rail network carried 13.4 million passengers in 2014. In March 2015, Auckland reached a record monthly high of 1.56 million train trips—a 29 percent increase from March 2014. As Auckland Transport uses its technology tools to help complete improvements such as City Rail Link and other projects, the agency is building a truly sustainable, scalable approach to managing the challenges of urban growth in the coming decades.

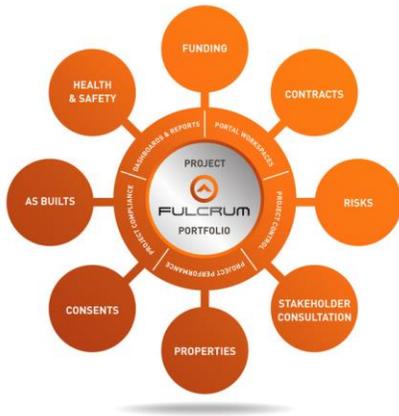


Figure 1. Functional modules in Fulcrum.

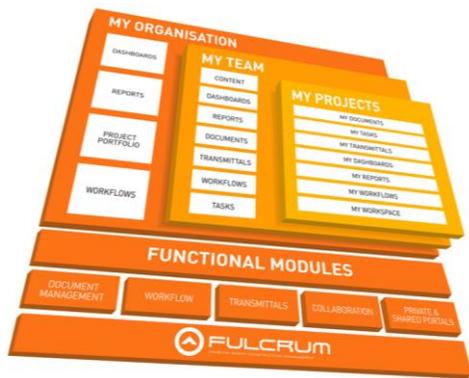


Figure 2. Features of the Fulcrum solution.



Figure 3. Auckland Transport staff uses Fulcrum to manage complex business processes.