

**It all comes down  
to the way you  
look at it.**

Presentation





It all comes down to the way you look at it...

**Presentation:**

Introduction to location intelligence and GIS in retail

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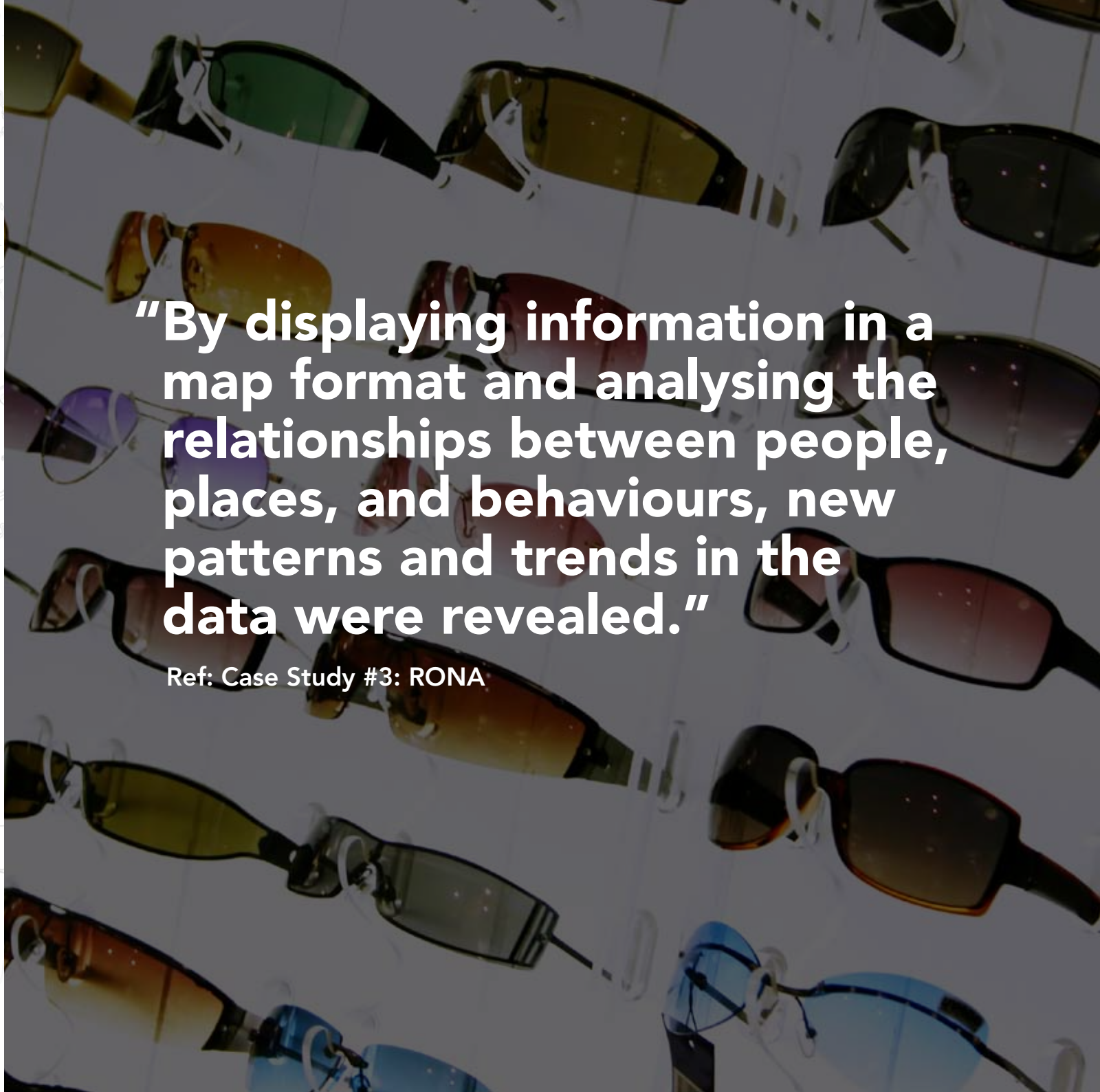
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**“By displaying information in a map format and analysing the relationships between people, places, and behaviours, new patterns and trends in the data were revealed.”**

Ref: Case Study #3: RONA

## Helping Retailers to know their place...

Location is inherent in all organisational data: people have residences, assets have proximities, employees have worksites and parcels have both origins and destinations.

By visualising and exploring the spatial relationships within organisational data; and then using the resulting discoveries to guide decision-making – you are effectively leveraging **location intelligence**.

Location intelligence is easily attained through utilising Geographic Information System (GIS) technology. By using the technology we are able to literally map the geographic elements contained within an organisation's data to expose patterns and relationships that may otherwise be hidden in a maze of numeric tables and databases.

Through GIS technology, data is essentially translated into a universal, visual language – enabling organisations to gain a better understanding of the geography of their business.

It's all about knowing your place.

## GIS in Retail

GIS is often described as an emerging technology. The truth is – GIS is a mature and sophisticated technology that has been around for more than four decades.

What has emerged in recent years however is the accepted value of an integrated GIS and location intelligence strategy into core business systems.

“Nike first licensed GIS from Esri in 1993 for use in the company’s Sales department to help management understand where Nike product was being distributed.”



Originally, GIS technology was very much the domain of surveyors, land management agencies and the military. However, more and more enterprises - across both the public and the private sectors - are adopting GIS technology solutions.

In terms of the retail sector, GIS and location intelligence has a very compelling story.

From the early nineties GIS technology was used to assist retailers to understand product distribution patterns within a geographical context. Since these earlier explorations of the technology, site selection has emerged as the poster child for GIS in retail.

Beyond site selection however, the technology has proven to have a vast number of applications from: **network management** and **trade evaluation**; through to **marketing**; **workforce planning**; and **store management**.

The following case studies aim to provide some insight into how GIS technology is transforming the retail sector.



## Network Management and Trade Evaluation

From as early as 1993 when Nike used mapping to help understand product distribution through to the current day, GIS has been providing retail organisations with the insight necessary to improve network management and properly evaluate trade.

Like all data, retail services data will reveal more when combined with other information. With GIS you can connect layers of corporate data through geographic relationships forming building blocks of information that can be easily translated into actionable intelligence.

This kind of insight provides retailers with a more intimate view of their marketplace and allows them to better understand product volume patterns, competitor activities, customer demographics, expenditure trends and market fit.

### Case Study #1: PETCO Grows a Network of 950 Stores with Statistics Not Intuition

Back in 2006 PETCO Animal Supplies implemented an Esri GIS based site selection solution.

Ballooning to over 950 stores in recent years, PETCO realised that they could no longer rely on just the experience and wisdom of the senior management team to select new sites but had to support network decisions with solid statistics.

“We sought to improve our ability to assess the sales potential for new locations, which was born of a desire to be more risk averse with capital. The investment would give us a more scientific basis to feel confident in our process” said Shawn Hanna, Director of Financial Analysis, PETCO.

In addition to significant construction-related capital expenditures, opening a new store often requires a long-term real estate lease. Improving the performance of sites with accurate site selection helps to minimise costly mistakes.



PETCO is a leading pet specialty retailer that provides the products, services and advice that make it easier for customers to be great pet parents.

Hanna says “We have successfully avoided the downside risk associated with several locations, which more than pays for our investment in the Esri solution.”

## GIS for Marketers: Optimising Reach and Returns

Marketing professionals are constantly being challenged to devise more effective strategies to locate and connect with their target market.

By displaying information in a map format and analysing the relationships between people, places, and behaviours - new patterns and trends in the data are revealed.

Location intelligence enables marketers to leverage their valuable information resources to better plan, execute and measure data driven marketing strategies and campaigns by creating a single point of truth – with a geographic context.

The end result - a greater ROI.



**"At the corporate level, it informs issues of branding and national advertising; at the individual store level it informs and influences decisions such as whether to place an advert in a local newspaper, or online."**

## Case Study #2: Nike Understanding the Marketplace One Customer at a Time

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By bringing together demographic, geographic and marketplace information combined with point-of-sale location data, Nike has developed a winning formula that has helped them to better understand their marketplace.

Information like customer and store locations can be placed on a street map, along with marketing information, including profiles of areas – right down to a customer address.

Using GIS technology, Nike teams around the globe map, analyse and share key planning information with other departments providing added business intelligence to retail marketplace strategy. Teams can create custom reports providing information such as retail expenditure, market research information for sports participation, performance against store location and much more.

GIS technology reduces the time and effort spent on researching information and creating reports allowing Nike to focus on better understanding their customers. By obtaining an holistic view of the existing suite of markets and activities in stores, the analytics behind Nike's site selection and market optimisation activities are vastly improved.

With GIS, Nike has the technology to know their marketplace better and to keep at the front of the pack.



Tracking the demographic, geographic and marketplace information of one of the worlds most recognised brands.

## Case Study #3: Actively Finding Customers

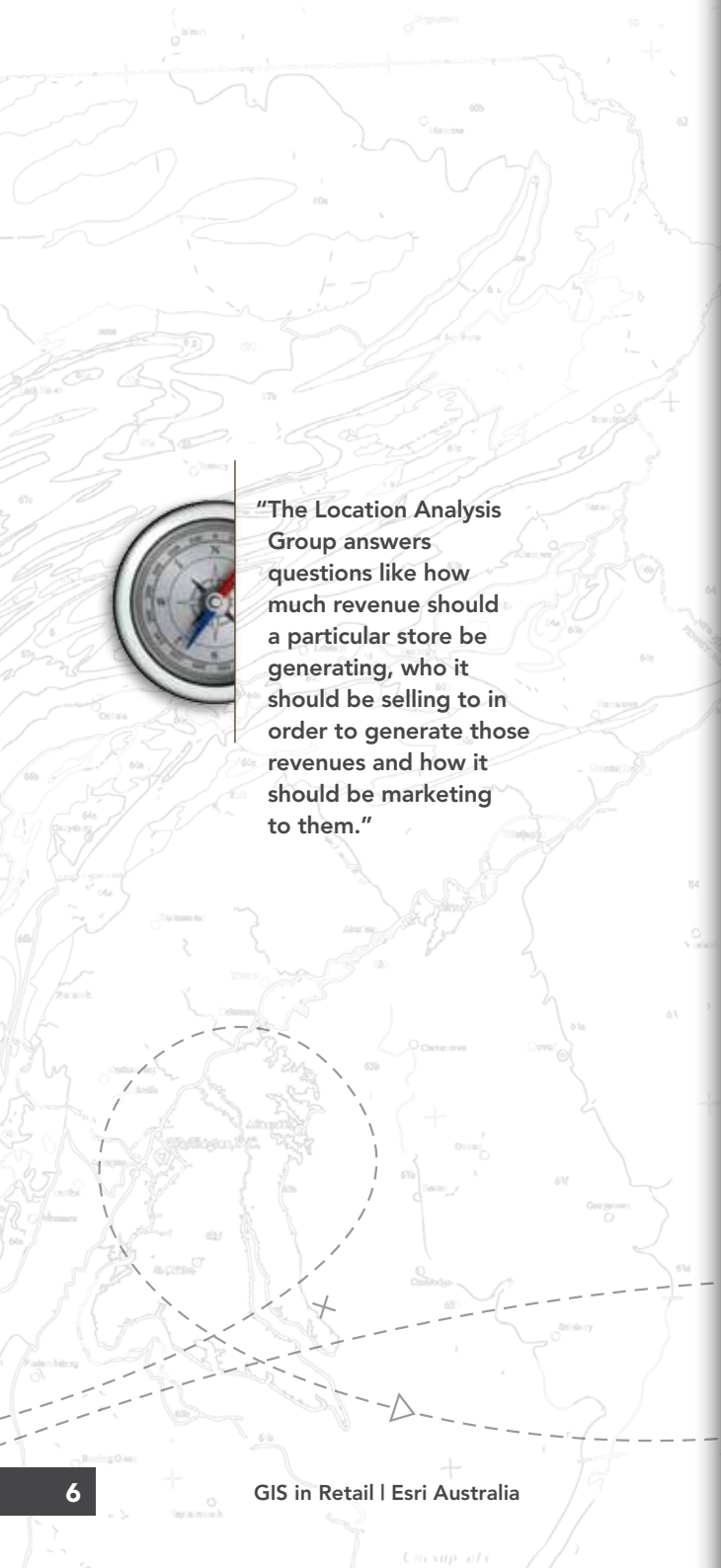
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RONA, Canada's largest hardware, home renovation and gardening products retailer, effectively utilises GIS to profile customers and develop its flyer distribution strategy.

RONA's Flyer Distribution and Network Information department is responsible for servicing over 630 stores across the country. Research showed that high volumes of flyers were being sent to areas that were not necessarily translating into sales.

Using GIS technology, RONA monitors their customers through individual profiles that are linked to specific trade areas. By displaying information in a map format and analysing the relationships between people, places, and behaviours, new patterns and trends in the data were revealed.

RONA have now optimised their marketing and advertising by zeroing in on profitable distribution areas and eliminating areas that were yielding poor results. An added benefit to the Department is they can now justify every promotion by being able to directly link sales results to specific geographic regions.



**"The Location Analysis Group answers questions like how much revenue should a particular store be generating, who it should be selling to in order to generate those revenues and how it should be marketing to them."**

## Case Study #4: Mapping the Unknown – The Co-Operative Group

The Co-Operative Group in the UK uses the geographic insight delivered through GIS technology to map the unknown and provide strategic input into the business.

Providing advice on things such as the optimum network size, where old stores should be relocated and where new stores should be built, the Location Analysis Group answers questions like: how much revenue should a particular store be generating; who it should be selling to in order to generate those revenues; and how it should be marketing to them.

Using geographic models has meant that The Co-Operative Group has been able to pinpoint gaps in the understanding of their business and by highlighting these gaps have been able to more accurately manage the business; and to ultimately become more competitive.

One of the most significant benefits of the Esri software is that it has enabled The Co-Operative Group to 'map the unknown'. This has led to the identification of several areas of 'hidden difference'.

"We need, for example, to track the number of people and this ties in neatly to geography through population densities. How much these individuals have to spend can also be mapped as this sort of

information has a distinct regional bias. And then we need to consider the competition – either to defend ourselves from new stores in a locality or to ensure we extend our network to areas of least competitive resistance," says Stephanie Durbin-Wood, National Location Analysis Manager.

"Geography provides a single framework for all these diverse considerations. And because we use sophisticated technology – in the form of Geographic Information Systems (GIS) – we can combine and show all this analytical data."

"The bottom line is we can print out a map with a hot spot marked in red and show that to our executive board saying; the red spot is where we should locate our next store."

"Our whole business depends upon how well we can model the differences between stores and [how we] use those measurements to manage effectively" she says.

"There is an enormous and very obvious difference between the trading profiles of different stores".

"Not only do we need to measure these differences but, more importantly, we need to develop a sophisticated understanding of what these differences mean and how to apply them to the running of the business."

## Workforce Planning

The value of location intelligence as a workforce planning tool is well documented.

Organisations throughout both the government and private sectors have used Esri location intelligence to develop workforce management plans that have included effective recruitment and retention strategies, resource mobilisation, and even business continuity planning where a large scale emergency has threatened operations.

**“Service technicians can better deploy resources for installing new machines by overlaying site location and service centre maps.”**



### Case Study #5: GIS in Workforce Planning – Coinstar Inc

Managing a network of retail stores also means managing a sizeable network of people.

When Coinstar turned to GIS technology for site selection and optimisation they didn't realise the impact the implementation would have on the rest of their business.

After searching for a solution that would better integrate information and allow easy access to the enterprise, Coinstar recognised that a geographic information system could meet these needs.

From marketing through to operations and sales a GIS is now the foundation upon which Coinstar integrates and shares company data and work experience knowledge.

“GIS has proven itself over and over again as a technological tool for many facets of our business. It's more than just computer mapping - it's real data integration, analysis and visualisation offering departments a common framework for collaboration and communication,” said John Chestnut, GIS Analyst, Coinstar Inc.

“We've seen a number of benefits including more informed planning and decision making, optimised allocation of resources, and improved performance.”




## Store Management

From developing the initial site to driving store performance, GIS is a technology that uncovers the hidden difference.

Understanding both network and individual store performance is critical to making informed decisions which drive direction and growth. Every store has a unique trading profile which needs to be optimised for commercial success.

Using location intelligence, organisations can model and measure the differences between stores to improve overall network performance. By using GIS technology to integrate layers of data and perform geographic analysis retailers can answer questions like: does the customer demographic match my product profile, or what stock levels should the store carry?

This information reflects a deep understanding of the customer and provides business intelligence which directly affects store performance and creates competitive advantage.



"As part of their site selection methodology, Starbucks uses GIS for trade area evaluation within each market to place their brand, as well as to determine the best overall markets to start new efforts."

### Case Study #6: Finding coffee hot spots - Starbucks



Starbucks Coffee Company operates thousands of stores globally with 16,635 stores in the U.S. alone.

Real estate is a large part of the Starbucks strategy. They employ professionals who are in the field making real estate decisions on the company's existing portfolio of locations, as well as new and potential sites.

As part of their site selection methodology, Starbucks uses GIS for trade area evaluation within each market to place their brand, as well as to determine the best overall markets to start new efforts.

A small team of analysts at Starbucks provides critical data to hundreds of people globally, answering questions like: what are the general trends; who are our competitors and where are they located; where will we achieve the highest traffic; where are people going to work and how are they getting there - all using GIS.

"Our experts no longer have to hunt and peck for real-time, reliable data and the time saved per day is used on other value-added tasks, such as making additional informed decision about new market strategies," says Patrick O'Hagan, Starbucks Manager of Global Marketing Planning.

## Supply Chain Management

Retail supply chain networks are becoming increasingly complex and diverse. Just-in-time inventory, off-shoring, global sourcing and both natural and man-made phenomena all decrease network productivity and introduce risk.

Esri location intelligence has played a significant role in driving productivity within a diverse range of organisations, including transport and logistics giant DHL and Australia's own concrete heavy-weight Hanson.

### Case Study #7: Cementing Real Savings and Stronger Planning Capabilities

Hanson, one of Australia's largest heavy building materials suppliers, uses an Esri Australia GIS solution for order processing and truck allocation and to co-ordinate building materials deliveries. The system enables staff to select the most efficient dispatch point in relation to the customer's address. Trucks often need to come from many different depots and the GIS calculates duration and travel time for the most efficient routes, taking into consideration road restrictions, such as no right hand turns or smaller roads that cannot be accessed by large trucks.

Hanson's CIO, Rob Downing adds, "Esri Australia has been an important partner since 1999. The Esri GIS system provides time and distance calculations for our truck deliveries. It is essential to get our product to site on-time, given the two hour shelf life of wet concrete, as well as pay our drivers and charge our customers correctly."

The Esri Australia system is a server based technology which is being integrated with Hanson's other ERP (Enterprise Resource Planning) systems, such as SAP, to deliver comprehensive business insights and analytics around fleet use.



Hanson is one of Australia's leading suppliers of heavy building materials to the construction industry.

A topographic map of a coastal region, likely in Australia, showing contour lines, roads, and water bodies. The map is rendered in a light, semi-transparent style, serving as a background for the text.

## Business Intelligence

Historically, Business Intelligence (BI) and GIS technology have followed separate development and implementation paths.

Customer requests for a more complete operational picture and the ability to be more proactive have led to the combination of these two technologies.

However the need for a more complete operational picture and the capacity to plan for changing business conditions have led to the amalgamation of the two technologies.

In addition, workforce diversity within the retail sector has seen GIS and BI become a natural pairing. By visually representing BI data on a map, GIS translates even the most complex messages into a universal language, that transcends education, culture or work experience.

The value of this universal language extends beyond internal communications.

With the maturation of Internet technology, we have seen transformational change in consumer shopping habits, as it has become easier to distribute information via the web.

In terms of the retail industry, and its various sources of data, an integrated GIS and BI solution would establish a common platform for the compilation, storage, use, and distribution of information, delivering enhanced data management capabilities and system agility.

### Case Study #8: Helping Westralia Airport Corporation Manage Retail Real Estate

More than 10.4 million passengers travelled through Perth Airport in 2009/2010 and total passenger movements per year are forecast to be 18.9 million by 2029. This kind of growth projection means managing not only more planes and terminals but also more retail facilities within the airport itself.

Westralia Airport Corporation (WAC) uses GIS to manage more than two hundred commercial leases; the delivery and maintenance of critical services such as gas, electricity and communications; and, a growing flight schedule.

“GIS means all geographically-related information is managed in a systematic way, is easily accessible to all staff...and is used to improve the airport’s operation and sustainability, while minimizing the likelihood of potential risks and mitigating their effect,” says Shannon Browne, GIS Administrator, Perth Airport.

## Seeing is believing

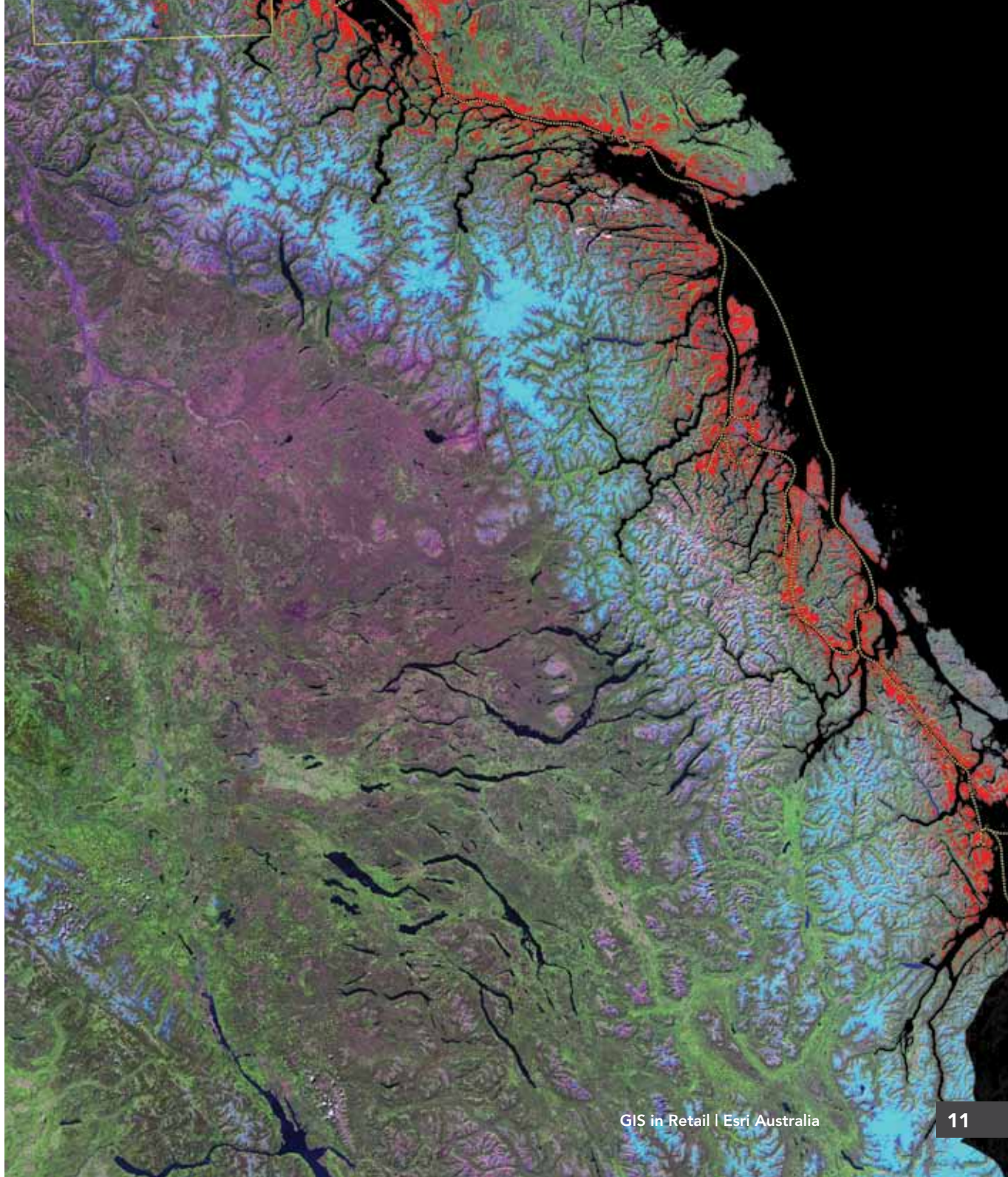
Esri Australia has been a part of the global Esri Network for more than 34 years.

Esri is the pioneer and unquestioned global market leader in Location Intelligence - with more than 350,000 organisations (worldwide) relying upon their GIS solutions.

And when it comes to Esri Australia and Location Intelligence seeing really is believing.

## Location Intelligence delivered through Esri Australia...

- Helped **Energex** identify \$500 million worth of unregistered assets, returning an additional \$21 million in revenue annually;
- Predicted the likely impact of the 2011 Brisbane flood for **Brisbane City Council** before the event fully unfolded;
- Guarantees **Queensland Fire and Rescue** emergency response personnel are in the right place at the right time – saving lives and property; and
- Enabled the **SA Department for Families and Communities** to conduct asset auditing of their remote aboriginal communities from out in the field.





## Moving forward...

Esri Australia's Location Intelligence Consulting Practice engages with organisations to derive greater value by leveraging the geographic and location elements inherent in all components of their business strategy and operating environments.

When getting started in Location Intelligence (LI), clients typically engage us to do some or all of the following - based on their business requirements:

- **LI Enablement - Readiness Review**

High level assessment of company's business imperatives to identify areas where Location Intelligence will provide benefit (short-term, mid-term and long-term).

- **LI Enablement – Strategy and Roadmap Development**

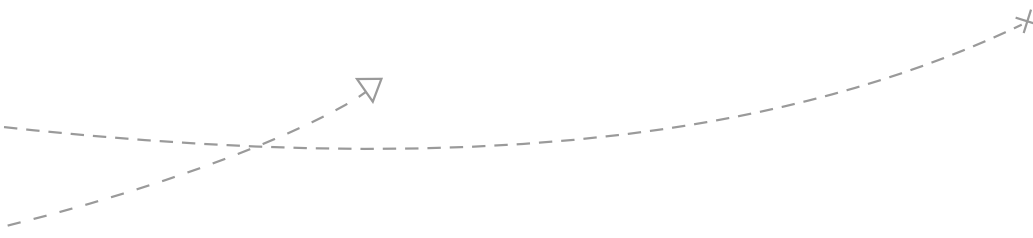
Based on the priorities identified during the Readiness Review, we conduct a further detailed analysis to establish recommendations for an integrated Location Intelligence solution that aligns to company identified success criteria.

- **LI Enablement – Business Case Development**

Generate the business case to activate a tailored Location Intelligence solution that incorporates the agreed deliverables. We work closely with key stakeholders to ensure value is understood and to address any implementation risks.

- **LI Decision Support – Strategic Business Insights**

Where resources are limited and time to market critical, we provide a full suite of location intelligence consulting services to support business decision-making. Where a location intelligence program is already in place, we offer high value consulting advice and independent validation of proposed strategy, investment and initiatives. Our Clients value the creativity and innovative insights that we have to offer.





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