



The difference is what you see

EastLink

EastLink Project



The EastLink Project is Australia's largest road project to date and is being constructed by a Thiess John Holland joint venture. The project will deliver Melbourne's second fully-electronic tollway, comprising about 45 kilometres of freeway-standard road connecting the Eastern Freeway in Melbourne's east to the Frankston Freeway in the city's south-east. Thiess John Holland is an unincorporated joint venture between Thiess Pty Ltd and John Holland Pty Ltd formed specifically to undertake the design and construct component of EastLink.

// Outcomes

- **Significant productivity and efficiency improvements in cartographic map production - 50% faster**
- **Automated workflow with spatial data now managed in a centralised and consistent format reducing the risk of erroneous information**
- **Cost avoidance and savings through the procurement of products and services supplied by the GIS - \$50,000 a year**
- **Staff have faster access to accurate and timely information and to multiple layers of data in the one place - 80% faster**

// Challenge

With a continual stream of incoming data relating to design, survey, the environment, construction, community feedback and planning, the communication and retention of this information was identified as a major issue. Four months into the project, a Geographic Information System (GIS) was identified as an ideal solution to host the myriad of location-based and textual data produced by a project of this size. It was also seen as the perfect platform by which to distribute this information to the whole of project and an ideal tool to manage data for the completion and handover process.

The GIS solution needed to provide high cartographic capabilities, supply timely and accurate data to stakeholders, integrate with other corporate systems, be simple to use, be put into service by existing staff and most importantly, be cost effective.

// Solution

An innovative multi-staged GIS strategy was implemented. The implementation included the procurement of new hardware and software, the translation of Computer Aided Design (CAD) data and the development of web-enabled applications. ESRI Australia was selected as offering the best solution for the Project's requirements, by providing the greatest interoperability with CAD files - a traditional data format that could be used in construction projects - and delivering all of the required functionality.

Technical specifications, data models, data dictionaries and symbol dictionaries defining the GIS data and map products were produced. With limited resources, the main focus of GIS services targeted the requirements of the environment, community, property, safety, completions and tunnels groups. Training manuals were prepared and training courses carried out to educate and equip the key project staff on how to use the GIS applications.



ESRI Australia

Putting knowledge into place

Eastlink



“The GIS solution is achieving the most efficient use of our dollars. We don’t duplicate efforts or deliver products and services where they’re not needed. That’s key to stretching our limited resources. The GIS tools enable us to

better develop and deliver our services and products.”

Jason Clark
GIS Manager
Thiess Pty Ltd

// Benefits

By incorporating GIS into the EastLink project, the following benefits have been achieved:

- EastLink staff now have easy access to accurate and timely information at their fingertips
- The ease of map production has resulted in significant productivity and efficiency improvements, making production 50% faster
- Significant savings of approximately \$50,000 per year were achieved by avoiding the need to outsource GIS services, and through the supply of products and services provided by the GIS solution
- Automated data validation and quicker editing of features has helped reduce erroneous data entry, ensuring more accurate data
- Time required to locate and collate information in the system has been dramatically reduced, with this process now 80% faster

- Reporting capabilities and the ability to integrate other corporate systems have provided Eastlink with a powerful management tool

Project staff have easy access to accurate and current data, can now conduct data queries and analysis, produce maps and reports, and utilise enhanced field mapping capabilities.

Staff with very little or no previous GIS experience are now familiar with using the GIS applications and a large majority of the workforce now recognise the importance of GIS. Staff have reported that the maps produced using GIS are much clearer and simpler to use as compared to the preceding plans produced from CAD packages.

// The Future

EastLink and Thiess John Holland will continue to develop their GIS capabilities with the further integration of business systems and services, bearing in mind the primary aim still remains enabling easy access to data. Continued web development and fine tuning will continue and the sponsorship of this solution to a broader audience will carry on.

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