

VICTORIA'S LEVEL CROSSING REMOVAL PROJECT USES INEIGHT TECHNOLOGY TO BETTER MANAGE AND CONTROL PROJECT DOCUMENTS



Red-faced and white-knuckled – common symptoms of rush-hour commuters in Melbourne as they waited at one of the many level crossings (or rail crossings as they're called in the U.S.). Looking to unclog some of the city's busiest roads, the Victorian state government has taken the bold move of eliminating 75 of these dangerous and congested level crossings, including nine between the suburbs of Caulfield and Dandenong.

The Level Crossing Removal Project (LXRP) and Lendlease, a leading international property and infrastructure group that is part of an alliance responsible for level crossing removals, wanted to transform the way they approached the project.

Because the project was highly complex with so many stakeholders involved, LXRP needed to develop a cutting-edge technological approach that would help increase efficiency and collaboration. It selected a collaborative document management software solution from InEight, a leading developer of capital project management software. LXRP mandated that Lendlease use the document management solution, InEight® Document, to manage, protect and control project documents throughout the Caulfield to Dandenong (CTD) project.

With InEight Document, CTD project teams now have an online document repository for capturing, controlling, versioning and distributing project documents, while tracking the complete history of every project document. This includes project documents, workflows, photos, emails and their attachments. The ability to track the complete history of every project document led to improved communication and collaboration on this monumental project. This resulted in greater efficiency throughout the project.

To better understand the project's scope, nearly 200,000 pieces of correspondence have been processed through InEight Document. In addition, more than 2,000 users have logged into the system and corresponded with over 3,000 contacts from 521 companies.

“We saved so much time in terms of document control because we were spared having to print up drawings and send them out to the various projects,” says Andrew Mehegan, quality and systems manager, Lendlease. “The efficiencies in communications have saved countless hours of traveling, as well as hours of additional labor and administration.”

THE PROJECT

The CTD project involved the removal of nine level crossings and rebuilding of five rail stations along Melbourne’s busy Cranbourne/Pakenham lines.

Boom gates at these level crossings were down for up to 82 minutes during the peak of the morning rush, and eliminating them improved traffic flow and commute times. Removing the crossings also reduced the risk of accidents between motorists, train passengers, cyclists and pedestrians.

The \$1.6 billion (AUD) CTD level crossing removal project included:

- Building three sections of elevated rail over existing level crossings
- Rebuilding five stations
- Extending 30 station platforms along the line to accommodate 65 longer, high-capacity Metro trains
- Upgrading rail systems, power and signaling on the line
- Building 12 kilometers (7.4 miles) of shared bicycle and walking paths
- Building 22.5 hectares (55 acres) of new parkland and community open space beneath the elevated rail to connect and enhance local communities
- An innovative design that kept trains moving during construction



With InEight Document, CTD had stronger document control during the project, along with flexibility in configuring the system. Project teams experienced increased efficiency, improved auditability and controlled security throughout the project.

With a project of this magnitude, tracking quality management is extremely critical, and InEight Document allowed the LXP to easily assess this as a specific portion of the job was completed. For example, as the CTD project team raised another concrete segment of the sky rail into place, it could easily report to the LXP on that segment’s quality in real time. This helped to speed up the construction process because once a portion of the work was done, CTD project teams could move on to the next segment.

InEight Document provided complete paperless handovers. As workers finished a portion of the project, they could hand it over almost instantly to the LXP. Project teams used “smart” folders, which automatically collate documents based on information pre-entered into the system. These were then used for handover packages and verification of completion records.

Manually entering this information would have once required the entire team downloading information from various systems. That information would then be pieced together, perhaps in various electronic folders or paper-based folders outside of the electronic document control systems.

Handing over documents to the LXP electronically improved efficiency and reduced waste. It was also groundbreaking, as this was the first time a contractor in Australia handed over a project to the LXP completely electronically.

Because the job is so widespread, we have six or seven offices we were working out of. If we didn't have InEight Document, it would be hard to collaborate through all of that. The admin and the travel would have been enormous.” – Andrew Mehegan, quality and systems manager, Lendlease

With InEight Document, CTD project teams had better transparency and communication, and more reliability.

The CTD LXP included more than 10,000 lots. Each lot had to be handed over to the LXP once that portion of the project was completed successfully. By using InEight Document’s Lot Manager, the CTD teams were able to streamline the quality management processes and project progress.

Lot Manager facilitated efficient close-out, which helped project teams manage their quality processes in a simplified manner. It also maintained a rigorous audit trail and provided a transparent view of a project’s lots to all participants. This enabled timely handover on a project of this scale.

THE SOLUTION

InEight Document provides the tools necessary to assure project teams are managing a single source of controlled project truth, available to the extended project team.

With InEight Document, CTD could manage a single source of truth and leverage a robust online document repository for capturing, controlling, versioning and distributing project documents – all this while tracking the complete history of every project document.

“InEight Document helps us save many hours of document control time in terms of printing up drawings and sending them out to the various projects,” says Andrew Mehegan, quality and systems manager, Lendlease.

CTD uses InEight Document to easily access project information. The solution features an intuitive search interface, spanning all the project information, including project documents, workflows, photos, emails and their attachments.

InEight Document allows project documents to be organized into familiar user-defined folders or dynamically created folders based on document attribute values.

InEight Document also offers a range of hosting options, which are optimized to suit the requirements of your organization.

“With Lot Manager, we were able to put all our documentation online where anybody could view it live, including our project stakeholders. That was a big deal and very convenient,” said Mehegan.

Where CTD project teams also saw the benefits of InEight Document was in the management and distribution of forms, specifically the deployment of more than 8,000 RFIs.

Ordering forms were also critical to the project. CTD used InEight Document to order 95 percent of the concrete used on the project. For context, CTD teams ordered nearly 400 cubic meters of concrete per day and needed to send concrete trucks to the right location on a project that was 75km long. “If we hadn’t used InEight Document, it would have been very difficult to manage all that concrete,” said Mehegan.

A HISTORY AND PARTNERSHIP

Lendlease has had a long partnership with InEight. Before Lendlease won the CTD project, they helped to develop the forms that are currently used in the software. “We are proud of the input we had in this system, and now seeing how it is being adopted across Australia,” says Mehegan.

The LXP’s use of InEight Document on the CTD project is quickly becoming the standard for other capital projects in Australia. They include the NorthConnex tunnel motorway in Sydney, and the CityLink Tulla Widening and Victoria Harbour projects in Melbourne. “This is a great example of a technology organization working hand in hand to effect a collaborative partnership solution,” says Ian Watt, regional director, InEight. “And we think this strategic partnership between the various parties involved has a very long lifespan ahead of it.”

