Property Land Use System (PLUS), a spatial land information system that incorporates a range of MapInfo products, allows Queensland Rail (QR) to manage the day-to-day operations of its railway network, which includes 1,400+ railway stations and 6,634 miles (10,700 kilometers) of track and corridor land, as well as tunnels, bridges and electric, gas and water supplies.

“We’re the biggest rail and freight operator in Australia and to be able to see things graphically makes people appreciate what we’re doing and where,” said Jan Simpson, principle systems officer for QR’s Property Division.

The QR system, PLUSnet, comprised of MapInfo Professional®, MapInfo EasiMaps and MapInfo MapX®, allows employees to tap into the resources and data sets of many of the divisions of QR, where these sources had previously been inaccessible across departments. For example, an employee needing to find out the total number of stations between two cities can access the information readily.

PLUSnet is the result of a five-year audit of the railway land holdings and associated assets, which included more than 6,000 miles of track and corridor land, as well as tunnels, bridges and electric, gas and water supplies. Once the entire railway corridor was mapped, categories were then assigned to all of the components based on their specific function.

“QR has a large data warehouse, and PLUSnet has enabled us to tap into that warehouse very readily and display information on maps,” said Simpson. “This was not possible before. If we didn’t have this product, we would still have isolated pockets of information. We wouldn’t be able to see the big picture or the relationships between our resources.”

QR launched PLUSnet in late 2000, using MapInfo Encounter™, a map-based product that allows map viewing using a simple browser, to develop its Web-based pages and create and manage a Web-deployed mapping environment. Via this intranet, every QR employee accesses PLUS, allowing him or her to tap into the resources and databases of many QR divisions. PLUSnet is now an official management resource for the entire QR network, which includes seven separate divisions—corporate services, technical services, infrastructure services, network access, passenger services, coal and freight services and workshops.
Within two weeks of the delivery of Encounter, QR deployed the initial PLUSnet platform. According to Simpson, this is a true testament to the flexibility of MapInfo. “The fact that we can play with something and turn it into a product very quickly without lots of investment in dollars and time is key to the evolution of spatial technology within QR.”

“The desktop application is customizable and the system can be used for many different functions
• Response times and deployment are quicker and more efficient for the Disaster Recovery System
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The first version of the system, referred to as PLUS, was deployed by the Property Division in 1998 and based on MapInfo Professional. It allowed QR to produce highly detailed maps, with property assets color-coded according to functionality. As the system developed and grew in complexity, more MapInfo products were integrated. EasiMaps, a powerful desktop inquiry and mapping system that provides a simple and user-friendly database, and MapInfo MapX, a product enabling developers to add mapping functionality to any application quickly and easily, were incorporated in 1999, expanding PLUS beyond simple mapping into data management and strategic planning.

“MapInfo was originally chosen because of its cost-ratio benefits and its ease of integration and flexibility,” said Simpson. “We continue to use MapInfo because the products develop and leapfrog at the same rate as our needs grow.”

Because PLUS’ desktop application is customizable, it is now actively used by most QR departments. For example, the Freight Division uses PLUS to work out the fastest, most effective routes to move freight between locations. The Disaster Recovery System also uses PLUS to manage the network, and response times and deployment are quicker and more efficient because they are now location-based.