



in action

eB document management system delivers accurate, real-time information

Network Rail and the West Coast Route Modernisation Project

Network Rail



A case study of how a safety-critical organization captures, stores, distributes, and controls huge volumes of information and provides access to employees, subcontractors, and other third parties on a real-time, on-demand basis. to help increase on-time statistics and lower operating costs.



Enterprise
Informatics

The background

Until the fragmented rail industry in the UK embraced information management systems and processes, it lacked the ability to provide ready access to and allocation of the information that could help improve operations, lower costs, and provide better services. As part of the West Coast Route Modernisation (WCRM) project, managers and staff were asked to develop solutions to providing real-time, linked information on assets and documents throughout the infrastructure, which would meet regulatory requirements and improve the ability to manage such a dynamic, large-scale enterprise.

The challenges

Network Rail needed a solution for capturing, storing, and distributing disparate volumes of accurate data and information about the assets and the controls systems that comprise its operations, including:

- Over 650,000 specific physical assets
 - * 400,000 drawings
- Millions of supporting documents, including requirement specifications, technical specifications, parts lists, test certificates, and safety cases

Added to the challenge of capturing and storing information, however, was the equally important and urgent capability for all of the information to be retrieved in a real-time situation by the various parties who needed access.

What's more, WCRM also demanded that any new system and process needed to highlight the impact of changes on one project to other projects or subprojects in order to streamline operations, ensure better decision-making, and prevent wasting valuable resources.

And finally, access to the information had to be available from various sites – for users located anywhere within a single building to users on different projects, working for different companies around the globe, such as subcontractors and third parties.

“Correcting incorrect information after it has already been delivered costs at least four times as much as it would if it had been done properly the first time. Until one of our big problems has been that key information has not been adequately defined or understood.”

Global Asset Management Architects, Shell

The plan

Enterprise Informatics presented the eB information management solution to Network Rail and the WCRM team, which first would provide a central repository for all common information on projects and assets and then provide access to any and all authorized users in multiple locations and time zones.

Today, the Enterprise Information system is being used by up to 2,000 users in all aspects of the enterprise and its associated organizations, providing users with valuable information that has saved time and money across many projects.

“Our organizations must have configuration management arrangements that cover everything that is important to safety or to demonstrating safety.”

Engineering Safety Management Fundamentals and Guidance, UK Rail Industry

The solution

Enterprise Informatics worked with key personnel from both the WCRM project and the National Records Group to set up and implement the eB software to meet Network Rail’s needs.

The outcome

eB has been able to deliver essential information and meet asset management requirements throughout a number of projects at Network Rail. The project team from the WCRM and the National Records Group have taken a significant step toward managing projects throughout the rail industry, helping people understand and see the benefits of linking documents, physical items, and people to achieve success in the operation of these large and complex assets.

The eB solution provides 100% accurate information for those who need it, whenever and wherever that may be.

“A fall of just 8% in Information Integrity will lead to a reduction in resource effectiveness of up to 50%.”

Institute of Configuration Management
Arizona State University

The process

The National Records Group had accumulated hundreds of thousands of drawings in manual filing cabinets with their details stored in an Access database. However, amendments and changes to these drawings that had been made over time had not been captured in Access. The only solution was to capture the accurate information at source.

After the drawings were scanned, Enterprise Informatics worked with the National Records Group to capture them and form a key data source within the Network Rail information management system. Now, any amendments which affect these drawings will be indicated to the user immediately, guaranteeing 100% accuracy and data integrity—and, if permitted, will automatically update any affected documentation.

While the scanning process was taking place, Network Rail took the opportunity to look at its business from a strategic management perspective. There were processes that required Network Rail to index all elements of the physical assets together with associated documents, drawings, and personnel related to a project. The eB toolset provided the opportunity to develop an effective way to manage the asset data and permit all relevant parties to access this process and information.

Accessibility was key

It was vital that people who needed to access the information could do so easily – and quickly. For example, if maintenance was required urgently on track, engineers would need to obtain relevant documents and signalling drawings quickly and accurately.

Initially Network Rail adopted eB software across only its own IT infrastructure. However, this allowed access to just 150 users across 10 sites and ultimately would not have been able to deliver the required solution to the predicted user base. Then Enterprise Informatics developed eB software for use with Web based-technology, which allowed access to the system through standard browser interfaces. Dependent on the users' requirements, they were assigned administrative rights and after some brief training, hundreds of people were able to access the information they required, from wherever they could gain entry to the Network Rail IT infrastructure.

The Web-based functionality made the system available across all of the Network Rail enterprise and to many subcontractors throughout the industry. Requests for documentation, including master copies, are managed easily and quickly, with accurate information as to the exact state of any affected information.

Users have been impressed with the simplicity of the system. eB is based on traditional Microsoft Windows Internet Explorer®-style file structures and layout.



Critical business issues covered professionally

In a safety-critical environment such as the rail industry, it was imperative that Network Rail could ensure accurate information on a number of key business drivers including:

- Health and safety files
- Operations and maintenance manuals
- Asset registers
- Various records for auditing purposes

eB provides Network Rail management with an easy-to-use method of creating accurate reports on critical business issues when required in a professional, timely manner.

Training for maximum effectiveness

Enterprise Informatics helped Network Rail maximize the benefits of the system with various levels of training, from computer-based tutorial material available for the basic user through in-depth administrator training and detailed manuals.

Change management made easy

The power of the eB solution became apparent to the Network Rail team as elements of projects changed. Network Rail anticipates further benefits will come from using the full change management capabilities of eB.

The powerful change effects analysis capabilities of eB permit users to see the impact of any change before the change is approved. Not only does this radically improve the speed of change, thus reducing costs, but it also reduces the risk.

Controls keep system up to date

The eB system automatically notifies key people who may be affected of changes as they changes occur. This prevents the common pitfalls encountered with databases when outdated information is not amended and people are not informed. Network Rail accompanied the installation and implementation of the eB solution with a set of controls, procedures, and requirements to maintain the information management process and ensure the integrity of the information held.

relevant and accurate information on demand

An example**100% Accuracy: information with integrity**

The structure of the eB solution ensures that the information a user receives is 100% accurate with complete integrity. Any documents, drawings or details related to a particular physical item can be relied upon to be the most current available edition. Network Rail has noticed a significant reduction in wasted resources when looking for the right information.

Enterprise Informatics

Enterprise Informatics offers a commercial information management solution that ensures the integrity of controlled information by uniquely managing its connectivity to all other relevant information. By building bridges between documents, records, assets, people, processes and projects, our solutions create an ecosystem for the rapid access of accurate information in context.

With eB, our Enterprise Information Management (EIM) solution, organizations reduce the cost of meeting compliance requirements, minimize business risk, improve decision-making, and optimize process efficiency.

**Enterprise Informatics**

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