2024 Year in Infrastructure and Going Digital Awards

Bentley®
Advancing Infrastructure

Category: Rail and Transit

User name: SPL Powerlines UK

Project name: Midland Mainline electrification project

Location: Toronto, Ontario, Canada

Background:

- A multidiscipline infrastructure project implemented to provide a full overhead electrified route from London.
- New electric line will extend for 447 kilometers along the existing rail corridor.
- When completed in 2032, the electrification will increase capacity while reducing carbon emissions.

Challenges:

- Large project divided into eight phases over a very large geographic footprint.
- Required giving a multidiscipline team spread over 20 design organizations instant access to up-to-date project information to keep project on schedule.

Solution:

 ProjectWise was established as the basis for their connected data environment, sending and receiving information as needed.

Outcomes:

- By better connecting people and leveraging data, engineering and construction firms and owner-operators can achieve greater awareness and collaboration.
- In one-month, first-time submission success rose from 41% to 67%, freeing up time to achieve compliance.
- Because everyone had access to the information that they needed, site walkouts reduced by 94%, ensuring safety while reducing carbon emissions and project costs.

Quote: "The Bentley software platform has empowered SPL Powerlines UK with digital tools that enabled a build it digital approach to design production and integration to be implemented on the Midland Main Line Electrification project. This approach is based on the seamless coordination and visualisation of vast amounts of data amongst all stakeholders utilising Bentley tools and software platforms. Teams can efficiently manage and access critical data through a SPL Powerlines managed, Bentley software driven common data environment. This has delivered tangible benefits for the Midland Main Line Electrification project stakeholders including Network Rail and design organisations through optimised system design and streamlined Information Management processes." – Elliot Watson, Programme Manager, SPL Powerlines UK

Image caption/courtesy 1: Keeping the project on schedule required giving a multidiscipline team spread over 20 design organizations instant access to up-to-date project information. *Image courtesy of SPL Powerlines UK*.

Image caption/courtesy 2: ProjectWise was established as the basis for their connected data environment, sending and receiving information as needed. *Image courtesy of SPL Powerlines UK*.

Image caption/courtesy 3: The open digital twin helped the team collaborate and bring together data in a geospatial context and at scale, improving infrastructure delivery and performance. *Image courtesy of SPL Powerlines UK*.

For more information, please contact Bentley PR at PR@news.bentley.com.