



Award of Merit

Custom Mobile GIS Streamlines Real-time Data for LNG Pipeline Project



Consultant

McElhanney Consulting Services Ltd.

Owner/Client

TransCanada Pipelines Limited

Category

Soft Engineering

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TransCanada PipeLines Limited (TransCanada) is developing the Coastal GasLink Pipeline, which will transport liquefied natural gas (LNG) from northeastern BC to a proposed facility near Kitimat, a distance of more than 650 km.

TransCanada needs to ensure reliable road access to the pipeline corridor for project planning, design, construction, and ongoing maintenance. McElhanney was retained to assess and inventory the 2,000 km access road network and related infrastructure, including hundreds of bridges and culverts, and present the data in a format that was useful to decision makers.

McElhanney met the challenge with a unique combination of mapping technologies and diverse skills. GPS-enabled tablet computers were used to collect data and asset photos, and georeferenced route photos were automatically captured by dashboard cameras. The data was delivered using Vertisee, McElhanney's in-house, web-based mapping software.

Complex project requirements dictated the involvement and coordination of over 80 employees from eight different branches, the majority of whom did not have a GIS background. This was mitigated by developing a customized interface for Vertisee, such that minimal training was needed for data collection and delivery.

The success of the project relied heavily on the combined disciplines and expertise from multiple branches of the company. The project serves as a model for future multi-disciplinary projects requiring a large, time-sensitive, and minimally invasive data collection effort. It has also resulted in the proliferation of new and highly efficient technology across McElhanney's branches, extending its benefit to many of their clients.