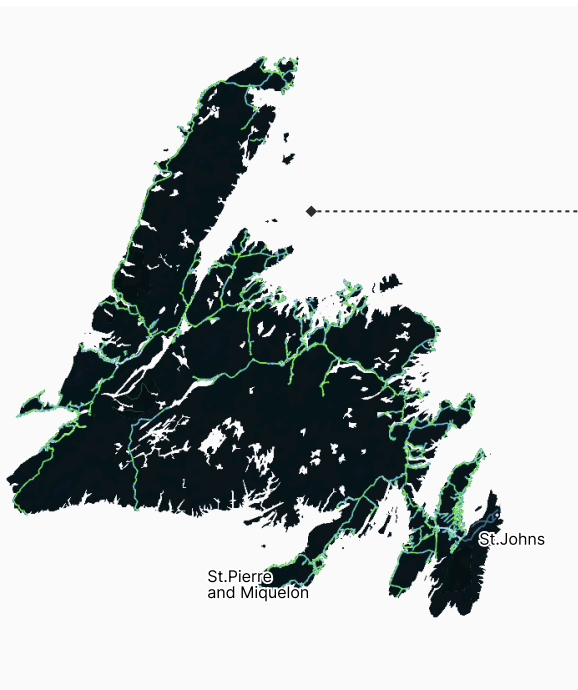


CASE STUDY

Accelerating Rural Broadband Expansion Through Automation and Visibility



Key Info

Customer: Eagle Engineering and Consulting

Scope: Make ready assessments and utility pole audits over 7,900 kms

Location: Newfoundland, Canada

Challenge: Need for a fast, accurate and scalable process to replace traditionally slow manual workflows

Solution: Rapid asset extraction with Mach9's AI-powered Digital Surveyor

Result: Data available for design and permitting within 6 weeks

Overview

Eagle Engineering and Consulting, a key design and engineering partner in Canada's rural broadband buildout, was tasked with make-ready fiber assessments and utility pole audits across more than 7,900 kilometers of fiber routes. Partnering with service provider Xplore, they needed to rapidly evaluate joint use readiness, pole conditions, and wire clearances to meet tight deployment timelines. Traditional manual workflows couldn't tackle these challenges at scale.

With Mach9's AI-powered Digital Surveyor platform, Eagle quickly extracted pole assets, assessed attachment feasibility, and built a consistent digital record of joint use infrastructure. Work that once took months (using traditional methods, such as human extraction) was completed in weeks, with data instantly available for design and permitting.

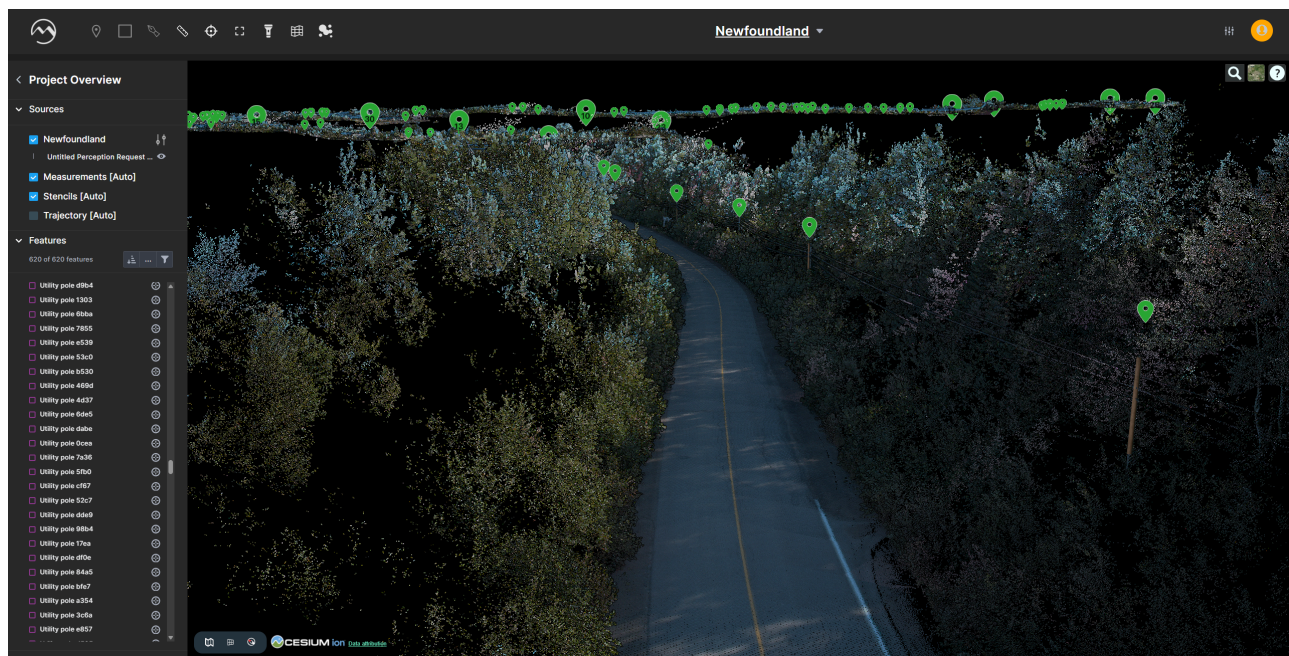
The Challenge: Time and Terrain

When Eagle was contracted to support Xplore Communications' rapid expansion of rural broadband networks in Canada, the stakes were high. Having to map nearly 8,000 kilometers of telecommunications corridors in Newfoundland and Labrador in 3 short months, Eagle needed to rethink its workflows and fast.

Traditionally, utility pole data collection in rural environments relied on field crews capturing just **3 – 5** kilometers per day. Even with mobile LiDAR systems increasing capture to **100+** kilometers per day, the bottleneck had shifted to post-processing and quality control.

Once we collected the LiDAR, we still had to process, extract, and QA manually, that was where Mach9 came in, to help us maintain accuracy while significantly improving speed.

Dan McCarthy, President at Eagle

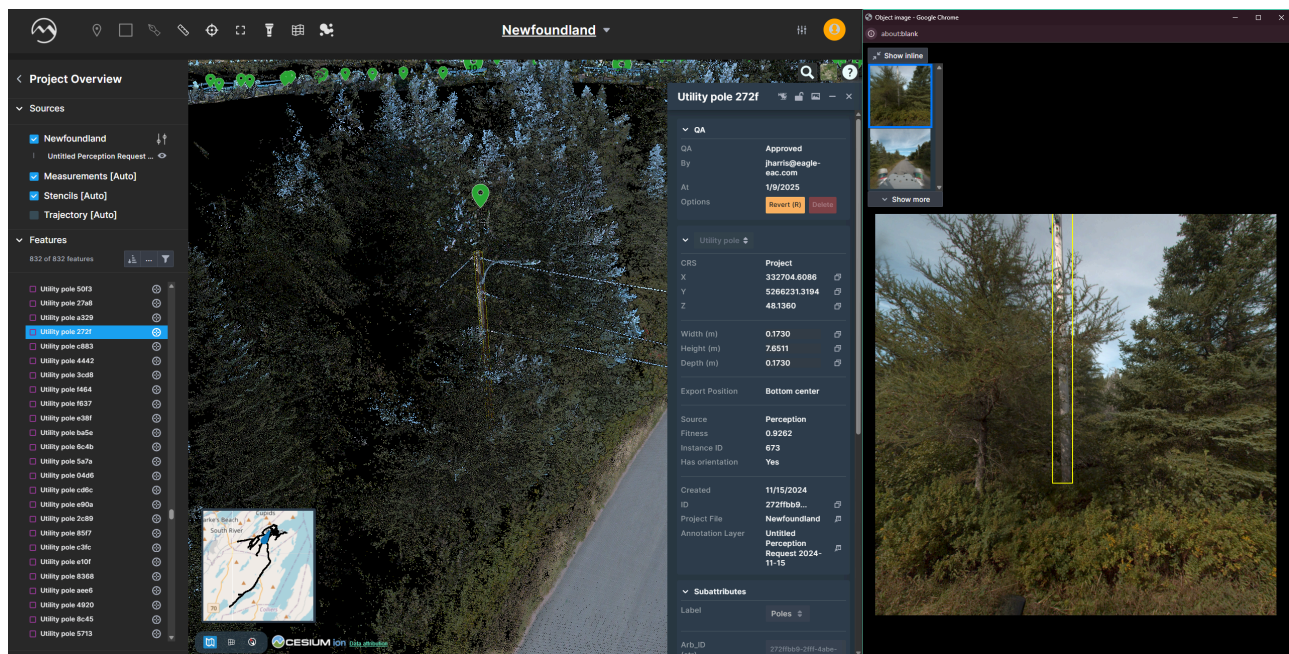


The Solution: A Collaborative Workflow Powered by Mach9

Eagle integrated Mach9's Digital Surveyor with a clear goal: Automate pole and asset extraction while minimizing manual QA labor.

Digital Surveyor's tools enabled:

- Confidence in perception results (~95% accuracy)
- Instant visual QA
- Filtered, asset-specific reviews
- Export-ready data, without manual searching



Utility pole extraction results



Instead of beginning from scratch, Mach9 gave us a full network upfront, so we could immediately identify gaps. If there was ambiguity in the data, we could revisit it instantly, review the object, and get a decision in minutes.

Alex Hill-Stosky, Manager of Reality Capture Development & Regulation at Eagle

The Result: Delivering at Scale, On Time

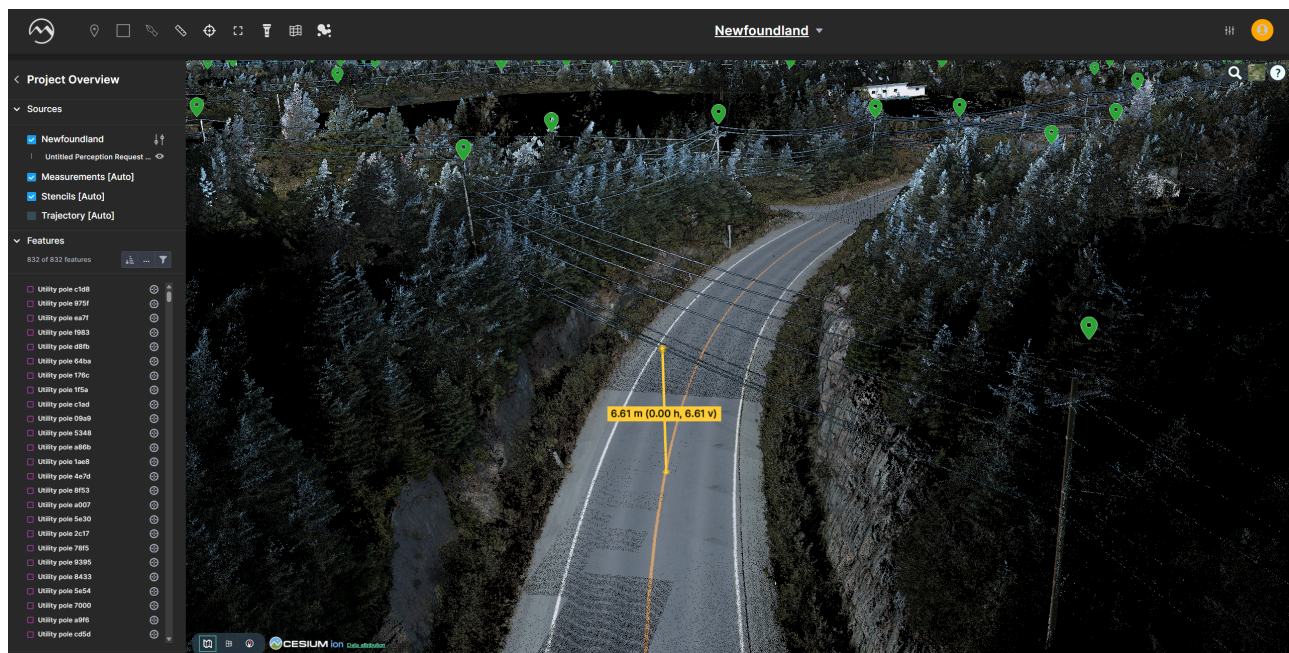
The new workflow improvements directly impacted client satisfaction and internal operations:

- **7,900** kilometers delivered in **6** weeks (a month ahead of schedule)
- Massive reductions in post-processing hours
- Digital Surveyor served not only as a QC tool, but also became the viewer of choice for the client, Xplore, counting **80+** users

7,900 KM

~95% Accuracy

6 Weeks



Sag measurements on wires within Digital Surveyor

A Strong Partnership Built on Adaptability

Eagle and Mach9 worked side-by-side to iterate workflows and solve technical challenges. From script-building to interface refinements, the teams co-developed a workflow aligned with Xplore's needs. *"We were both learning each other's trades,"* Hill-Stosky said. *"The Mach9 team was patient, receptive, and fast to respond."*

"Honestly, you were our secret weapon," McCarthy added. *"But not so secret anymore."*

Looking Ahead

Following the success of this broadband deployment, Eagle Engineering is actively pursuing a broader integration of Mach9's AI and automation tools across multiple workflows. This includes joint use permitting, make-ready design, and long-term utility asset management. The firm is also evaluating how Digital Surveyor can support vegetation analysis and digital twin readiness for municipalities.

As broadband initiatives continue expanding into harder-to-reach regions, Eagle aims to set a new standard for geospatial-driven infrastructure delivery with a faster, more transparent, and built for continuous improvement approach.

About

Eagle Engineering and Consulting is a Canadian firm specializing in geospatial, telecommunications, and infrastructure engineering. Since 1989, Eagle has delivered design, reality capture, GIS, and mobile mapping solutions that enhance visibility, improve safety, and support faster, more informed decision-making. Serving clients in telecom, AEC, and the public sector, Eagle combines technical depth with practical insight to help organizations understand their assets and manage them with greater precision.

Mach9 is a geospatial technology company focused on automating feature extraction from mobile mapping data. Designed for engineering teams, Mach9's AI-driven tools help convert LiDAR and imagery into accurate, actionable GIS and CAD-ready outputs, improving asset visibility, accelerating project timelines, and enhancing infrastructure management. Mach9 supports clients across transportation, utilities, and public works sectors seeking to scale asset intelligence and automate survey-grade data processing.