eagle

ENGINEERING & CONSULTING

Capturing Reality While Engineering Excellence.

eagle-eac.com

At Eagle, we aren't known for convention. And we embrace that.

We're constantly pushing the boundaries to help our clients improve efficiency, enhance safety, and reduce costs. We've embraced new technologies to solve complex challenges and deliver cutting-edge reality capture solutions for the telecommunications, public sector, AEC, and geomatics industries. Leveraging deep expertise, we offer solutions tailored to each client's unique project requirements.

Since 1989, we've been trailblazers in technological innovation, starting with our groundbreaking solutions in the telecom sector. Today, our services span reality capture, mobile mapping, geomatics, GIS, and asset management, showcasing our relentless pursuit to meet the evolving needs of our clients and remain at the cutting edge.

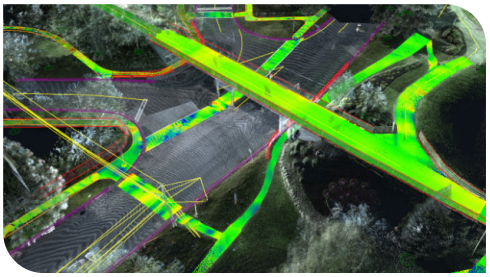
At Eagle, we capture your reality. We deliver excellence. We transform your work.

Why Work With Us?

- **Technical Expertise:** Our team of experienced engineers and technicians possess the skills and knowledge to tackle complex challenges.
- **Cutting-edge Technology:** We invest in the latest software and hardware to deliver the most accurate and efficient solutions.
- **Client-focused Approach:** We prioritize building strong relationships with our clients, understanding their unique needs, and exceeding their expectations.
- **Safety and Reliability:** We champion safety and reliability on every project, adhering to strict standards and best practices to ensure accurate data.

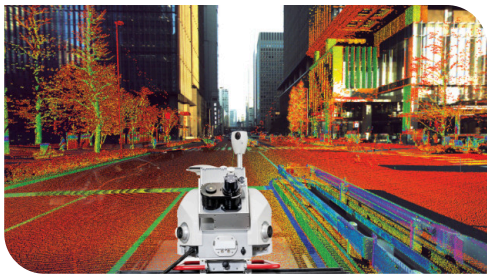
Our Services: Refine What's Possible

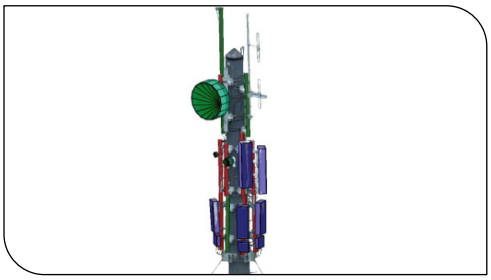
Eagle transforms raw data into actionable insights, empowering you to make smarter decisions, optimize operations, and achieve your goals faster. From precise reality capture to dynamic digital twins, our cutting-edge solutions deliver the intelligence you need to thrive in today's complex world. As experts in our field, we're the ideal partner for projects of any size, offering the experience, reliability, and flexibility to turn your ambitious projects into everyday realities.



Mobile Mapping/Photogrammetry: Drive efficiency and accuracy into your workflows with our state-of-the-art mobile mapping systems. We efficiently gather comprehensive geospatial data and transform it into detailed 3D renderings, providing crucial information for road surveys, asset inventories, and infrastructure assessments. These reusable data sets offer long-term value and flexibility for various projects.

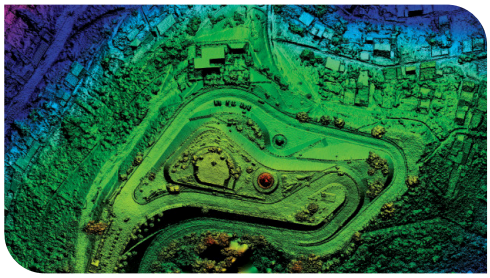
Reality Capture: Capture and map the world–exactly as it is. Our cutting-edge terrestrial and aerial drone reality capture technology empowers us to quickly and accurately create precise 3D digital replicas of the physical world. This innovative approach is not only faster but also more cost-effective than traditional data capture methods, ensuring both efficiency and affordability.

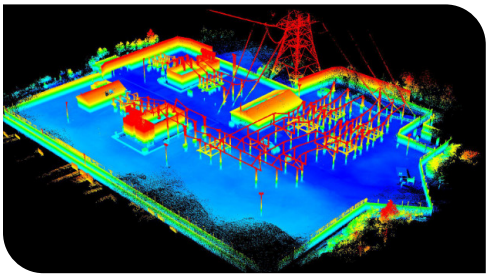




3D Models: Create stunning visuals, digital dioramas, planning maps, and 3D models using LiDAR to ensure accurate base information. We scan and extract just the information you need and deliver it in the formats you work with, such as spreadsheets, shapefiles, waveform files, COLLADA, and more.

GIS/Geomatics: Transform data into effective action. We turn complex geospatial data into clear, insightful information that empowers you to solve your toughest land use, resource management, and infrastructure challenges. With our solutions, you have the intelligence to make informed decisions and plan strategically.





Digital Twin/Building Information Modelling (BIM): Unlock the power of data-driven decision-making. Our BIM expertise allows us to create a dynamic digital twin of your asset, offering real-time insights for optimal asset management, streamlined construction, and efficient operations and maintenance.

Fiber Design & Build: Accelerate your network expansion with our streamlined OSP engineering services, encompassing comprehensive design and project management. We provide end-to-end solutions, leveraging our deep OSP infrastructure knowledge to create scalable, future-proof networks that support your growth and deliver exceptional customer experiences.

Our Solutions: Fit-For-Purpose for Every Industry

Whatever your industry, whatever the challenge, Eagle Engineering and Consulting is your partner for success. We offer tailored solutions and unwavering support to help you overcome obstacles.

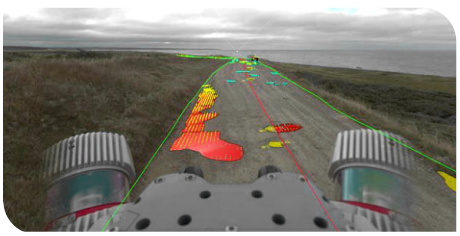
Public Sector Services: It's all about the asset

Eagle is shaping the future of municipal engineering by helping Federal, Provincial, and local governments better understand and manage their public infrastructure using reality capture technology. We use a powerful combination of LiDAR, photogrammetry, and other advanced reality capture tools to create high-resolution asset inventories.

This includes detailed digital condition assessments for roads, sidewalks, rights-of-way, bridges, retaining walls, and culverts. Reality capture technology simultaneously collects adjacent asset data such as street furniture, fire hydrants, utilities, signs, tree inventories, and more to provide value to municipalities by supporting capital planning, accessibility audits, maintenance prioritization, and multi-departmental coordination.

Our next-generation approach to municipal asset inventory and assessment is faster, safer, and often more cost-efficient than traditional survey methods done by manual field crews. Our tools and sensors capture detailed, geospatially accurate data, which enables asset managers and town planners to make smarter decisions about maintenance, investment, and long-term planning using accurate and reliable data.

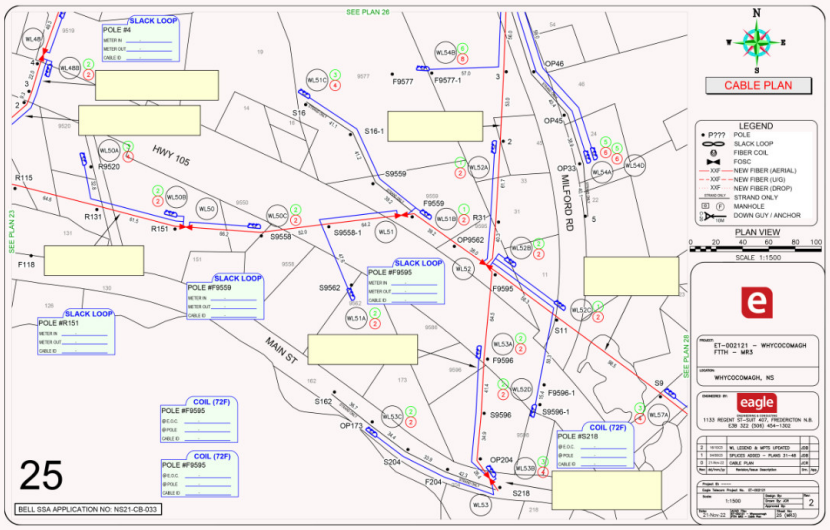
Reality Capture Services: GIS and LiDAR integration provides precise 3D mapping of its entire infrastructure network, from roads and bridges to underground utilities. The comprehensive view provides the detail to see more, the awareness to understand more, and the capacity to manage assets and create plans with more confidence.



Condition Assessments: Make informed decisions about infrastructure investments with comprehensive sidewalk, road, and manhole assessments using advanced mobile mapping and reality capture technology. This data-driven approach provides the insights needed to optimize maintenance strategies, extend asset lifespans, and allocate resources efficiently.

Telecommunications: Answering the Call, Every Time

Complete telecommunications OSP network development, including brownfield rehabilitation and greenfield construction. Accelerate route selection and field collection with tools and processes that have been targeted directly to optimize operations and meet the growing demand for high-speed connectivity with expert FTTx design and build services. Whether you need consulting, engineering or project management, our solutions and expertise will enable you to make the right call at the right time.



Engineering Services

Preliminary Engineering: The groundwork for successful projects is laid by carefully selecting optimal routes, designing and assessing pole lines, and planning underground infrastructure. Expertise ensures efficient and cost-effective solutions from the outset.

Detail Engineering: Visions are translated into buildable plans. Meticulous field surveys and detailed pre-construction and as-built drawings ensure accuracy and minimize surprises during construction.

Permitting & Applications: Navigating the complex world of permits and applications is simplified. The process is streamlined, securing necessary approvals for railways, waterways, highways, and utilities, keeping projects on track.

Building Services: Seamless connectivity integration into structures. Building entrances and structural cabling solutions are designed and implemented to meet specific needs while adhering to industry standards.

Network & Infrastructure Services

Outside Plant (OSP): Critical OSP infrastructure is collected and used as a key building block for all OSP records used for route selection, design, construction, and permit drawings. From signal generation to end user service location aerial or underground services are maintained from design to as built.

Mobile Mapping: Streamline network planning, documentation, and maintenance with rapid, high-precision geospatial data collection. Our mobile mapping solutions efficiently capture critical infrastructure details, enabling optimized asset management, informed decision-making, and cost savings.

FTTx/FTTH: Complete fiber optic network design and deployment services empower you to meet the growing demand for high-speed broadband in compliance with government-funded programs.

Terrestrial & Aerial Drone Reality Capture: Gain a new perspective on your projects. Cutting-edge drone technology and terrestrial scanning create detailed 3D models and surveys, providing invaluable insights for planning, design, and analysis.

Vegetation Clash Detection Analysis/Inspection: Proactively monitor your entire network with real-world spatial data to identify assets at risk of vegetation encroachment, and determine the most cost-effective maintenance strategy to maximize your assets' life cycle.

Our Solutions: Fit-For-Purpose for Every Industry

In the competitive AEC landscape, staying ahead requires agility and a comprehensive skillset. When you partner with Eagle, your firm can fill capability gaps and enhance your service offerings, enabling you to confidently tackle larger, more complex projects. Our specialized engineering solutions, from reality capture to BIM and GIS, streamline your workflows, boost efficiency, and deliver exceptional results for your clients. Together, we'll elevate your reputation, strengthen your market position, and open doors to new opportunities and greater success.

Partner Services

Mobile Mapping: Data that moves you. Solutions tailored to your project. From efficient route planning to precise data capture and delivery in your desired format, our advanced hardware and skilled data collection operators ensure a seamless experience.

Data Extraction & GIS Processing: Extract valuable insights from your LiDAR and mobile mapping data sets. We provide customized data processing and analysis, including GIS integration, to deliver the specific information you need for your project, whether it's precise measurements, detailed 3D models, or actionable intelligence for decision-making.

Design Phase Services: Extracting valuable insights from LIDAR and mobile mapping, we provide foundational and key information for you to design from. We provide AutoCAD topographic base drawings, DTMs of existing surfaces, GIS information, and detailed 3D models to meet your needs.

Construction Phase Services: When you need an accurate record, you need LiDAR pre- and post-construction surveys. These high-resolution models capture points and images creating an extensive record of what was there, and what was built. Supplement your takeover package with point clouds or 3D models that ensures accurate information of your work.

GIS and 3D Models: Create stunning visuals, planning maps, and 3D models using LIDAR to ensure accurate base information. We scan and extract just the information you need and deliver it in the formats you work with such as GIS and 3D models.

Reality Capture Technology

Superior Results Start with the Right Reality Capture Equipment

We leverage cutting-edge reality capture technology to deliver precise, efficient, and cost-effective solutions for diverse industries. Our toolkit includes high-accuracy laser scanners, advanced photogrammetry equipment, and sophisticated GNSS systems. These tools enable us to capture comprehensive spatial data, from intricate building interiors to expansive infrastructure projects. We also utilize powerful processing software and innovative techniques like Gaussian Splatting to transform raw data into insightful 3D models, point clouds, and digital twins.

Our skilled technicians are adept at deploying this technology across a wide range of applications. For AEC firms and construction professionals, we provide accurate as-built surveys, facilitate clash detection, and generate comprehensive 3D models for BIM workflows. In the telecom sector, we support tower inspections, site planning, and network optimization through detailed digital twins. Municipalities benefit from our expertise in asset management, urban planning, and infrastructure assessment, thanks to the rich data our reality capture services provide.

The Trimble MX9 is a mobile mapping system that combines high-density LiDAR data with high-resolution imagery to create accurate 3D models. It is ideal for a variety of applications, including surveying, engineering, and construction.

The Trimble MX7 is a mobile mapping system that captures 3D data and panoramic images at highway speeds. It is ideal for capturing data of large areas, such as highways, railways, and urban corridors.

A wearable mobile mapping system that allows users to quickly and easily capture 3D data of their surroundings. It is ideal for capturing data in areas that are difficult to access with traditional methods, such as indoors, in dense urban areas, or in off-road environments.

A high-speed, high-accuracy laser scanner that captures 3D data and panoramic images quickly and efficiently. It is easy to use and can be operated in a variety of environments, making it a versatile tool for a variety of applications.

A high-performance mobile mapping system that captures 3D data and panoramic images at highway speeds. It is ideal for capturing data of large areas, such as highways, railways, and urban corridors.

Looq is a handheld mobile mapping platform built for digitizing critical infrastructure. Its advanced camera technology enables survey-grade 3D photogrammetric capture at scale. Ideal for topographic mapping and T&D modeling, Looq streamlines creation, analysis, and collaboration to deliver fast, accurate results from the ground up.

What Our Clients Say About Us.

> Eagle delivered fast, precise results on a complex open web steel joist (OWSJ) assessment. Their digital survey was completed in just two days, with no disruption to the facility, and achieved 0.25mm accuracy. We saved hundreds of field hours and avoided manual errors. Their customized outputs have made them a trusted partner on multiple projects.
>
> **J. Allan Giberson, P. Eng., FEC**
> Senior Engineer | Principal | Project Manager
> Englobe

> Eagle is a leader in mobile mapping in the telecom market and has been a successful partner to Xplore... Eagle proved they can deliver under pressure, so we were confident that they had the right technology, expertise, and approach to succeed again.
>
> **Dave Morley**
> VP of Network Design
> Xplore Inc.

Ready to discuss your next project?

Contact Eagle Engineering and Consulting today to learn more about our services and how we can help you achieve your goals.

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ENGINEERING & CONSULTING

Calgary | Fredericton | Halifax | St. John's
Call: 506-300-2560 or **Email:** contact@eagle-eac.com