

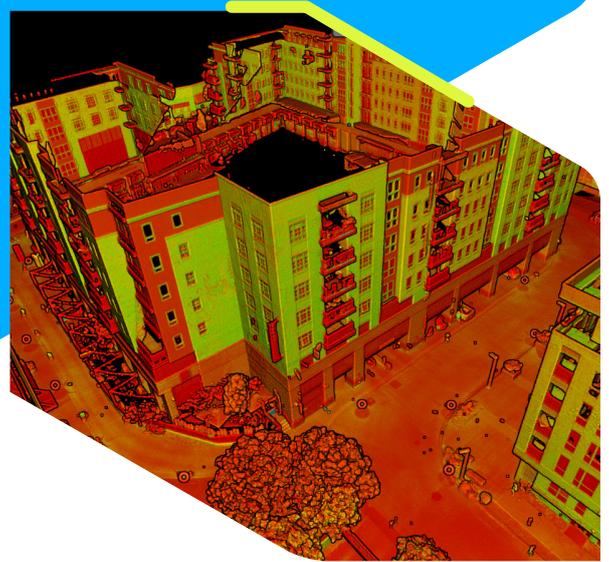
From field to finish: McNeil Engineering land surveying improves scanning deliverables with HxDR Reality Cloud Studio





HxDR Reality Cloud Studio has completely changed how we manage our projects. What used to take hours of manual setup is now done in a fraction of the time, saving us up to 10-15 hours each project. It's given our team the flexibility to focus on delivering results, not managing data.

Elizabeth McReynolds
Survey & High Definition Scanning Technician
Jr. Project Manager



Challenges

- **High-volume scanning projects** Complex jobs with anywhere from 100–1000 setups often strain on-premises servers, increasing the risk of system failures and potential data loss
- **Manual data sharing** Teams depended on static PDFs, FTP, hard drives, and Dropbox to transfer data between internal stakeholders, subcontractors, engineering firms, and clients
- **Time-intensive deliverables** Manually creating panoramic exhibits and embedding images into PDFs to share with customers took up to 10-15 hours per project
- **Heavy IT demands** Managing datasets up to 1-3 TB required large amounts of local storage and computing resources
- **Website storage overload** Hosting panoramic images internally caused performance issues and limited available space

Solution

- **Centralized data workflows** Adopted HxDR Reality Cloud Studio to manage, store, and share project data in one environment
- **Automated deliverable creation** Exported a single .LGSX file from Register 360, eliminating manual panoramic embedding
- **Simplified collaboration** Shared data instantly with clients, subcontractors, and internal stakeholders through secure cloud links, eliminating the need for FTP or physical drives
- **Enhanced accessibility** Enabled clients to view point clouds and panoramic images directly in the browser, with the flexibility to set their preferred starting view based on workflow needs.
- **Optimized storage efficiency** Freed over 10 TB of local storage by eliminating the need to host images on the internal website

Values

- **Time savings** Eliminated repetitive manual processes, saving up to 10-15 hours per project while expediting the final deliverable timing.
- **Delivered measurable client value** Provide immersive 3D visualization that increases client satisfaction through easier data access and viewing
- **Cost reduction** Eliminated extra website storage expenses with secure, cloud-based hosting
- **Enhanced operational efficiency** Expanded adoption across engineering, drafting, and surveying teams to improve collaboration and enable teams to focus on revenue-generating activities such as design, analysis, and project delivery, instead of data management

The Client

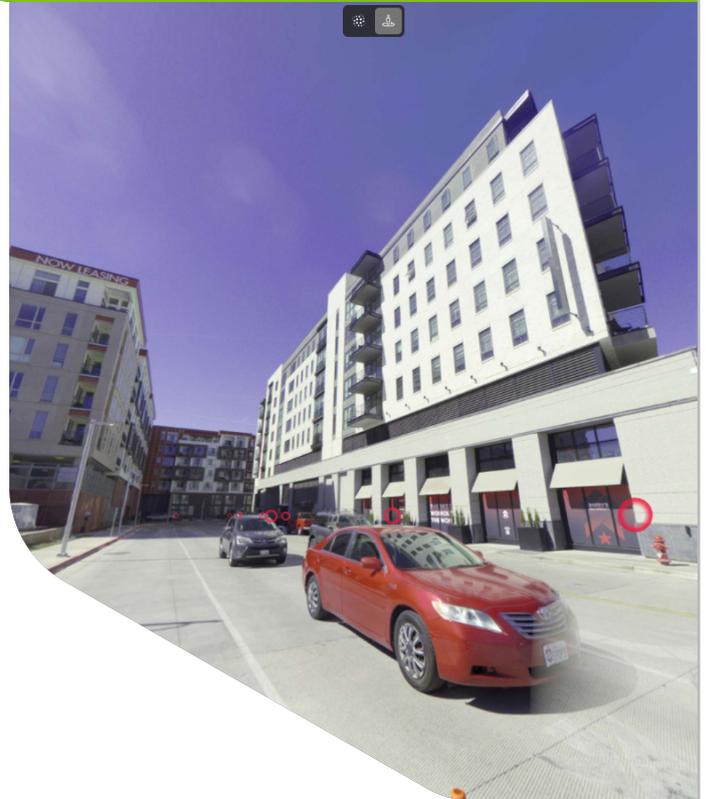
Founded in 1983 and based in Sandy, Utah, McNeil Engineering is a trusted multidisciplinary firm known for delivering innovative, high-quality solutions across the AEC industry. With decades of experience, the team combines advanced technology with proven expertise to provide precise, reliable, and efficient results.

McNeil Engineering offers comprehensive services in Land Surveying and High-Definition Scanning, Civil and Structural Engineering, Landscape Architecture, and Consulting. Committed to accuracy, integrity, and client success, the firm continues to shape projects that strengthen communities across Utah, Idaho, Nevada and beyond.

Challenges

McNeil Engineering faced ongoing challenges in managing, processing, and sharing reality capture data across multiple stakeholders. Teams relied on static images, FTP sites, hard drives, and third-party tools like Dropbox to transfer data between internal civil and consulting teams and external partners. This included engineering firms and clients working in the Autodesk product suite: AutoCAD, ReCap, and Revit. These methods were time-consuming, inconsistent, and required extensive manual setup for every project.

Large scanning projects, involving anywhere from 100 to 1000 setups, frequently caused system crashes during processing. The larger and more complex the dataset, the higher the risk of data loss. This was especially problematic on high-priority projects where reliability and turnaround time were critical. Internally, the lack of a centralized platform slowed collaboration between departments and created communication bottlenecks. Processing and managing large datasets, sometimes



exceeding 3 TB, required substantial local storage and computing resources. Uploading and sharing projects could take up to 10-15 hours per project, on top of the already lengthy task of processing scan data, depending on the project size.

Delivering client-ready outputs added another layer of inefficiency. The surveying team had to generate static PDFs and manually embed panoramic images for each scan location, a tedious process that required uploading hundreds of files to their FTP and linking them individually within documents. These panoramic images were also hosted on McNeil Engineering's internal website, which over time caused performance issues and system errors due to storage overload.

With drone and terrestrial scan data growing in both size and complexity, McNeil Engineering needed a faster, more scalable way to manage, process, and deliver 3D data to clients without risking downtime or data loss.

Solution

With HxDR Reality Cloud Studio, McNeil Engineering transformed how project data is delivered and shared with clients. Instead of creating static PDFs and manually embedding panoramic images, the team now exports a single .LGSX file from Register 360 and uploads it directly to HxDR Reality Cloud Studio. From there, clients receive a secure link that allows them to view the point cloud and panoramic images at each setup in one interactive environment. This streamlined process has eliminated multiple manual steps and saves approximately 10-15 hours per project, depending on scale.

The move to HxDR Reality Cloud Studio also addressed key limitations around accessibility and data management. Clients without Leica or Autodesk software can now view and interact with their project data directly in the browser, an important capability McNeil Engineering wanted to deliver. By centralizing storage in the cloud, RCS removed the need for local downloads, FTP, or temporary hosting on internal servers, freeing up more than 10 TB of storage on the company's website.

Today, McNeil Engineering's teams focus more on design and analysis rather than data handling. With workflows now centralized, secure, and easily shareable, collaboration between internal departments and external stakeholders is faster and more efficient. The firm also plans to expand its use of RCS across additional teams and explore features such as meshing and direct data streaming into AutoCAD, further improving productivity and client satisfaction.



Our clients love the HxDR Reality Cloud Studio links. It's not only easier for us, it's better for them and their records. Working with HxDR Reality Cloud Studio has strengthened how we deliver value to clients and continue to innovate as a team.

Elizabeth McReynolds

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Value

By adopting HxDR Reality Cloud Studio, McNeil Engineering has completely transformed how teams and clients interact with project data. Uploading large datasets is now as simple as drag and drop, with projects ready to share in under an hour. Clients can easily view either panoramic or point cloud data through a single link, creating an immersive and customizable experience that eliminates confusion and improves collaboration. The shift to HxDR Reality Cloud Studio has saved the firm over 10-15 hours of manual work each project, expediting

delivery of the final product and reduced website storage by 10 TB, removing the cost and hassle of hosting panoramic images internally. With scans now securely stored in the cloud at no additional cost, the solution is used by the Surveying, Structural, Civil departments and their clients, allowing teams to focus on design and delivery rather than data management. The impact has extended to clients as well, with an increase in positive feedback on how Reality Cloud links make it easier to store, organize, and access project data.

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