

## A Strategic Approach to Digital Transformation | Case Study

In this case study, you'll learn how our team partnered with a major utility company to guide them along the first steps of their digital transformation journey. The digital transformation initiative was driven by the utility's executive leadership team, who wanted to ensure sustained success in a business environment by becoming more technologically advanced and digitally connected.

The client's ultimate goal was to use our 3D deliverables and develop a cutting-edge virtual workspace to aid operational efficiencies. Some of those uses include:

- Basis of 3D Design and record drawings
- Automatic BOMs
- Constructability/Clearance Verification
- Intelligent Plans enabling Drag & Drop Engineering Efficiency
- Virtual Comparisons
- Remote site access through VR/AR
- Visual platform for O&M with the ability to interface with EAM software

Prior to implementation, the client primarily used 2D CAD and paper documentation to manage a large number of assets spread throughout their geographic service region. This lack of current as-builts would create inefficiencies when it came to constructability, clearance verification and correct bills of materials (BOMs).

These challenges extended to the utility's staff by putting additional burden on their internal teams. The utility's infrastructure covered a large geographic footprint that made site visits highly time-consuming and inefficient. Any time data needed to be collected from an asset, the client would have to physically travel to a project site.

### Project Approach

To kick off this project, we consulted with the client to understand their goals, specific needs and pain points. We used our Digital Transformation Curve (DTC) to strategically advance them through the process with a planned approach to digitize their assets. The DTC depicts the increased Return on Digital Investment (RODI) over time as an organization's assets are digitized, modeled, and used to simulate events and processes.

During this consultative phase, we also discussed potential future applications and uses for the digitized deliverables. A critical component of this project's success was ensuring our deliverables were compatible with the utility's future goals. The utility would realize a continuous RODI as digital outputs were leveraged, built upon and used to create future solutions. This includes compatibility with VR and AR applications eventually to further enhance remote access and connectivity to their assets.

As the model development evolved, we had numerous team meetings to make course corrections and incorporate lessons learned into our workflow. Once the deliverables were established, we focused on optimizing the production workflow by leveraging a library of software parts and creating multi-platform solutions. This enabled our innovation experts to find optimal efficiencies throughout the process.

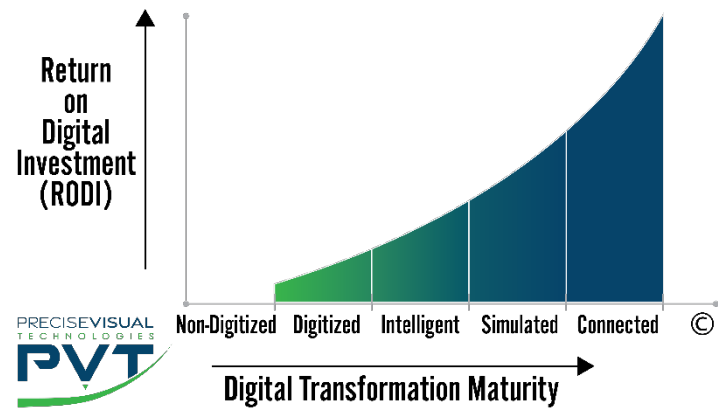
## The Journey Up the Digital Transformation Curve

### Digitized

We began by digitizing the utility’s assets using 3D scanning technology. In order for the client to achieve reliable accuracy, the assets needed to be digitized with exceptional detail and populated with meaningful data. Our team then used the as-designed data to model the assets in a 3D platform and compare them to the output from the laser scans. When there was no existing data the point cloud was used to develop 3D modeled objects with a high level of detail (within 1/8” accuracy).

### Intelligent

Applicable data was associated with each modeled object, making it more than just lines and solids but intelligent assets. Where available, equipment vendor models and data were incorporated into the overall deliverable. This resulted in an end product that is a visual replica of the actual conditions containing the parametric data that can be extracted to populate BOMs, equipment lists, asset inventories, maintenance reports, etc.



The Digital Transformation Curve depicts the increased **Return on Digital Investment (RODI)** over time as an organization’s assets are digitized, modeled, and used to simulate events and processes.



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