

The Challenge

In early 2009, an engineering firm began pursuing a large project for an oil refinery, its pipe racks, and a connected tank farm. The project was to provide complete and accurate data of the existing structure, as well as design and build updates to the structure.

Life Dimensional 3D (LD3) was the deciding factor that won this engineering company the project over another competing firm. The benefits of having visually and dimensionally accurate scan data, and the ability to use this model to create a geometric CAD model gave the firm's proposal a competitive edge. The challenge was now complete this large 135,000 sq. ft. project within a strict time schedule.

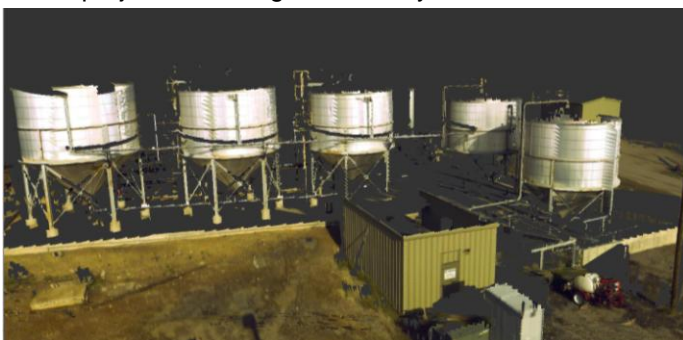
The Solution

The scan team captured the entire refinery and the connected tank farm in about one week. Once the LD3 model was complete, the engineering team was able to gather all of their survey data from the model. It is estimated that about six site revisits were saved by having this access to the LD3 model's data.

By working and designing within the true existing conditions provided by the LD3 model, the designers identified imperfections within the structure. This information was passed on to the asset owners and the contractors to reduce change orders due to unexpected design flaws that do not match with the actual structure. This minimized the cost and time associated with construction.

The Results

- The project's data capture and modeling portions were completed in 65 days, an estimated 82 days less than conventional methods.
- There was an estimated \$91,695 in direct cost savings over this portion of the project.
- An estimated 3x Return on Investment (ROI) was reported.
- This engineering company has complete and accurate models for all future projects involving this refinery.



The IntelliSum Approach:

By using IntelliSum's LD3 technology, the project was completed with a healthy ROI to both the Asset Managers and the Asset Owners.

Scanning (2 Days)

- Site set up and targeting
- On site scanning

Post processing (6 Days):

- Registering the several scans into one complete LD3 model.

3D Modelling and Design work (42 days)

- Creation of the complete Geometric As-Built and the new design.
- Created in half the time of using other modelling methods.

Total Savings :

- By using LD3, the firm was able to **save 82 days** and **\$91,965** in direct costs over the data capture and modelling portions of the project. They reported an **ROI of 3x**.

CLIENT RESPONSE:

"This LD3 process made a lot of our jobs easier. It was valuable to have that rich level of data."