



**Stridely**  
SOLUTIONS

## ***Business Case***

**Construction Modeling and Detailing with  
Tekla Structures for a Building  
Manufacturer**



# Overview

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Stridely Solutions partnered with a leading building manufacturer to transform their legacy systems which commenced with 2D elements, resulting in models lacking the necessary depth and accuracy. We helped them rearchitect the current system by implementing Tekla structures and Teckla Open API integration.

## The Client

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The client is a leading industrial and residential building manufacturing business, serving across North America. Their products and solutions cater to both residential and commercial markets.

## Challenges

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- Client's existing system could not create accurate 3D models using BIM Technology which is essential for approval in the commercial and industrial construction industry today.
- The system was based on outdated technologies like Design++ and Lisp that are no longer supported.
- The modeling process started with 2D elements, which resulted in models that lacked depth and accuracy. Inaccuracies compounded in complex models.
- Significant effort was spent drafting, generating, and revising drawings and reports due to outdated processes and technologies.
- The legacy systems could only provide a fragmented view of core business processes as drafting was done using outdated processes.





# Solution

Leveraging Tekla's integration with project management software Stridely Solutions helped the client to plan, manage and track projects efficiently. We implemented Tekla Structures and Tekla open APIs to automate the drafting of pre-engineered steel building structures with 3D models.

- The entire drafting process was streamlined using an interactive Tekla environment alongside Tekla Open API plugins and macros.
- Built customized plugins that enable editing of any imported 3D models utilizing Tekla Open APIs. These plugins generate reports like bills of materials and drawings like anchor rod layouts and shop drawings for the Tekla model.
- The solution allows draftsmen to import, edit, finalize, and create required reports and drawings for the pre-engineered building structure within the Tekla software.
- Tekla Structures can interface with analysis and design software through the Tekla Open API. This allows both engineers and modelers to collaborate on the same project.
- Modernized and migrated all supporting IT infrastructure to the cloud, making the system more flexible and enabling seamless integration.



# Results

01

## Lead time reduction

Using the new Tekla system, draftsmen can import, edit, finalize, and create drawings faster without leaving the platform. This reduced lead times.

02

## Futureproofing

The modern solution lets the client integrate technologies like VR, enterprise software, and project management tools to prepare for the future.

03

## Cloud architecture

Moving to the cloud enables staff to access work from anywhere, on any system, freeing them from location limitations.

04

## Blue Ocean Strategy

Reducing quote-to-delivery lead times and increased flexibility by responding faster to client revisions with lowering costs helped the client gain market share in a competitive industry.

05

## Automation benefits

Reducing manual intervention through automation cuts manhours per project. This gave the client a big competitive edge.

06

## Flexibility & modifications

Real-time BIM model modifications via Tekla APIs allow clients to quickly accommodate client needs and generate revisions. This responsiveness helps satisfy customers.

## Modeling and Detailing with Tekla Structures

Stridely Solutions successfully addressed the limitations of legacy systems for a leading building manufacturer by implementing Tekla Structures and Tekla Open API integration. The solution automated their modeling and detailing processes, modernized their IT infrastructure, and streamlined drafting workflows. By delivering flexibility, enhanced accuracy, and future-ready integration capabilities, we enabled the client to gain a competitive edge in the PEB market and adapt seamlessly to evolving business needs.

# About Stridely Solutions

Stridely Solutions offers Tekla solution to drive construction challenges. Tekla empowers engineers and builders to conceptualize, analyse, and refine their designs before construction begins. By combining robust 3D modeling, precise detailing, and seamless data sharing, it bridges the gap between vision and execution. Our Tekla expertise ensures you achieve exceptional design accuracy, operational efficiency, and project success.



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