

# Engineering Service Company Boosts Productivity with Agile PLM

## Business Challenge

### *Slow and Error-Prone Manual Processes*

Staying ahead of the competition is challenging enough, but it becomes nearly impossible when relying on inefficient manual product development processes. Add in the challenge of corporate growth, and Pinnacle Technologies was facing a difficult future.

“In the oil field diagnostics business, the key is time to market,” said Ken Smith, Sustaining Engineering Manager at Pinnacle Technologies, an energy industry engineering service, consulting and software firm specializing in the optimization of hydraulic fracturing. “The faster we get our devices to market, the faster we can get a return on what we invested.”

Pinnacle’s processes became acutely strained when the San Francisco-based company added a new engineering team in Houston. Before implementing Agile, all the mechanical drawings for Pinnacle’s equipment were completed at the new Houston facility and stored on a server in San Francisco, where the manufacturing and electrical groups were located. When the mechanical team in Houston needed to access a drawing in San Francisco, it would slow a project down significantly.

“For us in Houston, the lag time to search and access those drawings was extremely slow,” explained Patrick Mekolik, Mechanical Engineer at Pinnacle. “The system needed to be expanded to accommodate two engineering groups; we didn’t know where files were located; and sometimes we had the same files in multiple locations.”

In addition, Pinnacle relied on a manual process to link the engineering side to the manufacturing side of the business. Without Agile, providing manufacturing with a list of parts for the assemblies designed on SolidWorks 3D CAD software required manual re-entry of the entire bill of material (BOM).

“The manual process caused errors,” recalled Mekolik. “You could easily type in the wrong part number, or forget quantities. If you made a change, you would have to go back and make sure that revision was made in every document across both locations.”

“We had an instance where we sent a drawing to the machine shop, and then found out we had the wrong revision file,” Smith remembered. “When a part is made incorrectly, it slows time to market and costs money. We may have to scrap the part altogether and rebuild it to the correct dimensions. In this case it takes twice as long to get the same part.”

## Solution

### *Direct Integration Between CAD and PLM*

Pinnacle deployed Agile Advantage – an Agile PLM solution tailored to the needs of small and medium enterprises – to provide a single product record accessible across the entire company, whether at headquarters or the remote office in Houston. Agile also provides revision control and security to ensure the integrity of each document and make sure it is the latest version.

A key feature of the implementation, Agile’s Engineering Data eXchange (EDX), enables Pinnacle to publish mechanical drawings and all related documentation

“Agile enables us to reduce the time to make a large assembly from four hours down to one hour by streamlining the process of transferring information between the mechanical and manufacturing groups.”

▶ Patrick Mekolik

*Mechanical Engineer,  
Pinnacle Technologies*



## BUSINESS

Electronics & High Tech:  
Energy Industry Engineering

## CHALLENGES

- ▶ Limited Drawing Access Slowed Time to Market
- ▶ Legacy System Resulted in Multiple Document Copies
- ▶ Manual Re-entry of BOM Produced Errors
- ▶ Lack of Revision Control Cost Money and Time

## SOLUTIONS

- ▶ Agile Advantage:  
Agile’s PLM solution for small and medium enterprises
- ▶ Highlighted Feature:  
Engineering Data eXchange

## AGILE PLM RESULTS

- ▶ Increased Project Development Speed – assembly time reduced from 4 hours to 1 hour
- ▶ Improved Document Access and Revision Control
- ▶ Reduced Data Re-Entry and Errors
- ▶ Improved Collaboration between Engineering and Manufacturing
- ▶ Design Reuse



directly from SolidWorks into Agile with the push of a button – eliminating the need for redundant data entry. EDX provides an essential connection between the mechanical and manufacturing groups, ensuring the integrity of all drawings and associated documents throughout the product lifecycle. In addition, any modifications made to any devices or parts are automatically updated across all related documents, ensuring that all product data is up-to-date.

## Key Benefits

- ▶ **Increased Project Development Speed:** “With Agile, sharing documents is very fast between our two locations,” Mekolik noted. “Agile’s EDX enables us to reduce the time to make a large assembly from four hours down to one hour by streamlining the process of transferring information between the mechanical and manufacturing groups.”  
“Compared to the time it would take to go through all the old manual processes, Agile saves us money and increases our revenue,” added Smith.
- ▶ **Improved Document Access and Revision Control:** “Thanks to Agile, everyone is able to access the correct and latest drawings immediately,” said Smith. “There is no question about picking up an obsolete drawing. That helps us reduce time to market.”
- ▶ **Reduced Data Re-Entry and Errors:** The Agile EDX solution provides a direct import from SolidWorks to Agile, automatically creating the BOM and quantities of all the parts in the assembly, eliminating an enormous amount of data re-entry, and minimizing chances for error. If any changes are made to drawings, EDX ensures the revisions are distributed through Agile. “With EDX, you know that Agile is bringing in exactly what is included in the assembly,” Mekolik confirmed.
- ▶ **Improved Collaboration between Engineering and Manufacturing:** Due to the automatic sharing of drawings and design data through EDX, Pinnacle’s manufacturing team gets a head start on projects because they have earlier access to project information. “Especially in the prototype stage, the manufacturing group can start looking at what has been released for a particular product line,” explained Mekolik, “and they can give opinions and suggestions. The quality of the equipment is improved by enabling manufacturing’s participation earlier in the process.”
- ▶ **Design Reuse:** Agile and EDX make it easier for Pinnacle to leverage its intellectual property by reusing designs or parts whenever possible, saving the time and cost of designing from scratch.

To learn more about how your company can get results with Agile PLM solutions visit [www.agile.com](http://www.agile.com) or call an Agile representative closest to you.



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## Agile’s Engineering Data eXchange enables Pinnacle to:

- ▶ Publish engineering BOMs directly to Agile PLM
- ▶ Integrate CAD information such as parts, product structures, attributes and source data into the enterprise
- ▶ Provide early design releases to manufacturing
- ▶ Ensure design and data integrity

## Pinnacle chose Agile PLM for the following capabilities:

- ▶ Engineering Data eXchange
- ▶ Ease of configuration
- ▶ Ease of use
- ▶ Web-enabled remote document access
- ▶ Automated creation of part numbers

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