

PLM/CAD ASSESSMENTS HELP DEFINE PRIORITIES

PROJECT SUMMARY

The client, an engineered products company, had 13 North American manufacturing locations with varying levels of design/engineering processes, tools and methods. Each facility operated as an independent company and in some cases even as a competitor. Each facility produced similar products and a variety of custom products within the same product family. PMC was to evaluate the design/engineering processes, tools and methods at each facility and define an enterprise wide CAD and product lifecycle management (PLM) strategy and roadmap.



SYSTEM DESCRIPTION

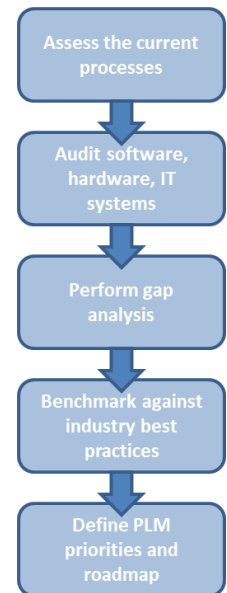
Three product groups are produced at each of the facilities: Doors, Curtain Walls and Skylights. The manufacturing systems are set up for custom product and standard product. Each engineering process is similar but uses different software and processes to achieve similar goals. The client required a CAD solution, along with a PLM system, that would be common across all Engineering and Manufacturing facilities.

SOLUTION

PMC consultants conducted 3-4 day on-site assessment engagements in each client site utilizing PMC's 6-step assessment methodology.

The following activities and infrastructures were audited and analyzed:

- Processes in estimation and bidding, design, engineering change, configuration management, and collaboration
- Current drawing practices and design standards
- CAD library structures and standards
- Bid and design documents
- Manufacturing, order management, and project management
- Current hardware, software, and network infrastructure supporting engineering process



APPROACH

The multi-site assessments allowed the PMC consultants to identify PLM/CAD priorities and recommend an implementation project plan to the client.

- Drawing standards were established
- AutoCAD 2D libraries converted to parametric 3D libraries
- Bill of Materials (BOM) Management implemented
- Configuration Management implemented for version control
- Engineering Change Management implemented for change order processing
- Upgraded design and engineering workstations and upgraded to current version design software



- Training provided to senior management, project and product managers, design and engineering staff on PLM and new technology

BENEFITS

PMC implemented a single CAD platform that utilizes the current design and engineering knowledge and reads directly into the PLM solution, eliminating unnecessary data transfer and revision control nightmares. This implementation had a huge impact on the CNC programming, as the individual CAD part models could be read directly into the 3- and 5-axis CNC machines. Additional benefits include:

- Increased bidding efficiencies, eliminating duplicated design and rework
- Reuse of product components, reducing overall cost of design and manufacturing
- Centralization of product information in shared repository
- Version control procedures eliminate rework and reduce design cost
- Improved design and engineering productivity and quality