CASE STUDY

PLM Assessments Help Define Business Priorities

Customer Challenges

- Less than optimal productivity in design and engineering processes
- Inefficient transfers in bidding, design, and fabrication
- Redundant duplication of design work
- Insufficient CAD library standards
- Lack of configuration management and collaboration

PROJECT SUMMARY

A hospital administration was planning the construction of a new hospital. The building architects determined the structure of the hospital to encompass four departments - Emergency, Inpatient, Imaging and Surgery. To facilitate the most optimal utilization of these spaces, PMC was able to offer a simulation model so as to validate the capacity envisioned by the architects' plans.

The simulation used historical data to analyze arrival patterns and to evaluate the service time at every department, as well as provide a model of every area in all four departments. The model encompassed inter-departmental movements of patients: outpatients entering the hospital, registration, triage, inpatient movements, the appropriate operating / treatment room and also the pre operation / preparation process and the post operation / recovery process. Along with patient movements and key performance metrics such as utilization of different areas, patient lead time in every department was improved.

SYSTEM DESCRIPTION

Three product groups were produced at each of the facilities: Doors, Curtain Walls and Skylights. The manufacturing systems are set up for both custom products and standard products. Each engineering process is similar but uses differing 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.

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 and Configuration Management added for version control
- Engineering Change Management implemented for change order processing
- Upgraded design and engineering workstations and upgraded to current version design software

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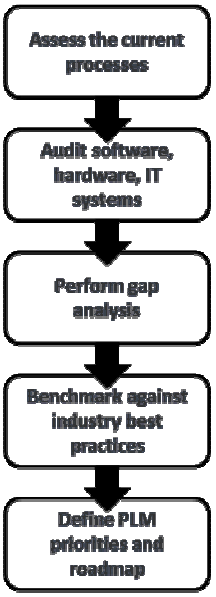
SOLUTION

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 observed 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 aiding engineering process

BENEFIT

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

PMC
Data-driven productivity solutions

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