

Product Lifecycle Management (PLM) as a "Single Source of Truth"

Introduction

In the modern business environment, companies struggle with the proliferation of dispersed data across multiple systems and platforms. This fragmentation of information leads to errors, data duplication, and inefficient processes.

A Product Lifecycle Management (PLM) system can act as a "Single Source of Truth" (SSOT), centralizing all product lifecycle-related information and ensuring that the data is consistent, accessible, and accurate across the organization.

What does "Single Source of Truth" mean in a PLM?

The SSOT concept involves having a single, reliable, and up-to-date source of data, eliminating the confusion caused by multiple versions of the same information.

In a PLM, this includes: CAD designs and technical specifications, customer requirements documents, production plans and bills of materials (BOM), change history and approvals, and quality and traceability information.

Benefits of PLM as SSOT

1. Improved Collaboration

- ✔ **Eliminate information silos:** All teams (engineering, production, purchasing) access the same up-to-date data.
- ✔ **Informed decisions:** Leaders can base decisions on reliable data, reducing errors.
- ✔ **Optimized workflows:** Automation in change management and approvals.

2. Operational Efficiency

- ✔ **Eliminates redundancies:** No need to duplicate data across systems.
- ✔ **Instant access:** Employees have quick access to key information, reducing search time.
- ✔ **Change management:** Changes are automatically recorded, with visible real-time impact.

3. Traceability and Regulatory Compliance

- ✔ **Version control:** Always work with the latest version of a design or document.
- ✔ **Simplified audits:** Every decision and change made in the product lifecycle can be tracked.
- ✔ **Guaranteed compliance:** Accurate documentation for specific regulations.

4. Scalability

- ✔ **Centralized management:** The company can scale its operations without losing control over product information.
- ✔ **Future compatibility:** Facilitates integration with ERP, MES, and other enterprise platforms.

5. Multi-CAD Data Management

- ✔ **Unified Design Data:** Consolidate and manage data from multiple CAD systems, ensuring all teams work with consistent and up-to-date design information.
- ✔ **Streamlined Change Management:** Automatically synchronize design updates across systems, reducing errors and ensuring a single source of truth for all multiCAD data.

Use Cases

1. Product Development

A design team and a production team work simultaneously at different locations.

✘ **Without PLM:** Both teams work with different versions of the design, leading to errors in production.

✔ **With PLM:** Both teams access the same designs and receive automatic notifications of updates.

2. Quality Management

During an audit, complete traceability of changes to a product is required.

✘ **Without PLM:** It is necessary to manually search for documents scattered across multiple systems.

✔ **With PLM:** All information is centralized and accessible in minutes.

3. Product Customization

A customer requests a specific modification to a product design.

✘ **Without PLM:** Coordination between sales, design, and production is slow and inefficient.

✔ **With PLM:** The request is logged, and changes are managed and automatically communicated to all involved areas.

Successful PLM Implementation

Having a solid foundation for your product lifecycle strategy is the first step to successful PLM implementation.

A clear plan and cross-departmental collaboration pave the way for successful implementation. Key steps to highlight include:

- #1 Define clear objectives from the beginning
- #2 Stakeholder involvement and collaboration
- #3 Choose a suitable platform that aligns with your specific industry needs
- #4 Plan for data migration to the new platform
- #5 Training and organizational Culture

Conclusion

Adopting a PLM transforms the way companies manage product information. This approach not only improves collaboration and efficiency but also ensures accuracy and consistency at every stage of the product lifecycle. In a competitive market, having a PLM is a crucial strategic advantage.

Have a question? Schedule a consultation with our experts **now.**