DIGITAL THREAD

The Problem of Data Disconnection in the Industrial Machinery Industry

Imagine a team working on the development of a custom machine for a client. Mechanical engineers design the structure, automation experts develop control logic, electrical engineers create the wiring schematics, and integration specialists ensure the machine connects seamlessly with the client's systems. Each team uses different tools tailored to their discipline, but these tools are rarely connected.

In many companies, design data must be manually exported from one tool to another: from mechanical CAD to simulation software, from schematics to PLC programming environments. Electrical layouts often need to be manually compared with mechanical designs to avoid collisions or interface issues. When one team makes a change, the others must be notified manually, a process prone to delays and errors.

This lack of digital continuity creates serious challenges for version control, team collaboration, and validating that the final machine meets all functional and quality requirements. Without a centralized and connected approach, teams spend more time aligning data than innovating, increasing the risk of inconsistencies and rework that could have been avoided through integrated digital workflows.

Advanced Machine Engineering

Intelligent Performance Engineering

Digital Part Production

Smart Manufacturing

Service Lifecycle & Analytics

Consequences of Data Disconnection

The lack of a centralized data flow in machinery design and manufacturing leads to a number of issues that impact efficiency, costs, and the quality of the final product:

Department misalignment: Every modification requires multiple manual validations.

Risk of assembly errors: Manufacturing instructions can quickly become outdated if changes are not communicated in real time.

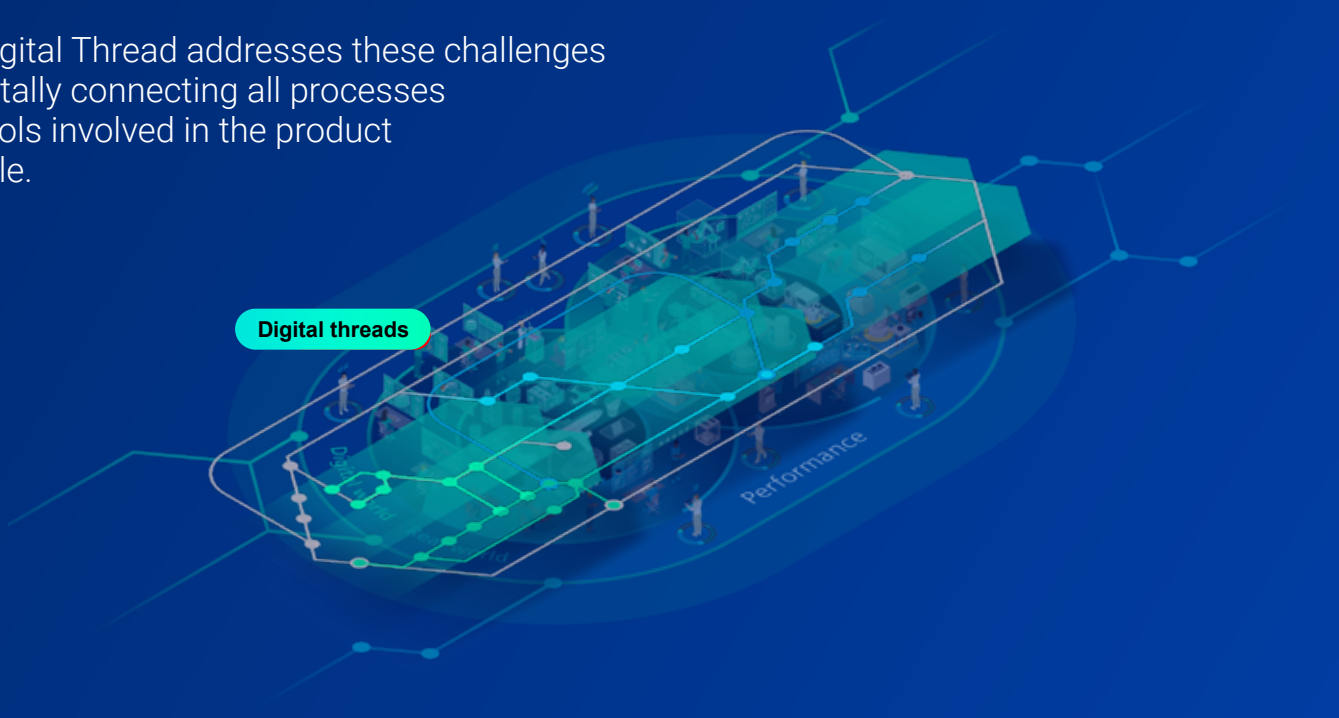
Increased costs: Reworking parts, delaying deliveries, or redesigning components drives up project costs.

Challenging after-sales maintenance: Lack of version traceability makes technical support and spare parts management more complex.

Limited customization: The lack of digital agility makes it more expensive to tailor solutions to individual customer needs.

Solution: The Digital Thread

The Digital Thread addresses these challenges by digitally connecting all processes and tools involved in the product lifecycle.



Seamless data flow: Data generated at one stage of the design process is updated in real time across all connected platforms, eliminating the need for manual transfers.

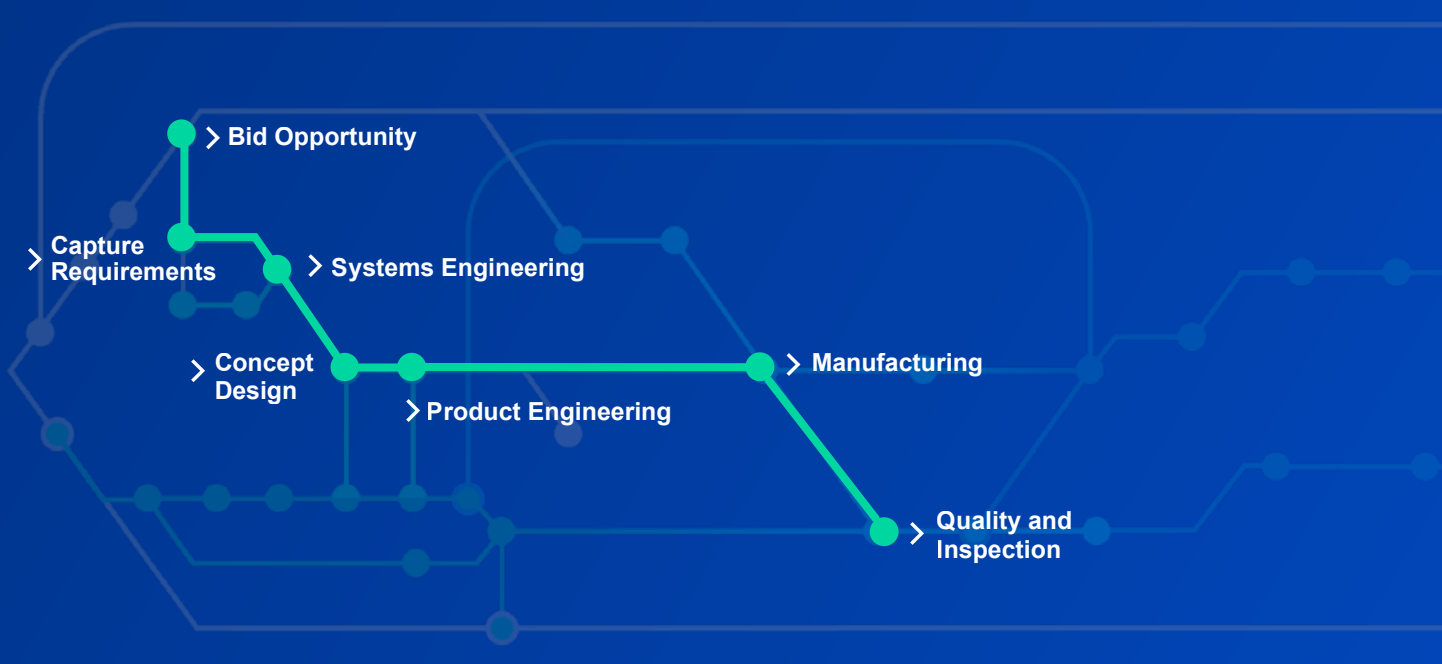
Automation and error reduction: With an integrated system, engineers can always access accurate and up-to-date information, minimizing errors and rework.

Agile decision-making: Full traceability allows issues to be identified before they impact production, optimizing time and cost.

Stronger team collaboration: In a connected digital environment, different disciplines work from a single data source, improving communication and coordination.

Cost and time optimization: Fewer errors and greater operational efficiency reduce production costs and accelerate the development of new machinery.

The challenges of disconnected data no longer need to hold you back. With the Digital Thread, you can optimize every stage of development and manufacturing, ensuring continuous data flow, greater efficiency, and reduced costs.



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