How Industrial Leaders Avoid PLM Stagnation

It's rarely the technology that's the issue when a $20M+ program loses momentum. It's the conditions that make change seem harder than standing still.

60-70%
OF PLM TRANSFORMATIONS STALL BEFORE FULL DEPLOYMENT

$20M+
TYPICAL ENTERPRISE PLM PROGRAM INVESTMENT

3-5X
LONGER NPI CYCLES WHEN LIFECYCLE DATA IS FRAGMENTED

100%
OF FORTUNE 500 INDUSTRIAL MANUFACTURERS TRUST WINDCHILL

THE PATTERN

How a well-resourced program becomes a patchwork system

Industrial organizations don't set out to build complexity or redundancy. Over time, the system evolves incrementally: a new acquisition here, a business unit workaround there, a vendor relationship that outlasts the original project. A deliberate architecture quickly becomes a network that no single team fully owns.

This results in an environment where the system technically works but is increasingly difficult to evolve. And with each passing year, the perceived cost of change rises while the urgency to act starts to dissolve.

WHAT THIS LOOKS LIKE IN PRACTICE

- Engineering data lives across multiple CAD and PLM platforms
- Different business units rely on different systems and service providers
- "Multi-CAD" has become a workaround, not a strategy
- Manual processes fill critical gaps between systems
- No single team owns the end-to-end lifecycle view

THE OPERATIONAL IMPACT

When lifecycle systems aren't connected, the cost shows up everywhere

Disconnected lifecycle environments erode. The impact accumulates in slower product introduction cycles, inconsistent data quality, and a growing reliance on manual effort and external services to maintain the status quo.

CURRENT STATE: FRAGMENTED

- Longer product introduction cycles
- Disconnected service and engineering data
- Manual workarounds in supplier collaboration
- Inconsistent data quality and traceability
- Rising services dependency to sustain operations

FUTURE STATE: CONNECTED

- Faster time-to-market with unified lifecycle data
- Single source of truth across engineering and service
- Structured supplier collaboration workflows
- Consistent, traceable product configuration
- Reduced operational risk and services overhead

WHY MOVING FORWARD IS HARD

Identifying the problem is the easy part

In most organizations, Engineering and IT leaders know where the gaps are. What's harder is navigating the organizational conditions that make change feel riskier than standing still.

COMMON BARRIERS TO PLM MODERNIZATION

- Uncertainty about where to start — CAD migration, PLM re-platforming, or service data unification
- Concern about disrupting existing teams, programs, or partner relationships
- Established vendor and SI dependencies that are difficult to unwind
- Lack of clear ownership across the product lifecycle
- Difficulty aligning stakeholders with competing priorities across engineering, IT, and operations

In many cases, coordinating the change is harder than identifying the problem. The organizations that make progress aren't the ones with the clearest technology roadmap — they're the ones that invest in the governance and alignment work first.

WHAT PROGRESS LOOKS LIKE

The organizations moving forward aren't starting over

Leading industrial manufacturers are deliberate in their approach to change. They are not attempting wholesale replacement of their lifecycle environments, but instead, identifying high-impact workflows, connecting data incrementally, and establishing the governance structures that make sustained progress possible.

A MORE DELIBERATE APPROACH TO PLM MODERNIZATION

- Focus on high-impact workflows first — not full platform replacement
- Connect data across the lifecycle incrementally, reducing risk at each stage
- Establish clearer ownership and governance before expanding scope
- Reduce reliance on manual processes in critical integration points
- Align stakeholders around outcomes and operational metrics, not tool selection

Windchill by PTC is built for this kind of transformation. It provides the platform continuity that complex industrial environments require, while enabling the incremental moves that makes modernization achievable at scale

Leading heavy equipment OEMs are modernizing product development, now. Are you?

We're speaking with engineering and IT leaders across large industrial organizations to understand how these challenges are actually experienced day-to-day. If your organization is navigating PLM complexity, we'd like to show you where industrial lifecycle strategies are breaking down — and how leading manufacturers are getting unstuck.

See how this could apply to your organization: ptc.com/windchill >

About Windchill by PTC

Windchill is the industry's leading PLM platform, trusted by 100% of Fortune 500 industrial manufacturers to manage engineering, manufacturing, service, and product data across the enterprise. It provides the foundation for connected digital operations — from design to delivery to service — enabling the world's most complex products to be built and maintained at scale.