

RESILIENT PRODUCT LIFECYCLE MANAGEMENT

STRATEGIES & SOLUTIONS FOR FUTURE-PROOFING PLM

PLM systems hit the wall when they can't adapt to evolving business requirements and / or when they hold your business back from adopting new IT technologies. To remedy these issues and future-proof your IT infrastructure adopt a resilient technology solution approach.



“As global companies extend their PLM backbone through the organization and across the supply chain, performance at scale becomes critical for effective collaboration.”

Robert Parker, Group Vice President, IDC

New innovations in materials science, electronics and software mean that everything from missiles and motors to smartphones and stents are far more complicated than they were just few years ago.

New product development, manufacturing and supply chain processes have never moved faster or been more complex than they are right now. Factor in the Internet of Things, big data and 3D printing / on-demand customization and you quickly realize that complexity and the rate of change are increasing every day.

To be successful moving forward, IDC says that companies need a flexible, scalable and resilient product innovation platform that can handle today's complexity and adapt quickly to address tomorrow's accelerating pace of change.

20+ YEAR PRODUCT
LIFECYCLES DEMAND
LONG-TERM PLM
CONTINUITY THAT CAN
ONLY COME FROM A
RESILIENT PLM SYSTEM

WHAT IS RESILIENT PLM?

Resilient PLM is designed to adapt to changing business requirements. Resilient PLM ensures that your customizations can always move forward to the next version of the software. And resilient PLM never leaves you locked out of your own data.

Resilient PLM - and the investment you make in it – persists independent of changes to your business processes, the operating system, database, upgrades, features etc. These changes could be as simple as switching to a new browser or as complex as changing use cases when acquiring other companies, moving into new vertical markets, adding product lines or adjusting processes to meet new compliance mandates.

A truly resilient PLM will last 20 years or more. In fact, it should last indefinitely.

Attributes of a 20+ year PLM system:

- ✓ **Transparent** – Open and accessible technology. Imagine if 20 years from now you found a database and vault without the application software. Could you still extract your product structure and CAD data?
- ✓ **Evolvable** – Nothing IT platform specific or dependent because we don't know what platforms we'll be working on 20 years from now.

- ✓ **Adaptable** – Because your business needs and company processes will surely change over the next 20 years.

WHY RESILIENT PLM MATTERS

Ask anyone who has been through a product lifecycle management (PLM) implementation about their experience and they'll probably tell you this: "I don't want to do it again anytime soon."

PLM is difficult. It's expensive. It takes time. And once it's done, you certainly don't want start all over again.

Unfortunately, that's exactly what a lot of companies are doing because they find themselves boxed in by their PLM systems. In short, they hit a PLM wall.

PLM systems hit a wall when they can't adapt to evolving business requirements and / or when they hold the business back from adopting new IT technologies. To remedy these issues and future-proof your IT infrastructure you must adopt a resilient technology solution approach

IF YOU'VE HIT A WALL
WITH YOUR PDM /
PLM SYSTEM, YOU
HAVE TWO CHOICES:
RIP IT OUT AND
REPLACE IT OR
COMPLEMENT AND
EXTEND IT WITH MORE
MODERN TECHNOLOGY.
THE PATH YOU TAKE
DEPENDS ON WHICH
WALL YOU'VE HIT.

HAVE YOU HIT A PLM WALL?

If your PLM system is holding the entire enterprise back from taking advantage of a newer operating system, hardware or database technologies, then you've hit the technology wall.

If your PLM system just lacks the functionality needed to support your business requirements, you've hit the functionality wall.

Regardless of which wall you've hit, there is a path forward. The open architecture of the Aras platform can take you where you need to go, and ensure that you avoid hitting walls in the future.

The Aras PLM platform has the flexibility of an open architecture and business model to enable you to:

- ▶ **MIGRATE to an entirely new PLM environment**
- ▶ **INTEGRATE your old PDM / PLM system with new PLM functionality**
- ▶ **INTEGRATE today while you prepare to MIGRATE tomorrow**

**IN THE NEXT 10-20 YEARS
WILL YOU:**

- ADD OR MODIFY HARDWARE TO SUPPORT END-USER GROWTH?
- CHANGE OR MODIFY VAULT FILE STORAGE?
- ADD MORE SITES TO YOUR NETWORK?
- ADD NEW FUNCTIONALITY, DEPARTMENTS & WORKFLOWS TO YOUR PLM SYSTEM?
- GO THROUGH AN ACQUISITION OR MERGER?
- CHANGE OR ADD AN ERP SYSTEM? CAD? OTHER

CAN YOUR CURRENT PLM SYSTEM HANDLE IT?

HITTING THE TECHNOLOGY WALL

A few years back, you purchased your PLM system. It took a while and cost plenty, but eventually you got it working the way you wanted it too, more or less. You thought you were all set, until one day you realized that your PLM system has locked you in.

You could be locked in to an old version of Linux or Windows XP and your company is trying to standardize on Windows 7, or perhaps your old PLM system doesn't work with the latest version of your CAD software, your database or your ERP system. Either way, you're stuck. Your legacy PLM system has you locked in and the rest of the enterprise can't move forward.

If you've ever delayed using a new application you really needed because your PC is the wrong hardware or you are running the wrong version of Windows, you're familiar with this wall. The culprit is usually one of the major corporate business systems that is lagging and forcing all users to remain on older technology.

Can you upgrade your PLM? Maybe, but bringing all those customizations up to date will likely take as long and cost as much as your initial implementation. And eventually, you'll find yourself locked in all over again at some point in the future.

HITTING THE FUNCTIONALITY WALL

You've been hearing it from your PLM end users for months or maybe years, "if we only had insert functionality here we could create new products faster, manage suppliers better or run manufacturing smarter, cheaper, etc."

It's that one piece of functionality the business must have; that your current PDM / PLM system doesn't support or it does support but you'd have to go through a costly upgrade to get your hands on it.

It's compelling, but is it worth starting over?

TO MIGRATE OR INTEGRATE?

As daunting as it may seem, the choice to migrate off your old PLM system entirely or keep what works and integrate with a modern system is pretty straightforward. It simply depends on which wall you've hit.

If you've hit the functionality wall you really don't need to undertake full scale migration and retraining to get the additional functionality you need. At least not right away. Leave the existing PDM / PLM system running. Let it keep doing what it is doing and then complement and extend it by adding the

missing functionality right on top of it using the Aras Innovator framework. This is the advantage of an open architecture with web services interfaces: simple and resilient integrations.

Unfortunately, if your problem is technology lock-in, then an integration strategy isn't going to help you. Until the old PLM system is removed from the corporate network, you are not going to be able to move forward with the other systems and applications that the business needs.

Integration and migration are not mutually exclusive. Most customers that start with an integration strategy usually end up migrating over time because eventually they hit the technology wall. But that's ok, because Aras is designed to grow, evolve and change with your business needs, whatever they may be.

ARAS IS RESILIENT PLM

Why is Aras able to be so future-proof when experience shows us that no other enterprise software can be? It's rooted in our corporate philosophy. The mission and vision of the founders of Aras was to create a resilient PLM platform from the outset.

Resilient by Design:

Open – From our open architecture to our enterprise open source approach and transparent data model Aras is all open, all the time, so we can easily adapt to changes in your business and work with the latest technology. With Aras, your company will not be forced to delay rollout of new IT technologies because the PLM business system is not compatible.

Subscriber Upgrade Guarantee - All upgrades to your Aras PLM system are included in your annual subscription fee. When it's time to upgrade we take care of everything, including upgrading all your customizations. With Aras you will never repay for the same PLM customization again.

Self-Documenting System – No more relying on vendors, consultants, in-house system gurus or tribal knowledge. With a self-documenting system you know you'll always have the information you need to take your PLM system forward.

Company Culture – Our motto is “no customer left behind.” We guarantee you will never be forced into an expensive upgrade and that the codes and methods you've developed will still run 20 years from now.

PLM Spotlight: **THE US ARMY**



- ▶ **14 Years with Aras Innovator**
- ▶ **9 Major Aras Upgrades**
- ▶ **Migration from Oracle to SQL Server & Java to .NET**
- ▶ **All Integrations & Customizations from Day 1 Still Work**
- ▶ **AML Queries from 2000 Still Run Today on the latest version of Aras Innovator**

MIGRATION – YOU’RE PROBABLY MORE THAN HALF WAY THERE ALREADY

If you’ve already got your data and some engineering processes in a PDM / PLM system, you are 90% of the way through your Aras implementation. If you already have a bill of material (BOM) with roll up logic and the attributes that you like, it’s a short exercise to re-create the exact same BOM and logic in Aras. You just need to remodel the use cases, business rules and workflows. The Aras modeling engine empowers you with a simple drag and drop interface to configure workflows and data models rapidly. Many customers find that implementing their business rules the second time is much easier.

We have a formal, well tested, data migration methodology. We run PDM / PLM migrations in 3-4 iterations, offline, so that recursively you’re doing full system testing. After that, your last step is retraining and rollout. Because Aras is a browser-based PLM system there’s no software for IT to deploy to 5,000 PC clients all over the world. It’s just a URL and a log in. And we use active directory as a single sign on, so you’re not creating and maintaining a gazillion user accounts.

INTEGRATION – THE BEST OF BOTH WORLDS

Aras Federated Services make it possible for you to keep what’s working in your old PLM system and add new functionality right on top of it in a highly scalable and secure way.

Federation enables Aras to define and build wrappers around data objects that are stored and managed in remote systems, such as a legacy databases or PDM / PLM system, so that there are real time links to the data and it behaves like local data within the Aras PLM system. Even though we are not

copying the data or moving it, we're able to build user interfaces, workflows, supplier portals, etc., so the Aras screens have data from all your legacy systems and Aras PLM. This enables you to add functionality via Aras and still be working interactively with data in old systems.

With Aras Federated Services, users of the legacy system are still working in their old environment while other users are working through the Aras interface and in the context of enterprise workflow, lifecycle, project management. It enables the existing vault to persist until there's another reason to replace it.

This approach is often a good strategy if you embarked on your PLM journey by solving your CAD management issues first. You probably implemented a PDM solution from your CAD vendor, that is very good at managing files in one specific CAD format but doesn't give you BOM, workflow, enterprise scale lifecycle or other business-level capabilities. With Aras, that workgroup of 100 or 200 engineers can keep right on doing what they're doing in their favorite PDM, while you implement a full enterprise PLM solution right on top of the CAD file management system.

Your business has changed a lot since you implemented your PLM or PDM system. It will and should continue to change on an ongoing basis, as will your IT environment.

If your current system hasn't kept up and it's time to do something about it, take this opportunity to future-proof your PLM environment with a resilient platform that scales up, down, in and out with your business needs and business potential.



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