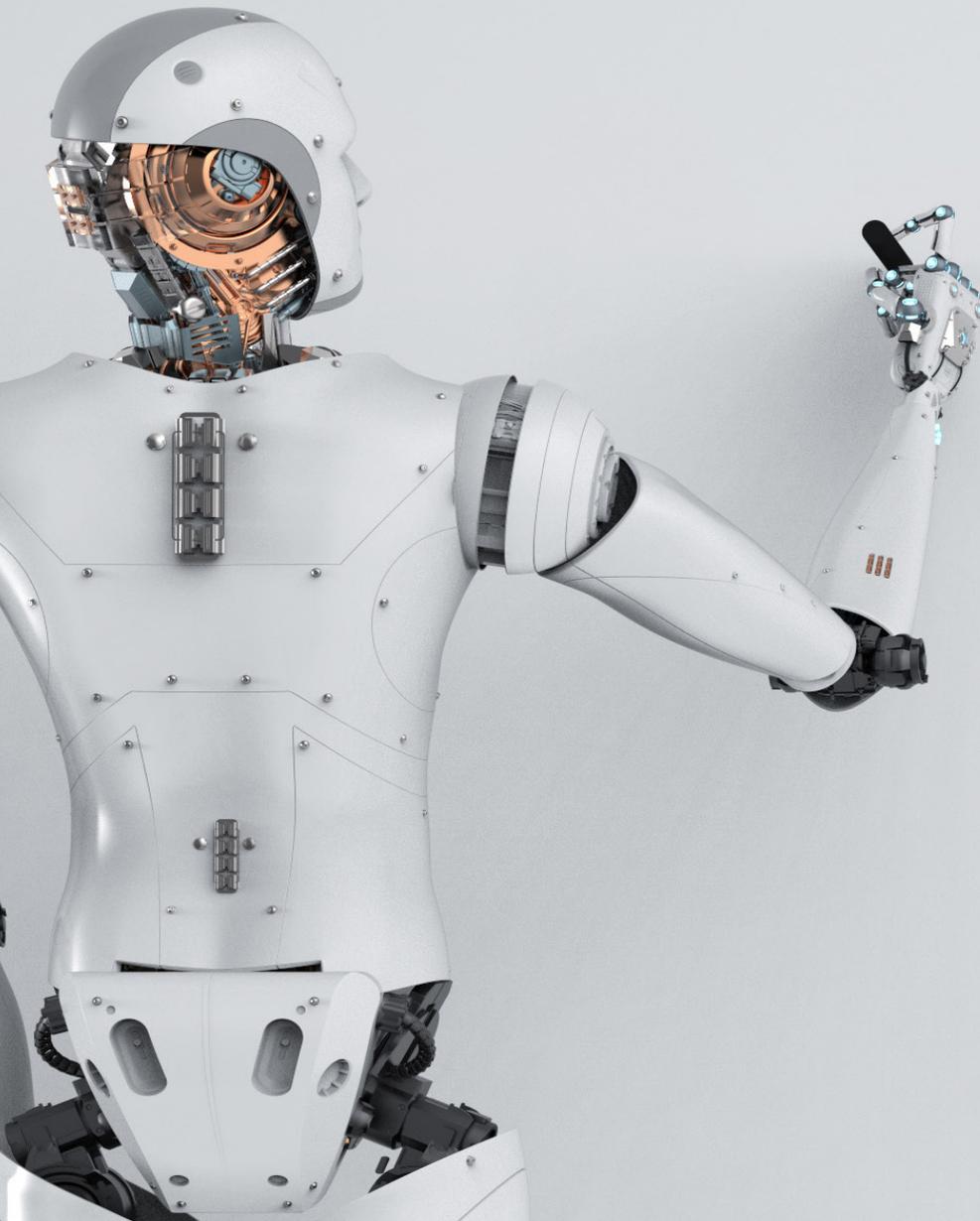


BUSINESS DATA MIGRATION STRATEGIC BLUEPRINT

Complex data migrations require strategic planning, process know-how and the right toolset for execution. Because migration can involve multiple parties and departments, you'll want to understand the right migration strategies for your specific use case. Whether you are going through a divestiture, planning mergers/acquisitions or centralizing your systems, your choice of migration strategy and toolset is critical to your business success. Avoid time intensive resource planning by following PROSTEP's blueprint for data migration. With over 25 years of experience in data migrations, we've created this document to provide the strategies and methods for a successful migration.



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A Data Migration Success Story

“We had an extremely low error rate through the migration rehearsals and ultimately through the production migration”

– Kirk Jones, Product Engineering Supervisor at Walterscheid Powertrain

In January of 2018, PROSTEP received a request from Walterscheid Powertrain Group for a quote to migrate PDM data. Walterscheid wanted to move PTC Windchill data to another server in order to consolidate their legacy systems. Doing so would enable additional collaboration and faster, more efficient product development.

Their two systems were set up differently and were hosted in different countries. Each system had its own lifecycle state, revision scheme, attribute types and classification. Walterscheid knew that the amount of data to migrate was monumental. There was also a time constraint, as Walterscheid needed to complete this project within a certain time frame and under a set budget.

Working closely with their international team, the PLM experts at PROSTEP worked to not only fine tune their scope, but also to define test cases and migration rehearsals. PROSTEP’s preparedness set the stage for a successful product migration.

Production migration was completed in March of 2019, well within the project deadlines. The Walterscheid project had a low error rate and Walterscheid considered the project to be highly successful.

“Ultimately PROSTEP’s most valuable strength for us was keeping our project on a strict schedule and advising us any time our internal delays posed any risk to delay the project. The proposed project timeline was realistic, reasonable, and ultimately achieved to within a week of the original outlined schedule”- Kirk Jones, Product Engineering Supervisor at Walterscheid Powertrain Group

Read More About Data Migration



The Business Case for Migration

How do you know when it's the right time for your data migration? From a business perspective, what's the reason to move forward? These four instances will most likely be the starting point for migration planning.

Digitalization:

Are you introducing new technologies such as blockchain and industry 4.0 in your company? Regardless of what new technologies are implemented, a migration plan to update your legacy systems is needed.

Mergers and Acquisitions:

Is your company going through a merger and acquisition? In this instance, you'll need a comprehensive engineering collaboration strategy and solution. Your goal should be to standardize your PLM through migration so your systems work collaboratively.

Joint Ventures:

Partnerships build on the strength from each partner. As a result, each partner can be geared for better collaboration and product development. Further, cross-domain product development requires your intellectual property to be protected.

End-of-Life PLM System

Are your systems nearing end of life? Do you have a sustainable PLM solution? When it comes time to migrate your data to a new PLM, you'll need the knowledge, toolset and expertise to perform a migration.

Now you've determined you will plan a migration. Before you do anything, you need to consider the following 3 steps:

1. You'll need a well-informed user base. Stakeholders need to be brought in early so they understand how this migration will benefit. Further, maybe you'll have an internal campaign for all users that promotes the benefits of the migration.
2. You need to start thinking intelligently about what requirements you'll need in the new system and what's required to decommission the old system. Do you have an archiving strategy planned?
3. Lastly, you'll need the right toolset and strategy to carry out your migration.

Business Data Migration

Why You Need the Experts

Successful data migration requires you to plan strategically, understand migration strategy and pinpoint the most effective tools for implementation. To ensure that your data is migrated effectively, there are key questions that you must answer:

- Are you migrating to a new system or an existing system?
- What interfaces will you need?
- Do you have the right internal and/or external resources?
- What is your budget?
- What cross system processes are you implementing?
- What data will you share between new and old systems?
- How clean is your data?
- What toolset will you use for your data migration?

At PROSTEP, we've created a 3-tiered approach to data migration. With 25+ years of data migration experience and solid partnerships with leading vendors like Dassault, PTC and SIEMENS, PROSTEP is focused on 3 main points of consideration for your migration:

- Do you have the right migration strategy?
- Success depends not only on strategy, but on execution.
- OpenPDM Migrate as the Toolkit for Data Migration

Migration of all business domains to a common PLM platform requires strategic organization, resource planning and the right toolset for execution.



Do you have the RIGHT Migration Strategy?

Big Bang Migration

Do you have a small amount of data (less than 500,000 parts) to migrate?

A Big Bang Migration shifts your legacy data to the target system all at once. This migration is typically performed over a weekend or during a blackout phase.

The advantage is that all your data is migrated to the system at once. The disadvantage is that your blackout time is a critical factor. If not all your data is migrated during the blackout or planned downed time, then your business will face additional down time.

Additionally, if your data is comprised of over 500,000 parts, a Big Bang Migration may not suite your needs. Can your data migration software migrate that data quickly and easily?

Lastly, once all your data is migrated, your users will begin to work in the new system. Some questions to consider: Are my users trained in the new system? Will my users be just as productive or less productive in the new system?

Trickle (Phased) Migration

Do you have 500,000-1 million data parts to migrate to a new system?

A Phased Migration approach is likely to be your best choice if you have 500,000 to a million data parts to migrate. This phased approach migrates your data one business unit or department at a time.

Since this migration doesn't happen concurrently, some of your users will remain in the old system as others transition to the new system. This gradual approach works well for legacy systems with a large user base and multiple sites to be migrated. Additionally, the advantage of having a phased migration is training new users in batches and it also limits the traffic in your network.

The only disadvantage to this type of migration is its lengthier implementation sometime. Are my users trained in the new system? Will my users be just as productive or less productive in the new system?

Coexistence Migration

Do you have more than a million parts to migrate?

For the most complex data migrations involving more than 1 million parts, a Coexistence Migration is ideal.

Brian Schouten, Director of Presales at PROSTEP, describes this strategy: "Move all the data first. Next, move the users at the pace of the business." Brian's explanation indicates that businesses will benefit from moving all data to the new environment at once. This ensures that the data is mapped correctly and that the new system is up and running as soon as possible.

It eliminates the wait time experienced in both the Big Bang and Phased approaches. Once all your data is migrated to the new system, the users can be migrated at their own pace. Both the legacy system and the new system are running simultaneously until all users have shifted to the new system.

The success of this strategy depends on the ability to ensure that data is up-to-date in both systems. Any changes in the legacy system must be reflected in the new system. Once all users are working in the new system, you will decommission your legacy system and archive your data.

“...together with consultants from PROSTEP, we have already developed a concept showing how we can use PLM to provide optimum support for our new product engineering process, what tasks need to be completed at a given level of maturity, and what work packages result from this...”

Matthias Steinman, Manager Central R&D Services at Karcher

KÄRCHER

Strategic Migration Depends not only on Strategy, but Execution

An appropriate strategy will eventually lead to the execution of a thoughtful plan. PROSTEP recommends having a migration technical / program office. This team would be responsible for all migration related materials, internal publicity and training setup for the new system. Moving the data is easy, but getting your team acclimated to a new system can be challenging. Many users have a ‘preferred’ method of doing their work, and any change can potentially cause resistance.

A successful migration demands careful planning. At a bare minimum, your plan should include the following:

- Clearly defined scope
- Migration requirements and implementation specification documents
- Integration and migration scripts
- Execution of migration rehearsals (full data executions)
- Full data migration
- Go-live and on-going synchronization

Your plan should also include answers to the following questions:

- Is training and support in place for the new PLM?
- Do you have a public relations and PLM change acceptance plan?
- Is your business capable of handling the event to switch to a new system?

You've chosen the right strategy...

You've created a plan for execution...

Do you have the right toolset to carry out your data migration?

OpenPDM Migrate is a tool that enables you to migrate existing data from your legacy system to a new system using either big bang, trick (phased) or coexistence migration strategies. OpenPDM Migrate transfers individual parts, BOMs, documents and complex product structures to a new system.

Using OpenPDM Migrate affords you many benefits. The toolkit is flexible for different migration strategies given your use case. It offers parallel processing of individual jobs to enable faster data transfer. Further, it can process large volumes of data (multiple terabytes) to ensure high quality data transfer in a target system. The toolkit gives you a graphical monitoring interface to help you understand and optimize your migration process. Do you have CAD Data? OpenPDM Migrate has a CAD conversion option to migrate CAD data to new CAD systems.

- ETL Tools - OpenPDM Migrate's ETL tools gives you predefined processes and the ability to have a staging database for testing your migration.
- Reporting- OpenPDM Migrate has standardized reporting structures that are configured to support your use case. Reports include but are not limited to: errors and warnings, data cleansing activities, pre and post migration checks and others. Reports can be run against the live system and provide real time data.
- Integration - OpenPDM Migrate provides ongoing synchronization for coexistence migration strategies. Project milestones will be established that trigger whole program synchronization. You can then reconcile both systems (legacy and target) with updated data. This will trigger OpenPDM Migrate to export, map and import that required data into the target system.



Choose the Right Migration Strategy and Toolkit for Your Project

Waltersheid Powertrain Group took the right approach for planning and execution. Their migration project was completed on time, within budget and scope.

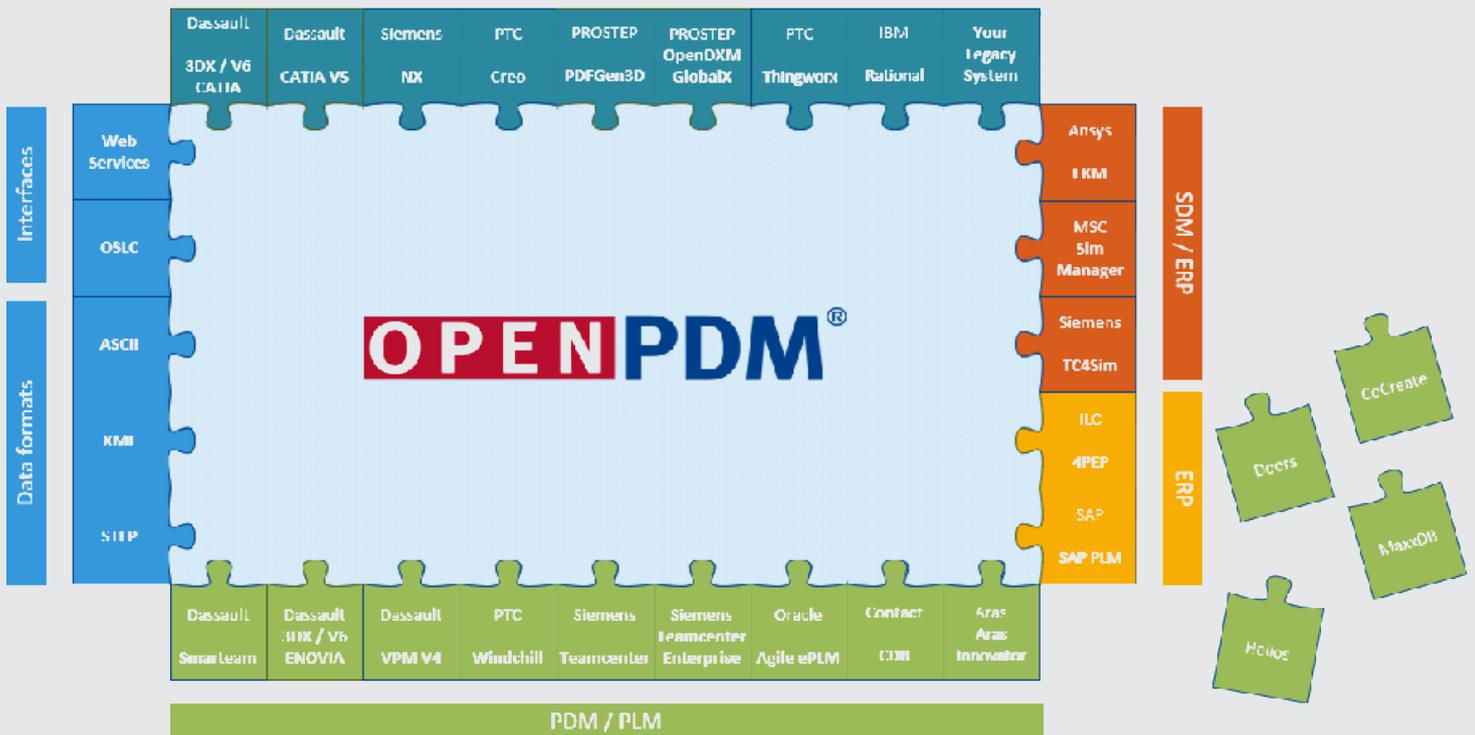
“The proposed project timeline was realistic, reasonable, and ultimately achieved to within a week of the original outlined schedule” - Kirk Jones, Product Engineering Supervisor at Waltersheid Powertrain Group

If you are facing a migration, we want to help you choose the right strategy and execution plan. There are many migrations tools, but PROSTEP is the leading migration expert. If you are interested in a demo and/or proof of concept, we are happy to speak with you. Want to learn more about our migration solution? Visit us here or contact us at infocenter@prostep.com.

More about OpenPDM

The PDM integration platform OpenPDM® not only allows PDM information exchange between different systems but also provides simultaneous access to the entire engineering domain within a single company and via the Web. PROSTEP provides you with connectors to connect data from different vendor systems from separate siloed domains with the OpenPDM® API for the Digital Thread. OpenPDM® facilitates the configuration of integration solutions with varying degrees of complexity so you can connect any number of global systems or engineering data sharing.

OpenPDM Connectors Enable Integration, Migration and Collaboration with Your Business Systems.



The OpenPDM Solution Family

OpenPDM is built with vendor neutral connectors that streamline your product development processes. It's the only solution that integrates all of your systems quickly and in a standardized manner tailored to your business.

OpenPDM Functionality includes:

- PDM System Migration
- PLM System Integration
- Cross Domain Integration
- Bridge between your partners, customers and suppliers

The OpenPDM Solution Family consists of OpenPDM Connect, OpenPDM Integrate, OpenPDM Migrate, OpenPDM Collaborate and OpenPDM C-Center

OPENPDM[®] **CONNECT**

OpenPDM Connect gives you the ability to connect to PLM systems, allowing bi-directional data exchange so your data is synchronized for up-to-date and enhanced product development.

OPENPDM[®] **INTEGRATE**

OpenPDM Integrate allows you the ability to connect to any number of PLM systems whether those systems are used in different systems, departments or locations. OpenPDM Integrate's end-to-end PLM processes gives you limitless scalability that ultimately allows your data to be synchronized through your global product development processes.

OPENPDM[®] **MIGRATE**

OpenPDM Migrate gives you the ability to migrate existing PLM data from an old to new system. OpenPDM Migrate gives you flexible migration options whether you prefer a short, big bang migration, longer transitional phased migration or coexistence.

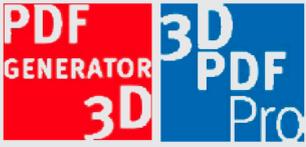
OPENPDM[®] **COLLABORATE**

Going through a joint venture or cross-company long-term product development? OpenPDM Collaborate gives you the framework for automated synchronization of PLM and CAD data for these development scenarios.

OPENPDM[®] **C-CENTER**

Do you need a self-contained collaboration platform to enhance your product development? OpenPDM C-Center gives you the ability to share data for your distributed development projects and cross-company project work.

Other PROSTEP Solutions



PDF Generator and Intelligent Documents

PDF Generator 3D is your server-based solution for merging 3D CAX data, PLM Metadata and associated documents into intelligent PDF documents. Our solutions are fully based on original Adobe technology.

The 3D data can be easily combined with other types of information and protected against unauthorized use. Intelligent documents know their way around an organization. Use them for collecting end user metadata and automatically importing them back into enterprise systems, enabling true bi-directional capabilities.



OpenDXM GlobalX - A New Generation of Data Exchange Solution

The OpenDXM GlobalX platform is your most secure, stable and effortless exchange of all data via the Internet. OpenDXM® GlobalX gives you a highly secure encryption concept and has been optimized for the stable transfer of large volumes of data. GlobalX is a fully scalable Managed File Transfer (MFT) solution with the ability to integrate with Windows OS, as a stand-alone web portal, seamlessly with mail clients like MS Outlook, or deeply embedded straight out of CAX or PLM systems, for powerful secure enterprise integration options.

“ ...we now have a uniform solution that we can use not only to exchange data automatically, but also to upload and download data manually... That not only makes life easier for us here in the IT department, but also for users in the specialist departments... We have increased the number of licenses within a very short time...”

Jorg Hartmann

Head of IT PLM - MeyerWerft



Who is PROSTEP?

PROSTEP INC is the wholly owned subsidiary of PROSTEP AG and is located in the hub of the US automotive industry, Birmingham, MI. PROSTEP is the leading vendor-independent PLM consultant for the discrete manufacturing industry. With 250+ employees throughout and 20+ years of experience, PROSTEP specializes in PLM consultancy services and engineering solutions. PROSTEP are experts in providing leading global manufacturing companies with the support they require for designing and optimizing their internal and cross-enterprise development processes.

Vendor neutral independent consultants position PROSTEP as the leading integration/migration, 3D PDF and secure data exchange experts. You'll feel confident knowing we partner with some of the following leading vendors:

Technology Partners:



PROSTEP Customers

<h3>AUTOMOTIVE OEM'S</h3>	<h3>AVIATION / AEROSPACE</h3>	
<h3>AUTOMOTIVE SUPPLIERS</h3>	<h3>SHIPBUILDING</h3> <h3>TRANSPORTATION / GENERAL ENGINEERING</h3> <h3>CONSUMER ELECTRONICS</h3>	<h3>OTHERS</h3>

Do you have any comments or questions?

We look forward to your feedback at
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