



*Guide*

# When Your PDM System Becomes a Risk

**Chances, options, and tips  
for smaller companies**

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# Replacing PDM systems?

Poor Product Data Management (PDM) is often a blind spot in engineering. It drives up operating costs, slows down processes, and impairs customer satisfaction. Here's a case in point:

Due to its PDM system, a tier 3 supplier from the automotive industry ran into difficulties in 2024. The company was using an outdated tool whose weaknesses its engineers frequently complained about. While management was aware that the software wasn't functioning optimally, IT had advised against a system update due to potential maintenance issues, and the company wanted to avoid the costs of new software. Consequently, they decided to maintain the status quo.

What management didn't realize, however, was that employees were only using the PDM system occasionally. This led to shadow workarounds and errors in data versioning. For instance, because the software was too slow, CAD data was stored locally and shared via email. Often, multiple people worked on the same files in parallel. This chaos resulted in a tool being manufactured based on outdated information. The faulty product required significant rework and delayed the development project by several months.

## What's in this guide?

Systematic problems with PDM solutions are not uncommon, especially in small companies. Slow, functionally limited software that is not available via web or cloud services complicates project coordination and causes errors. Management is often unaware of this.

This guide explains why Product Data Management should be a priority even for SMEs. You will learn,

- how inefficient PDM slows down engineering efficiency,
- when a PDM system is no longer fit for purpose,
- your options for a follow-up solution, and
- what factors are important for selection.



# Problems due to bad Product Data Management

In companies with product development teams of just one or two dozen engineers, PDM often plays a minor role. It's largely seen as an engineering responsibility and is commonly handled with outdated systems or without specialized software. The resulting errors, inefficient processes, and unnecessary costs frequently remain hidden from management.

Companies looking to replace their PDM system often tell us about such problems. We have compiled some quotes from the engineering departments of these companies here for you. Do any of these points sound familiar to you?

## Project management is tedious

*“The effort required for coordination within engineering, but also with customers, is tremendously high. We are constantly battling misunderstandings and delays and virtually never complete projects on schedule. Even as a project lead, I lack a clear overview of the development status. We often identify problems far too late.”*

### Why is that?

Pure PDM solutions offer little support for project management and communication with external partners. Since project and product data are not linked, there is no central source of information. This complicates the planning, execution, and control of projects. Teams constantly must

exchange information on factors such as the status quo, resources, or changes. This is time-consuming and makes it difficult to respond to risks or problematic developments..

## Users are frustrated with the system

*“Load times are very restrictive, especially when working from home. Searching for files, for example, is time-consuming. Many colleagues now only use the system as much as necessary. As an engineer, I find working with the software frustrating. My everyday work is already dominated by time pressure. There's little room left for new ideas and innovations.”*

### Why is that?

When a PDM system has been in use for several years, long load times are not uncommon. Its usability is also limited compared to modern software. For instance, many PDM systems often operate on a file-based system. They store information not in a database, but in individual files. This easily leads to data inconsistencies and misunderstandings. Such seemingly minor factors are an unnecessary burden for the engineering team. Furthermore, new colleagues find it difficult to get to grips with the software.



### Change management is error-prone

*„Evaluating, implementing, managing, and documenting new or changed customer requirements is tedious. Many tasks have to be performed manually. Since documentation is not automated, important information has been lost more than once. We find it difficult to identify problem causes or risks and to learn from mistakes.“*

#### Why is that?

PDM systems without dedicated change management are often more of a hindrance than a help when collaborating with customers. Typical examples include cumbersome manual workflows or difficulties in tracking changes (approvals, impacts, etc.). These functional gaps hinder collaboration, as well as compliance with regulations, security, and process standards.

### Effective knowledge management is not possible

*„During the COVID-19 crisis, we managed to get by with short-time work. Our Head of Engineering then left the company after 20 years. His experience is still missed today. The colleague who replaced him has to build up a lot of knowledge from scratch.“*

#### Why is that?

Companies cannot systematically document the experiences they gain during their development projects within a PDM system. This complicates the transfer of knowledge for subsequent projects. For example, factors that drove up the calculated project price are not considered when preparing the next quote. Furthermore, when individuals leave the company, valuable knowledge is lost. In times of skilled labor shortages, it is almost irreplaceable.

### Compliance requirements generate too much effort

*„Laws and compliance requirements mean significant additional effort for us. To provide information, we have to compile the required data from different systems. Unfortunately, it has already happened that a customer complained because our data was incomplete.“*

#### Why is that?

Laws and environmental regulations, such as the EU's CSRD directive, introduce new disclosure requirements. While these primarily concern OEMs and Tier 1 suppliers, these companies pass on the requirements to their suppliers and partners. Therefore, even smaller companies must be able to reliably collect, consolidate, and transmit data (like the CO2 footprint of manufactured products) to third parties. If they send incorrect or incomplete data to their clients, it is difficult to rectify this retrospectively.



## When should you replace your PDM solution?

PDM software is deeply integral to product development workflows. While it's understandable that companies wouldn't readily replace a functional system, there are three scenarios where replacing a PDM solution becomes necessary:

### 1. The software is no longer in development:

In recent years, some PDM providers have ceased upgrades and support for their products. While customers are still able to use the software, it can no longer be adapted to updates of operating systems, databases, or Java versions. The consequences are security risks and functional limitations.

### 2. The software no longer meets requirements:

New customer demands and regulations necessitate modern, reliable data management. Older PDM tools reach their limits, especially in complex projects with many internal and external stakeholders, for example, when handling CAD assemblies or integrating with external IT infrastructures..

### 3. Users are struggling with the software:

Older PDM systems impair the efficiency of collaboration. Long waiting times, cumbersome features, and poor usability increase the risk of errors.

## What options do you have?

Companies looking to realign their product data management have two options:

#### ■ Upgrade the PDM System:

If product support is only discontinued for older versions, companies can perform an upgrade (including data migration). While possible, it's relatively uncommon

for SMEs to customize the system via in-house programming.

#### Replace the PDM System:

If a solution is no longer being developed or its functional limitations are too significant, you must find an alternative. This could be a new PDM tool, or comprehensive software such as ERP or PLM.



### What makes sense?

Not all problems caused by outdated software can be solved even with newer PDM software. These are tools with a strong focus on engineering. They are difficult to scale, customize for future requirements, and integrate with other systems. Managing, processing, and sharing data in a compliance-compliant manner with customers or partners is therefore more complex than necessary.

The requirements that customers pass on to their suppliers

via the supply chain will increase in the coming years. Therefore, it is important for SMEs too, not to view Product Data Management merely as an engineering task. It also makes sense for them to think further about digitalization with enterprise software like Enterprise Resource Planning (ERP) or Product Lifecycle Management (PLM).

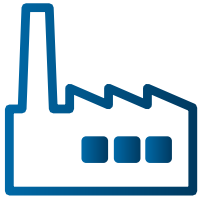
For industrial companies, PLM systems are the more sensible choice. ERP typically focuses on resource planning and offers only limited support for managing objects such as CAD data, bills of materials, version control, or engineering workflows.

PLM explicitly focuses on the requirements of product development and links these with all processes throughout the product lifecycle, from conception to decommissioning.

Product Lifecycle Management is also attractive for SMEs today. Software-as-a-Service (SaaS) models have proven effective in this regard. Companies can implement PLM software with little effort and utilize it quickly. Since the platforms are delivered without extensive customizations and subscriptions can be canceled regularly, the financial risk remains limited.



# 9 tips for system replacement



## Look for industry relevance:

Software not tailored to industry requirements quickly leads to inefficiencies due to functional gaps.



## Seek Cloud and SaaS models:

Software-as-a-Service-Plattformen bieten einen schnellen Einstieg und ersparen Aufwand für Wartung und Pflege der Software.



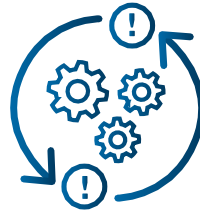
## Ensure security and data privacy:

Companies should carefully review the provider's security measures and clarify whether all relevant data protection and compliance guidelines are adhered to.



## Try out usability:

Software should not only meet all functional requirements but also be easy to use.



## Clarify integration:

The new solution should be connectable via open interfaces to the company's most important data repositories, as well as the systems of customers and partners.



## Assess migration expertise:

The new provider should have experience migrating large amounts of data and use a structured, proven process for it.



## Enable scalability:

With modular platforms that can be expanded as needed, companies are able to successively increase their digital maturity.



## Utilize consulting and training:

Software only fulfills its purpose if it is meaningfully embedded in processes and accepted by employees. Therefore, the provider should support customers during both integration and system usage.



## Prefer a Web Client:

Older PDM systems are typically only available as a Rich Client. Platforms with a Web Client are easier to manage, update, and scale.

# From PDM to PLM

Poor Product Data Management continuously impacts operating costs. It creates inefficient processes, distracts employees from more important tasks, and complicates collaboration with customers and partners. To remain competitive, a system change is unavoidable at some stage.

Considering the future IT requirements that clients will place on their suppliers, companies should not view their PDM in isolation. It is a key task for successful engineering that can be solved more productively with platforms like PLM. Today, even smaller companies benefit from this. SaaS models have proven effective. They can be implemented quickly and easily without extensive customizations and limit the financial risk for SMEs through tailored pricing models.

## About CIM Database Cloud

CIM Database Cloud is a cloud-based PLM system. It helps companies of all sizes to streamline their product development processes. The software is based on CONTACT Software's CIM Database PLM solution and offers all functions for modern data, workflow, project, and change management. Your company can centralize the management of all product data and improve collaboration between departments. Thanks to its cloud architecture, you benefit from high flexibility, scalability, and cost-efficiency.

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