HOW TO INCREASE PRODUCTIVITY

with **Integrated Product Data Management**

BY PLM GROUP

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Experience 3D

This is what you need to know to increase productivity with integrated product data management

The demand for faster product development, higher quality and minimized cost stresses the need for companies to have an overall strategy for managing product data to meet competitive goals and profitable operations.

However, many organizations working with specialized CAD departments do not utilize the benefits of product data management in this process.

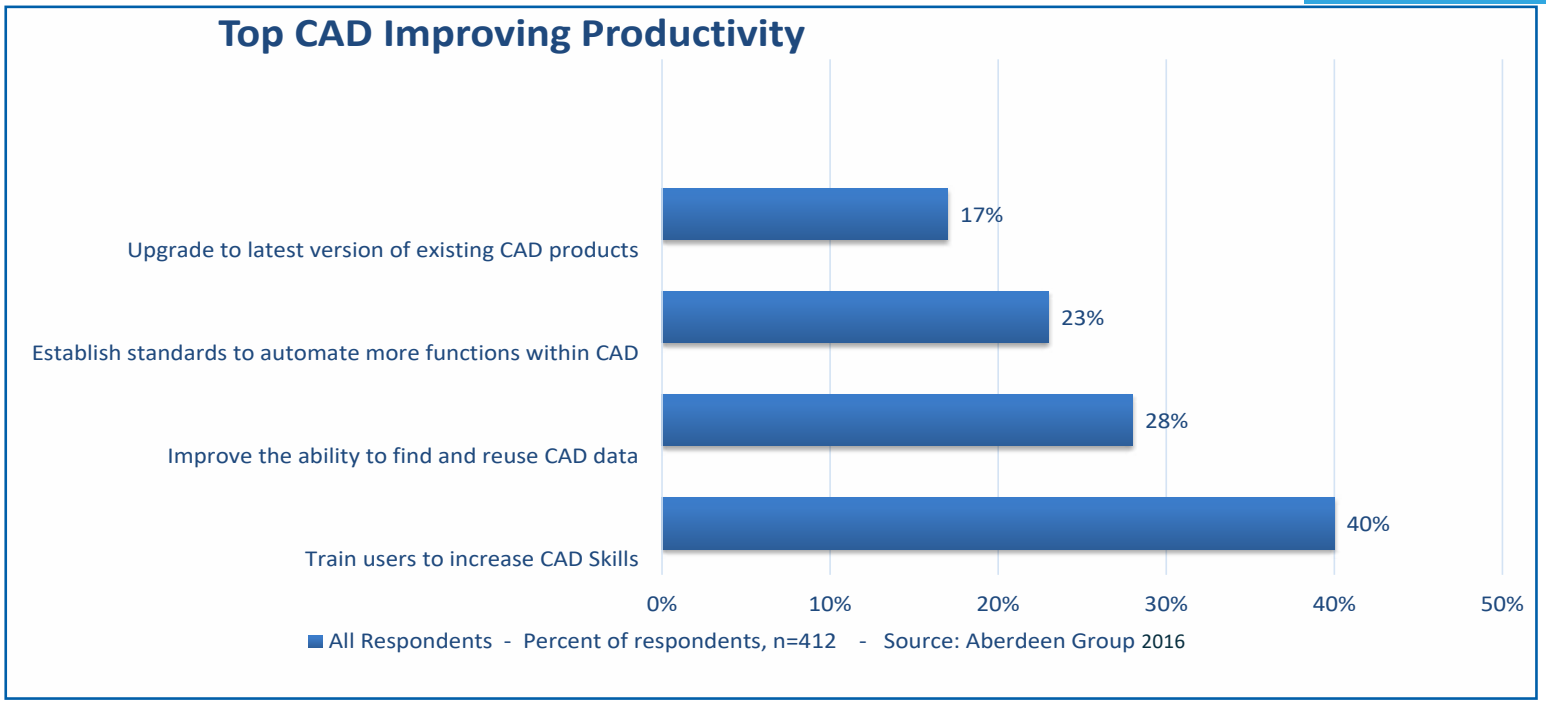
Using an integrated product data management solution allows companies to leverage data across the entire company to make better decisions about product development, management, design and production. This e-book will investigate how integrated product data management can improve business cases through increased productivity and higher ROI.

Product data management – organizing and unifying

With the increased complexity and amounts of CAD projects being developed, organizations tend to be overwhelmed by the amount of data generated. Multiple files saved – not only every time a new project is commenced but every single time a change has been made – puts pressure on internal procedures.

Moreover, different versions of software and even multiple CAD-systems within the same organization leads to vast amounts of unrelated files. In a recent report, Aberdeen Group asked a representative number of CAD-users about productivity. Results showed that 28 % find the main key to advance productivity is to improve the ability to find and reuse CAD data.

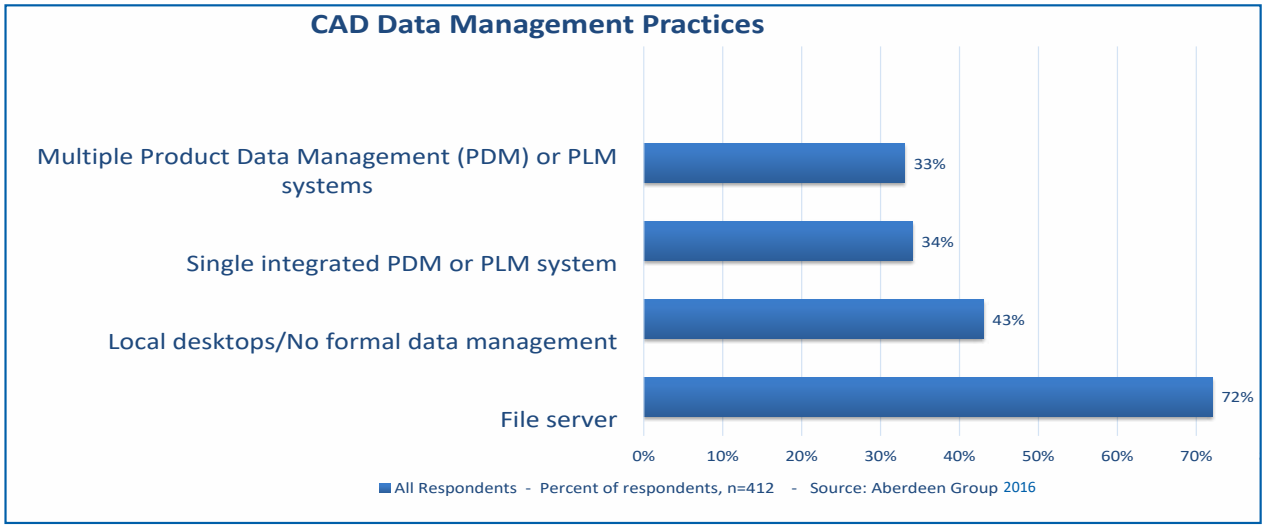
Since 1988, Aberdeen Group has published research that helps businesses worldwide improve their performance. The analyzes derive fact-based, vendor-agnostic insights to identify Best-in-Class organizations from research conducted with industry practitioners. The survey conducted for this particular report is done with a sample size of 412 people, and in all questions, it has been possible to provide multiple answers.



How to improve productivity

It proves a serious issue when more than a quarter of those surveyed state that the ability to find and reuse data is their biggest headache. Especially as this issue is second only to “increased CAD skills among the staff” as the most important aspect to improve productivity.

This is just one of the problems where product data management proves superior. By organizing and unifying how your CAD-employees handle product data by a set of automated policies, seamless access to data becomes a competitive advantage by improving time to market and lowering overall design and development costs.



The challenge of managing product data

It has been estimated that the average designer or engineer loses 25% of their time to data management. Searching, updating systems, recreating data saving and backing up data across platforms are time consuming tasks. This combined with incompatible systems and file formats leaves many organizations with a technical challenge that becomes both a productivity and competition issue.

It might come as a surprise that 72% of the respondents in the Aberdeen Group study said their organisation does not use any kind of automated solutions for file management.

The most common way to handle product data by individual employees is to store them on a file server or local desktops workstations.

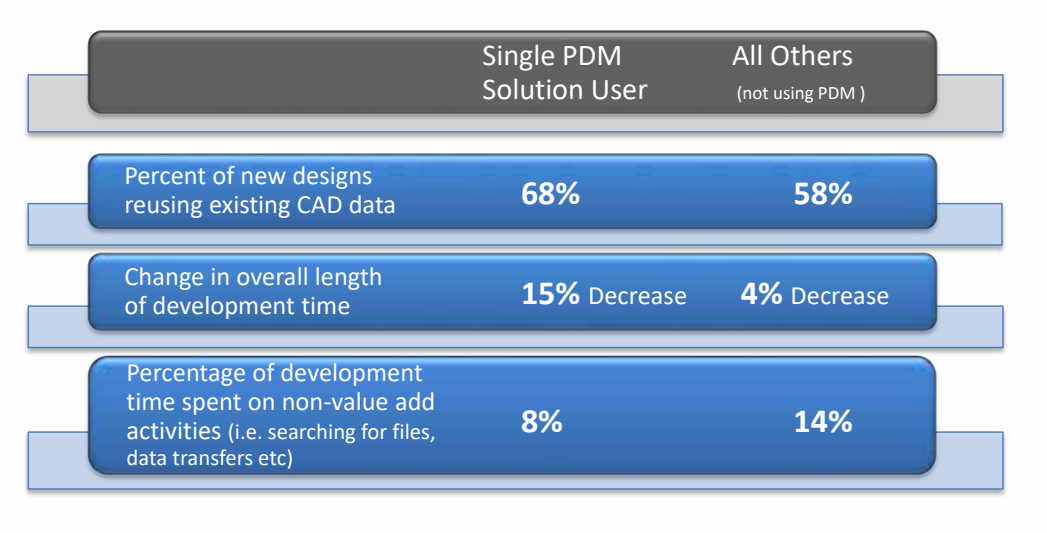
This practice makes it difficult to access and share data, and quickly find and reuse already created projects. And this is not just a theoretical risk.

Users of product data management build projects faster

Aberdeen Group studied segments consisting of both users of Product Data Management (PDM) or Product Lifecycle Management (PLM) solutions for product data management and CAD users without any data management solutions.

The study showed that PDM-users are more likely to build new designs by reusing existing CAD data. While non-PDM-users use existing designs 58% of the time a new project is commenced, the PDM-users will do it on 68% of the occasions. This minor difference in percentages might not sound like a lot, but here comes a more important finding: The change in overall length of development time for those using PDM is a 15% decrease, while the non-PDM users only saw a 4% decrease. This documents that an integrated system for reusing CAD-files actually leads to more reusing and therefore an increased productivity, which will accumulate over time as the catalogue of reusable projects grows.

The Aberdeen Group survey also asked companies about the hardware configurations of workstations and networks used by PDM users and non-PDM-users respectively. It turns out that PDM-users are far more likely to take advantage of the newest hardware configurations and advanced setups. It is among the PDM-users that we see the highest frequency of use of 3D controllers, Cloud Computing and advanced monitor set-ups.



What is PDM and PLM?

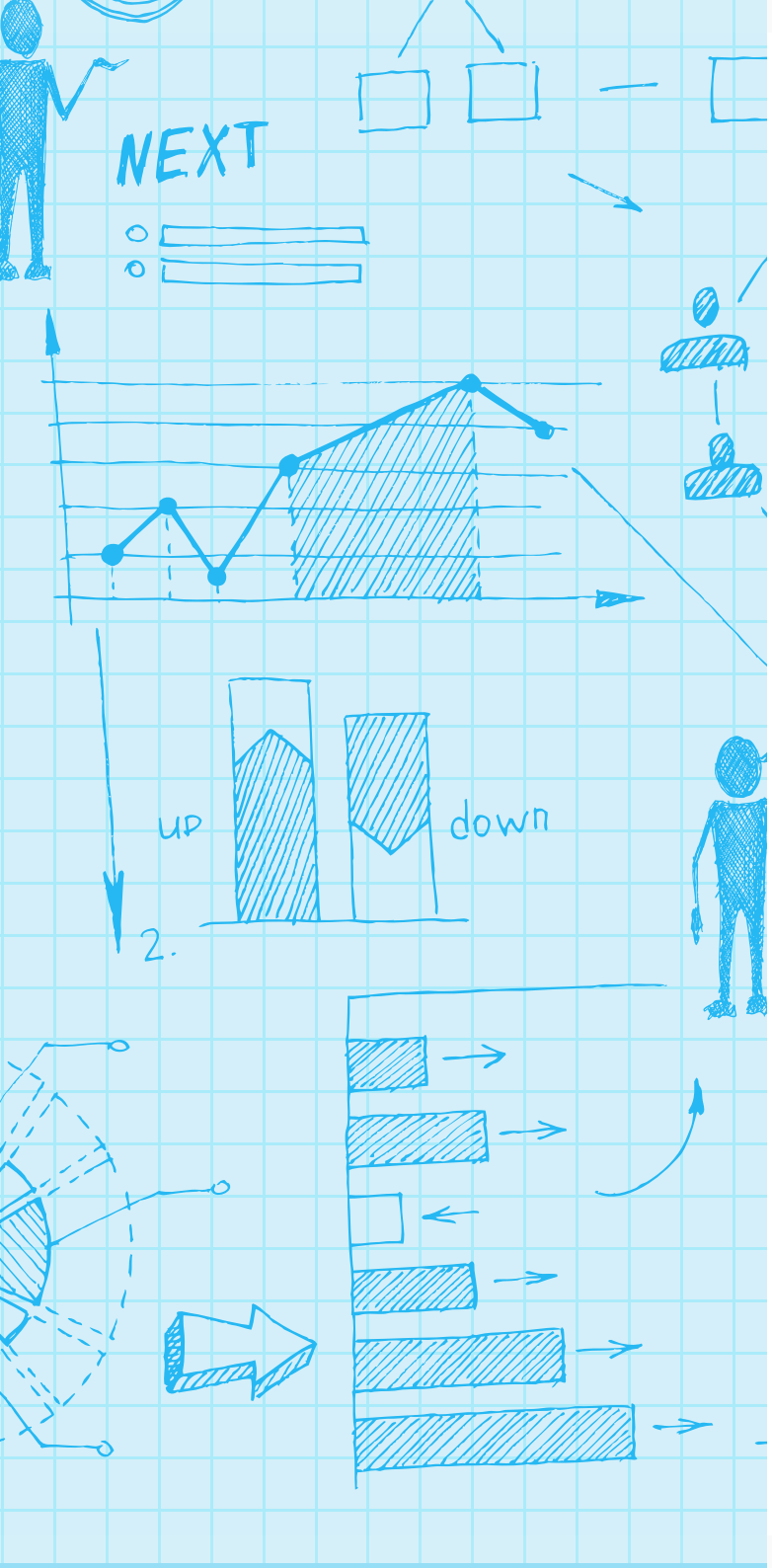
PDM is the common abbreviation for Product Data Management. PDM solutions help you get your design data under control and substantially improve the way your teams manage and collaborate on product development. In this context it is synonymous with the term 'CAD Data Management'. Another often used abbreviation is PLM, Product Lifecycle Management, which is the process of managing the entire lifecycle of a product from inception, through engineering design and manufacture, to service and disposal of manufactured products.

Working with a Single Data Management Solution

The benefits of an integrated product data management solution are both measurable and obvious to the companies already working with an integrated solution. It allows for better decision making, faster, more precise product development and far more streamlined overall management of processes, combined with less time spent on unproductive tasks. We see that companies still not using product data management are troubled by:

- ***Spending unnecessary time searching for engineering data for reuse in new projects***
- ***Excessive time spent copying and renaming CAD files and fixing broken references within those files***
- ***Slow open, loading, and saving of large CAD-files when data is stored on a shared file server***
- ***Weighty project and file collaboration between multiple users***
- ***Manual processes of approving, releasing and sending documents***

To take the step the organization must unify its processes and accept the initial costs and overcome the potential for initial productivity loss and errors. For some organizations this is not only a question about cost/benefit but also about changing habits and how the CAD-teams cooperate. The risk of productivity loss by not getting started with a data management solution is far higher.



Best practices for Product Data Management Solutions

Product data management solutions range from simple file management systems, that simply defines where files are located and when they have been edited, to solutions fully integrated in your CAD system.

At the core, a data management solution for CAD teams should be a secure vault, extending the access to your organizations 3D design environment and associated files – for all participants from engineering through manufacturing. Such an approach enables every participant involved in your projects to share information and collaborate on designs while automatically protecting your intellectual property with automated version and revision control systems. Furthermore, a product data management solution should:

1 Establish relationship between data from past to future projects

A completed CAD design including every part, drawing and assemblies should be viewed as an investment in future projects. A data management solution is the key to establish relationship between data from past to future projects by tracking content information in a shared file storage environment. Using automated version control and revision control systems also secures data and intellectual rights while improving the way your team manages and collaborates on projects.

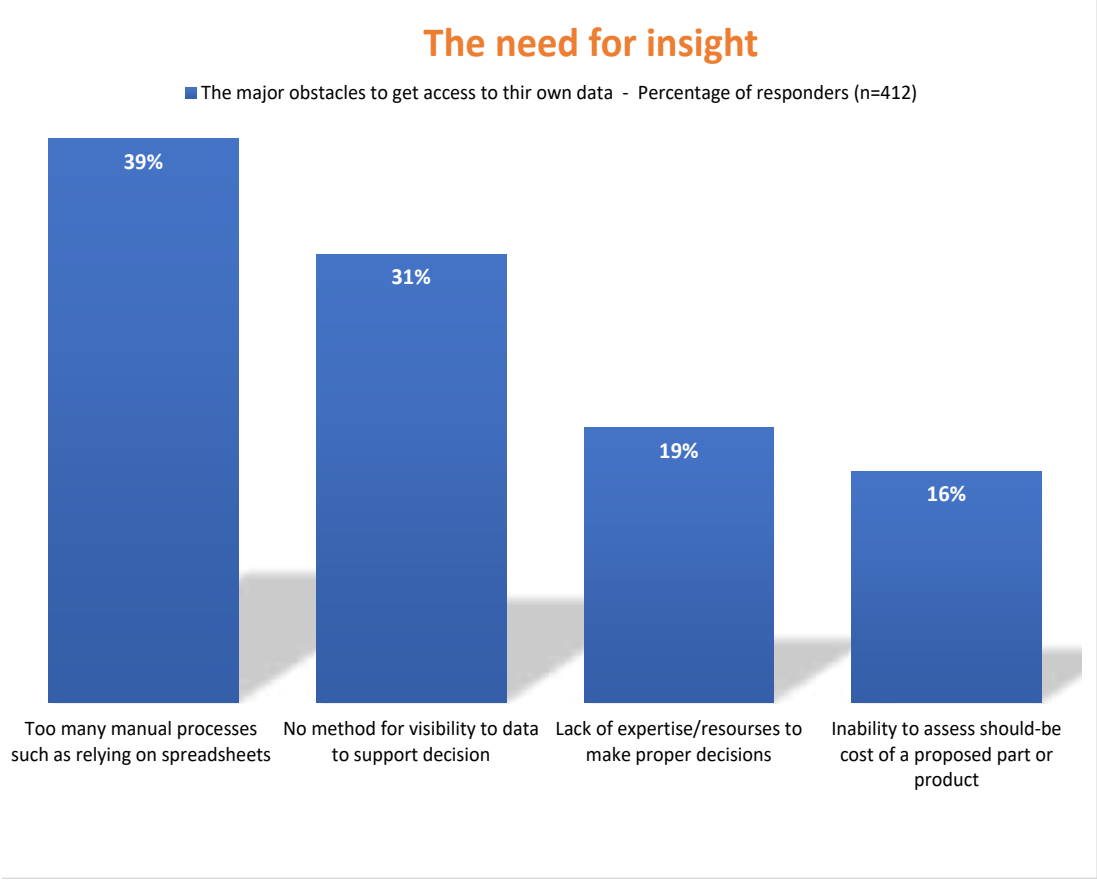
2 Implement a system for access to files

A modern data management solution will allow for a complete, transparent log of revisions of every single file. A full history of all operations and all CAD-files makes it easy to avoid redundant work and take advantage of multiple user's additions to the designs. Synchronization of user access will ensure that redundant versions will not occur in situations where multiple users, perhaps in different time zones, are working on the same files or projects. Access to files should be restricted so users cannot overwrite existing files. And since every edit is a potential asset, they should be fully documented. This functionality should be a built-in feature of your new data management system.

3 Automatize workflows

Integrated workflows that automate design and approval processes for more efficient review and release of final designs are important. For instance, a product data management system, such as SOLIDWORKS PDM can automatically search for existing CAD models for possible reuse when a new project is initiated. Keep in mind that the Aberdeen Group survey revealed that PDM users are 37% more likely to reuse CAD models.

The need for faster product development, rapid advances in product technology and more complex design processes puts increasing demands on organizations to organize how they handle information. We see that organizations taking up the challenge with product data management are thriving. And with their new insights they gain a deeper understanding of their value chain. This makes them capable of taking precise data-driven decisions and reach competitive advantages.



Key findings from the Aberdeen CAD management survey:

The need for insight

A challenge for companies is to get access to data on their own product development processes. The major obstacles, according to the interviewed in the Aberdeen survey, are:

- ***Too many manual processes, such as relying on spreadsheets: 39%***
- ***No method for visibility to data to support decision: 31%***
- ***Lack of expertise/resources to make proper decisions: 19%***
- ***Inability to assess should-be cost of a proposed part or product: 16%***

EMPLOYEES
130

NUMBER OF OFFICES
17

REVENUE
30 million Euros

PRESENT IN
Sweden, Denmark, Norway, Finland, Iceland, Estonia and Latvia

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About PLM Group

We make our customers more successful by building capabilities to deliver better products faster. We have over 20 years' experience in helping engineers and product developers make inspirational, ground-breaking high quality products better, faster and more cost-effectively.

We're the largest Dassault Systèmes SolidWorks partner in Northern Europe serving 5000 customers across a wide range of industries in Sweden, Denmark, Norway, Finland, Iceland, Estonia and Latvia. Common across all our solutions is fast implementation and short payback time.

Have you laid the foundation for your digital value chain?

We can help you do that. We can help you seamlessly share digital information across your organization. From product concept to procurement to marketing to aftersales.

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