# PDM assistant
## Engineering solutions

Information support for manufacturing companies




**An effective information management system for small and medium-sized manufacturing companies**

- Ease of use
- Flexibility to customer needs
- No implementation costs
- Unlimited number of users
- Modular structure
- Adding features at customer request

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We present an information management system for small and medium-sized manufacturing enterprises that is extremely easy to use and has no implementation costs. The main objectives of the system are:

- Organizing information for the design, production, and delivery of products.
- Managing information on key aspects of company's operations—from supply contracts to shipment.
- Monitoring the status of processes at all stages.
- Organizing user workflows based on personal assignments automatically generated by the system.
- Facilitating access to information through an intuitive interface.
- Freeing up user time by automating routine processes.
- Integration with other systems — CAD, office applications, e-mail.

The system's operation transforms technical, production, and operational information into a single information flow, from which reports on the current status of projects and current implementation needs can be obtained at any time. The information flow has a modular structure that can be expanded as the complexity of the process increases.




The system is available in **Lite** package with standard features or **Pro** package with standard and advanced capabilities. Both packages offer a wide range of basic functions for managing data anytime, anywhere. The capabilities of both packages are divided into several core modules:

- Projects and Sales Management module (PM).
- Products Data Management module (PDM).
- Component Purchase Order Management module.
- Production Management module.
- Finished Product Shipment Management module.

## PDM or ERP?

The main tasks of the **PDM assistant** are to organize information for product design, manufacturing, and supply, facilitate access to this data, and monitor its status at every stage. But what does this actually mean? First, let's break down the key terms used::




**BOM (Bill of Materials)** - a specification containing a list of materials, parts, assemblies and their quantities.

**CAD (Computer-Aided Design)** – software for design engineers to develop products on a computer.

**PDM (Product Data Management)** - software for managing technical data (including documents) of a product.

**MRP (Material Resource Planning)** - software for planning materials resources in manufacturing.

**ERP (Enterprise Resource Planning)** - software for planning all enterprise resources, including human resources.

**IDM (Identity Management)** - access control and user credentials management software.

Engineering documentation primarily consists of drawings and specifications and stands at the beginning of a product's information flow. Various CAD systems have proven to be highly effective and well-established solutions for product design and documentation release. Companies that have designed their products using 3D CAD systems for many years have no doubts about their business necessity. They know perfectly well that 3D CAD design brings substantial financial benefits and is an investment worth making.

Various BOMs form the core of product data - ranging from a simple engineering BOM for a subassembly to a consolidated BOM for the entire product. The specific types of BOMs a company utilizes depend on the complexity of its manufacturing process, but the engineering BOM and the consolidated BOM are always used. The former is created by the engineer during the documentation release, while the latter is calculated by aggregating all BOMs included in the product. It is this consolidated BOM that serves as the foundation for calculating and planning all subsequent manufacturing processes..

Design engineers generate a massive volume of files and documents, which raises the challenge of organizing and managing this data. This is exactly what PDM systems do. This is also why the vast majority of PDM solutions currently on the market are tightly linked (integrated) with a specific CAD system. Because the level of integration is quite high, they have proven to be highly effective tools for drawing and BOM version control, thereby reducing the time engineers spend searching for the right data and eliminating errors. Product data - primarily 3D models and their associated 2D drawings - is gathered in a centralized database accessed by members of the engineering team (CAD users).

However, product development is rarely performed using a single CAD system today. For example, various systems may be used: mechanical components design systems (3D CAD), electronic component design systems (ECAD), plan and schematic creation systems (2D CAD), computer numerical control machining systems (CAM), and computer-aided engineering systems (CAE). Furthermore, in real-world production, data from a PDM system only is insufficient, because employees in other departments (e.g., procurement or production) are not CAD users but must have access to design information in an easily format. Therefore, now PDM must be linked to the next levels — material resource planning systems (MRP) and, finally, enterprise resource planning systems (ERP). For maximum management efficiency, project management processes and task generation for all stages must also be integrated into the information flow.




Despite the undeniable advantages of moving to each subsequent level of information organization, the complexity of the process increases proportionally as the range of tasks expands. Assessing the magnitude of challenges in moving to the next level is highly difficult for managers, who often lack the needed experience. Choosing a too simple level may fail to meet expectations and achieve the desired effect, while attempting to implement a high-level solution without the necessary resources can drag on for years, leading to unnecessary costs and disappointment. Even after successfulimplementation of high-level systems, companies often underutilize the full capabilities, meaning the overall effectiveness of the solution is diminished. So, is a simple but highly effective information flow management system possible at a low cost?

Understanding all these challenges, we have developed the simplest possible solution that covers the core enterprise processes—from design to shipment—with zero bloat. See for yourself by trying our system **PDM assistant**!

## Focus on results

Product data on its own is just a collection of information. To turn this data into profit, it must be organized in a specific way—one where every employee knows exactly what to do, when to do it, what results to deliver, and what has already been achieved. That is why in our system, every team member works with personalized tasks automatically generated by the platform. This approach eliminates endless status meetings and cross-department finger-pointing over missing information. Want to know the current project status? Where the engineering docs stand? Whether components have been purchased? - **Just open the system and see for yourself!**

## Understanding the Specifics of Small Businesses

Medium and especially small manufacturing companies have unique characteristics that impact their information flow. The most critical of these include:

- A small, and sometimes extremely limited, technical staff.
- Overburdened management teams.
- Underutilized or completely absent process engineering and production routing departments.
- A modest machinery fleet, resulting in heavily developed outsourcing and subcontracting.
- Tight deadlines for design and production setup.
- The need to process data generated across multiple diverse CAD systems.
- Remote team members working across different time zones.

These conditions inevitably lead to a higher information load on every single employee. As a result, critical data can slip through the cracks, and the company as a whole fails to get the right outcomes. Our system is designed not to consume your users' time, but to free it up by automating routine workflows.

## Integrating Employees into a Unified Team

The system is built for hands-on, daily collaboration. Each team member inputs their piece of data on the fly. As a result, individual time spent on the platform is kept to an absolute minimum, while the enterprise gains a comprehensive, real-time picture of its operations. This is why, after just a short onboarding period, keeping the system open and active for instant updates typically becomes second nature to users.

## Core Features

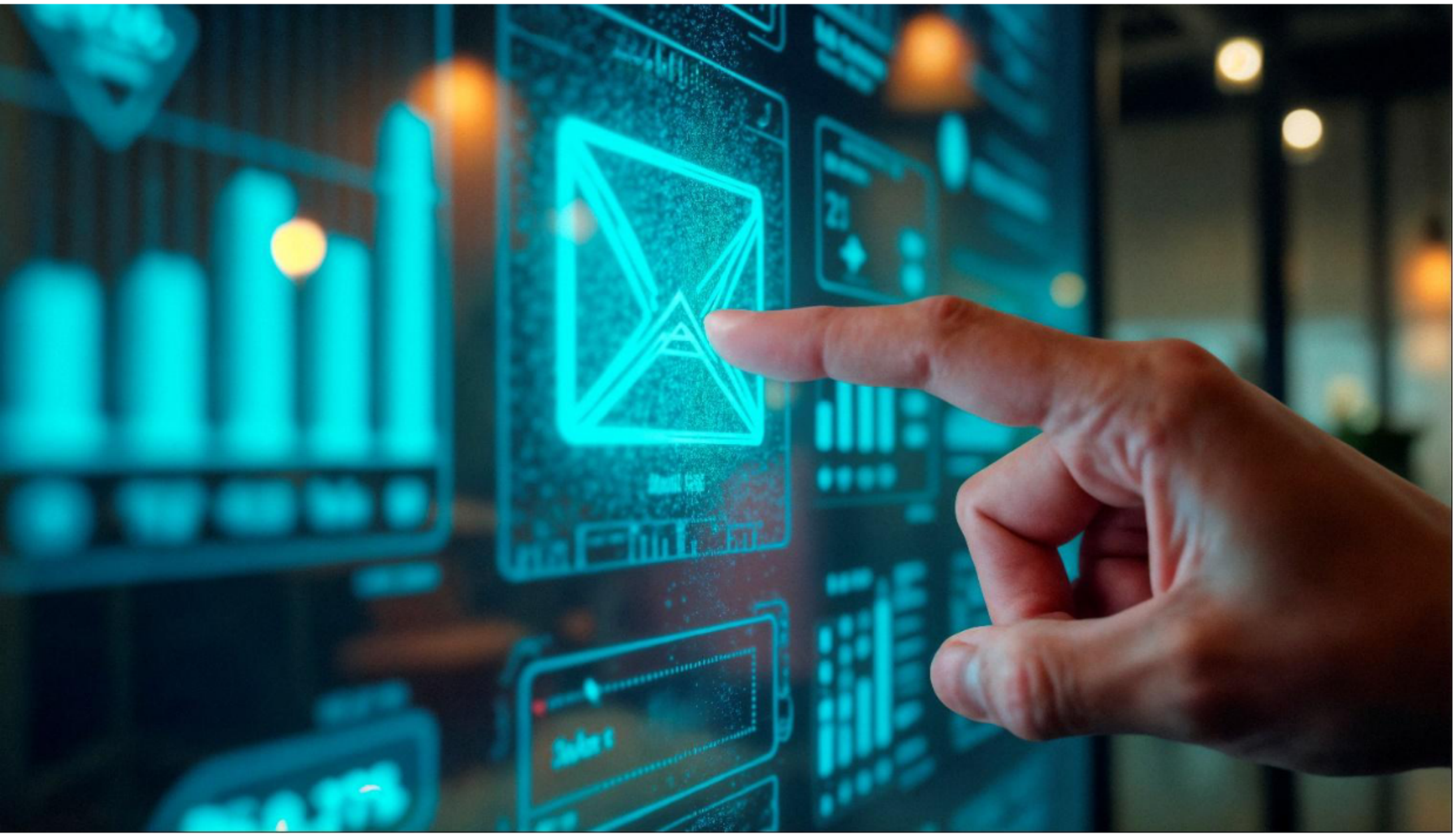
- Standalone, local network (LAN), and internet work support.
- User password authentication and role-based access control (RBAC).
- Data import from major CAD software: SolidWorks, Inventor, AutoCAD, Fusion360, etc.
- Comprehensive database search functionality.
- Data filtering based on the current active user.
- Undo functionality for the last deleted item.
- Color-coded alerts based on deadlines or operational status.
- Product editing permissions driven by document status (in development, approved, canceled).
- Tree-view representation of product structures (BOM tree).
- Where-used list for tracking component usage across products.
- Direct access to document files (e.g., viewing PDF drawings, retrieving CNC files in DXF/DWG/STEP formats, etc.).
- Automated task generation and performance tracking.
- Email distribution for RFQs (Requests for Quotes) and component purchase orders.
- Consolidated Bill of Materials (BOM) generation for each project item based on engineering BOMs.
- Consolidated routing sheet generation for each project item based on part routing data.
- Secure access to financial data governed by user permissions.
- Material and financial cost reporting for every project item.
- Statistical reporting on orders and component procurement.
- API integration that connects third-party software actions (CAD, etc.) to the system database without opening the system interface (e.g., registering a unique part number in the database while automatically creating a new CAD drawing with that number)

## Advanced Features

- Version control and revision history tracking.
- Quality control (QC) procedure logging.
- Product lifecycle management (PLM): serial number generation, field tracking, and warranty claim management.

## Have Questions? Get in Touch!

No question will go unanswered. Furthermore, our system is continuously evolving, and its development roadmap is closely driven by your feedback. Upon your request, we can implement new features or refine existing ones, provided it is technically feasible and brings value. Feel free to share your suggestions—**we are always excited to hear your feedback!**



To help you explore the system's capabilities, we can set up a dedicated meeting for your team. We will visit your facility free of charge to provide:

- A live hands-on demonstration using a dedicated demo version.
- A pilot test of the system using your own data (optional).
- An analysis of your company's information flow, along with optimization recommendations for system deployment (optional).

Fill out the form on our website or email us with your contact details to book your free on-site demo today!