

The '4 PEP' logo is positioned in the upper left. It features a dark blue rounded rectangle with the number '4' in white, followed by 'PEP' in a larger, bold white font.

PRODUCT EXCELLENCE & PERFORMANCE

MACHINERY & PLANT ENGINEERING

PRODUCTS – PROJECTS – PROCESSES

Integrated product lifecycle management –
from preparation of offers to assembly and service



Machinery & Plant Engineering Products – Projects – Processes

The machinery & plant engineering industry has the highest sales volumes and is the most innovative industry in Germany and Western Europe. According to the German Engineering Federation VDMA the engineering industry, with expenditures for innovations of about 13 billion euros, is in a top position compared to other industries. The development of machinery and plants tailored to customers' requirements under long term projects as well as the definition and processing of product variations have always posed challenges to the engineering industry.

The integrated interaction of processes, project and product data at every stage of the product lifecycle is an important key to success. Machines and plants can be developed and produced more efficiently than before when integrated processes are in place. This creates significant competitive advantage.

With 4PEP Machinery & Plant Engineering, this path can be followed easily. You will achieve more efficiency, more transparency and more flexibility by presenting the product life-cycle comprehensively and in an integrated mapping – from the requirements definition to the closure, from offer to service.



Integrated product data, project data and processes – the key to sustainable success

4 PEP

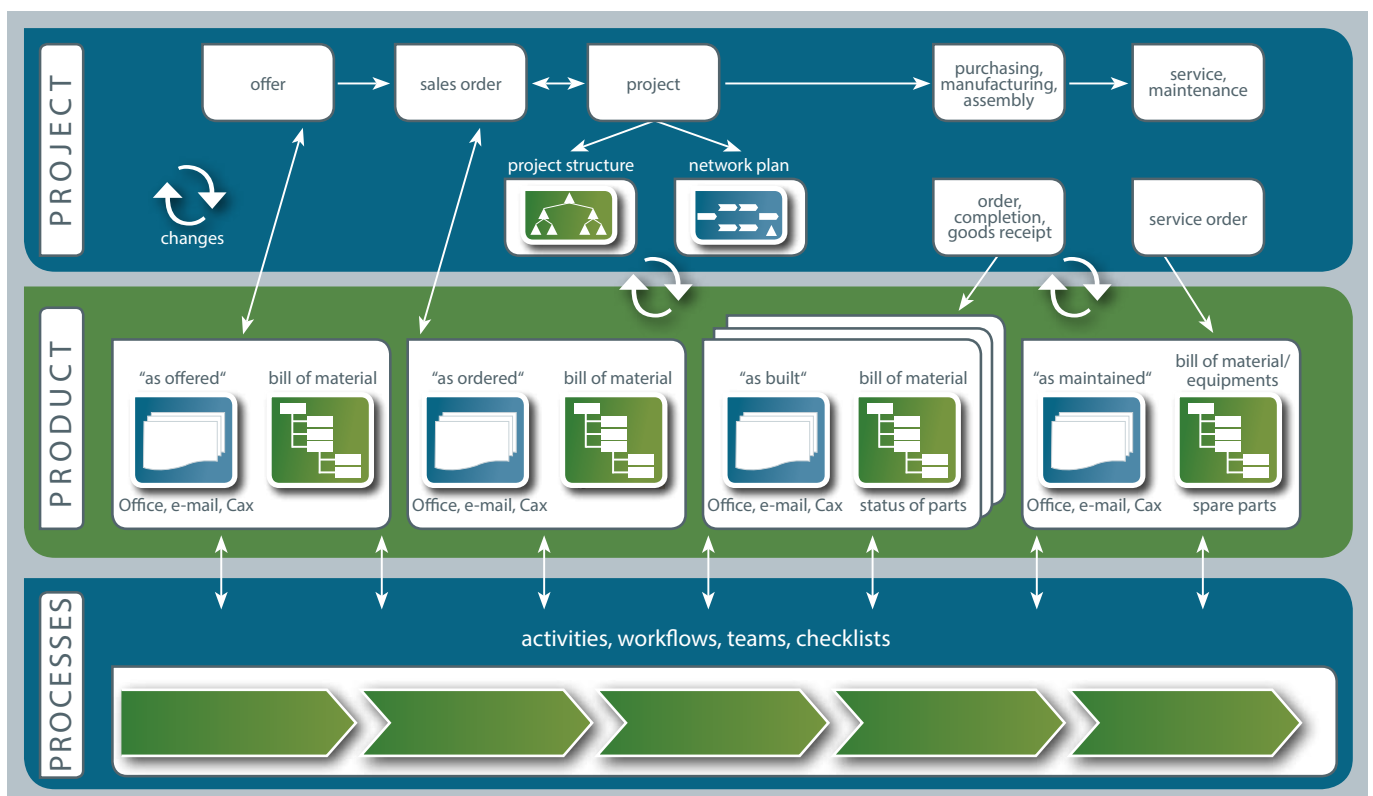
MACHINERY & PLANT ENGINEERING

Achieving an integrated project management without media discontinuity together with having a consistent documentation of the product lifecycle present challenges to many companies. Very often, unsuitable IT tools are used, for example MS Office to enter and manage master data or e-mails to control processes. This has far-reaching consequences for the operative processing of a development project:

- Often, product master data and documents are out-of-date, incomplete and are not managed in a consistent configuration status.
- Product master data and documents are not stored in direct contextual relationship to project management data and order data.
- The progress of processes cannot be monitored, there is no process reliability.

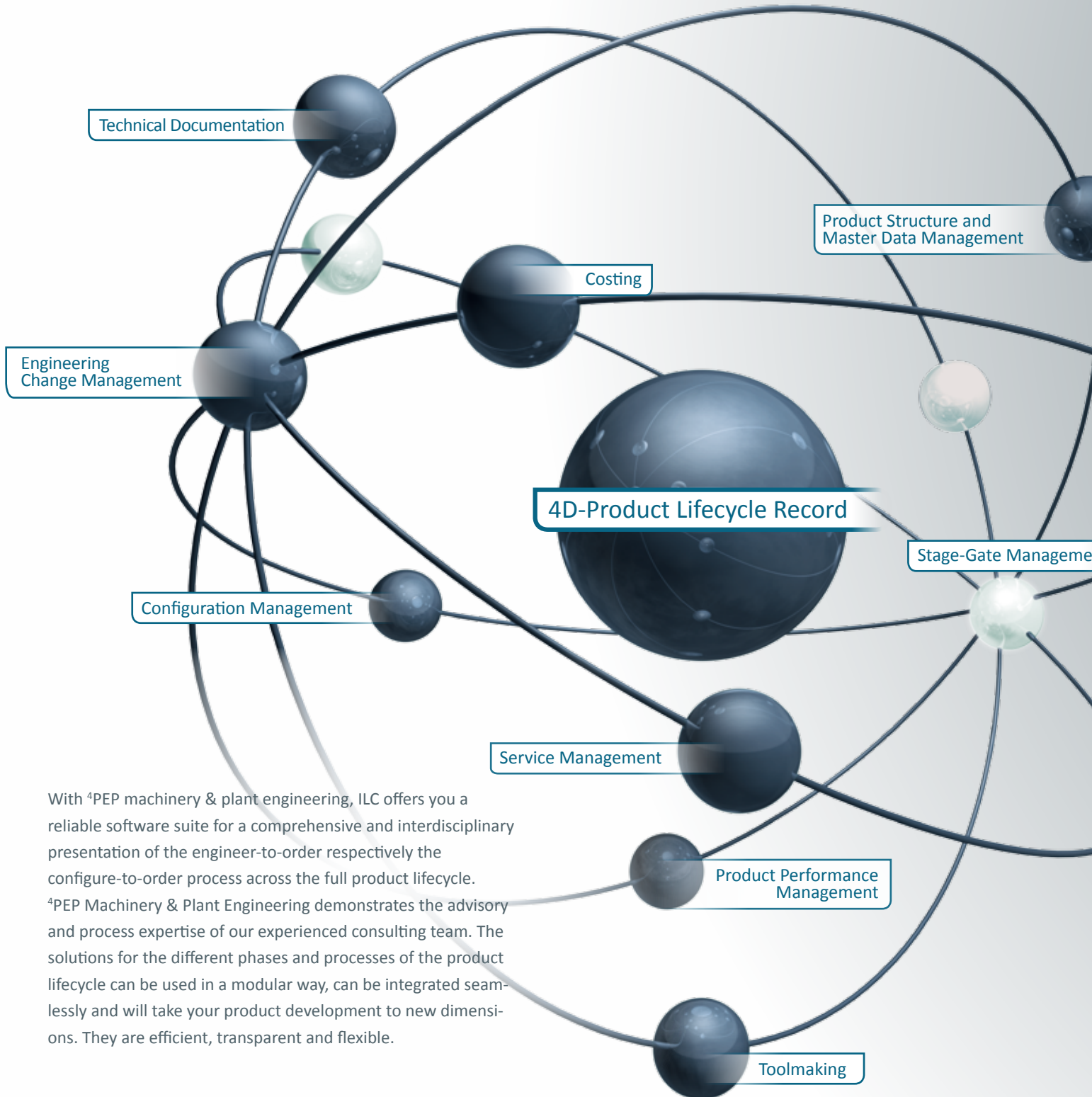
Eventually, this leads to a big patchwork, which has to be pieced together by hand with great effort and a loss of continuity and quality.

The objective is clear: having an integrated IT platform for the management of all data and documents associated with the project. This is the basis for an efficient control of the business processes.



Img. "4PEP – integrated platform for project data, product data and processes"

4PEP Machinery & Plant Engineering – the solutions



With 4PEP machinery & plant engineering, ILC offers you a reliable software suite for a comprehensive and interdisciplinary presentation of the engineer-to-order respectively the configure-to-order process across the full product lifecycle. 4PEP Machinery & Plant Engineering demonstrates the advisory and process expertise of our experienced consulting team. The solutions for the different phases and processes of the product lifecycle can be used in a modular way, can be integrated seamlessly and will take your product development to new dimensions. They are efficient, transparent and flexible.

**“THE WHOLE IS GREATER
THAN THE SUM OF ITS PARTS.”**

Aristoteles

**4D-Product Lifecycle Record**

- One central source of information for all data concerning a product (single point of truth)
- Secure product and project data management during the whole lifecycle
- Easy editing of documents, also via the Windows Explorer
- Integration of transactional data like customer orders, projects, inventory etc.

Product Structure and Master Data Management

- Flexible maintenance of "growing" mechatronic product structures without mandatory SAP master data creation
- Easy, interdisciplinary maintenance and change of product master data like material masters, bills of material and task lists during every phase of the product lifecycle
- Structure comparisons (e.g. engineering BOM/production BOM, ...)
- Management of the maturity of every part in the product's structure
- Transparent control of the master data, change and procurement processes
- Early trigger of demands and procurement of long lead-time items including tracking of the status of parts

Engineering Change Management

- Comprehensive support of product change processes across all sectors
- Presentation of change initiation, change request, change order and implementation
- Where-used report and usage decision, possibility to identify and prioritize corresponding changes
- Release process and digital signature
- Integration of master data maintenance processes
- Introduced/discontinued parts

Configuration Management

- Revision-proof management of production stages and product configurations
- Basis for the transfer of data to downstream departments like purchasing, toolmaking, costing etc.
- Configuration specific process control

Technical Documentation (in accordance with VDI 4500 and Directive 2006/42/EG)

- Freely definable structure for a safe storage document
- Linking of data to corresponding documents
- Intuitive assignment per drag and drop

Stage-Gate Management

- Definition of all stages of the product development process and the product lifecycle
- Setting of stages, milestones (gates) and corresponding checklists using flexible templates
- Deliverables to a milestone (project plan, release documents, bill of material, ...)

Costing

- Early calculation at bidding phase
- Management of multilevel, freely organizable costing structures
- Implementation of different forms of planning

Toolmaking

- Integrated management of all tools and their usage
- Simple and flexible maintenance of tool structures
- Efficient and transparent processing of the planning and producing of tools with the use of standard procedures from sales, purchasing, manufacturing etc., even if there are incomplete master data

Service Management

- Contextual management of all technical objects, orders and machine movements
- Access to all machine data, notes, drawings and documents
- Documentation of all maintenance and repair measures as well as of the repaired or replaced parts

Product Performance Management (PPE)

- Extraction of all data that is relevant for a key performance indicator system
- Technical analysis and data preparation
- Provision of visualization in tables or graphics for the departments and the management

⁴PEP Machinery & Plant Engineering – the new dimension for an integrated product lifecycle management

With ⁴PEP Machinery & Plant Engineering, you are preparing your business for a successful future. With the introduction of the ERP systems, it became a standard to have integrated data and integrated processes in some departments. Now, with ⁴PEP Machinery & Plant Engineering it is possible to have integrated data and integrated processes in your product development and product handling process.

⁴PEP Machinery & Plant engineering – a new dimension for your product lifecycle management: efficient, transparent, flexible.

EFFICIENT

- Prevention of data redundancies and of multiple entries of data
- Reduced searching effort
- Secure, controlled and complete documents and master data
- Easy compliance with external norms and guidelines

TRANSPARENT

- **Data transparency:**
Access to data, documents and to data relating to products from all departments (costing, inventory, ...) is central and protected by authorization
- **Project transparency:**
Linking of project information (phases, milestones, ...) with product information (status of parts, version, ...)
- **Process transparency:**
View the current status of the release processes, the maintenance processes and the change processes at all times!
- **Key performance indicator transparency:**
The integrated data basis allows you to extract and analyze real key performance indicators using IT. Secure the long-term success of your development project by gaining knowledge immediately and by quickly implementing measures.

FLEXIBLE

- ⁴PEP Machinery & Plant Engineering meets the requirements of the customers and provides tailored solutions.
- Quickly implement changes to processes, organization or data models.
- ⁴PEP Machinery & Plant Engineering is scalable across a range of applications, from small to midmarket to large and international ones.



4 PEP

MACHINERY & PLANT ENGINEERING

Satisfied customers speak for themselves...

“We chose ILC as our consulting and implementing partner in order to be able to achieve our project goals faster and more effectively. The PLM7 extension based on the reliable 4PEP platform was the only way for us to realize the necessary functionality.”

Gerard Engelkamp, Dipl. Ing.

Director of IT and Organization, Hottinger Baldwin Messtechnik GmbH

“With the solution from ILC, we bundle all data relevant to changes in SAP and can therefore use it as a basis to integrate all departments.”

Dr. Friedrich von Wachter

Director Quality, L'Orange GmbH

FESTO
CLAAS



ebm**papst**
L'orange
YOUR POWERFUL INJECTION

4 PEP

PRODUCT EXCELLENCE & PERFORMANCE

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