

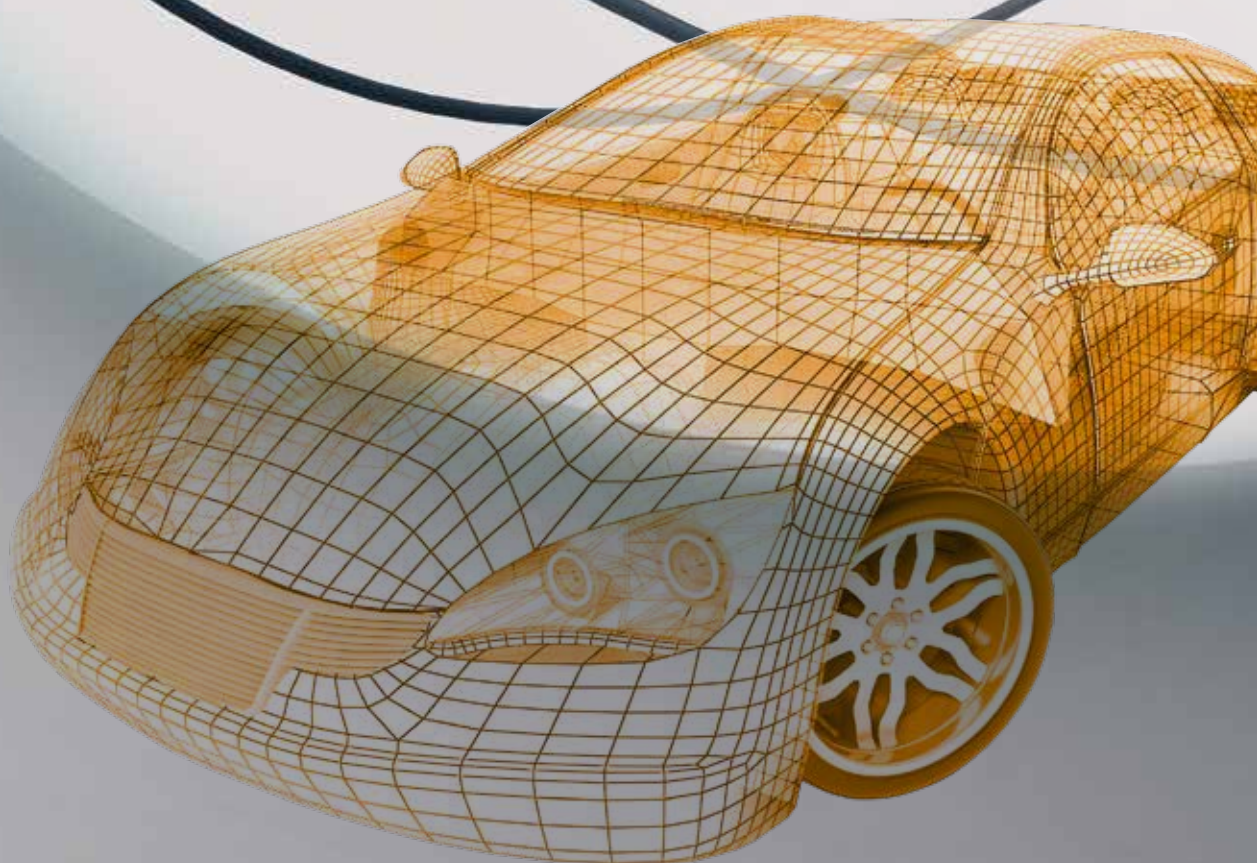
The '4 PEP' logo features the number '4' in white on an orange square background, followed by 'PEP' in white on a white rectangular background with an orange border.

AUTOMOTIVE

PRODUCT EXCELLENCE & PERFORMANCE

Technologies for the mobility of the future

The software suite for your product development process



Automotive – Technologies for the mobility of the future

The automotive industry is one of the most important and most innovative sectors in Germany and Western Europe.

With a strong capacity for innovation, the automotive industry is constantly developing trend-setting technologies for the future. However, the way to a successful product launch can be bumpy and risky given the potential conflicts of e.g. range and model diversity versus cost and time pressure, let alone an intensifying global competition.

In the automotive sector, the research and development of new technologies and vehicles is strongly marked by an intensive collaboration of vehicle manufacturers and their suppliers.

The extent to which suppliers are involved in the development of the systems they provide rises, which leads to stronger demands for an efficient product creation process supported by excellent IT.

With ⁴PEP Automotive, it is easy to fulfill these demands. You will achieve more efficiency, more transparency and more flexibility by presenting the development process comprehensively and across all branches involved.



Innovations in product development – the key to sustainable success

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A considerable long period of time passes between the beginning of the development project to the start of production (SOP), which leaves room for an enormous potential for optimization in the automotive industry. Even the structured management of the development process poses problems to companies. Most of them may have defined a phase model with tasks, checklists, milestones and a documentation which is to be produced. But the controlling and management of the process is made impossible in your day-to-day work when you use IT tools that do not meet your requirements e.g. MS Office and storing you files on fileservers.

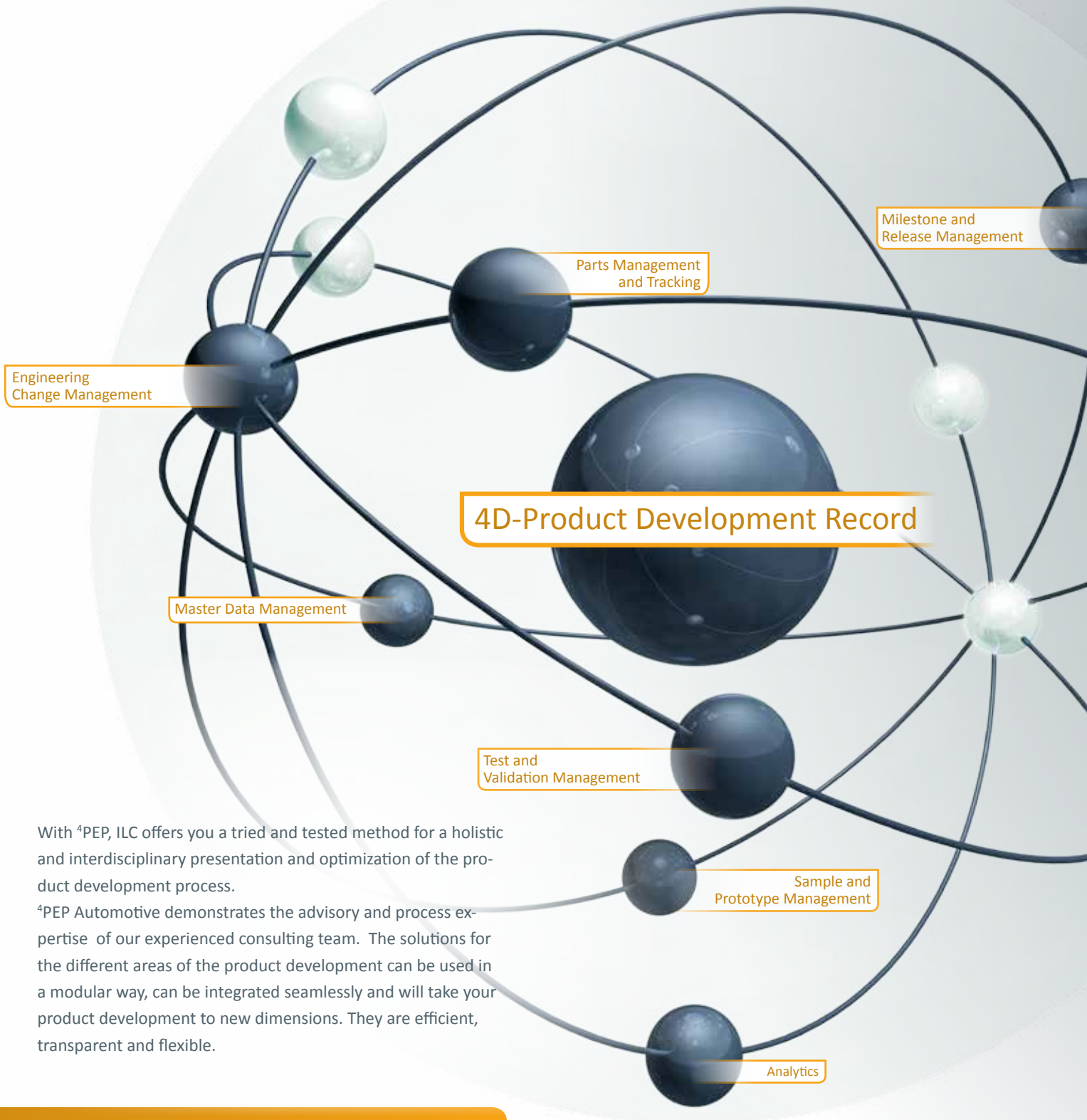
Automotive suppliers tend to take over more and more tasks when it comes to the development not only of parts but even of complex subsystems. This demands an intensive cooperation across company borders. The interface between cooperating partners has to be as simple and as transparent as possible. Without the use of a professional business system, this proves to be a more than difficult exercise.

In addition to it there is a rise in the number of mechatronic systems and components with a complex interaction of their disciplines: mechanics, electronics and software. This leads to a broadening of the classic engineering approach by methods like the “V-Model”.

Integrative methods ask for integrative IT tools. That is why applications from all disciplines need to be interlinked, giving the developers and the employees involved in the development process the opportunity to stay firmly on track.

A structured and IT-supported management of the development process is the basis for measuring and controlling the product development with a reliable and readily determinable indicator system. This is the key to ensure the success of development projects quickly and from the beginning. Having actual metrics is crucial for the effective and successful management of one or more development processes done by businesses competing internationally.

Efficient management of the development process with ⁴PEP Automotive



With ⁴PEP, ILC offers you a tried and tested method for a holistic and interdisciplinary presentation and optimization of the product development process.

⁴PEP Automotive demonstrates the advisory and process expertise of our experienced consulting team. The solutions for the different areas of the product development 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."

Aristotle

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4D-Product Development Record

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

Milestone and Release Management

- Definition of all phases of the product development process
- Setting of milestones and corresponding checklists using flexible templates
- Deliverables to a milestone (project plan, validation plan, bill of material, ...)
- Managing and monitoring of release processes based on workflow and checklists

Engineering Change Management

- Controlled management of product changes across all departments of the company
- Presentation of change initiation, change request, change order and implementation
- Where-used report and usage decision
- Release process and digital signature

Master Data Management

- Easy maintenance and change of product master data like material master, bill of material and work schedules
- Transparent monitoring of the maintenance process
- Flexible master data maintenance in the early stages of development without mandatory SAP master data creation
- Quick maintenance by providing already existing master data

Parts Management and Tracking

- Controlled development of the product structure through the stages of the product development process
- Online-status of the maturity of every part in the product 's structure
- Freely definable product status (e.g. release of drawings, release of calculation)
- Supplier tracking for all parts (order request, purchase order, posting of goods receipt)
- Automated comparison of target and actual state with visualization (traffic light display)
- Basis for the dissemination of data to downstream sectors like purchasing, prototype production, calculation etc.

Test and Validation Management

- Planning of test and validation measures in the different phases of the product development
- Data derivation and adjustment of the relevant product data for the respective test
- Documentation of the test and validation parameters as well as the corresponding test results

Sample and Prototype Management

- Controlled and traceable derivation of the different development status for the prototype production department
- Simple adaptation of the product structures from development to the requirements of the prototype production department
- Efficient and transparent realization of the planning and producing of prototypes with the use of standard procedures from sales, purchasing, manufacturing etc., even if there are insufficient master data

Analytics

- 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 Automotive – A New Dimension for your Innovation and Development Process

With ⁴PEP Automotive, you are preparing your product development for a successful future. With the introduction of the ERP system, it became a standard to have integrated data and integrated processes in the order handling and the accounting. Now, with ⁴PEP it is possible to have integrated data and integrated processes in your product development.

⁴PEP Automotive – a new dimension for your product development process: efficient, transparent, flexible.

EFFICIENT

- Prevention of data redundancy and of multiple entries of data
- Reduction of time spent on searches
- Secure, controlled and complete documents and master data
- Comply with external norms and guidelines easily

TRANSPARENT

- **Data transparency:**
Access to data, documents and to data relating to products from all sectors (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 process, the maintenance process and the change process!
- **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 Automotive meets the requirements of the customers and provides tailored solutions
- Quickly implement changes to processes, organization or data models
- ⁴PEP Automotive is scalable across a range of applications, from small to midmarket to large and international ones



Satisfied customers speak for themselves ...

“The 4D-Product Development Record allowed us to provide our Product Development with an ‘Integrated Parts Management’. All product data are managed and controlled in an integrated manner. With this 4PEP solution, we considerably increased transparency in the product development process.”

Rafael Pahlke,

**Team Leader PLM, Global Processes and Applications,
Benteler Automobiltechnik GmbH**

“4PEP Engineering Change Management gives us a high level of security and transparency in the planning and steering of our worldwide change processes. The ‘return on investment’ was reached in a very short time.”

Helmut Peters,

Manager Commercial Services, Leopold Kostal GmbH & Co. KG

BENTELER 

KOSTAL

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A New Dimension in
Product Development