



## <sup>4</sup>PEP Product Definition, Variant and Structure Management

### Efficient variant management for configurable products

#### Benefit from our proven solution!

Successful companies know how to reduce the growing complexity of products and processes in a targeted manner using variant management. It is the **control of the variant diversity** that makes it possible to serve the market optimally with modularized solutions. Configurable products have long been the key to success, surpassing individually developed variants. However, the majority of companies find it challenging to map **the variant management in an efficient way** when it comes to data. With *<sup>4</sup>PEP Product Definition, Variant and Structure Management*, we offer an approach for a smart variant management that serves as a basis for sustainable business success.

#### Best Practices in Variant Management

- **optimization of variant diversity** and creation of a balance between inner and outer variance,
- separation into different worlds and areas of responsibility (e.g., production and sales),
- use of a mathematically described and therefore analyzable variant model,
- **reliable mapping** of changes made to variants using versions and validity periods,
- decoupling of the variant modeling from SAP master data and **automatic creation** of master data at the right time.

#### Your Benefit

- You control variants throughout their **entire life cycle**.
- You create a uniform communication basis for everyone involved.
- You **reduce costs** by evaluating necessary follow-on processes early on.
- You avoid creating unnecessary master data.
- You create a **savings potential of 30-50 per cent** by improving data quality and by **saving time**.

4PEP Product Definition, Variant and Structure Management allows you to define the variants of a product that is to be developed along with the structure of the product in a simple and quick way. This web-based solution in the modern SAP Fiori® technology offers you **transparency, flexibility and data safety** while being closely integrated into SAP standard processes.

The **Product Development Record** represents the entry point and also the overall framework of the application. Each product record consists of different development statuses, which again assemble individual information and structures that describe the product at a given time. The **continuous development** of the product across its life cycle is mapped with versions of the development status.

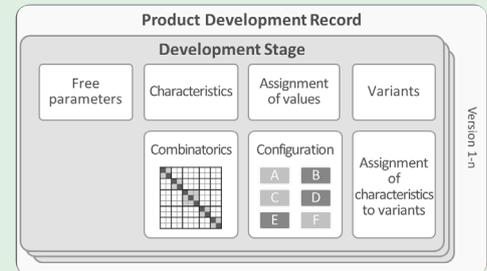


Figure: Product Development Record

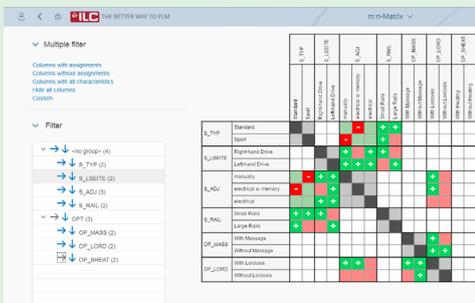


Figure: Maintenance of the combinatorics

A product is described by mapping its properties in the form of characteristics. In the early phase, it is not necessary to have SAP classes or SAP characteristics. Allowed product variants are defined using a rules set that displays the **combinatorics** between the characteristic values. The processing is then done in an **easily comprehensible matrix display** and with a **configurator** that evaluates the set of rules, followed by a characteristic value assignment and an **automatic compilation of the desired variants**.

The **product structure** separates the product or system into its physical elements like assemblies, sub-assemblies and parts. It displays the maximum structure of the product. In the early phase, it is possible to model the product without SAP master data. The product structure keeps the connection to the variants or the characteristics, which means that **closed** as well as **open variant concepts** are supported:

Number	Version	Description	M.	Status	Fr.	Attachm.	Material	Material	Material
S-11000 (2)	3	Structure		New					
S-11200	1	ST Seat		Released			1018		
S-11100	3	ST Back		New			1024		
S-18000 (2)	6	Security Components		New					
S-19000 (4)	5	ISDix Assembly		New					
S-19200	3	Beit Backs		New			1041		
S-19100	3	Antlag		New			1032		
S-22000 (1)	3	Packaging		New			1043		
S-21000 (2)	3	Small Parts		New					
S-20000 (2)	3	Assess		New					
S-18000 (2)	4	Heating		New					
S-17000 (2)	4	Electrical Components		New					
S-17200	3	Control Line		New			1034		
S-17100	5	Cable Harness		New			1033		

Figure: Product structure

- The maximum structure with variants can be used to derive individual (manufacturing) BOMs by assigning assemblies to variants.
- The direct connection of specific characteristic values with the elements of the product structure makes it possible to generate selection conditions that can be applied to a rule-based variants BOM. Objects dependencies that are needed in the SAP variant configuration are created automatically without any manual programming.

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