# pure::variants Enterprise

## Variant Management for Complex Systems and Software Engineering

### Enabling Product Line Engineering and Systematic Reuse

Variant management is required in all stages of product line development. However, traditional software development tools are often focused on single system development.

pure::variants closes this gap by providing a model-based infrastructure for variability modelling and variant definition in all phases of system and software development. This allows existing tools to be augmented to handle variability and variants more efficiently. With its open interfaces, variant information can be used consistently in requirements engineering, during systems design, implementation and also in testing.

There are many extensions that connect pure::variants with common systems and software engineering tools and ALM/PLM systems and this list continues to grow.

What's more, it is quick and easy to implement new extensions with pure::variants powerful API and extension capabilities.

### Features and Dependencies - Requirements Management

Most differences between products are directly derived from requirements. With pure::variants extensions for Requirements Management, requirements information can be enriched with variability information and associated with its implementation.

IBM DOORS® - IBM DOORS NG® - Polarion Requirements - HP ALM - PTC Integrity - Caliber®

### Systems Architecture and Model Driven Development

Since variant management itself is a part of the domain of model driven development, it is straightforward to connect to other MDD tools to enrich their models with variability information.

AUTOSAR - Capella - Enterprise Architect® - IBM Design Manager® - IBM Rhapsody® - MagicDraw® - MATLAB® Simulink® - Papyrus - EMF - medini™ analyze

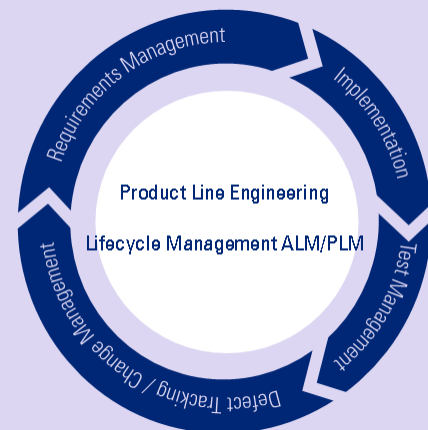### Components and Code - Software Configuration Management

With a direct link, it is easy to apply variant-specific tasks and automated software generation to artefacts stored in a configuration management system.

CVS - Git - IBM RTC - Subversion® - PTC Integrity

### Change Management / Test Management / ALM

Test and defect records may be associated with pure::variants variation points. The states for these records are monitored in real-time and can be analysed by variant.

IBM RQM™ - Polarion ALM - HP QC/ALM - ClearQuest® - Jazz - Jira - PTC Integrity



Product Line Engineering Lifecycle Management ALM/PLM

### Variant Configuration, Generation, Analysis and Documentation

Configure and generate variants from your platform and manage complexity efficiently. Automate the extraction of requirements, architecture models, components, code, test plans and test suites that fit your product, software or system variant. Use extensive reporting and analysis functions to automate documentation and to optimize your product line and platform.

### About pure-systems

Founded in 2001, pure-systems is a leading provider of tools and solutions for Variant Management and Product Line Engineering (PLE) for Complex Systems and Software. pure::variants enables integrated and automated PLE and Systematic Reuse in existing tools like DOORS, Rhapsody and Simulink, while managing complexity of features, dependencies, systems and variants.

pure::variants provides deep analytic insights into variants, and can deal with both structural and parametric variability across the V-Model, supporting diverse engineering assets like requirements and test cases, architecture & model-based-development, source code and documentation, Excel feature lists and calibration data, among others.

As a platform solution, pure::variants provides enterprise scalability and public open APIs, while supporting standards like OSLC, VEL (Variability Exchange Language), Eclipse, EMF and AUTOSAR among others.

Today, the solution is deployed with customers in the segments of Automotive, Avionics & Aerospace, Defense & Security, Industry Automation & Production, Rail & Transportation and Semiconductor.

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