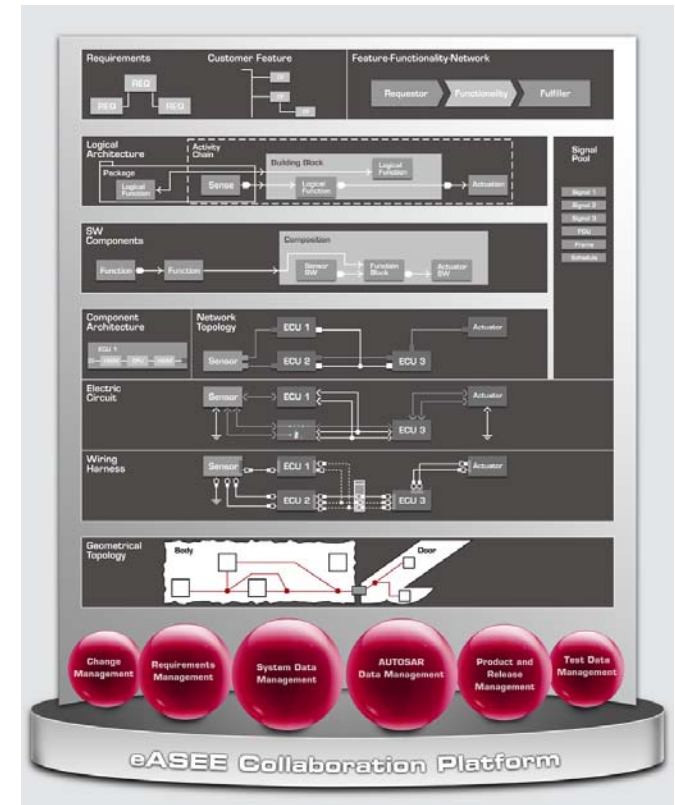


Vector Congress 2010

eASee/PREvision Product Concept and Roadmap

1st of December 2010, Stuttgart



- ▶ eASEE Automotive Solution
 - > Approach 2008 and experiences
 - > New strategy

- ▶ eASEE and PREEvision - the perfect fit

- ▶ eASEE Automotive Solution New Generation
 - > Product Concept
 - > Product Description
 - > Roadmap

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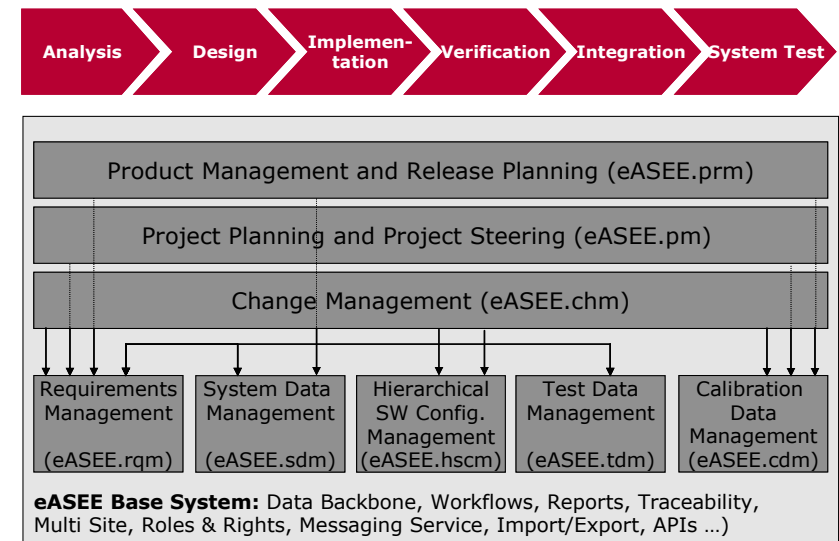
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eASEE/PREEvision – Product Concept and Roadmap

eASEE Automotive Solution – Approach 2008 and Needs for Change

- ▶ Disadvantages “One Solution”-approach:
 - > Process improvement projects of our customers usually focus on specific process areas.
 - > We believe in the integrated approach, but we must be able to manage entry scenarios for dedicated process areas and the eASEE integration in the customers tool landscape.
- ▶ The “Big Bang”-approach reduces our market opportunities to a big projects like VSEM, DeepC, CoC, System42 or AIDA.
 - > These projects are rare and Vector normally is not seen as the natural product partner for this kind of projects.
 - > Good experiences we have with mid range solutions like CEDB, ELEKTRA and ECU-IDE.
- ▶ With the eASEE Automotive Solution the eASEE product changed more and more from a generic process tool to a **E/E-engineering tool with team collaboration capabilities**.
 - > Re-design of the tool architecture necessary.
 - > Usability improvements and graphical editors requested by the customers.



New Strategy

- ▶ To address the need of change, Vector did the following main decisions:
 - > **Flexibility**
 - > eASEE must be more flexible to address specific process needs of the customers – perfect fit by configuration.
 - > **Scalability**
 - > Improve the scalability of our solution – ability to provide stand alone solutions and small team solutions in the same way, as the solution for the entire E/E-development.
 - > **Technology**
 - > Migrate to a new technology, which allow fast and efficient feature and GUI development and the integration in customer specific IDE's
→ Eclipse.

- ▶ Implementation Strategy



- > Vector decided to implement the new strategy by buying aquintos and integrate the products eASEE and PREEvision.

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▶ eASEE Automotive solution

- > Mature team environment for big user groups.
- > E/E specific, AUTOSAR compliant data model.
- > Integrated environment for the management of requirements, system data, test data and changes.
- > Special editors/GUIs for dedicated use cases.



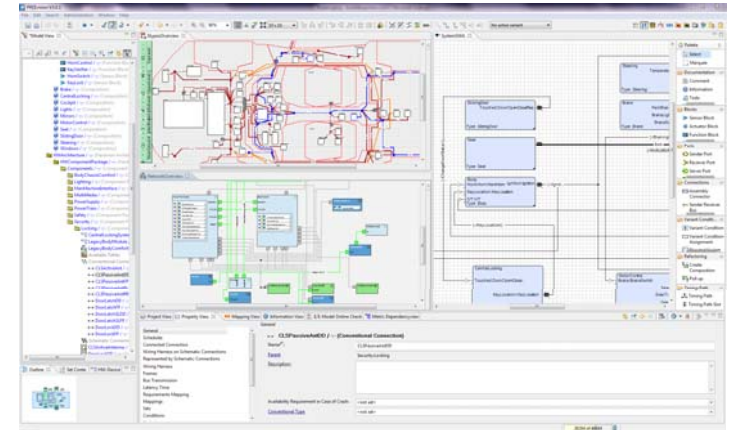
▶ PREEvision

- > State of the art architecture design and optimization tool.
- > Advanced graphical editors and rich engineering functionality.
- > Configurability by a fine granular right concept.
- > Very detailed data model incl. wiring harness.
- > Eclipse Client.



- ▶ The **PREEvision Client** is the basis for new eASEE Client.
 - > PREEvision is the full scope product beginning with architecture design up to a broad usable functional design tool for the series development.
 - > The existing PREEvision product is immediately available in the market.
 - > Therefore PREEvision is the natural starting point for the later use of the integrated product.
 - > Naturally, evolutionary growth from stand alone installation to a team environment is possible.

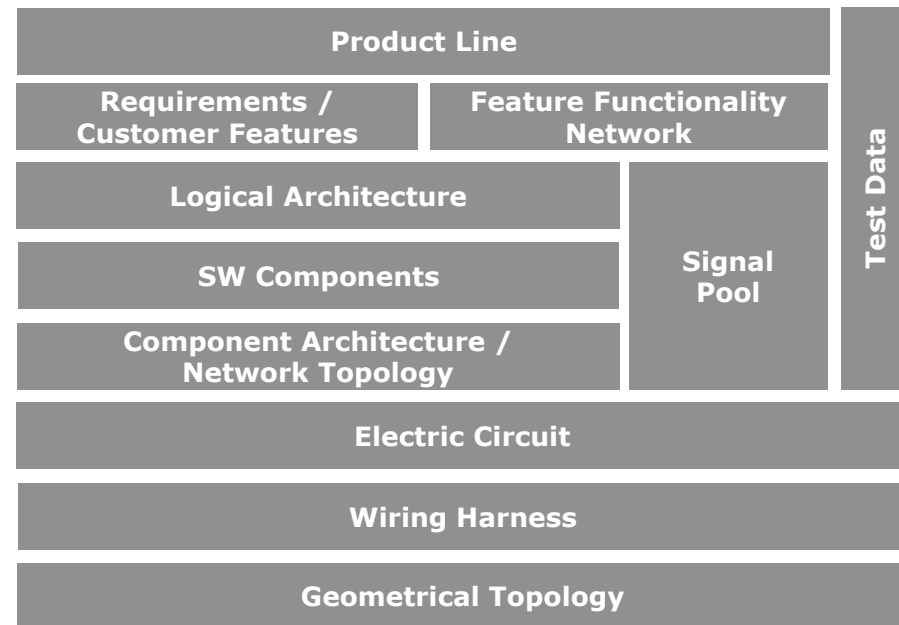
- ▶ **eASEE** is the base for the new team collaboration platform
 - > Collaborate in globally distributed teams.
 - > Perform revision and branch management for all engineering artifacts.
 - > Administrate users, roles and rights.
 - > Manage defects and change requests for engineering artifacts.
 - > Perform change tracking and impact analysis.



eASEE/PREEvision – Product Concept and Roadmap

eASEE and PREEvision – Integrated Data Model

- ▶ Data model is already in place – this saves the customer a lot of time, costs and efforts for individual data model definitions.
- ▶ The data model is AUTOSAR compatible, market-proven and has been designed in close collaboration of the following Automotive OEMs:



aquintos & Vector products – current landscape
in the Customer market

PREEvision Architect & eASEE Automotive Solution(*)



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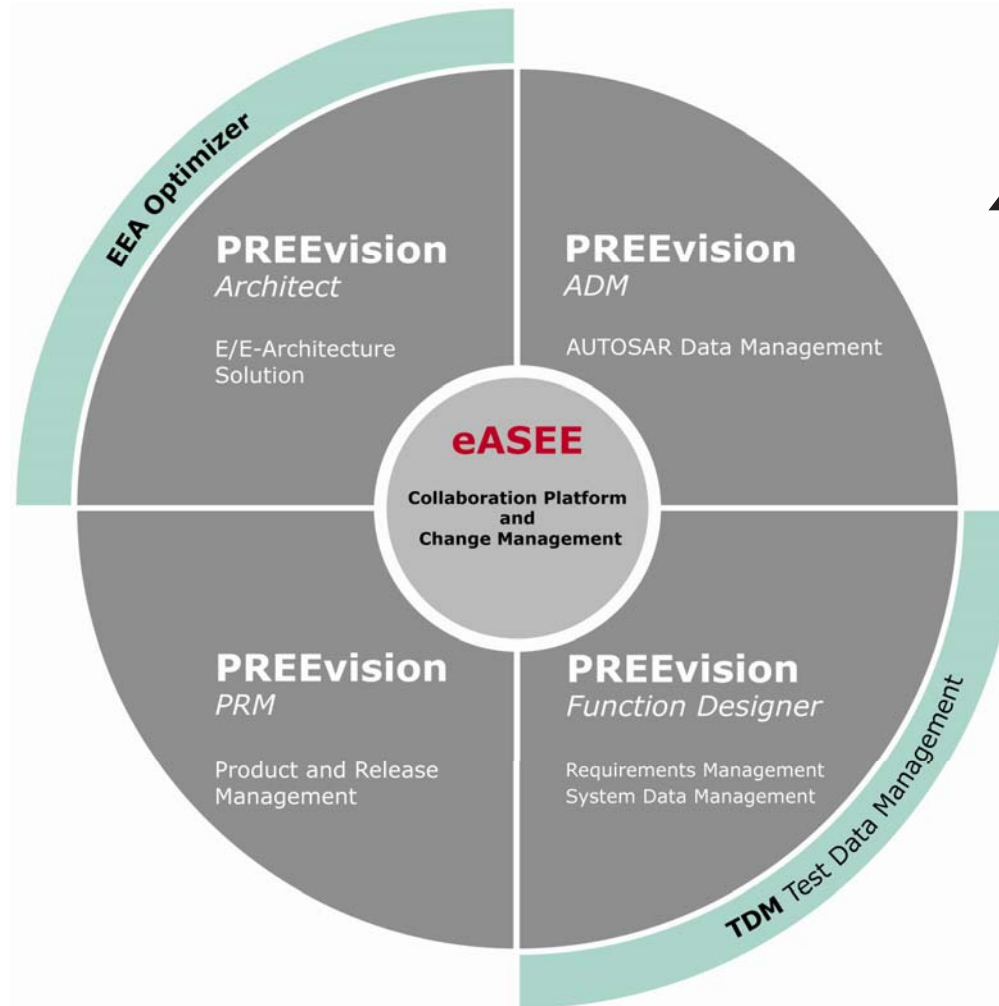
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eASee/PREvision – Product Concept and Roadmap

eASee Automotive Solution New Generation – Product View



Fibex



Vector Tools

AUTOSAR:
DaVinci Developer

Test:
CANoe
VT-System
Open Test

3rd Party Tools

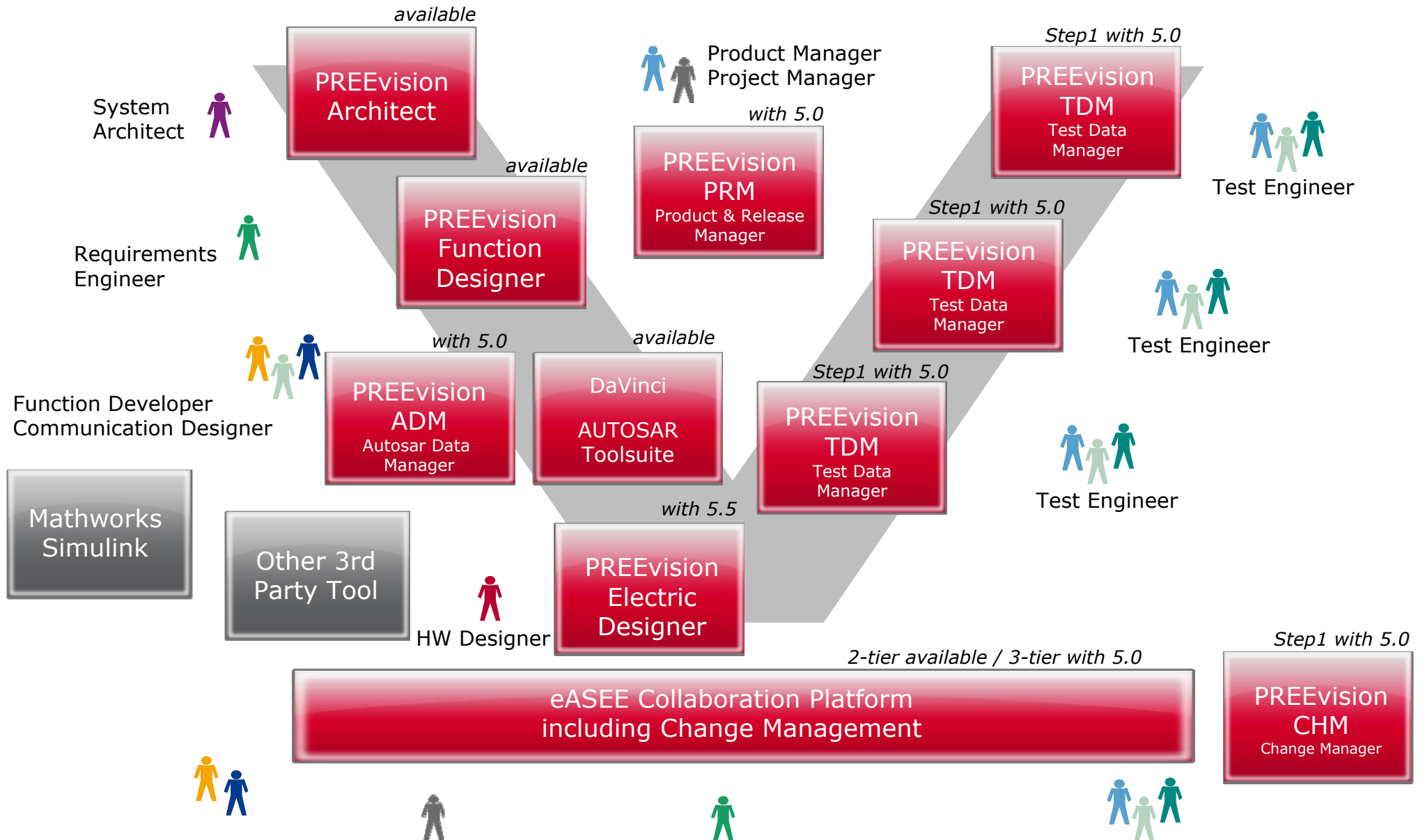
THINK REAL-TIME

ETAS
ASCET

MATLAB®

eASee/PREvision – Product Concept and Roadmap

eASee Automotive Solution New Generation – Process View



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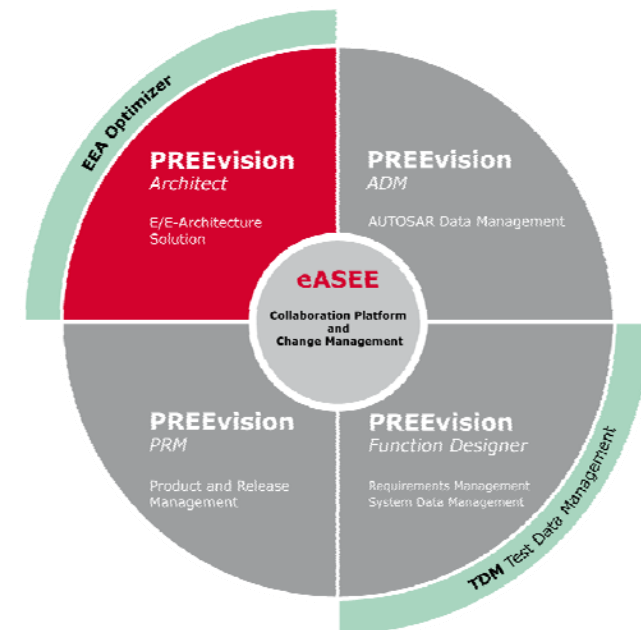
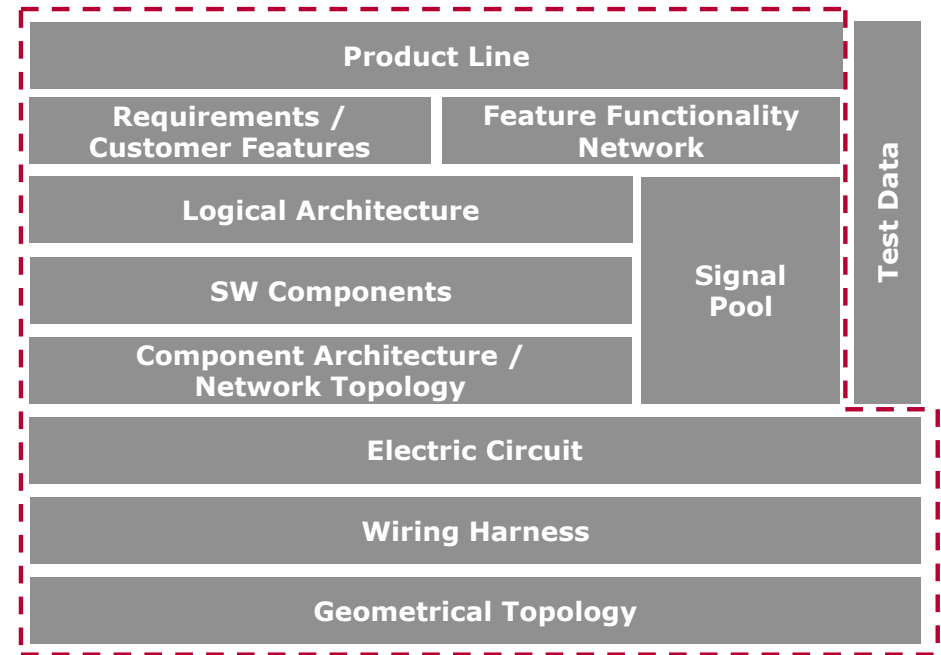
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PREEvision Architect

Architecture Design and Optimization

- ▶ Typical Users
 - ▶ E/E Architects
- ▶ Functionality
 - ▶ Graphical editors and table-based Editors for E/E architecture and system design
 - ▶ Architecture Evaluation and Optimization
 - ▶ Documentation of large E/E systems
 - ▶ Signal routing, frame synthesis, synthesis for circuits and wires
 - ▶ Import / export
 - ▶ Metric and report development
 - ▶ Integrated requirements management
- ▶ Option
 - ▶ Optimizer

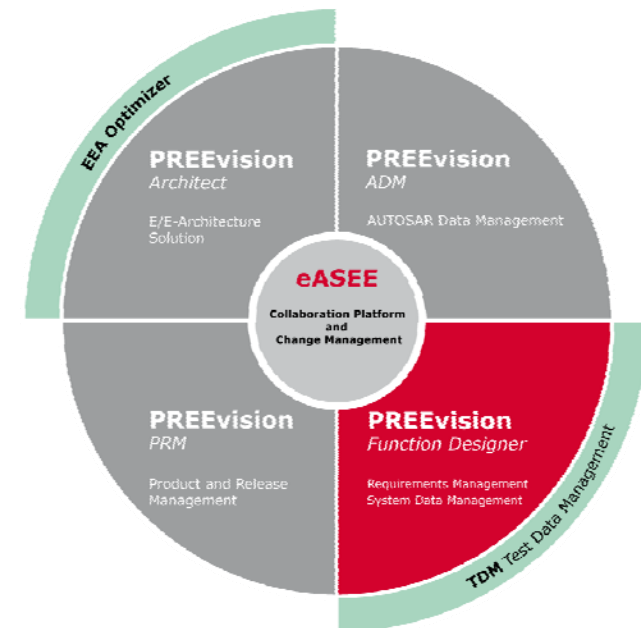
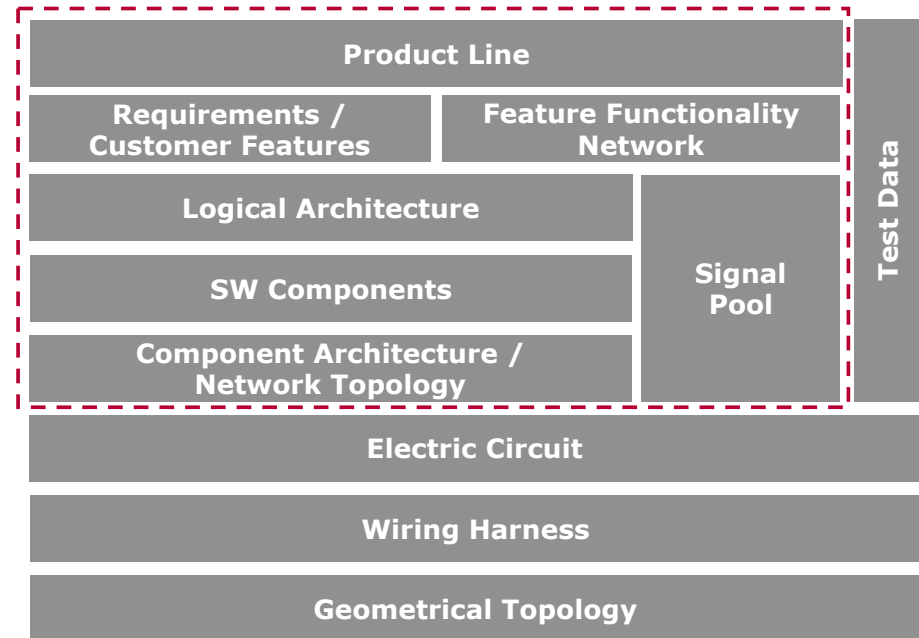


eASee/PREEvision – Product Concept and Roadmap

PREEvision Function Designer

Functional System Design and System Data Management in the series development

- ▶ Users
 - ▶ Function developer, component developer, communication engineer.
- ▶ Functionality
 - ▶ see “Architect” without HW use cases
- ▶ Main use cases
 - ▶ Create supplier specifications.
 - ▶ Manage platform strategies.
 - ▶ Re-allocation of functions and ECU’s for optimization.
 - ▶ Integration of ECU’s from internal or external suppliers.
 - ▶ Develop functional and technical safety concept.
- ▶ Option
 - ▶ Integrated test data management

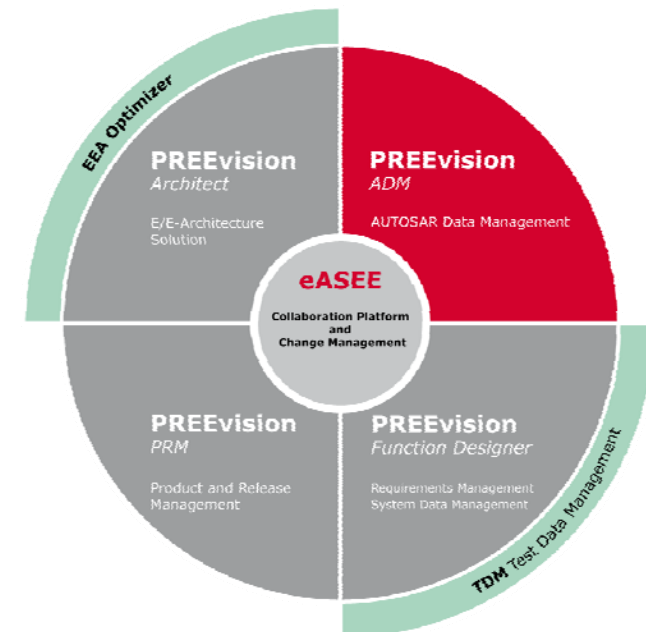
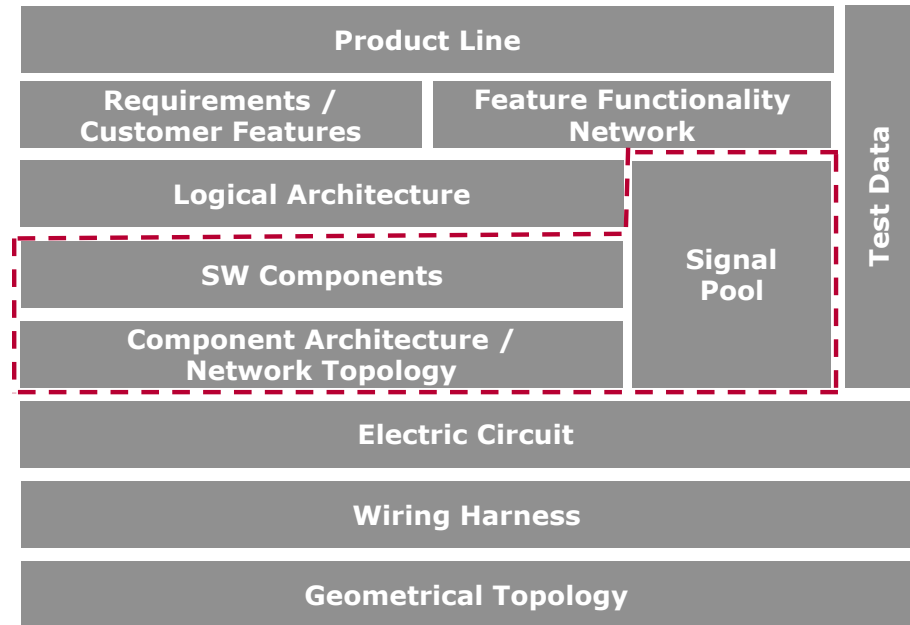


eASEE/PREEvision – Product Concept and Roadmap

PREEvision AUTOSAR Data Manager

AUTOSAR Data Management and authoring tool

- ▶ Users
 - ▶ Communication Engineer, SW-Developer, Component Developer
- ▶ Functionality
 - ▶ Graphical editors and table-based Editors for functional design
 - ▶ AUTOSAR import / export
 - ▶ Metric and report development
- ▶ Use cases
 - ▶ Authoring of ARXML-Files
 - ▶ AUTOSAR compliance checks
- ▶ Option
 - ▶ Integrated test data management



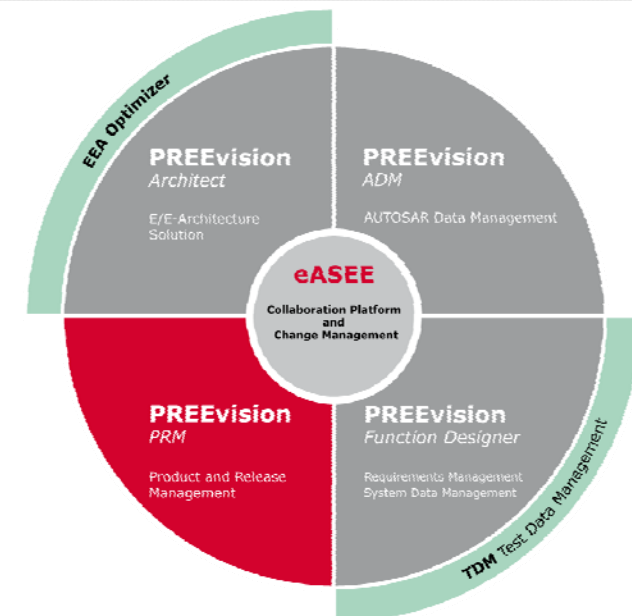
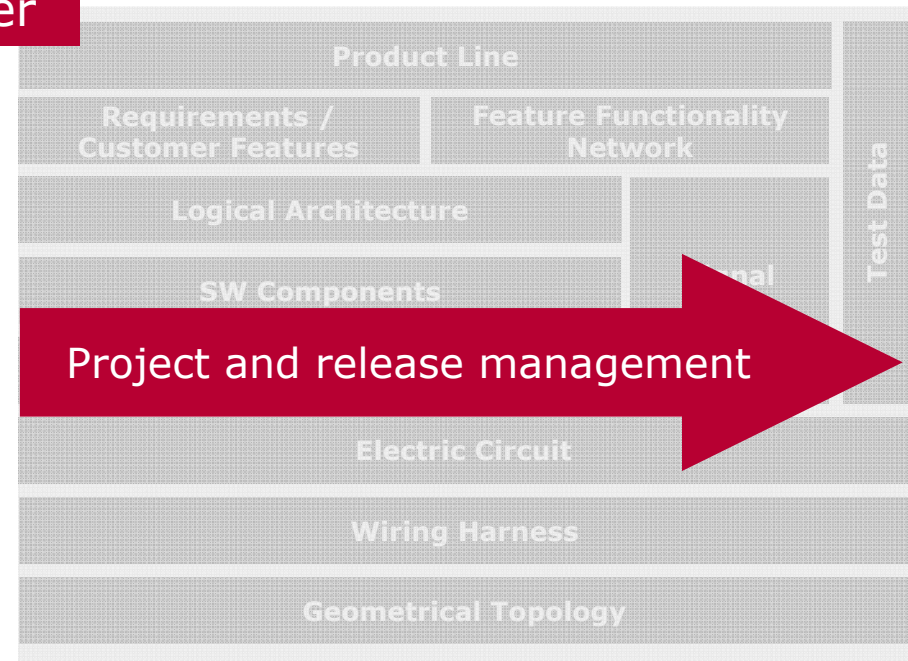
Project and Release Management

► Users

- Product managers, project managers, system and component responsables

► Focus

- Graphical editors and table based editors for project planning and tracking.
- Plan and monitor projects, work packages and resources in a product line setting.
- Allows the user to set engineering artifacts under planning control.
- Monitoring dependencies and resolve conflicts between projects and gates.



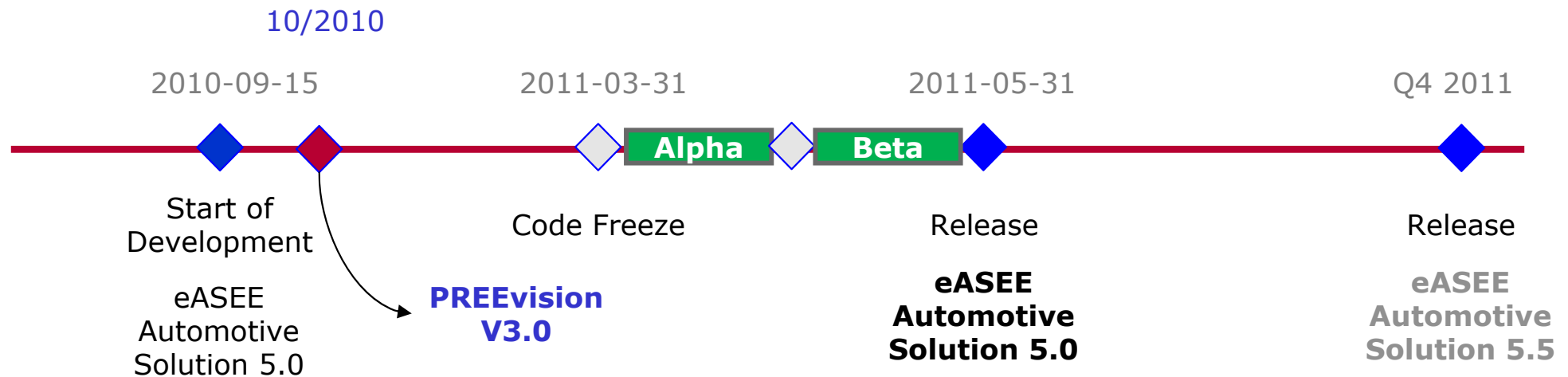
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eASEE/PREEvision – Product Concept and Roadmap

eASEE Automotive Solution New Generation – Roadmap



▶ PREEvision V3.0

- > Starting point for existing eASEE Automotive Solution customers to migrate to the eASEE Automotive Solution New Generation.

▶ eASEE Automotive Solution V5.0

- > Migration of interested PREEvision customers to the team collaboration platform.
- > New customers with focus on architecture, function design, release management and team environment.
- > Close collaboration with PND to provide an integrated AUTOSAR tooling.

▶ eASEE Automotive Solution V5.5

- > New customers with additional focus on change and test data management.

Thank you for your attention.

For detailed information about Vector
and our products please have a look at:

www.vector.com

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