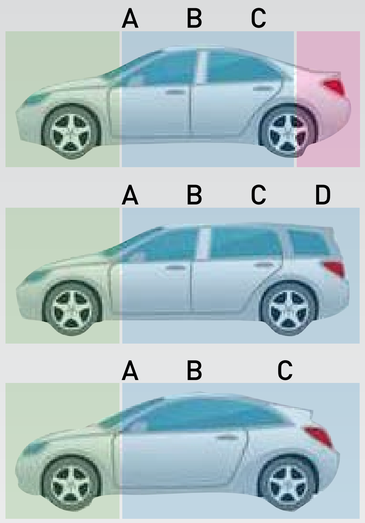
Knowledge Inside
arKItect your system

Synchronize MBSE projects in a context of high diversity

End customers are expecting more and more customized products. They want to select "all" options in the their car: engine horsepower, trunk type, fabric color...
It has been years since automotive industry manages reuse of components between different vehicle projects.
Today, reuse is not limited to components anymore, Model Based Systems Engineering is the opportunity to reuse the systems engineering artifacts in order to **avoid repetitive developments for similar products**.



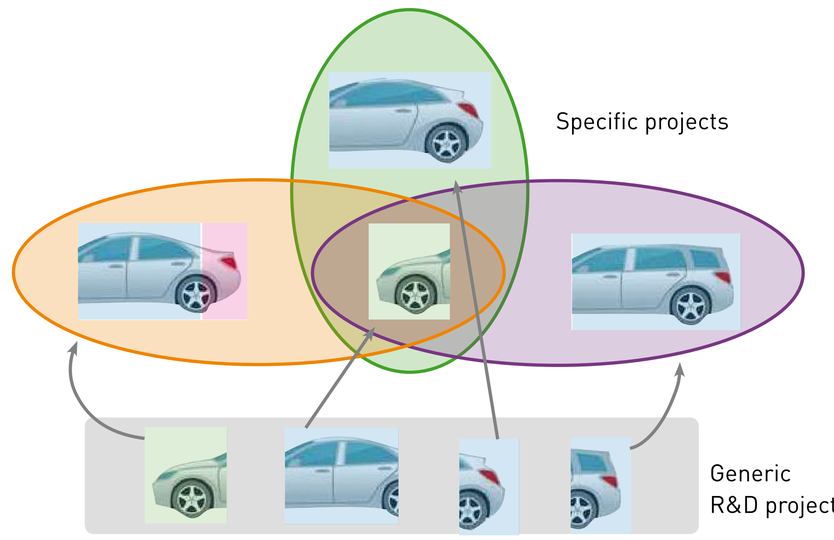
Increasing tuning and segmentation compels for sharing Model Based Systems Engineering processes (requirements specifications, architectures design, test plans definition).

Two constraints make this very challenging:
- "real-time" reuse of artifacts that are under development, requiring perfect synchronization between projects,
- the need to identify the subset of reused elements within each project.

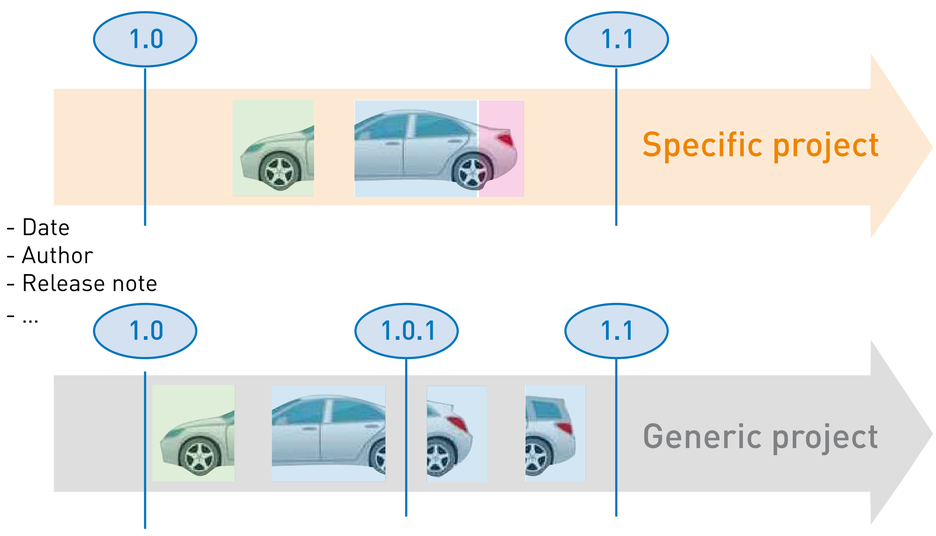
▶ Share elements based on products diversity

Different development projects are grouped in a unique generic R&D project (grey in the figure) that is later specialized into specific ones (orange, green, and violet). For example, instead of launching three projects to develop three vehicles of a new product range, automotive manufacturer launches only one vehicle development program that will be refined into three specific vehicles. Within each project, elements have to be identified with diversity criteria to control their affiliations to generic or specific projects.

BENEFITS
- Keep a strong link between the generic project and the specific ones
- Keep a global view of all projects at any time



▶ Fully manage all project's changes



It is important to consider upgradeability of each Model Based project, generic as well as specifics, in order to keep all developments synchronized. In such context, change management is a key issue.

Each project should have its own versioning system allowing engineers to check releases notes, compare versions, and stay informed about changes.

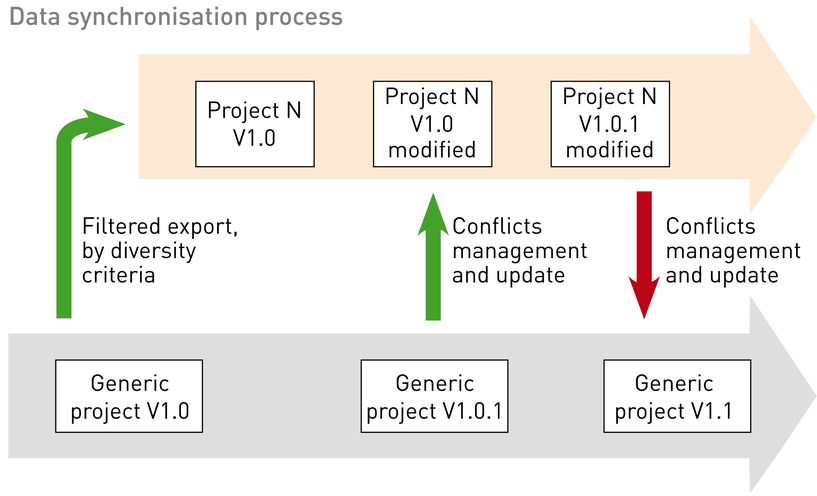
BENEFITS
- Visualize and control modifications
- Guarantee projects compatibility through versions

▶ Ensure a perfect synchronization between projects

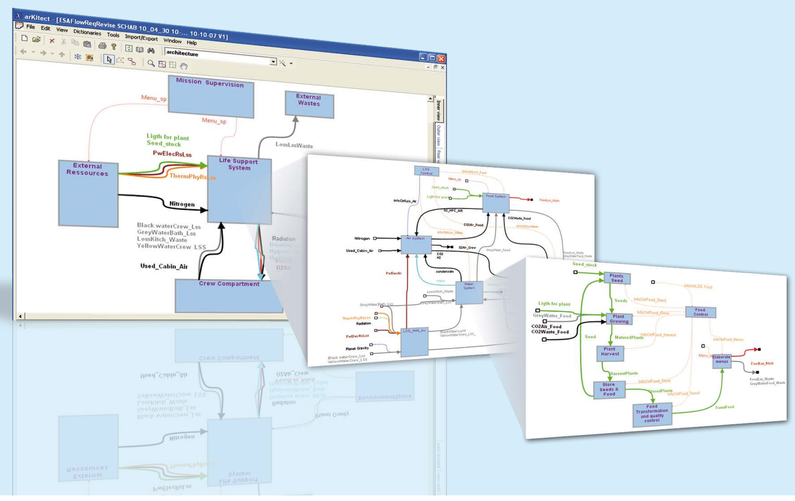
Teams working on each project shall be able to synchronize evolutions coming from others (generic to specific or vice versa). Engineers shall be able to extract changes that impact their development, to check conflicts with their current work, and to upgrade or discard the changes.

The goal is to ensure a perfect synchronization between projects and maintain the control of change management.

BENEFITS
- Propagate changes between generic and specific projects
- Check and solve conflicts between developments



arKItect, a Model Based Systems Engineering environment to efficiently synchronize projects in a context of high diversity.



arKItect environment helps you to:

- share data between different projects, considering **diversity criteria**,
- **synchronize evolutions** between the projects which share data,
- capitalize your projects' data in order to be **reused efficiently**,
- reduce Time To Market of the similar products,
- optimize development costs by grouping projects.

Learn more

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