

Modeling based on Feature-Branches





Vienna, Austria

OUR EXPERTISE

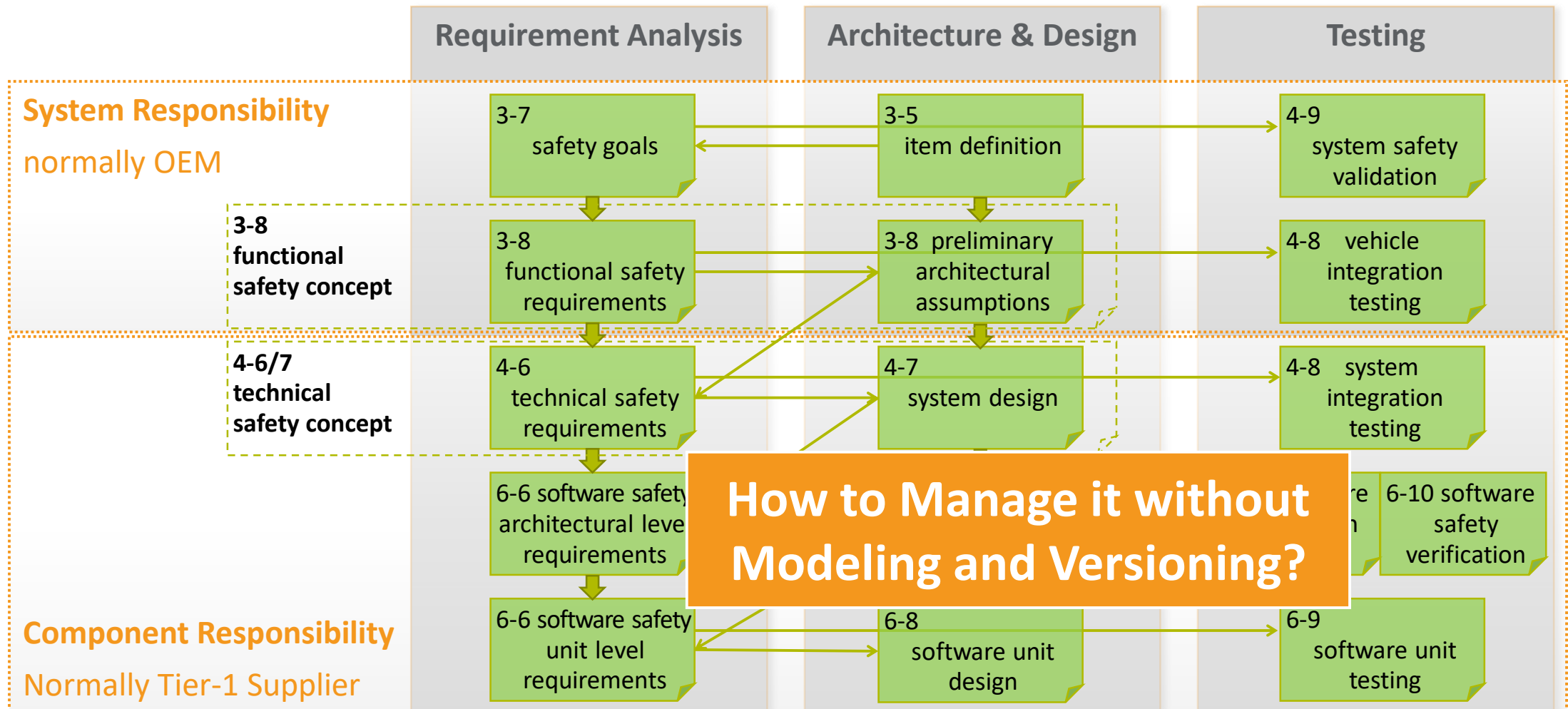
- Model-based Systems Engineering
- Configuration Management for Models
- Integration Enterprise Architect with other Tools



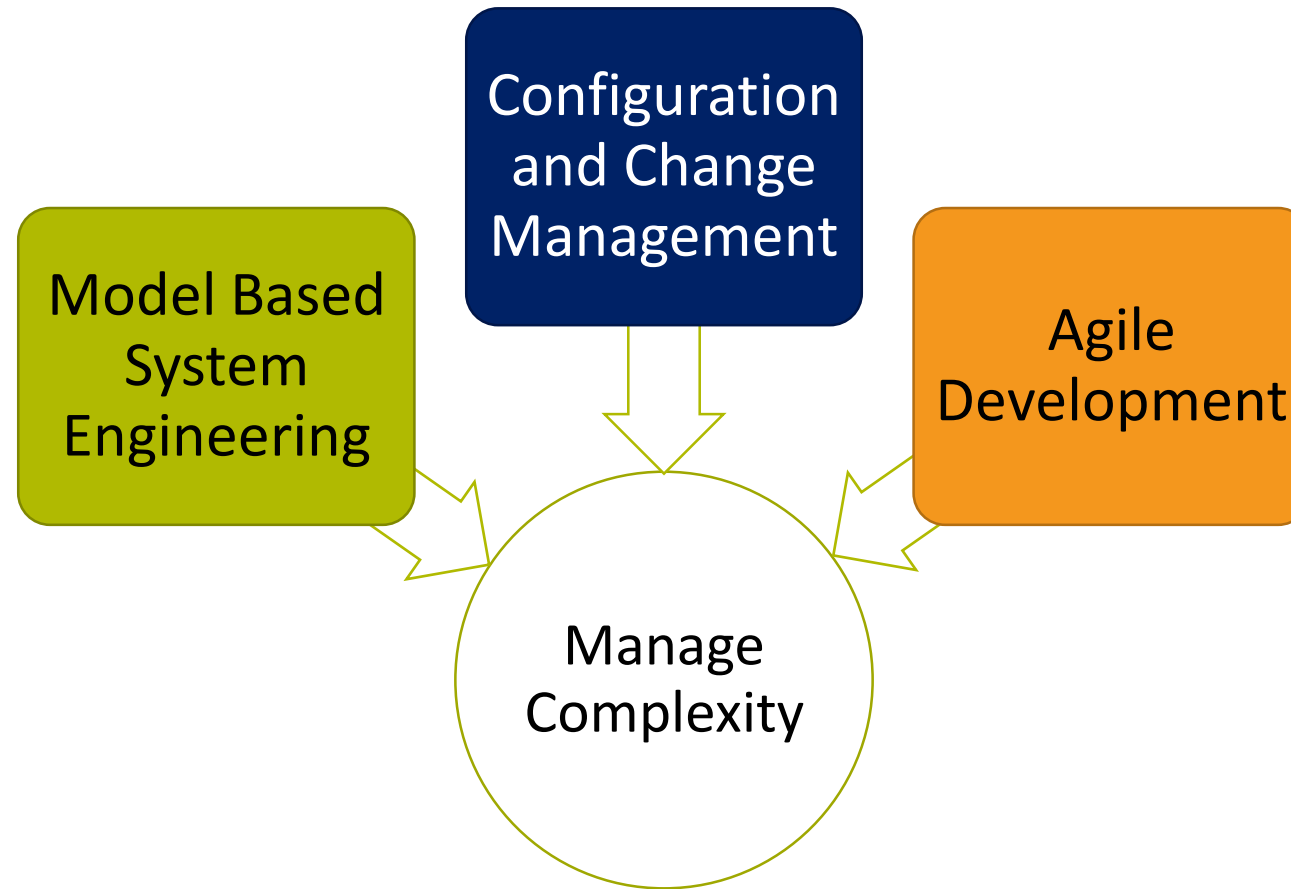
The Industry Challenge



From Concept to Solution as required by ISO 26262



Solution Strategies



Key Take Away

1. Agile team collaboration with models for safety projects
2. Consistent development state
3. Perfect triggers for peer reviews



Goals of Configuration and Change Management

1

Systematically tracking of changes during development and maintenance

2

Preserving the integrity of the system after changes

3

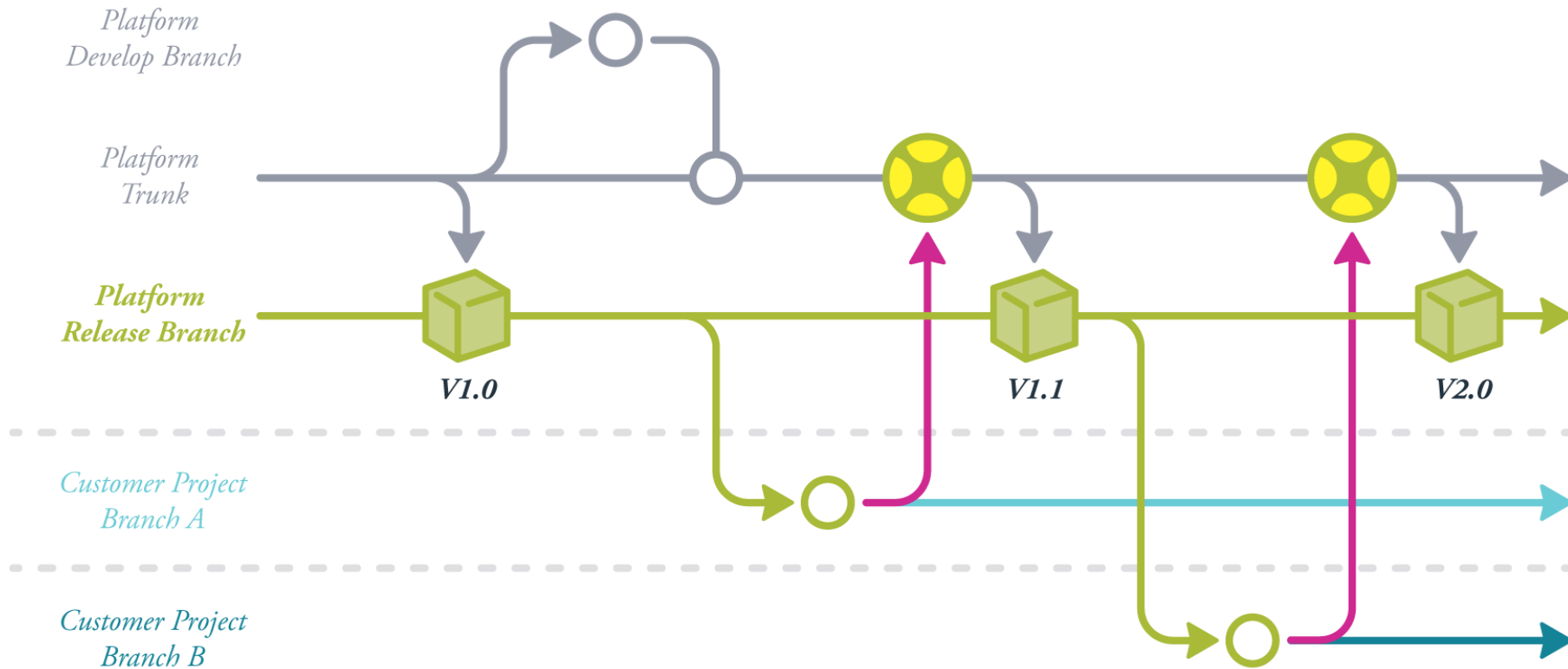
Preventing unwanted and unpredictable effects

4

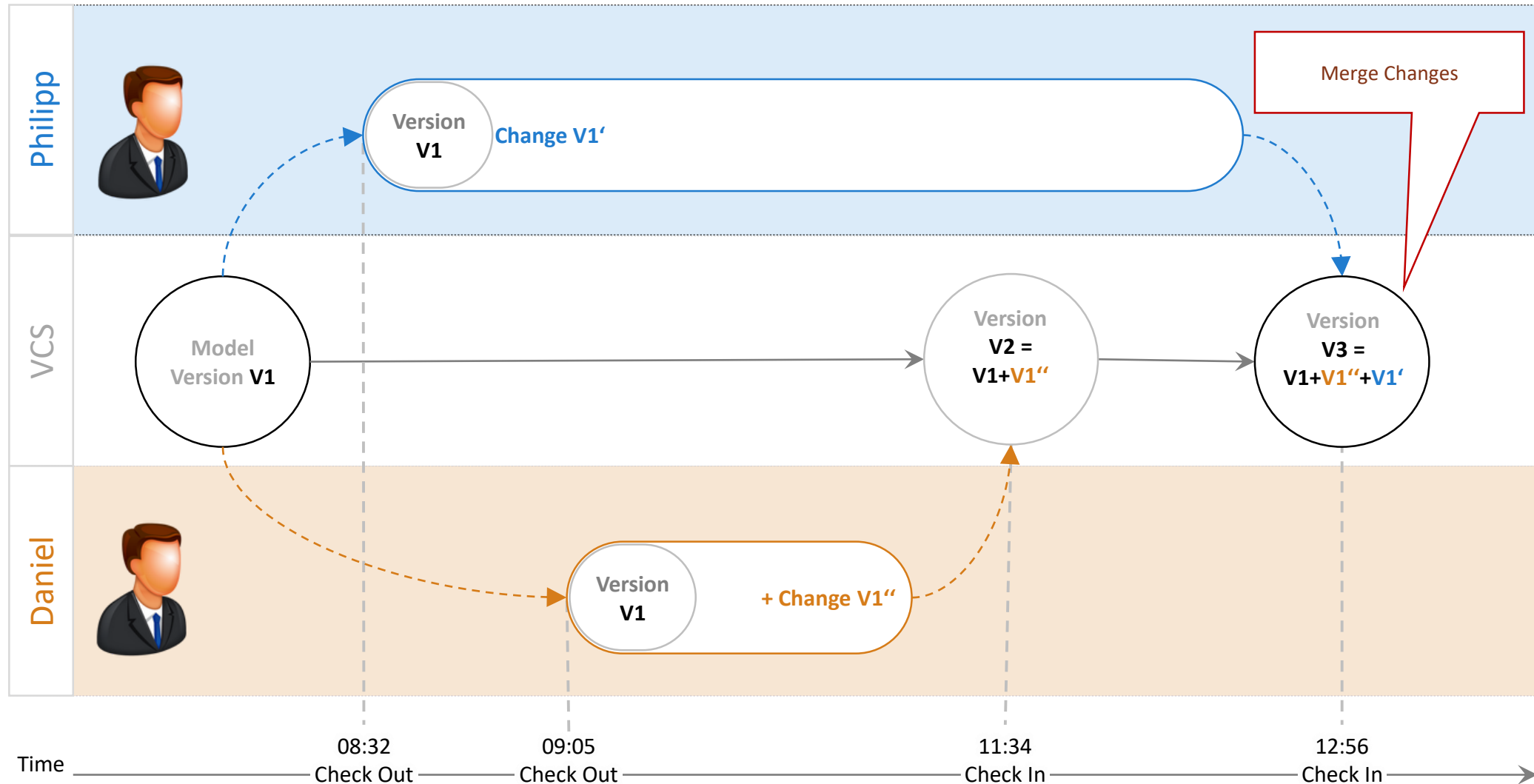
Standardizing the process of making changes



Typical Scenario with Branching



3-Way Merging as Key Technology



Goals for Branching in MBSE

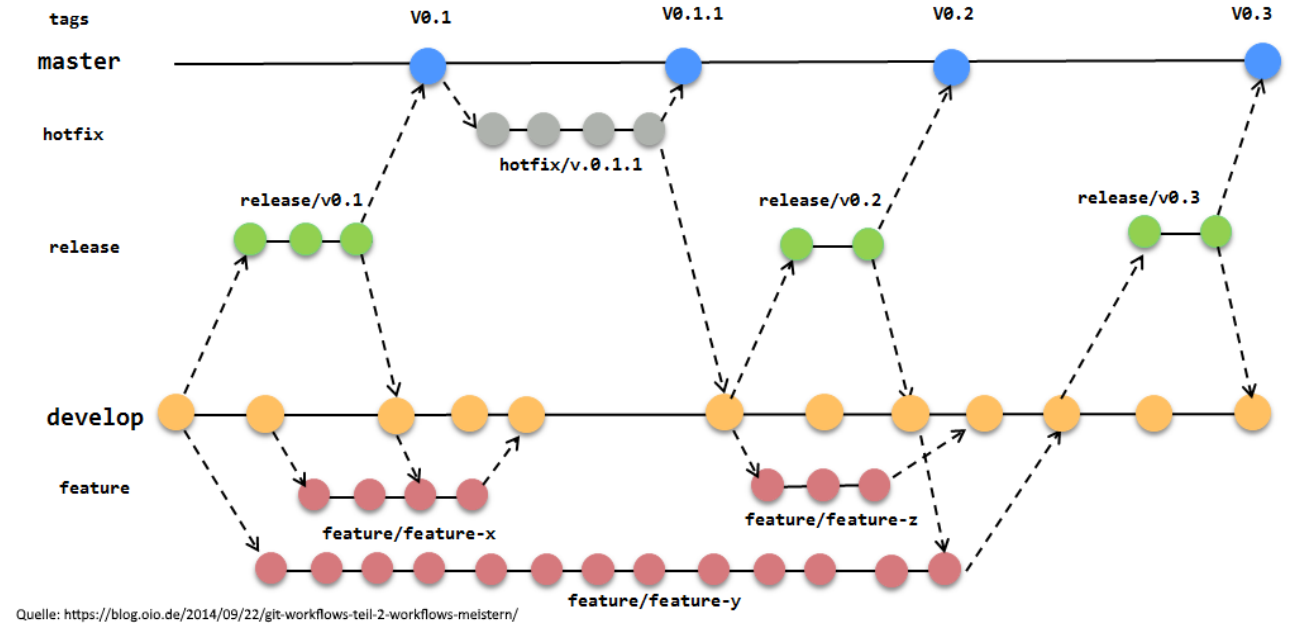
- Enhance modeling processes in the day-to-day work of software configuration management
- **Longer-Term, Parallel Development of Versions and Variants**
- Reuse of existing tools and workflows for system modeling
Example: Gitflow for Feature Branch based product development
- **Provide support for Functional Safety Critical Norms** – currently we have a certification tool kit for ISO26262



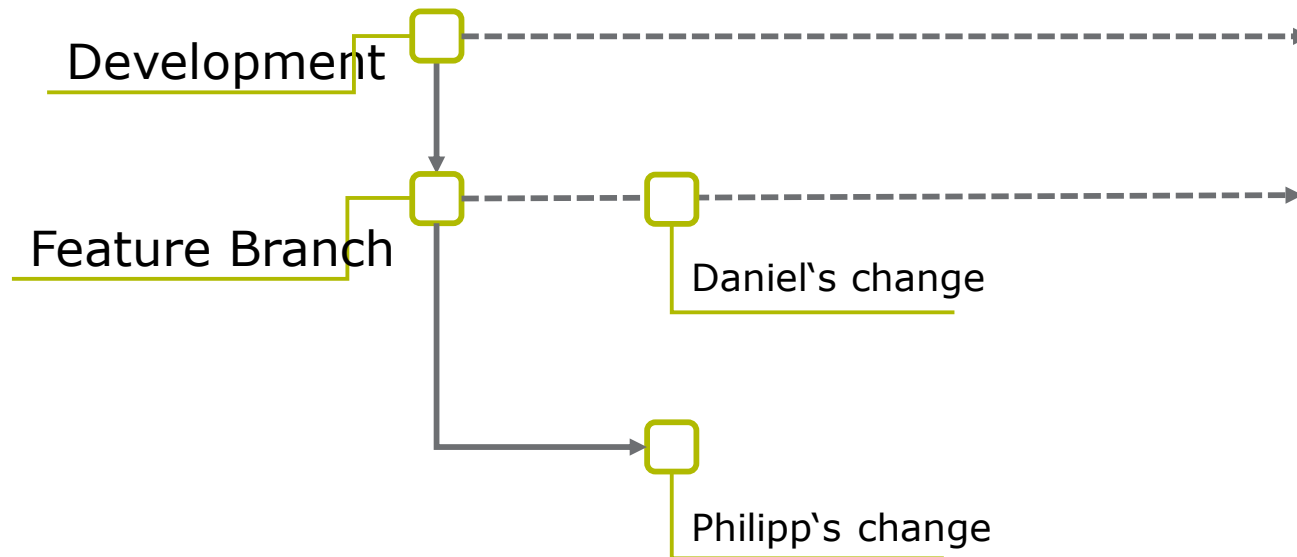
Example



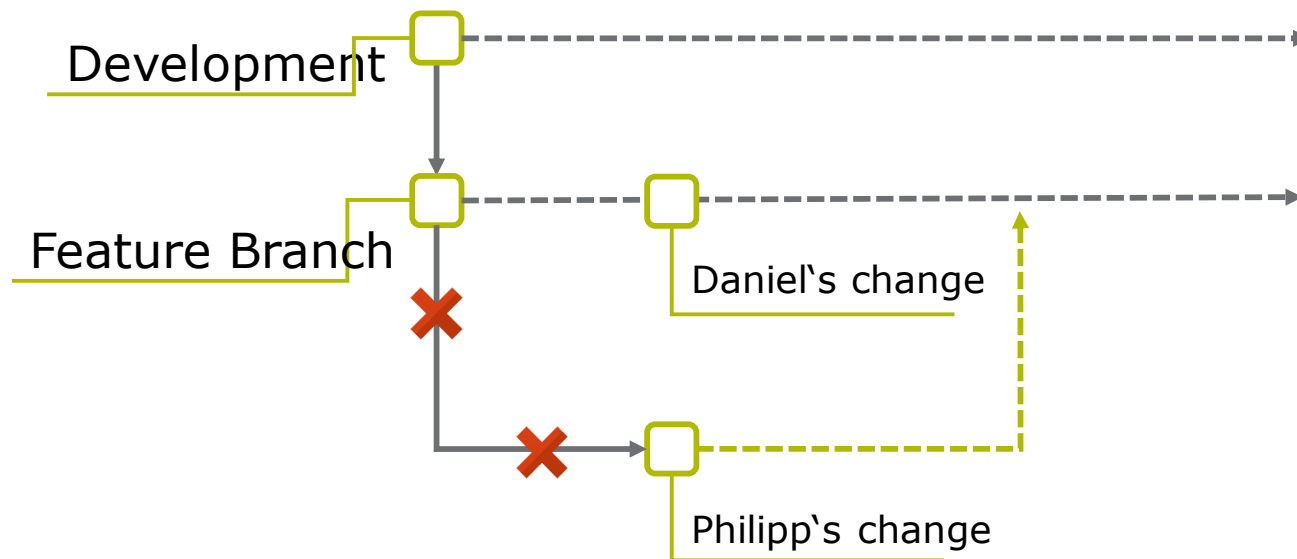
Initial situation



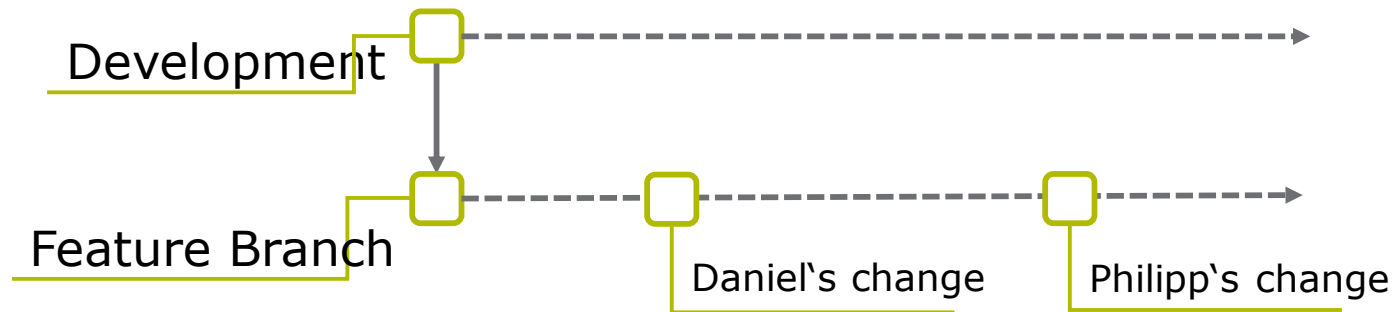
Working on a feature



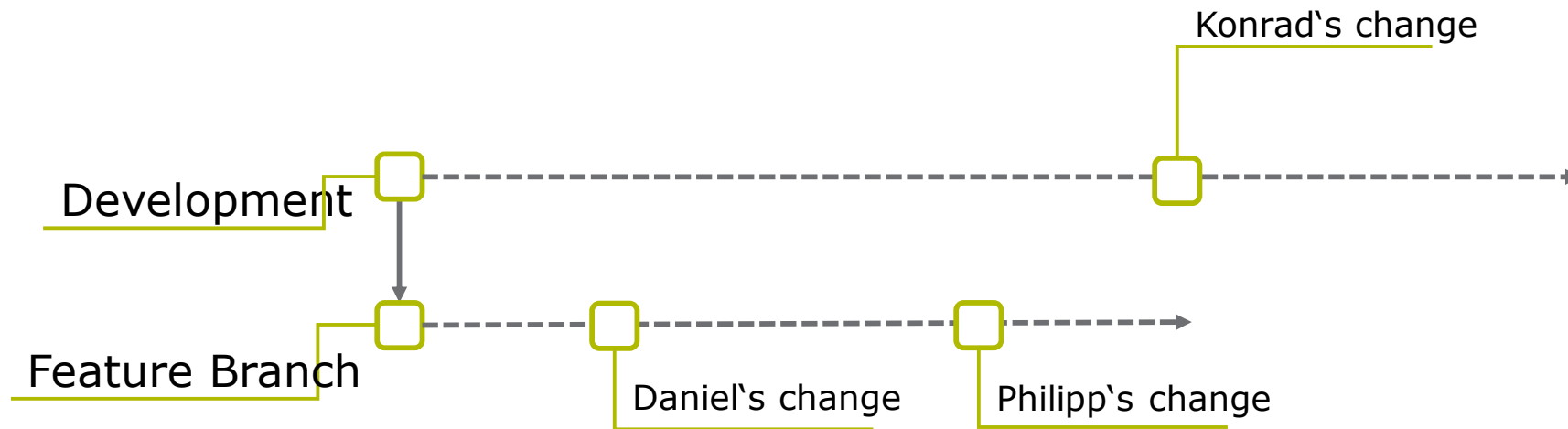
Working on a feature



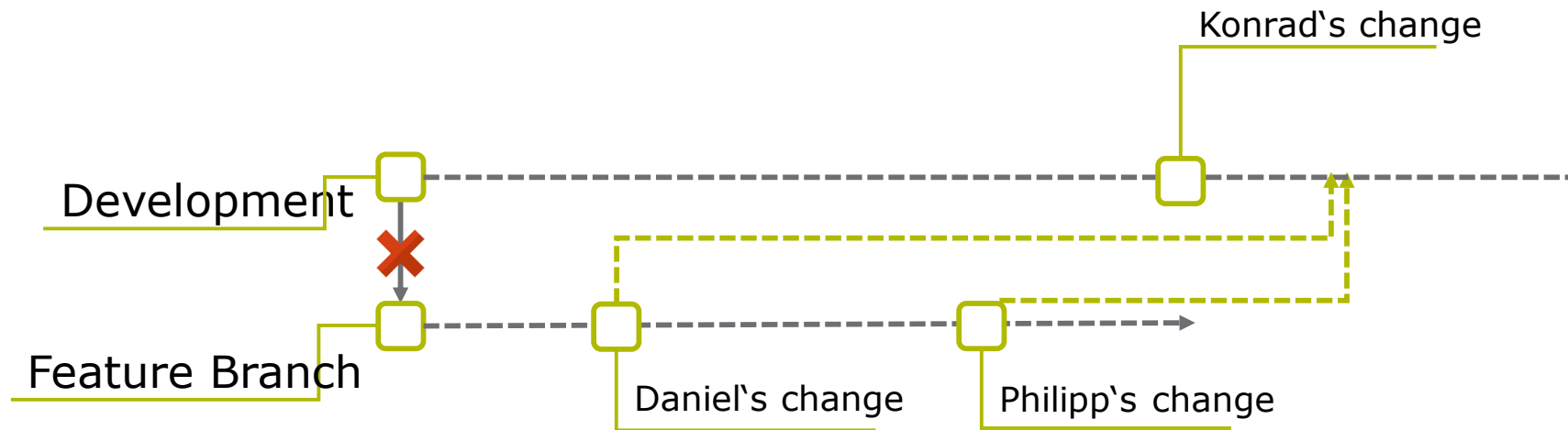
Working on a feature



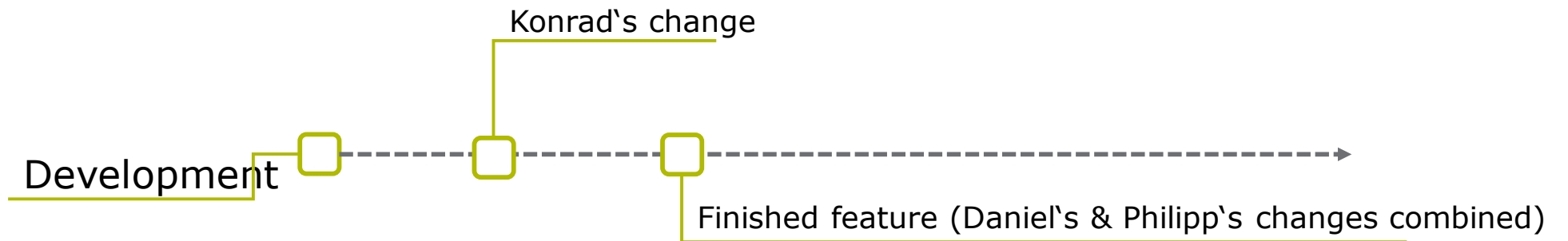
Integrate finished feature to develop



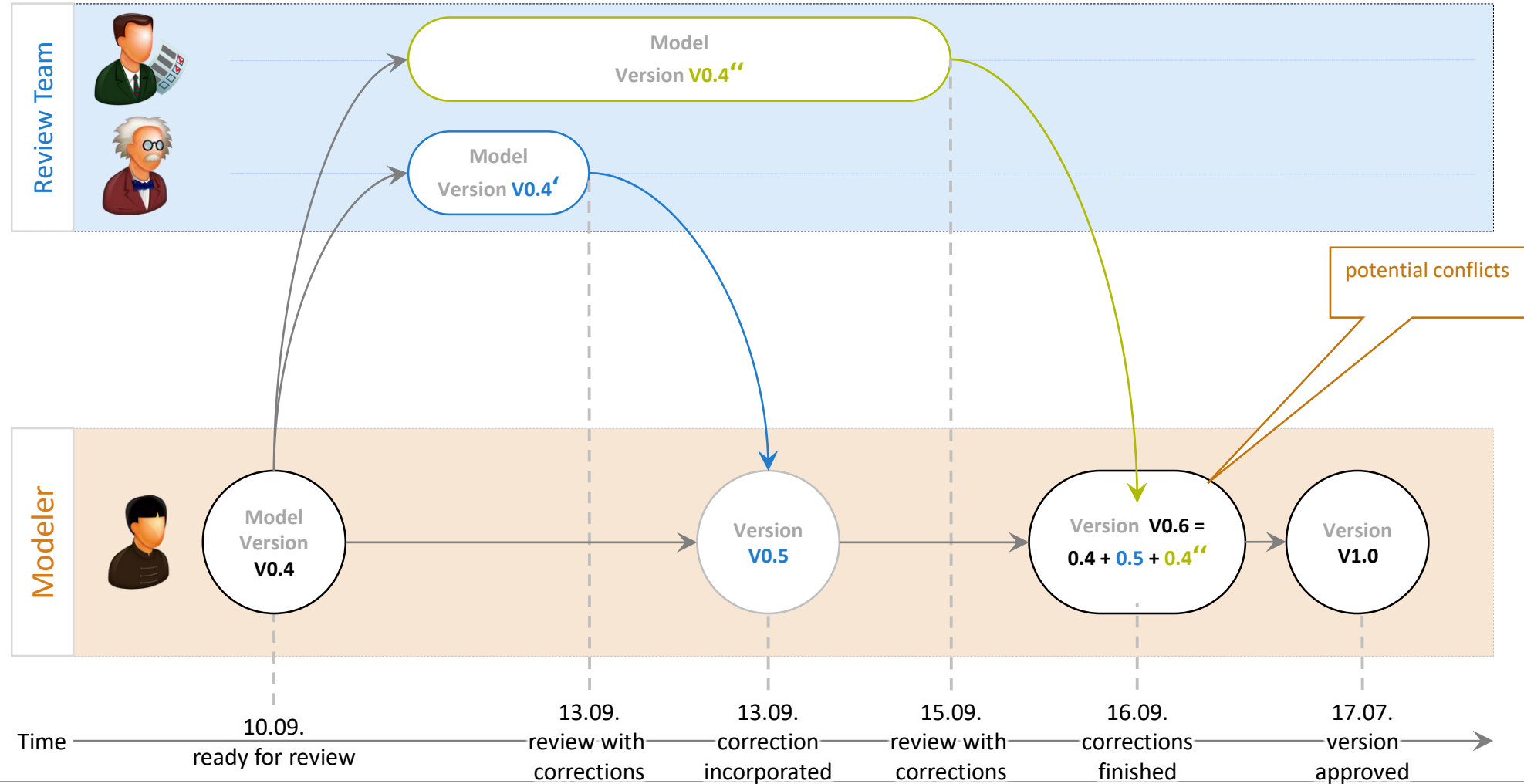
Integrate finished feature to develop



Integrate finished feature to develop



Review Process



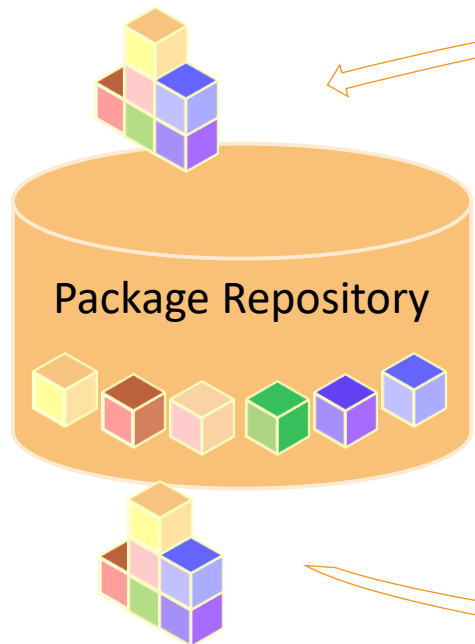
Conclusion

- Established workflows from SE for MBSE
 - Agile team collaboration based on branching
 - Consistent development state due to precise versioning
 - Perfect triggers for peer reviews
-
- Outlook:
 - Continuous Integration for models

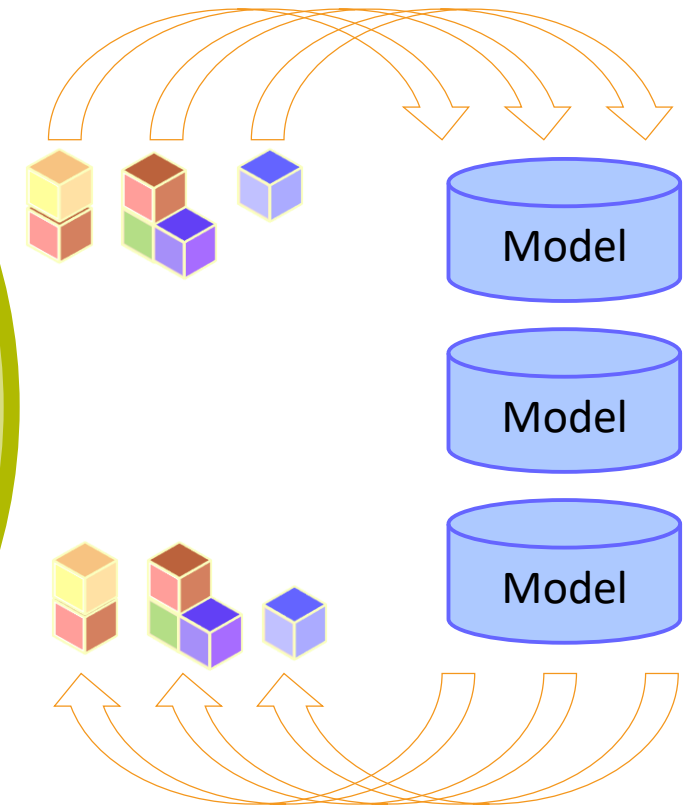
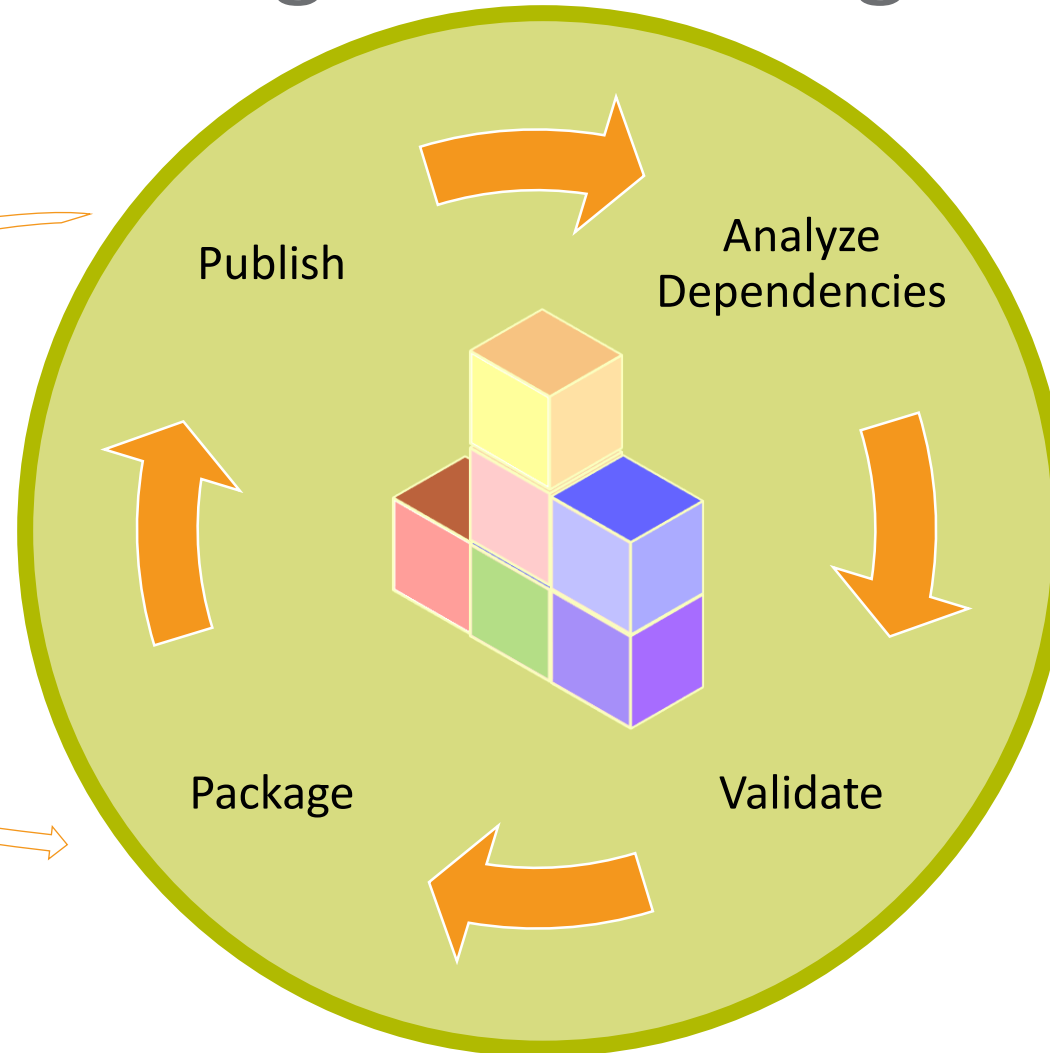


Outlook: Continuous Engineering as the high-end Agile Modeling

Consume valid Model Packages
with valid dependencies



Provide valid Model Packages
with valid dependencies



Thank you!

www.lieberlieber.com

blog.lieberlieber.com

konrad.wieland@lieberlieber.com

