

Support for Correct Evolution of Software Product Lines

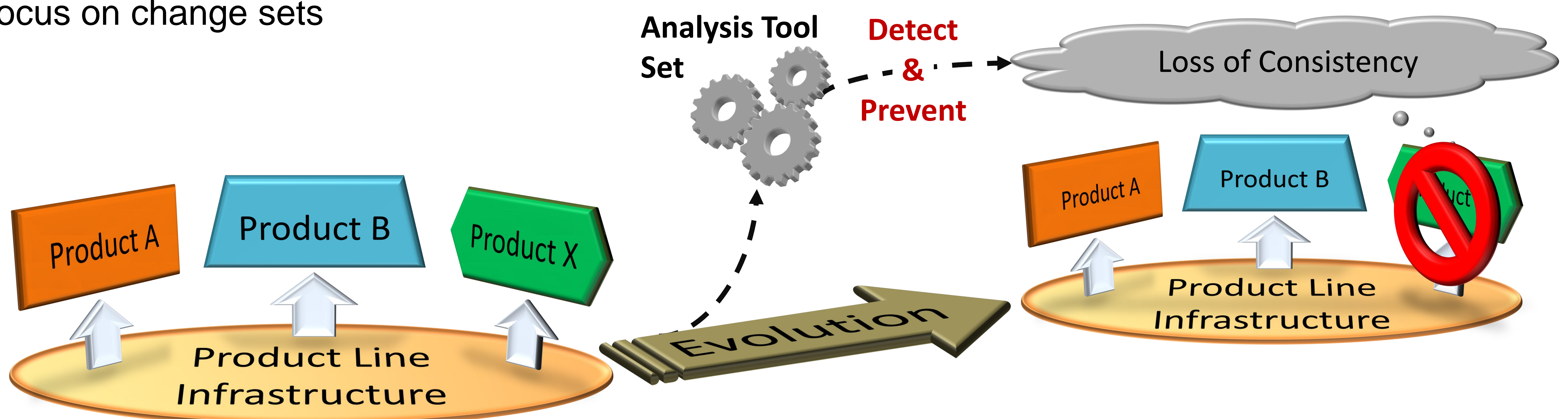


Vision

- Automatic developer evolution support
- Prevent loss of consistency between variability model and code during product line evolution
- Simplify detection and reduce complexity by focus on change sets

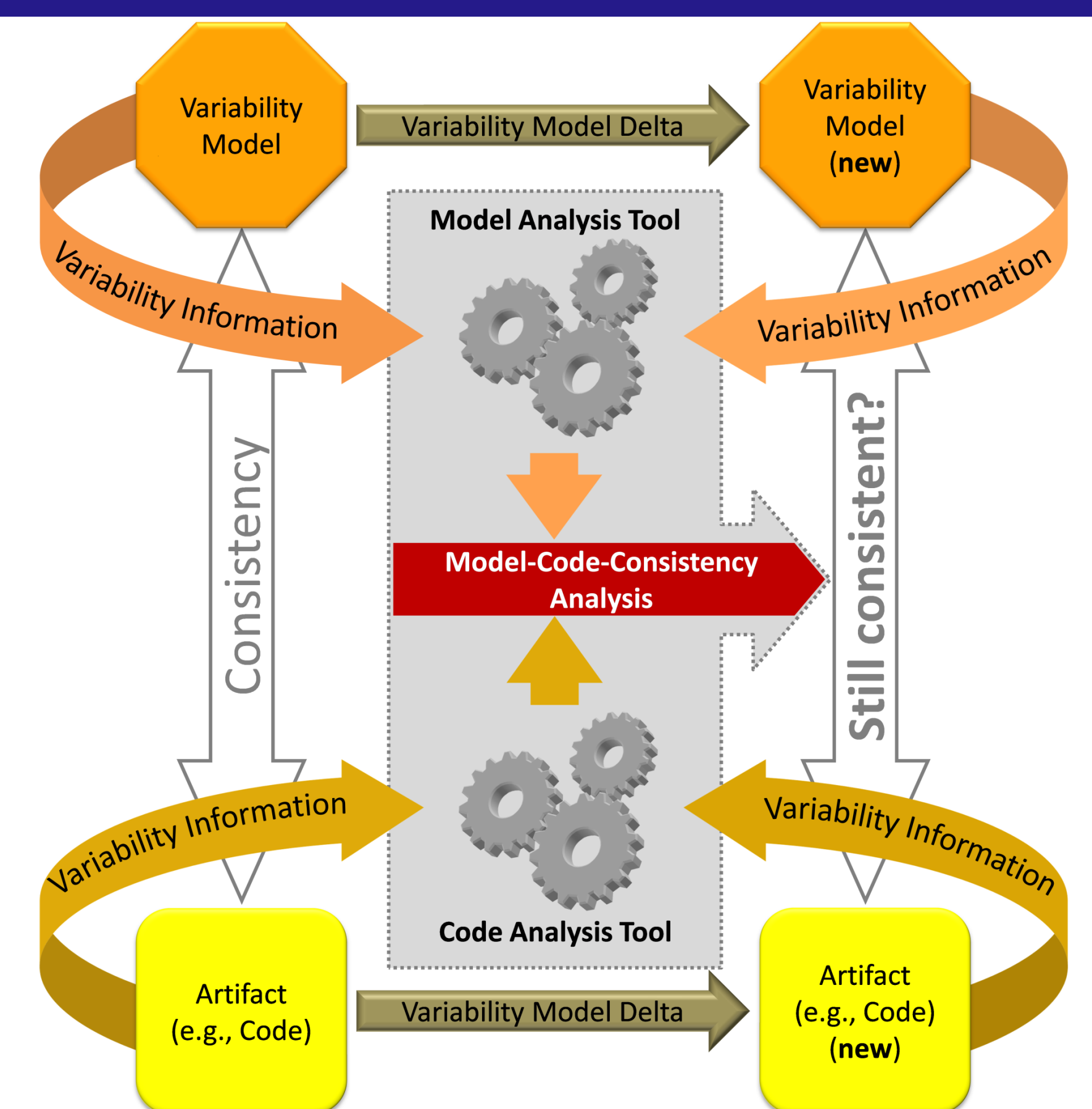
Focus

- Embedded systems
- Preprocessor directives & configuration variables
- Large-scale, non-Boolean variability models



Approach

- Analysis of variability models
- Analysis of variability information from code
- Pairwise consistency
- Conditional consistency of changes (if initially consistent)
- Support for non-Boolean variability at different binding times
- Identification of typical code modification problems (variability smells)



Case Studies

- Initial case studies based on open source repositories (e.g., Linux)
- Focus of case studies based on embedded systems
- Industrial case studies from associated partners (automation and automotive systems)

Principal Investigators

Prof. Dr. Rainer Koschke, Prof. Dr. Klaus Schmid

Members

Dierk Lüdemann, Christian Kröher

Associated Partner

Robert Bosch GmbH, Siemens AG