



Software Center



# Model-Based Development and Continuous Integration Project Nr: 32

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# Project team

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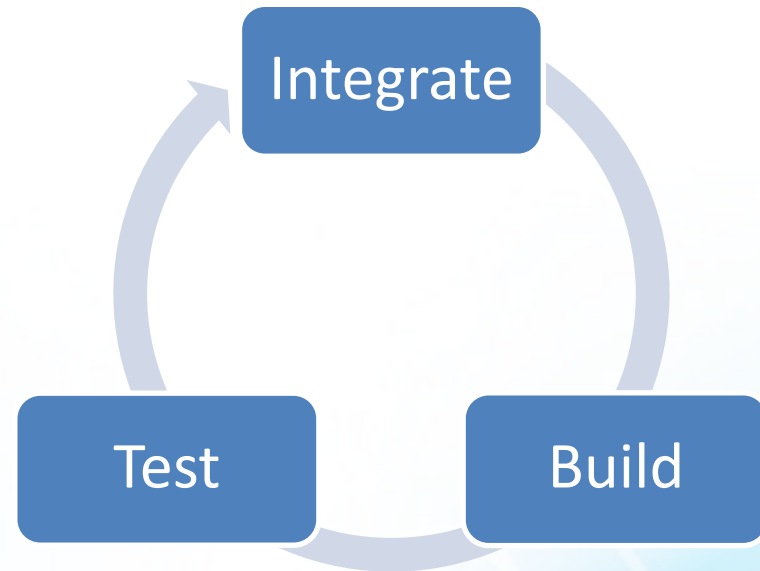
# Project goals

- Identify impediments to introducing **Continuous Integration** practices in Model-Based Development projects

# Project goals

- **Continuous Integration**

- XP, Agile
- Each developer commits at least daily,
- Integrates her work in a shared repository and
- Automated build and tests are performed.
- To have always an overview of the current state of the project and its integration

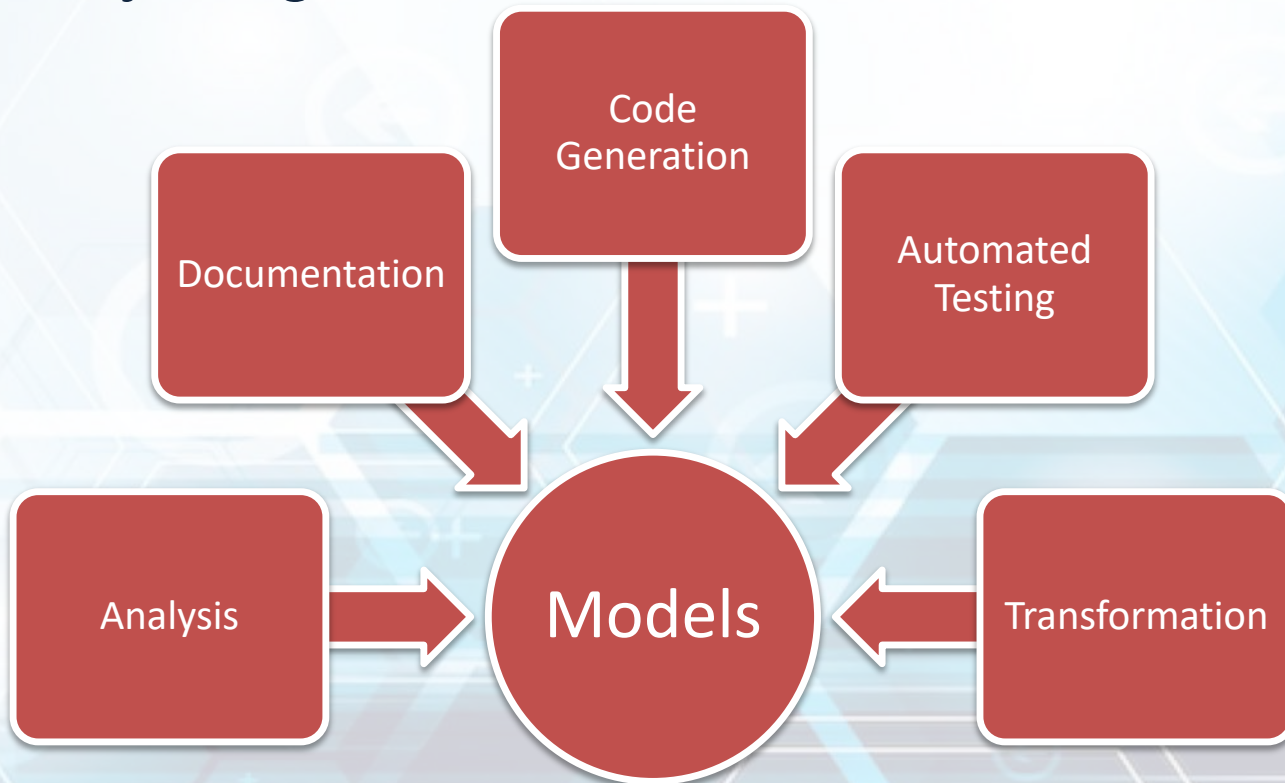


# Project goals

- Identify impediments to introducing Continuous Integration practices
  - Frequent integrations
  - Automated builds and tests
- in **Model-Based Development** projects

# Project goals

- **Model-Based Development**
  - Everything is a model

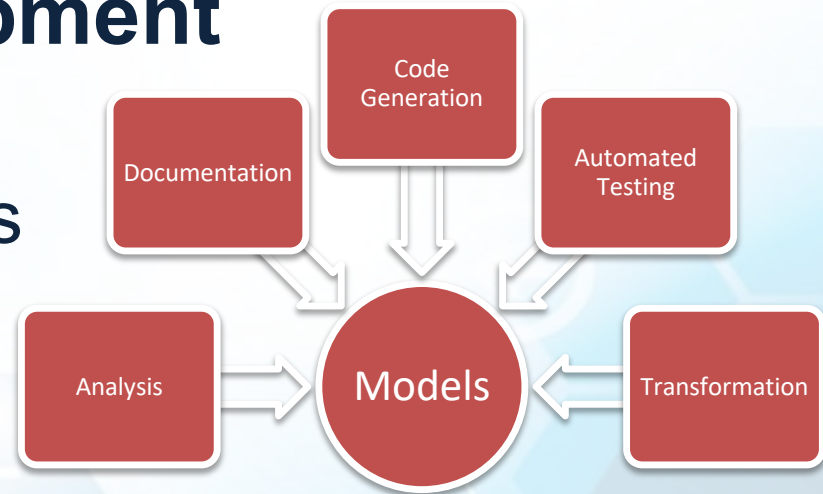


# Project goals

- **Model-Based Development**

- ~~Everything is a model~~  
Some things are models

- Models are driving the development
    - Models are created and shared within teams
    - Eventual code must conform to these models



# Project goals

- **Identify impediments** to introducing Continuous Integration practices
  - Frequent integrations
  - Automated builds and tests
- in **Model-Based Development** projects
  - Models driving development
  - Code conforms to models



# Project goals

- Identify impediments to introducing Continuous Integration practices in **Model-Based Development** projects
- Developing methods, techniques and tools to help **alleviate** these **impediments**

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  - To find aspects that are **commonly underdeveloped**

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  - **Identify** relevant **aspects** of modeling tools to support the combination of CI and MBD, and

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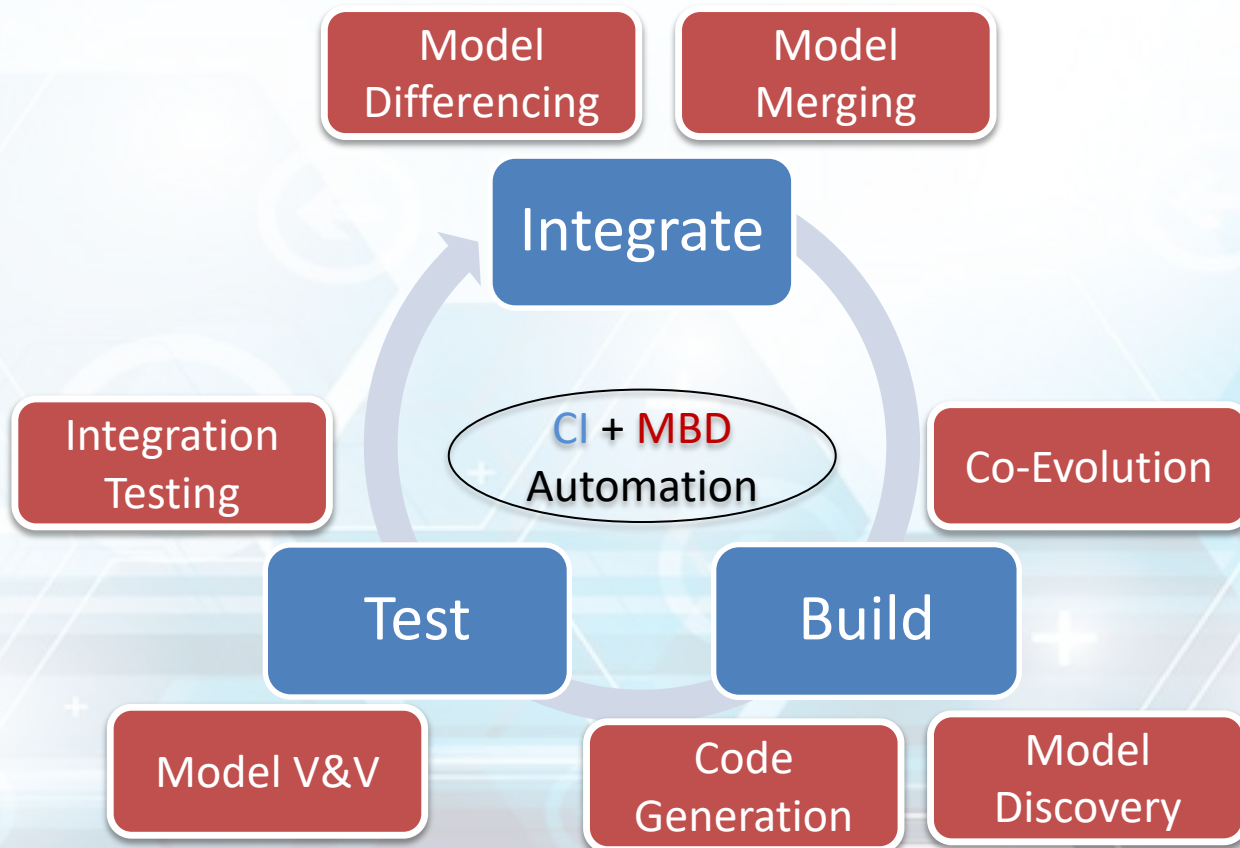
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  - To find aspects that are commonly underdeveloped
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  - **Evaluate** current levels of **support** for these aspects

# What we have done

- Review of modeling tools
  - To find aspects that are commonly underdeveloped
  - Identify relevant aspects of modeling tools to support the combination of CI and MBD, and
  - Evaluate current levels of support for these aspects
- Preparation of **interview study** to be performed in the next sprint

# Results so far

- Identified **aspects** to CI practices in MBD:



# Results so far

- Seen varying levels of support

Aspects	Tools								
	BridgePoint	Enterprise Architect	Integrity Modeler	LabView	Magic Draw	Papyrus	Rhapsody	Simulink	
Integration	-	-	o	+	+	+	+	+	
Building	o	o	+	o	+	+	+	o	
Testing	o	+	o	+	o	+	+	o	
Automation	-	o	+	+	o	o	o	+	

# Results so far

- **Interview study setup**
  - Closed questions about professional background and current practices



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- **Interview study setup**
  - Closed questions about professional background and current practices
  - Open questions about viewpoints and perceived impediments:
    - How could your software development benefit from
      - More frequent integrations
      - More mature modeling practices
    - What limits do you perceive to
      - Integrating more frequently
      - Adopting more mature modeling practices

# Next steps

- Sprint 15
  - Performing the **interview study** designed in this sprint

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  - Create CI pipeline in a case study MBD project to find more impediments
  - Workshop **paper** describing the results of the **tool review** performed during this sprint
    - Input?



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