The tale of a model **hoarder**

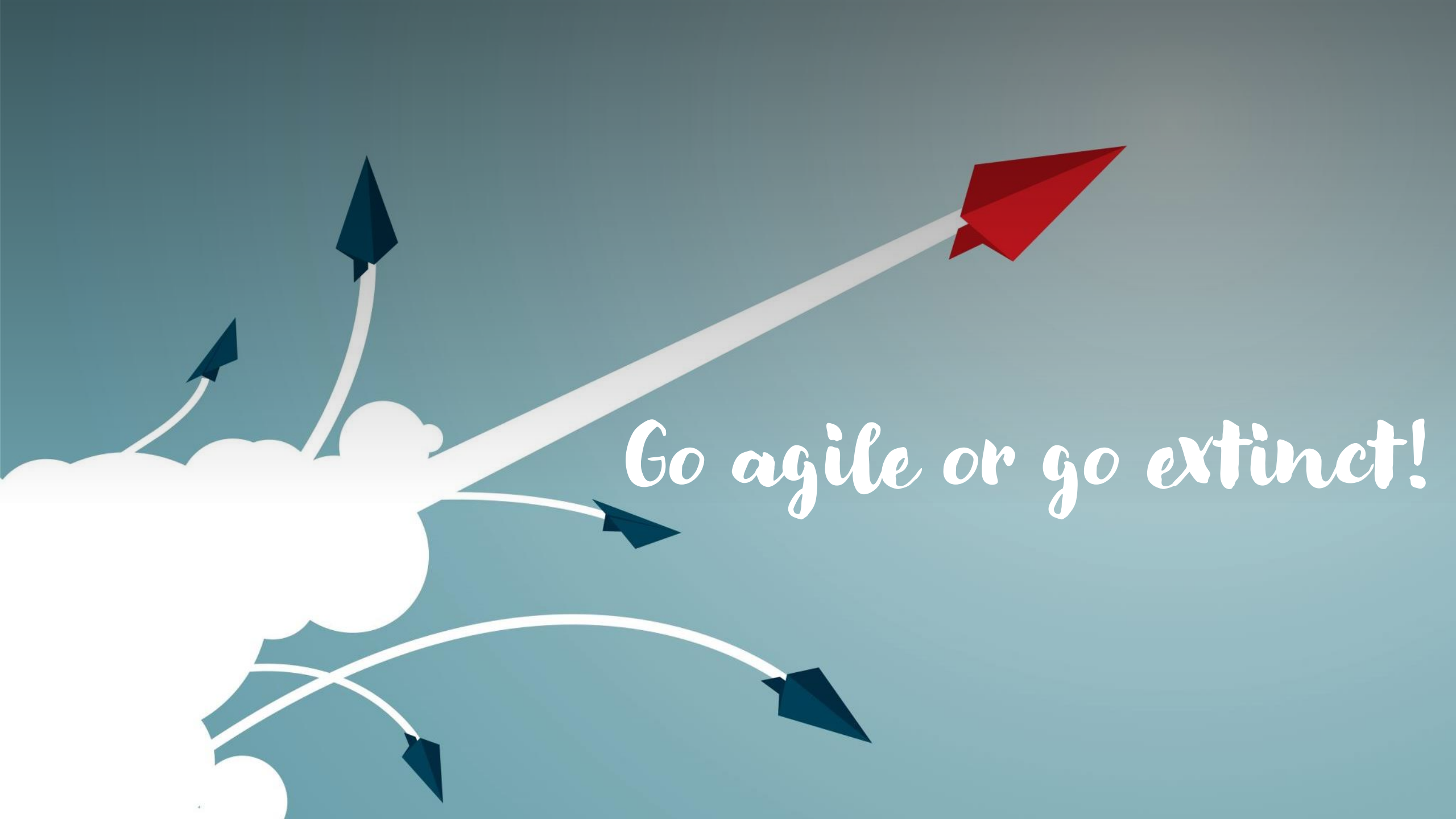
Agile Archimate? Using Enterprise Architect and GitHub to craft your models!

LieberLieber Software
Daniel Siegl
11.09.2024

Daniel Siegl

- Involved with Model Based Engineering Tools since 1999
- Business “Development” at Syntevo and LieberLieber
- INCOSE Deputy Director for Standards
- Chaired PROSTEP Workgroups
- Involved with OMG since 2008

#MBSE
#Collaboration
#Interchange
#Standards
#git #github

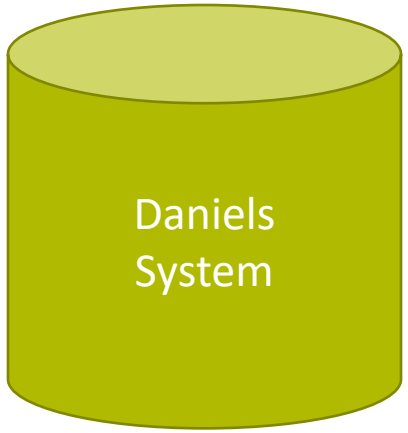

Go agile or go extinct!

LemonTree 4.0

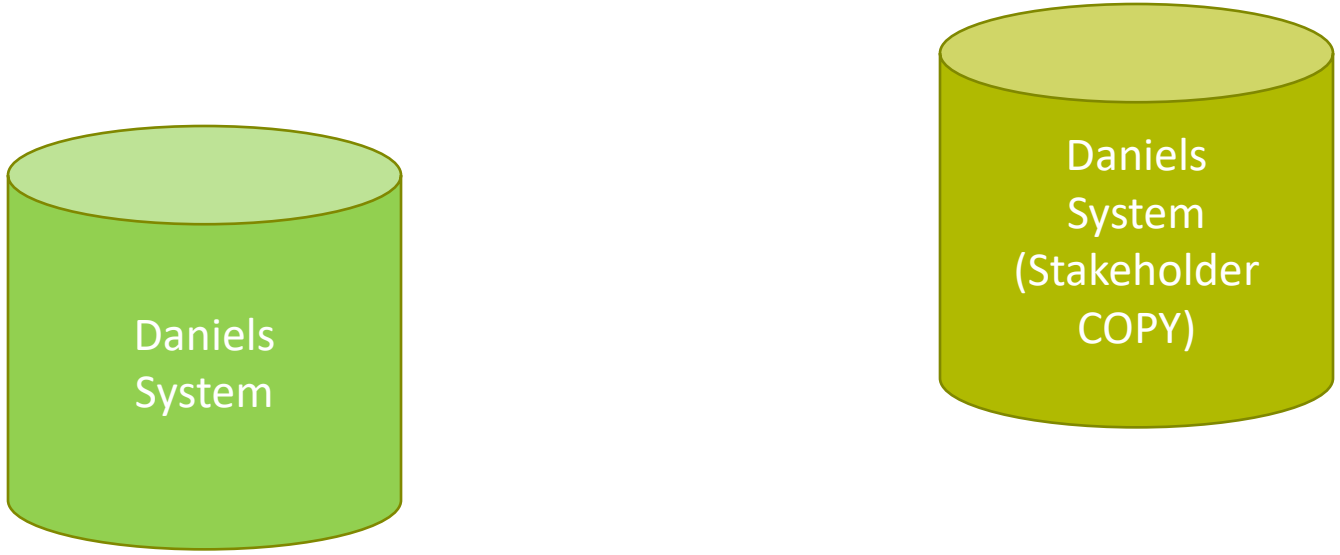
LemonTree©
Fresh Model Versioning

Model Based Team collaboration using strategies from Software Engineering.

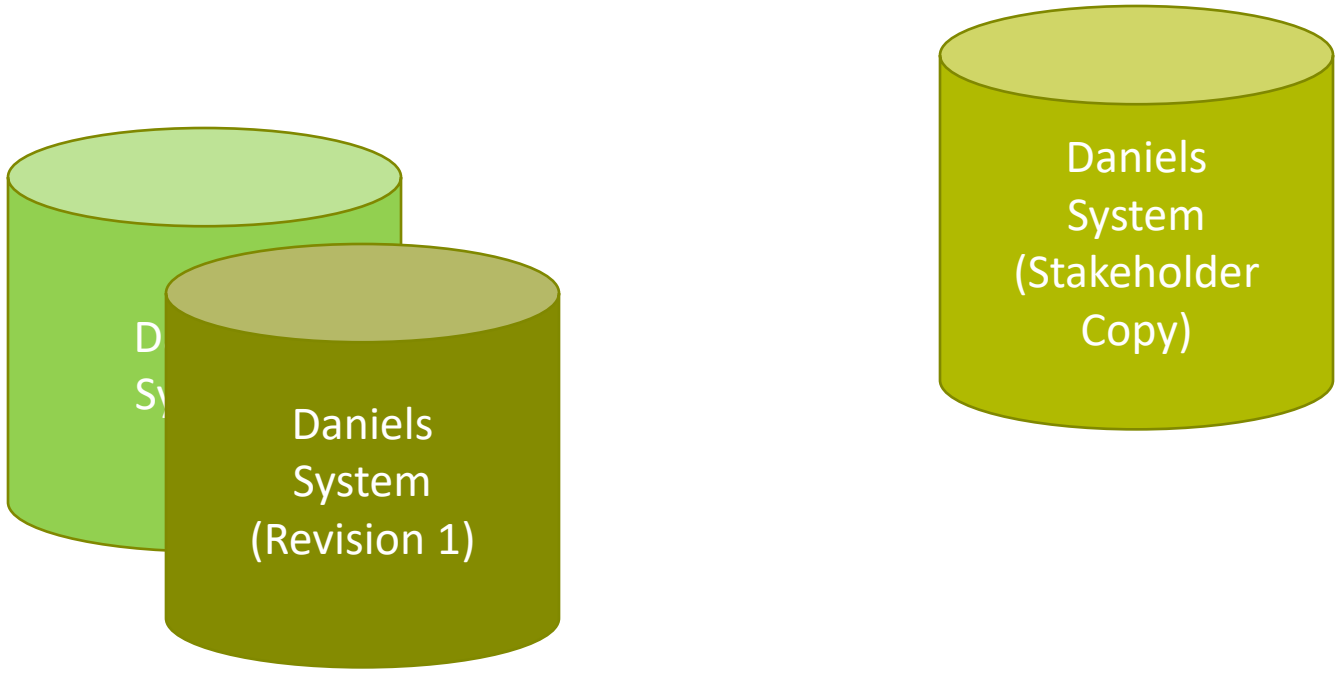
I create a Model



I am done – testers wants a copy
I start an update

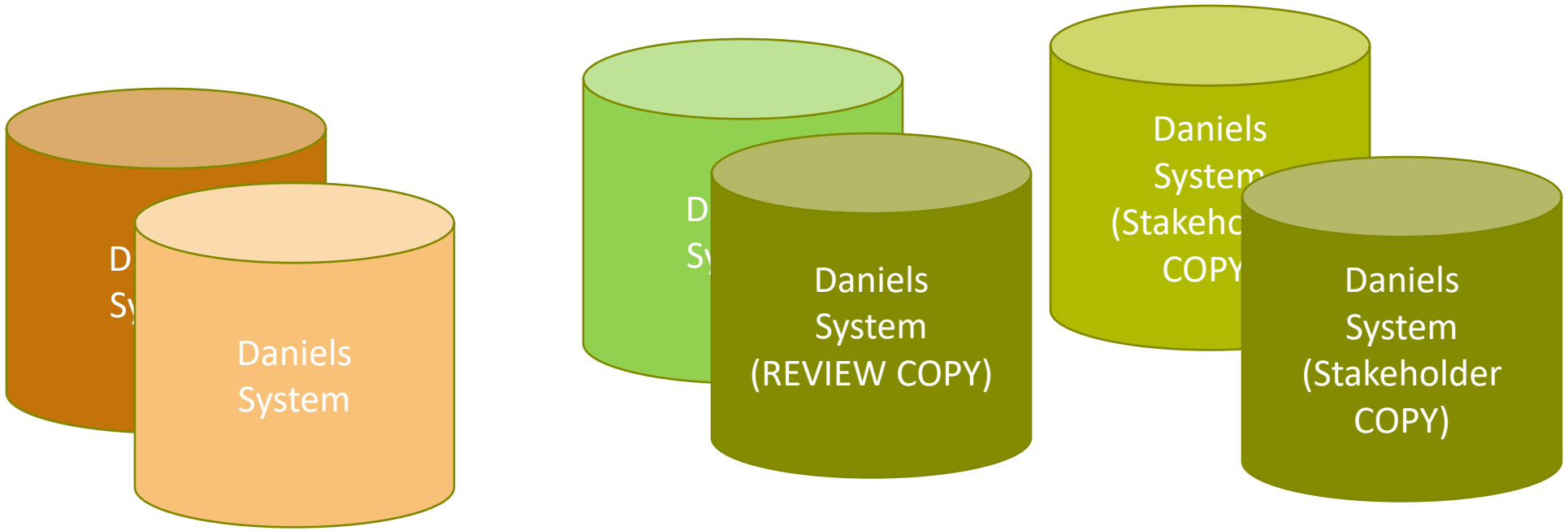


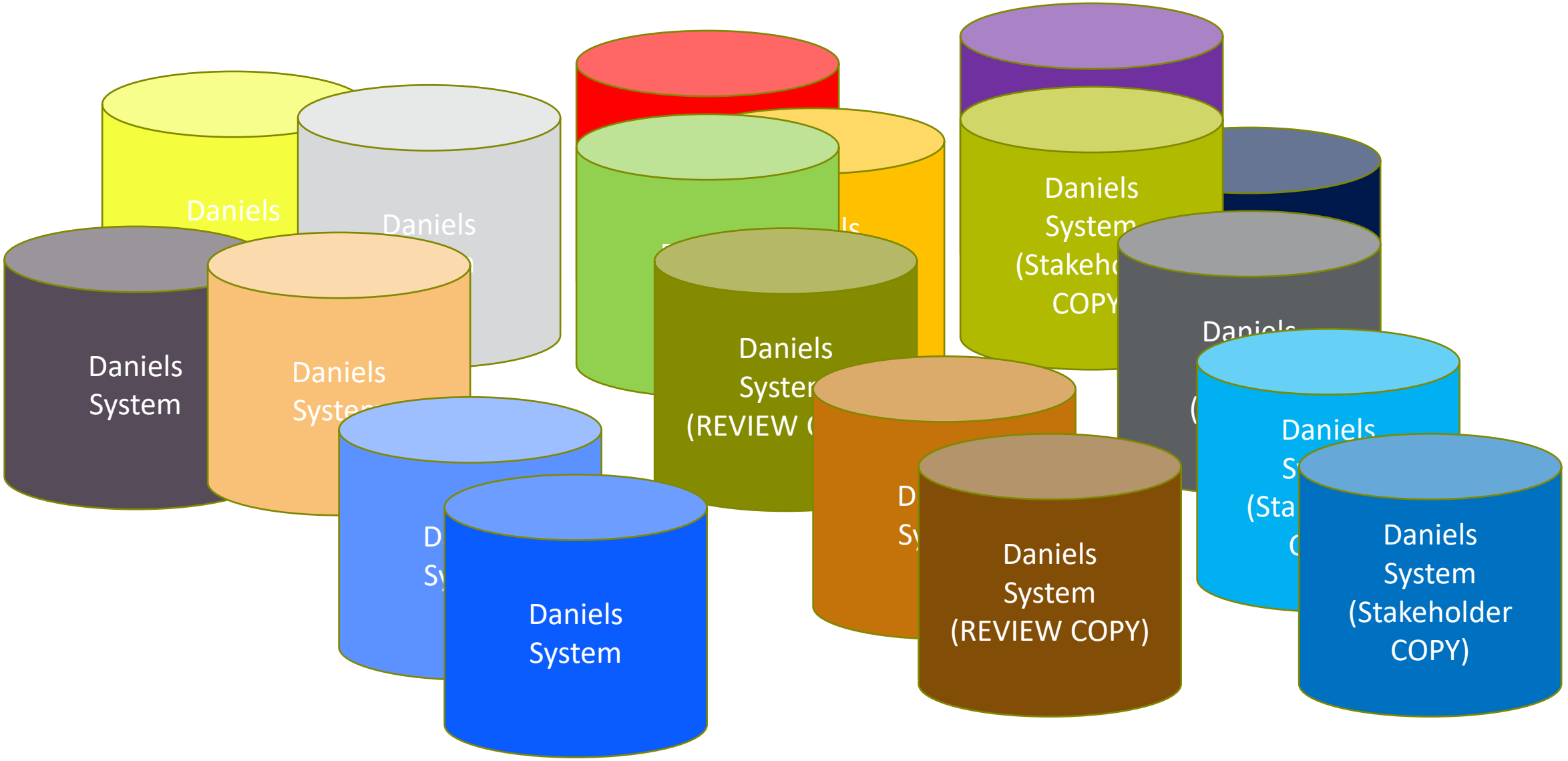
I need to do a variation for some one else



They got an IT too

And now they want to review the stuff I did

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(Stakeholder
COPY)

One truth? Really? – History?

Problem Statement

- „Trunk“ only not feasible for systems
- Agility also needed in MBSE to meet goals
- **Complexity** of Cyber-Physical Systems
- **Manage Model quality in distributed Teams**

- **Cross company projects on shared IP**
- **Digital Twin – and the dead meat…**

Modeling Collaboration User Requirements

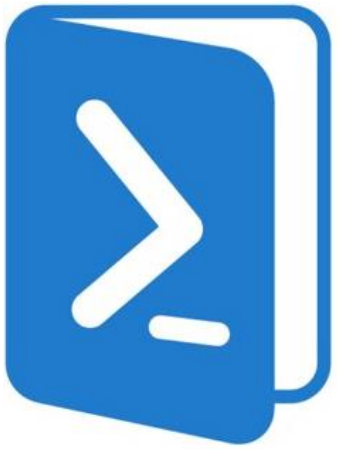
- **It should be easy to release Models**
- It shall be possible **to view and modify past versions** of the Model
- It shall be possible to evaluate alternative scenarios
- **It shall be possible to give new users a sandbox**
- Stake holders shall only be able to access „Staging/Review“ and „Production“ Models
- Stake Holders need to be able to consume and review the model via a Web browser

I need a ROBOT

Engineers have Robots!

„**The first real version control system goes back to 1972** when a Source Code Control System (SCCS) started getting developed by Marc J. Rochkind at Bell laboratories as a set of commands developed for OS/MVT, and later on UNIX.”

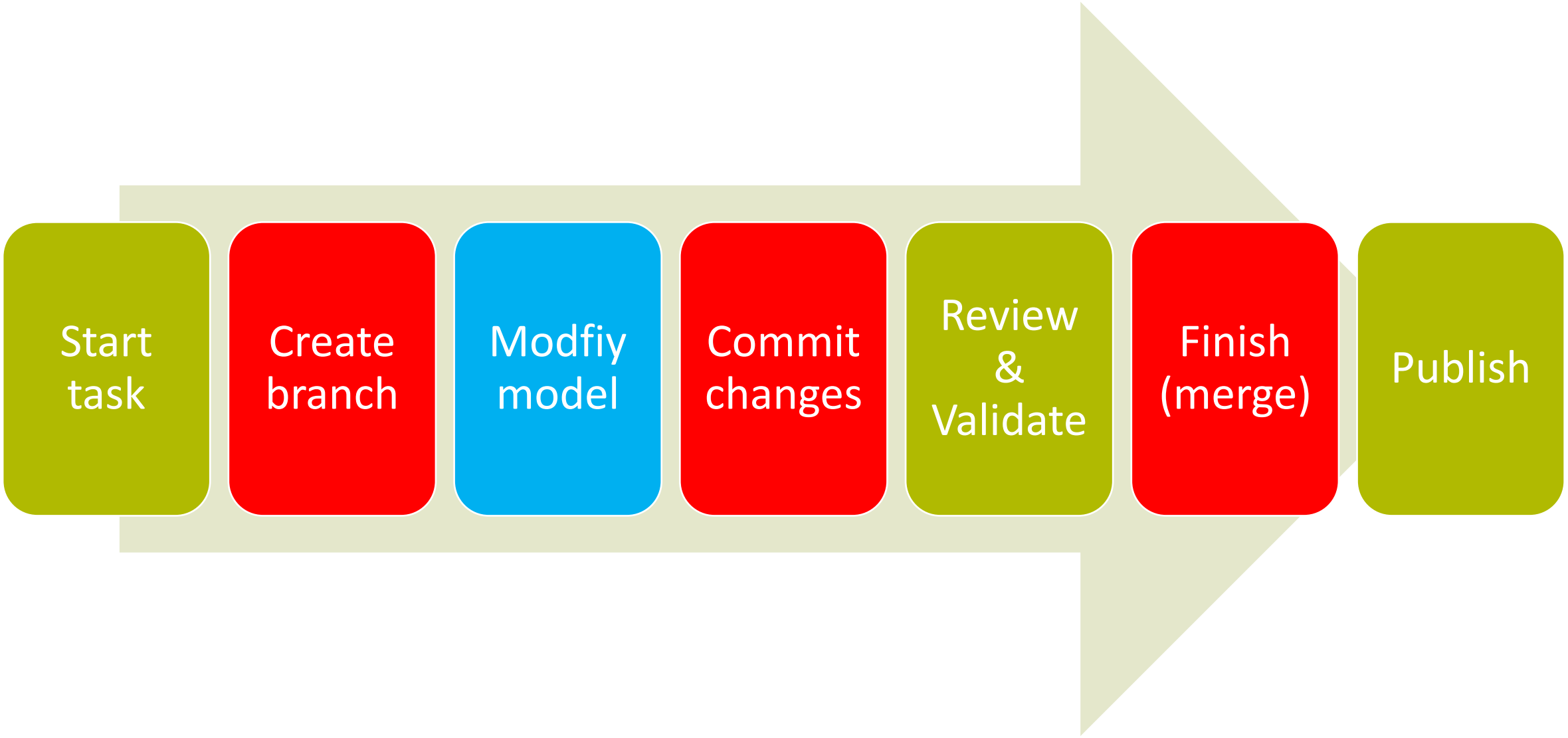
Jenkins

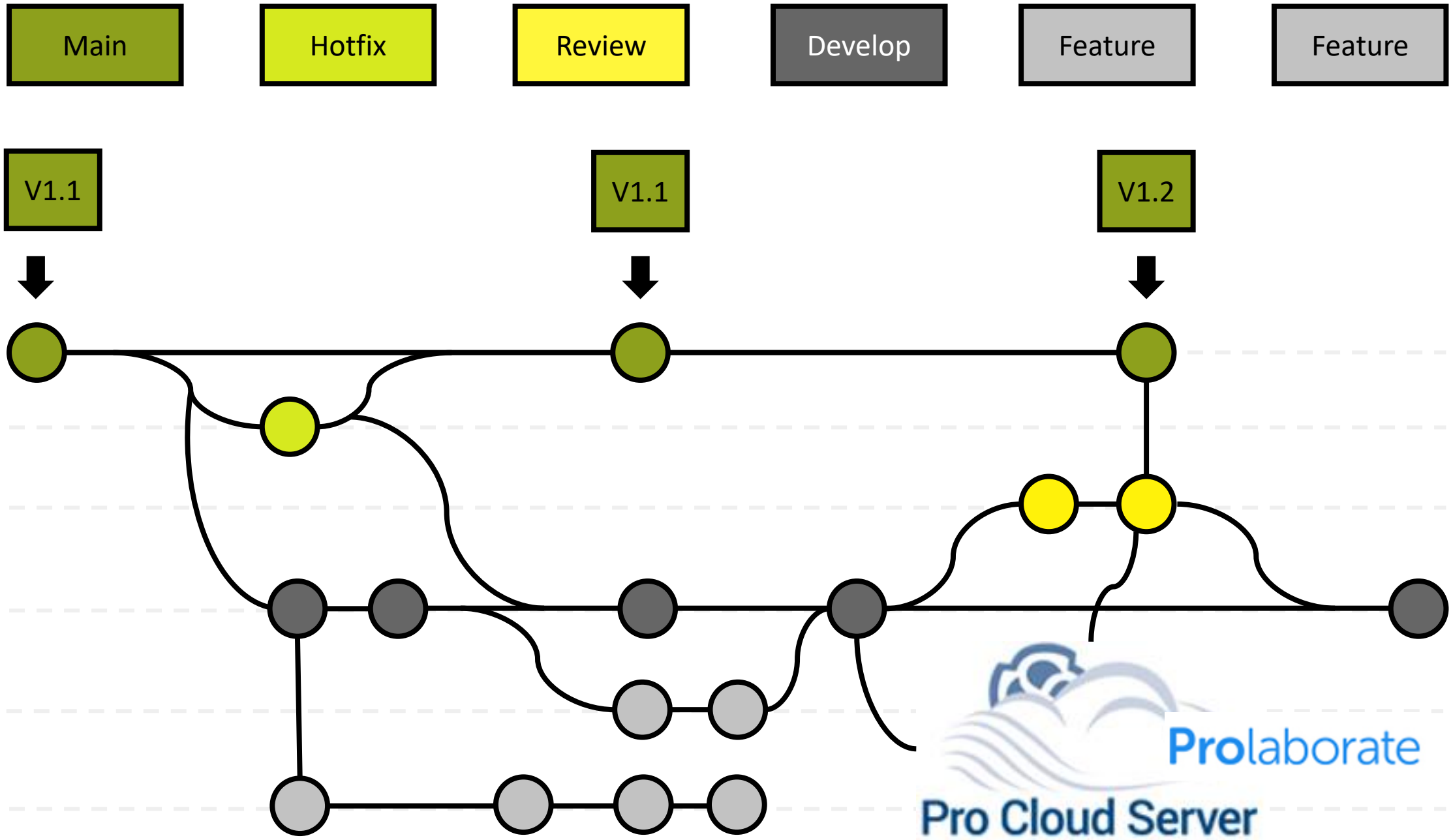


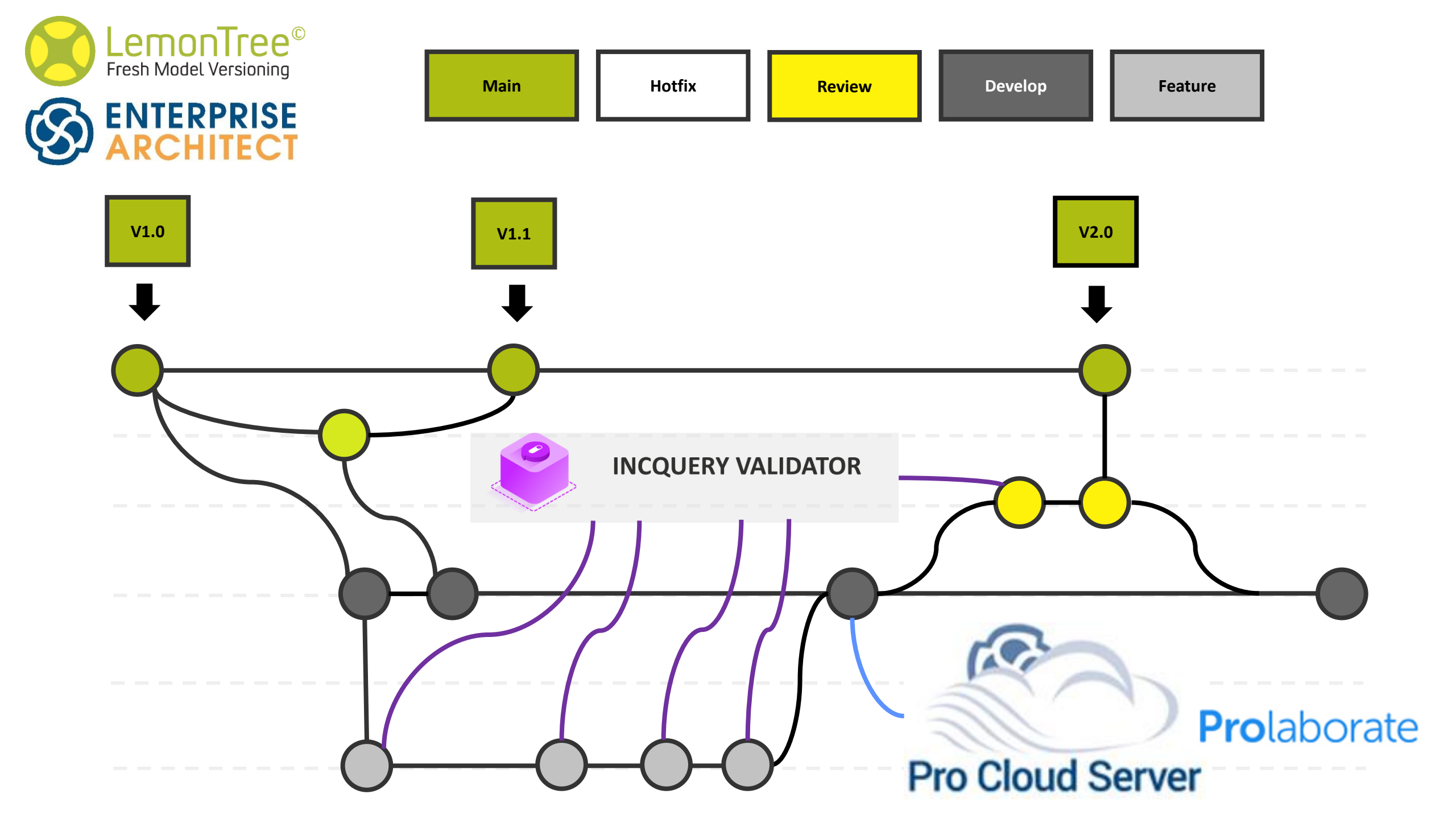
PowerShell

GitHub

Some of our 200+ global Users….

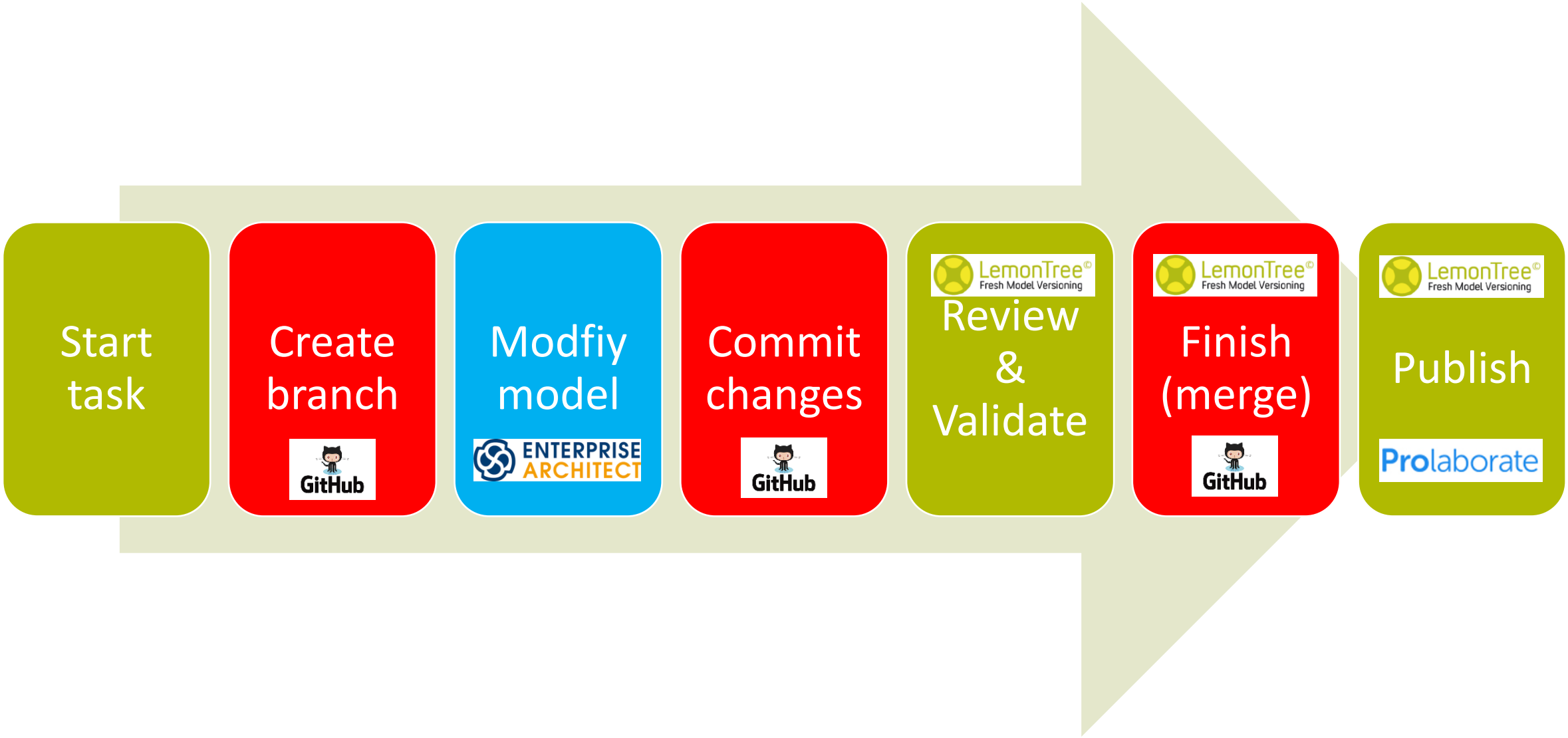

Start task
Create branch
Modfiy model
Commit changes
Review & Validate
Finish (merge)
Publish


Main
Hotfix
Review
Develop
Feature
Feature
V1.1
V1.1
V1.2
Prolaborate
Pro Cloud Server


LemonTree©
Fresh Model Versioning
ENTERPRISE ARCHITECT
Main
Hotfix
Review
Develop
Feature
V1.0
V1.1
V2.0
INCQUERY VALIDATOR
Prolaborate
Pro Cloud Server

DON‘T SAY AGILE

IF YOU CAN‘T MERGE YOUR MODELS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ENTERPRISE ARCHITECT
Commit changes
GitHub
LemonTree© Fresh Model Versioning
Review & Validate
LemonTree© Fresh Model Versioning
Finish (merge)
GitHub
LemonTree© Fresh Model Versioning
Publish
Prolaborate

Client

Local Git Repository

.qea (x) file

Git Binaries
+ Client

LemonTree

Push

Pull

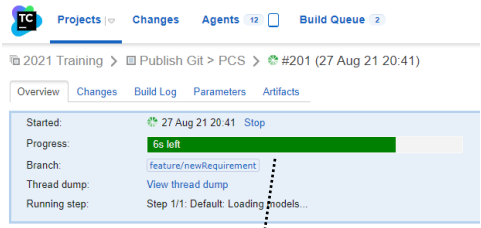
Server

Git Server
(f.e. GitHub)

.qeax file

Trigger

Build Server
TeamCity/Jenkins/GitHub

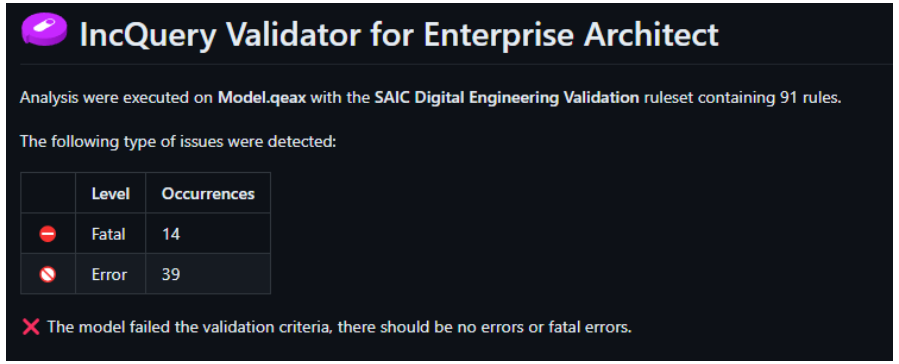


LemonTree Automation

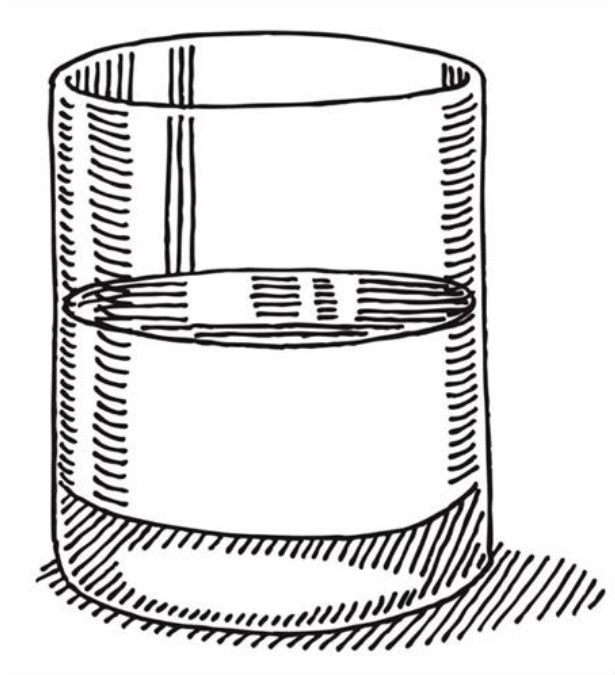
Prolaborate

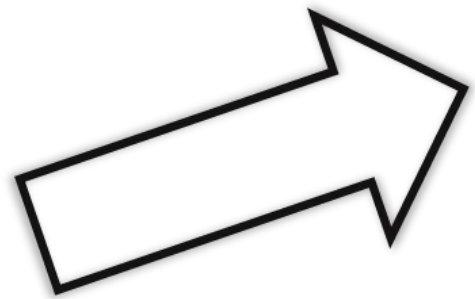
Web Access

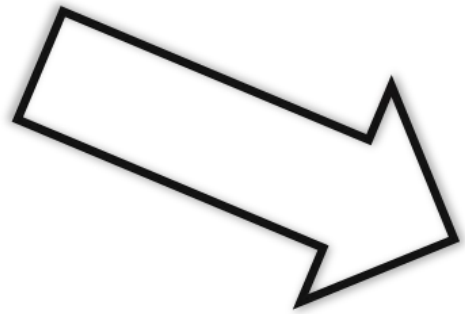
Pro Cloud Server

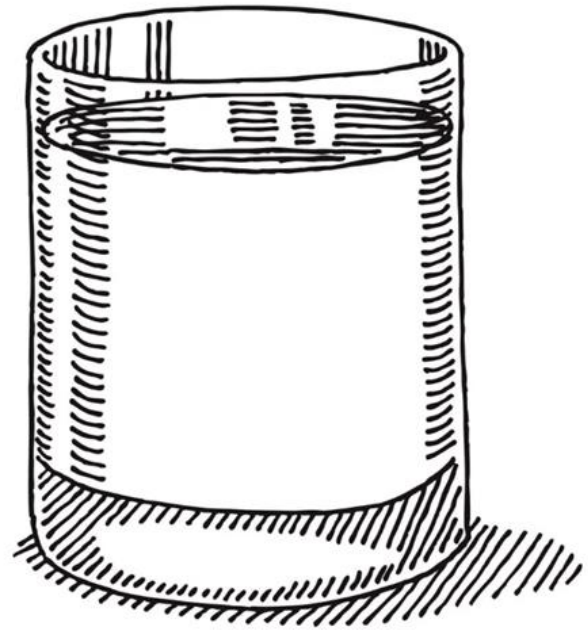


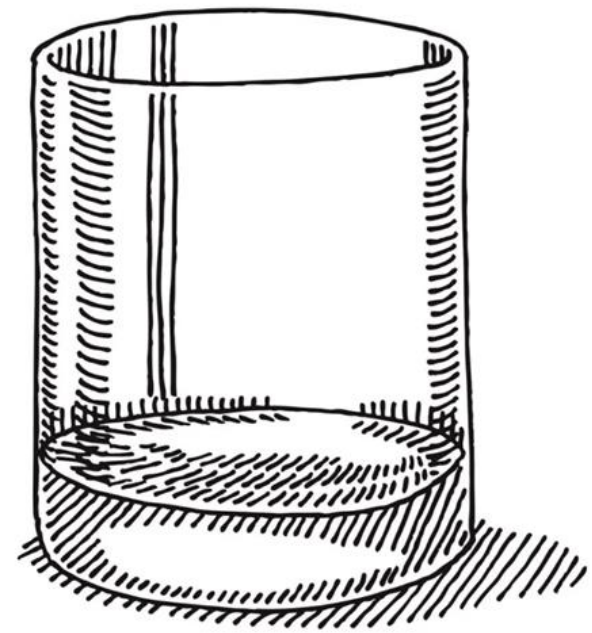
DEVOPS ISN'T IT?











„Social“ Benefits

- New users – can work in a sandbox – **easy to mentor and review**
- Only **„finished“ models are published** for Stakeholders/Reviewers
- Easy to **revert changes**
- If a Feature is discarded/postponend there will be **no „dead meat“ in the „main“ model**
- Culture of visible measuring **improves quality and transparency**

Conclusion

- Established workflows from SE for modeling
- **Agile team collaboration based on branching**
- **Agile (cross) team collaboration based on Model Components**
- Consistent development state due to precise versioning
- Perfect triggers for peer reviews
- Publish/Release consistent models to Stakeholders

#XMIISDEAD

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