

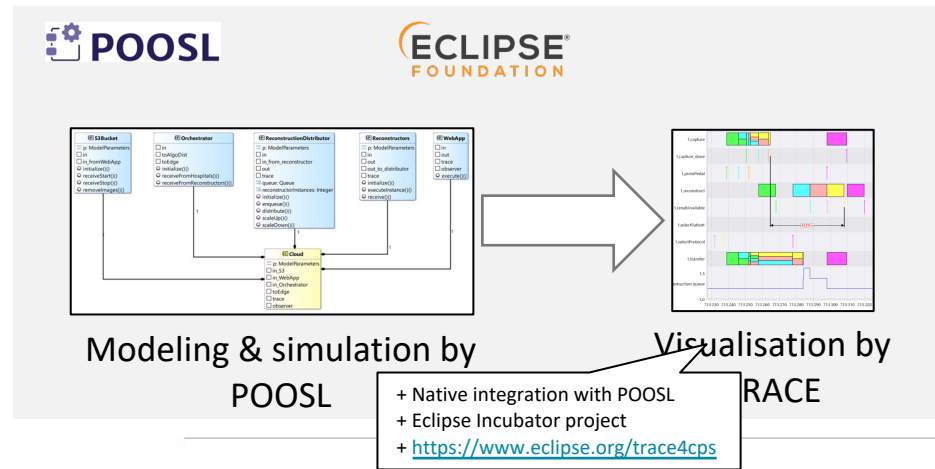
## POOSL for early system validation

### Parallel Object Oriented Specification Language (POOSL)

- Light-weight modeling and simulation for early system validation
- Successful applications in high-tech companies

### Eclipse Open Source Project

- Eclipse Modeling Project for model-based development technologies
- Research result from TU/e and ESI, industrialised by Obeo
- POOSL website: <https://www.poosl.org/>
- Source code: <https://github.com/eclipse/poosl>



## POOSL in TRANSACT: Use case cloud-assisted image guided surgery



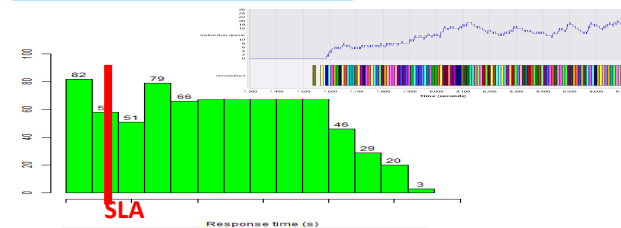
- Advanced image processing in the cloud, while patient is on the table
- Response time should not keep surgeon waiting
- How to meet SLA for Response Time?



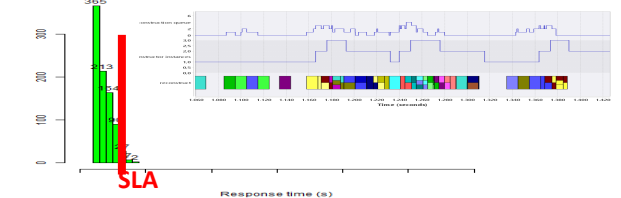
So many hospitals?  
So many operations?  
So many cloud requests?

Model stochastic, time-varying demand

How many cloud resources?  
How to scale to meet timing?



1 cloud resource instance



1-3 cloud resource instances (dynamic scaling)