# *Further Experiences with Software Performance Modelling*

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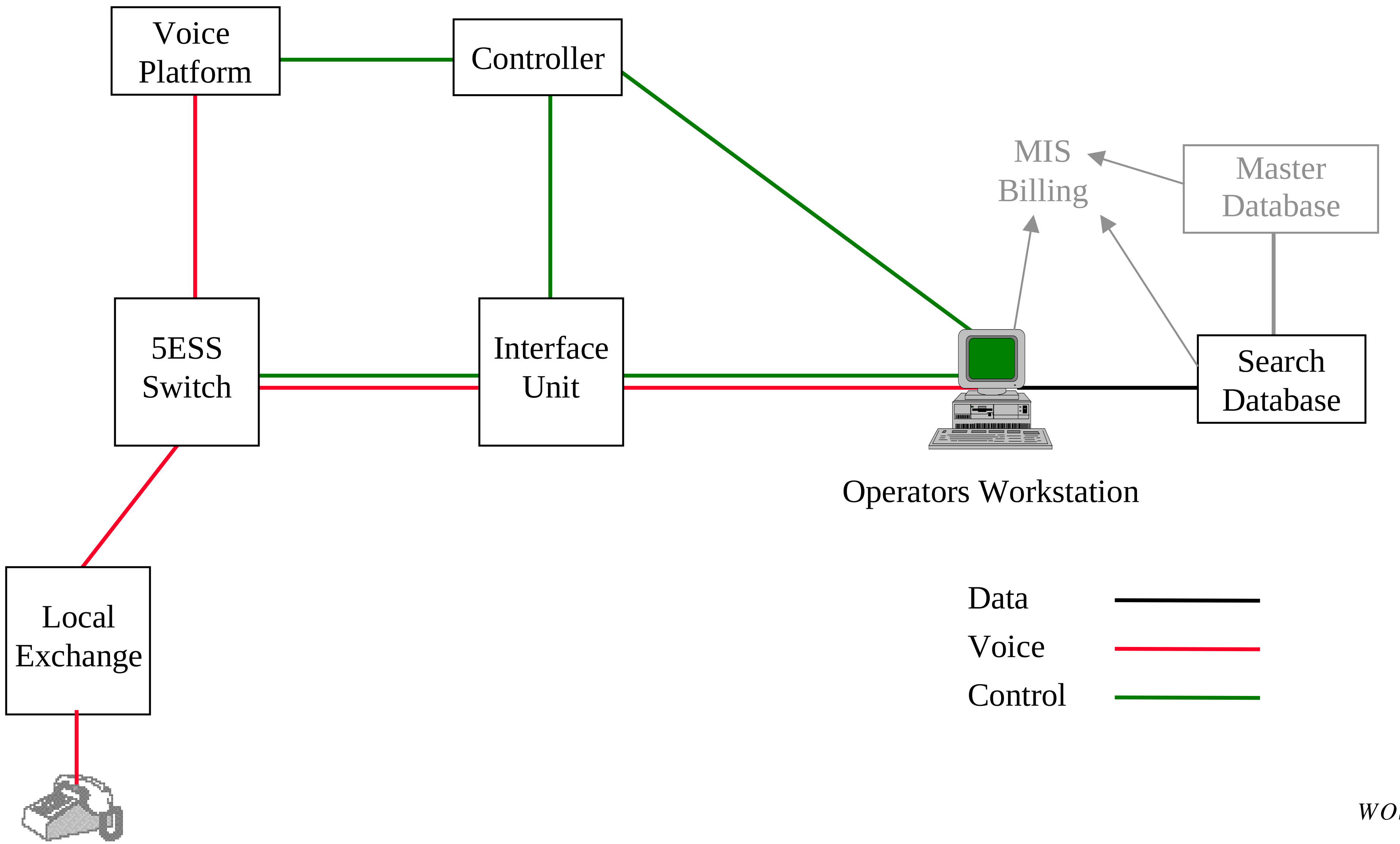
# *The Vision*

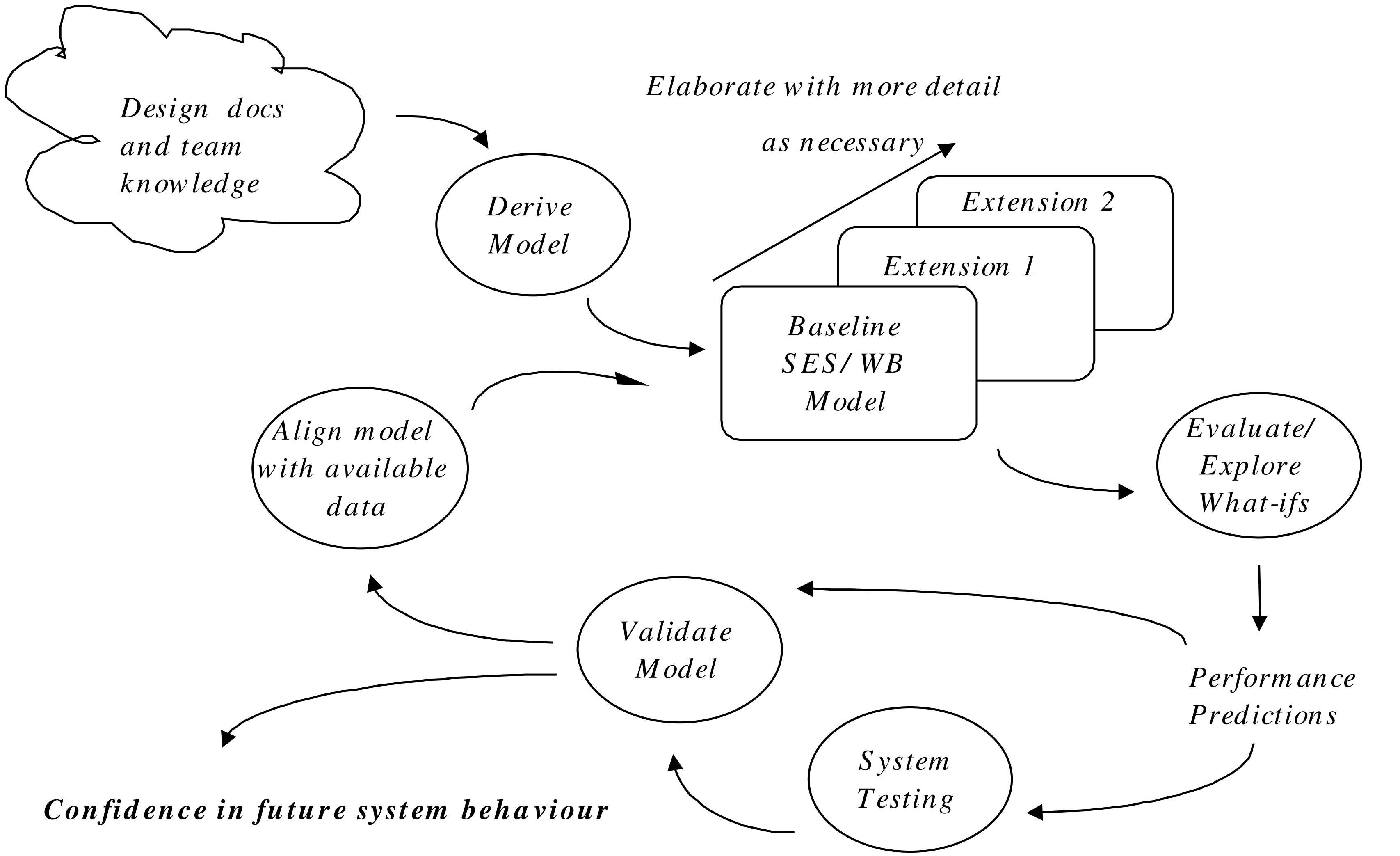
- ⇨ predict performance of a system <u>before</u> you build it
- ⇨ apply performance techniques earlier in lifecycle
- ⇨ **techniques more accessible** to typical software engineers
- ⇨ integrated with development process
- ⇨ business as usual, not an afterthought
- ⇨ **performance results direct from designs**; transparent models
- ⇨ start early, start simply; elaborate and refine models during design
- ⇨ **component oriented models**; 'try before you buy'; re-use of models
- ⇨ readily explore alternate what-if scenarios
- ⇨ **performance evaluation 'at the touch of a button'**

# *Case Study System - High Level View*



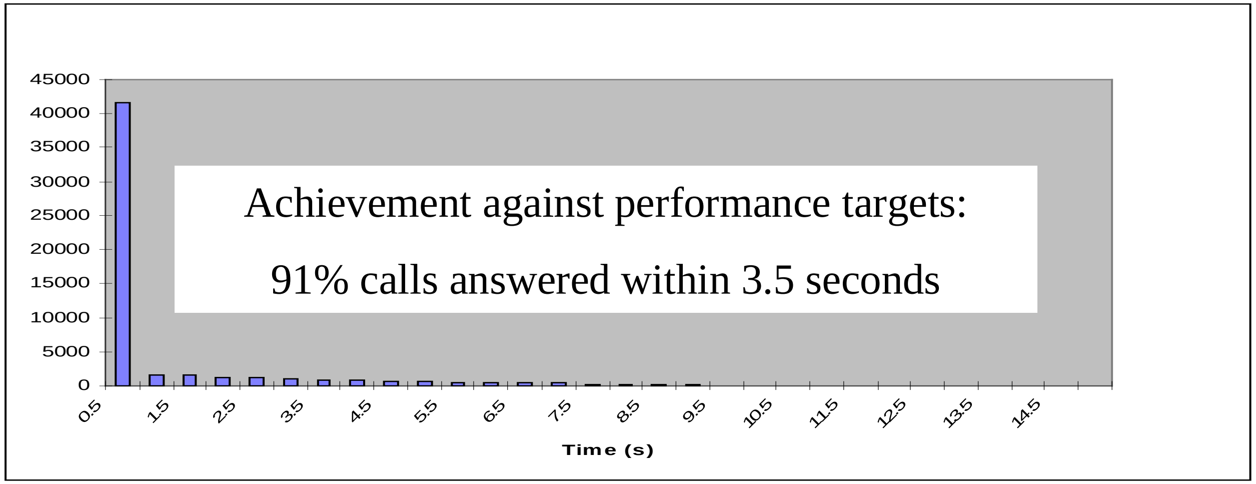

*WOS P98*

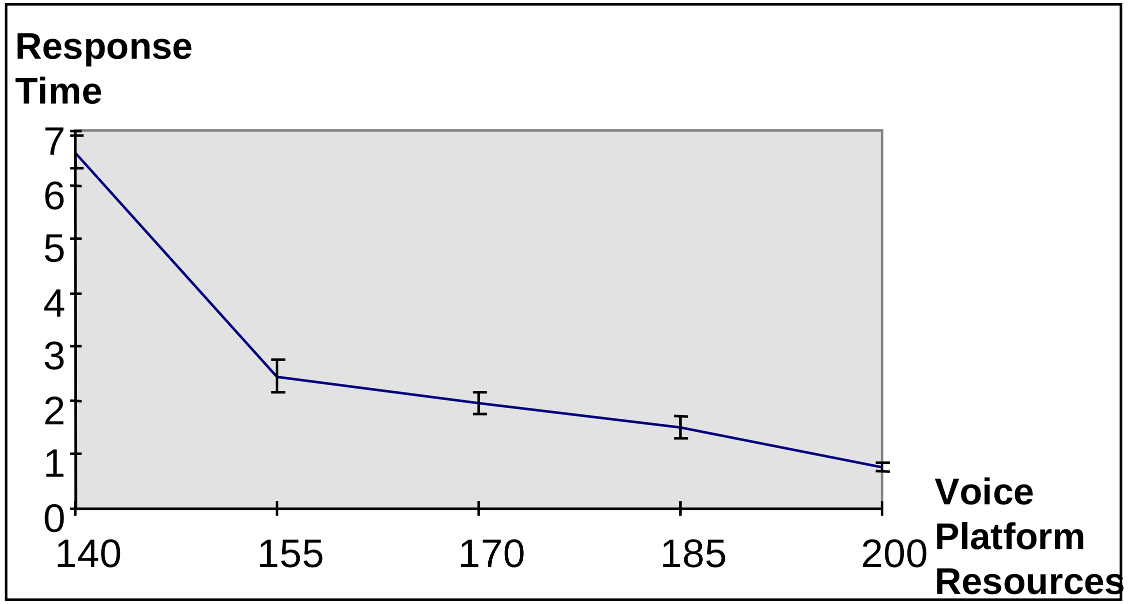
# Case Study Process - Manual



# Example Results

*Understand Service Implications*

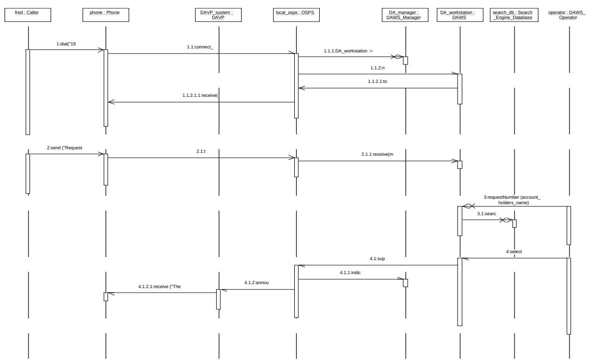


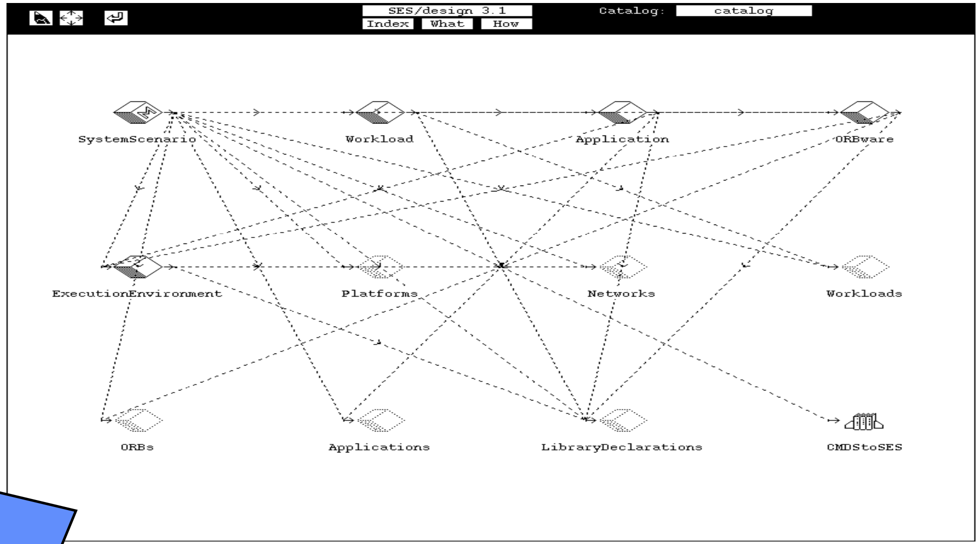

*Evaluate Design Trade-offs*

# *PPME Prototype*

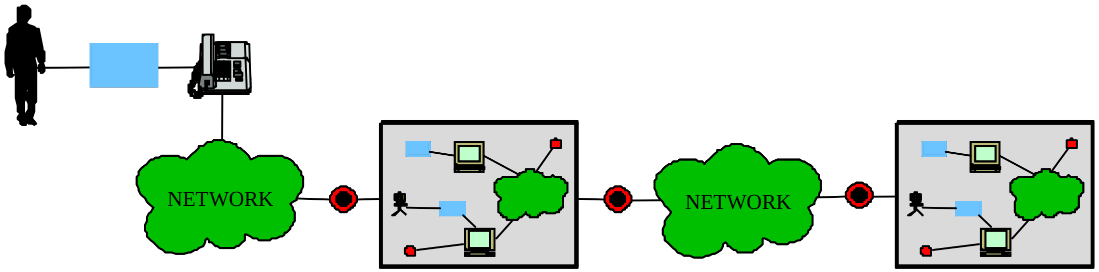
## Application model

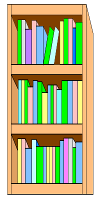


## Performance (simulation) model



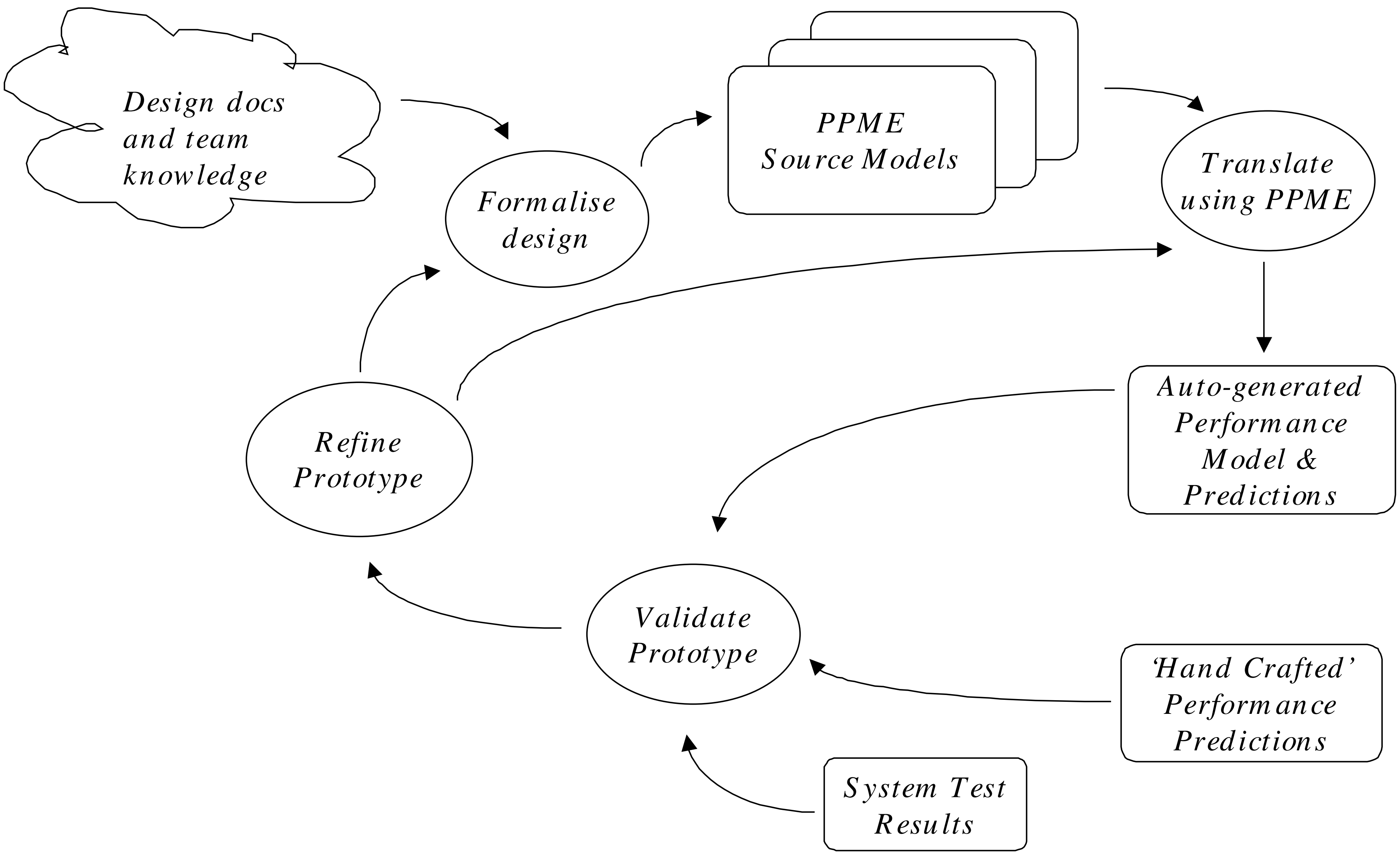

## System Scenario model



## Library of re-usable component models

# Case Study Process - PPME



# *Findings*

- **Customer sold on benefits - wants more!**
- **Reviewing manual model hard work**
- **Scale is a big issue!**
- **Performance equivalent source model transforms**
- **Need to handle incomplete models**
- **Plus other emerging product requirements**