

SEMA Methods Overview

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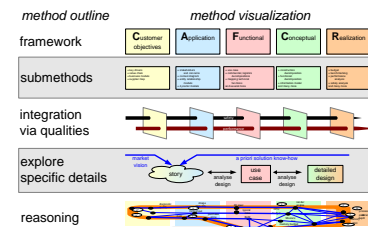
Abstract

This presentation provides an overview of the SEMA course: Architectural Reasoning Using Conceptual Modeling. This course uses the CAFCR+ model with 6 views. Qualities connect all views. Threads-of-reasoning capture the architectural reasoning across views and qualities. Conceptual models visualize and capture the context, the system and its design. Quantification is a means to make problem and solution space tangible.

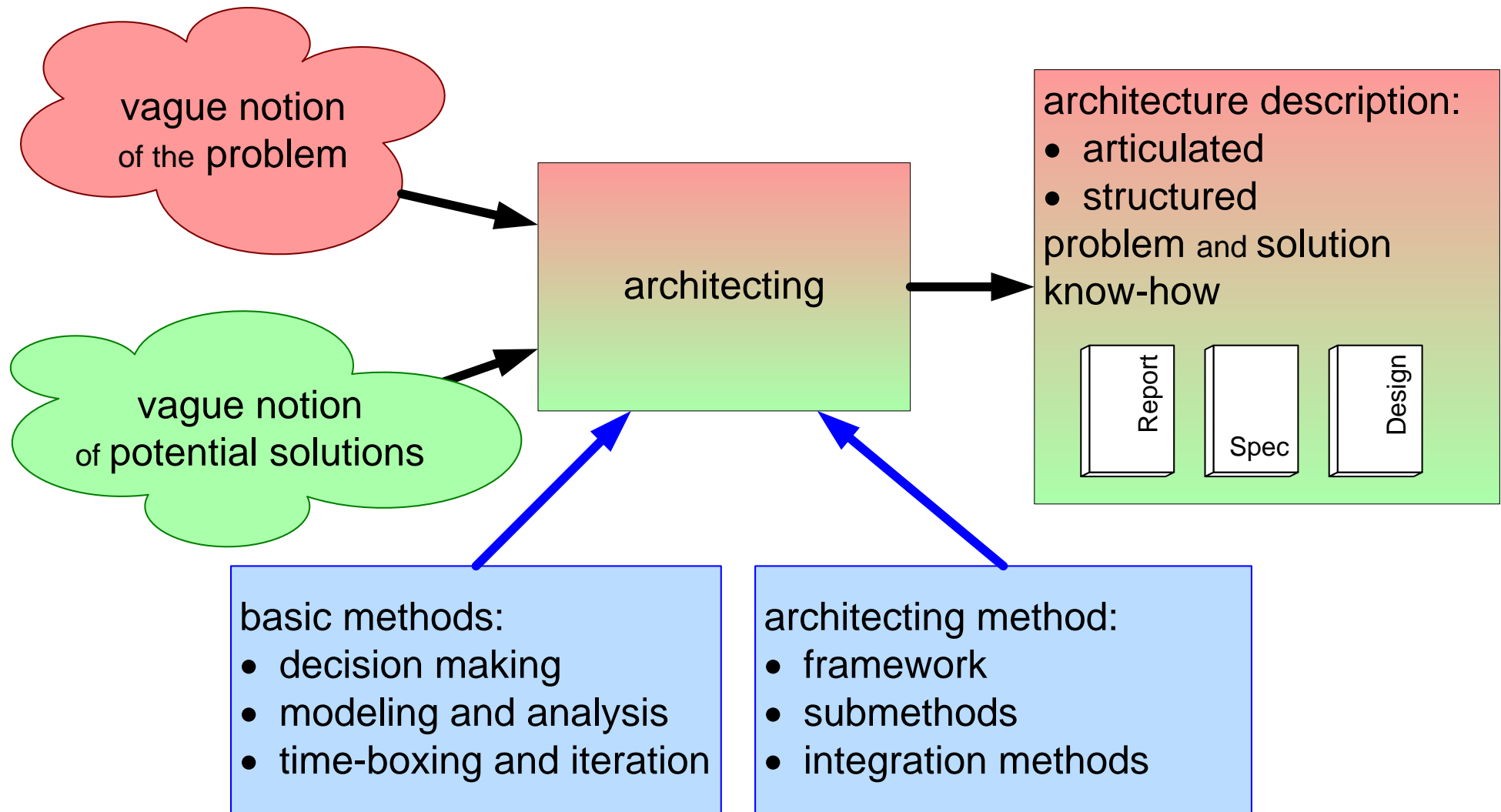
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From vague notions to articulate and structured



Overview of architecting method

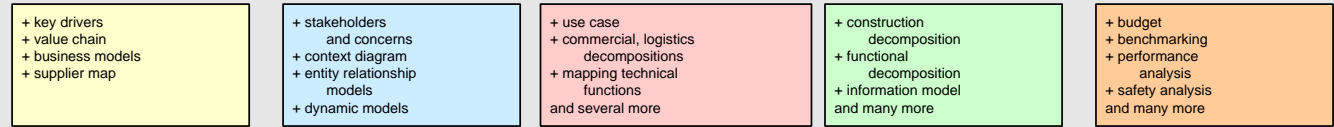
method outline

method visualization

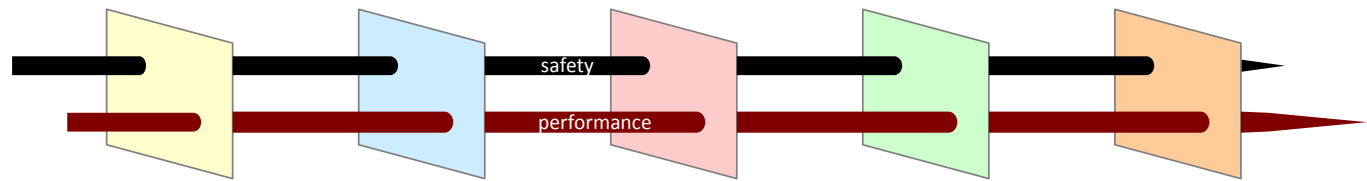
framework



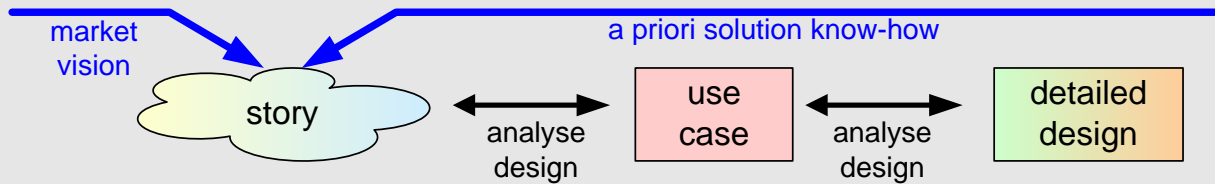
submethods



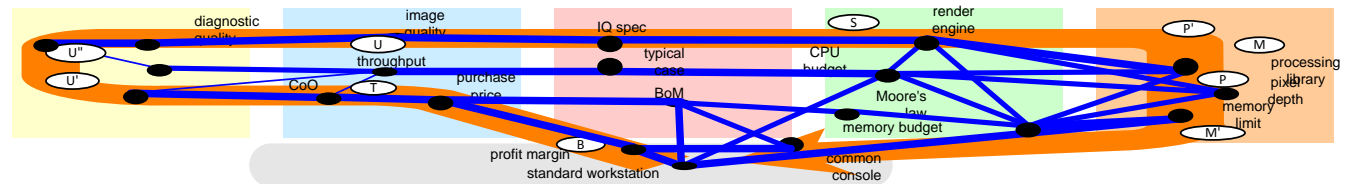
integration via qualities



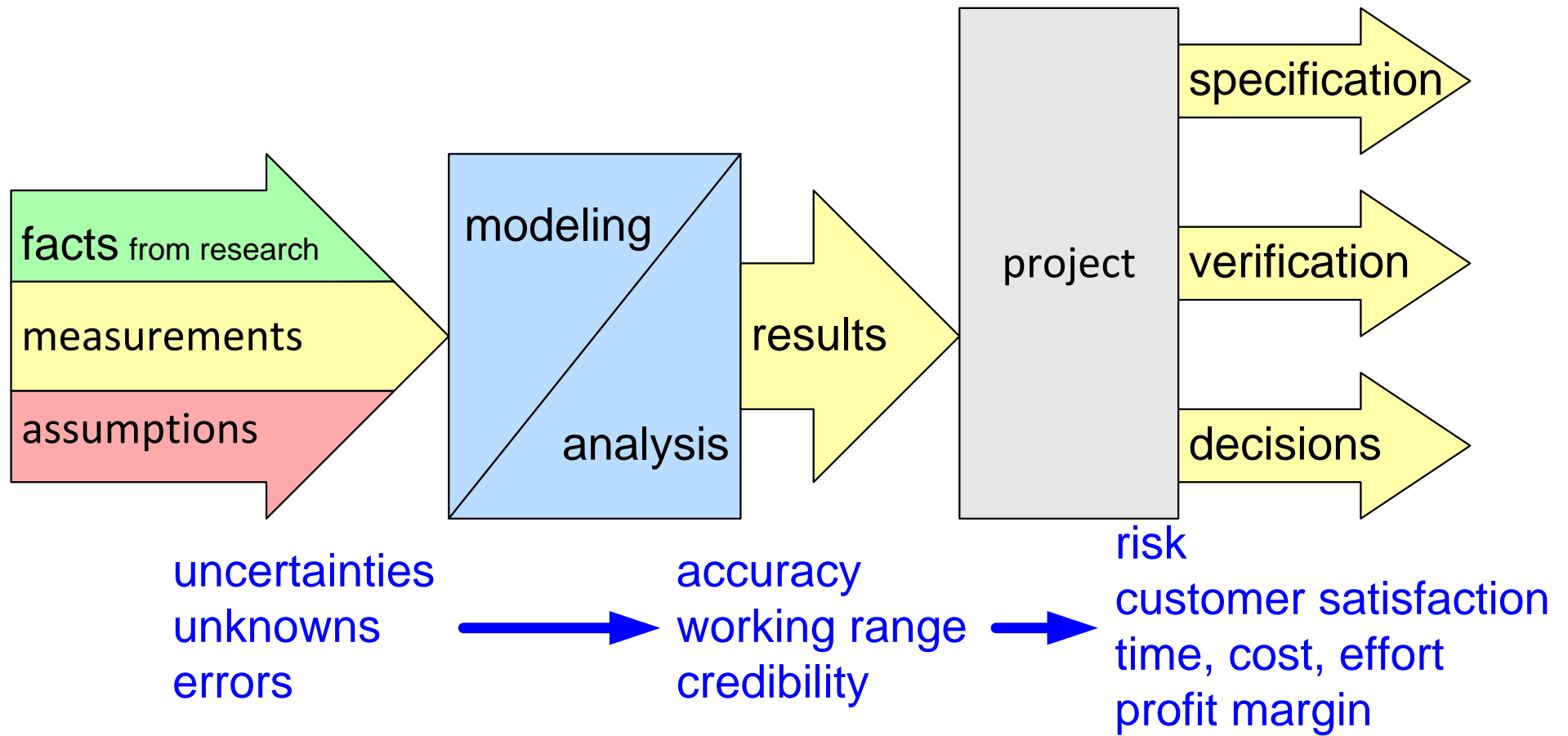
explore specific details



reasoning



Purpose of Modeling



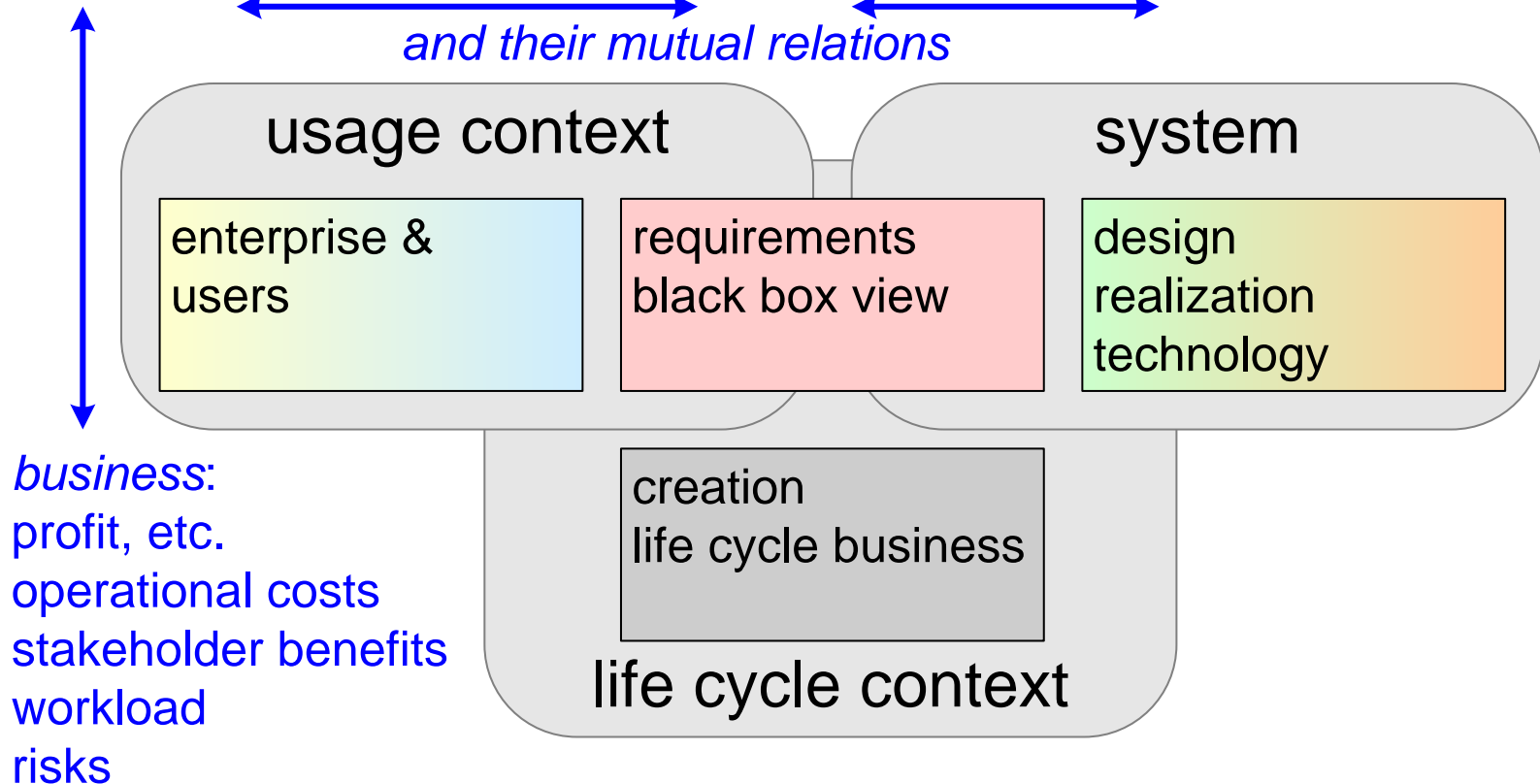
What to Model?

business:
profit, etc.
operational costs
stakeholder benefits
workload
risks

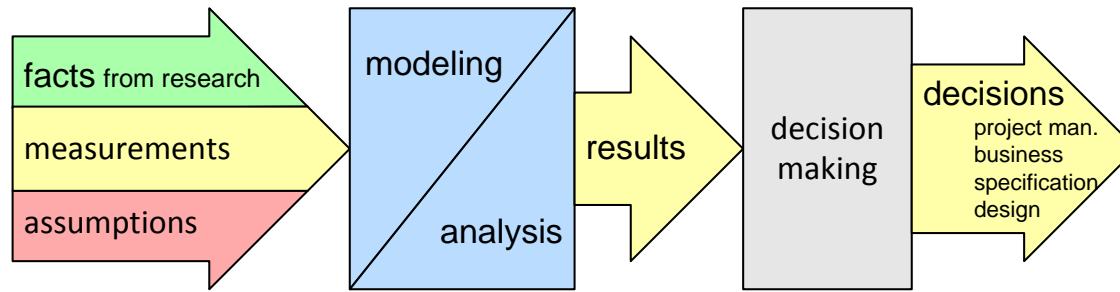
key performance:
throughput, response
reliability
availability
scalability
...

(emerging?) properties:
resource utilization
load
latency, throughput
quality, accuracy
...

← and their mutual relations →

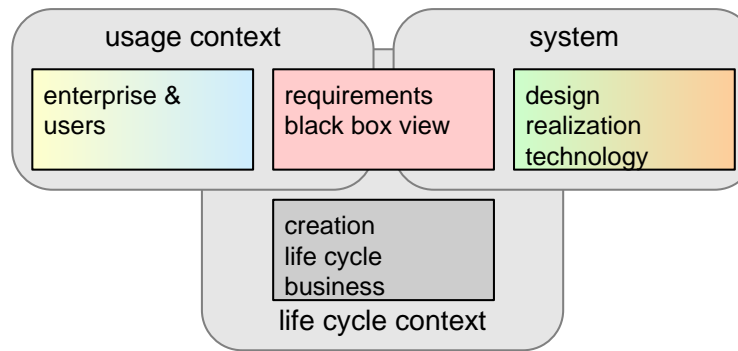


Overview of Modeling Approach



collect input data

model and analyse relevant issues



for different stakeholders & concerns

integration and reasoning

