

Modeling and Analysis Overview

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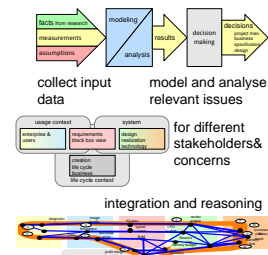
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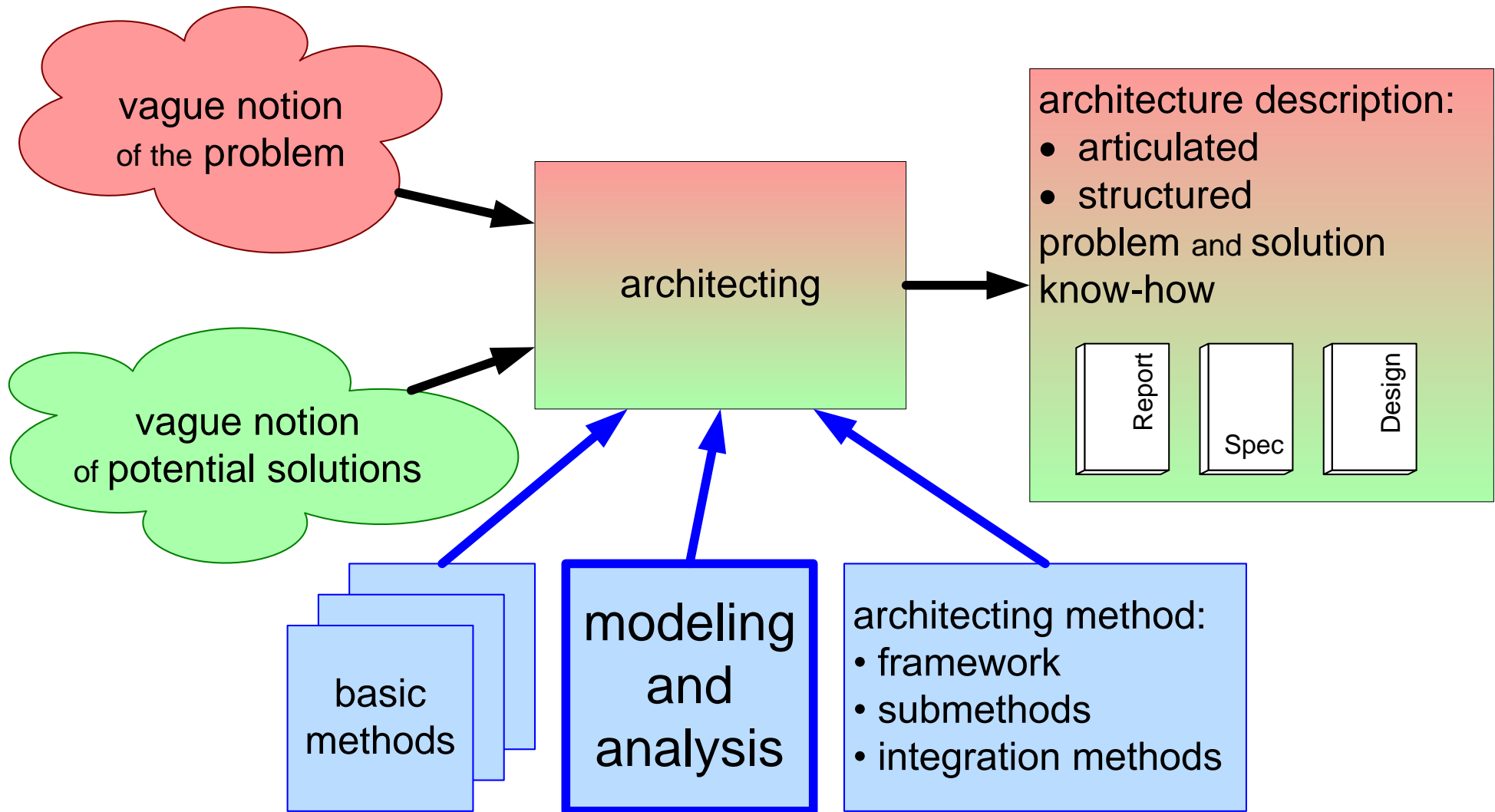
Abstract

The course Modeling and Analysis is described. The program consists of 10 modules. The course format, iterating theory, illustration and interaction is explained. The course heavily emphasizes the practical application of the method. This presentation shows the overview of the modeling and analysis approach and the methods and techniques that will be elaborated in the rest of the course.

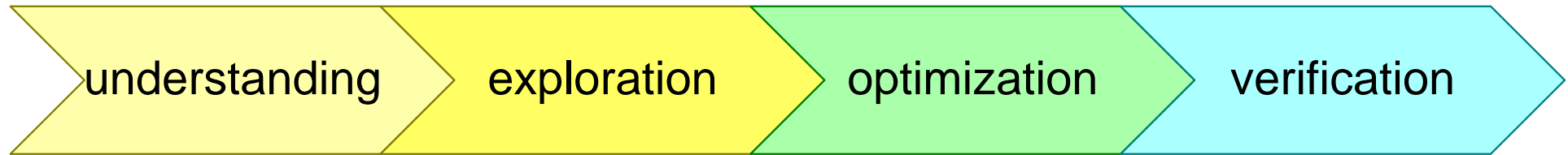
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Positioning Modeling and Analysis in Architecting



Modeling and Analysis supports:



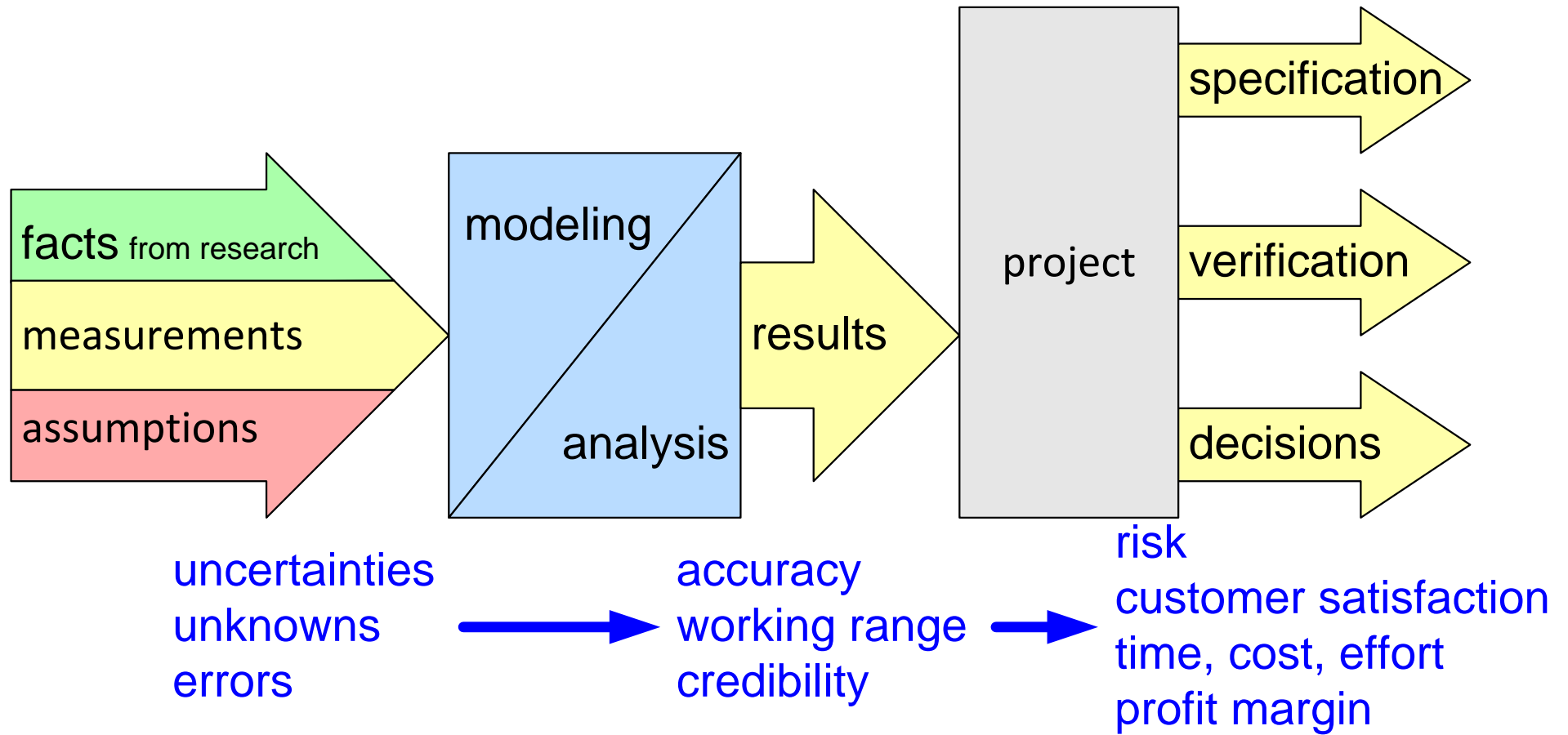
Type of model depends on project phase

Models have a goal

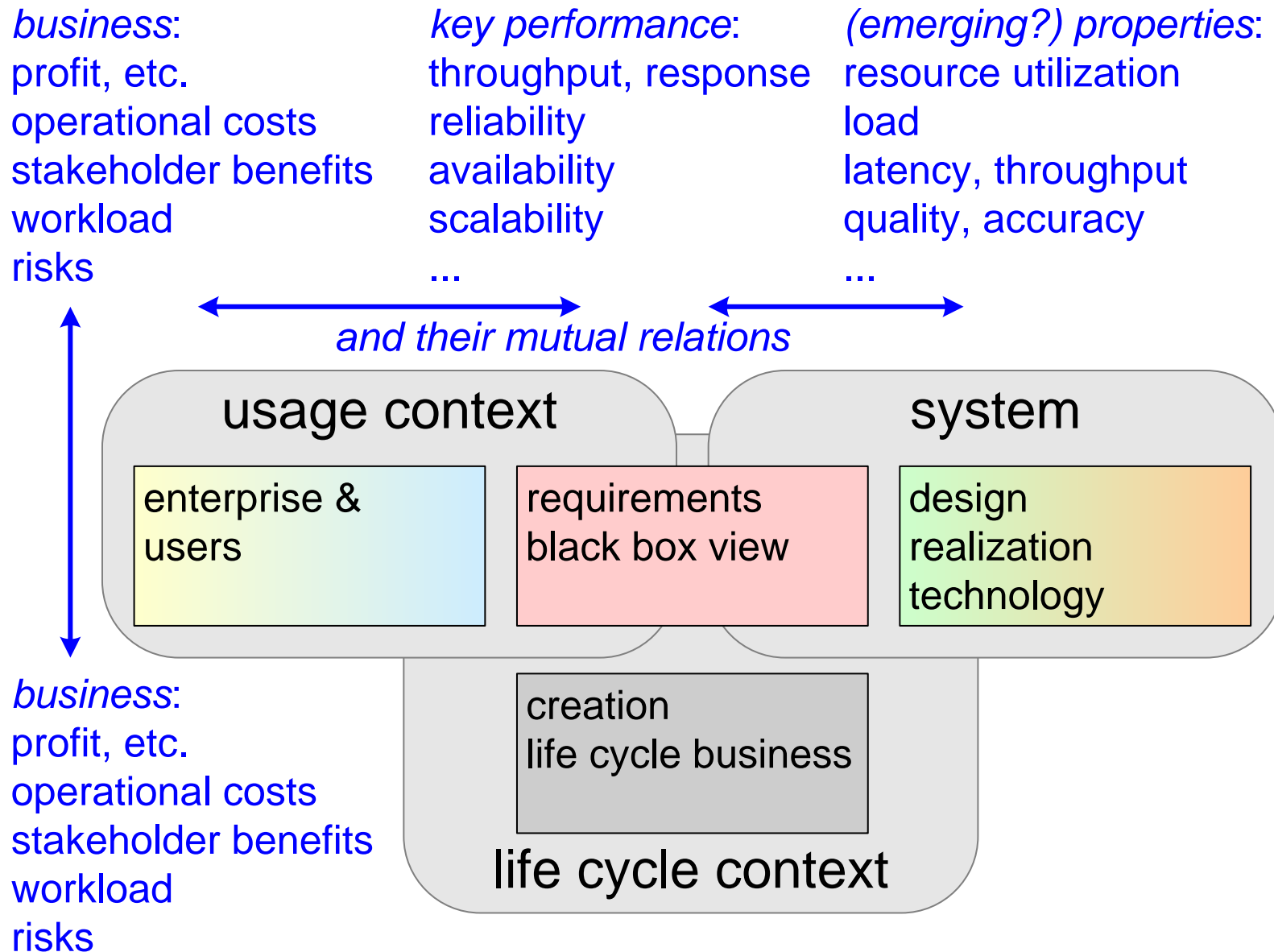
Goals evolve and models evolve

Techniques are used to reach this goal

Purpose of Modeling



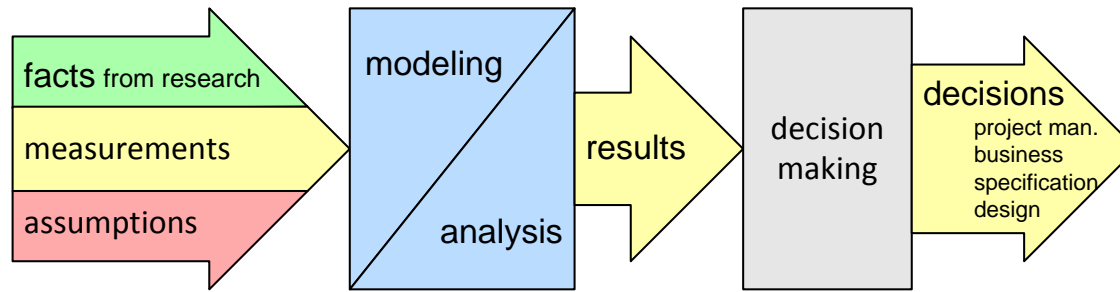
What to Model?



Program of Modeling and Analysis Course

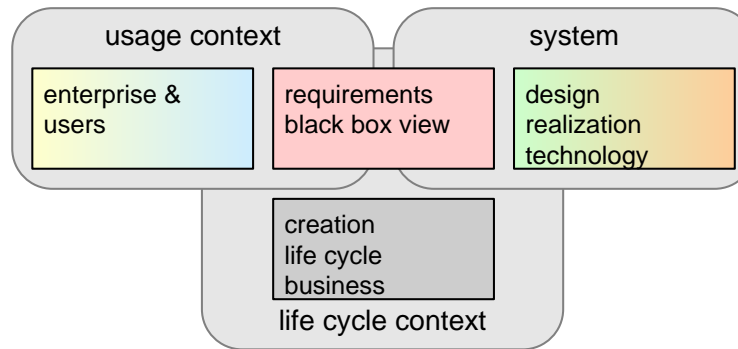
| | |
|-------|---|
| day 1 | 1. overall approach intro, overall approach, exercise overall approach |
| | 2. input facts, data, uncertainties quantification, measurements, modeling, validation, technology background, lifecycle and business input sources |
| day 2 | 3. system modeling purpose, approaches, patterns, modularity, parametrization, means, exploration, visualization, micro-benchmarking, characterization, performance as example |
| | 4. application, life-cycle modeling reiteration of modeling approach (see module 3), applied on customer application and business, and life cycle |
| day 3 | 5. integration and reasoning relating key driver models to design models, model based threads of reasoning, FMEA-like approach, modeling in project life-cycle |
| | 6. analysis, using models sensitivity, robustness, worst case, working range, scalability, exceptions, changes |

Overview of Approach



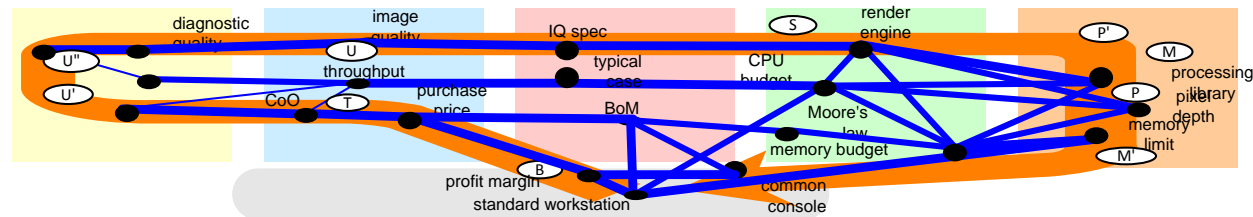
collect input data

model and analyse relevant issues



for different stakeholders & concerns

integration and reasoning



Iteration over viewpoints

