SEMA Basic Philosophy

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Abstract

This presentation explains the basic philosophy behind the SEMA course. The SEMA course in the first place is a course that provides an approach to architectural reasoning. Core to architectural reasoning is the ability to make conceptual models and to use them in conjunction. The course discusses how to make conceptual mdoels, how to get input, and how to use them for analysis. Modeling is put in broader perspective, such as model evolution, simuation, and validation.

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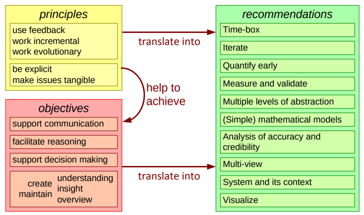


You will mostly be working!

One **Case** during the course and the home work assigment

Work in **teams** if possible

Select a case close to **your day-to-day practice**

Learning by Doing

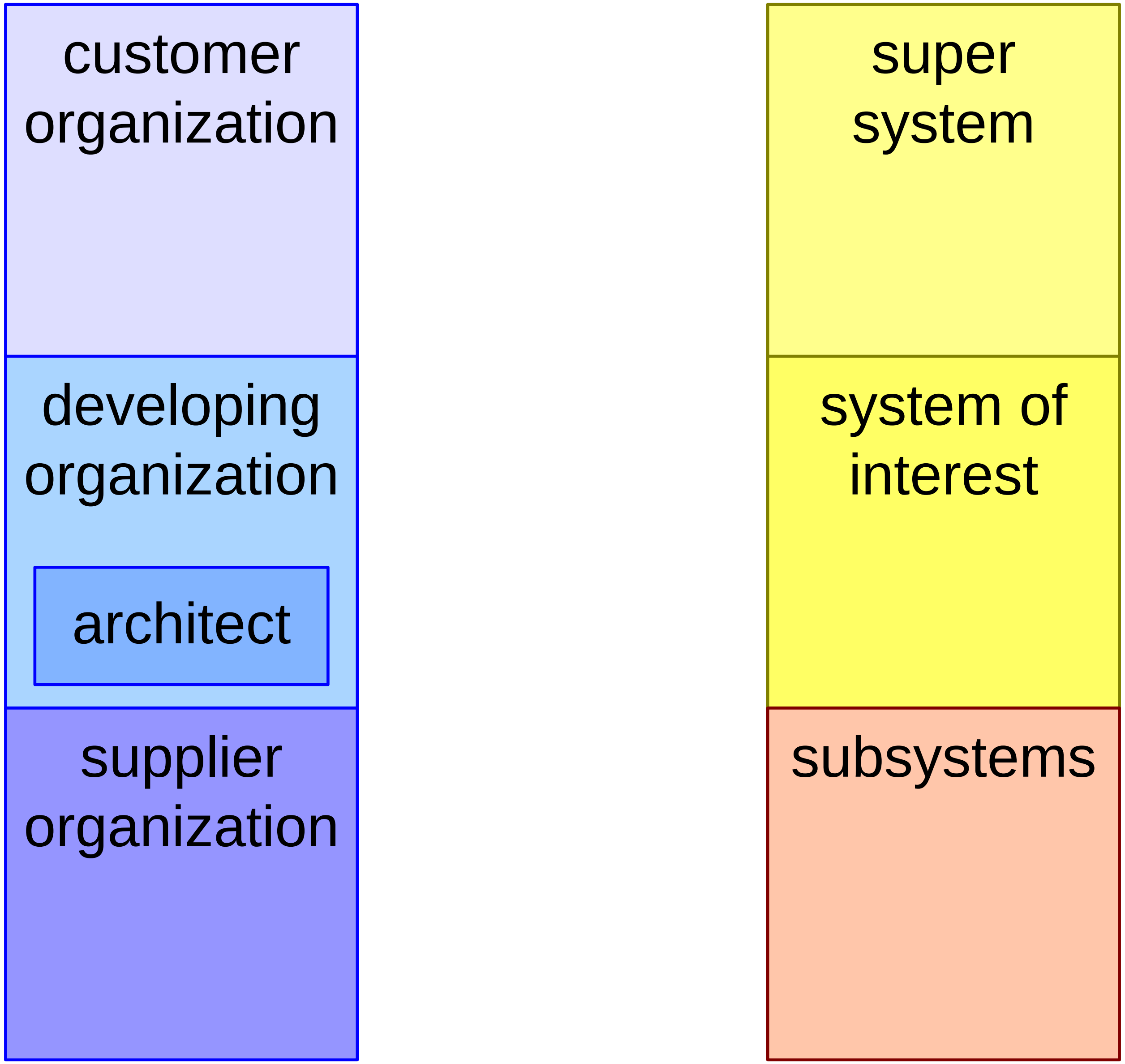
Some theory, apply on case

Case = System of interest + developing organization + some innovative change

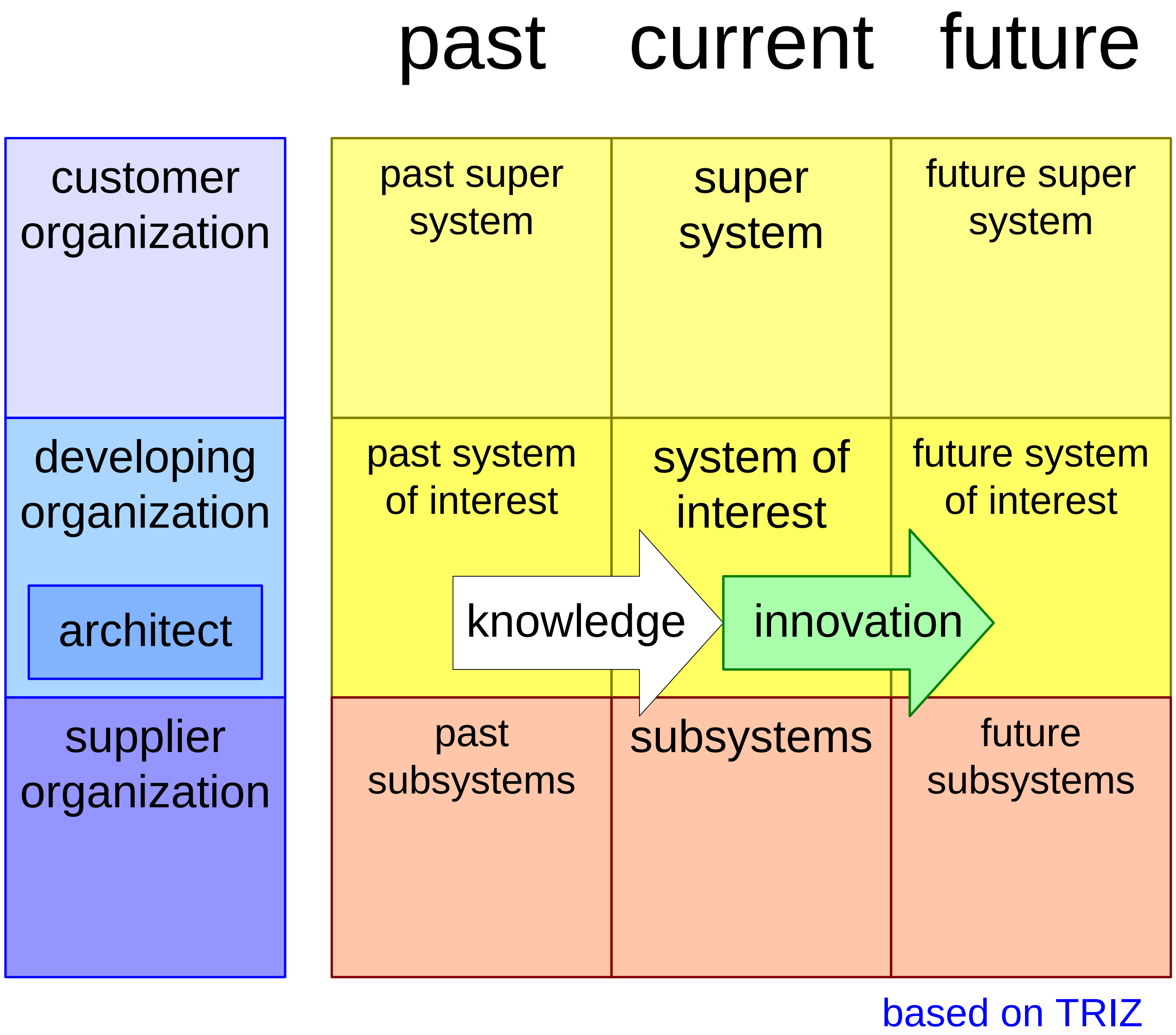
Choice of case is critical!

Our Primary Interest

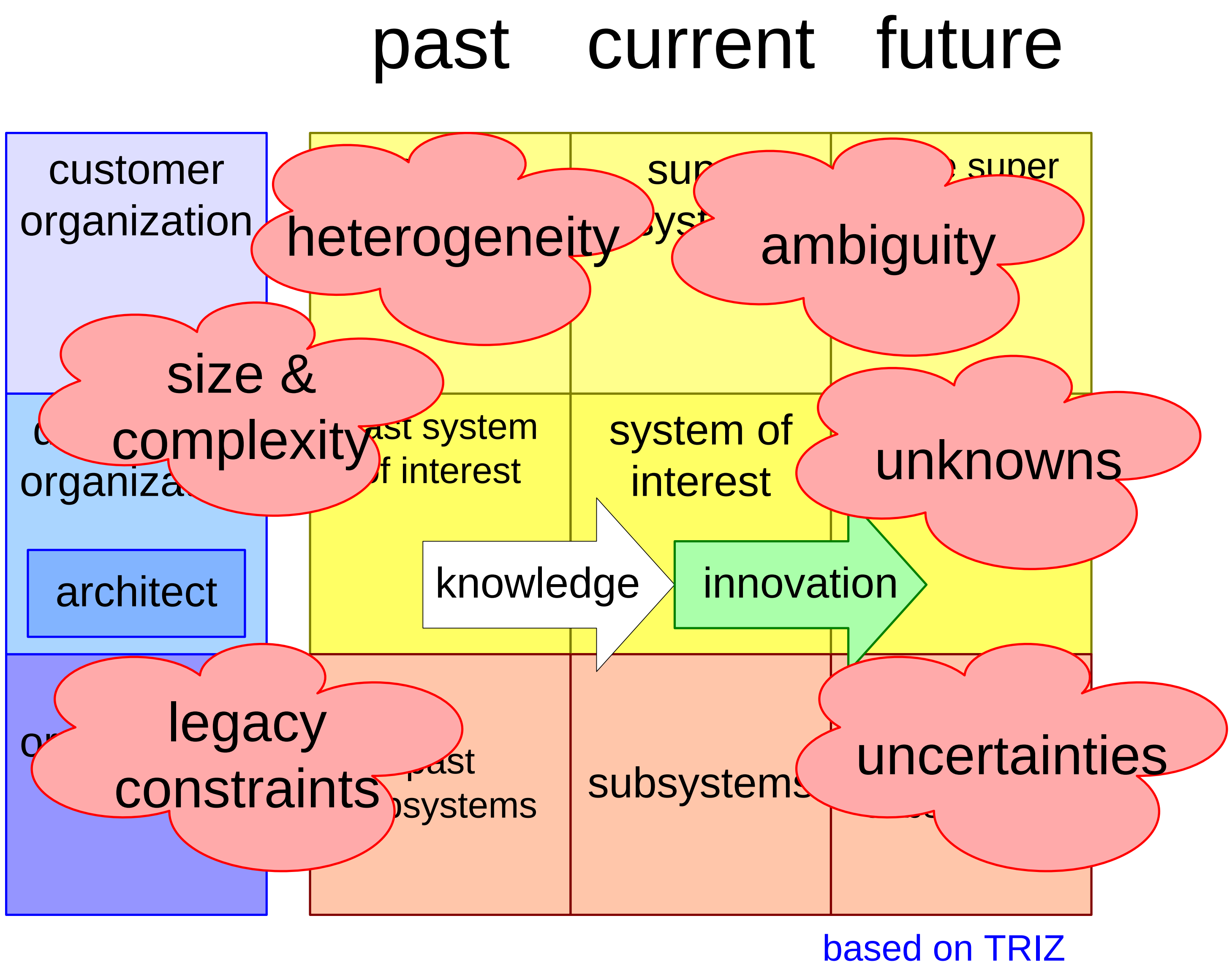
Context, Zoom-out and Zoom-in



Adding the Time Dimension

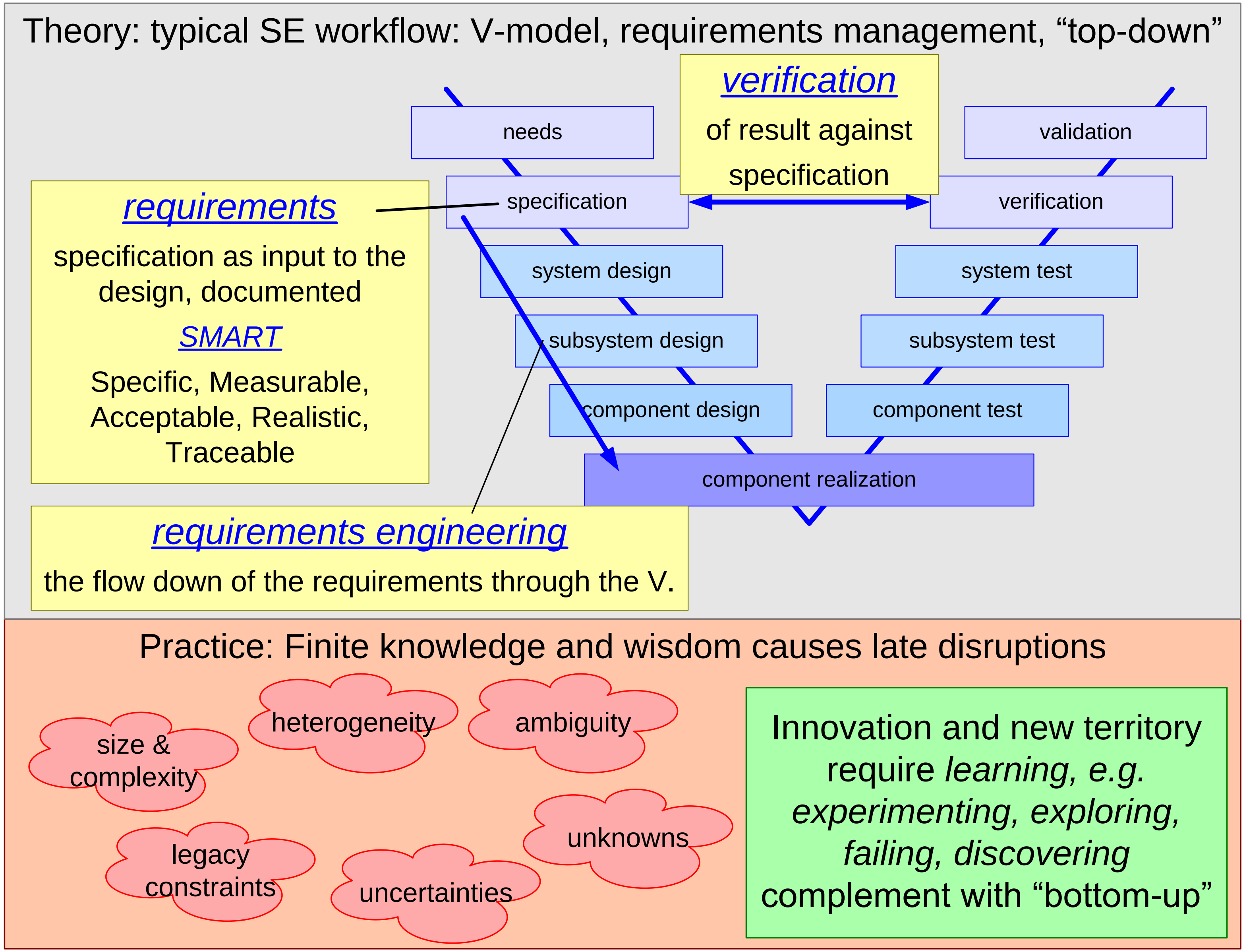


Challenges



past
current
future
customer organization
heterogeneity
ambiguity
size & complexity
past system of interest
system of interest
unknowns
architect
knowledge
innovation
legacy constraints
subsystems
uncertainties
based on TRIZ

From Theory to Practice



Recommendations as Common Thread

principles

- use feedback
- work incremental
- work evolutionary

- be explicit
- make issues tangible

translate into

help to achieve

objectives

- support communication
- facilitate reasoning
- support decision making
- create / maintain — understanding / insight / overview

translate into

recommendations

- Time-box
- Iterate
- Quantify early
- Measure and validate
- Multiple levels of abstraction
- (Simple) mathematical models
- Analysis of accuracy and credibility
- Multi-view
- System and its context
- Visualize

Final Delivery: Presentation to Top Management