

# SEMA Basic Philosophy

by *Gerrit Muller* University of South-Eastern Norway-NISE

e-mail: `gaudisite@gmail.com`

`www.gaudisite.nl`

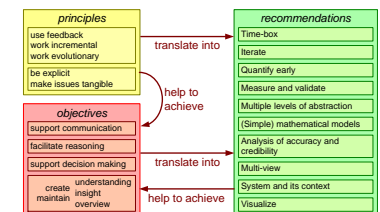
## Abstract

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 models, how to get input, and how to use them for analysis. Modeling is put in broader perspective, such as model evolution, simulation, and validation.

## Distribution

This article or presentation is written as part of the Gaudí project. The Gaudí project philosophy is to improve by obtaining frequent feedback. Frequent feedback is pursued by an open creation process. This document is published as intermediate or nearly mature version to get feedback. Further distribution is allowed as long as the document remains complete and unchanged.

August 16, 2025  
status: draft  
version: 0.3



# You will mostly be working!

---

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

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

---

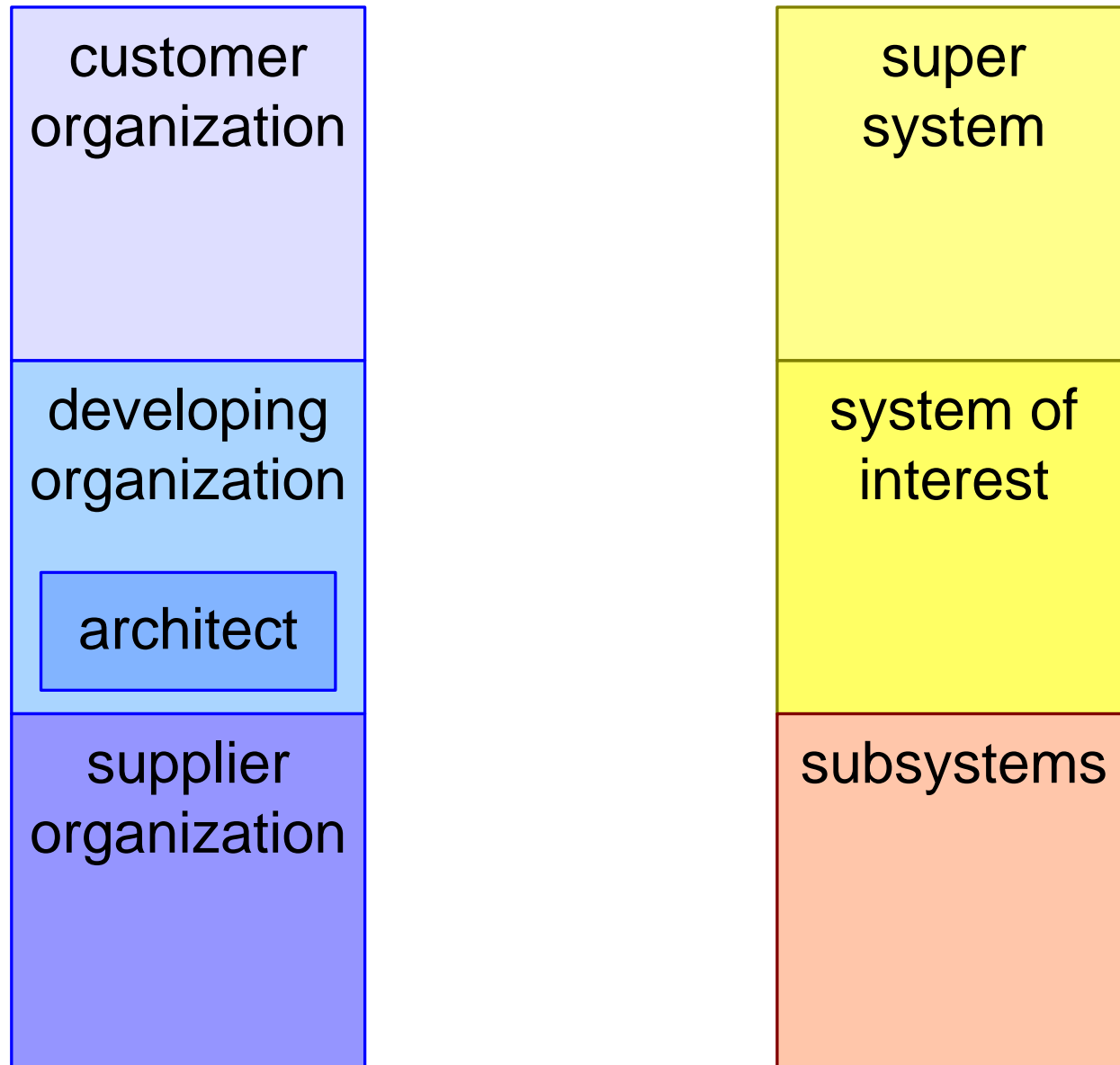
developing  
organization

architect

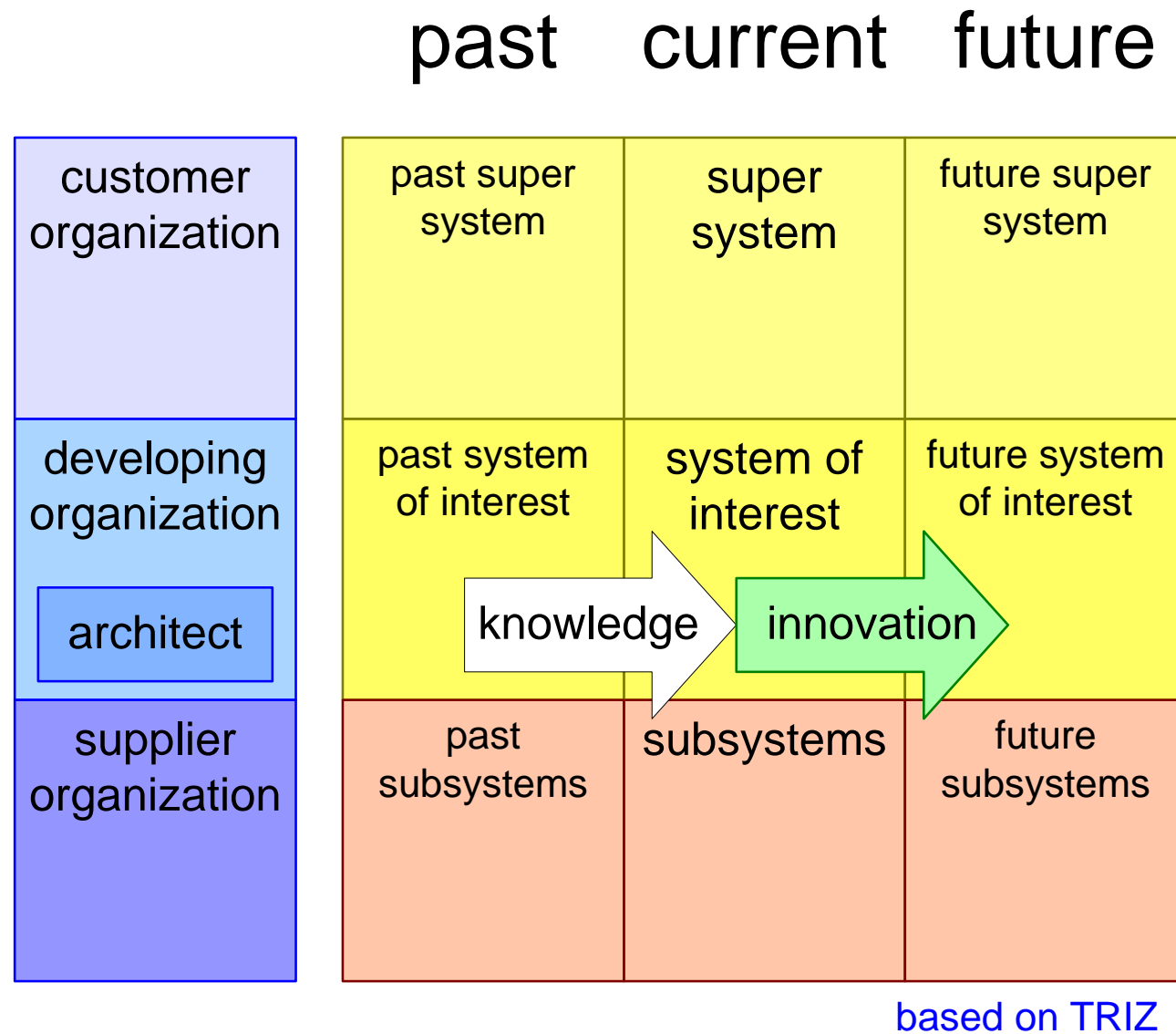
system of  
interest

# Context, Zoom-out and Zoom-in

---

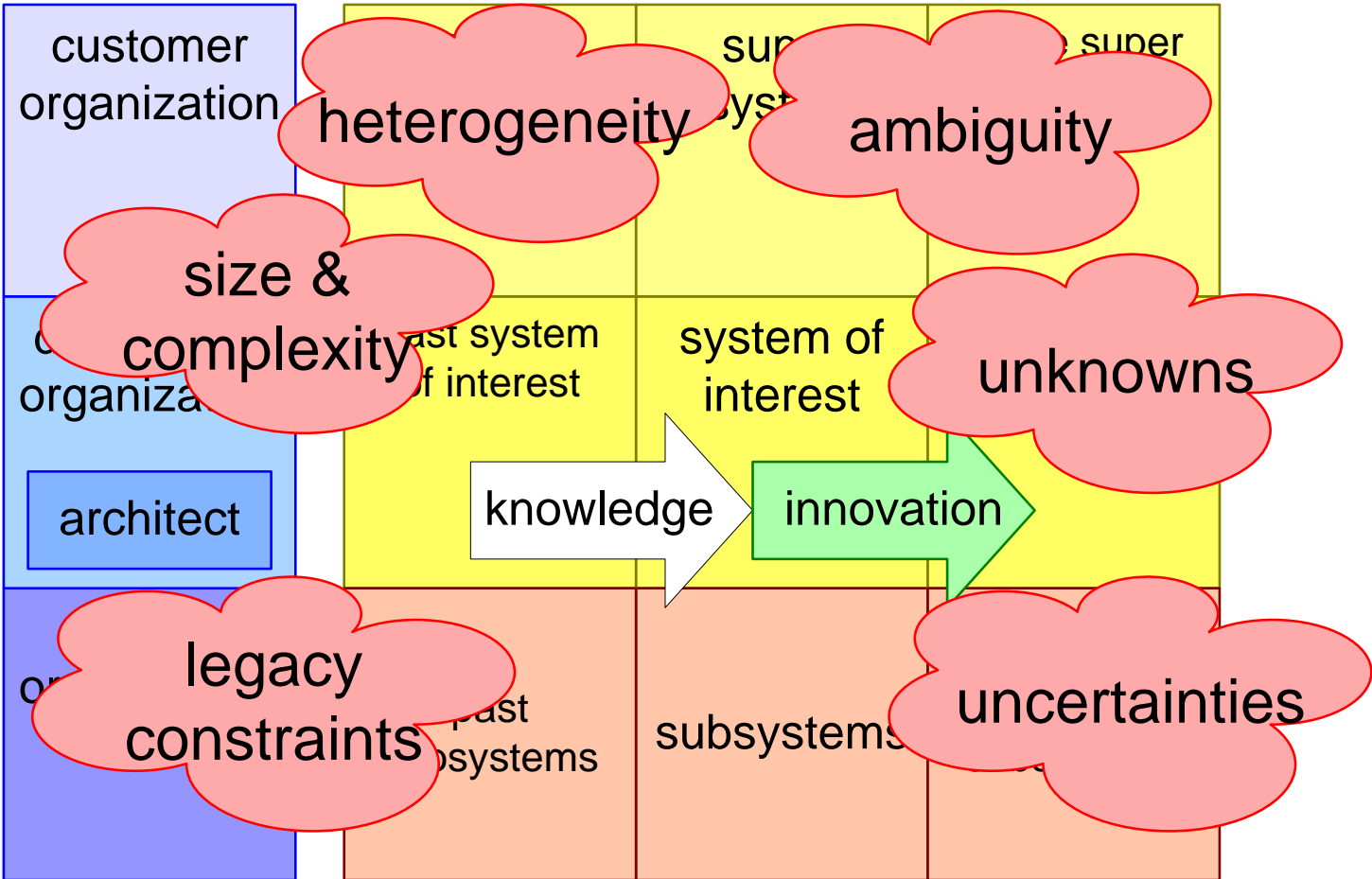


# Adding the Time Dimension



# Challenges

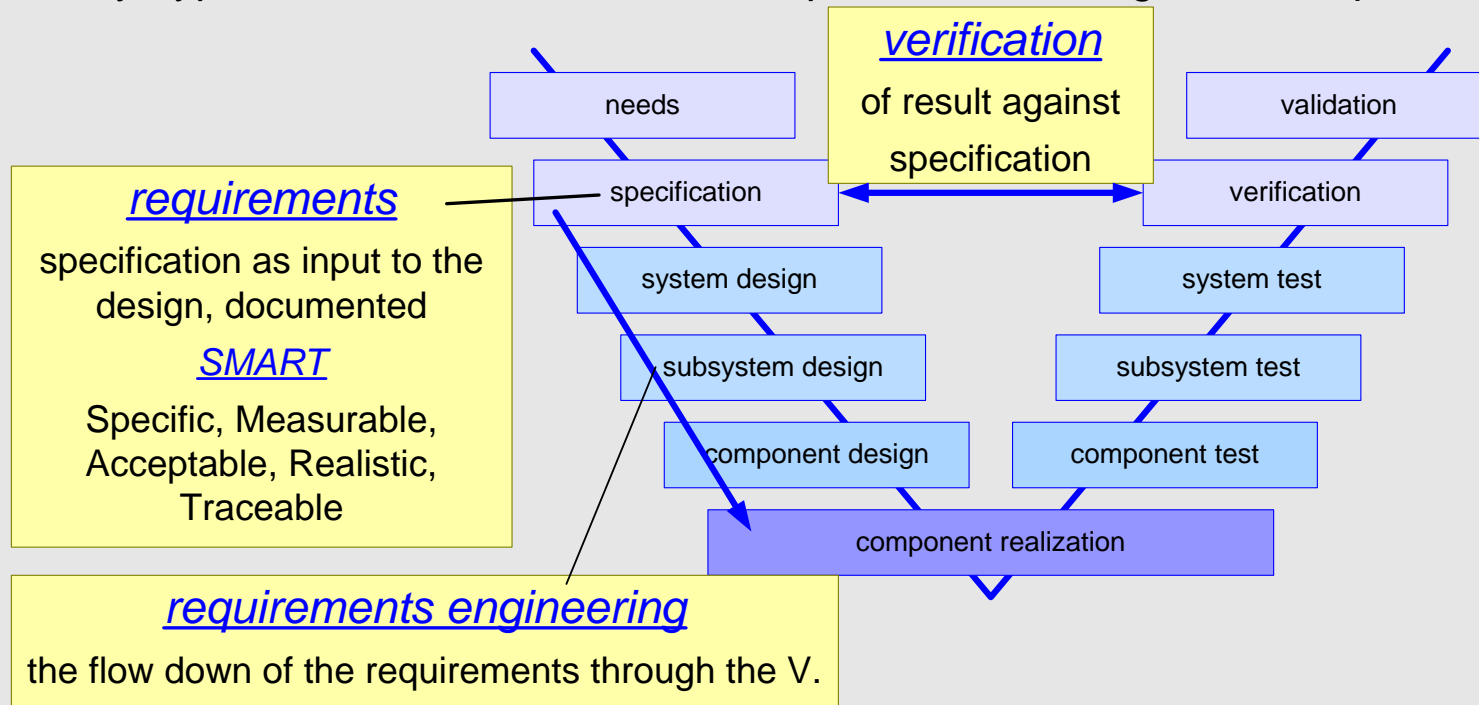
past    current    future



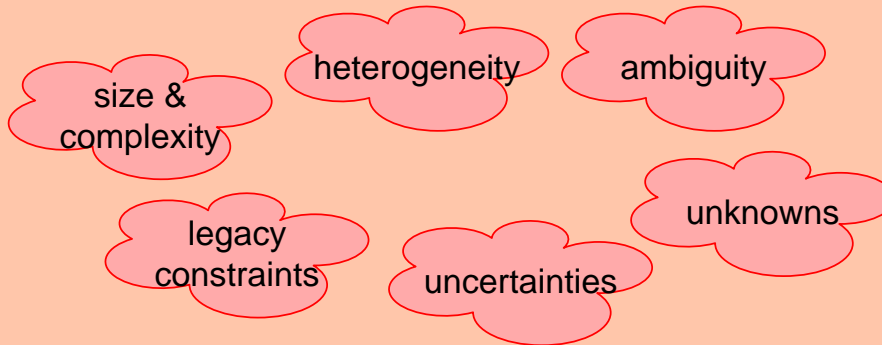
based on TRIZ

# From Theory to Practice

Theory: typical SE workflow: V-model, requirements management, “top-down”

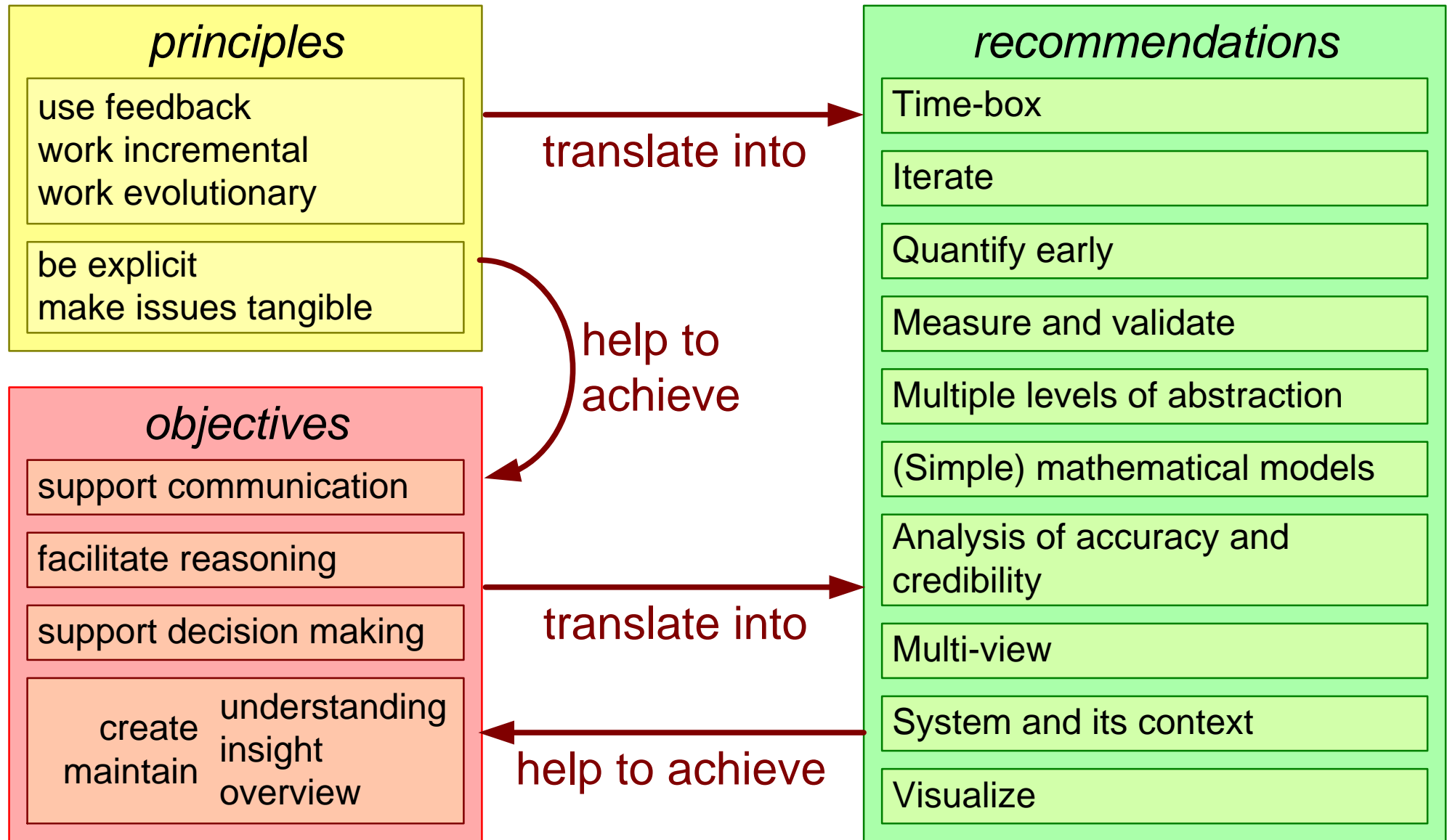


Practice: Finite knowledge and wisdom causes late disruptions



Innovation and new territory require *learning, e.g. experimenting, exploring, failing, discovering* complement with “bottom-up”

# Recommendations as Common Thread



# Final Delivery: Presentation to Top Management

