

Systems Engineering Master Project

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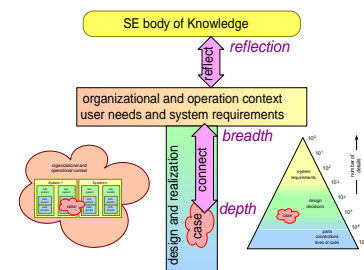
Abstract

The master study Systems Engineering is completed by performing a thesis project. This document describes objectives and guidelines for the project and the thesis.

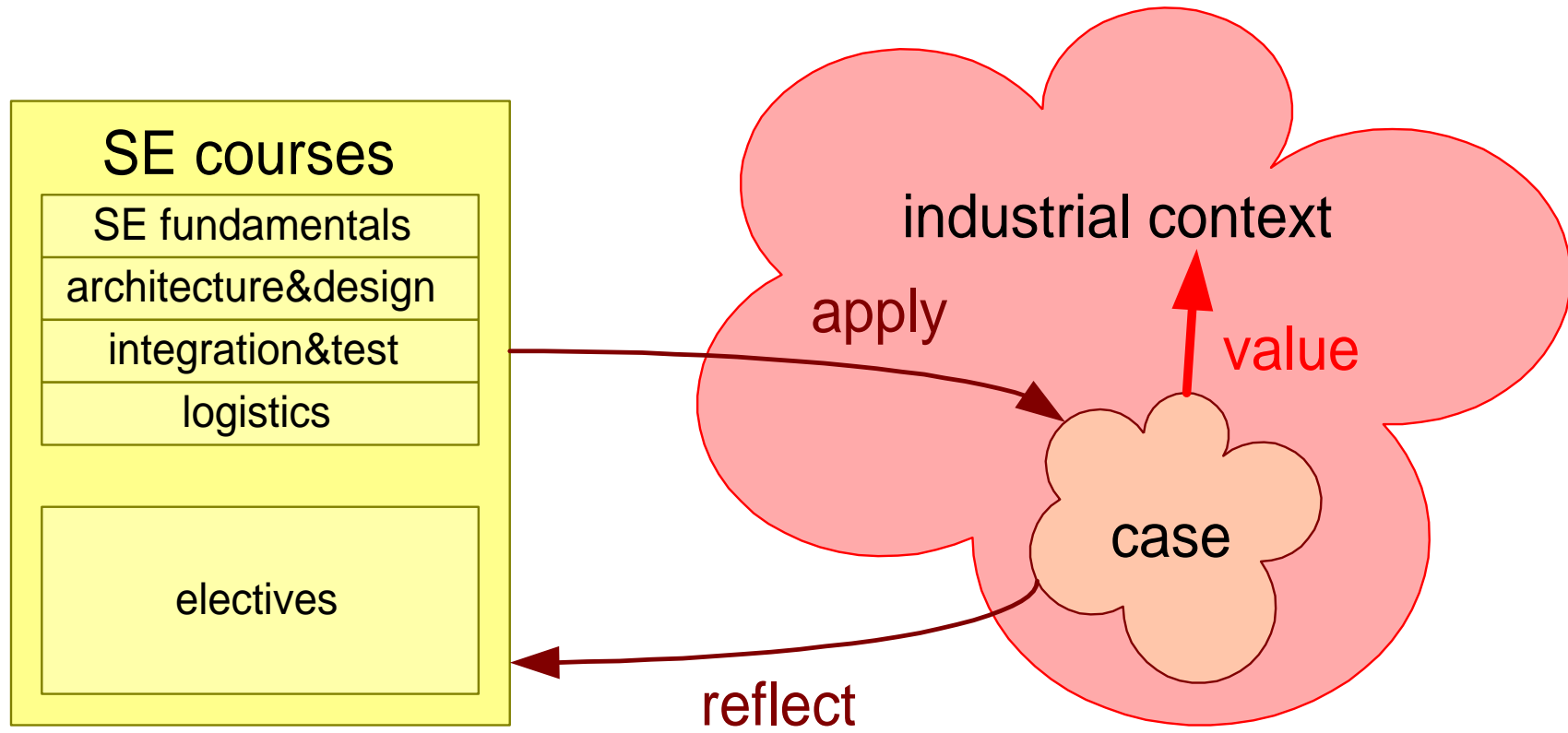
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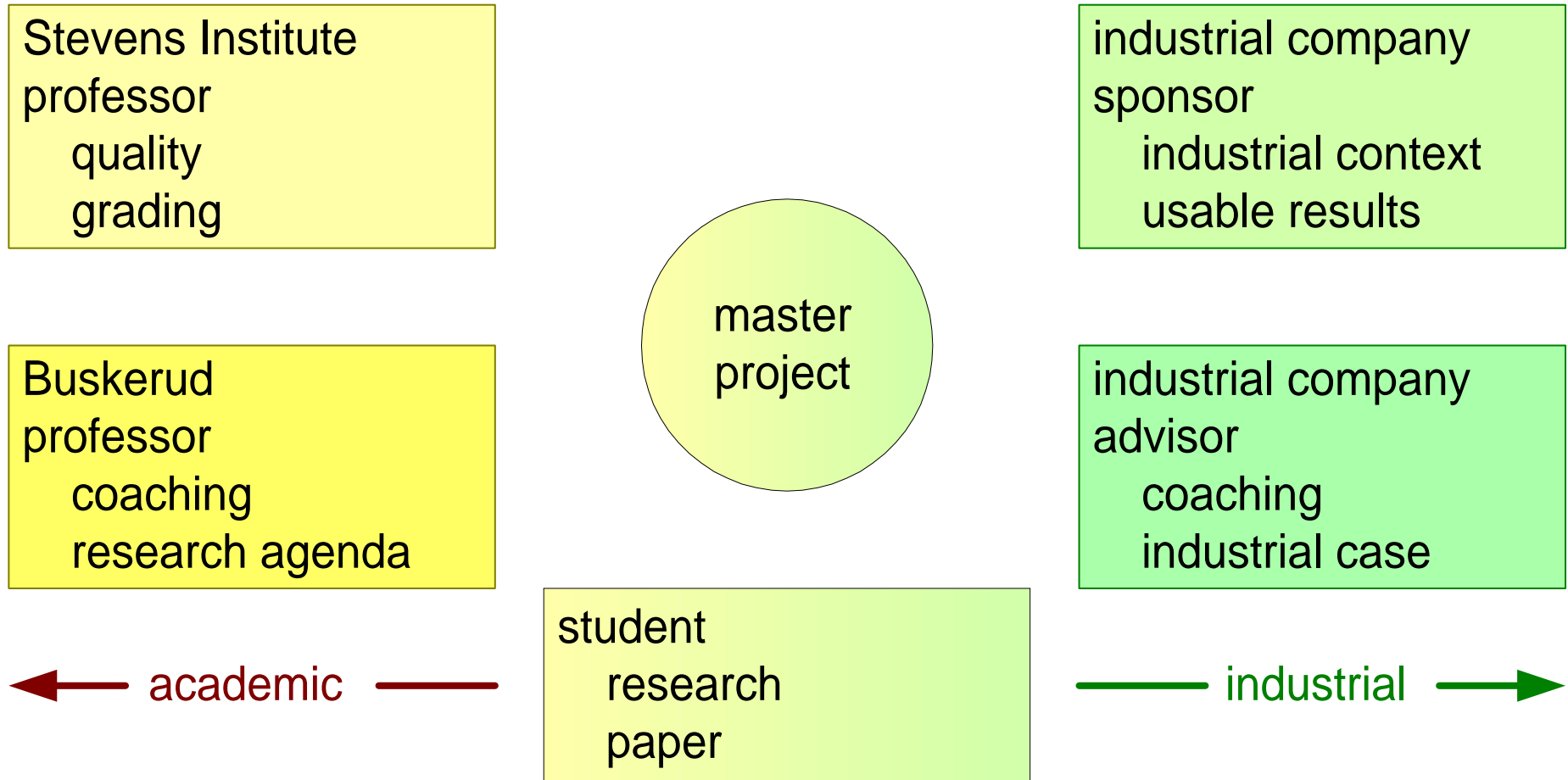


Objectives of Master Project



Apply SE methods, techniques, and concepts in practice and reflect on its application, while providing value to the industrial sponsor

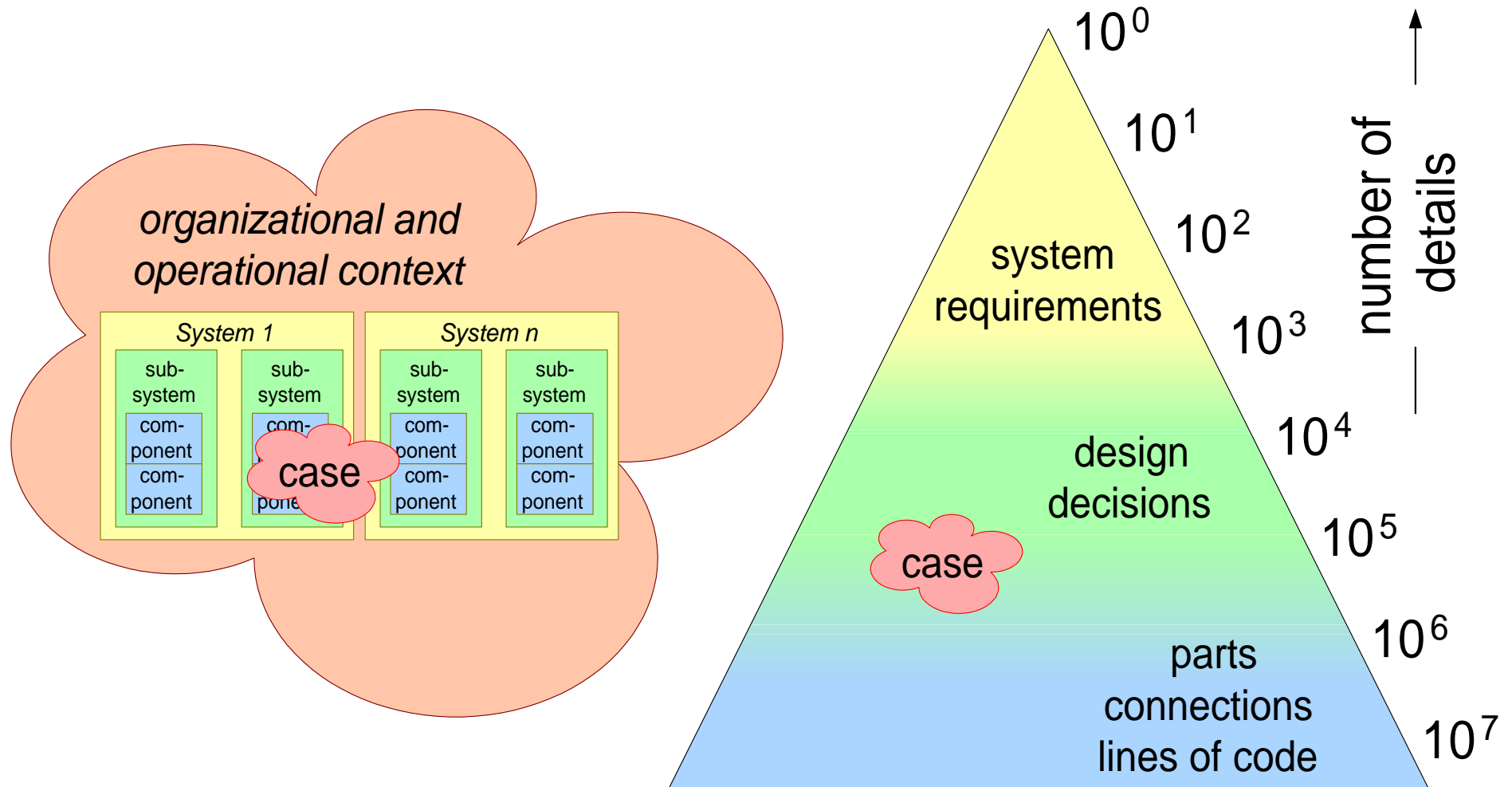
Stakeholders of the Master Project



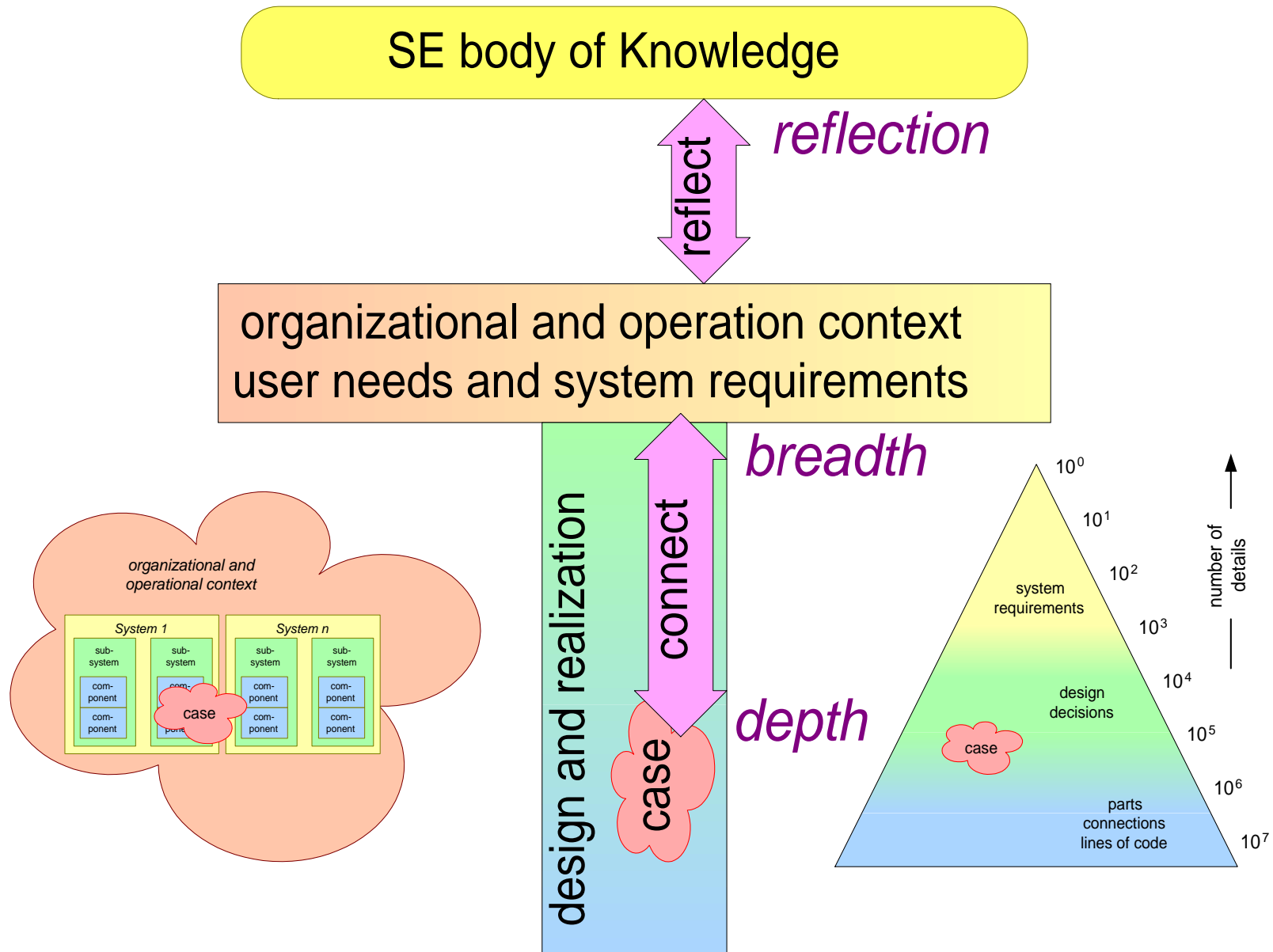
Scoping is Crucial

What methods, techniques, tools, concepts	Systems Engineering
What (sub)systems, releases, functions, qualities, aspects, disciplines, technologies	industrial
What timing of activities and deliverables	planning
What resources (student time, means, advisors)	planning
What approach, criteria	research

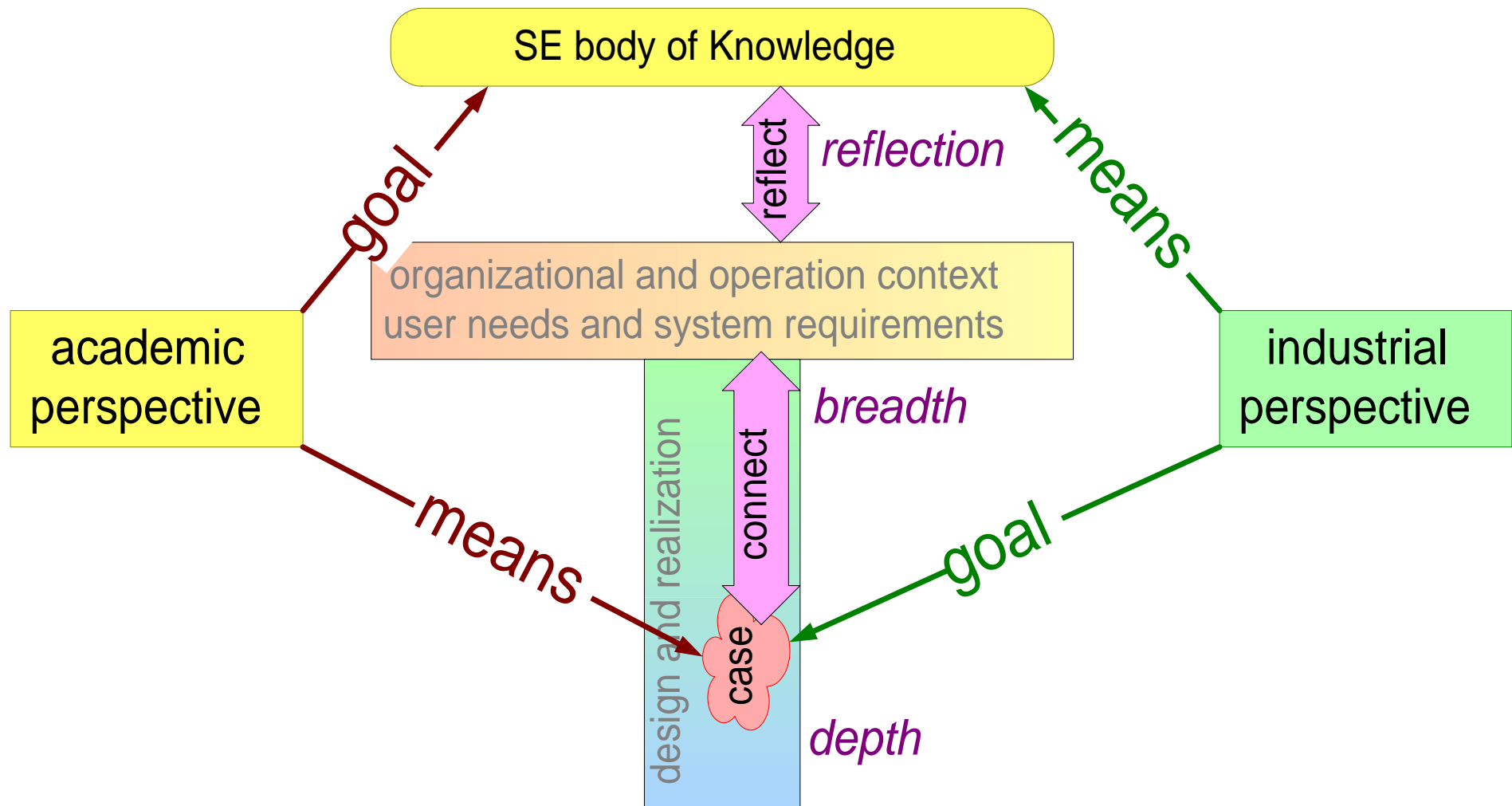
Case Positioning



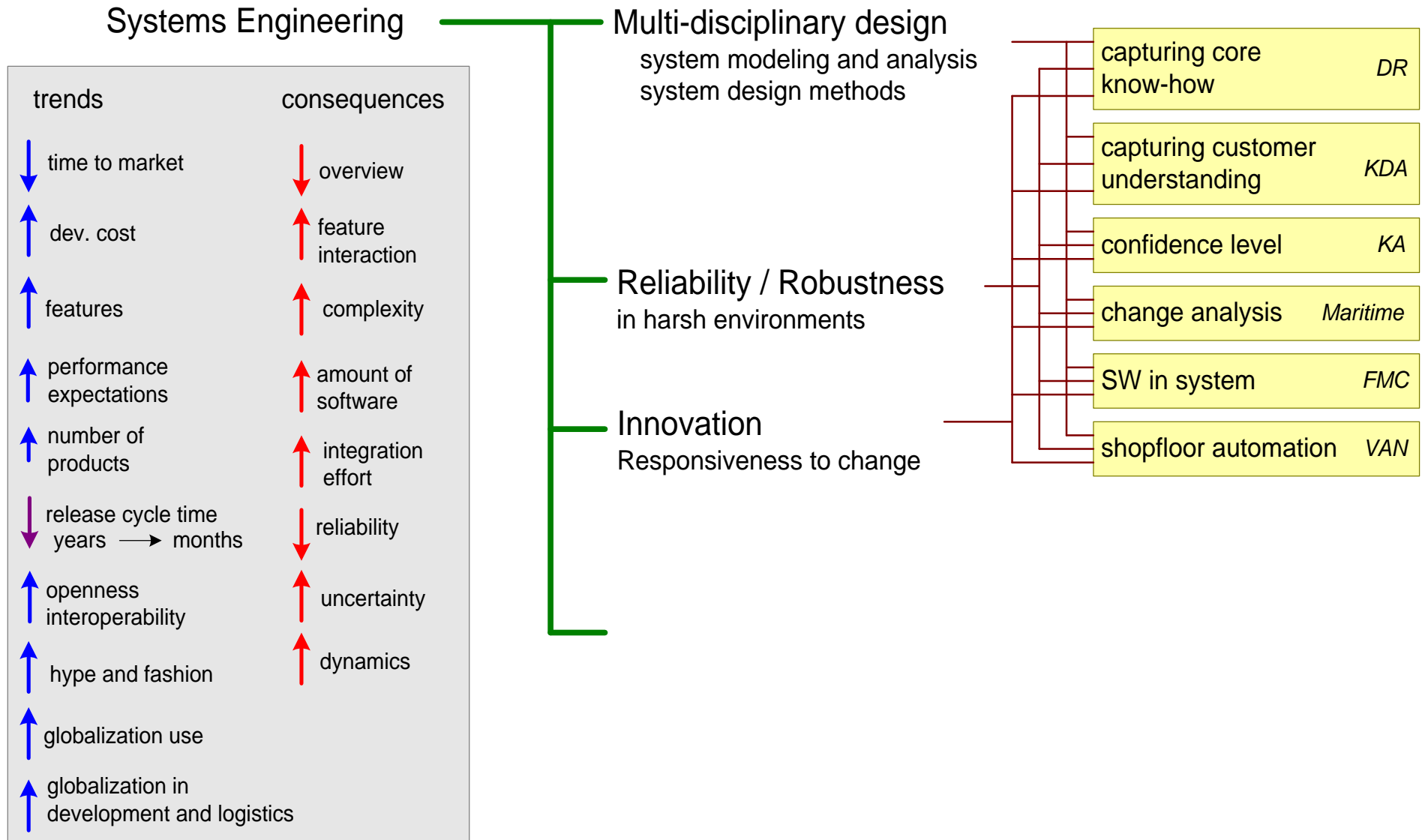
Depth, Breadth and Reflection



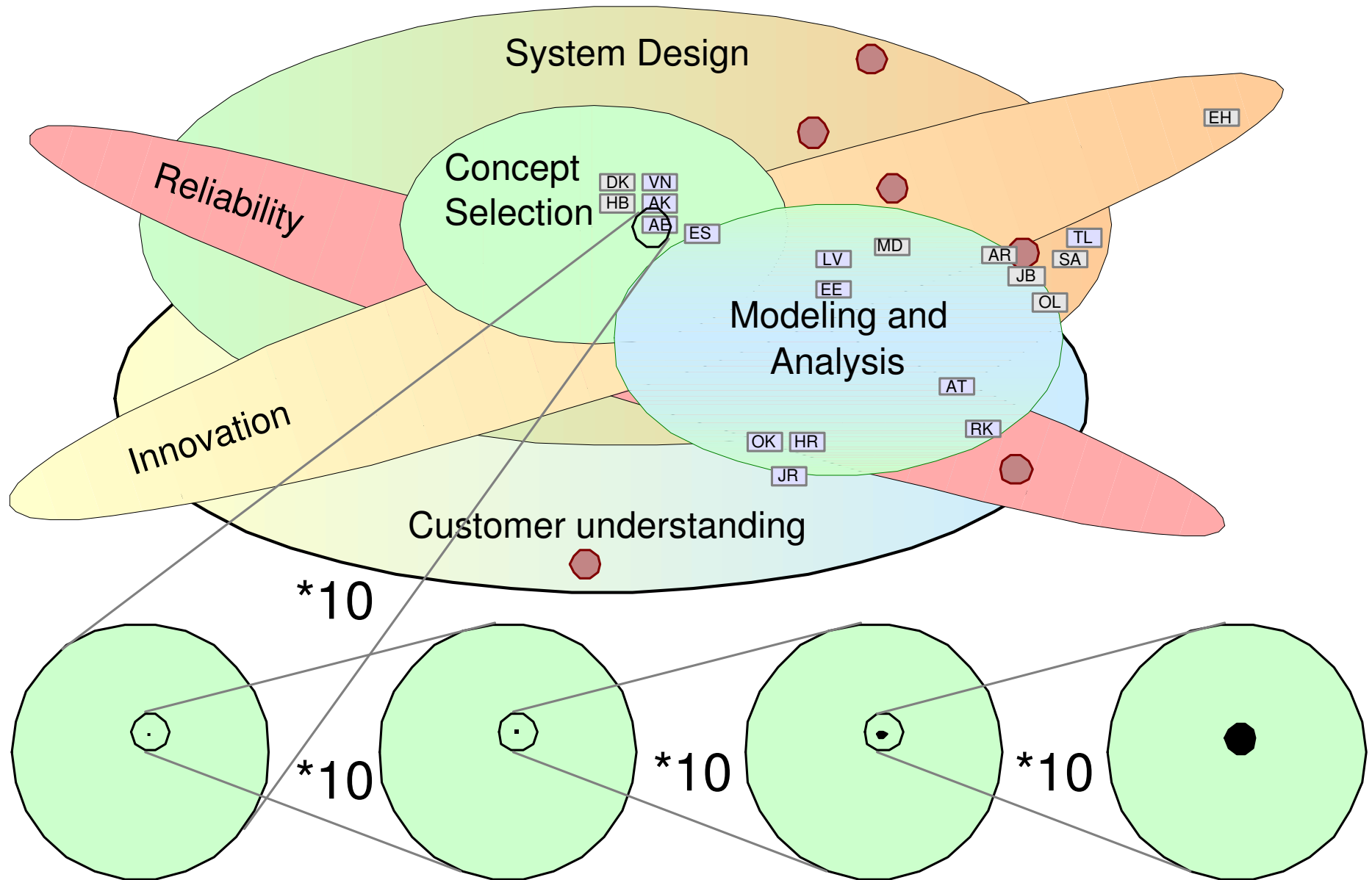
Difference Academic and Industrial Goals



Buskerud Research Agenda



Mapping Master Projects on the Research Agenda



Process of Master Project

Pick subject

Secure advisors (SIT, BUC, industry)

Write proposal, project plan; for paper write abstract

Perform project; involve advisors regularly

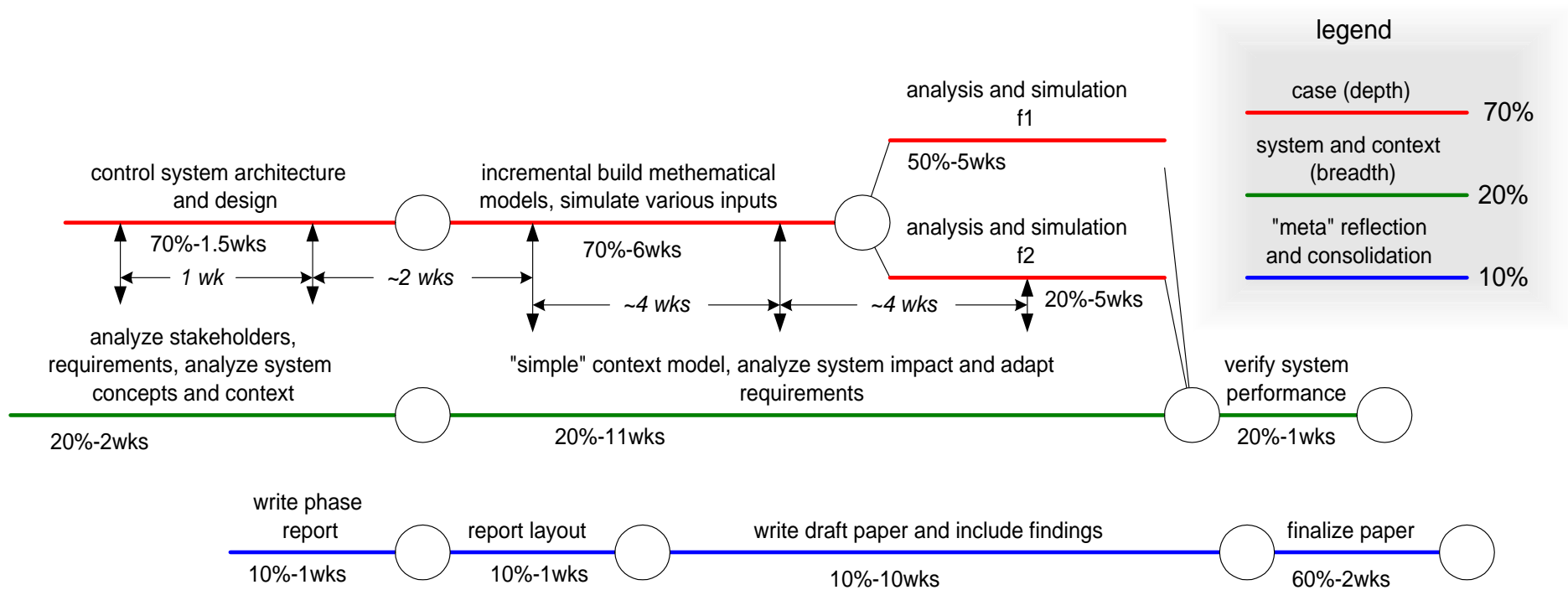
Write thesis and iterate with advisors

Grading by professor

Graduation

Publication in journal or conference

Plan: Simple PERT Diagram



"A good abstract should answer three questions:

What did I do,

what did I learn,

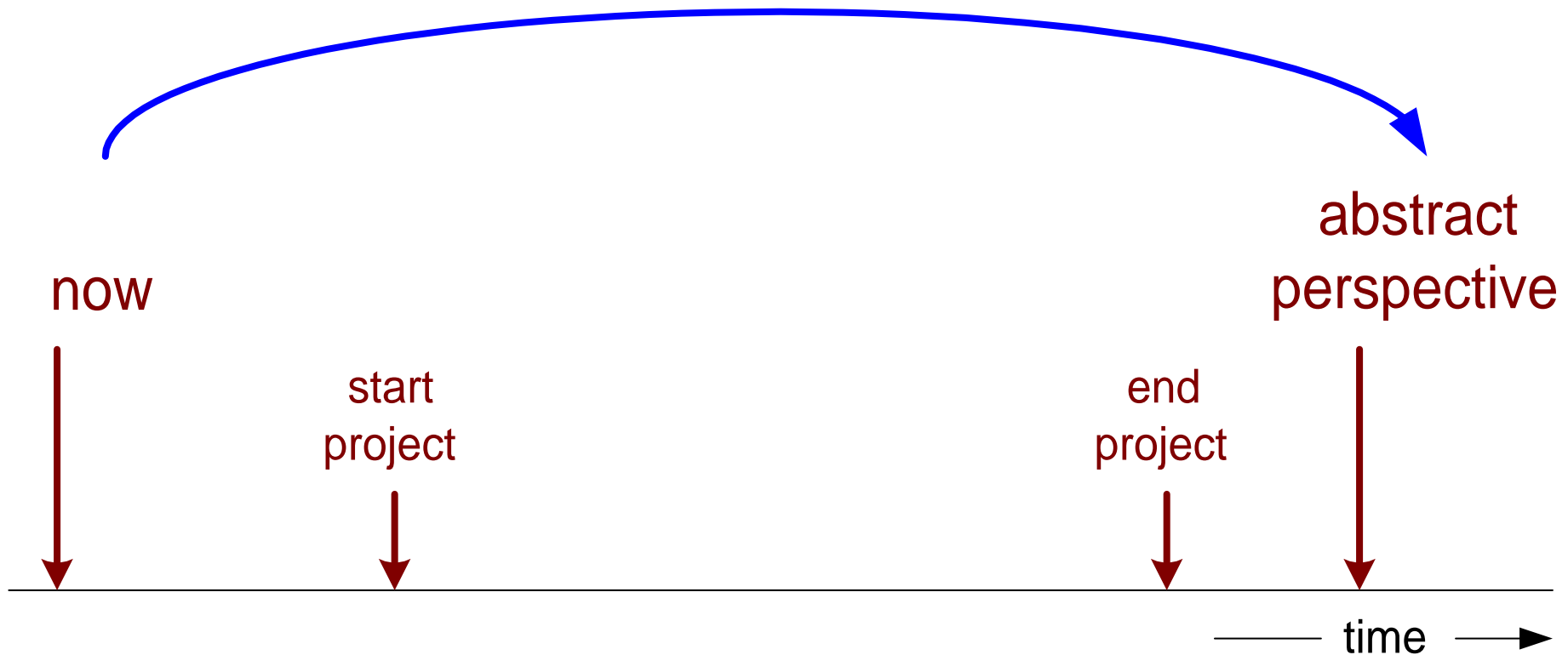
and why is that important?"

The key is to identify something or things that can be reused in the future."

Prof. Michael Pennotti, Stevens Institute of Technology

Needed: Time Machine

"fast forward" yourself into the future
what do you expect to be the project outcome?



Project Execution

maintain a project log

data, findings
documents
references

keep supervisors involved

regular presentations
regular meetings

time box and iterate

case
system and context
reflection and consolidation

early feedback on paper

start writing early
elicit feedback early
work incremental

- 1.Explanation of the subject; what is the goal of the project?
- 2.Positioning of the subject in the academic context and literature; what does this paper add to the Body of Knowledge?
- 3.How is the project performed, what has been done.
- 4.Evaluation of the project, reflection on the results and the project itself.
5. Paper should be submittable to a refereed conference or to a journal

Paper content is being discussed with Stevens Institute

Stevens Guidelines for Paper

1. Clearly introduce the problem that the manuscript is discussing/addressing,
2. Discuss the problem background. That is, discuss the research that has been previously conducted by you or others in the field (or related fields) to solve/address the same or similar problem,
3. Develop a succinct argument for the methods or ideas proposed in your manuscript,
4. Present a clear and understandable justification of why the proposed methods or ideas contribute to a superior or different solution to the problem. A clear statement of your contributions is often crucial to reviewers. Clear specify this when possible. And finally,
5. Discuss the likely future directions of the research being conducted by you (your group).

www.stevens.edu/sse/fileadmin/sse/pdf/SE_Master_Project_Guidelines.pdf

Publication Process

Company screens paper for sensitive or confidential issues, see
<http://www.gaudisite.nl/BuskerudSEpublicationProcedureSlides.pdf>

Select target journal or conference, typical choices are:
INCOSE symposium, CSER, Journal of SE, Systems Reserach Forum

Transform the paper into the prescribed format or template

Review of the paper by BUC and Company, adapt paper

Submit paper to journal or conference

Process journal or conference feedback

Final review by company

Submit final version

Visit conference and present paper

Third Party Involvement

If a third party is involved, e.g. a customer or supplier,
then ask the third party to agree with publication procedure:

<http://www.gaudisite.nl/BuskerudSEpublicationProcedureSlides.pdf>

and ask who will be reviewer for the third party

Conventions for Submitting Project Deliverables

Submission instructions

use for all deliverables the following conventions:

filename: SEMP <your name> <subject>.<version>.<extension>

e.g. SEMP John Student abstract.2.doc

where subject = {proposal | abstract | plan | presentation | paper | ...}

email to: <gerrit . muller @ gmail . com>

subject: SEMP <subject>

cc: <gunnarkb @ gmail . com>

"standard" file types preferred, e.g. pdf, jpg, doc, xls, ppt