Gaudi Project; from Incremental Growth towards Publication

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Abstract

The Gaudí project has been ongoing for 10 years. The philosophy of the project is described, and the status after 10 years of incremental development. Next challenge is to consolidate some of the work in the form of published book.

September 6, 2020
status: preliminary draft
version: 0

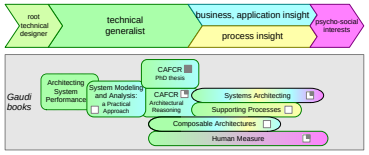


Figure Of Contents™

1. Who is Gerrit

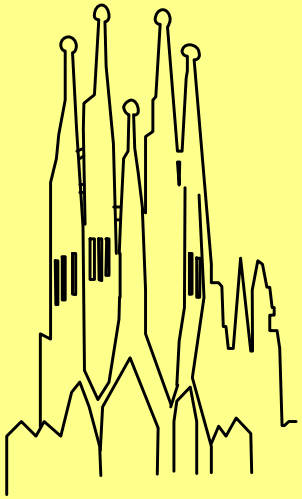
Gaudi Project

2. Goals

3. Process and Concepts

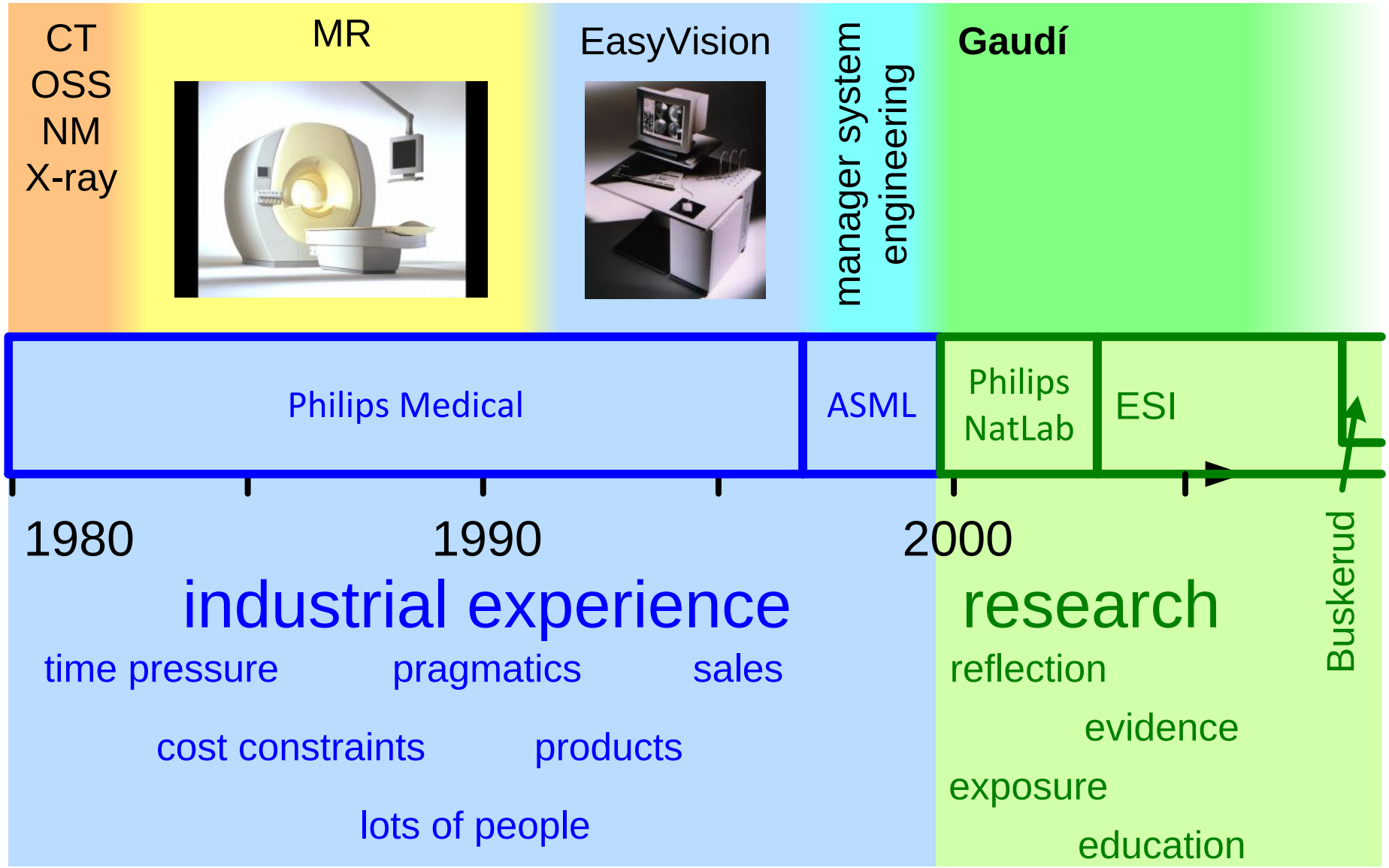
4. Results

5. Future



6. Published Book

Background Gerrit



Goals

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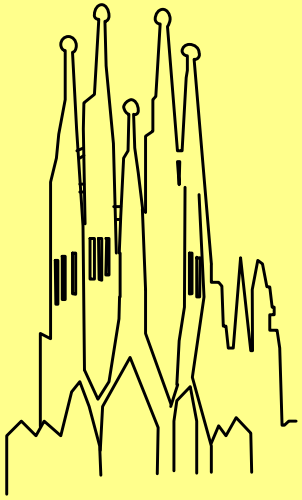

6. Published Book

Companies need more Systems People!

trends		consequences
↓ required time to market	↓ release cycle time years → months	↓ overview
↑ development cost	↑ openness interoperability	↑ feature interaction
↑ features	↑ hype and fashion	↑ complexity
↑ performance expectations	↑ globalization use	↑ amount of software
↑ number of products	↑ globalization in development and logistics	↑ integration effort
		↓ reliability
		↑ uncertainty
		↑ dynamics

Goals of the Gaudí Project

- Consolidate existing Systems Architecting Methods

  evaluate, reflect, generalize

- Make the Systems Architecting art more accessible

  case descriptions

- Enable the education of (future) System Architects

  curriculum, course material

- Research new or improved Systems Architecting Methods

  industry as laboratory

Gaudisite.nl home page

Navigation

Books

Courses

Cases

Research& Education

search

Major Books and Courses

Most recent changes

Down load top 10

Gaudí System Architecting homepage - Mozilla Firefox

Bestand Bewerken Beeld Geschiedenis Bladwijzers Extra Help

http://www.gaudisite.nl/

Meest bezocht Aan de slag Laatste nieuws

Gaudí System Architecting

Home
Reading Guide
Gaudí project
Books
System Architecting
Architectural Reasoning
CAFCR; PhD thesis
Supporting Processes
Composable Architectures
Human Measure
Courses
Course descriptions
BUC master Systems Eng.
SARCH
MSARCH
CAFCR course
ESA stakeholders
Platforms and evolvability
System Modeling & Analysis
Performance EA, ASP
OOTI requirements eng.
MASTERS ES context
Bachelor System Design
Case studies
Medical Imaging
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Embedded Systems Institute
Personal Information
Website tools

Gaudí System Architecting homepage

Google Search
Search WWW Search www.gaudisite.nl

Welcome to Gaudí System Architecting

The Gaudí site provides **System Architecting** information. Most white papers and presentations are aggregated in a set of works-in-progress books and ready-to-go courses. This page provides direct links to a few books and courses. To find your way on this side we recommend the Reading Guide .

Embedded Systems INSTITUTE

All documents are works in progress. Feedback is welcome (via e-mail) to Gerrit Muller <gerrit.muller@embeddedsystems.nl>

Background, Books and Courses

Gaudí Project

Reading Guide
Gaudi Project

Books

System Architecting
PhD Thesis
Architectural Re
overview of all b

Courses

System Architecting

Most Recent Changes

2009-09-11	new	Workshop Reflective Practice; My Role	at BUC Master Systems Engineering
	new	Workshop Reflective Practice; How to Apply SE in Practice	at BUC Master Systems Engineering
	new	Workshop Reflective Practice; Domain Knowledge	at BUC Master Systems Engineering
	new	All fly Unive	at BUC Master Systems Engineering
	new	BUC	
2009-08-18	new	Indus part-t	at Buskerud University College
2009-08-07	new	Mode	at Modeling and Analysis Course (MA)
2009-08-04	update	Systems Engineering Research Validation	at Buskerud University College
	update	Reviewed Publications	
2009-05-13	new	Industry Needs for Academic Systems Knowledge	at Buskerud University

p 10 (August 31, 2009)

hits	title
15449	Book: System Architecting
12450	Paper: What is a Process
9624	Book: Architectural reasoning explained
9386	Paper: The System Archit
8971	Paper: The Role and Task
7696	Book: CAFCR: A Multi-vie Architecting; Balancing Ge
7112	Paper: Roadmapping
6634	Paper: Process Decompos
5137	Paper: Case Study: Medic Platform
4779	Paper: The Product Creation Process

Klaar

start NL Gaudí System Archite... naamloos - Paint 18:06

Process and Concepts

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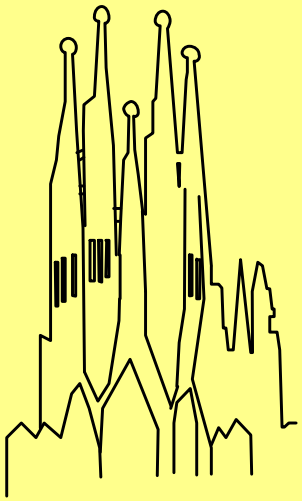
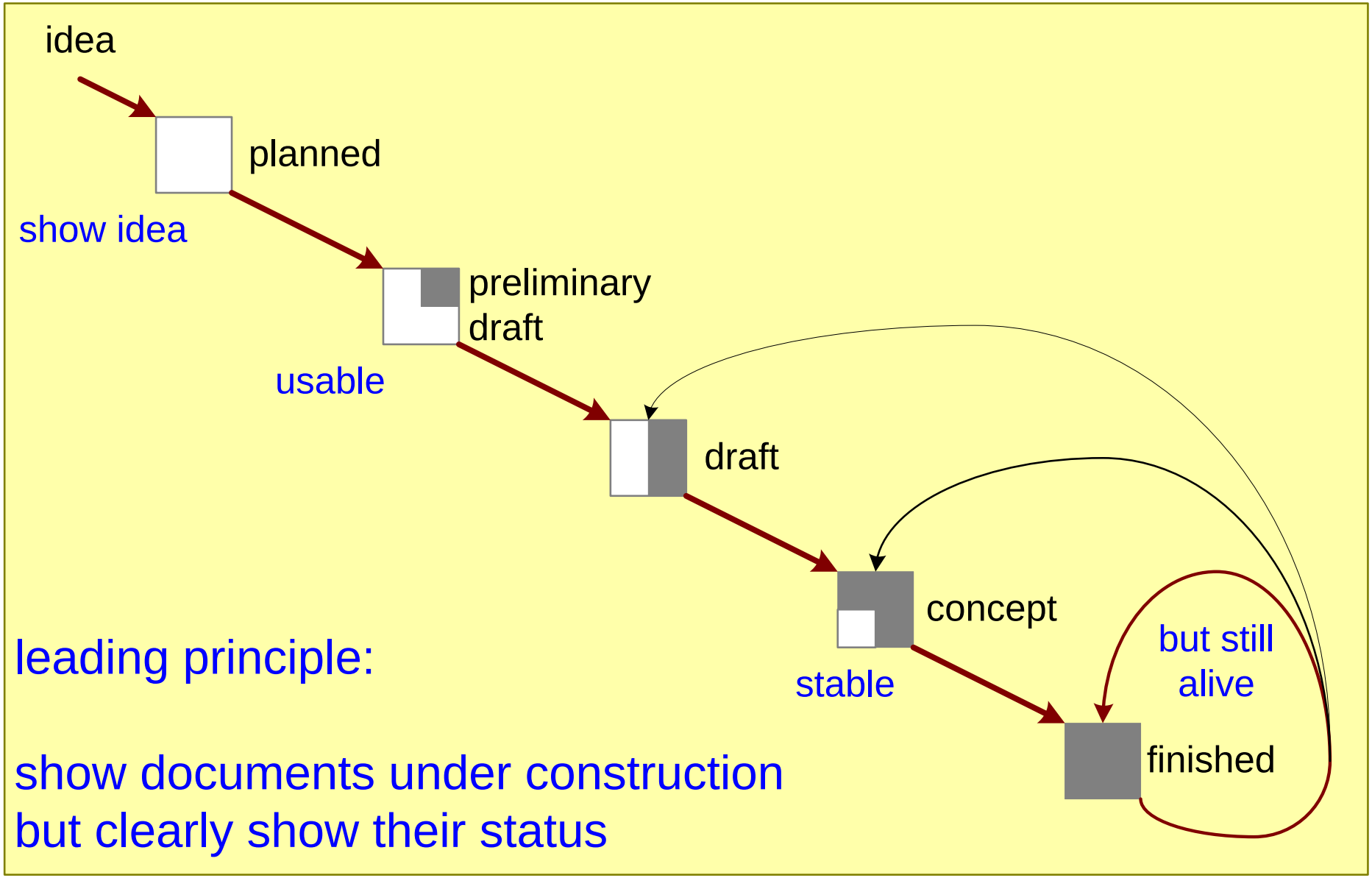


4. Results

5. Future

6. Published Book

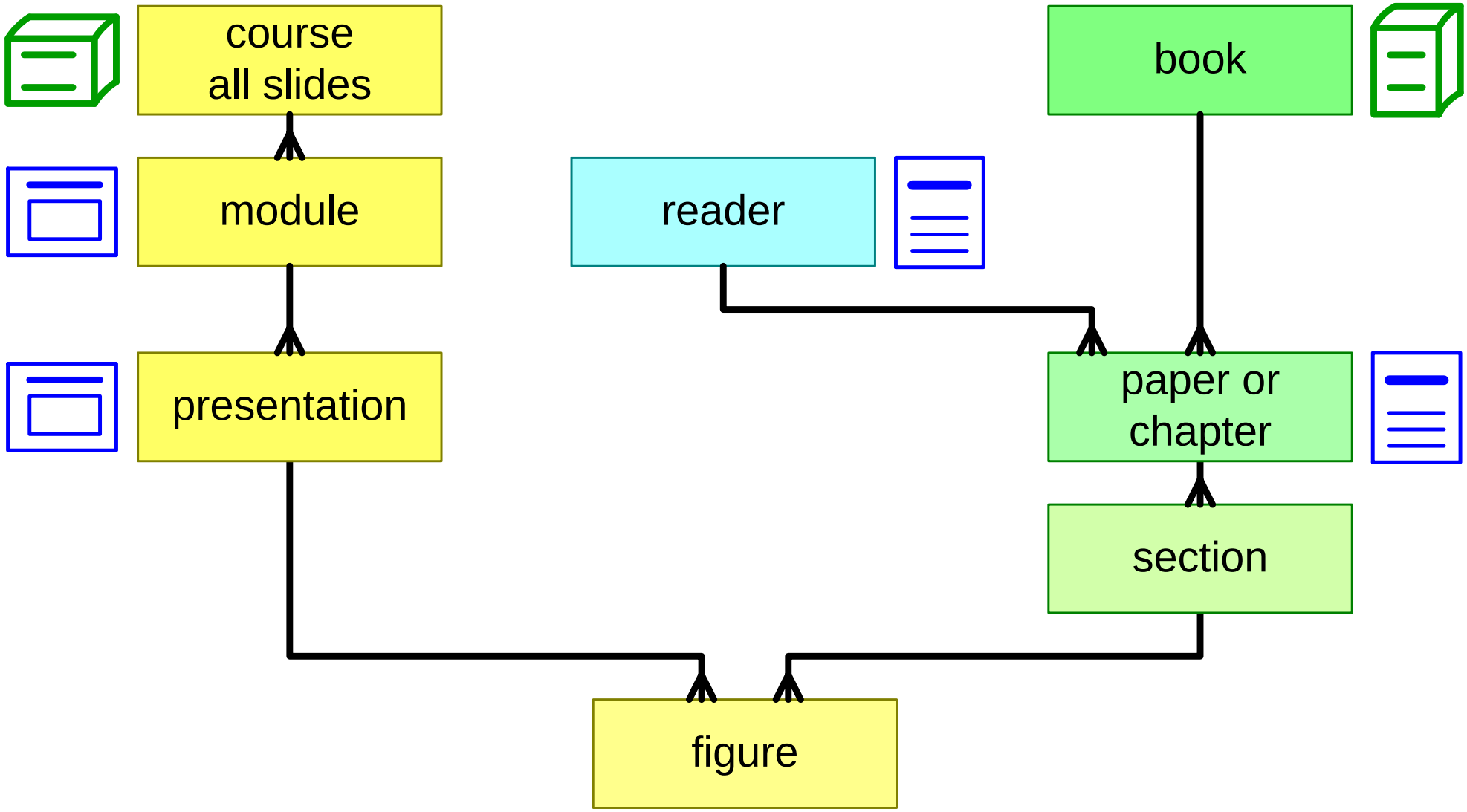
Show Early to Get Feedback



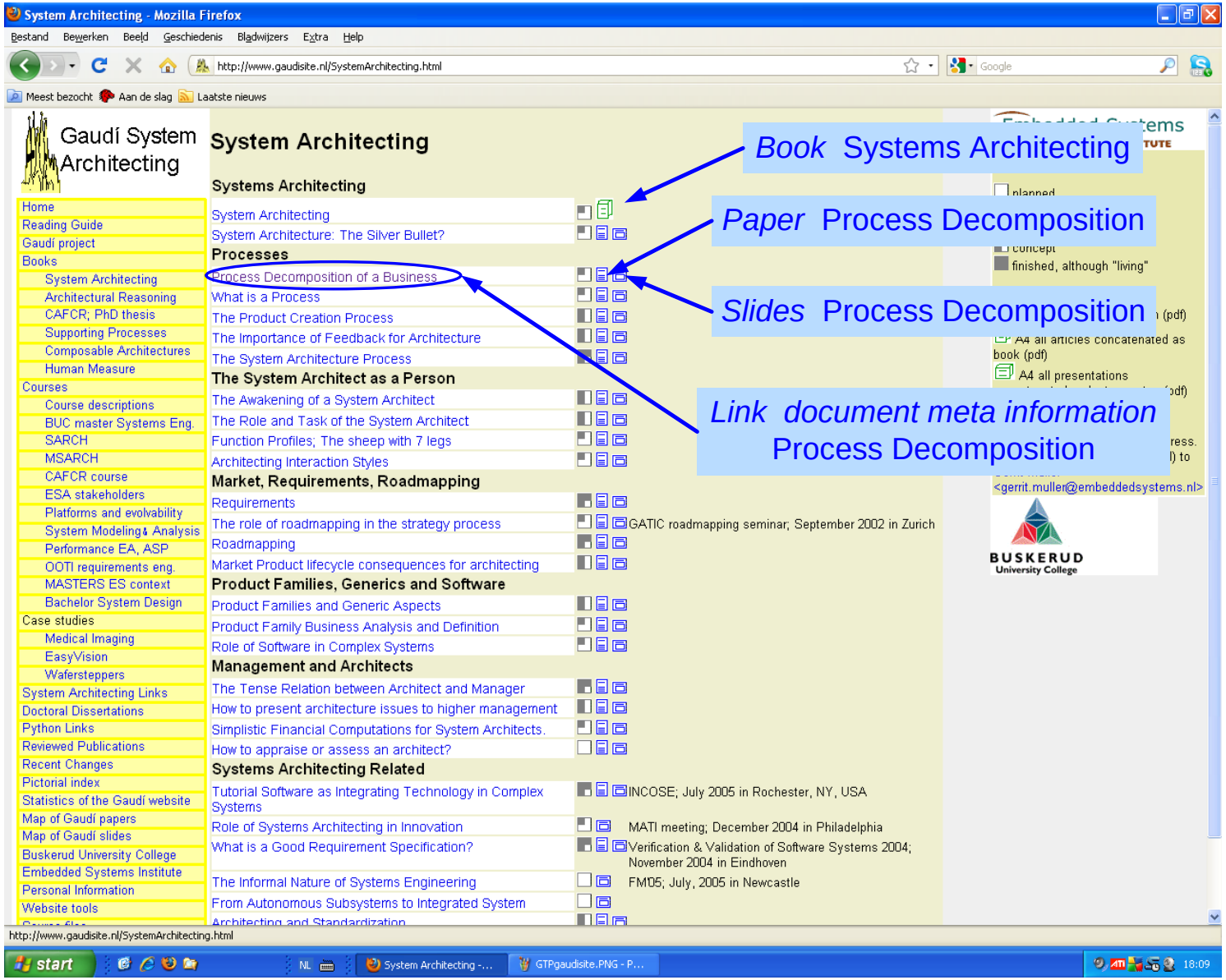
leading principle:

show documents under construction
but clearly show their status

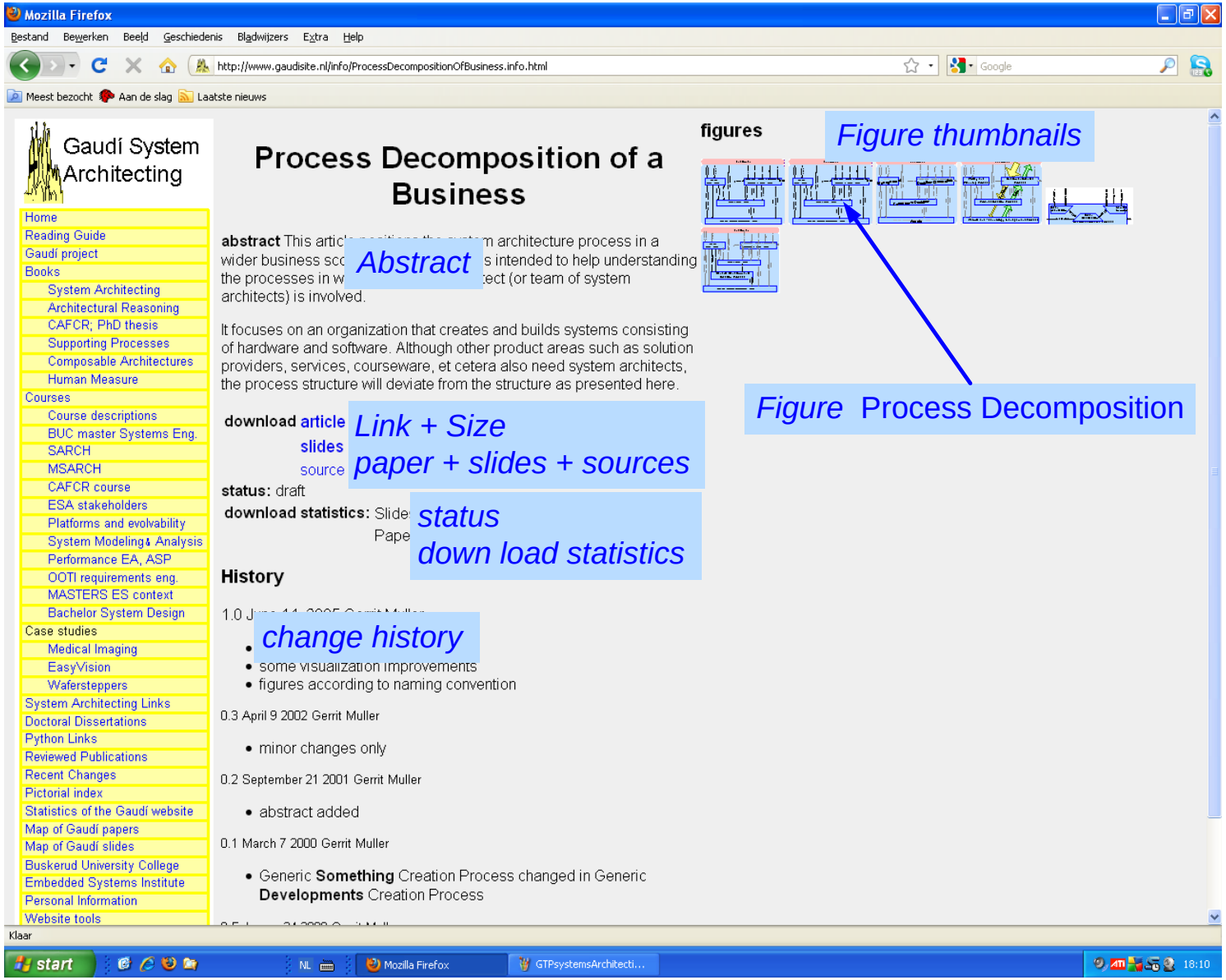
Modular approach



Example Book “Systems Architecting”



Example Document “Process Decomposition”



Example Figure “Process Decomposition”

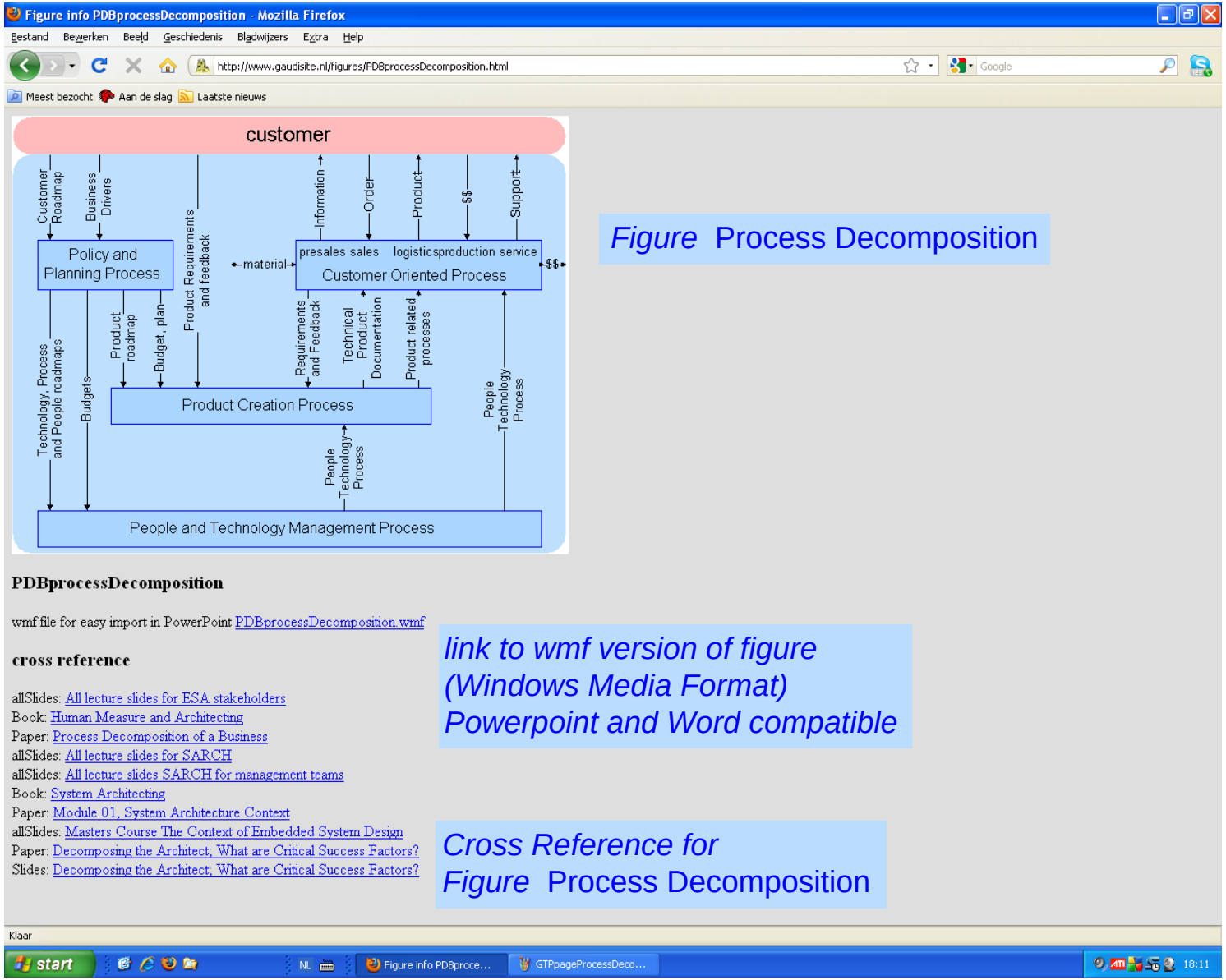
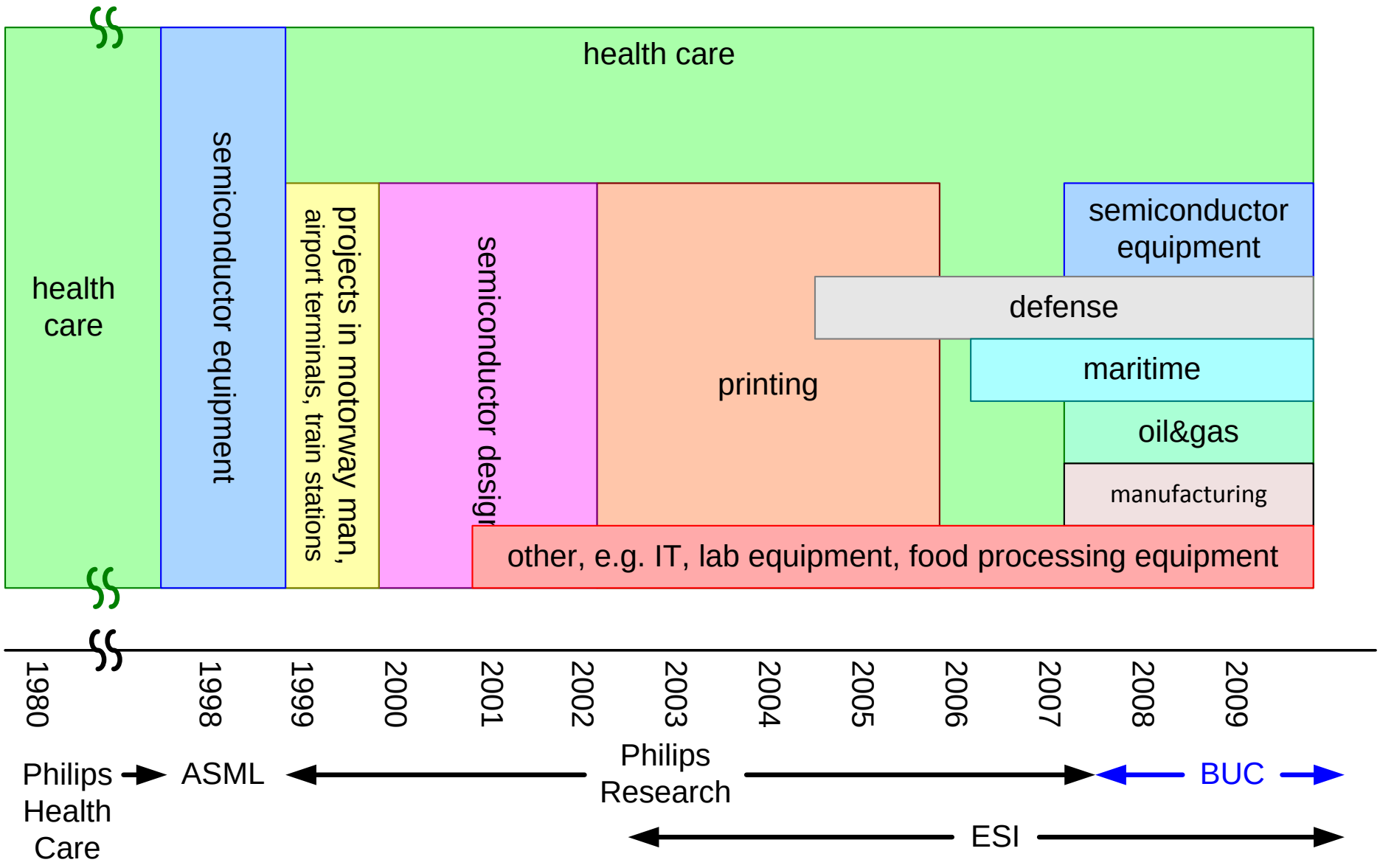


Figure Process Decomposition

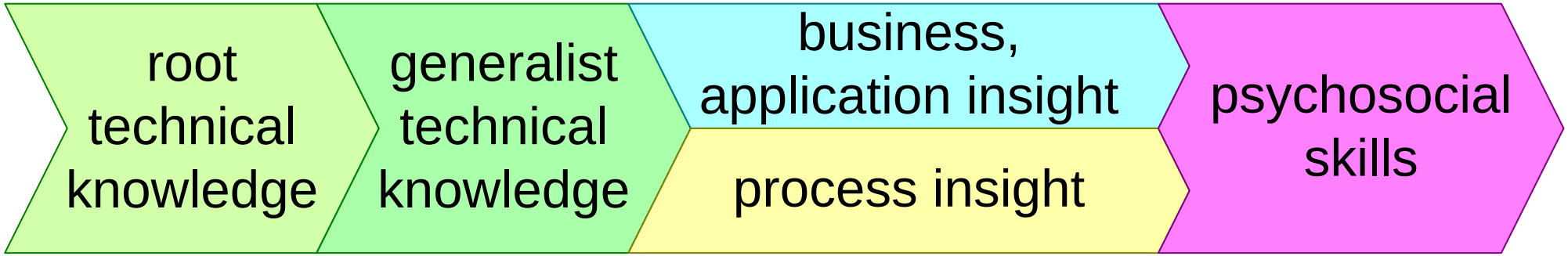
link to wmf version of figure (Windows Media Format) Powerpoint and Word compatible

Cross Reference for Figure Process Decomposition

Leading Domains



Growth of the System Architect



Results

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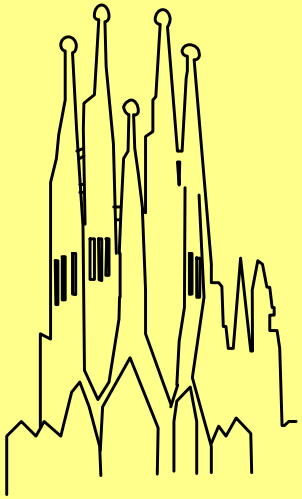
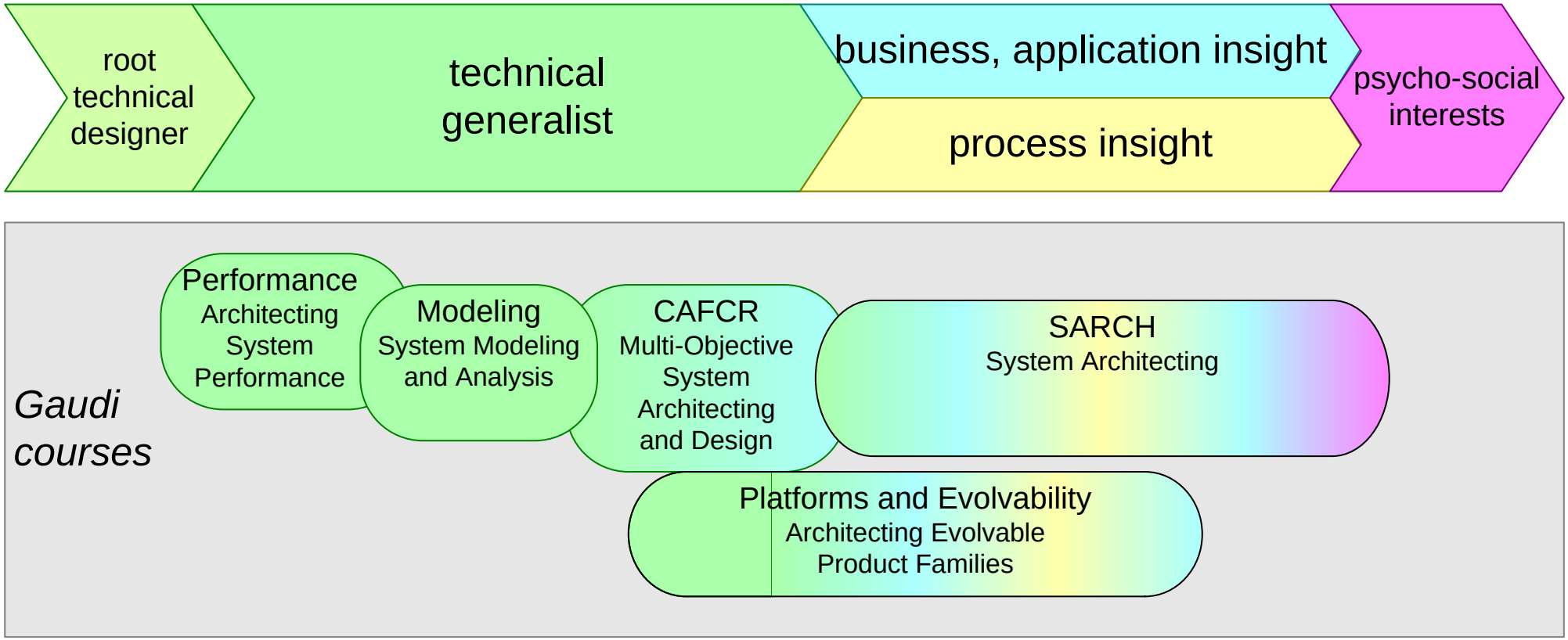
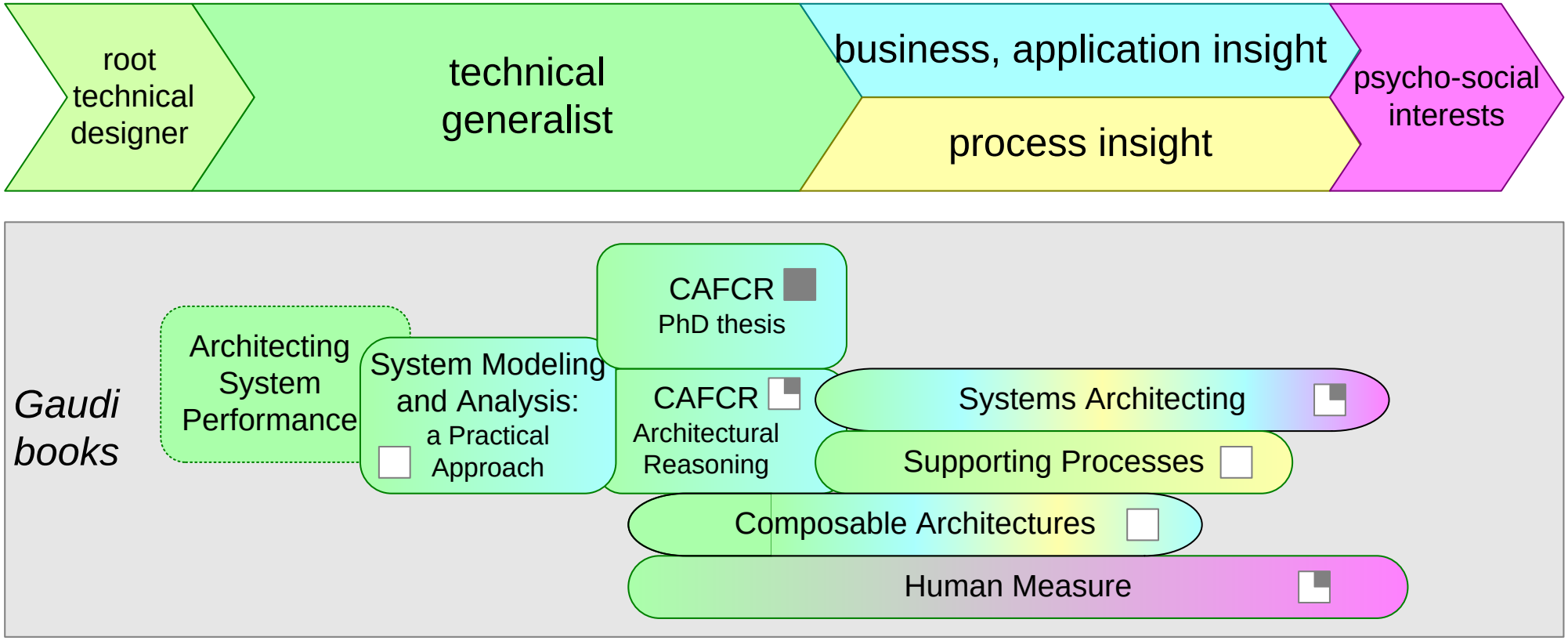


6. Published Book

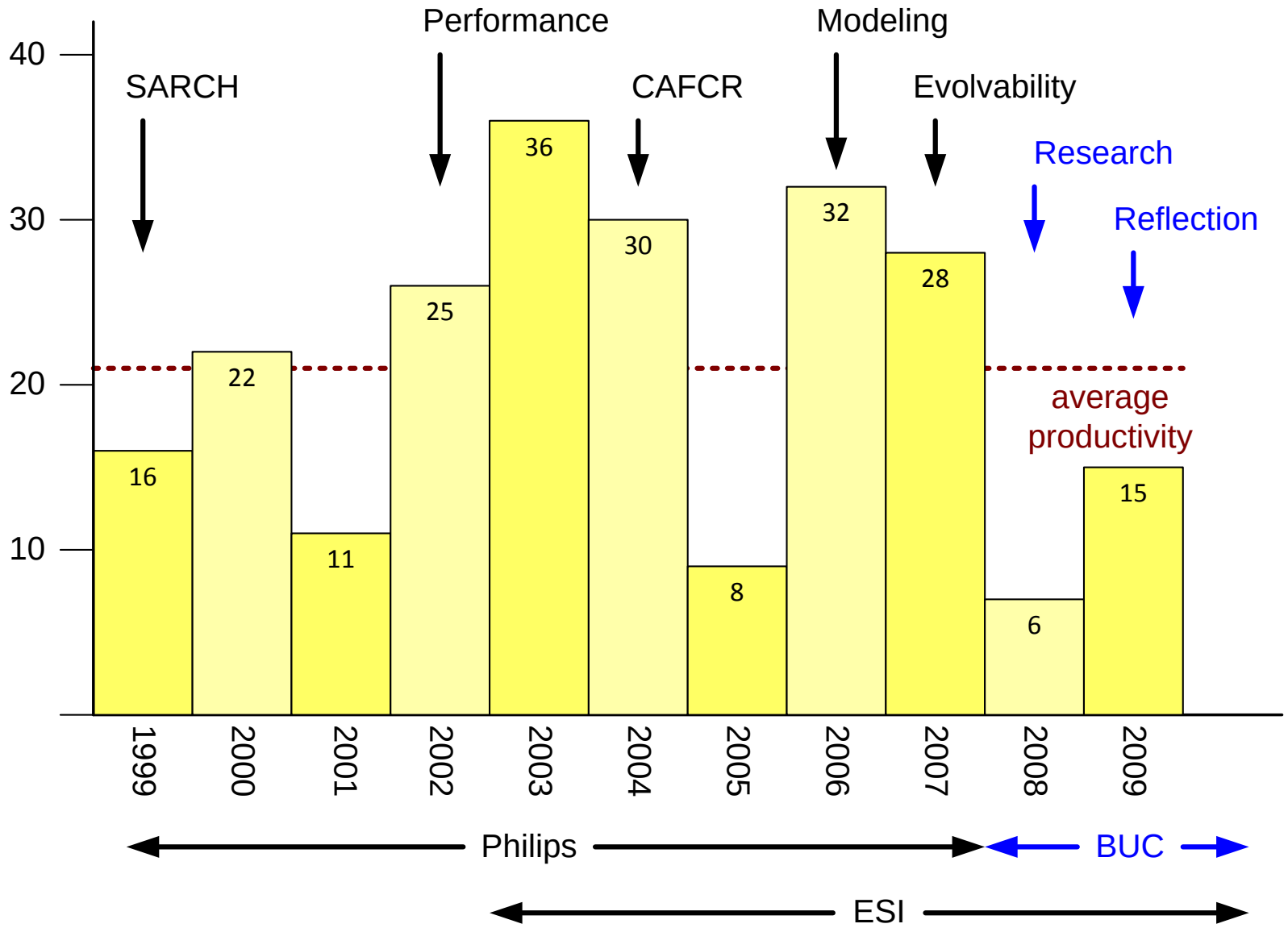
Positioning Courses



Positioning Books



Productivity: number of new entries



Different Perspectives

industrial perspective	*academic perspective*
industrial relevance of subject — valuable, useful	scientific relevance of subject — new, original
goal, solution oriented — broad, integral how to — practical	knowledge oriented — deep why, what
single author — other contributors are reviewers, clear responsibility	all contributors are authors — including reviewers
pointers to related relevant information	pointers to related scientific work — self citations are not-done
clear description juicy description understandable lots of signal, very low noise level	clear argumentation every statement is supported by reference, verifiable facts — blocks broadly interested scientists in development correct language clear positioning, well linked in with existing scientific work strong cultural filter in scientific magazines and conferences

productivity	*value*
low overhead (e.g. reviews)	practitioners appreciate info
few constraints (e.g. academic musts)	academics appreciate info
immediate feedback (especially through courses)	
80/20 principle (80% ofvalue in 20% of effort)	
no territorial problems (co-authors)	
free choice of tooling (Visio, Latex, Python)	
modular, incremental and evolutionary approach	

Future

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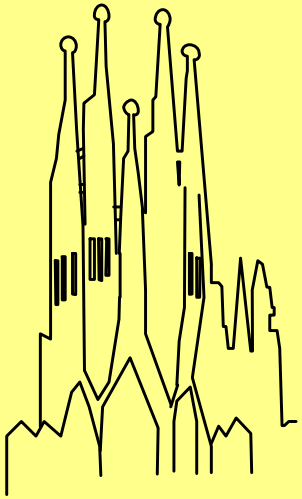

6. Published Book

Ideas for Near Future

	2010	2011	2012
Education	SE master program Reflective Practice yr 2 Master Project Modeling and Analysis Bachelor level	Reflective Practice yr 3 System Design Systens Engineering for other masters	SE PhD program
Research	Master Projects Methodology Research Agenda	staffing research model	PhD Projects Methodology broadening
SE Networks	local: SESG, BUC alumni, strategy&roadmapping, KSEE ESI Sr architecten global: architectingforum.org, SoSE network INCOSE academic forum, symposium, CSER, SEANET		
Tools, website	navigation and search	*ideas are welcome!*	
Book publication	Systems Architecting in Context	Multi-view Architecting and Modeling	

Published Book

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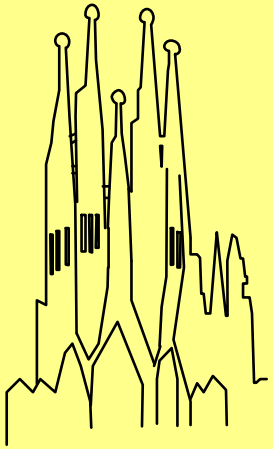


6. Published Book

Stakeholders

Publisher

acquisition

sales

support

Author

Readers

industrial system engineers

(junior..senior..fellow)

managers

(e.g. project leader, line manager)

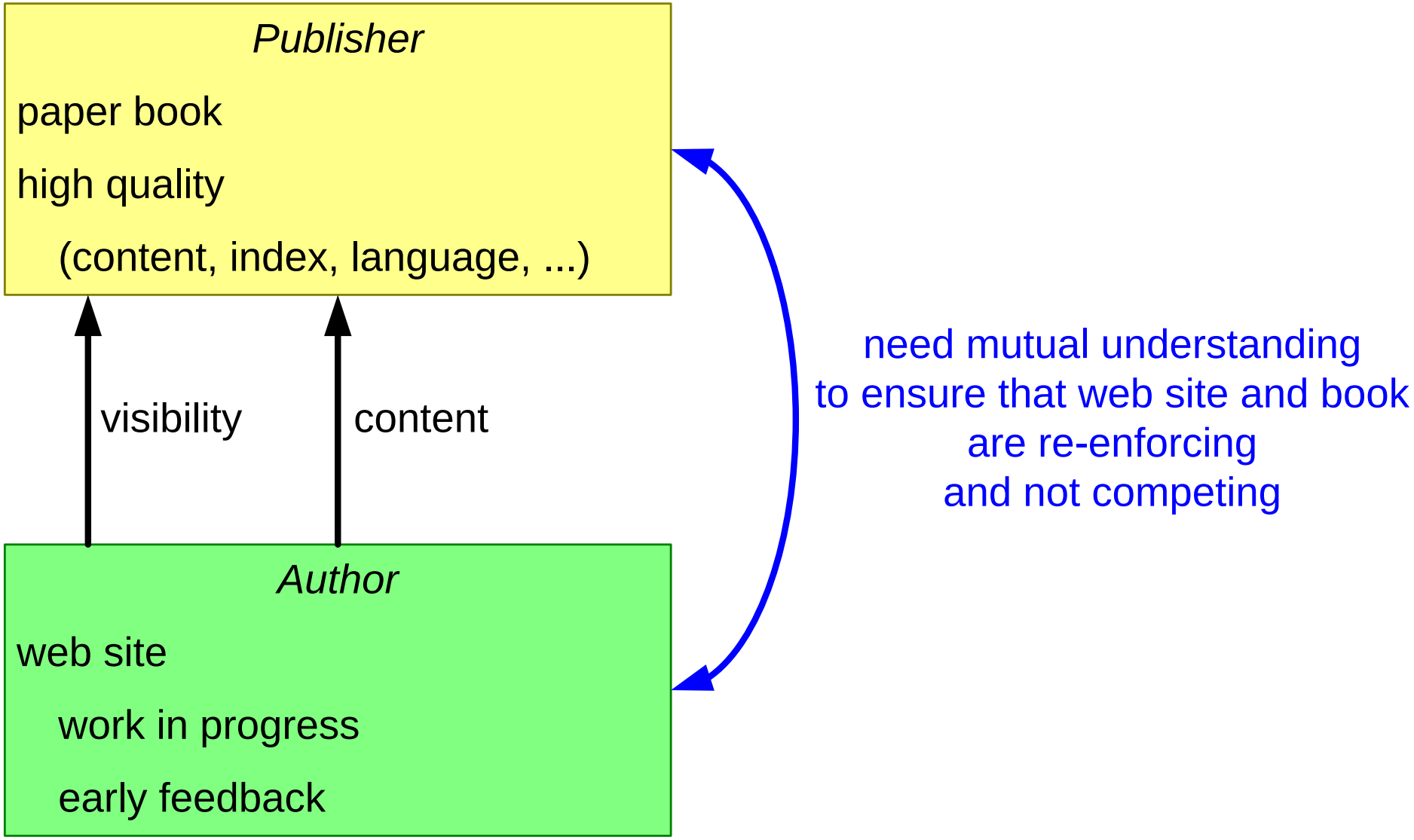
students

(bachelor, master, PhD)

academics

(e.g. professor, teacher, researcher)

Value Proposition



Content

1. How does systems architecting fit in the **organization** and its **processes**?
2. **What** are **deliverables**, **responsibilities** and **activities** of the system architect?
3. How to **elicit requirements**?
4. What **methods**, **tools** and **techniques** are available for the architect?
5. How to anticipate on **future needs**, **trends**, and **changes**?
6. How to **harvest synergy**?
7. How to **present** to less technical **management teams**?
8. What **human factors** impact systems architecting?
9. How to **apply** this material in the own **organization**, short term and long term.

Work to Do

to do

find publisher, agree on approach

integrate all chapters
- remove duplications
- make consistent
- determine order
- unify terminology

add foreword, glossary, index, ...

improve language quality

ensure greylevel quality images

current status

1 chapter

8 chapters

7 chapters

4 chapters

0 chapters

Conclusions

Open development yields high productivity.

Feedback mainly through teaching and presentations.

Practitioners appreciate material.

Academics appreciate material, but don't know how to cope with unconventional model.

The final 20% to finish is a lot of work.

Paper books will be around for a few more decades.

Your feedback is highly appreciated and always welcome!