

IT architecture and user driven software design (BUITA) and Project Portfolio

Intro

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Keld Bødker





The BUITA course and project portfolio



Project Portfolio group establishment

About me

- Research into user's changing expectations
- Practice oriented research
- Focus on designing usable artefacts
- Love to teach:
 - Organizational Systems Development
 - Project Management
 - Process Improvement
 - Practice-based evaluation of technology



"Love to learn from those I teach"

About me: Niels Jørgensen

- Associate Professor, PhD
- Roskilde University
- Current research: "Chaos Computer Club"
 - a German hacker group - the world's largest
 - the group cloned (copied) a mobile phone in 1998
 - led to changes and improvements in the GSM standard
- Teaches security, programming and Arduino



About me: Keld Bødker

Associate Professor, PhD
Roskilde University, Jan. 1986 –

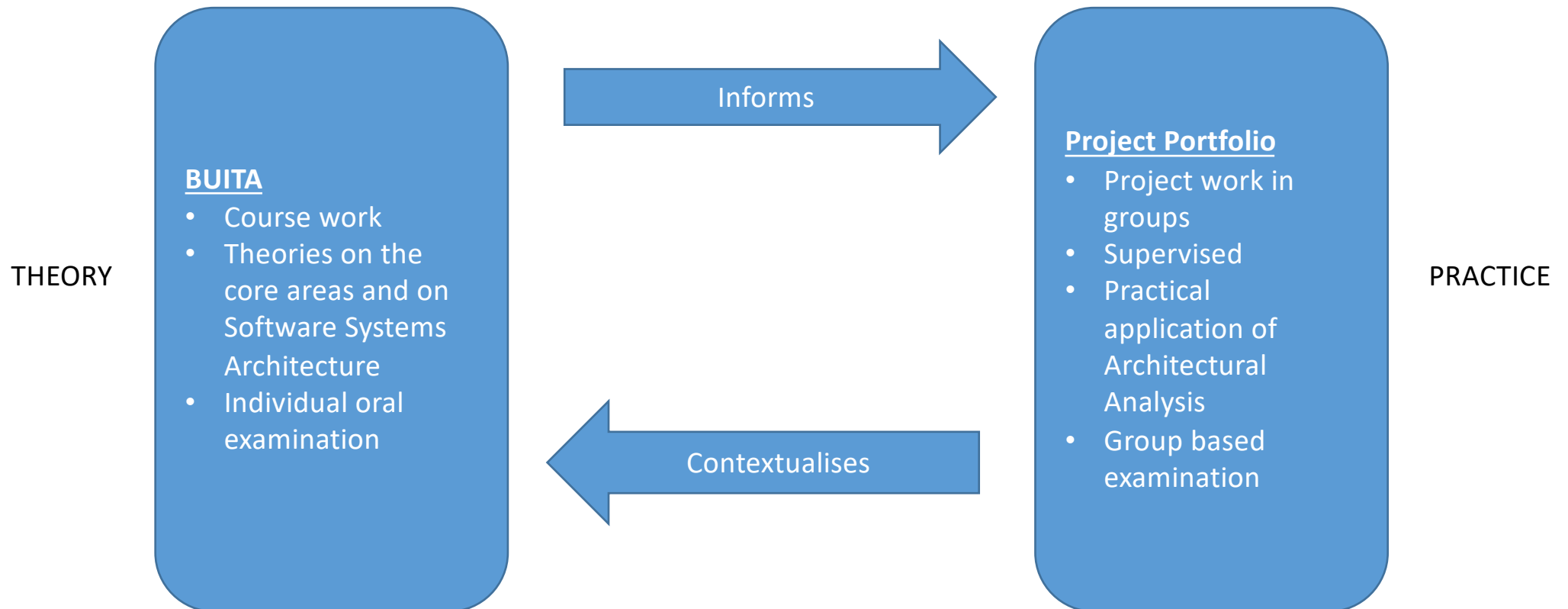
Research (keywords):
System development in an organizational context
Participatory Design processes

Teaching (keywords):
BUITA
Portfolio Project
UXD, AUX



Keld Bødker
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Two concurrent processes



BUITA at a glance

- 10 ECTS
- 16 weeks
 - twice weekly in September (Tuesdays and Thursdays)
 - once weekly in October/November
- 4 core areas of informatics <-- theoretically
 - System development
 - Implementation, including change management
 - Evaluation of IT usage
 - IT security
- Text book and research articles
- Supports the portfolio project work packages

Project Portfolio at a glance

- 15 ECTS
- You have to find an organisation in need of an architectural analysis
- 7 milestones with associated work packages planned + peer review
- Supervisors:
 - Keld Bødker
 - Magnus R.P. Hansen
- Hand-in Reflection Report based on project portfolio: December 18 at 12.00
 - www.eksamen.ruc.dk
 - 1 x Architectural Description (template given at PP seminars)
 - 1 x Reflection document (max. 20 pages plus appendices)
- 4 core areas of informatics ← practically
- You find your own literature and/or draw on the BUITA literature

Have knowledge of:

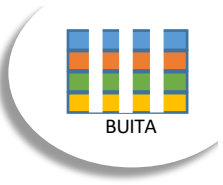
- Systems Development and Design: *Core concepts of the systems architecture definition process, Organizational Systems Development, Paradigms of systems development, Soft Systems Methodology.*
- Evaluation of IT: *Architecture evaluation, Technochange prototyping, summative and formative evaluation.*
- Implementation and Change Management: *Nexus of Change management, Knowledge management systems, Computer-supported Collaborative Work, Diffusion of innovations.*
- IT security: *Privacy By Design, Security technologies, and Identity Management Systems.*

Skills, to be able to:

- Systems Development and Design: *IT architecture development, including stakeholder analysis, Architecture Viewpoints and Perspectives, and Architecture Skeleton Construction, CATWOE, Rich pictures.*
- Evaluation of IT: *Lifecycle evaluation, Architecture evaluation, Stakeholder evaluation, Pilot implementations, Phased implementation.*
- Implementation and Change management: *Organizational structure assessment, mitigation of technology-derived challenges.*
- IT security: *Privacy Impact Assessment, Risk analysis, Security Planning.*

Competencies, to be able to:

- Work with IT related problems individually and with a team.
- Account for, identify and analyze challenges related to IT architecture.
- Use tools and techniques for locating and retrieving contemporary IS literature research.
- Critically discuss and reflect on the quality and usefulness of contemporary IS research literature.



BUITA

Literature, main concepts and lecture structure

Course book: Software Systems Architecture
- Rozanski, N., & Woods, E. (2012) *Software systems architecture* (2nd ed.). Addison-Wesley

Part I: fundamentals (ch. 2-5)

Part II: the process of software architecture (ch. 6-14)

Part III: the viewpoint catalog (ch. 15-23)

Part IV: the perspective catalog (ch. 24-29)

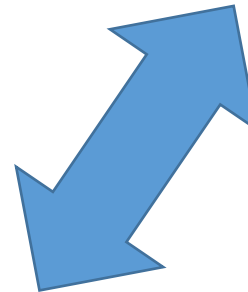
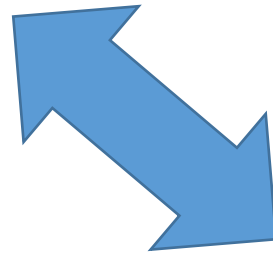
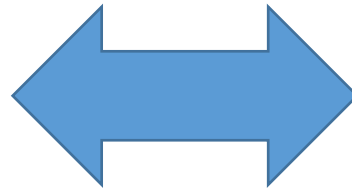
Part V: putting it all together (ch. 30)

Done 8th of march.

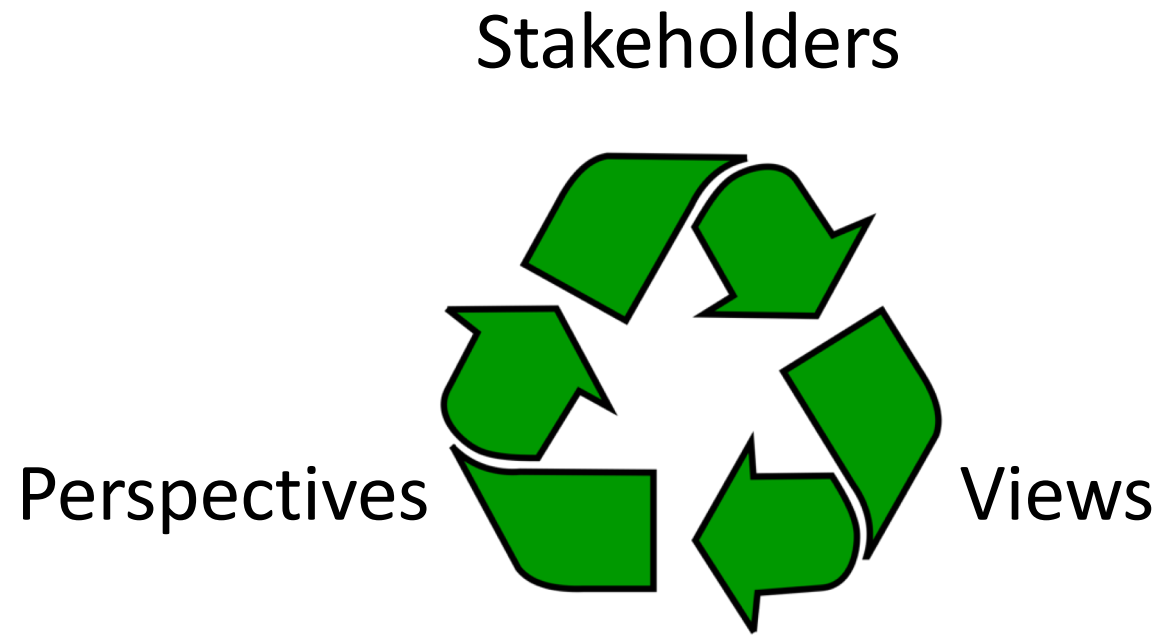
Articles

- Find them yourself through REX: <http://kub.kb.dk/c.php?g=202959>
- State-of-the-art articles are used from October and onwards
- They will be related to the four core areas of Informatics

Architecture?



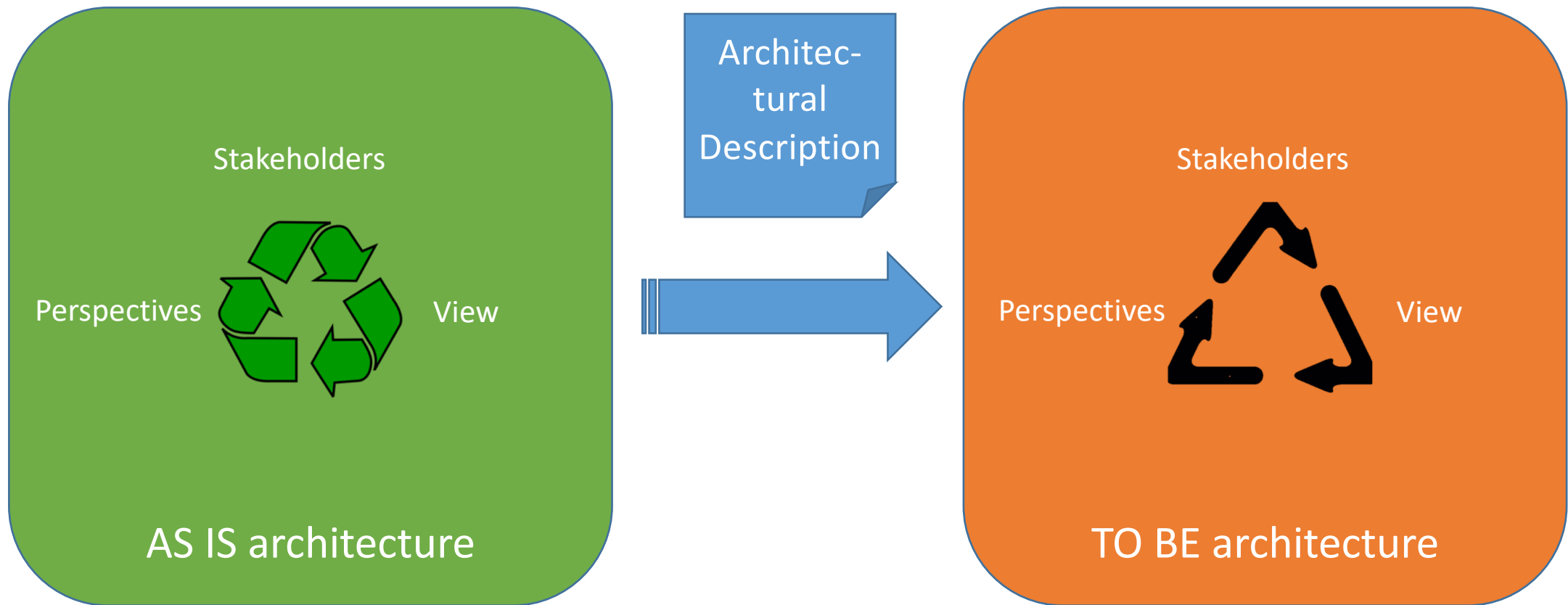
3 main concepts regarding architecture

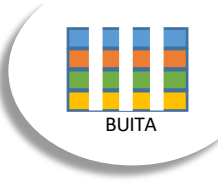


Main concepts

- Stakeholders
 - Those impacted by and with a vested interest in the architecture
 - Owners, architects, customers, users, IT support, legislators etc.
- View
 - Aspect of the information technology in relation to how it responds with stimulus of the real world
 - Contextual, functional, information, deployment, operations etc.
- Perspective
 - A system quality that can be applied across views
 - Usability, concurrency, performance, security

Your task as an architect

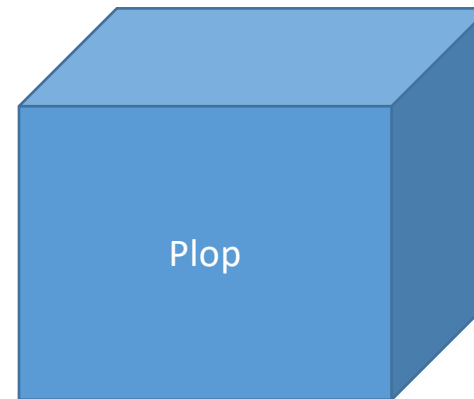




Project Portfolio

Work package content

- Project charter
- Stakeholder analysis
- Context viewpoint
- Functional viewpoint
- Information viewpoint
- Security assessment tools
- Many more...



9+ Seminars

inspiration and feedback on work packages

- September 4 (in conjunction with BUITA 1)
- September 20
- September 27 status (in conjunction with BUITA 7)
- October 2
- October 9
- October 25
- November 8
- November 22
- November 27
- December 4

Project Portfolio

- Need to establish groups by the 20th of September (or sooner)
 - Hand in a project charter with project team name, purpose, case and project team members
- Relatively autonomous process, so plan to meet each other!
- Today will be the first day where you mingle
- You (may) have mingle time Tuesday as well
 - The next official Project Portfolio meet-up is the 20th Sep.
- Divided by who already knows a potential case to work with
 - Short rounds of 20 minutes “speed dating”
 - 5 minutes status updates

The good case

- The company needs to be larger than 10 people
- It's preferable if the company already has an existing IT architecture
- International company might be preferable if you have international students in your group. Otherwise you have to divide up work between you
- Look around for someone you know who works for 'any company'
- You need access to the company
 - Main stakeholders
 - Access to technological infrastructure, hardware and software
 - Meetings 1 x hour every three weeks for architectural review products