Design for Usability
- To Practice User-Centered Systems Design

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In the IT-business since 1984 – consultant and researcher.
Focus on usability in both business and systems development.
Helps organizations to develop their businesses by using IT in an intelligent and efficient way, based on user-centered techniques.
Helps organization to build competence in usability — teams, roles and processes.
PhD in Human-Computer Interaction.

Application areas: business support (authorities, case-handling, medicine, etc.), products (hardware and software), web and e-services, etc.

Methods development: process support in applying user-centered systems design.
To Structure a Development Process

• Is it important to have an explicit process? Give five motives!
  – Two by two, 5 minutes.
• Main phases in a development process?

1st activity ⟷ 2nd activity ⟷ 3rd activity ⟷ n... activity

In Order To...

• Explain and visualize...
• Understand what to do...
• Plan a project...
• Know what to do...
• Assure quality...
• Be able to repeat, in a controlled way...
• Learn by mistakes, improve by learning...
• Communicate and sell...
Process

Does the outline (syntax and semantics) of the process matter?

Has it any impact?

Dynamic Systems Development Method – DSDM

Figure 1.1 DSDM process diagram.
Rational Unified Process – RUP

**Disciplines**
- Business Modeling
- Requirements
- Analysis & Design
- Implementation
- Test
- Deployment
- Configuration & Change Mgmt
- Project Management

**Phases**
- Inception
- Elaboration
- Construction
- Transition

**Iterations**
- Initial
- Elab #1
- Elab #2
- Constr #1
- Constr #2
- Trans #1
- Trans #2

Workflows in RUP

- Business Modeling
- Usability Design
- Requirements
- Analysis & Design
- Implementation

- Test
- Deployment
- Configuration & Change Management
- Project Management

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The Usability Engineering Lifecycle – Deborah Mayhew

**SCRUM**

- Scrum is a project management method for agile software development.

![Scrum Flow Diagram](https://via.placeholder.com/150)
This and That...

- **Usability** is a quality in use. It measures how well a product or a system supports me, as a user, in getting my work done and reach my goals in a given context.
- **User-Centered Systems Design** is an attitude to development, and a process, that leads to usable products and systems.

but...
The Magic Development Process – The Myths

- The process gives us all the answers – everything is covered within it.
- We just have to follow the process.
- A process is something that all stakeholders can unite around, it gives us a common language to communicate.
- There is a single process for all needs and situations.
- As someone else developed the method, and improves it, it has to be good.
- When we have the process, we don’t need to think anymore!

What The Development Process Really is About

- Systems development is a learning process itself.
- Processes does naturally evolve over time. You hardly use it the same way twice.
- There is no single process that fits all needs.
- Development is done by people! Not roles, activities or documents.
- Pick the pieces (methods, techniques, etc) that support your organization the best.
- Use your previous experiences.
- The most important aspect is how you execute and use the process, not what it looks like. It’s about peoples attitude and abilities to work in teams.
Exercise

Exercise: Describe a User-Centered Process

• You shall propose and describe a user-centered process — a project concept, in order to get a contract on re-designing SJ’s Ticket-vending Machines.
• It’s a hypothetical tender from SJ.
• You really want to get this assignment!
• Convince the client that you are the right company for the job and that your process promise to deliver value.
Example: SJ’s Ticket-vending Machines

The Ticket-vending Machine
Describe the Process

• What’s the first thing you would propose do?
• Phases and activities?
• Resources?
  – Time
  – Money
• Involving users? How? Convincing SJ to let you involve users, how?
• Choice of methods?
• How should you sell-in your process and tender?

A UCSD Case From My Practice
Background

- Consultant work :: Usability Designer. Spent approximately 190 hours in the project, during six months.
- Design for people with special needs.
- Interaction design for a handheld computer:: PDA.
- An early version (Beta) of the system was already developed and tried out by a couple of users.

What was the Problem, My Assignment?

- Make it easy to use!
- Wanted it to be perceived as a “serious” product...
- “We know that we have all the functions needed, make it look nice”!
Project Team

- Nurse - specialised in Parkinson
- Usability Designer
- Technical project leader
- Developers, 2-3
- CEO - responsible for the product

No experience in user-centred activities or usability...

The Process :: Lightweight and Tailored UCSD

- Review of all points of view that had come from different stakeholders, including early users.
- Analysis of all screens and dialogs.
- User interviews.
  
  Report - analysis report

- New design phase - paper and pencil, sketches in a drawing program.
- Evaluations with users.
- Continued design - prototype on the PDA.
  
  Report - design report
UCSD Had a Major Impact

- We did not just change the look of the system. We eventually changed the whole interaction (dialog), and also altered quite a lot of the functionality. The usability focus and the UCSD approach had a much greater influence on the re-design than anyone could foresee.

- The managers at the product company were surprised that the re-design had such a great impact on the system. What they expected to be a minor “face-lift”, turned out to be a major make over.

What Can Be Learned :: Process

- The tailoring of the UCSD process was necessary. We could not have pushed harder for a change in the company's development practices. We realised that it had to be a step-by-step process, changing the work practices for the team members as well as for the managers.

- Having the usability designer leaving the project right at the start of the construction phase was a logical decision in the managers’ eyes, but resulted in a lack of user and usability focus during this phase. This was reported numerous times by team members in later communications. The usability design and championing aspects can never be overrated.
Thank You For Cooperating!

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