Conceptual Evaluation of a Complex Interactive Retrieval Interface for Usability Information

Project Overview & Exploratory Results

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Need for human centred design

Understand and specify context of use

Use Cases
Personas

Persona: Daniel Storm

Beruf
Daniel (29) arbeitet als freiberuflicher Fotograf. Seine Aufträge bekommt er hauptsächlich aus der Industrie, er versucht aber auch als Landschaftsfotograf Fuß zu fassen. Daher reist er sehr viel und hat vor allem in Asien Zustände gesehen, die er gerne verändern würde.

Freizeit
In seiner Freizeit macht Daniel gerne Sport, wie z.B. Klettern. Außerdem interessiert er sich für Kunst und besucht gelegentlich Ausstellungen. Seine Freunde, mit denen er gerne etwas unternimmt, sind ihm wichtig. Momentan ist Daniel Single und wohnt alleine in einer gemütlichen Wohnung.
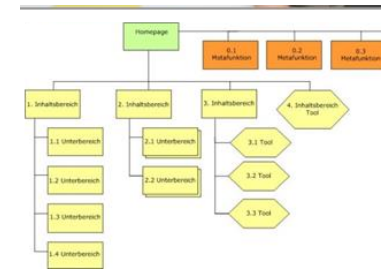
Einkaufsverhalten
Umweltschutz ist für ihn genauso ein Thema, wie fairer Umgang mit Menschen, da er schon viele

Results of Expert-Reviews
Survey-Results
Reports from User Tests

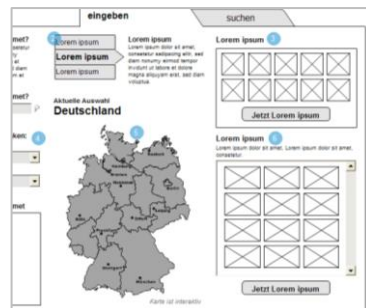Evaluate designs against requierements

System satisfies specified requierements

Specify the user and organizational requierements

Content-/
Functional-
Requierements

Produce design solutions
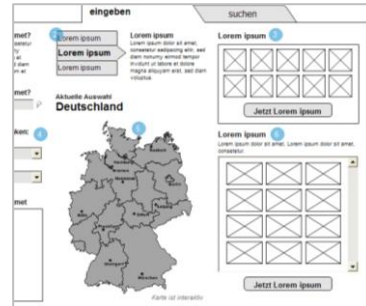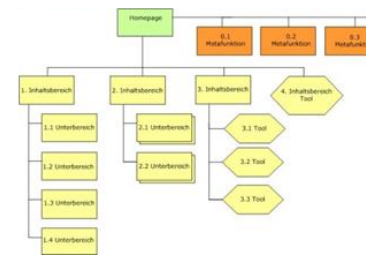
UI-Specifications
Prototypes

Human-centred design process
ISO 9241:210

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Current Management of Usability Information

Problem

All this usability knowledge **available within many organizations** is not used systematically:
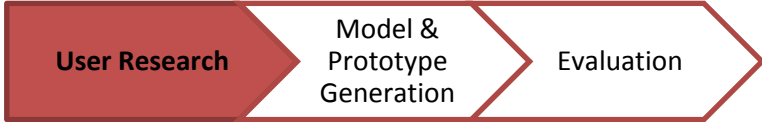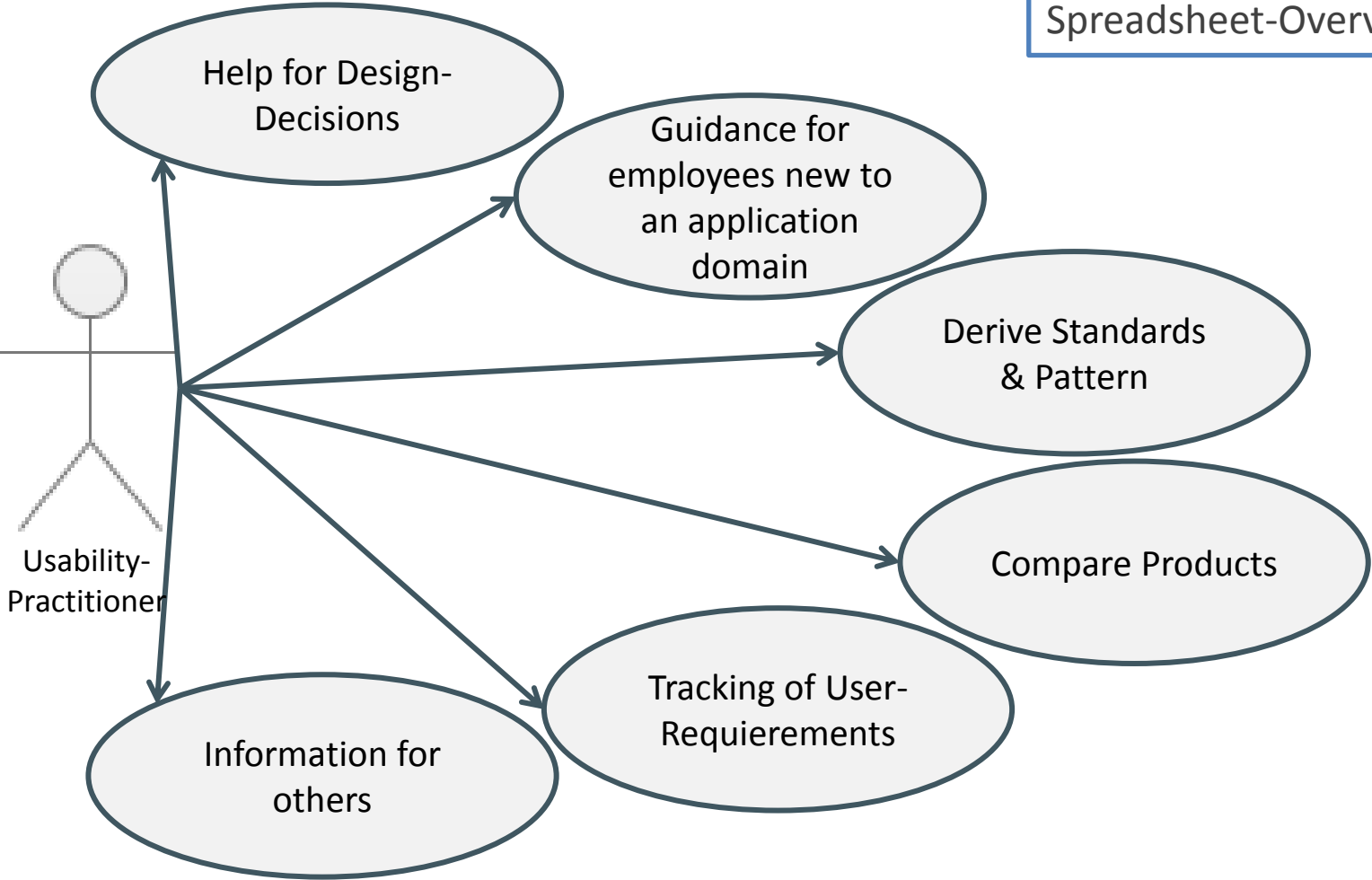
- **Cost** for Evaluations:
  Don't repeat yourself

- **Quality improvement**:
  Don't repeat mistakes

- **Internal results**:
  Look at most specific
  information first

- **Internal Usability Guidelines**:
  Create and maintain your
  own library on an empirical basis
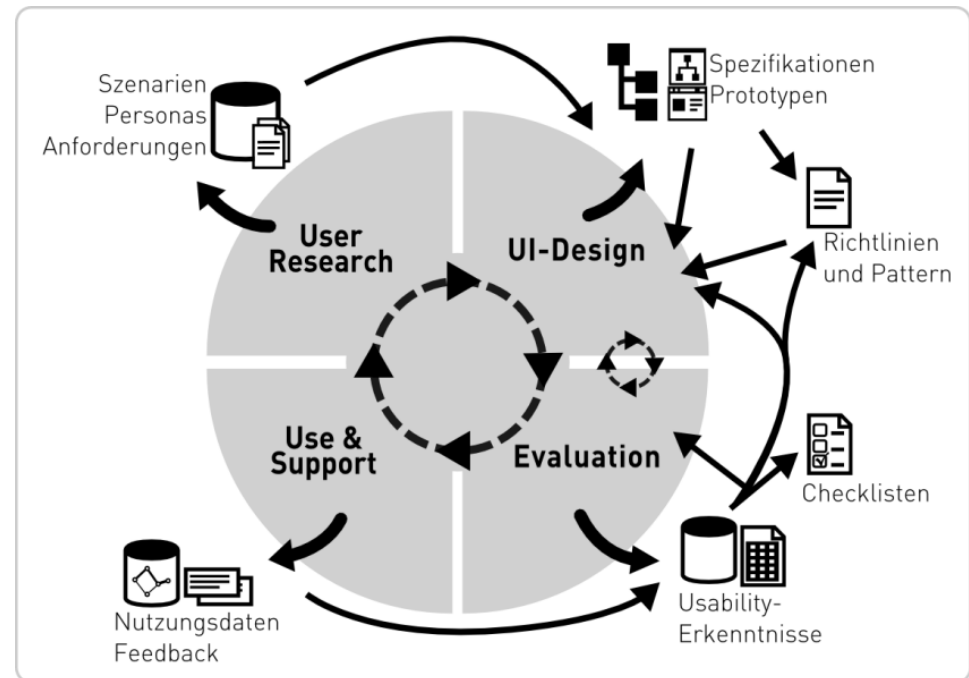
Research Project

Interviews and Focus Gropus

Tools

Documents on Fileservers
Issue Tracking
Spreadsheet-Overviews

Help for Design-Decisions

Guidance for employees new to an application domain

Derive Standards & Pattern

Compare Products

Tracking of User-Requierements

Information for others

Usability-Practitioner

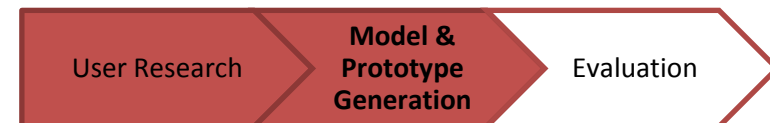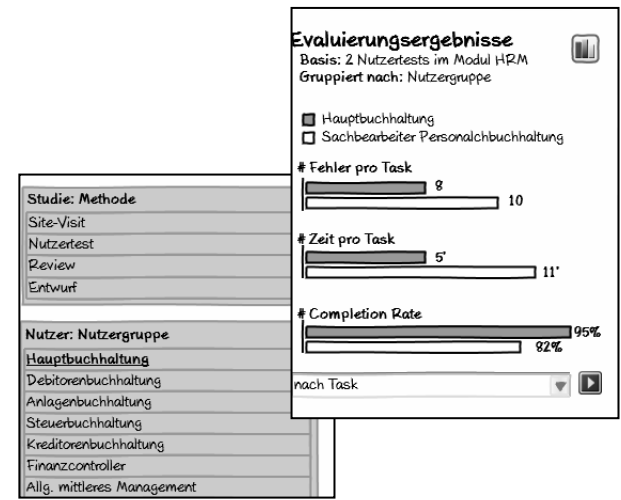**User Research** | Model & Prototype Generation | Evaluation

Research Project: Model Generation & Evaluation

Scenarios of Use (Rosson & Carroll 2002)

Wireframes based on Scenarios

Usability-Database for Input of Usability-Results

Corpus with Results of Usability-Tests by students

User Research > **Model & Prototype Generation** > Evaluation

Prototype

Interactive Search Tool

- Support Exploration
- Support simple information analytics

Evaluation of Prototype

Evaluation

- Cognitive Walkthrough with Usability Engineers from different Organizations (*10 Interviews*)
- Qualitative Feedback about Prototype
- Technology Acceptance Model (TAM)
- Questions about perceived potentials and risks

Results:

- Validated Taxonomy for Usability-Information
- Validated and prioritized Requirements for Usability Information Systems

User Research → Model & Prototype Generation → **Evaluation**
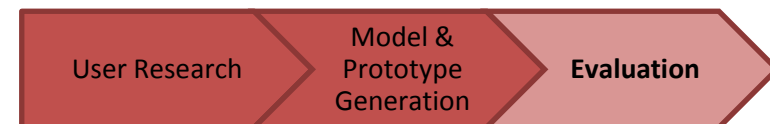
Evaluation: Conceptual Analysis
Content-Types, Classification, Links

System · User · Concepts
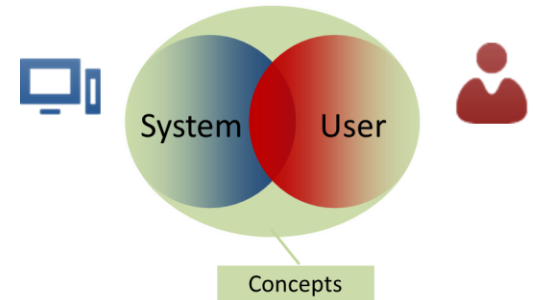
User concepts not represented within the System	System concepts that the User has to know about	User- and system concepts are similar, not identical
• *New Concept*	• *Change Interface?* • *Remove Concept?*	• *Change System*

Conceptual Structures for Information Interaction CSII (Blandford & Attfield 2010): Analysis of User-System-Misfits

User Research → Model & Prototype Generation → **Evaluation**
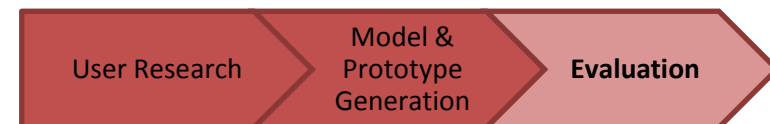
Example: What is a Usability-Finding?

System

User

Findings occur only in one Usability-Test
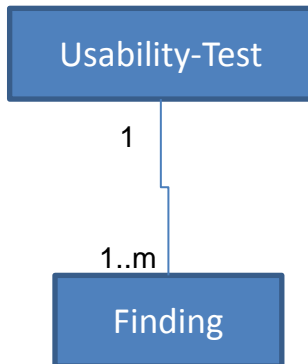
Findings grouped by number of tests they occur in.

Recurring Findings (e.g iterative Usability-Tests)
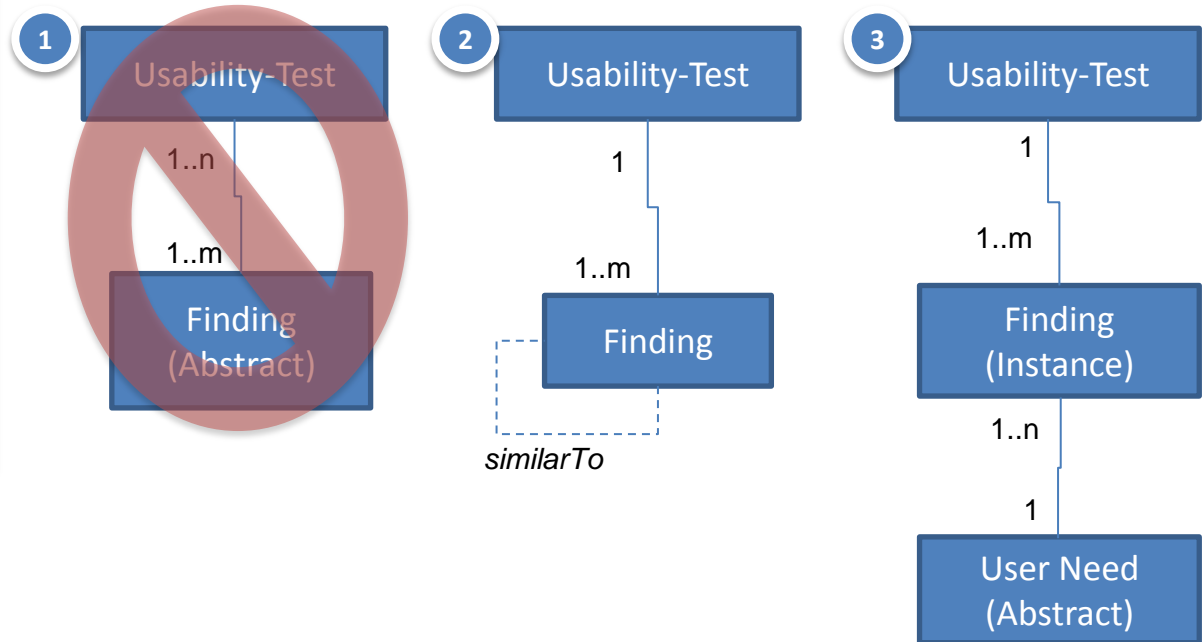
Data Model ←→ Fundamental Domain-Concepts
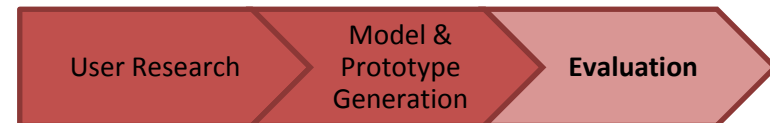
Lessons Learned:

Complex search-system and analytical tasks are not easy to evaluate
- Users with domain knowledge needed
- Interactive User Testing needs training time
- Conceptual Walkthrough appears to be a reasonable compromise

Analyze users comments and questions, try to find underlying needs...

Literature

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