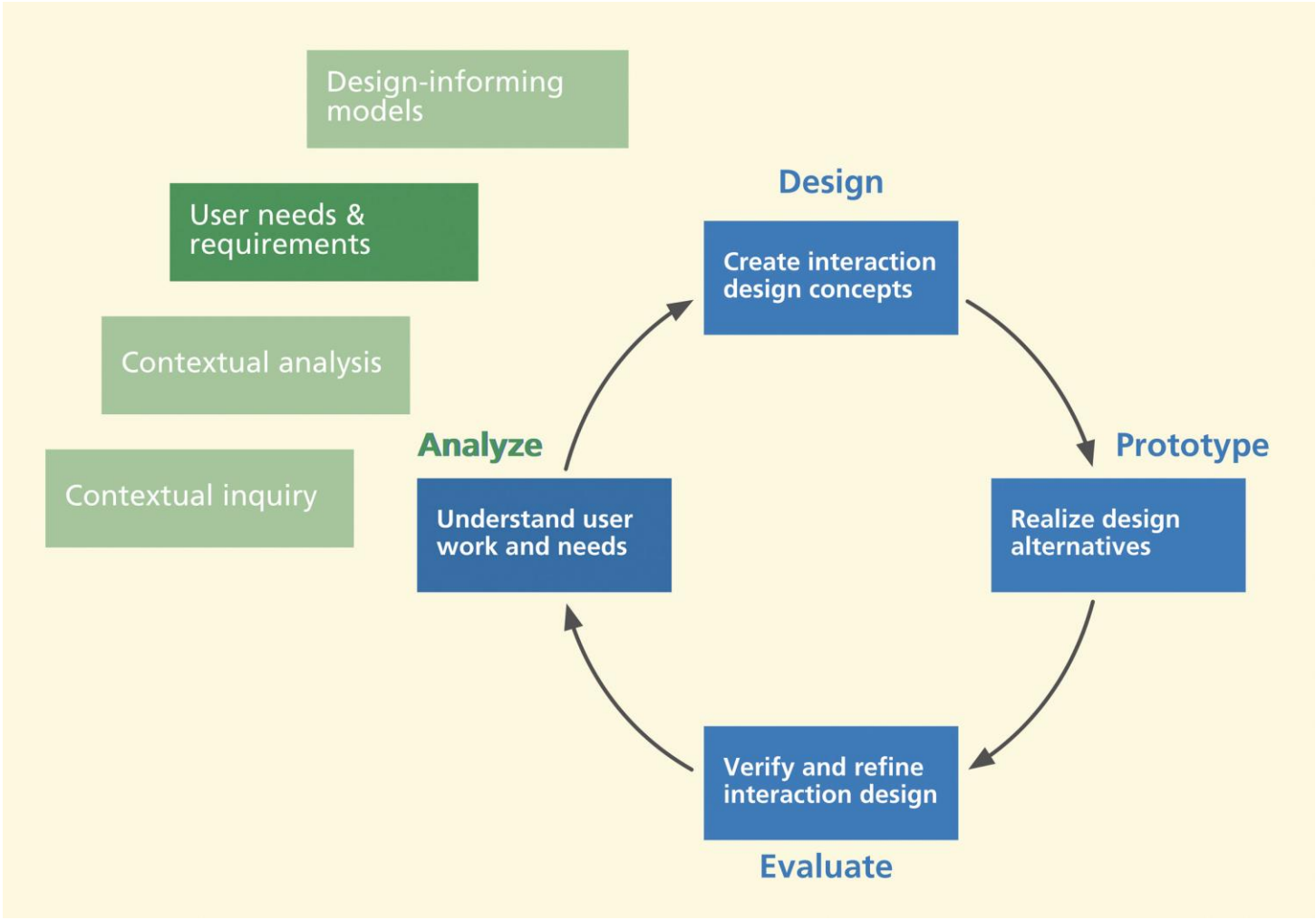
Extracting Interaction Design Requirements

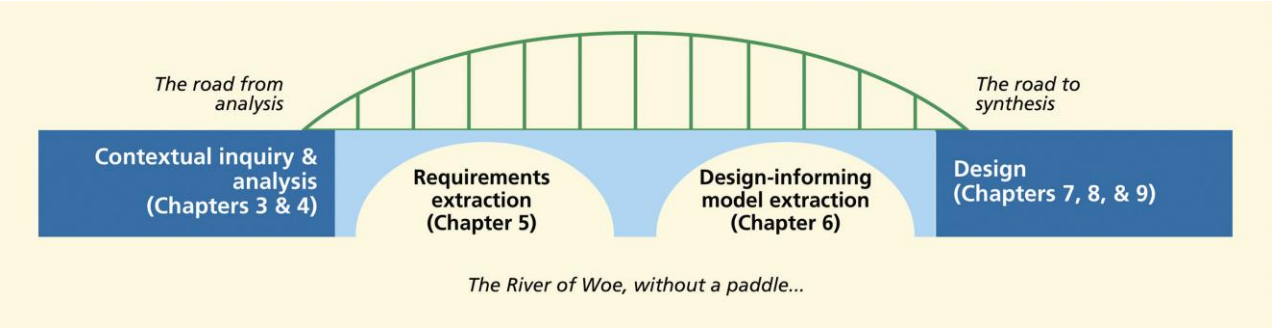
SWEN-444

Selected material from *The UX Book*, Hartson & Pyla


Design-informing models
User needs & requirements
Contextual analysis
Contextual inquiry
Design
Create interaction design concepts
Prototype
Realize design alternatives
Evaluate
Verify and refine interaction design
Analyze
Understand user work and needs

UX Requirements means interaction design requirements - What is required to support user work activity needs

- Work activity notes are not requirements
- Requirements bridge contextual inquiry and analysis to design



- What to look for?
  - Functionality of course
  - Usability goals
  - Emotional impact – “fun”, “boring”, …

UX Requirements Extraction: How?

- Walk the WAAD one note at a time to deduce needs and UX requirements
  - Filter terminology to achieve consistency (e.g. alarm, alert)
  - What user needs are **implied** by the work activity note? Translate each user need into one or more interactive design requirements
- Switch from inductive to deductive reasoning
  - What UX requirement is “deduced” from a work activity note in a WAAD?
  - Consolidate notes to condense ideas
  - Extrapolate notes to broaden

UX Requirements Statements

- Generic structure of requirement statement
  - Major feature or category name
  - Second-level feature or category name
  - UX Requirement statement [WAAD source node ID]
  - Rationale (if useful): Rationale statement
  - Note (optional): Commentary about this requirement

Example 1

- Work activity note: “I am concerned about privacy and security of my transactions”

Security

Privacy of ticket–buyer transactions

Security and privacy of ticket-buyer transactions shall be protected. [C19]

Note: In design, consider timeout feature to clear screen between customers.

Example 2

- Work activity note: “I sometimes want to find events that have to do with my own personal interests”

Transaction flow

Recommendations for buying

Ticket-buyer purchases shall be supported by recommendations for the purchase of related items. [DE2].

Implied system requirement: During a transaction session the Ticket Kiosk System shall keep track of the kinds of choices made by the ticket buyer along with the choices of other ticket buyers who bought this item. [DE2].

Note: Amazon.com is a model for this feature.

Importance of Deduction

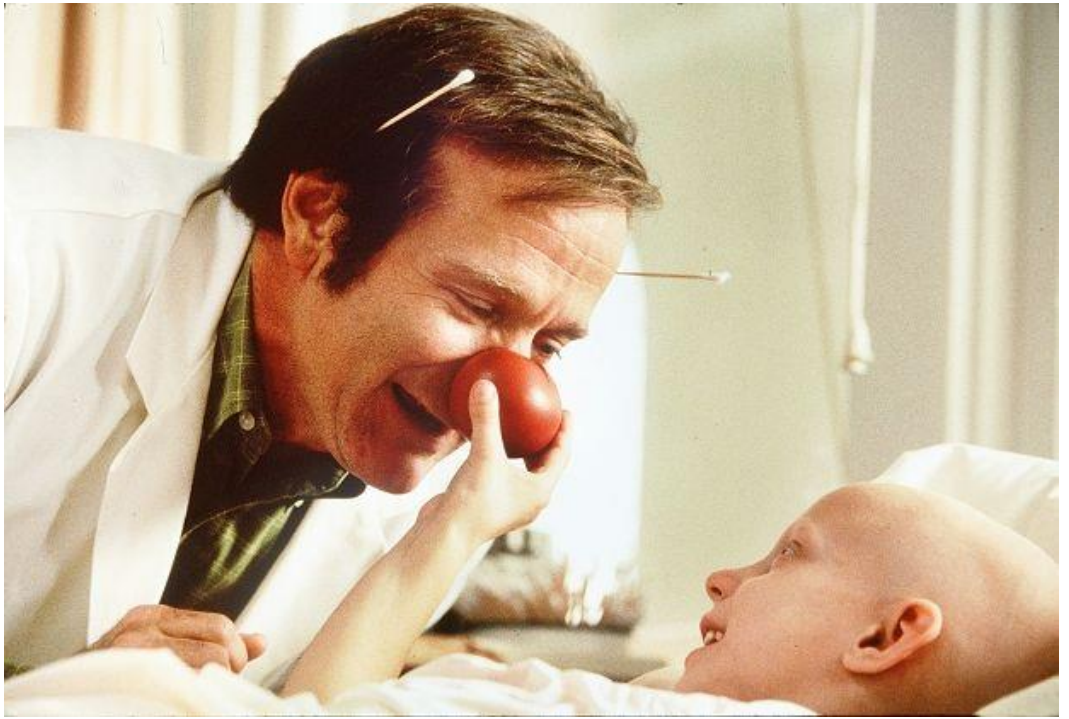
WAN: “I use my calendar to schedule meetings with my co-workers”

UX requirement: “Users shall have support for automated coordination or negotiation of schedules with the calendars of other users”

Need to find balance between extrapolating and “inventing” requirements

Validate

- Review with customers and users
- Prioritize in collaboration with customers and users
- Resolve identified issues



Usability Is …

- **Ease of learning**
  - Faster the second time and so on...
- **Ease of Remembering (memorability)**
  - Remember how and what between and within sessions
- **Productivity / Task Efficiency**
  - Perform tasks quickly and efficiently (for frequent users)
- **Understandability**
  - Of what the system does; important in error/failure situations
- **User satisfaction**
  - Confident of success and satisfaction with the system

“MULES”

Activity: UX Requirements extraction

- Remember that “requirements” are interaction design requirements.
- Do a walkthrough of your work activity affinity diagram.
- Extract interaction design requirements by deducing the requirement(s) implied.
- Write the requirements statements using the generic structure of the requirement statement given in the book/lecture.
- Document relevant quantified usability requirements for learnability, memorability, efficiency, understandability, and satisfaction. Example usability requirements for a Calendar app:
  - Users will have no more than two false attempts in rescheduling appointments
  - Users will learn setting recurrent appointments within 150% of the benchmark times.