IPM 13/14 – T1.3
Iterative HCI Design Process

Licenciatura em Ciência de Computadores

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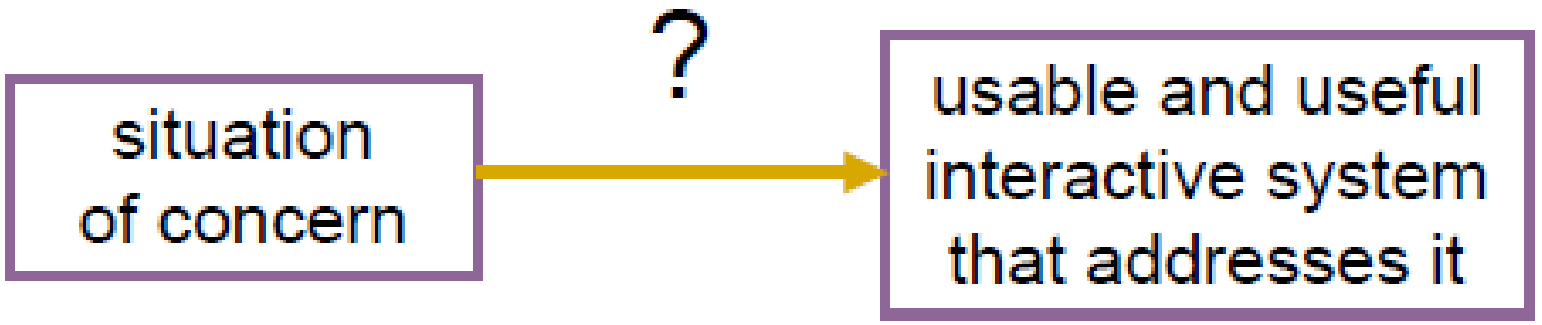
Summary

- Iterative HCI Design
- Design Methods
- Stakeholders

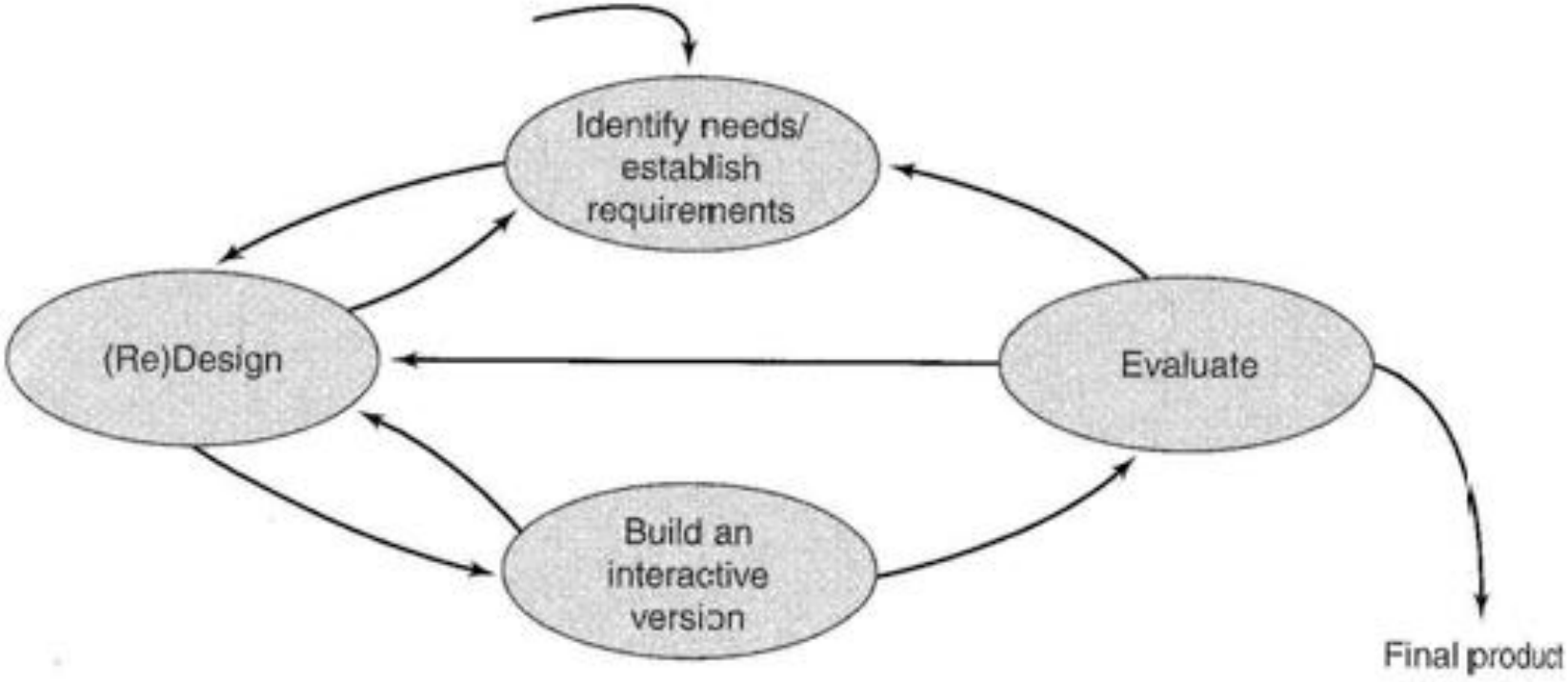
Design Process



Different design process models have been proposed

Who and what are these models for?

Simple interaction design model

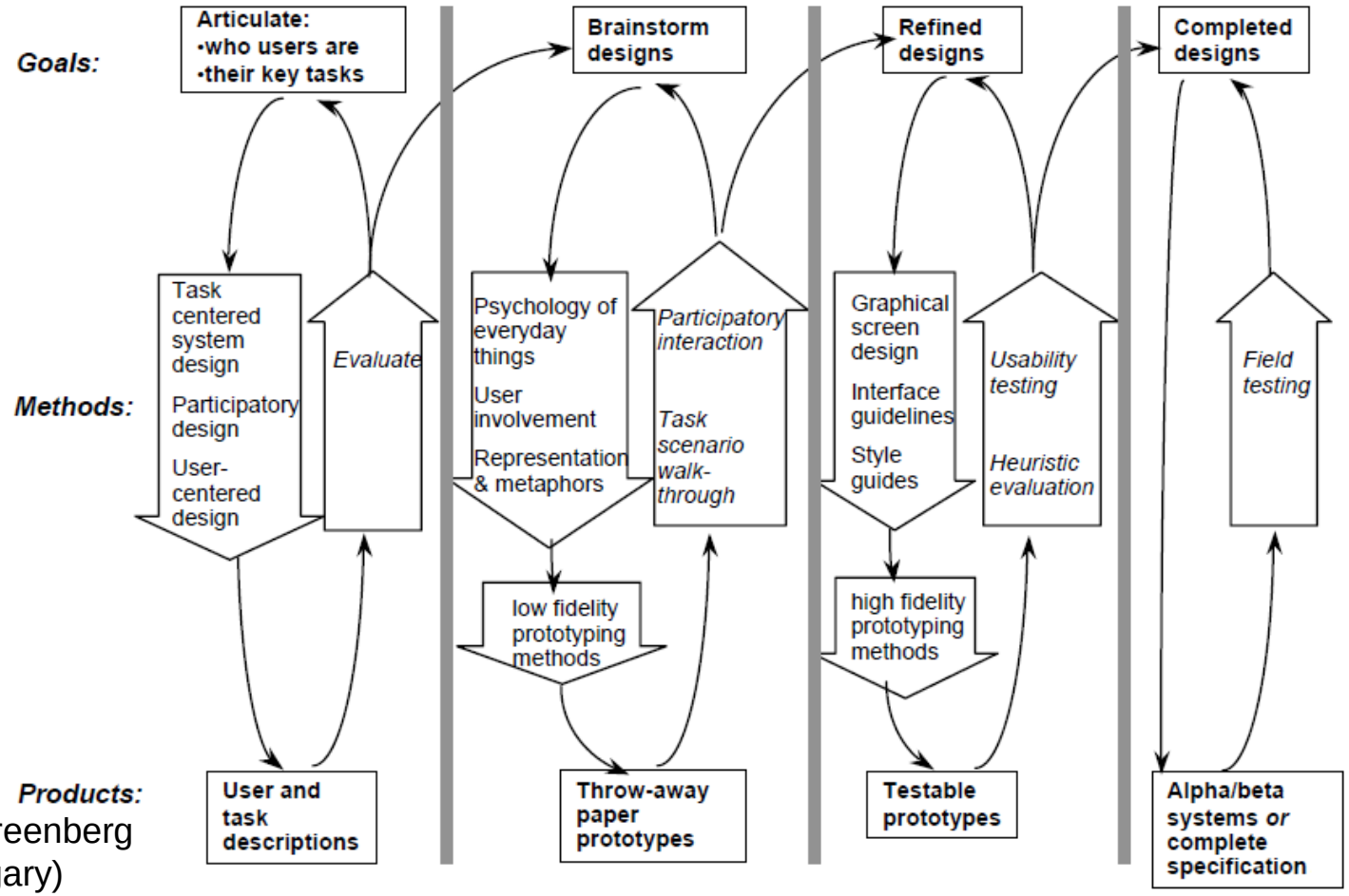


Interaction Design: Beyond Human Computer Interaction
Preece, Rogers & Sharpe, 2002

Four components

1. Identify needs/establish requirements:
   - Core to design process – know thy user!
2. Developing alternative designs
   - Includes both conceptual design and physical design
3. Building interactive versions of the designs
   - Not necessarily software: create prototypes (including simple mock-ups) that can be evaluated by users
4. Evaluating designs
   - Ideally involving users at every stage, feeding evaluations back into the design process
   - Much easier to do if clear usability and user experience goals have been identified up front

Interface Design and Usability Engineering



Saul Greenberg
(U Calgary)

Bowing to reality

- What makes it hard to follow the “ideal” process?
  - Deadlines
  - Budget
  - Access to appropriate users
  - Involvement late in design cycle
  - Valuation of HCI input by other parts of the organization

What do you do then?

Stakeholders

Stakeholder = anyone who has some reason to care about the interface

- Can be lots of them!
- Needs may conflict

- User: convenience, functionality, …
- Boss: price, worker efficiency
- Developer: ease of development - deadlines, budget
- Manufacturer: cost of production
- Advertiser: visibility
- … more

How to figure out who your stakeholders are

- Who will ask for it?
- Who will use it?
- Who will decide whether to use it (or if someone else will use it?)
- Who will pay for it?
- Who has to make (design / build) it ?
- Who has to make a profit from it?
- Who will otherwise make your life miserable if they don't like it?
- ???

roadmap to evaluation types

pre-design

ethnography

interviews, focus groups

questionnaires, surveys

early design

interviews, focus groups, observation

questionnaires, surveys

contextual inquiry & work modeling

task analysis, task / cognitive walkthroughs

participatory design

heuristic evaluation

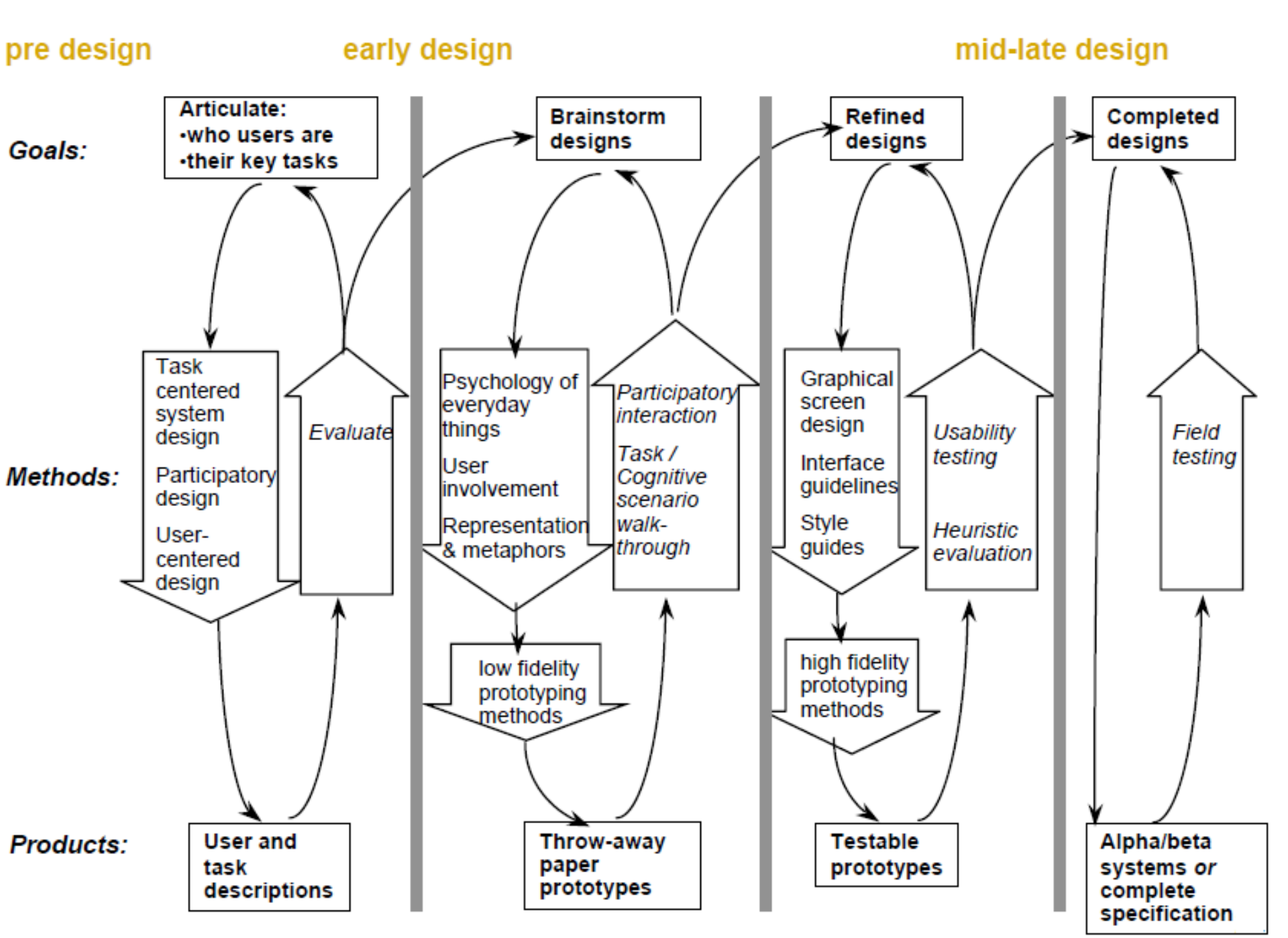
mid-late design

observation, interviews, questionnaires *using advanced prototypes*

heuristic evaluation

formal performance / usability testing

→ *evaluation material (prototype) evolves* →


pre design
early design
mid-late design
Goals:
Articulate:
•who users are
•their key tasks
Brainstorm designs
Refined designs
Completed designs
Methods:
Task centered system design
Participatory design
User-centered design
Evaluate
Psychology of everyday things
User involvement
Representation & metaphors
Participatory interaction
Task / Cognitive scenario walk-through
Graphical screen design
Interface guidelines
Style guides
Usability testing
Heuristic evaluation
Field testing
low fidelity prototyping methods
high fidelity prototyping methods
Products:
User and task descriptions
Throw-away paper prototypes
Testable prototypes
Alpha/beta systems or complete specification

Important things for today

- Design is an iterative process
  - Evaluation is key!
- There are several HCI design models
  - Choose one? Adapt one?
- Identifying stakeholders
  - Vital since they are the ones that **care**

Resources

1. Kellogg S. Booth, Introduction to HCI Methods, University of British Columbia, Canada http://www.ugrad.cs.ubc.ca/~cs344/current-term/