



Design Process and User Research

Lecture 3, Week 2
January 12, 2015
CSC318H1S
Velian Pandeliev

Announcements

Piazza

We will be using the Piazza platform for discussions. All of you should have received an invitation to join.

Tutorial rooms

Tutorial room assignments will appear on Blackboard later today. Please go to your assigned tutorial room on Friday.

Assignment 1 is due Wednesday at 6 pm.

Challenges

Challenges in ID

- **Communication**
to group members, users, the general public
- **Design**
follow a process, create effective and delightful interfaces
- **Research**
ascertain user needs and evaluate your designs

Communication Challenges

Communication Challenges

Communicating your ideas varies by:

- **Medium** (oral, written, visual, Web-based)
- **Format** (report, pitch, discussion)
- **Tone** (formal, informal)
- **Length**
 - Oral: elevator, golf course, airplane
 - Written: tagline, sentence, paragraph, story

Group Work Discussion

It is important to be able to communicate effectively within your project groups.

Exercise: recall a group project at school or work.

What made it work?

What problems did the group encounter?

Group Work Problems

Issue	Occurrence
Difficulty contacting group members	30%
Having to take on leadership role	30%
Failure to do what was promised	25%
Insufficient brainstorming	25%
Poor communication	25%
Difficulty accepting feedback from others	25%
Failure to divide tasks fairly	20%

Group Work Tips

- Identify contact details and schedules (PI)
- Plan and run regular group meetings
- Keep meetings brief
- Assign participants roles for meeting: scribe, facilitator, timer
- Identify clear purpose for each meeting
- Record meeting details: follow-ups, responsibilities, assignments, notes
- Damage control & move on

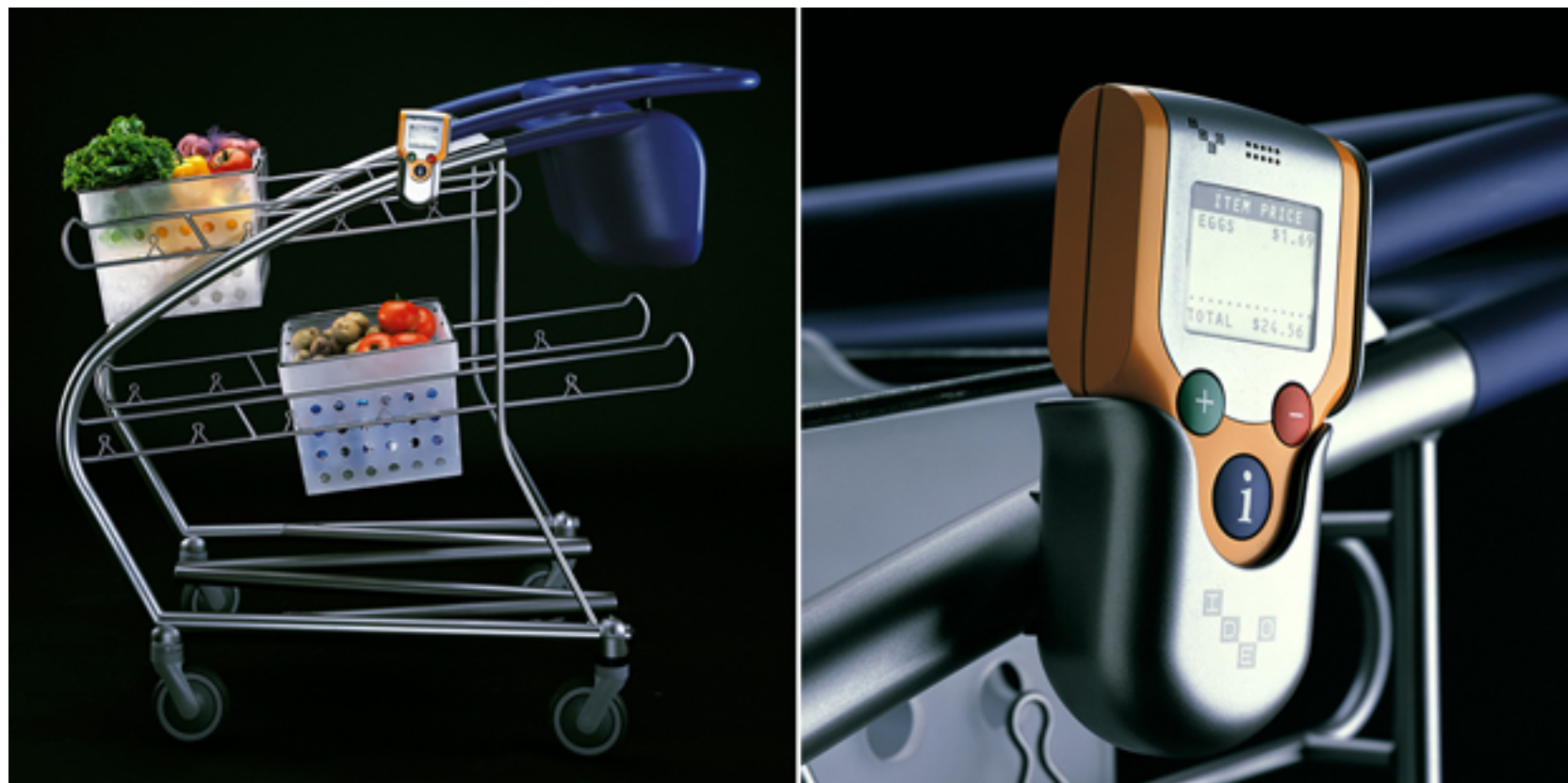
Design Challenges and the User-Centered Design Process

IDEO Design Process

IDEO is a leading industrial design firm. In 1999 they redesigned the shopping cart for ABC's Nightline program.

To-do: Watch the video.

<https://www.youtube.com/watch?v=taJOV-YCiel>



IDEO Design Process

Some inspirational thoughts:

- The only thing not designed is nature.
- Fail often in order to succeed sooner.
- Stay focused.
- One conversation at a time.
- Encourage wild ideas.
- Defer judgment.
- Enlightened trial and error over lone genius.

Lifecycle Models

Lifecycle models break down complex design tasks into manageable stages.

In software engineering:

waterfall, spiral, incremental/iterative, agile

In HCI:

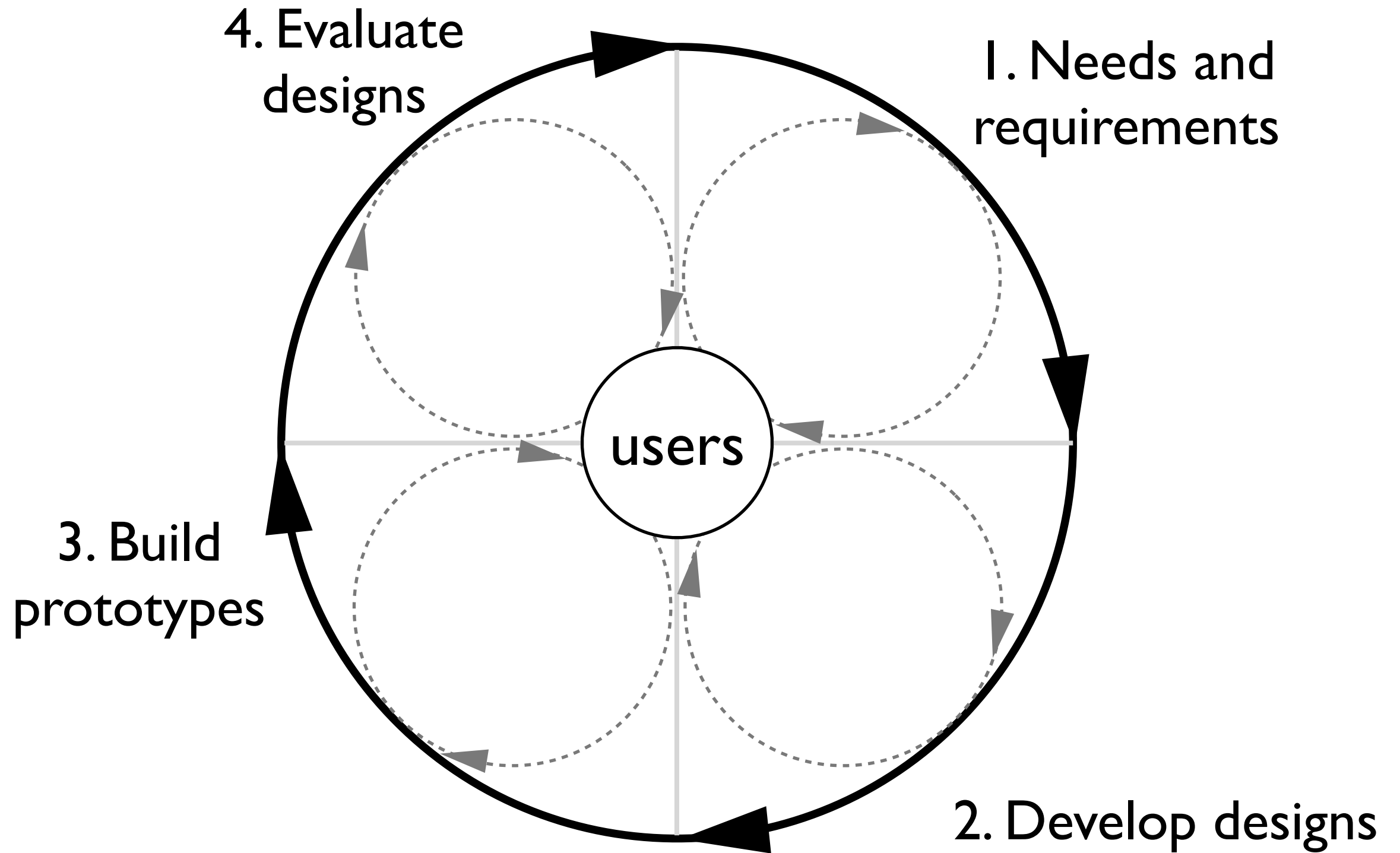
Star (evaluation at the centre)

Usability engineering (user feedback after build)

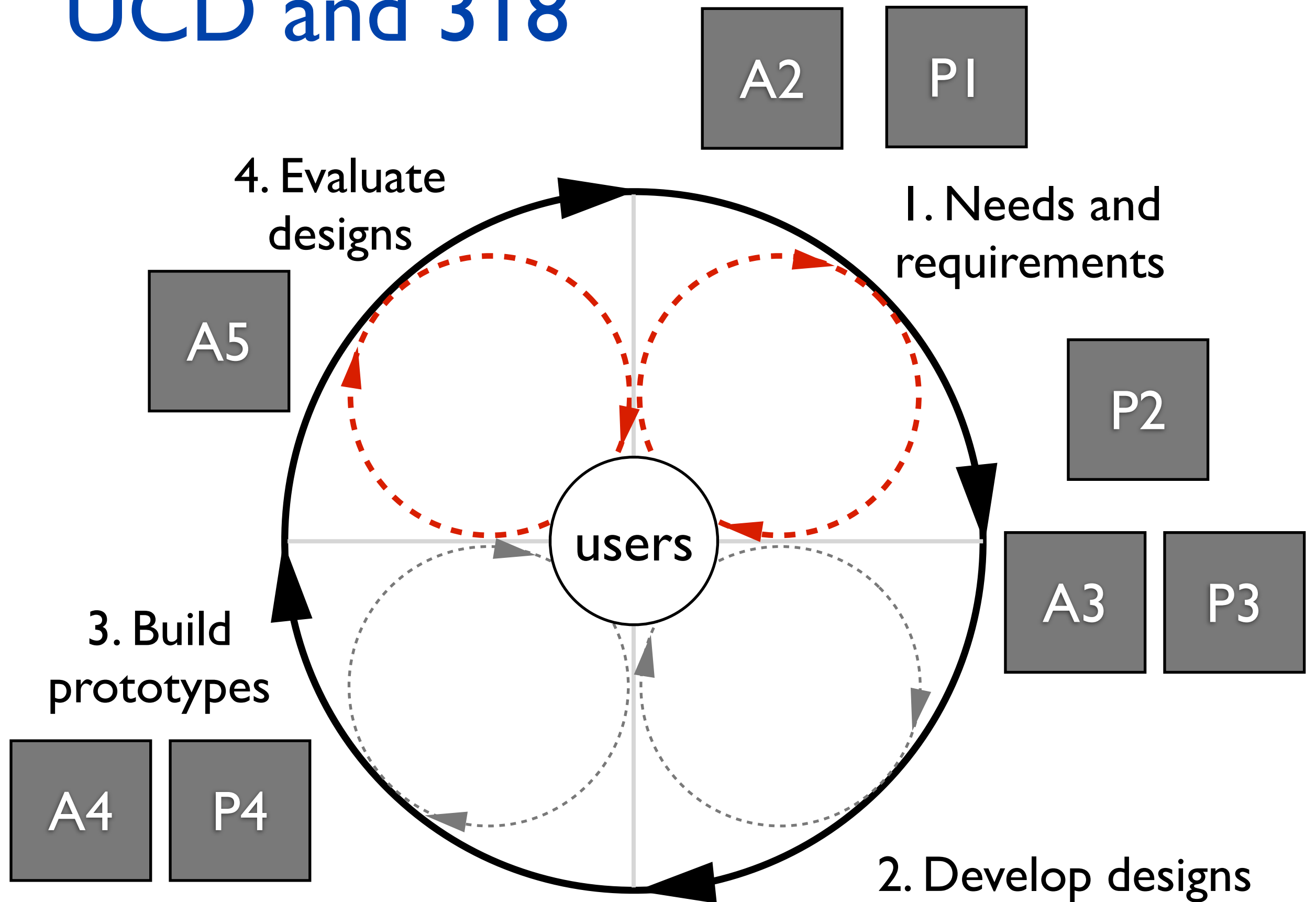
User-centered design (user feedback throughout)

Participatory design (users are on the design team)


UCD Process



UCD and 3I8



UCD Methods



Stage	Methods
Needs	user profiles, needs, scenarios, task analysis, environment, technology, work practices, business goals, competition, personas
Design	conceptual model, proposed scenarios, interaction process, interface, prototype, product
Build	paper prototype, prototype, interface, alpha/beta, product
Evaluate	focus groups, usability tests, user surveys, experiments, heuristic evaluations, user observations

UCD Models

User-centered design involves:

- multidisciplinary teamwork
- iterative work practices
- methods of acquiring user input
- ways of converting user input to design

Users and Stakeholders

Users: the individuals who will be interacting with your product.

Stakeholders: *"people or organizations who will be affected by the system and who have a direct or indirect influence on system requirements."*

Kotonya & Sommerville 1998

Example: Online movie ticket booking system

Users: moviegoers.

Stakeholders: moviegoers, ushers, cinemas, distributors, technical staff

Users and User Groups

All users are stakeholders.

There may be different user groups with different priorities, requirements, etc.

User groups are abstract descriptions of use case actors. Individual users may belong to more than one user group, and they may change user groups depending on their roles.

User groups may be overlapping.

Identifying Users and Stakeholders

Be **specific**:

1) Isolated elderly (>65 years old) individuals living in long-term care facilities.

2) Collocated caregivers and family members of 1).

3) Non-collocated family members of 1).

There may be **multiple user groups**.

Do their needs **overlap**? Are they vastly different? Are they using the **same interface**?

E.g. elderly individuals need a simple communication interface with a reasonable learning curve while their younger family members should have more customization options.

Avoid big **compromises** to address the needs of many different users: specific is better than general!

Questions?

This lecture is based on slides and content by:
ILONA POSNER

Materials from:

Interaction Design: Beyond Human-Computer Interaction. Rogers, Sharp and Preece. 2011

References:

Requirements Engineering. Kotonya & Sommerville, 1998

Emotional Design. Don Norman, 2005