Interaction Design

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The Design Lab

Human-Computer Interaction Design

Human-**Computer** Interaction Design

Human-Computer **Interaction** Design

Human-Computer Interaction **Design**

Good Design

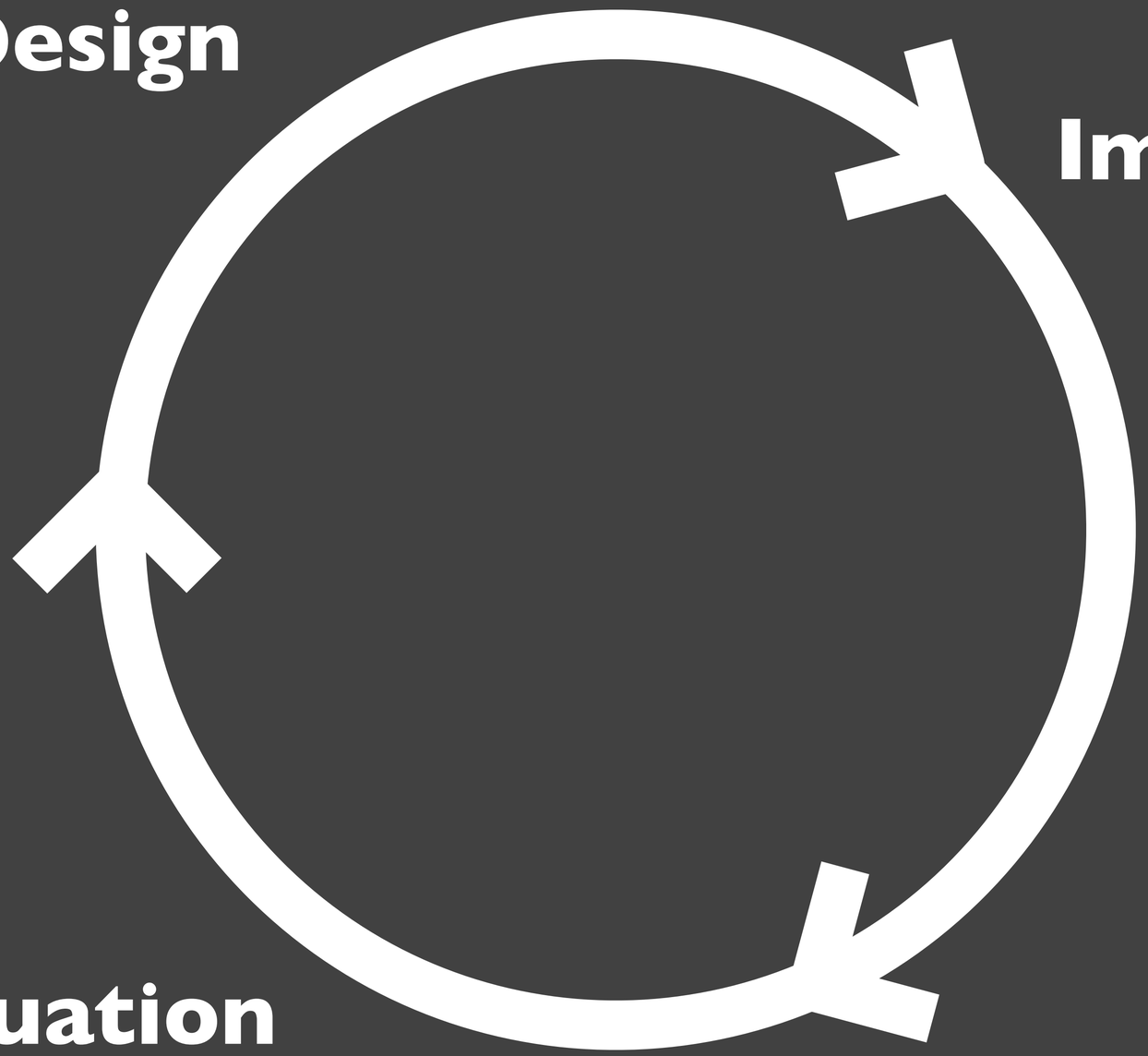
Bad Design costs lives, money, & time

300,000,000 Americans
x 10 minutes per day per American

3,000,000,000 minutes per day

= 40,000,000 Intro to HCI lectures

Design



Implementation

Evaluation

Avoiding local optima

Quarter-long design project

Teams of three
Shared weekly in studio

FINAL PRESENTATIONS
FRIDAY OF WEEK 10

This class

Tuesdays
Design Concepts

Thursdays
Lab
bring a laptop!

Fridays
Studio

Weekly Studio Ritual

- Projects due Thursdays, 11.59pm
- Participate in studio & check out your peers' work
- Reflect on & self-assess your work

Prereqs

- CSE8a/11 required, CSE8b/11 strongly recommended
- Cogs1, Dsgn1, Cogs187a

Take this class if you seek...

Consider dropping the course

- If you don't have time to invest in a projects-based course.
  - It's not like other courses that you can do in spurts.
    Projects are time consuming.
    You have to work consistently throughout the quarter.

- If you don't want to participate in teams.
  - Working in a team and coordinating team activities is challenging. Teams can be frustrating; some don't contribute their fair share. Joint presentations and papers are challenging.

- If it worries you that your final grade will be significantly influenced by what others on your teams do or don't do.

5 Units

Letter Grade only

Visit office hours!
Mine are…
Tuesdays 11.00-12.00

Be mindful during class time

(aka no Facebook during class)

Studio Leaders

Piazza, not email

The Web Site

has all the information

it's where to send questions

http://ixd.ucsd.edu

Questions?

First project:

Needfinding

Needs for...

INTERVIEWS

Follow up

- Adjust your questions to their previous answers
- Ask questions in language they use / understand
- Pick up on and ask for examples
- Be flexible

Scheduled Interviews

Facilitate Depth

Plans are useless

Planning is invaluable

Create a "Field Guide" (Steve Portigal's insights)

- Introduction and participant background
- Main body
- Projection/dream questions
- Wrap Up

Do a Trial Run first
(gives you practice, catches bugs)

where to interview?

should you record audio or video?

Audio/Video: Drawbacks

- Time-consuming to review / edit
- Can change participants' responses
- Requires permission

Audio/video: Benefits

- A robust record
- Highlights are GREAT for communication
- Helps you focus on interviewing

Photos Are Powerful Reminders

What are the gems?

- You've uncovered a surprise or found what is missing
- You can explain why people do unusual things
- You want to tell others about what you have learned

Share with your team

- Stories
- Photos
- Sketches
- Quotes

Save Records - It’ll help later

- Keep photos, notes, and artifacts
- Helps tie all design to use, rather than debating things on an abstract plane

DISTILLING YOUR INSIGHTS

Your goal:

a point of view

Flare, then focus.

Observation alone does not guarantee a great design.

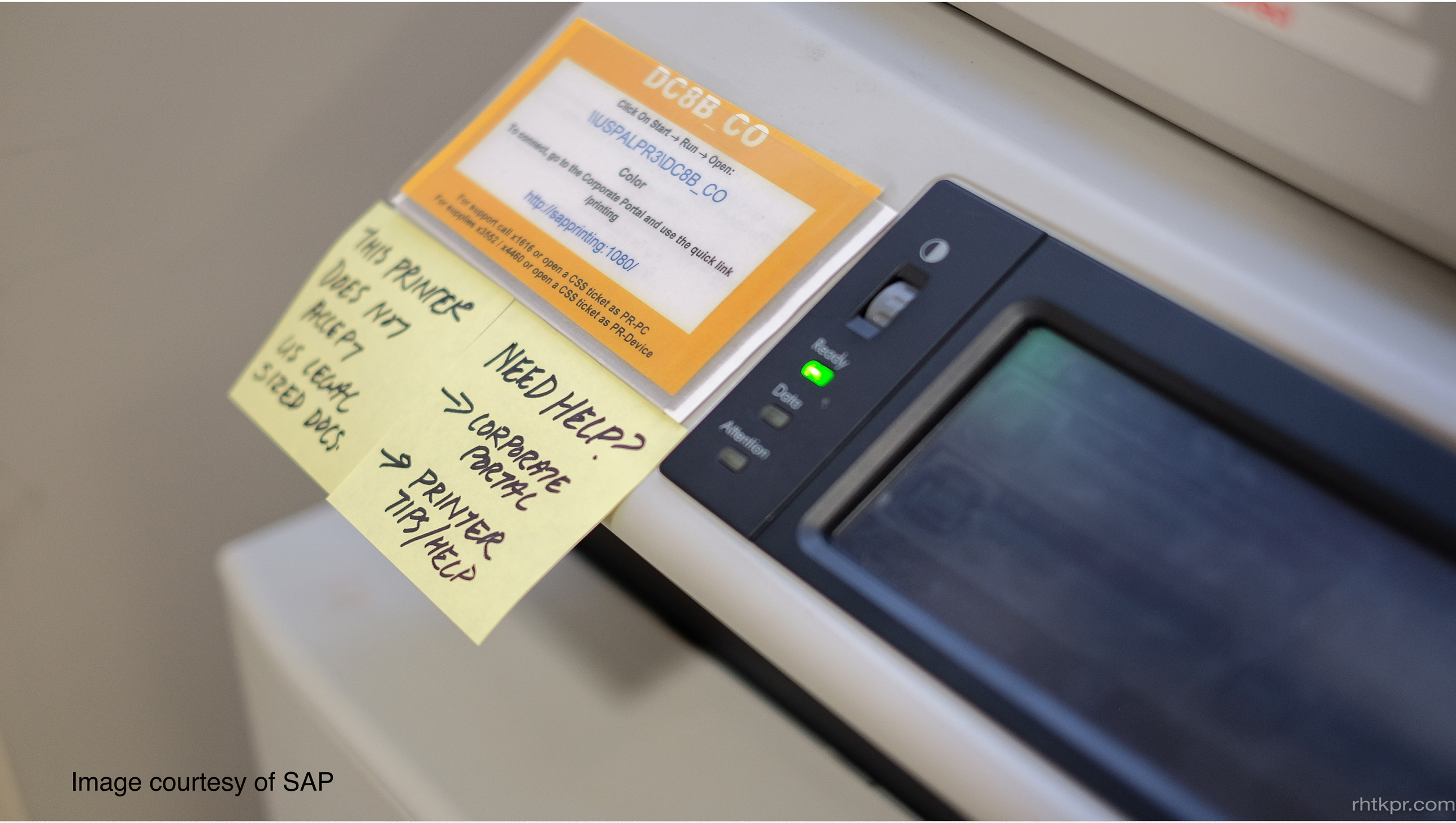
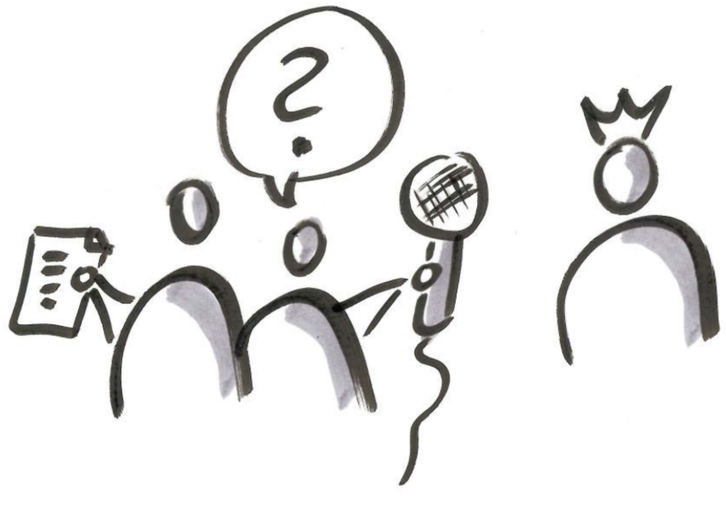


Image courtesy of SAP

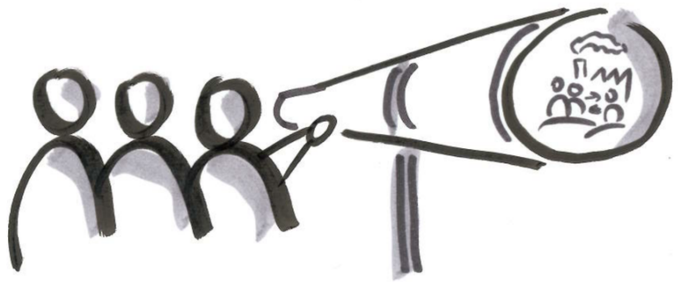
rhtkpr.com

Were the users just “dumb”?

Try & do



Ask & listen



Watch & Observe

Picture courtesy of SAP

Need finding through Facebook

- Scenario: How might we help people get to and around campus without driving solo?

- In Facebook, use key terms to search for groups to fit your community (2 mins)

- Turn to your partner to discuss the groups you found (4 mins)

Collecting Needfinding Data on Facebook

- From the previous scenario, think of some Facebook status updates you might post to gather information about user needs

- Share your status ideas with your partner. What questions did you ask? How did they differ? (4 mins)

- BONUS: if you're curious, choose a time you think will get the best responses to post the status and see what you get

The outcome of activity analysis

- What are the steps?
- What are the artifacts?
- What are the goals?
  (how you'll measure success)
- What are the pain points?

Example: steps

- Unlock driver's door
- Take a seat behind the wheel
- Insert key in ignition switch
- Turn key fully clockwise
- When engine starts, release the key
- from http://www.nwlink.com/~donclark/hrd/isd/cognitive-task-analysis.html

Example: artifacts

- key
- car
  - door-lock
  - ignition switch

Example: goals

- (your point of view comes in here)
- Turn on the car?
- Pick up bread?
- Make a meal?
- Have a satisfying evening?

Example: pain points

- In the narrow version: necessary to put the key in? It's already in the car. Why not just drive off?
- In the slightly broader framing, the pain point could be needing a car to get bread. (Alternatively, bread could be delivered, or you could walk/bike/...)

Actvitity Analysis is easiest for...

- Workflows like doing taxes or travel planning
- Repeated activities, like scheduling (why does it take 17 emails?)

Challenge: we don't design tasks

- Activities and objects don't map 1:1 (a smartphone is not just one "activity")
- We design artifacts. So a forum has multiple tasks.

Have multiple related activities

- The same person uses the same design to achieve slightly different things
- Also, different people may do things slightly differently
- Because they have slightly different goals, expertise, ...
- For empathy, keep ‘em human