

Participatory Design

Web Architecture, INFO 290

October 2010

School of Information, UC Berkeley

Rachel Hollowgrass

User Experience Architect for Student Systems

University of California, Berkeley

Overview

- ▶ Once upon a time in 2002
- ▶ Review of the User-Centered Design process (UCD)
- ▶ Case study: Student portal
- ▶ Participatory design exercise
- ▶ Questions

Once upon a time in 2002

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Game Neverending

This online, multi-player game was launched in 2002:

- ▶ Based on instant messaging and object manipulation
- ▶ No way to win or measure success
- ▶ Community and communication between players was encouraged


GAME ∞ NEVERENDING

Hi, bees. Ready to go?

▶ **PLAY THE GAME**
1 players online ([who's on?](#))

- [Edit account/character details](#)
- [Discuss this](#)
- [Instructions](#)
- [FAQs](#)
- [Make a suggestion](#)
- [High scores](#)

We would love it so much if you could take **this very brief survey**.

Reward for completed surveys is 5 sheets of blue paper . Thanks!

[Logout completely](#) (to login another character)

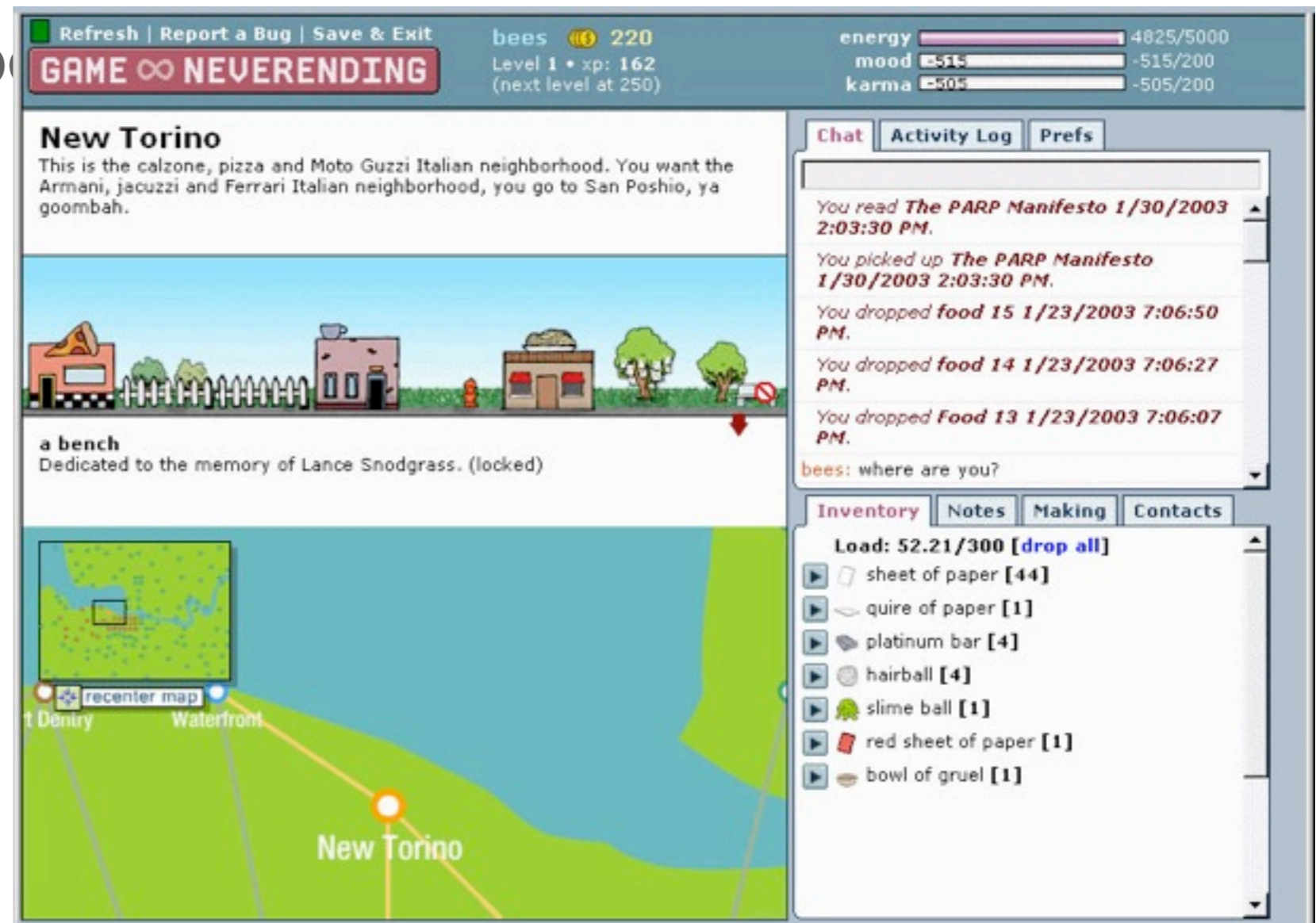
Game Neverending

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Virtual objects to be manipulated and chatted about included:

- ▶ Sheets of paper
- ▶ Bowls of gruel
- ▶ Slime balls



Game Neverending

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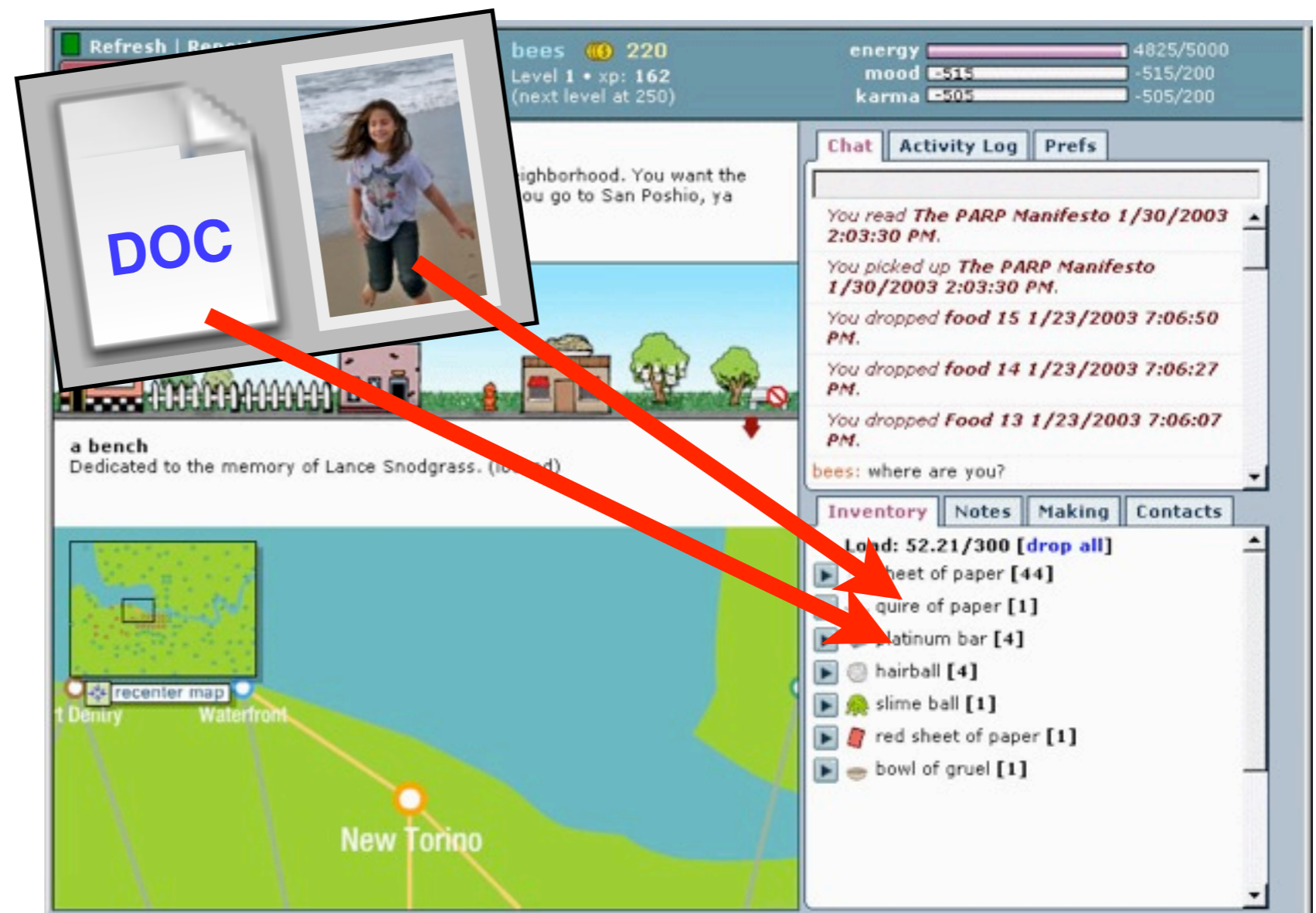
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A team member had an idea.

What if users could add their own files as objects? Users could share and chat about:

- ▶ Word docs
- ▶ Photographs

The team implemented this feature.



Game Neverending

Users really liked the photo-sharing feature. They responded so strongly that the team decided to make that feature more prominent. Eventually, the interface was radically changed and all other aspects of Game Neverending were removed. The site was renamed and went on to become a very popular online tool named ...

**Yay team!
You listened!
You are heroes!**

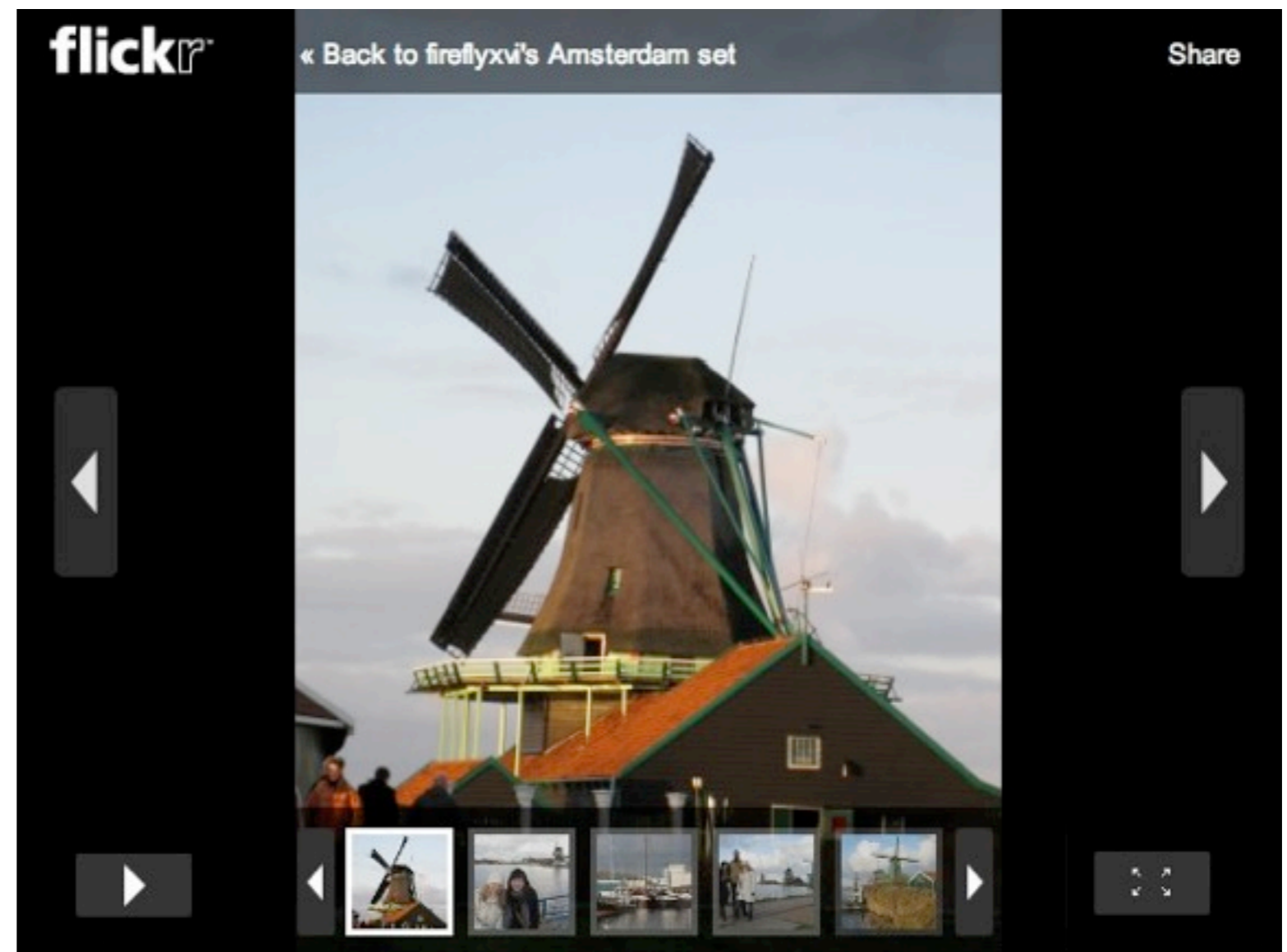


Game Neverending

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... Flickr!



Sources: http://en.wikipedia.org/wiki/Game_Neverending, <http://www.gnespy.com/museum/>

UCD process: Review

Six phases

- ▶ User Research
- ▶ Modeling
- ▶ Requirements Definition
- ▶ Delivery Method Definition
- ▶ UI Design
- ▶ Development support

This is a linear process.
It begins before actual product
development. Notice how much
happens before UI design.

UCD process: User Research

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Purpose: Learn about users'

- ▶ Goals
- ▶ Behaviors
- ▶ Attitudes

UCD process: User Research

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Who can perform user research?

- ▶ Programmers
- ▶ Business analysts
- ▶ Graphic designers
- ▶ User experience designers
- ▶ Others

Time with users

- ▶ Benefits team members
- ▶ Makes a better product

UCD process: User Research

Limitations of surveys and interviews

Users are

- ▶ Good at recalling their past behavior.
- ▶ Bad at predicting their future behavior.
- ▶ Bad at focusing on things they don't really care about.

Adapted from Todd Wilkins / Adaptive Path

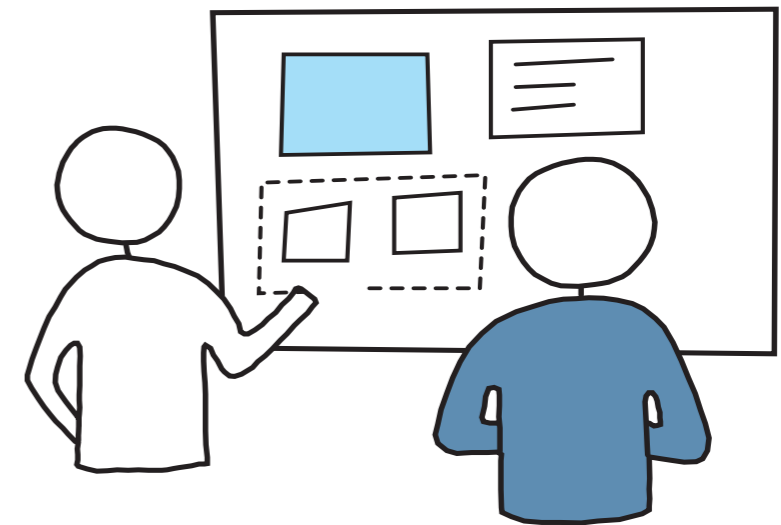
Case Study: Student Portal

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Participatory design:

- ▶ An approach to design that attempts to actively involve all stakeholders (e.g. employees, partners, customers, citizens, end users) in the design process to help ensure that the product designed **meets their needs** and is **usable***.
- ▶ Commonly, user experience team members facilitate this process.



* Source: Wikipedia

Case Study: Student Portal

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**How many
campus
tools do
you use?**



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**How
did
we
get
here?**



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How did we get here?

- ▶ Lack of available integrated solutions
- ▶ Many projects focus on individual domains, e.g. degree audit, registration, course sites
- ▶ Rapidly changing technology at all levels
- ▶ Academic environment encourages independent investigation
- ▶ Independent development groups



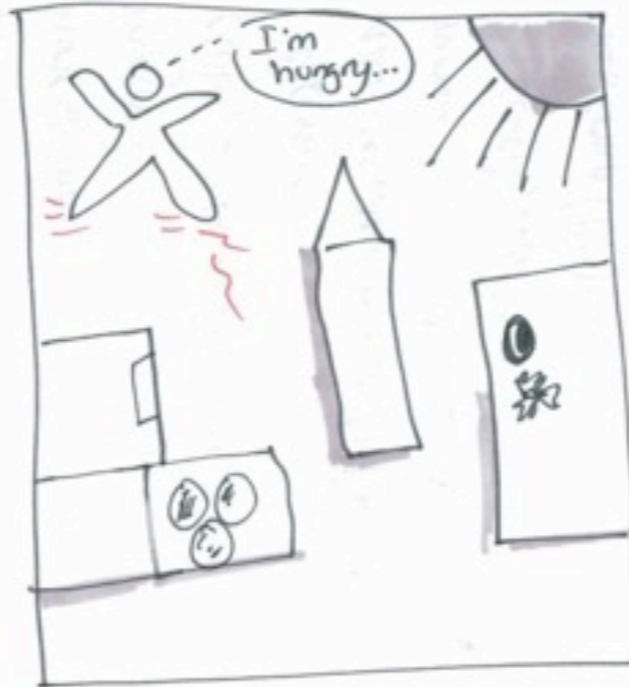
Case Study: Student Portal



Summer 2009: **Sketching the Student Experience**

- ▶ Two five-hour workshops
- ▶ Students, faculty and staff worked in teams as peers
- ▶ Emerging issues included
 - ▶ Study space at night
 - ▶ Laundry
 - ▶ Campus safety

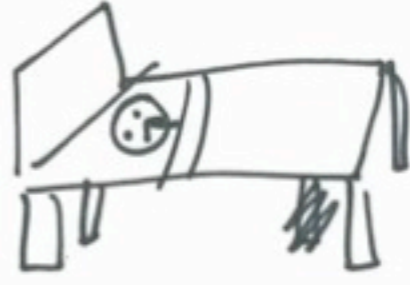






MON	✓	
TUES	✓	
WED		
THUR	✓	✓
FRI		
:		

Four empty rectangular boxes are drawn to the right of the calendar grid, with faint lines suggesting they are connected to the calendar's structure.



**Can
we
do
this?**



“App store” model?

Customize

Schedule X

Next class:
In **10 minutes** at 1pm:
BIO 256
Barrows 60

Task List X

Upcoming tasks

- Final exam for "Poly..."
- Paper for "History of ..."
- Submit "Halls of Ferric..."
- Complete "Steno-lith..."

Financials X

Next disbursement on
Wed October 26th

Enrollment X

Early enrollment begins in

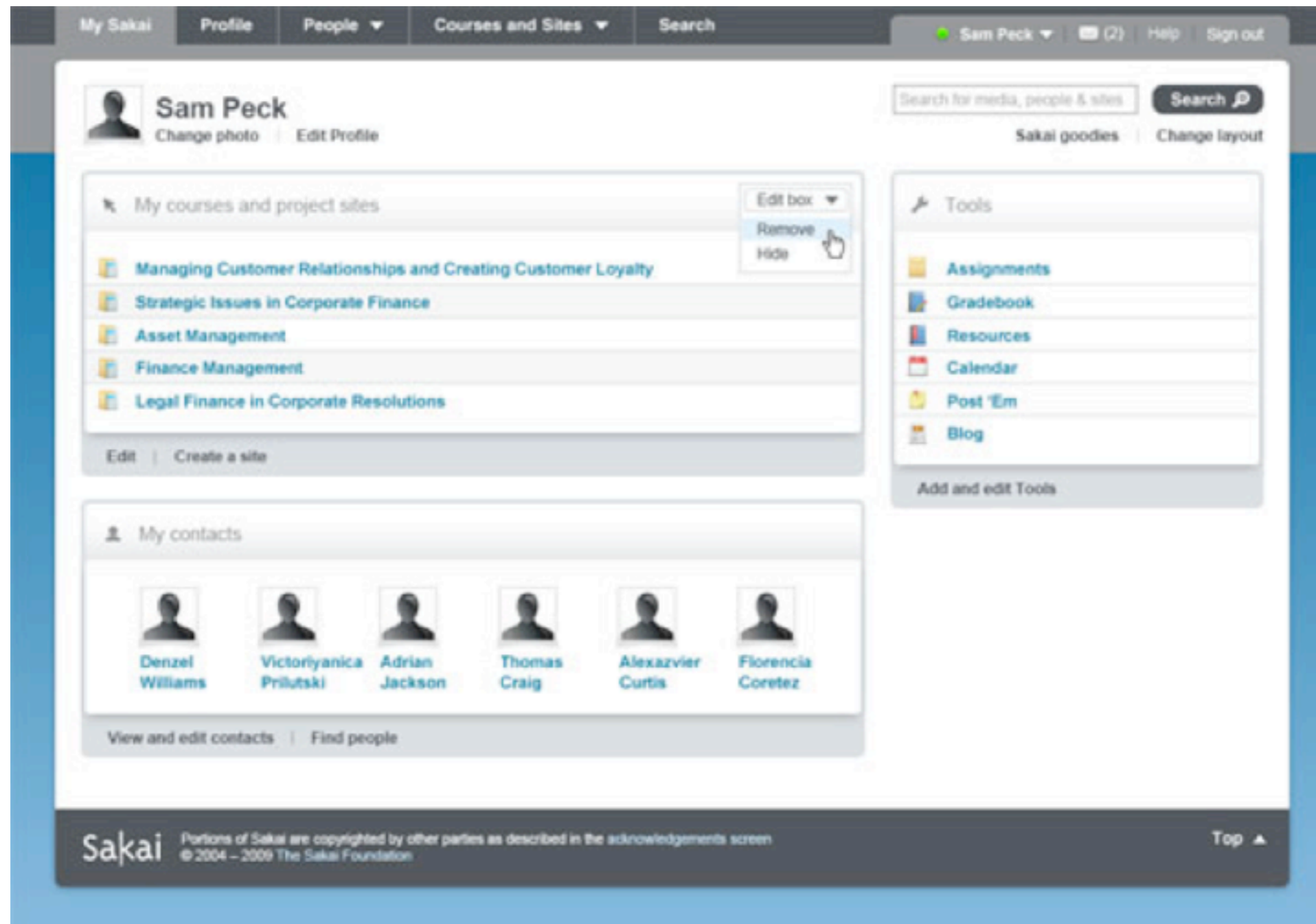
▶ **Two weeks**

Program Audit X

Projected graduation in

- 3 years,
- 2 months
- 17 days

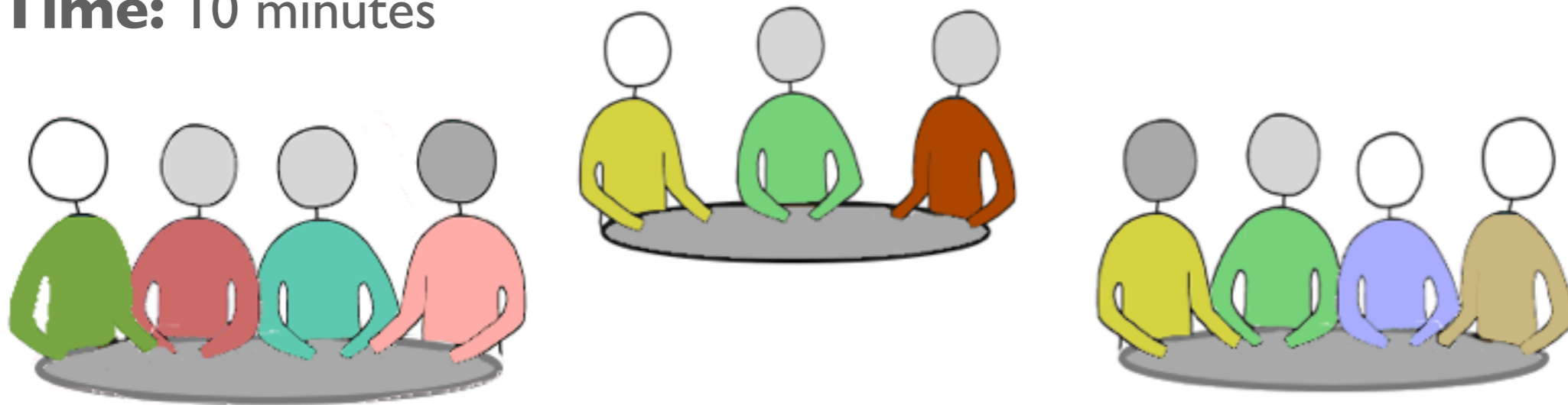
The student portal project is in development. It is based on the Sakai 3 platform, the successor to bSpace's platform, Sakai 2. Sakai 3, also in development, promises widgets, groups and networking features similar to Google Gadgets and FaceBook.



Participatory design exercise

Make teams and brainstorm

- ▶ Make teams of 3 - 4 people each.
- ▶ Aim for a mix of skills.
- ▶ **Task:** Imagine ways to improve the Cal online student experience such as new smart phone apps. Choose one **very simple** idea to focus on.
- ▶ **Time:** 10 minutes



Participatory design exercise

Formulate research questions and topics

- ▶ Brainstorm about questions and topics for your potential users.
- ▶ Examples:
 - ▶ Do you ever do [X]?
 - ▶ Tell me how you do this.
 - ▶ What's satisfying? Frustrating?
- ▶ Cull down the list to about 5 questions.
- ▶ Make a copy of the list for each team member.



Participatory design exercise

Interviewing skills

- ▶ Engender trust
 - ▶ Minimize distractions such as cell phones
 - ▶ Make eye contact
- ▶ Active listening by paraphrasing:
 - ▶ “I understand — you want to pay your fees in cash.”
- ▶ Open questions — let user lead
- ▶ Focus on user's goals
- ▶ Learn the user's language
- ▶ Details are crucial



Participatory design exercise

Research via interviewing

- ▶ Tools
 - ▶ List of questions and topics
 - ▶ Paper and pen, or computer
- ▶ Each person: Find someone who is not on your team.
- ▶ Choose roles: interviewer and interviewee
- ▶ Conduct interview
- ▶ Take notes
- ▶ **Time:** 5 minutes



Participatory design exercise

Switch: Interviewers becomes interviewees.

- ▶ Engender trust
 - ▶ Minimize distractions such as cell phones
 - ▶ Make eye contact
- ▶ Active listening by paraphrasing:
- ▶ Open questions — let user lead
- ▶ Focus on user's goals
- ▶ Learn the user's language
- ▶ Details are crucial
- ▶ **Time:** 5 minutes



Participatory design exercise

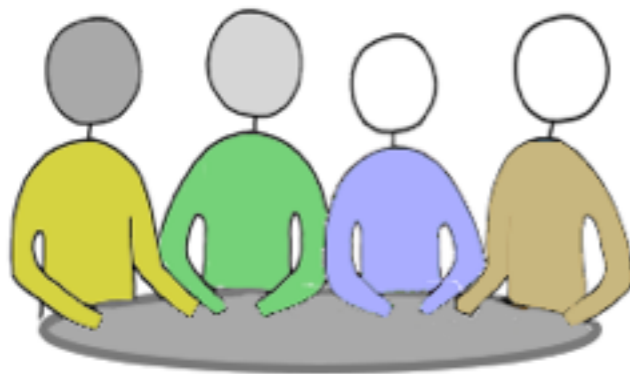
Glean facts

- ▶ Tools:
 - ▶ Your notes
 - ▶ Pen and Post-Its
- ▶ Find a place to work on your own.
- ▶ Referring to your notes, find the essential data in your interviewee's responses.
- ▶ Transfer them as brief phrases on Post-Its
- ▶ Examples:
 - ▶ “Parents sign checks.”
 - ▶ “Wants to pay fees in cash.”
- ▶ **Time:** 5 minutes



Participatory design exercise

Regroup into original teams



- ▶ Review research data.
- ▶ Cluster like items.
- ▶ Put on scales if relevant.
- ▶ Some items will be outliers.
- ▶ **Time:** 15 minutes

outliers



Participatory design exercise

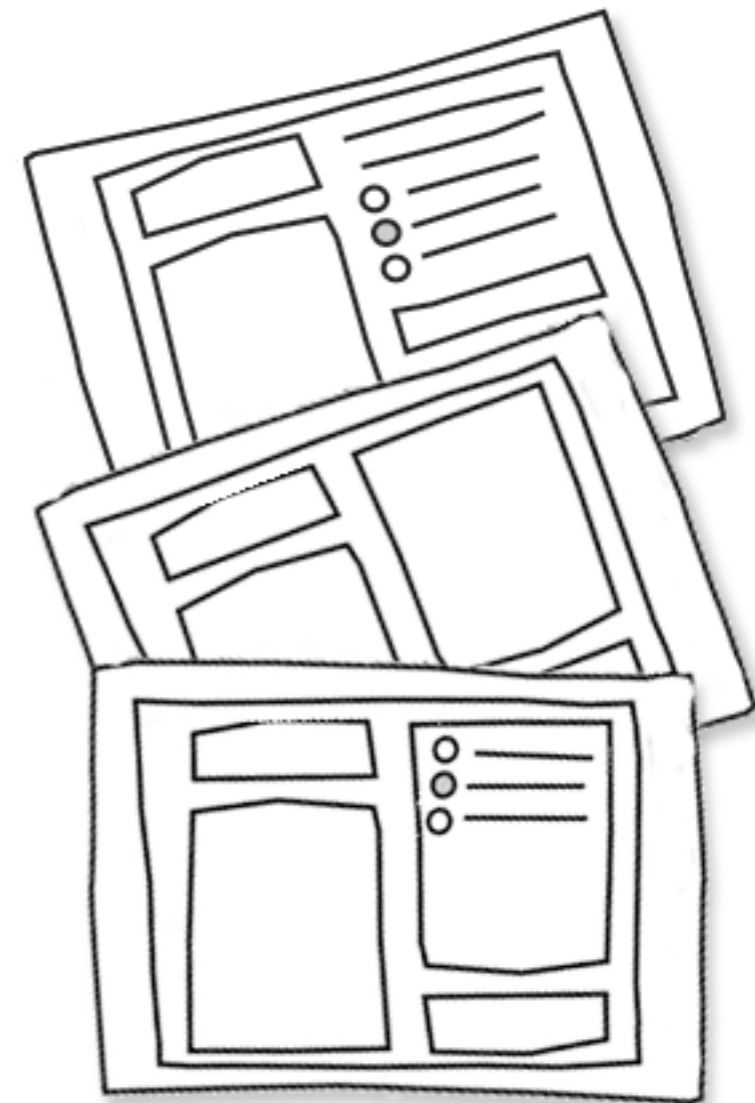
Everyone

- ▶ Identify the most common pattern(s).
 - ▶ This is the “happy path.”
- ▶ The primary UI elements should clearly support the happy path. Less common but significant patterns can be supported by secondary UI.
- ▶ The least common paths are edge cases. If most edge cases are not discarded, a bloated application will result.

Participatory design exercise

Sketch Ideas

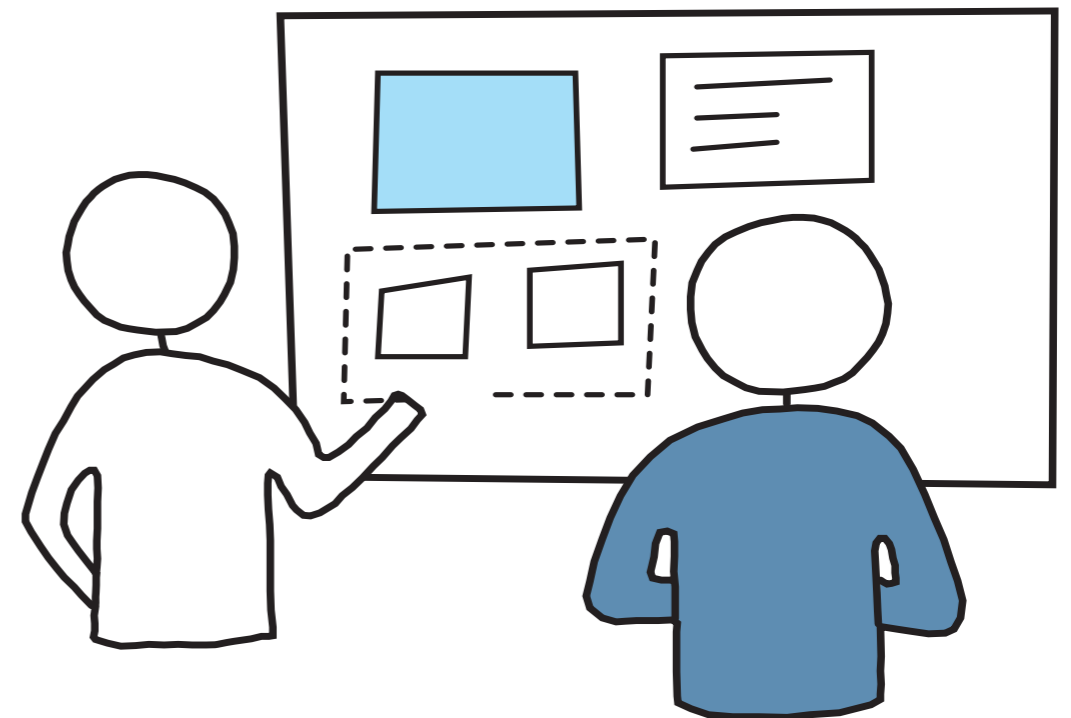
- ▶ Using refined research data, make some very rough sketches.
- ▶ Decide on best ideas from each.
- ▶ Make 1 - 3 large, refined sketches for presentation.
- ▶ **Time:** 10 minutes



Participatory design exercise

Present to users

- ▶ Each team member finds their interviewees.
- ▶ Gather them near the team area.
- ▶ Post sketches on easel for review.
- ▶ Explain sketches to users, referring to research data.
- ▶ **Time:** 5 minutes



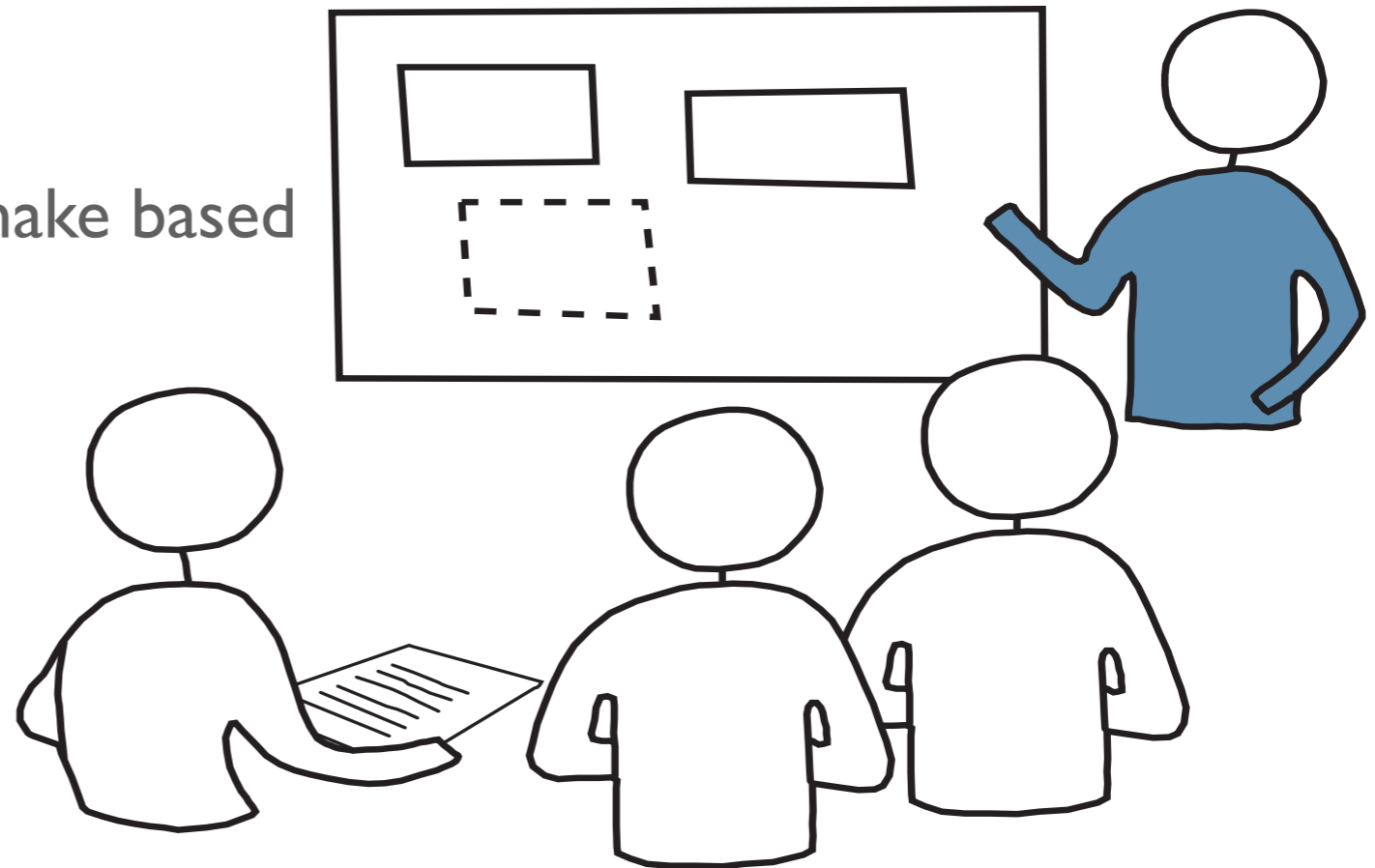
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Receive feedback

- ▶ Listen to users.
- ▶ Imagine changes you would make based on their feedback.
- ▶ **Time:** 5 minutes



Questions

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Rachel Hollowgrass

User Experience Architect for Student Systems
University of California, Berkeley

rhollow@berkeley.edu

Student Portal Project:

<http://campuslife.berkeley.edu/myberkeleyproject>