Define

Prof. James A. Landay
Computer Science Department
Stanford University

Winter 2022
January 10, 2022

Slides adapted from d.leadership Define + Ideate slides (https://dschool.stanford.edu/groups/dleadership/wiki/59f08/dleadership_2015.html)
Additional resources from bootcamp bootleg (https://hci.stanford.edu/courses/cs147/2021/wi/readings/bootcamp_bootleg.pdf)
Hall of Shame!

http://www.dol.wa.gov/

+ UI is clean & uncluttered (lots of whitespace)
+ Most common task in white bar near top
+ Less important info below fold
+ Language translation at top
+ Contrast of white bar indicates navigation

- Huge wasted first read: “How can we help you today?” And large image!
- Have to click through menus to get to tasks
- Unclear why a lot of the things are above fold
  - two separate boxes (red & blue) about COVID
Captricity
Forms used for public health/education data in under resourced regions

Often slow to get data & data entry error prone
Hall of Shame or Fame?

Captricity
Scan-in or use phone to tack picture of form data
Machine learning to parse & humans to verify
Hall of Fame!

Captricity
Scan-in form data
Machine learning to parse & humans to verify
Faster & less error prone than existing methods
UI innovation is the form layout & using phone camera
Define

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Outline

• Design thinking process
• Inferring insights
• Point of views
• Administrivia
• Team break
• Unpacking data
• Writing & Evaluating POVs
Design Thinking

- Empathize
- Define
- Ideate
- Prototype
- Test
Design Thinking

Define
REALIZE NEW INSIGHTS
REFRAME THE PROBLEM.
UNCOVER OPPORTUNITIES.
NOTICE SOMETHING

“I WONDER IF THIS MEANS . . .”

ACTIONABLE LEARNING ABOUT PEOPLE
OBSERVATION + INFER = INSIGHT
THE SELL:
TIDE REMOVES TOUGH STAINS
We heard:
“I rarely wash my jeans, I want them to look great longer”

We observed:
Jeans on the back of a chair

Millennials care about their clothes, and that means not cleaning them
The Perennial Objective:

**IMPROVE THE STAIN-REMOVING PERFORMANCE OF TIDE**

The Realization:

**IT’S NOT ABOUT CLEANING. IT’S ABOUT CARING FOR CLOTHES.**
REALIZE

Define

FOCUS
FOCUS ON **ONE** MEANINGFUL CHALLENGE
Focus by Writing a “Point of View”

A unique, concise reframing of the problem that is grounded in user needs & insights.
Focus by Writing a “Point of View”

A unique, concise reframing of the problem that is grounded in user needs & insights.
Focus by Writing a “Point of View”

WE MET . . .
(person you are inspired by)

WE WERE SURPRISED TO NOTICE. . .
(tension, contradiction, or surprise)

WE WONDER IF THIS MEANS. . .
(what did you infer? need—verb reflecting user needs)

IT WOULD BE GAME-CHANGING TO. . .
(Frame up an inspired challenge for your team.
NOT a reason for the need! Not a solution, but a more informed problem)
Focus by Writing a “Point of View”

WE MET . . .
Chuck, a young millennial living in an apartment in SoCal

WE WERE SURPRISED TO NOTICE. . .
he says he cares about his jeans, but he doesn’t wash them often

WE WONDER IF THIS MEANS. . .
he believes the best way to protect his jeans is to not wash them

IT WOULD BE GAME-CHANGING TO. . .
help him care for his clothes while keeping them clean
Making Art Accessible to Young Professionals
We hear:
“I don’t understand. Why is this $50 and this $5000. I actually like the $50 one more, but maybe it sucks.”

“What do my friends like?”

We think of collecting art as deeply personal, but in fact for them art is about what others are going to think.
The presumed mindset:

ART IS DEEPLY PERSONAL.

The realization:

ART IS FASHION ON THE WALL.
Focus by Writing a “Point of View”

WE MET . . .
(person you are inspired by)

WE WERE SURPRISED TO NOTICE. . .
tension, contradiction, or surprise

WE WONDER IF THIS MEANS. . .
(what did you infer? need—verb reflecting user needs)

IT WOULD BE GAME-CHANGING TO. . .
(Frame up an inspired challenge for your team.
NOT a reason for the need! Not a solution, but a more informed problem)
WE MET . . .
Joel, a guy in his twenties with a good job and a new apartment

WE WERE SURPRISED TO NOTICE . . .
He worries his taste was unrefined when the pieces he liked didn’t align with the more expensive prices

WE WONDER IF THIS MEANS . . .
Joel views art as fashion on the wall: it’s about what his friends are going to think about his taste

IT WOULD BE GAME-CHANGING TO . . .
help buyers cut through the paralysis of doubt
Winter 2022

dt+UX: Design Thinking for User Experience Design, Prototyping & Evaluation
Team Wanderlust

We heard:
“[I’m] a person who only goes to places one always goes – safe bets.”

“when visitors come or I’m with other people, I’m motivated to research and explore new places”

“safety is the most important element when navigating a neighborhood”

People are not always searching for the fastest route and other people can serve as motivation to explore new areas
WE MET . . .
(user – **possibly extreme** – you are inspired by)

WE WERE AMAZED TO REALIZE . . .
(what did you learn that’s **new**?)

IT WOULD BE GAME-CHANGING TO . . .
(frame up an **inspired challenge** for your team.)
(don’t dictate the solution.)
WE MET . . .
Lena, a newcomer to the city, who is afraid to stray from her routine path

WE WERE AMAZED TO REALIZE . . .
she enjoyed diverging from her usual route to find a restaurant for her friend

IT WOULD BE GAME-CHANGING TO . . .
motivate people to explore unfamiliar places
Team Wanderlust

We heard:
“there was a time that I only had a final destination to visit. Since I wasn’t in a rush, as long as I arrived to my final destination, routes did not matter.”

The fastest route is not always the preferable route. People need a way to customize their routes depending on context/purpose.
WE MET . . .
JunGu, a short-time visitor from Korea, exploring the area on his way to a destination

WE WERE AMAZED TO REALIZE . . .
people are not always searching for the fastest route

IT WOULD BE GAME-CHANGING TO . . .
customize routes based on one’s travel goals.
POV Will Differ Depending Who You Talk To
Guidelines for Gender Equity and Inclusivity

- **HCI Guidelines for Gender Equity and Inclusivity**, by Morgan Klaus Scheuerman, Katta Spiel, Oliver L. Haimson, Foad Hamidi, Stacy M. Branham
[Note: lots of good material on this page, but linking directly to the survey section, as relevant for everyone]
Discussion Guide Resources

- Creating an Effective Discussion Guide for User Research, Medium
- 5 Steps to Create Good User Interview Questions, Medium
- Asking the right questions during user research, interviews, and testing, uxdesign.cc, Medium
- Sample UX Research Plan (discussion guide + context), Smashing Magazine
- Just Enough Research, by Erika Hall of Mule Design, Talk at UX Salon 2016 (30 min.)
Administrivia

• Studio assignment stats

<table>
<thead>
<tr>
<th>1st choice</th>
<th>2nd choice</th>
<th>3rd choice</th>
<th>4th choice</th>
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<tbody>
<tr>
<td>141</td>
<td>40</td>
<td>24</td>
<td>5</td>
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</table>

Better than last year: more 1st choice & less 4th choices

Office hours are up to date on the web site
- under teaching staff & office hours calendar
- Landay: Wednesday 3:30 - 4:00 PM
  Friday 4:00 - 4:30 PM
- schedule a 15 min slot through https://calendly.com/landay/landay-office-hours

• Open mindedness in design
  - follow the needfinding!
## What You Wanted to Learn in CS147

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
<th># of Responses Mentioned</th>
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<tbody>
<tr>
<td><strong>product design methods</strong></td>
<td>design helpful products</td>
<td>35</td>
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<td></td>
<td>intuitive design</td>
<td></td>
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<tr>
<td></td>
<td>design thinking</td>
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<td></td>
<td>needfinding</td>
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<td></td>
<td>fundamentals of design</td>
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<td></td>
<td>learning how to build around user</td>
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<td></td>
<td>how to approach design</td>
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<td><strong>inclusive design</strong></td>
<td>accessible design for virtual worlds and collaboration</td>
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<td></td>
<td>balancing empathy, ethics, inclusivity with design</td>
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<td><strong>UX design</strong></td>
<td>figma</td>
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<td>fast prototyping</td>
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<td>ui/ux</td>
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<td><strong>empathetic design</strong></td>
<td>different aspects of user centered empathy</td>
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<td><strong>collaboration during the design process</strong></td>
<td>Be an effective team member</td>
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<td>Crossfunctional collaboration</td>
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<td>working in design teams</td>
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<td><strong>meaningful aesthetics</strong></td>
<td>How to rely less on text in UX design</td>
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<td>make visually appealing designs</td>
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<td></td>
<td>fundamentals of design</td>
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<td>how to implement universal design principles</td>
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<td>design cohesion</td>
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<td><strong>design evaluation</strong></td>
<td>consequences of bad design</td>
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<td>How to critique design effectively!</td>
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<tr>
<td><strong>applying technology</strong></td>
<td>translating ideas into software and design</td>
<td>2</td>
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<tr>
<td></td>
<td>how to finally have a human approach to coding</td>
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</tbody>
</table>
Adminstrivia

• Readings for today
  - *Tips for Working Successfully in a Group* by Randy Pausch
  - *The Discipline of Teams* by Katzenbach and Smith, Harvard Business Review

• Listen
  - *Invisible Women, 99% Invisible, Episode 363* (39 minutes)

• What did you think?
Team Meeting Agenda

1. **Schedule weekly meeting** times (2-3)
2. **Make a plan** for how you will get the rest of your interviews & presentation slides done for Thur/Fri
3. Folks who have days where they know they won’t be at studio, **schedule your presentations now** & make sure the team is covered & work is made up
4. **Go over the homework assignment** carefully & **ask clarifications of your TA** or of me during/after break
TEAM MEETING
Point of View: How?

• **Unpack** your empathy work

• Leap from observations to identifying **users, needs, & insights**

• **Reframe** the problem as a Point of View (POV)
UNPACK
INSIGHTS
POINT OF VIEW
one color PostIt per participant, take notes with a sharpie, write down snippets of everything
Using the Data Collected in the Field

- Figure out what is important
- Affinity diagramming
  - group info & find relations between groups
  - Post-Its on large surfaces
Get Them up on a Wall…
Organize & discuss
Share your Field Stories
Recall Our Interviews With Bruno...
Unpacking Interview Results... Yes and...
Unpacking Interview Results... Don’t do this!
Empathy Map to Help Synthesize

say | think
---|---
Observations | Inferences

do | feel
Unpacking Interview Results...
Empathy Map to Help Synthesize

- Say
- Think
- Do
- Feel

Keep a list of tensions, contradictions, surprises

Use to find needs & insights
WHAT DOES SHE NEED?

- A ladder, more books, …
  - NO, these are solutions

- Acknowledgement from her peers that she is a hard worker?

- A strong voice driven by knowledge & education?

- More social time with her father through reading together?

- These needs are more powerful & inspiring for design
I wonder if this means . . .
identify attributes, surprises, needs, & insights

user attributes

surprises...

needs

insights
combine to create a point of view

user attributes

surprises...

needs

insights
combine to create a point of view

user attributes

surprises...

needs

insights

WE MET...  ...SURPRISED TO NOTICE...  ...WONDER IF IT MEANS...  ...GAME-CHANGING TO...
Point of View

WE MET . . .
(person you are inspired by)

WE WERE SURPRISED TO NOTICE. . .
tension, contradiction, or surprise

WE WONDER IF THIS MEANS. . .
(what did you infer? need—verb reflecting user needs)

IT WOULD BE GAME-CHANGING TO. . .
(Frame up an inspired challenge for your team.
NOT a reason for the need! Not a solution, but a more informed problem)
Characteristics of A Good Point of View

• Provides **focus** & **frames** the problem
• **Inspires** your team
• Provides a **reference for evaluating** competing ideas
• **Fuels brainstorms** by suggesting “how might we” statements
• **Captures the hearts and minds** of people you meet
• Saves you from the impossible task of developing concepts that are **all things to all people**
• Is something you **revisit & reformulate** as you learn
• **Guides your innovation efforts**
DO IT NOW:

UNPACK: note the say, do, think, & feel

NEEDS/INSIGHTS: infer from observations

POINT OF VIEW: 1 written sentence
the truck owner

https://vimeo.com/9212719
Do It Now:
UNPACK: note the say, do, think, & feel
SURPRISES: surprises, tensions, & contradictions
NEEDS: infer from the observations above
INSIGHTS: take a leap as to what the real problem is

POINT OF VIEW: 1 written sentence
We met X
We were surprised to notice…
We wonder if this means…
It would be game-changing to…
POVs for the truck owner

- We met…
- We were surprised to notice…
- We wonder if this means…
- It would be game changing to…
1. Does your POV start by focusing on one specific person and sharing relevant context?

2. Does your POV present a truly surprising observation or quote related to a pain point?

3. Does your POV offer an insight about the person that is emotional and flows logically from what you learned?

4. Does your POV help you generate many ideas immediately?
We met… Chuck. ← *No background*

**We were surprised to notice**… he wears jeans often and they’re always dirty because he doesn’t clean them. ← *It’s a fact that jeans get dirty when you don’t clean them. Not surprising.*

**We wonder if this means**… Chuck is lazy. ← *Focus more on Chuck’s emotional experience. Don’t label your users.*

**It would be game changing to**… help him be less lazy. ← *This is a big assumption about Chuck instead of his experience.*
We met… Chuck, a guy who wears jeans all the time. ← not enough about his identity.

We were surprised to notice… he wears his jeans dirty and chooses not to clean them. ← why is it surprising he chooses not to clean them?

We wonder if this means… Chuck doesn’t have time to clean his jeans. ← maybe, but not super logical in explaining his choice.

It would be game changing to… provide Chuck with faster ways to clean his jeans. ← limits the brainstorming.
We met... Chuck, a young millennial living in an apartment who loves to wear jeans. ← lots of context!

We were surprised to notice... he cares about his jeans and wants to preserve them, but doesn’t like to wash them. ← contradiction!

We wonder if this means... Chuck believes that the best way to take care of his jeans is to not wash them. ← about Chuck’s beliefs!

It would be game changing to... help him care for and preserve his clothes while still keeping them clean. ← sky’s the limit!
Further Reading

Next Time

- Wed Lecture
  - Ideate
- Studio
  - Present your initial needfinding results & work in studio on Point of Views

- Read by Wednesday's lecture
  - Early Customer Research by Tom Eisenmann (slides)
  - Coping with Hitchhikers and Couch Potatoes on Teams, Excerpt from Oakley, et al.

- Watch by Wednesday
  - Working in Teams (0:56), Tina Seelig, Stanford Technology Ventures Program
  - Team Composition (2:33), Kathleen M. Eisenhardt, Stanford Technology Ventures Program