USER-CENTERED DESIGN APPROACHES TO OPTIMIZE AUDIT & FEEDBACK

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⚙ **Following**

First lab meeting of the year, great chance to finally get a full group photo. Merci à Josée pour la photo! -HW

Dresher Olivia
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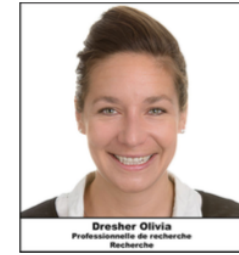
Virginie
Sirois

RETWEETS
3

LIKES
7

3:15 PM - 1 Sep 2016

↩ ⟲ **3** ♥ **7** •••

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DECLARATIONS

I declare I have no other known conflicts of interest

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HUMAN FACTORS ENGINEERING

Designing for the way people **are,**
not the way **we wish they were**

Adapting systems to people,
rather than expecting people to
adapt to systems

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~~FOUR~~ FIVE METRICS FOR GOOD SYSTEMS

Good **functionality:**

- It **works**.
  - System does what the design specifications say it should do.

Good **usability:**

- I **can** use it.
  - System is easy & intuitive to use.
  - Person using the system can complete task(s).

Good **accessibility:**

- **Most/all people** can use it.
  - System has affordances to enable people with various limitations to use it.

Good **user experience (UX):**

- I **enjoy** using it.
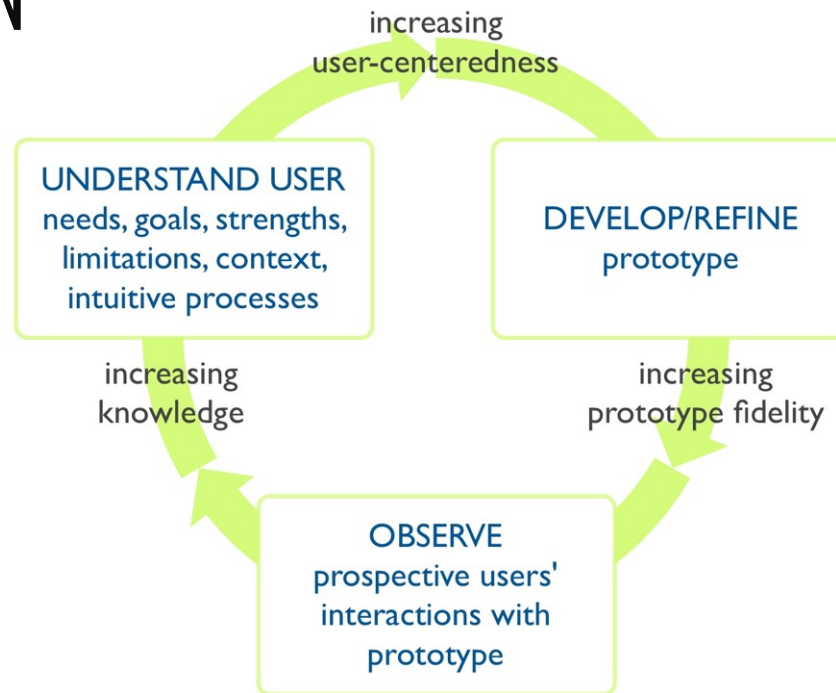 - Person feels good while using system.

Good **implementability:**

- It is **feasible** to implement this system in the **intended context**.

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USER-CENTERED DESIGN

(More or less) related terms

- Human-centered design
- Design thinking
- User experience design
- Goal-directed design
- Co-design
- Co-creation
- Participatory design
- Plan-Do-Study-Act
- Agile

User-Centered Design Framework

increasing user-centeredness

UNDERSTAND USER
needs, goals, strengths, limitations, context, intuitive processes

DEVELOP/REFINE
prototype

increasing knowledge

increasing prototype fidelity

OBSERVE
prospective users' interactions with prototype

Witteman et al., *Systematic Reviews*, 2015
DOI: 10.1186/2046-4053-4-11

EXAMPLE PROCESS

Observe existing processes via shadowing (UNDERSTAND USER)

Focus groups with users (UNDERSTAND USER)

Participatory design workshop with users & other experts (DEVELOP)

Test candidate designs (OBSERVE)

Interpret test results (UNDERSTAND USER)

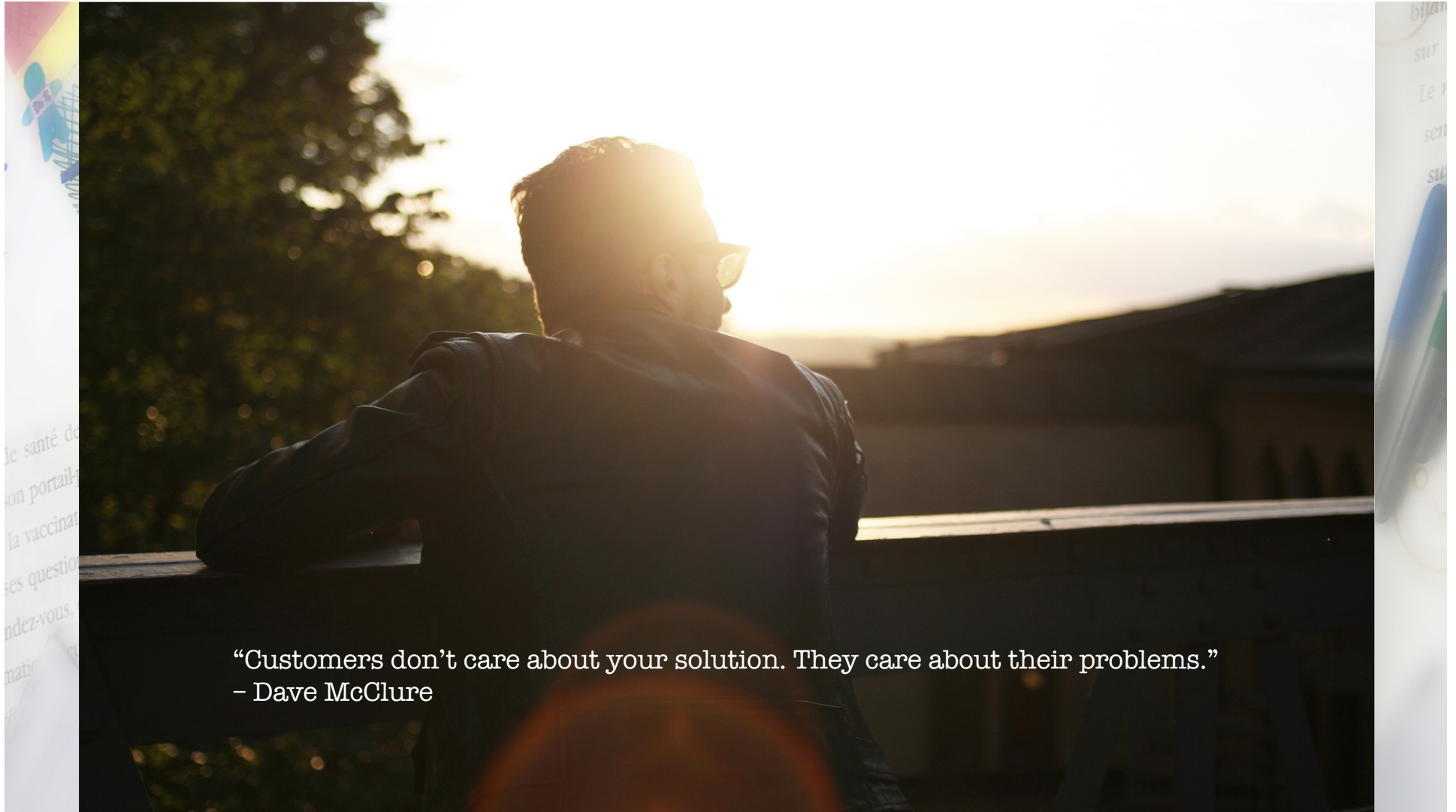Refine design (REFINE)

Test again, repeat

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DESIGN FLIPS THE SCRIPT

Ask not: "How can we get people to use our system [the way we want]?"

Ask: "How can we make our system useful to people?"

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"Customers don't care about your solution. They care about their problems."
– Dave McClure

USER

Someone who uses something (a technology/system/thing/procedure …)
- to accomplish a task
- to accomplish a set of tasks
- in pursuit of a goal

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Image: Black & Decker, Canadian Tire

DEFINING & ALIGNING GOALS

What are my users' goals?

What are my goals?

Are these the same?

ACTIVITY 1

Break into groups

Define your goal

Identify your users & their goals

Create 3 personas (1 high performer, 1 average, 1 low)
- Persona: an archetype (not stereotype) of your potential users. Give each persona at least a name, age, gender, location, and practice pattern.
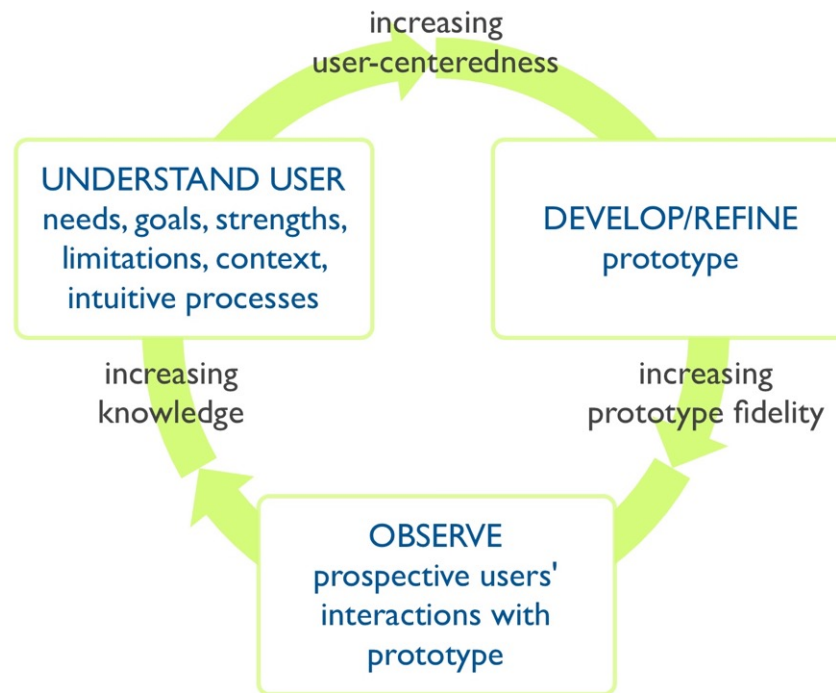
KEY POINTS

1: Iterative cycles

2: More than needs

3: Prototype early

4: Observe, not ask

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USER TESTING

"Design like you're right;
listen like you're wrong"
- John Lilly (former Mozilla CEO)

Basic concept:

- See how people respond
  - <u>Not</u> asking whether they like it/what they think
- Fix problems/adjust design accordingly
- Efficient way to discover problems before launching expensive pilot study or trial
  - You want bad news here, not after the trial is over or your intervention is implemented ("Fail early, fail well")
  - Most useful feedback: the feedback you don't want to hear

USER TESTING: RECOMMENDATION

Table with 5 columns:

- 1: design element
- 2: what you want this element to convey (a useful design exercise anyway!)
- 3: what users understood from this element
- 4: how this element made users feel
- 5: other comments, key quotes

Think of it like hypothesis-testing your design

WHEN USER TESTING ISN'T THE RIGHT METHOD

Functionality: standards (various), technical testing

Accessibility: standards (WCAG 2.0), simulations

@wittemanlab @hwitteman   Image credit: http://www.colourblindawareness.org/wp-content/themes/outreach/images/slider/living/traffic-light_p.jpg

ACTIVITY 2

[steps of your choice] → **draft prototype**

Make table with 5 columns, fill in first 2:
- 1: design element (e.g., graph, statistic, introduction text, etc.)
- 2: what you want this element to convey
- 3: what users understood from this element
- 4: how this element made users feel
- 5: other comments, key quotes

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ACTIVITY 3

User test your prototype using think aloud
- assign roles:
  - facilitator (goal: be low key, a listener, connect with your user)
  - note-taker(s) (goal: get all relevant data)
- users = volunteers from another group

Fill in last 3:
- 1: design element
- 2: what you want this element to convey
- 3: what users understood from this element
- 4: how this element made users feel
- 5: other comments, key quotes

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ACTIVITY 4

Analyze your results

- Look at your 5-column table: anything people aren't getting/reacting to in the way you want?
- Anything that's confusing?
- Make a list of issues & note how severe they are
  - 1 = very minor issue, won't seriously impede user experience
  - 5 = major issue, will stop person from being able to use this as designed
- What do these results tell you about your users' needs, goals, strengths, limitations, intuitive processes?

Plan changes for next iteration

DEBRIEF

What worked well?

Have markers for both strengths & problems

Paper prototypes

Personas

Unstructured user testing

What would you do differently next time?

Co-design with user from the beginning

Make sure to have users who represent the population & understand what lens they're bringing

Have more than one user

Know what our options are (e.g., book of examples)

KEY TAKEAWAYS

Be clear about goals

- What are they?
- Whose are they?

Fail early; fail well (seek negative results as early as possible)

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