

Fostering Innovation in Survey Systems with Human-Centered Design

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Main Theme

- Human-Centered Design methods are great approaches to fostering innovation
 - ▶ In government survey systems
 - ▶ And beyond



Agenda

- What is Human-Centered Design / User Experience?
- Methods that foster innovation
- Two BLS case studies
 - ▶ Data review for the Current Employment Statistics – State and Area (CES-SA) program
 - ▶ Data collection for the Consumer Price Index (CPI)



What is Human-Centered Design (HCD)?

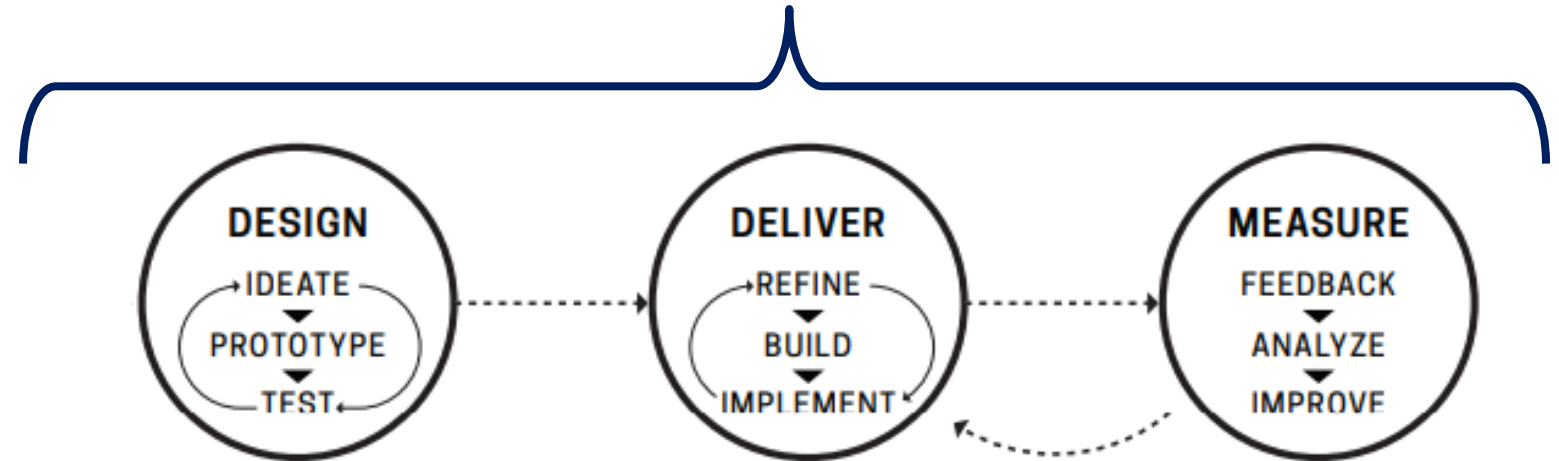
- An approach to design and development that focuses on the users' concerns throughout the process
 - ▶ From understanding the users and their tasks before starting any design work to usability testing just before deployment
- Requires the application of User Experience (UX) methods
- Other related terms: Customer Experience (CX), Usability, Human Factors



“Traditional” HCD vs HCD for Innovation

HCD for Innovation

Traditional HCD work



- UX methods before any development begins
- Goal is to determine what system to build

- UX methods throughout development
- Goal is to make the system better meet users' needs

From <https://www.gsa.gov/cdnstatic/HCD-Discovery-Guide-Interagency-v12-1.pdf>

UX Methods that Foster Innovation

- Methods done early in the process
 - ▶ Design thinking
 - ▶ Interviews
 - ▶ Focus groups
 - ▶ Field observations
 - ▶ Usability testing of a previous version
- Generally, more qualitative methods



How HCD Supports Innovation

- You get ideas from people actually using your tools/products/services
 - ▶ Their experience, ideas, and priorities may be different from management
- It minimizes risk
 - ▶ Building the right product the right way for the right people
- It helps to build trust, buy-in, and greater adoption among user groups
- Can improve Products, Services, Procedures, and Policies
 - ▶ An agency may need to revise procedures and policies to improve the UX
- Provides evidence for users' actual needs and desires
 - ▶ Can streamline discussions about prioritizing and designing features



Using HCD to Innovate at BLS: Two Case Studies



Case Study 1

Data Review for the Current Employment Statistics –State and Area Program



CES State and Area Background

- A federal and state cooperative program
- Provides employment, hours, and earnings estimates for states and metropolitan areas



Goals

- Innovate improvements to State and Area data review systems
 - ▶ Target audience is BLS analysts
- Start by understanding how analysts currently do data review
 - ▶ Identify pain points, gaps, and other opportunities to improve the process
- Continue to get feedback from analysts throughout development



Methods

- Start with a usability test of the current system
 - ▶ See how people are currently doing review
 - ▶ Get input on improvements and priorities
- Design prototypes to address priorities
- Continue to get feedback from analysts throughout development
 - ▶ Focus groups and interviews to discuss paper prototypes, then higher fidelity prototypes
- Involve the whole team in the process



Benefits of this Approach

- We learned how people were conducting review.
 - ▶ Tools they use within the system
 - ▶ Procedures they follow
- We identified priorities for improvements.
 - ▶ Keep future ideas in mind
- The team members were more aligned with a common understanding of the users.



Case Study 2

Data Collection for the Consumer Price Index (CPI)



CPI Background

- Measure of inflation
- CPI Surveys
 - ▶ Housing
 - ▶ Commodities and Services



Goals

- “How might we improve data collection for the CPI Commodities and Services survey?”
 - ▶ Small tweaks to revolutionary ideas
 - ▶ Encouraged new, creative, innovative, outside-the-box ideas
 - ▶ Without considering feasibility (for now)
- Hear from all groups involved in data collection
- Analyze and summarize ideas to present a path forward

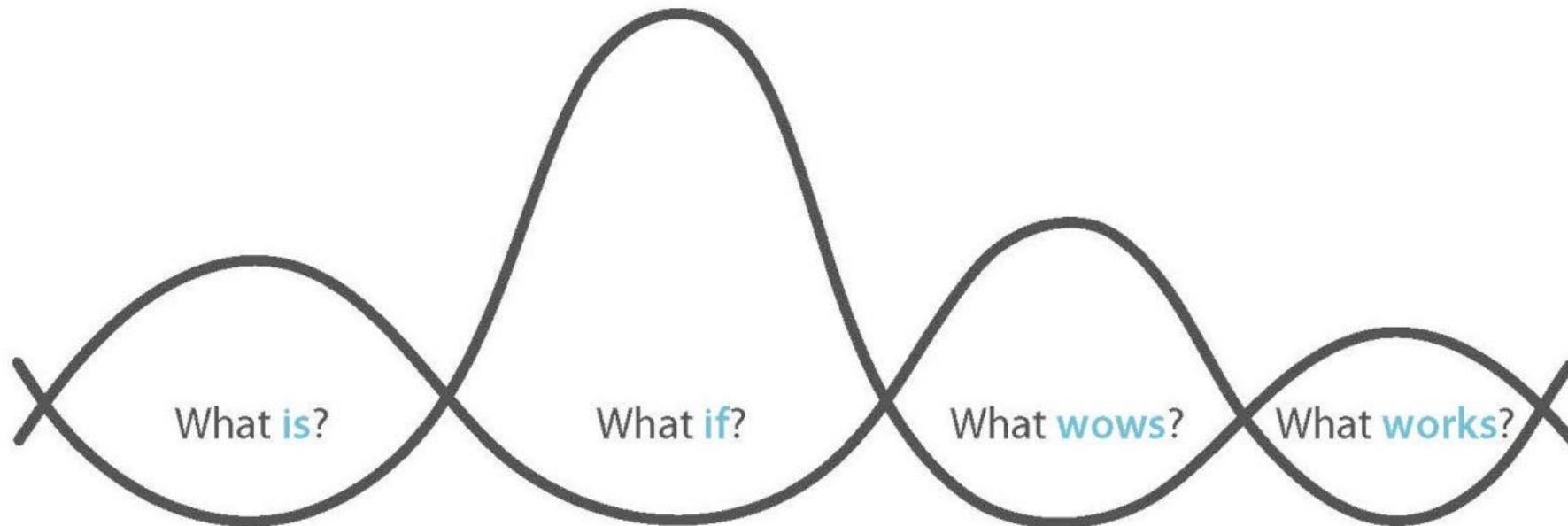
Method

- Design Thinking approach
- Interviews with Stakeholders
 - ▶ What works
 - ▶ What doesn't
 - ▶ What can be improved
- Involve the whole team in the interviews



Design Thinking

- A structured process for problem solving



Jeanne Liedtka
University of Virginia

By the Numbers

■ Our process

- ▶ 70 interviews across 9 user groups
- ▶ >1,600 findings
- ▶ 61 recommendations
- ▶ 5 next steps



Benefits of this Approach

- Good news: Overall, things were going pretty well.
- We identified many opportunities, from small tweaks to system overhauls.
 - ▶ Technical (requiring IT work)
 - ▶ Non-technical (e.g., changes in procedures, new training, and improvements using existing systems)
- Results provided evidence to guide long-term decisions about priorities for projects and resources.



How to Get Started with HCD

- Conduct UX methods to observe and listen to users and other stakeholders *before determining a project's scope*
- Make the personal connection to empathize with users
- Involve the whole team
- Focus on the priorities you uncover



Resources

- The Lab@OPM: <https://lab.opm.gov/>
- Jeanne Liedtka: <https://jeanneliedtka.com/>
- IDEO Design Thinking: <https://designthinking.ideo.com/>



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