

# Human-Centered Design 101

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Arianne Miller, Deputy Director, The Lab at OPM



# WELCOME

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## Objectives

- Share a bit about The Lab at OPM
- Develop an understanding of some of the mindsets, methods and tools in the practice of Human-Centered Design (HCD)

LAB·OPM

How do we help build  
innovation in government?

## Teach

Deliver classroom and project training that builds the public sector workforce's ability to develop innovative cultures in their organizations

LAB·OPM

**Lead**

Foster the development of a  
connected federal community  
of innovators

## Do

Conduct design projects with partners to tackle challenging public sector problems and produce innovative outcomes

USDA



Human-Centered

v.

\_\_\_\_\_ - Centered?



FREE AND REDUCED PRICE SCHOOL MEALS FAMILY APPLICATION

PART 1. ALL HOUSEHOLD MEMBERS

Names of all household members (First, Middle Initial, Last)	Name of each child's school or indicate "NA" if child is not in school	Place a check in the box below if child is a foster, homeless, migrant, runaway, or Head Start child. If each child attending school is a foster, homeless, runaway, migrant or in Head Start, skip to part 4 to sign this form.					Place a check in the box if NO income
		Foster	Homeless	Migrant	Runaway	Head Start	

**Part 2. BENEFITS**

IF ANY MEMBER OF YOUR HOUSEHOLD RECEIVES [State SNAP], [FDPIR] OR [State TANF Assistance], PROVIDE THE NAME AND CASE NUMBER FOR THE PERSON WHO RECEIVES BENEFITS AND SKIP TO PART 4. IF NO ONE RECEIVES THESE BENEFITS, SKIP TO PART 3.

NAME: \_\_\_\_\_ PROGRAM NAME \_\_\_\_\_

CASE NUMBER: (NOT EBT CARD NUMBER) \_\_\_\_\_

**PART 3. TOTAL HOUSEHOLD GROSS INCOME (BEFORE DEDUCTIONS).** List all income on the same line as the person who receives it. Check the box for how often it is received. RECORD EACH INCOME ONLY ONCE.

1. NAME (LIST ONLY HOUSEHOLD MEMBERS WITH INCOME)	2. GROSS INCOME AND HOW OFTEN IT WAS RECEIVED														
	Earnings from work before deductions.			Welfare, child support, alimony			Social Security, SSI, V/A, retirement benefits			All other income (such as Unemployment) benefits					
	Weekly	Every 2 Weeks	Twice Monthly	Weekly	Every 2 Weeks	Twice Monthly	Weekly	Every 2 Weeks	Twice Monthly	Weekly	Every 2 Weeks	Twice Monthly			
(Example) Jane Smith	\$200	X		\$150		X	\$0					\$0			
\$				\$			\$			\$			\$		
\$				\$			\$			\$			\$		
\$				\$			\$			\$			\$		
\$				\$			\$			\$			\$		
\$				\$			\$			\$			\$		
\$				\$			\$			\$			\$		

PART 4. SIGNATURE AND LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER (ADULT MUST SIGN)

An adult household member must sign the application. If Part 3 is completed, the adult signing the form also must list the last four digits of his or her Social Security Number or mark the "I do not have a Social Security Number" box. (See Statement on the back of this page.)

I certify (promise) that all information on this application is true and that all income is reported. I understand that the school will get Federal funds based on the information I give. I understand that school officials may verify (check) the information. I understand that if I purposely give false information, my children may lose meal benefits, and I may be prosecuted. I understand my child's eligibility status may be shared as allowed by law.

Signature: \_\_\_\_\_ Printed name: \_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Last four digits of Social Security Number: \* \* \* \* \*  I do not have a Social Security Number

PART 5. CHILDREN'S ETHNIC AND RACIAL IDENTITIES (OPTIONAL)

Choose one ethnicity:

Hispanic/Latino  Not Hispanic/Latino

Choose one or more (regardless of ethnicity):

Asian  American Indian or Alaska Native  Black or African American

White  Native Hawaiian or other Pacific Islander

**DO NOT FILL OUT THIS PART. THIS IS FOR SCHOOL USE ONLY.**

Annual Income Conversion: Weekly x 52, Every 2 Weeks x 26, Twice A Month x 24 Monthly x 12

Total Income: \_\_\_\_\_ Per:  Week,  Every 2 Weeks,  Twice A Month,  Month,  Year Household size: \_\_\_\_\_

Categorical Eligibility:  Eligibility: Free,  Reduced,  Denied,  Date Withdrawn: \_\_\_\_\_

Reason for denial or withdrawal: \_\_\_\_\_

Determining Official's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Confirming Official's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Verifying Official's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Your children may qualify for free or reduced price meals if your household income falls at or below the limits on this chart.

Household size	Yearly	Monthly	Weekly
1			
2			
3			
4			
5			
6			
7			
8			
Each additional person:			

The Richard B. Russell National School Lunch Act requires the information on this application. You do not have to give the information, but if you do not, we cannot approve your child for free or reduced price meals. You must include the last four digits of the social security number of the adult household member who signs the application. The last four digits of the social security number is not required when you apply on behalf of a foster child or you list a Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF) Program or Food Distribution Program on Indian Reservations (FDPIR) case number or other FDPIR identifier for your child or when you indicate that the adult household member signing the application does not have a social security number. We will use your information to determine if your child is eligible for free or reduced price meals, and for administration and enforcement of the lunch and breakfast programs. We MAY share your eligibility information with education, health, and nutrition programs to help them evaluate, fund, or determine benefits for their programs, auditors for program reviews, and law enforcement officials to help them look into violations of program rules.

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If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at [http://www.ascr.usda.gov/complaint\\_filing\\_cust.html](http://www.ascr.usda.gov/complaint_filing_cust.html), or at any USDA office, or call (866) 632-9992, to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202)690-7442 or email at [program.intake@usda.gov](mailto:program.intake@usda.gov).

Individuals who are deaf hard of hearing or have speech disabilities may contact USDA through the Federal Relay Service at (800) 877-8339; or (800) 845-6136 (Spanish).

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# 2015-2016 Prototype Application for Free and Reduced Price School Meals

Apply online at [www.abcdefgh.gov](http://www.abcdefgh.gov)

Complete one application per household. Please use ink.

## STEP 1 List ALL Household Members who are infants, children, and students (up to and including grade 12) (if more spaces are required for additional names, attach another sheet of paper)

**Definition of Household Member:** "Anyone who is living with you and shares income and expenses, even if not related."

Children in **Foster care** and children who meet the definition of **Homeless, Migrant or Runaway** are eligible for free meals. Read the **Parent Letter** for more information.

Child's First Name	MI	Child's Last Name	Student?		Homeless, Migrant, Runaway	
			Yes	No	Foster Child	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Check all that apply

## STEP 2 Do you currently participate in one or more of the following assistance programs: SNAP, TANF, or FDIPIR? Circle one: Yes / No

If you answered **NO** > Complete STEP 3. If you answered **YES** > Write a case number here then go to STEP 4 (Do not complete STEP 3)

Case Number: \_\_\_\_\_

Write only one case number in this space.

## STEP 3 Report Income for ALL Household Members (Skip this step if you answered 'Yes' to STEP 2)

**Definition of Household Member:** "Anyone who is living with you and shares income and expenses, even if not related."

Read the "Sources of Income for Children" section on p. 3 of the document titled "How to Apply for Free and Reduced Price School Meals"

Read the "Sources of Income for Adults" section on p. 4 of the document titled "How to Apply for Free and Reduced Price School Meals"

### Child Income

Sometimes children in the household earn income. Please include the TOTAL income earned by ALL household members listed in STEP 1 here. Do not include income received by foster children.

Child income \$ \_\_\_\_\_

How often?	Weekly	Bi-Weekly	2x Month	Monthly
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### All Adult Household Members (including yourself)

List all Household Members not listed in STEP 1 (including yourself) **even if they do not receive income**. For each Household Member listed, if they **do** receive income, report total income for each source in whole dollars only. If they **do not** receive income from any source, write '0'.

Name of Adult Household Members (First and Last)	Earnings from Work	How often?				Public Assistance/ Child Support/Alimony	How often?				Pensions/Retirement/ All Other Income	How often?			
		Weekly	Bi-Weekly	2x Month	Monthly		Weekly	Bi-Weekly	2x Month	Monthly		Weekly	Bi-Weekly	2x Month	Monthly
	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Total Household Members (Children and Adults) \_\_\_\_\_

Last Four Digits of Social Security Number (SSN) of Primary Wage Earner or Other Adult Household Member     \_\_\_\_\_

Check if no SSN

## STEP 4 Adult signature and contact information

"I certify (promise) that all information on this application is true and that all income is reported. I understand that this information is given in connection with the receipt of Federal funds, and that school officials may verify (check) the information. I am aware that if I purposely give false information, my children may lose meal benefits, and I may be prosecuted under applicable State and Federal laws."

Street Address _____	Apt # _____	City _____	State _____	Zip _____	Daytime Phone and Email (optional) _____
Printed name of adult completing the form _____		Signature of adult completing the form _____		Today's date _____	

LAB·OPM

## VIDEO

“It’s not you. Bad doors are everywhere!”

<https://www.youtube.com/watch?v=yY96hTb8Wgl&feature=youtu.be>

LAB·OPM

**DESIGN + INNOVATION**

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Boost

# DESIGN + INNOVATION

## Approaches to Innovation

stories	not started	in progress	finished
Feedback session for Michael Teacher DONE			ARRANGE FOLLOW UP 0.5 E MENT 1.0 PAGE STUNG 1.0
As a team member I want Boost's goals for the year to be highly visible DONE			SET UP BOOST BOARD DRAFT + SEND EMAIL PUBLISHING BOARD 0.5
WorldBlu prep DONE			COMP SUBM EN STA COV AS WRITE PRESS RELEASE 2.0
As a leader at Boost I want a full understanding of the Product role FINISHED			WRITE PRESS RELEASE DELAN WORK REVIEW PRESENTATION 0.5
As a new member of Boost I would like to be versed in the ways and means of Boost 2	STAFF SIGNOFF 1.0	MEETING WITH ANNE 1.0	WRITE STAFF INDUCTION 1.0
Business Development (Timebox 6 hours) 2	4		2
Design and implement new Boost newsletter template 1	TEST (UX) 1.5	HTML + CSS 2.0	WIREFR DESIGN 2.0
Revise new Boost services section 3	WRITE 2	REVIEW 1.0	

DONE  
 DONE  
 DONE  
 DONE  
 DONE  
 DONE  
 FINISHED  
 FINISHED  
 FINISHED  
 FINISHED  
 FINISHED  
 FINISHED  
 FINISHED

PROCESS + METHODOLOGY: AGILE METHODOLOGY

# DESIGN + INNOVATION



Approaches to Innovation

EVENT + CONDENSED PROCESS: HACKATHON

# DESIGN + INNOVATION



Approaches to Innovation

CULTURE + MANAGEMENT: OPEN ALLOCATION (GITHUB)

# DESIGN + INNOVATION

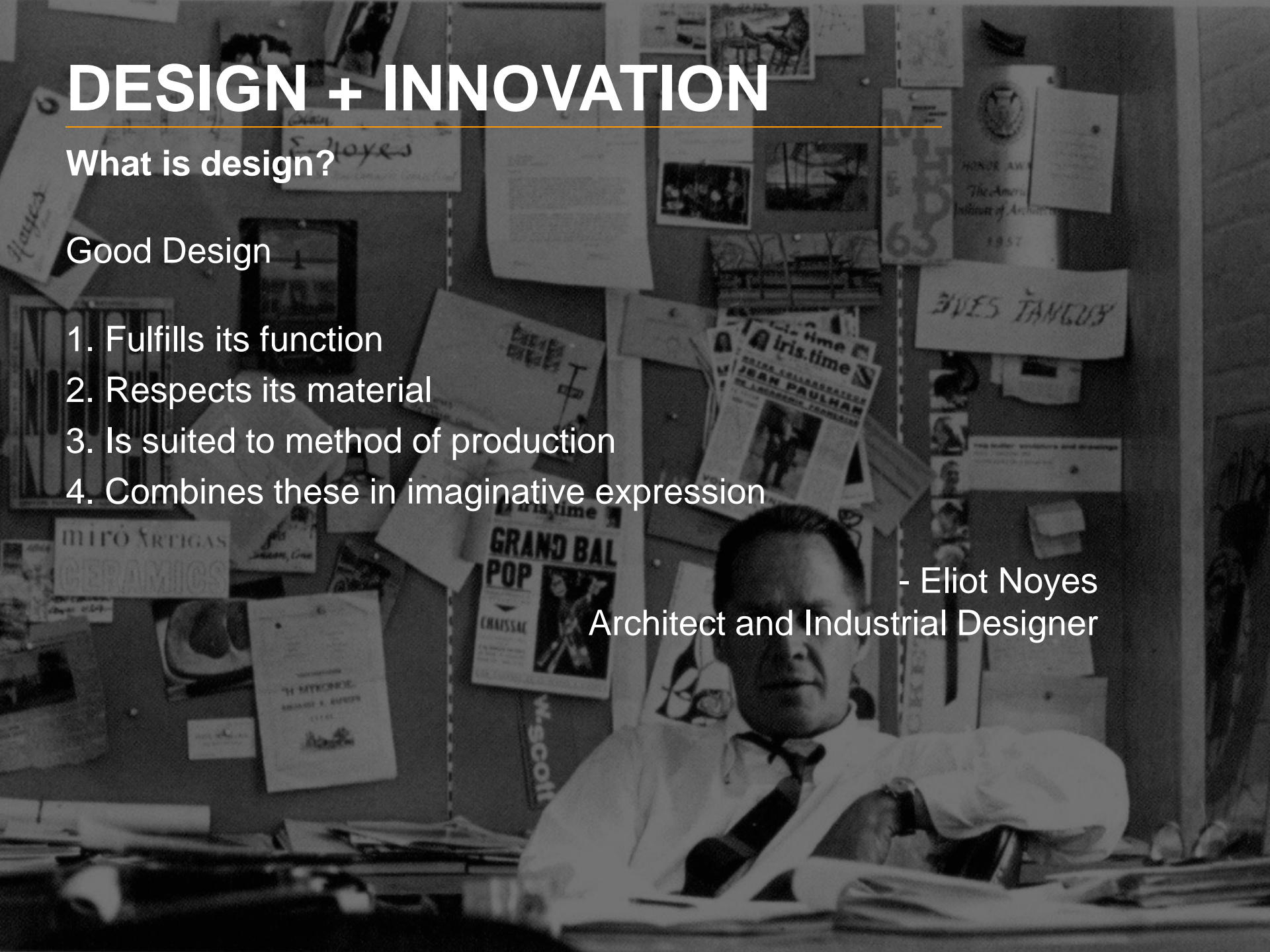
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What is design?

Good Design

1. Fulfills its function
2. Respects its material
3. Is suited to method of production
4. Combines these in imaginative expression

- Eliot Noyes  
Architect and Industrial Designer





# DESIGN + INNOVATION

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What is design?

**“People think that design is styling. Design is not style. It’s not about giving shape to the shell and not giving a damn about the guts.**

Good design...combines technology, cognitive science, human need, and beauty to produce something that the world didn’t know it was missing.”

- Paola Antonelli

Curator of the Department of Architecture & Design, MOMA

# DESIGN + INNOVATION

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# DESIGN + INNOVATION

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What is design?

“Everyone designs who devises courses of action aimed at changing existing situations into preferred ones.”

-Herbert Simon  
Economist, Psychologist and Design Theorist



# DESIGN + INNOVATION

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Defining human-centered design

**The discipline of navigating complex problems and creatively designing effective solutions to meet people's real needs.**

# DESIGN + INNOVATION

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Defining human-centered design

The **discipline** of navigating complex problems and creatively designing effective solutions to meet people's real needs.

# DESIGN + INNOVATION

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# DESIGN + INNOVATION

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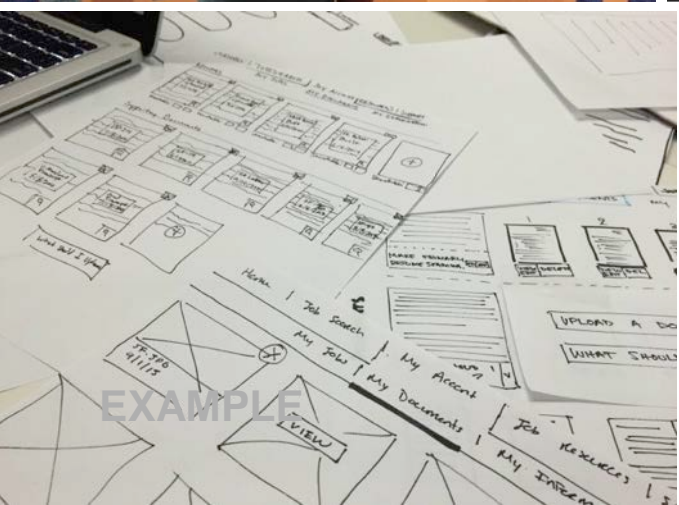
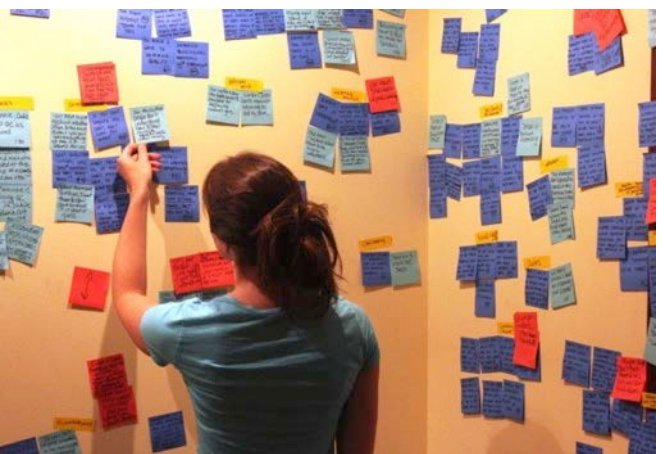
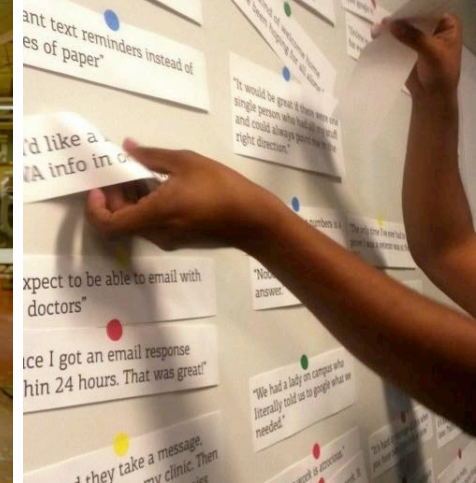
Defining human-centered design

The discipline of navigating complex problems and creatively designing effective solutions to meet **people's real needs**.



# DESIGN + INNOVATION

What does human-centered design look like?



# HCD COMPONENTS

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# HCD COMPONENTS

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**MINDSETS**

# HCD COMPONENTS

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## MINDSETS

- Learn through action
- Work within ambiguity

# HCD COMPONENTS

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**MINDSETS**



**TOOLS/  
ACTIVITIES**

# HCD COMPONENTS

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**MINDSETS**

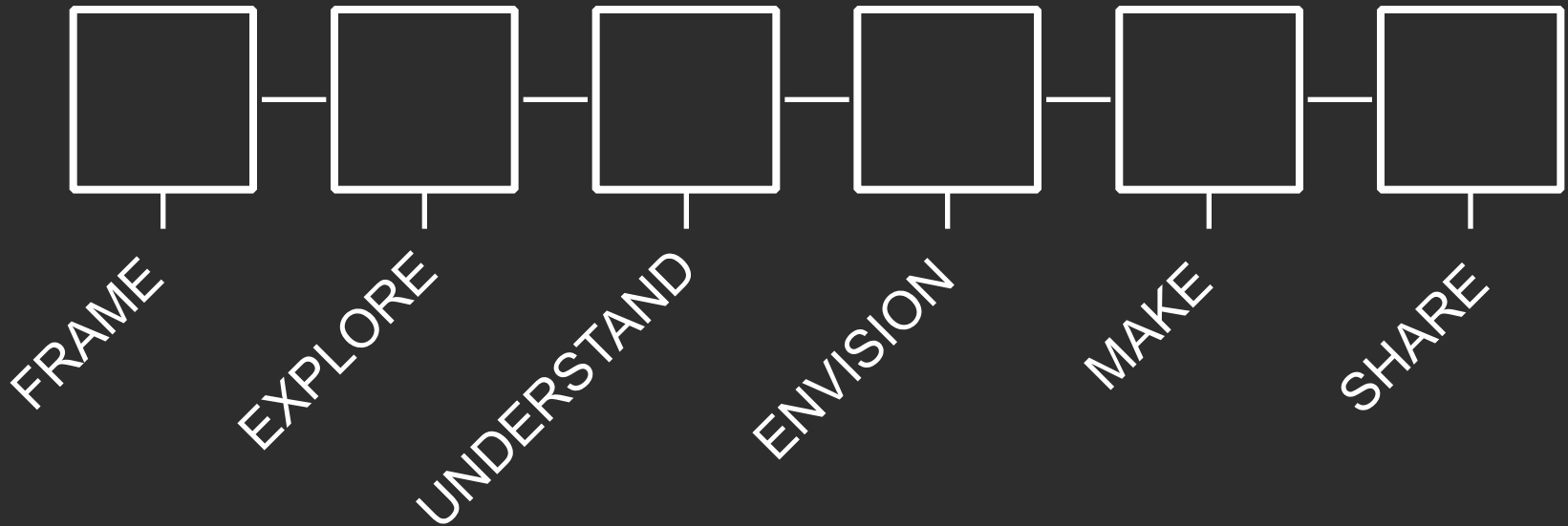


**TOOLS/  
ACTIVITIES**

- **ORIGINS**
- **METHODOLOGIES**
- **METHODS**

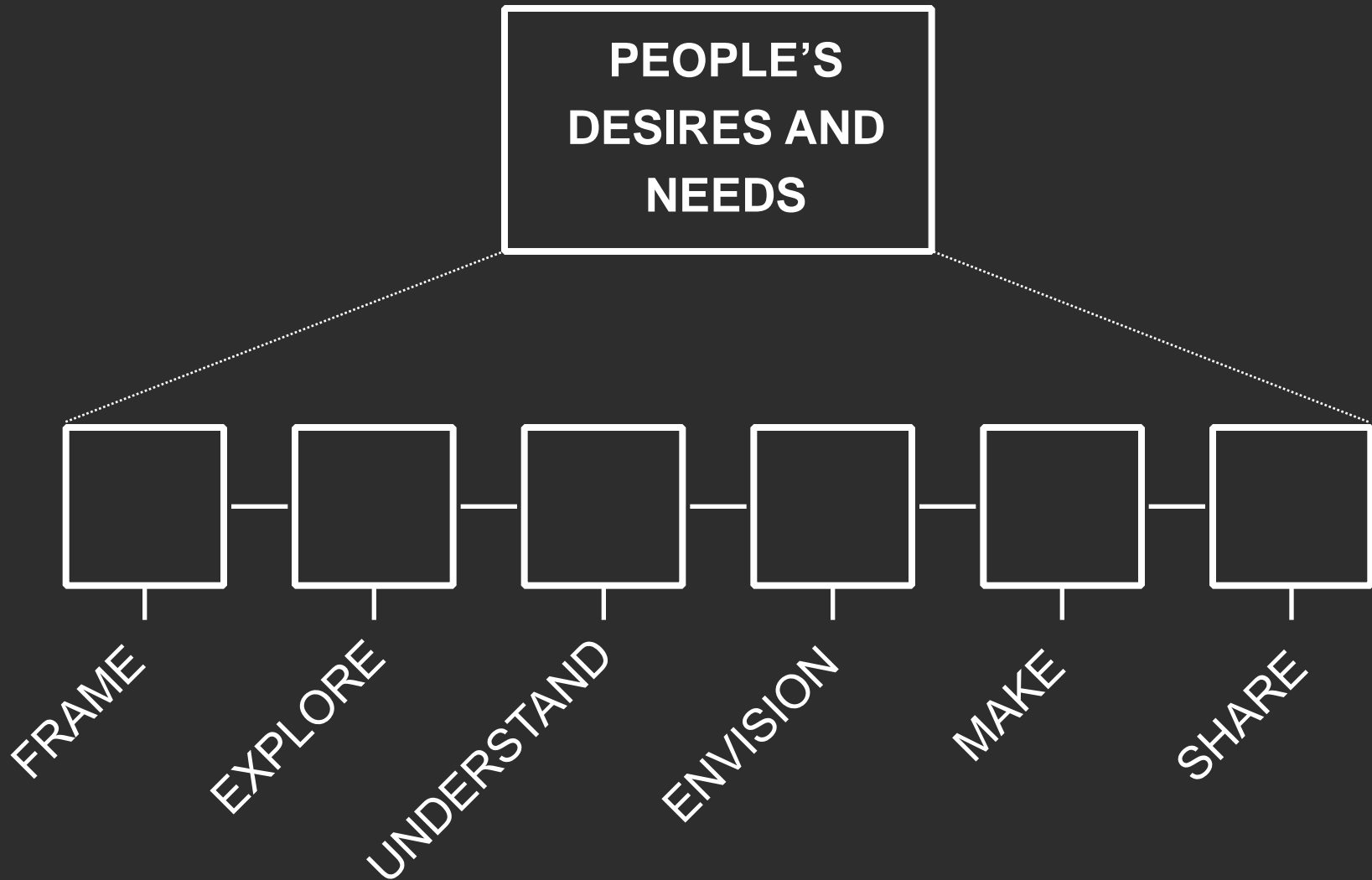
# Our Design Process

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# Our Design Process

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# Our Design Process

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- **This is not a prescriptive process**
- **It is highly versatile and adaptable**
- **Beginners + experts alike use HCD in various ways**

# EXPLORE

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## Design and Data

**We must build an understanding of the system by learning about the people within it.**

**Design leverages qualitative data gathered from people and by people to complement quantitative data.**

# EXPLORE

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How do we learn about our stakeholders?

## Quantitative Data

- deals with numbers
- information about quantities
- is measured

## Qualitative Data

- deals with descriptions
- information about qualities
- is observed

# EXPLORE

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Qualitative and quantitative

TWITTER MAP OF HURRICANE SANDY AFTERMATH

# EXPLORE

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## Design Ethnography

The study of people in the environments which they live, work and interact through observation, interview and direct facilitated interactions in order to understand their world and build empathy.

A design ethnographer's role is to gather data and discover patterns in the behaviors and experiences faced by a diverse group of people that will be used to inform the design process.

# EXPLORE

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## Design Ethnography

### Primary Approaches


- Ethnographic/Open Interviewing
- Observation
- Contextual Inquiry
- Walk-a-Mile (Participant Observation)

# EXPLORE

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## Design Ethnography

Approach gathering data with **curiosity** and **openness** in order to build empathy and learn from others.

A photograph of a crowd at what appears to be a festival or parade. In the center, a person wearing a dark jacket and a black and white striped beanie with a pom-pom sits on the shoulders of another person. In the foreground, a colorful pig mascot with a yellow and green body and a white and yellow striped head is visible. The background is filled with other people and buildings, creating a sense of a busy, public event.

# EXPLORE

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## Design Ethnography

**“What people say and what people do and what they say they do are entirely different things.”**

**- Margaret Mead, Anthropologist**





# EXPLORE

## Design Ethnography

...and what we think  
people do.

“What people say and what people do and what they say they do are entirely different things.”

- Margaret Mead, Anthropologist

# PROBLEM FRAMING

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**“The mere formulation of a problem is far more often essential than its solution,** which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle requires creative imagination and marks real advances in science.”

- Albert Einstein

# PROBLEM FRAMING

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**Framing the problem accurately early on will produce far more innovative and impactful solutions.**

# PROBLEM FRAMING

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## HCD often works with Wicked and Complex Problems

Wicked Problems are characterized by:

- The **resources** needed to solve the problem **change over time**.
- There is **incomplete or contradictory knowledge** around the problem.
- The **stakeholders** have radically **different world views** and different frames for understanding the problem.
- The **interconnected nature** of these problems with other problems.
- The problem is **never solved definitively**.

# PROBLEM FRAMING



CENTER FOR RESPIRATORY DEVICES, FDA

# PROBLEM FRAMING

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EBOLA CRISIS RESPONSE, LIBERIA

# PROBLEM FRAMING

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Statement Starters

**HOW MIGHT WE...?**

# PROBLEM FRAMING

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## Statement Starters

**HOW MIGHT WE...?**



# PROBLEM FRAMING

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## Statement Starters

HOW **MIGHT** WE...?

# PROBLEM FRAMING

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## Statement Starters

HOW MIGHT **WE**...?

• Click icon to add picture

How MIGHT WE ENSURE INFORMATION IS READILY AVAILABLE TO VETERANS?

In what ways might we identify existing community resources?

How MIGHT WE HELP VETS FIND MEANINGFUL EMPLOYMENT... Leverage skills learned in the WAR ZONES

How might we improve the reintegration process for returning soldiers?

In what ways might we provide access to (mental/behavioral) readjustment counseling for family members?

How MIGHT WE ENSURE VETS AND THEIR FAMILIES ARE BETTER ABLE TO NAVIGATE THE INTEGRATION PROCESS.

In what ways might we... assist w/ ~~de-~~ mobilization ~~aculate~~

How might we assist veterans in accessing all of the benefits they are

IN WHAT WAYS MIGHT WE...  
**LEVERAGE VET PRIDE!**

# ENVISIONING

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## Ideation

Ideation is the creative process of generating, developing, and communicating new ideas within a design framework.

# ENVISIONING

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Envisioning new futures requires **building on others ideas** and **'green housing'** ideas that may feel unfinished incomplete or scrappy.



LAB·OPM

# APPLICATION + IMPACT

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# APPLICATION + IMPACT

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Formula for Change, David Gleicher

Dissatisfaction with the present

x

Clear vision for the future

x

Clarity of a path forward

<

Perceived  
Difficulty  
of Changing

**Change is unlikely.**

# APPLICATION + IMPACT

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Formula for Change, David Gleicher

Dissatisfaction with the present

x

Clear vision for the future

x

Clarity of a path forward

>

Perceived  
Difficulty  
of Changing

**Change is likely.**



# **Next?**

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**We offer Fundamentals of HCD workshops on a monthly basis.**

**Join us for an upcoming workshop!**

- **June 7-9**
- **July 12-14**