Innovation Definition: Human-Centered Design Mindset

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# Overview

Human-centered Design (HCD) is about solving problems for (wait for it), humans. As [IDEO](http://www.designkit.org/human-centered-design) puts it:

*“It’s a process that starts with the people you’re designing for and ends with new solutions that are tailor made to suit their needs. Human-centered design is all about building a deep empathy with the people you’re designing for; generating tons of ideas; building a bunch of prototypes; sharing what you’ve made with the people you’re designing for; and eventually putting your innovative new solution out in the world.”*

Human-centered design consists of three phases. In the Inspiration Phase, you’ll learn directly from the people you’re designing for as you immerse yourself in their lives and come to deeply understand their needs. In the Ideation Phase, you’ll make sense of what you learned, identify opportunities for design, and prototype possible solutions. And in the Implementation Phase, you’ll bring your solution to life, and eventually, to market. And you’ll know that your solution will be a success because you’ve kept the very people you’re looking to serve at the heart of the process.

## Key Terms

* **Design thinking:** A human-centered approach to innovation that draws from the designer’s toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.
* **Frameworks**: Visual representations of a system used to highlight key relationships and develop strategy.
* **Prototype**: Quickly created representations of a product, program, or service to test a hypothesis or assumption about the usability and/or functionality of a feature or set of features.

## Why Human-Centered Design?

People design things and experiences to influence and shape the world around them. In that sense we are all designers, but we are not necessarily Human-Centered Designers. HCD takes work, a specific skillset, and deeper level of knowledge and intuition to guide practice and produce trustworthy insights.

In general, HCD sessions:

* Lead to creative problem-solving in complex situations (innovation)
* Establish design and problem-solving as a team sport
* Require diverse teams (designers, business, technical expertise, personality, style, etc.) that must trust each other to tap into the wisdom in the room
* Generate stakeholder buy-in/ownership/investment because solutions are co-created
* Help non-designers better understand the implications of design decisions
* Allow teams to vet design concepts early before expanding lots of resources
* Use rapid prototyping to show or demonstrate concepts for feedback
* Demand testing prototypes with stakeholders--making improvements--and repeating the cycle.

The best problem solving approaches recognize the power of working across disciplines, learning from people, and considering multiple relevant perspectives--all while embracing reality and the constraints that come with it.

# How to Implement Human-Centered Design

There are several schools of thought in human-centered design--the Stanford d.school approach, the IDEO Method, and the Google Design Studio Method.

## Stanford d.School Approach

* Model: <http://dschool.stanford.edu/use-our-methods/>
* 90-minute crash course: For a true crash course in design thinking, introduce your team to design thinking following the video, facilitator notes, and participant handouts available through the d.school:
  + [Crash course video](http://dschool.stanford.edu/crash-course-video)
  + [Facilitator Guide](https://dschool.stanford.edu/groups/designresources/wiki/ed894/attachments/0132b/GG%20Facilitators%20Guide2012.pdf)
  + [Participant Handout](https://dschool.stanford.edu/groups/designresources/wiki/ed894/attachments/6cfe1/TheGiftGivingProjectB%26W2012.pdf)

## The IDEO Method

The IDEO Model starts with building empathy during the discovery phase, then moves through a flow of divergent and convergent thinking and doing.

There are many tools that you can use in each stage and you’ll find descriptions at the [IDEO.org](https://www.ideo.org/) [Field Guide to Human-Centered Design](http://www.designkit.org/). It’s available for free in pdf or in paperback on Amazon.

OpenIDEO and +Acumen also run free online courses that are open to the public:

* [DesignKit: The Course for Human-Centered Design](http://www.designkit.org/resources/5)
* [DesignKit: Prototyping](http://www.designkit.org/resources/8)

If you want to learn how to facilitate the IDEO Method, there’s a [Facilitator Guide](http://www.designkit.org/resources/7) and a course.

## The Google Design Studio

Design Studio is a highly interactive, fast-paced facilitated session following a methodology commonly used in architecture and industrial design, but with some important twists. It has been called the “Iron Chef,” of ideation. It can be intense, focused, and chaotic at times, but those lucky enough to have participated understand the power and effectiveness of this tool. It is mostly effective when you’re working on product or technology innovation rather than process or program.

Teams use the Design Studio methodology to achieve several key goals:

1. Collaborate to understand the nature, opportunities, and constraints of some articulated problem space. If you imagine your current state, and then some positive future state, the problem space (sometimes called the design gap) is the distance between those.
2. Allow ideas from various perspectives and insights to percolate within the team.
3. Solidify ideas and, especially, unstated assumptions from tacit or verbal states into cognitive artifacts that can be shared, evaluated, and iterated upon.
4. Create a culture of shared ownership around future product vision.
5. Generate a lot of ideas very quickly—usually no faster than three hours, and sometimes as long as ten hours.
6. Allow open and honest critique of various concepts.
7. Force participants to defend their concepts and negotiate with other team members.

A Design Sprint has five basic components that allow the group to innovate on an existing product, come up with a new product, or solve a pressing business challenge. As always, the method relies on bringing together diverse teams to:

1. Practice divergent and convergent thinking
2. Build something
3. Test on real users

A Design Studio can be modified from 90 minutes to a full-day session, and finally can span an entire week for a full experience. Here’s a broad outline of a Design Sprint:

* Monday: Unpacking the problem
* Tuesday: Everybody sketches
* Wednesday: Participants sort through and decide what to build
* Thursday: Prototyping
* Friday: Testing prototypes with real customers

In his book *Sprint*, Jake Knapp provides a DIY guide to all five days of the Design Studio. There are also great resources available through [Google](http://www.gv.com/sprint). There are a few Design Studio sprint methods to follow:

* [UIE Method](https://articles.uie.com/design_studio_methodology/): Uses a case study appraoch to solve a problem and aligns with the business. This method focuses on four principles: 1) illuminate; 2) sketch; 3) present/critique; and 4) iterate.
* [Design Studio by Todd Zaki Warfel and WIll Evans](https://vimeo/com/37861987): An offshoot of the charette, an intensive, collaborative, stakeholder meeting for designing, mapping, and planning solutions. Follows the 1) create; 2) pitch; 3) critique method.

# History of Human-Centered Design

Human-centered design was popularized in the 1990s by the Standford d.school and the design company IDEO. It was an evolution of participatory and cooperative design, which is built upon various disciplines like anthropology, sociology, and psychology. The [principles of human-centered design](http://dschool.stanford.edu/wp-content/uploads/2011/03/BootcampBootleg2010v2SLIM.pdf) are:

1. Focus on human values. Empathy for the people you are designing for and feedback from these users is fundamental to good design
2. Craft clarity. Produce a coherent vision out of messy problems. Frame it in a way to inspire others and to fuel ideation.
3. Embrace experimentation. Prototyping is not simply a way to validate your idea; it is an integral part of your innovation process. We build to think and learn.
4. Be mindful of process. Know where you are in the design process, what methods to use in that stage, and what your goals are.
5. Bias toward action. Design thinking is a misnomer; it is more about doing that thinking. Bias toward doing and making over thinking and meeting.
6. Radical collaboration. Bring together innovators with varied backgrounds and viewpoints. Enable breakthrough insights and solutions to emerge from the diversity.

# Future States

TBD

# Related Policies

TBD

# Additional Resources

* [A Brief History of Design Thinking: How Design Thinking Came to ‘Be’](https://ithinkidesign.wordpress.com/2012/06/08/a-brief-history-of-design-thinking-how-design-thinking-came-to-be/)
* [IDEO’s Design Kit](http://www.designkit.org/human-centered-design)
* [David Kelly: Human Centered Design TED Talk](https://www.ted.com/talks/david_kelley_on_human_centered_design?language=en)
* [Wired: Why Human-Centered Design Matters](http://www.wired.com/insights/2013/12/human-centered-design-matters/)
* [White House: Applying Human Centered Design to improve the National School Lunch Program.](https://www.whitehouse.gov/blog/2015/09/04/using-human-centered-design-make-government-work-better-and-cost-less)
* [Design Thinking vs. the Lean Startup](https://www.youtube.com/watch?v=snxicC5cI9A)--Stanford webinar on the philosophical and practical differences between the two methods
* [Design Thinking + Lean Startup: A Google Hangout](https://www.youtube.com/watch?v=JzEg-Y0noRY) that includes Jake Knapp who developed Design Sprints at Google, IDEO’s Tim Brown, and Lean Startup author Eric Reis