DESIGN THINKING TO ADDRESS COMPLEX PROBLEMS

Steve Hornberger, MSW
College for Behavioral Health Leadership
March 1, 2018
The Social Policy Institute and Idea Lab have partnered to help health and human service organizations achieve their goals using design thinking and other creative problem solving tools.
OUR VISION

Design Thinking + Systems Thinking + Strategic Actions

= A Health and Human Service Ecosystem that is Effective, Efficient and Increases the Well Being of Those Served
“A methodology for innovation that combines creative and analytical approaches and requires collaboration across disciplines.”

- Stanford d. School
“Design thinking can be described as a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.”

- Tim Brown, IDEO
Integration of Creativity into the ME Curriculum

REVIEW OF CREATIVE STRATEGIES

1. HARD WORK: Usually comes first. Most of the strategies listed are most useful when you are "blocked".
2. CREATE A SUPPORTIVE ENVIRONMENT
3. RELAX: Even if you are "blocked", tap your subconscious.
4. BRAINSTORMING: Express, Test, Cycle, Defer judgment.
5. LISTS: Goals: A: Flexibility, B: Quantify.
6. METALISTS: Lists of things to make lists of!
7. MENTAL ANALYSIS: Matching up attributes of lists.
8. IDEA LOGS: Drawing, tangibles, specific.
9. HONOR: Conversation.
10. FORCED TRANSFORMATIONS: Checklists, matrices, magnify.
11. SYNECTICS: Direct analogy, personal analogy, compressed conflict, "safe attack".
13. CRITICAL THINKING: Creativity (creativity attitude), what if: "no gravity" question assumptions, "blow off" idea, paint, joke, telling trash can.
14. BACKWARDS: Imagine yourself finished - think back to milestones.
15. UNIFY DIAGRAM: Problem/solution diagram, redefining problem.
16. THINKING - JIM ADAMS: Be aware of context, flexible and depth to implement.
17. TOLD DIAGRAMS: Heat notes contain messy information, messy note contain heat information.

Rolf Paste 1989
Stanford Design
The main tenet of design thinking is empathy for the people you're trying to design for. Leadership is exactly the same thing - building empathy for the people that you're entrusted to help.

— David M. Kelley —
13

WICKED PROBLEMS IN DESIGN THINKING

Richard Buchanan

THE WICKED PROBLEMS THEORY OF DESIGN

Recent conferences on design are evidence of a coherent, if not always systematic, effort to reach a clearer understanding of design as an integrative discipline. However, the participants, who scientists share in the new liberal art of design thinking, they are also masters of specialized subject matters and their related methods, as found in physics, chemistry, biology, mathematics, the social sciences, or one of the many subfields into which these sciences have been divided.¹ This creates one of the central problems of communication:
d. School | Hasso Plattner Institute of Design at Stanford
WHAT IS DESIGN THINKING?
Design thinking in health and human services is a:

- Process for engagement and innovation
- Common language
- Broad and effective toolbox
- Process to guide critical problem solving skills
The goal of the Define mode is to craft a meaningful and actionable problem statement.

- A guiding statement that focuses on insights and needs of a particular user.
- Your Problem Statement defines the RIGHT challenge to address, based on your new understanding of people and the problem.
A good problem statement is one that:

• Provides focus and frames the problem
• Inspires your team
• Informs criteria for evaluating competing ideas
• Empowers your team to make decisions independently in parallel
• Captures the hearts and minds of people you meet
• You ideate to transition from identifying problems to creating solutions for your users.

• Chance to combine the understanding you have of the problem and the people you are designing for with your imagination to generate solutions.

• Pushing for a widest possible range of (divergent) ideas from which you can select, not simply finding a single, best solution.
Various forms of ideation are leveraged to:

- Step beyond obvious solutions and thus increase the innovation potential of your solution set
- Harness the collective perspectives and strengths of your teams
- Uncover unexpected areas of exploration
HOW MIGHT WE...

• Create fluency (volume) and flexibility (variety) in our options
• Get obvious solutions out of your heads, and drive your team beyond them
IDEA LAB

SHARE

EMPATHY

DEFINE

TEST

IDEOATE

PRODUCT

DESIGN THINKING

SAN DIEGO STATE UNIVERSITY
Social Policy Institute
School of Social Work

© Kevin Popović 2016.
• In the early stages of a project the question may be broad – such as “do my users like to use a remote control?”

• Create low-resolution prototypes that are quick and cheap to make (think minutes and cents) but can elicit (additional) useful feedback from users and colleagues.
In later stages both your prototype and question may get a little more refined.

A later stage prototype for the remote controls that aims to find out: “Do my users enjoy using a remote control with voice commands or visual commands?”
• A prototype can be anything that a user can interact with – be it a wall of post-it notes, a gadget you put together, a role-playing activity, or even a storyboard.

• Bias is toward something a user can experience.

• Having them role-play through a physical object or environment that you have created will likely bring out more emotions and responses.
Easily overlooked:

- Once innovation leadership has a promising new idea, the temptation is to go for a quick launch without wasting any more time.
- Time spent on prototyping provides ROI.
- Insures innovative idea has greatly improved odds for success.
Easily underestimated:

• Prototyping may look childish, misconstrued as a playful activity without business benefits.

• Early-stage prototyping ensures potential flaws are discovered early on, when they are not yet costly to repair.
Key Points for Prototyping

• Start building
• Don’t spend too long on one prototype
• Identify a variable
• Build with the user in mind
• Build for the audience
The Test mode is when you solicit feedback, about the prototypes you have created, from your users, and have another opportunity to gain empathy for the people you are serving.
• For a physical object, ask people to take it with them and use it within their normal routines.

• For an experience, try to create a scenario in a location that would capture the real situation.

• If testing a prototype in a real situation is not possible, frame a more realistic situation by having users take on a role or task when approaching your prototype.
Testing will help you:

• To refine prototypes and solutions
• To learn more about your user
• To refine your problem statement
Key Points for Testing

• A rule of thumb: always prototype as if you know you're right, but test as if you know you're wrong

• Testing is the chance to refine your solutions and make them better

• Better to fail fast here than after further time and cost to continue development of the project
The Design Value Index Study shows 10 year returns yielding 2.11 times (211%) that of the S&P 500.
OUR EXPERIENCE
<table>
<thead>
<tr>
<th>Process</th>
<th>Tools</th>
<th>11-18</th>
<th>11-8</th>
<th>11-18</th>
<th>11-18</th>
<th>11-18</th>
<th>11-18</th>
<th>11-18</th>
<th>11-18</th>
<th>11-18</th>
<th>11-18</th>
<th>Est Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathize</td>
<td>Interview</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Dig Deeper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Empathy Map</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Define</td>
<td>Synthesize</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Reframe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideate</td>
<td>Sketch Divergent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sketch Convergent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prototype</td>
<td>Build</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Test</td>
<td>Collect Feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Share</td>
<td>Post to Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

*Problem Statement: How might (who) do (what) to (accomplish what)?*
LESSONS LEARNED
REFERENCES

RESOURCES TO GET YOU STARTED


• IDEO’s Field Guide to Human-Centered Design at http://www.designkit.org/resources/1
For more information, resources and tools visit our website at:

http://www.sdsusocialpolicyinstitute.org/design-thinking-resources/
CONTACT INFORMATION

Steve Hornberger, Director
Social Policy Institute
shornberger@mail.sdsu.edu

Kevin Popovic, Director
Idea Lab
kpopovic@sdsu.edu