Design Thinking

Alberta CoLab Info Sheet

Design thinking is an approach or way of working that starts with an understanding of human needs and motivations to define, frame, and solve problems. It is about creating delightful and quality products, services, experiences, or systems that work for those who use them by getting to the root of why a particular need exists.

Why design thinking?

Design thinking helps people explore and target possibilities and bring new ideas to life. It helps people to:

- **Surface latent needs.** Latent needs are those that people don't know they have. There's the famous quote by Henry Ford: "If I had asked poeple what they wanted, they would have said faster horses." It's challenging to imagine an idea or future that doesn't yet exist - activities and conversations that enable people to play, ideate, and test ideas gives them a way explore systems and see new possibilities.

- **Engage fringe perspectives.** A tenant of design thinking is that a solution that meets the needs of extreme users will meet the needs of the middle majority. (Extreme users or outliers - because they aren't the majority - often have to come up with their own fixes to make things work for them. They are often great at articulating challenges, because they feel them more acutely.) As such, they are sources of great innovation and insight.

- **Design for the 'sweet spot'.** Often, people start brainstorming based on what is viable (what is it possible for us to do right now?) or what is feasible (what can we do that is sustainable?). Design starts with needs - and what could be desirable to do in order to meet those needs. This does not mean designing without constraint; instead, it means starting by exploring what people need and desire.

- **Personalize.** Ever tried on a one-sized-fits-all hat? Maybe it fit, maybe it didn't. Sometimes diverse groups of people have similar needs; other times, needs differ. Design thinking encourages us to create solutions that integrate desirable features, rather than making something that kind of works for most people (but doesn't work really well for anyone). It is about integration over compromise; remixing over giving away.

- **Challenge assumptions.** Design thinking encourages us to test our assumptions: our own engrained biases and ideas about what we think is both the problem and the solution. It offers us methods that take us out of our comfort zones of what we know - or think we know - to put our ideas out into the world, in front of real people who have lived experience and will use the design, and get feedback.

Key Concepts

Empathy

Empathy is the work designers do to understand needs from the users' points of view. Using ethnography or other forms of qualitative research, empathy is key to understanding the 'why' of user needs.

User-Centricity

User-centricity means that understanding and addressing user needs drives the design process. Solutions are based on a deep understanding of users' needs, desires, activities, and contexts. It also means that users are involved in the design process.

Prototyping

Designers take a 'show, don't tell' approach: making ideas tangible early and often, learning how to improve ideas through testing, and iterating. There is a strong orientation toward prototyping - creating preliminary versions of ideas - and experimentation.
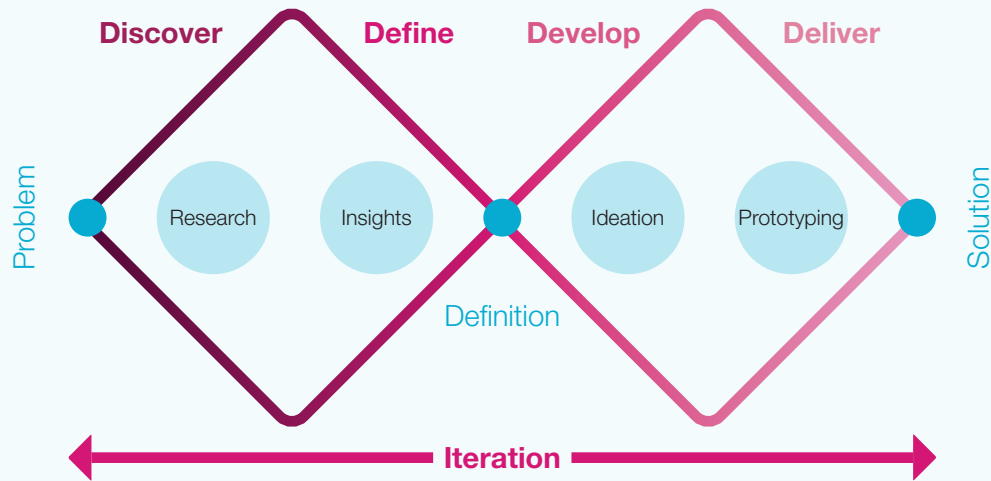
Future-Focus

Design is about creation and has a strong bias toward action: it is focused on what could be and what ought to be - on learning and moving forward. The current state is a springboard to possibilities.

Let's Practice!

Design is about doing! Turn the page for some activities you can use to build a designerly approach into your work.

Try This: Design Tools

Design thinking methods are often categorized by where they land in the **double diamond** - a common model used to show similar approaches to the creative process. During a design process, groups go through cycles of **diverging** (generating ideas and insights) and **converging** (focusing in on what seems promising) as they learn towards a potential solution. This process is **iterative:** ideas are repeatedly developed, tested, and refined, informed by user research. Designers typically follow a **non-linear** process, moving forwards and backwards between the stages.

Discover   **Define**   **Develop**   **Deliver**

Problem

Research   Insights   Ideation   Prototyping

Solution

Definition

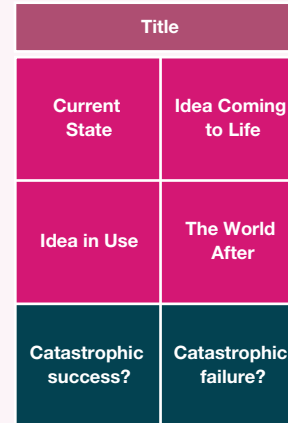◄──────── **Iteration** ────────►

Crazy 8s

Develop: Use Crazy 8s to generate ideas in a creative, visual, and quick way. This activity uses time as a **constraint**, enabling people to focus on generating ideas without **judgment**. At this point in the design process, quantity breeds quality. Build on your own ideas and those of others - see what you come up with!
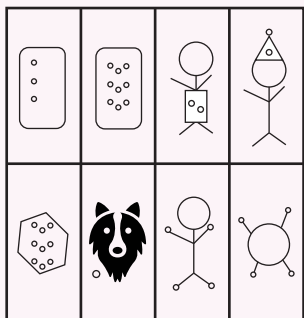
- Fold a large, blank sheet of paper in half four times until you end up with eight squares.
- In five minutes, draw eight different ideas in answer to a particular challenge or question.
- If you have time, give each of your ideas a name.
- Consider doing two rounds of Crazy 8s.
- If you get stuck, try remixing - modify an aspect of one of your existing ideas or put pieces of ideas together in different ways.

Storyboarding

Deliver: A storyboard is like a comic strip - a sequence of images and words that tell a story, frame by frame. Designers use storyboards to sketch the hypothetical journey of an idea - how the different parts of an idea work together, or the story of how an idea may come to life. A storyboard is a type of paper **prototype**; it doesn't have to be perfect! Stick figures and half-baked ideas are great starting points.

Title	
Current State	Idea Coming to Life
Idea in Use	The World After
Catastrophic success?	Catastrophic failure?

- Draw your storyboard frame on a blank page.
- For the following frames, draw a picture:
  - ◆ Current State: what does the world look like now, without your idea? What is the need?
  - ◆ Idea Coming to Life: how might your idea come to life? What action is necessary?
  - ◆ Idea in Use: what does it look like when people are using your idea?
  - ◆ The World After: what does the world look like after your idea? What difference does it make?
- Write a few bullets outlining what might happen if your idea is catastrophically (too) successful and a catastrphoic failure (doesn't work at all).
- Give your storyboard a title.

Persona Mapping

Define: Use personas to **visualize** the diverse **perspectives** of different actors in user-centred design processes. They are most useful when started near the beginning of a design process. A persona is not a real person and it is not a stereotype - they should be **complex** and flawed to be believable. **Specific** details and quotes are more useful than generalizations. Personas should be based on **user research**. Not all the data you need to complete a persona will be readily available. You may have to use a combination of observation and imagination, checking your assumptions and **iterating** your persona as you learn more.

Name

Think   Feel

Hear   See

Say   Do

HOPES   FEARS
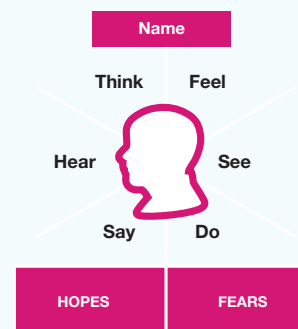
- Select a stakeholder you need to better understand in relation to a particular topic.
- Give the persona a name.
- Capture the information the persona receives in the 'hear' and 'see' sections.
- Discover what they 'think' and 'feel'.
- Draw a face to show their emotional state.
- Observe what they 'say' and 'do'.
- Discover what hopes and fears motivate thier actions.