

INNOVATION PLAYBOOK

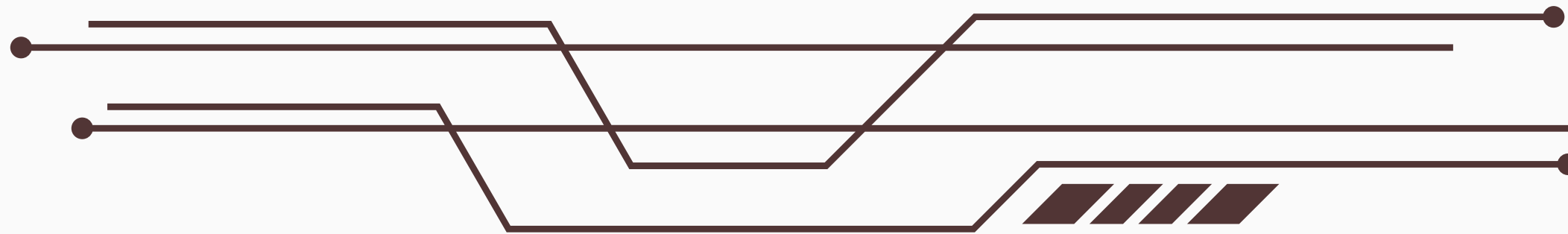
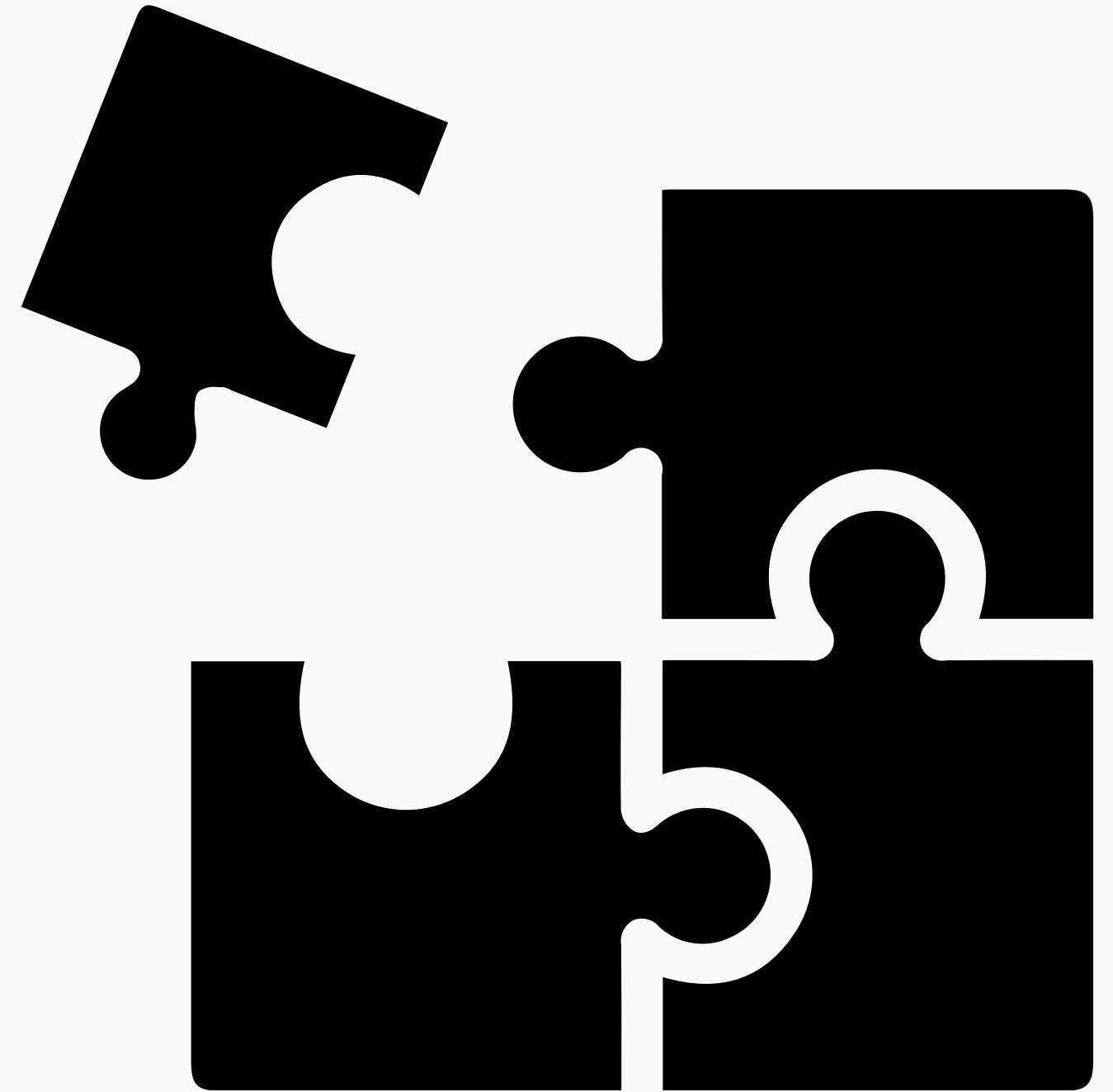


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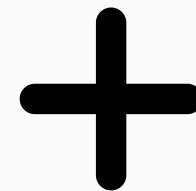
WHAT IS A

HACKATHON?



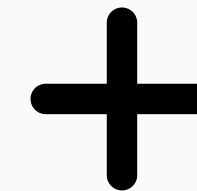
Collaboration

The purpose of a hackathon is to foster a culture of collaboration and innovation in healthcare by bringing together diverse stakeholders to design and develop new and innovative solutions.



Inspiration & Innovation

Through a collaborative and inclusive approach, we aim to generate new ideas and solutions that address systemic healthcare challenges while inspiring and empowering participants to be mindful, think creatively, and take ownership of the innovation process.



Aspiration

At the heart of innovation and codesign is a vision of the future shaped by many voices.



Purpose Driven Mission

Leaders today need to **THINK BIG** and be equipped with the tools to solve systemic issues, support holistic well-being, create spaces for innovative thinking, and take on the responsibility of developing a more resilient healthcare system.

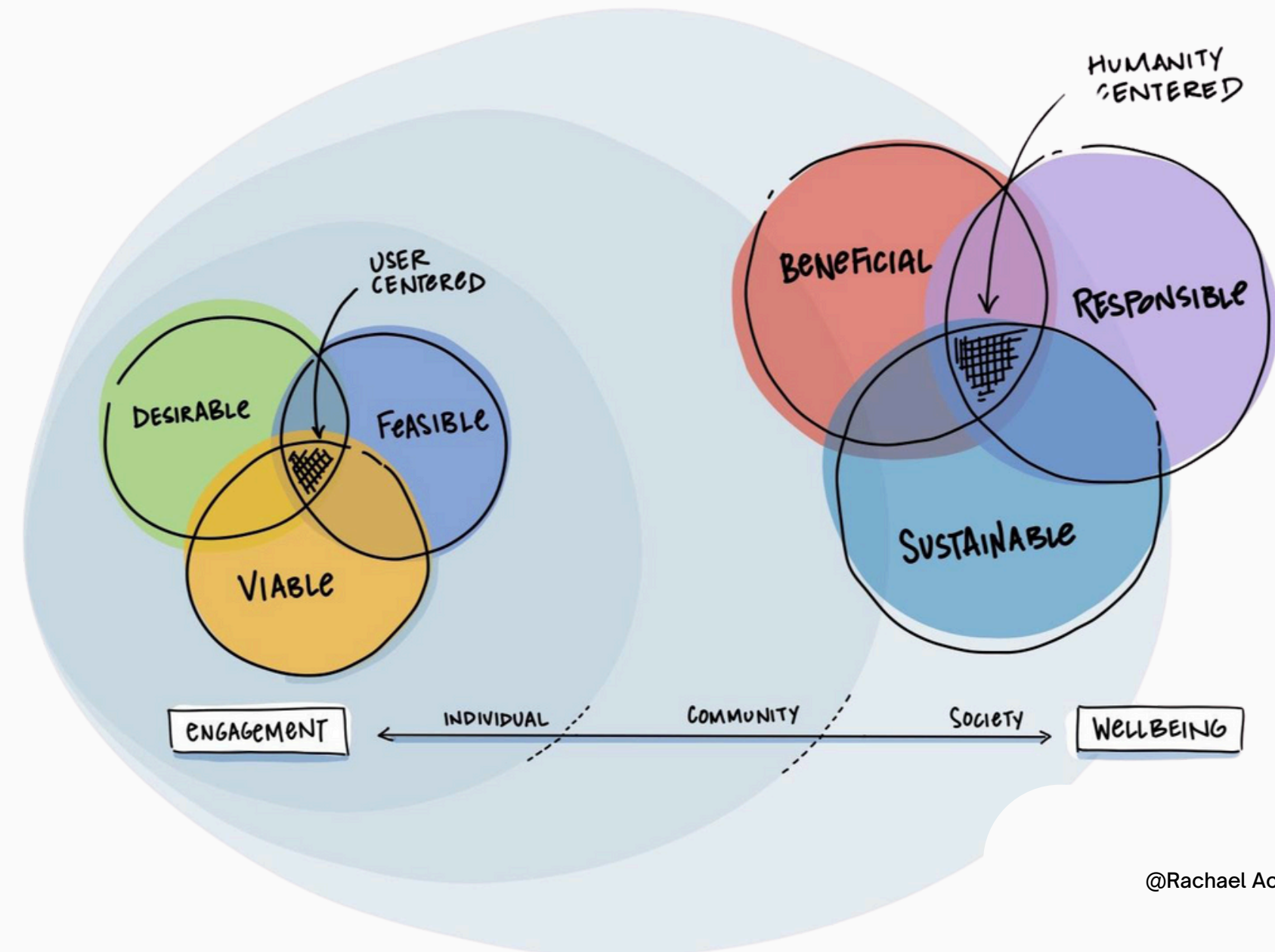
Design thinking became popular in the early 2010s, giving organizations that were developing products and new business models a competitive edge and a path to market leadership.

This **user-centered** approach catalyzed the massive growth of digital products and services that are desirable, feasible, and viable. The user experience (UX) industry emerged in response, armed with this toolkit, to optimize experiences and maximize engagement while balancing the impact of unintended consequences.

The problems in healthcare today are more complex and systemic in nature, in part, thanks to the connectivity technology has enabled. To develop future-ready solutions, it's not enough to be user-centered and meet the needs of individuals. In addition, we need to consider the long-term effects of our solutions on communities and society at large, to be **humanity-centered**.

Solutions today need new tools in our problem-solving toolkit. Tools and governance that bring diverse perspectives together to solve hard problems, and activities that produce artifacts like stories to guide the team on their innovation journey.

We need system-level tools to dig deep into social determinants of health (SDOH), tools that map and synthesize rather than deconstruct and silo, and tools that nudge behaviors and change mindsets. We need tools that break barriers to change culture and grow at a sustainable pace. We need new ways to listen deeply and integrate diverse voices into solutions. We share some of these tools here in the playbook, to use on your journey.

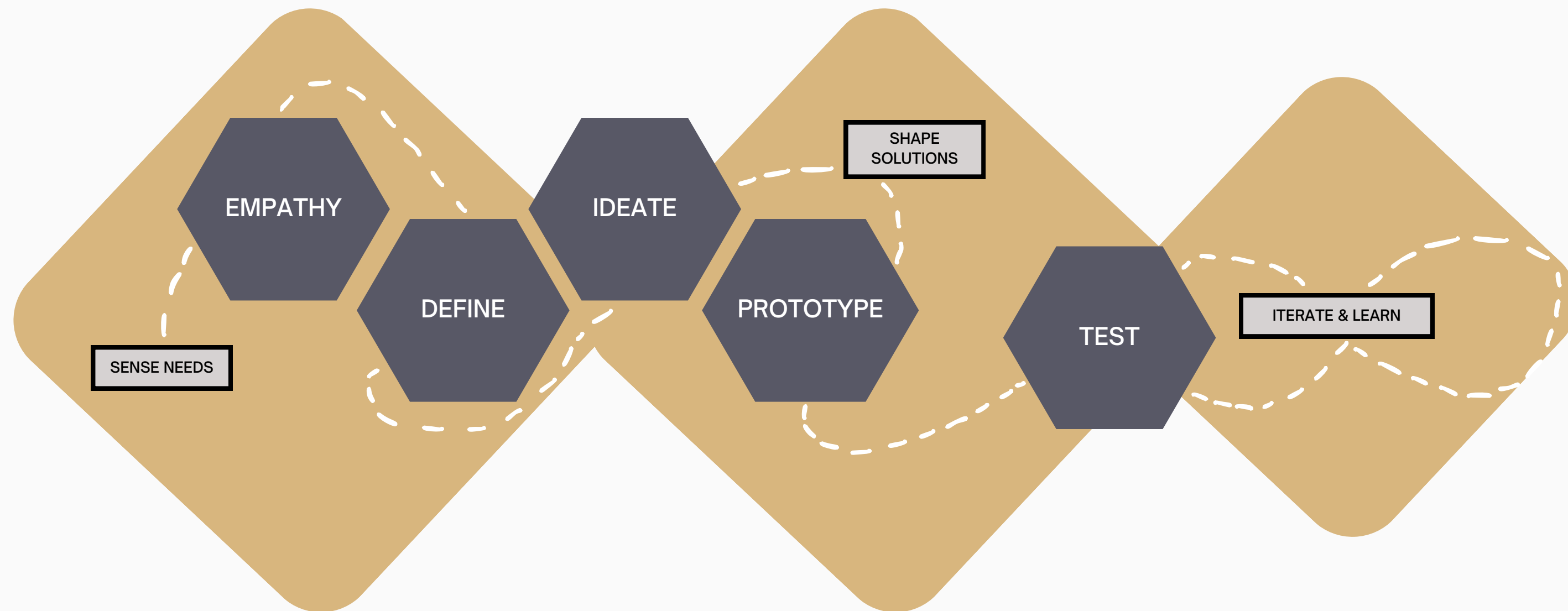


@Rachael Acker



Design Thinking Framework

A human-centered approach to develop an innovation mindset, and through the process of doing, create artifacts of learning. These artifacts created from the exercises are human-centered research deliverables or outputs. These artifacts are evidence of using a design thinking process to tell your story and arrive at your solution.



Learning Objectives

DESIGN THINKING

Empathizing with patients and healthcare providers within the context of an ecosystem.

Persona Development & Ecosystem Mapping

FUTURES THINKING

Spur the imagination by exploring “What ifs” using Design Fiction as a framework.

Future Scenarios, Magazine of the Future

***Tip: All activities in this playbook can be scanned and enlarged to collaborate with your teams.**

GUIDING PRINCIPALS

- Collaborate to develop shared language. Create from diverse perspectives, an inclusive vision, the North Star.
- All ideas are seeds toward a good solution. It doesn't matter where ideas come from or how crazy they may seem.
- Scan the future. Old models don't always work. Change emerges from collective needs. Look at adjacent industries for metaphors and inspiration.
- Everything you see, touch, feel, and experience is designed. Design the future you want to live in.
- Make space for critical thinking. Consider unintended consequences early. Fail forward fast.



MEANINGFUL QUESTIONS = HOLISTIC SOLUTIONS

01 WHAT

- What is the problem?
- What would we like to know?
- What are the assumptions should we challenge?

02 WHO

- Who is involved?
- Who is affected by the situation?
- Who decides?

03 WHERE

- Where does the problem occur?
- Where was it resolved?
- Where did similar situations exist?

04 WHY

- Why is the problem important?
- Why does it occur?
- Why was it not yet solved?

05 WHEN

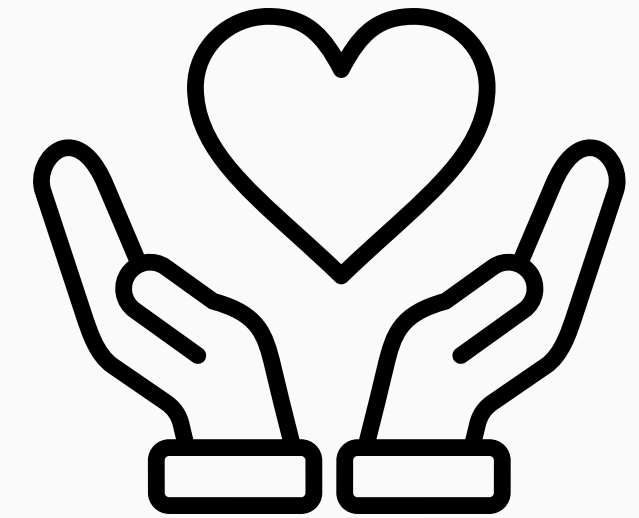
- When did the problem begin?
- When do people want to see results?
- When can the intervention start?

06 HOW

- How could this problem be an opportunity?
- How could it be solved?
- How has it been tried to be resolved before?



EMPATHY



UNDERSTAND DIVERSE PERSPECTIVES

Gain insights into others' experiences, needs, and pain points through direct observation, interviews, and other research methods. This will help you design solutions that are tailored to the specific needs of a target audience. Here we define the target audience as the population who will be impacted by the solution.

IDENTIFY UNMET NEEDS

By listening and observing, help identify unmet needs that may not have been previously considered. Learn how to dig deeper to get to patterns of behavior and learn how to reframe observations from a holistic perspective. The process in this section will help you challenge assumptions about the target audience and build evidence for defining the unmet needs.

BUILD TRUST

Immersive empathy activities help you build trust with colleagues, patients, and families, which in turn build resilient teams. By demonstrating that you understand and care about their perspective, you will be able to establish a stronger relationship with your staff, leading to staff retention.

TRAUMA-INFORMED LENSE

Applying a trauma-informed lens to empathy research prioritizes safety, respect, and empowerment for those impacted by trauma. This approach aims to create a safe and supportive environment for participants, respect their autonomy and choices, and minimize triggers or re-traumatization. By prioritizing sensitivity to the needs of participants, this approach can build trust, establish rapport, and create a more impactful experience.



EMPATHY



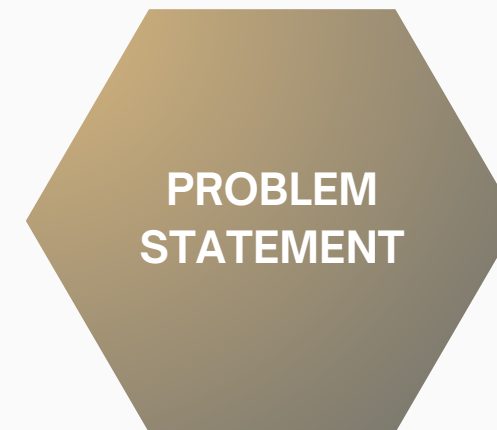
DIVERGENT THINKING

DIVERGE



- The process of exploring a wide range of perspectives and experiences related to the challenge topic.
- Requires the ability to be open to including diverse perspectives in your thinking.
- Check assumptions about what you think you know about the problems at the door and make space for alternative perspectives.

CONVERGE



CONVERGENT THINKING

- Focuses the problem on a specific area of need to address in the later phases.
- Requires the ability to synthesize and organize the information gathered through the empathy experience research process without bias.
- Involves identifying patterns, themes, and insights that emerge from the research to develop a deeper understanding of needs and challenges.



Activity: A day in the life...

WHAT YOU'LL NEED

Everyone on the team should have a large index card and a fine marker. Make sure your writing is legible and share only what you feel comfortable sharing with your team.

INSTRUCTIONS

1. Describe your role, starting with your name. List the top 3 things that keep you up at night, the problems or barriers you face in your daily work.
2. Describe who you're responsible for and the decisions you make that impact them.
3. PAUSE and appreciate all you do.
4. Now share what you wrote. Pass your card to the person next to you.
5. Reflect on what was written and share your perspective on the problem. How might they reframe the problem to feel more in control of their situation?
6. Add where and who you go to to help you make those decisions.
7. Share what you do when you face challenges, before you start a task and after.
8. Describe the stakeholders within your system of control.
9. Repeat till your card arrives back to you.
10. Discuss as a group. What did you learn? What was surprising?



Activity: Find Unmet Needs

BEFORE YOU START...

If you're running this activity in person, print the empty Empathy Map on a large piece of paper. Grab enough sticky notes for everyone on the team to write on with markers. Remember - one thought per sticky note.

INSTRUCTIONS

1 - To gather knowledge for problem-solving, you will need to gain a holistic understanding of your target audience, from their individual experiences to the context of how they live their lives. Understand their experiences through a socio-economic lens.

2 - In this exercise, your goal is to arrive at a short narrative that describes the problem for someone who best represents a target audience. As you define the audience and frame the problem, notice if you're intentionally or unintentionally excluding anyone.

3 - Give this person a name and attribute, e.g. Misunderstood Maya. Step into their shoes and imagine walking through their day from the moment they wake up.

4 - Find quotes to best capture their emotional burden. E.g. "It's not fair! I hate needles! I wish I was normal."

5 - Once you have a good map, generate a list in the Pains and Gains section. Apply a hypothesis approach (IF...THEN) when generating this list.

Empathy Map

STATE PROBLEM / OPPORTUNITY

1 THINK, SAY, DO, SEE, HEAR & FEEL

2 BELIEFS & VALUES

3 RELATIONSHIPS & INFLUENCERS

4 SOCIAL STRUCTURES & CULTURAL NORMS

PRIMARY USER

GAINS

PAINS



Activity: Map Care Delivery

From the Empathy Map, extract interventions or interactions to derive the different stakeholders influencing decisions made by your persona. Start with your persona at the bottom center and work one circle at a time.

INSTRUCTIONS

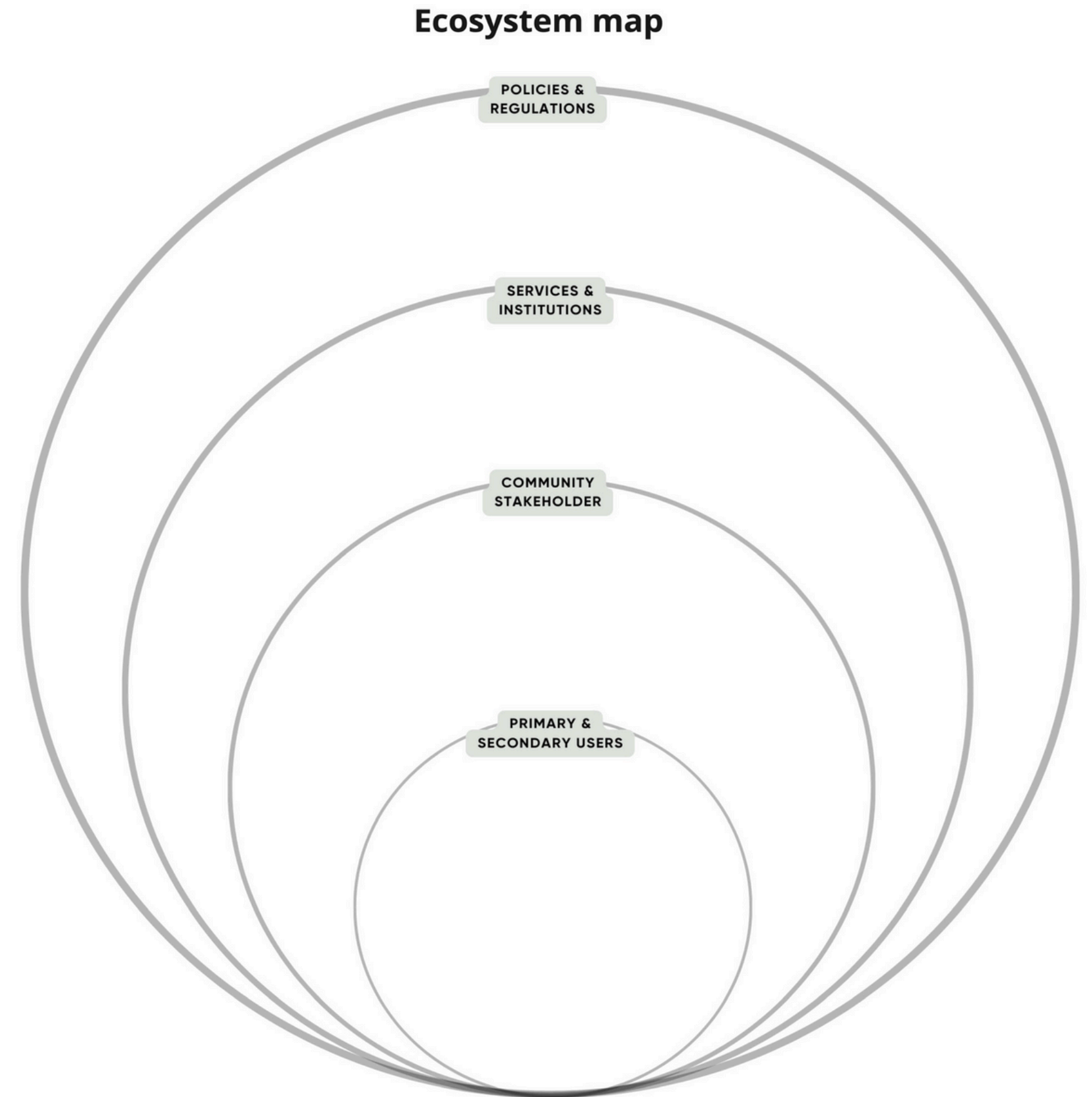
As a group, add stickies that describe interactions across the ecosystem from the perspective of different stakeholders, e.g. buying groceries from the grocery store across town.

1 - Reimagine Intervention

- Who are all the stakeholders you need to involve?
- How does the intervention fit into existing services or is this an expansion of existing services?
- Are there policies or regulations around your intervention?

2 - Feedback Loop

- What makes data actionable and relevant?
- Where is data collected to inform the intervention?
- What is the impact on patient-provider interactions?
- How are health outcomes measured to continuously adapt to new learnings?



DEFINE



FRAME THE PROBLEM

The Define phase is about framing the problem that needs to be solved in a way where the scope, intent, and outcome for an intended audience are clear. The process should feel like focusing a camera lens on an object within the frame. Learn how by creating a story around the problem, using metaphors, in narrative and visual form, so that others might understand and empathize with the problem.

SYNERGISTIC COLLABORATION

Team collaboration is a key principle in design thinking to drive delivery of human-centered solutions. Participatory design sessions create the space for a wider ecosystem of participants, like clinical staff to come together to share experiences and have ownership of the solution. Design sessions develop critical thinking skills that can result in new shared language. This shared language is needed to increase communication channels across the healthcare ecosystem. Shared language is a mechanism for leaders to access valuable insights and timely feedback from the front lines.

EMERGENT METAPHORS

Through a shared understanding of the problem during the design process, metaphors will emerge to describe the problem. These metaphors will help you navigate ambiguity and make sense of patterns of behavior. The definition that emerges can then be presented as a current state journey map. When the work is from shared effort, everyone's perspective will be reflected in artifacts, including discussions around unintended consequences.



DEFINE



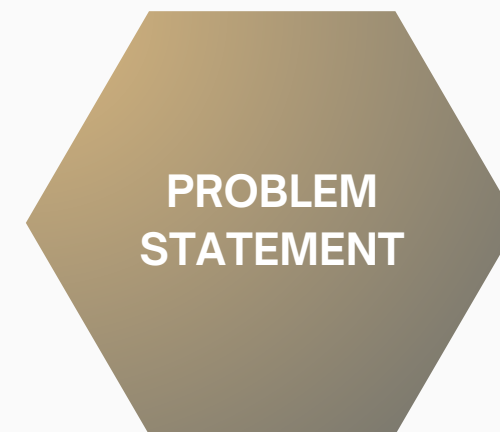
EXPLORATORY INVESTIGATION

DIVERGE



- The process of framing a problem requires uncovering underlying factors that contribute to the problem. Exploratory research involves methods to gather data from various sources and observations, then synthesizing into themes and patterns of behavior.
- This is typically the hardest part of the process and requires putting aside our biases and preconceived notions. Spend most of the time framing the problem and you'll spend a lot less time solving it.

CONVERGE



DESIGN CHALLENGE

- A problem or opportunity is presented as a design challenge in order to attract innovative and viable solutions.
- A design challenge helps develop creative thinking and problem-solving skills by presenting the opportunity in a way that anyone can resonate with. The challenge frames the unmet need as spanning beyond the individual and describes context of use in community, change behavior that benefits others, which then helps the team uncover strategies to mitigate harm in the future.



Activity: Defining a Point of View (POV)

BEFORE YOU START...

The team should deeply understand who has the lived experience and the problem to focus on from the Empathy and Ecosystem Maps.

The goal of this activity is to identify specific use cases for your innovation as a way to craft a problem statement that gets to the crux of the issue.

INSTRUCTIONS

1 - Use the Narrative Worksheet to dig into the behavioral patterns and values around the core challenge to develop your POV. This will help you get to your elevator pitch.

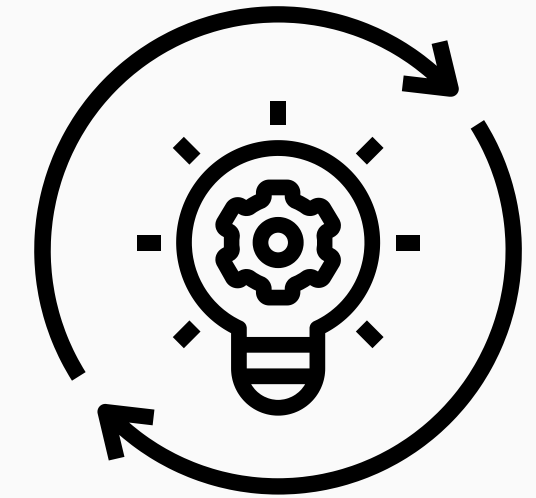
2 - Collaboratively incorporate insights from the Empathy and Ecosystem Maps to complete the worksheet. Focus on reducing the words to just those that best articulate your POV in the most memorable way.

3 - Get feedback on your POV. Share it with staff and colleagues. What was their reaction? Did they confirm your POV? What feedback contradicts your POV?

NARRATIVE WORKSHEET			
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">WHO</div> <p>Build empathy for the lived experience, Pick a feeling to evoke, i.e. anger, inspiring, empowering.</p> <p><i>Imagine how __ feels?</i></p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">WHAT</div> <p>Challenge assumptions or share evidence that this problem is worth paying attention to.</p> <p><i>The research shows that this is important because</i></p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">WHY</div> <p>Describe the urgency around the gap in care and need for a better intervention strategy.</p> <p><i>If we don't do something now....</i></p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">WHERE</div> <p>Contextualize the unmet need as a point of view, identify key pain points and unmet needs faced?</p> <p><i>Now imagine [persona] being able to...</i></p>
<p><i>"Imagine teenagers like Maya who struggle with the stigma of living with diabetes..."</i></p>	<p><i>"The impact on their mental health affects more than X% of the population"</i></p>	<p><i>"What would you do if this happened to a loved one? Maya deserves better. "</i></p>	<p><i>"To live their best lives, we believe Maya will need [X] when ..."</i></p>



IDEATE



BACKCAST FROM THE FUTURE - WHAT IF...

Understand how the curiosity of change can inspire you to think differently about the present. We're NOT attempting to predict the future, but rather to illuminate unexpected implications of present-day issues. The emphasis isn't on what will happen, but the plausible futures, of what could happen, given various change drivers.

HOW MIGHT WE...

A way to become more curious. "How might we" (HMW) is a phrase commonly used to reframe a problem or challenge into an open-ended question that invites creative solutions. It is a tool for generating ideas and solutions and building on each other's ideas. Draw analogies to natural systems like a murmuration.

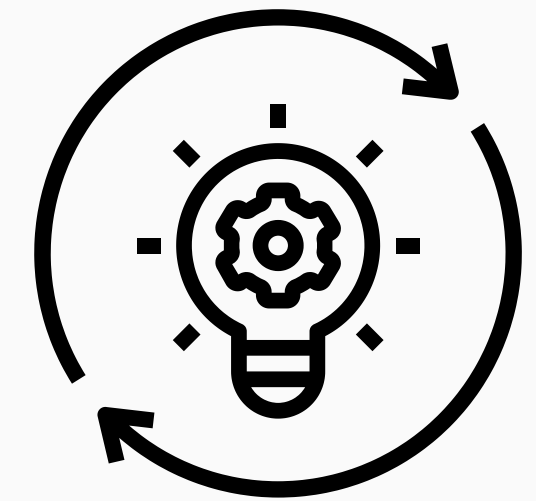
Add a biomimicry lens to generate ideas inspired by nature, for example, how might we create a community that can adapt to changes like a murmuration. With this slight shift in framing, we've opened up space for other disciplines to influence the design and development of our solutions.

CONCEPT DESIGN

To create solutions that are relevant, effective, and usable, the outcomes of the exercises, these artifacts, are generated to be shared so that you can continuously improve on how well the idea meets the needs and perspectives of those who will use them.



IDEATE



NORTH STAR

DIVERGE



- A vision that guides the development of the solution is sometimes described as a set of guiding principles.
- It ensures that the team is working towards a shared goal and that individual decisions and ideas are aligned with that goal. It also provides a way to evaluate the success of the project and determine whether it has achieved its intended impact.

CONVERGE



PARTICIPATORY CO-DESIGN

- Participatory design is an approach designers use to lead workshops, interviews, and other activities that invite end-users to share their insights and experiences and align stakeholders.
- These insights are then used to inform the design process, with the healthcare team working alongside end-users to co-create solutions that meet their needs and preferences.



Activity: How Might We...

WHAT YOU NEED TO KNOW

Get the most obvious ideas out first. The goal is to describe how the solution might work, in as much detail as you can, across different dimensions. This is where having a diverse team is critical, so each perspective adds clarity and depth to an idea.

For instance, a clinical lens will ensure the solution is safe and efficacious, a design lens will ensure the experience is frictionless and beneficial, an engineering lens will ensure the experience can be feasibly delivered, and a strategic lens will help the leaders guide teams on the optimal path to operationalize the solution.

INSTRUCTIONS: REFER TO THE ARTIFACTS CREATED: EMPATHY MAP, ECOSYSTEM MAP, ETC.

1 - Imagine the solution your target audience needs. In the first 4 minutes, come up with one idea in the topmost panel. Describe visually, by sketching and using comics, rather than writing a narrative. In the last 10 seconds, give it a headline that best represents the value proposition.

2 - Pass your idea to the person on your right. In the second panel on top, build on the idea in the first panel. You'll have 2 minutes before passing it on again. Repeat till your idea returns to you.

3 - Take 5 minutes to discuss. Then sketch out the best idea to move forward with. It's sometimes hard to let go of your own ideas. To make it easier to let go, develop an idea library for all the potential solutions that didn't make the cut. Everyone is going to have ideas throughout the project, so create a database of ideas you might come back to at a later time.

How Might We.....

BIG idea here

This is a good idea because....

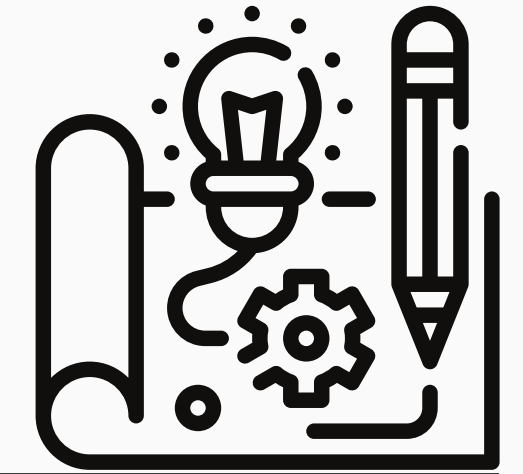
The challenges we will face with this idea are.....

We can overcome these challenges if we...

The unintended consequences could be...



PROTOTYPE



RAPID PROTOTYPING

Getting to the right solutions requires a mix of art and science to fit a market need. How do you get to the key features that meet a need without falling into the one-size-fits-all trap?

Rapid prototyping is a process of quickly creating and testing a rough model or low-fidelity solution. It utilizes available resources and materials to create a version of the solution that can be interacted with, to be tested and refined before investing more time and resources in its development.

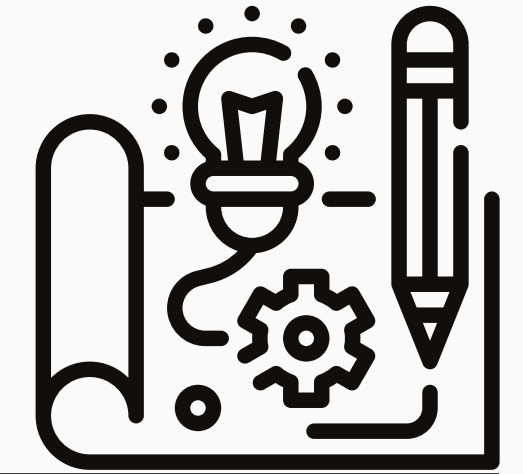
FUTURE SCENARIOS

How you build the right thing is to understand what decisions people make, their mental model, and how your solution helps them make better trade-offs within different contexts.

Future scenarios is a method for exploring different possibilities within environments of continuous transformation. In healthcare, future scenarios would involve multiple technologies and social, economic, and political factors. For example, a future scenario might describe how advances in AI, genomics, and robotics could transform the way healthcare is delivered and accessed at community health centers.



PROTOTYPE



NORTH STAR

DIVERGE

NORTH STAR

- Design goals, narratives, and sketches that communicate key ideas and explore potential variations, which can then be prioritized later. It could represent a use case but shouldn't include too much detail, just enough to gather feedback without too much explanation.
- Typically designed using digital tools like Miro, Figma, AutoCAD, and Adobe Design suite.

CONVERGE

MINIMUM
VIABLE
PRODUCT
(MVP)

MINIMUM VIABLE PRODUCT (MVP)

- A minimum set of features can be released to the market to test its viability and gather feedback from customers. It is a key concept in Lean Startup Methodology.
- The MVP is how your solution is experienced by the target audience. It is functional, usable, and provides value to the user, then improves, in iterations, over time.



Activity: Magazine Cover of the Future

WHAT YOU NEED TO KNOW

Work as a team to envision your idea as if it has already been implemented in 2034 and is what is featured on a major healthcare magazine cover.

INSTRUCTIONS

Together, as a group, complete the following sections using text and visuals.

- Magazine title
- Provocative headline
- A feature story abstract that highlights the best-case scenario
- Advertisement of a new product or service
- Opinion piece written as a worst-case scenario

Note: A provocative headline should be bold and inspire action, e.g. **“Uber & McDonald’s cure the obesity pandemic”**

The image shows a template for a magazine cover layout. It consists of a large rectangular frame divided into three main sections, each with a label in a small grey box at the top left of the section:

- TITLE:** A large empty rectangular box at the top of the page.
- HEADLINE:** A large empty rectangular box in the middle of the page.
- FEATURE STORY:** A large empty rectangular box at the bottom of the page.

In the bottom right corner of the entire frame, there is a small grey box labeled **ADVERTISEMENT**.



TEST



QUALITATIVE RESEARCH

A type of research to continuously validate that the solution matches changing needs:

- If the solution is a product or service, who will be using it?
- What are their needs, goals, and motivations?
- What challenges do users face when interacting with the solution?
- How can the solution be improved to better meet needs and expectations?

ETHNOGRAPHIC RESEARCH

A type of qualitative research that involves observing and interacting with individuals or groups within their natural setting to gain an in-depth understanding of their behaviors, beliefs, and cultural practices.

It involves the researcher immersing themselves in the culture or community they are studying and using a variety of data collection methods, such as interviews, field notes, and document analysis, to gain a comprehensive understanding of the group's experiences and perspectives.

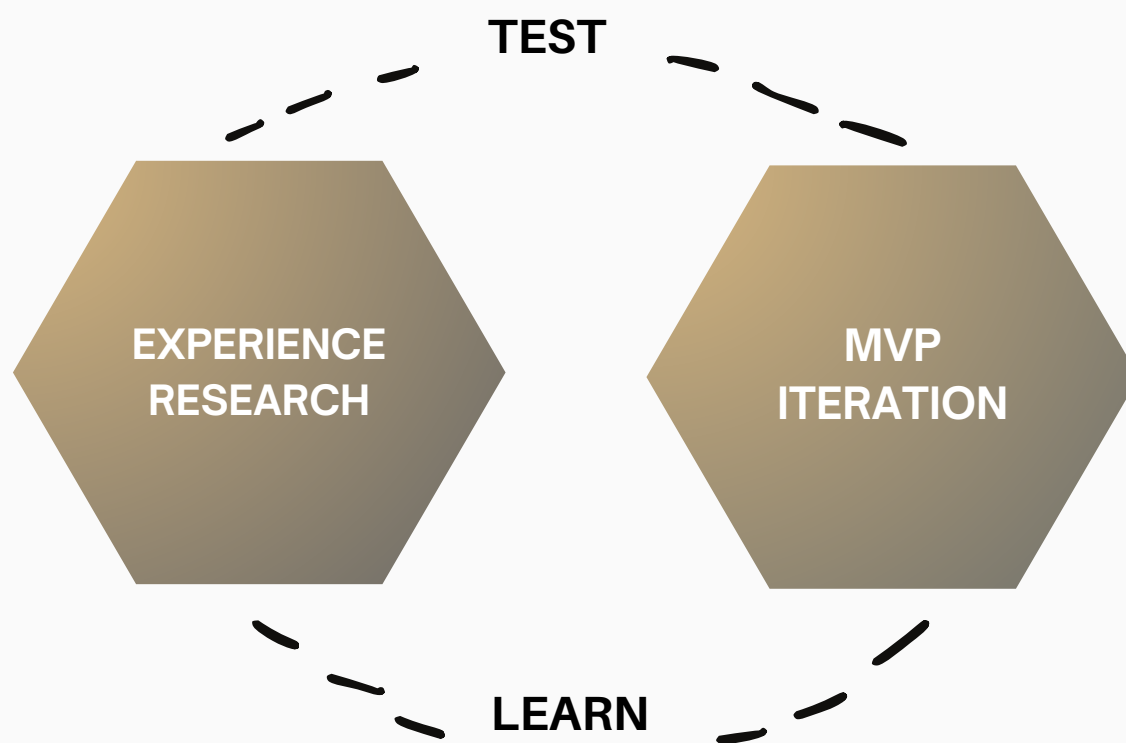
ORGANIZATIONAL RESILIENCE

As part of this section, we introduce the need for a resilient team and what that looks like. We define resilience as the ability of a team to collectively anticipate, respond, and adapt to changes and feedback.

It requires the ability to learn continuously, experiment with new ideas, sense potential new disruptions within a system, revise approaches based on new knowledge, deploy new strategies, and coordinate communication across teams and systems. A resilient team can respond to adversity and maintain the resources needed to persevere.



TEST & LEARN



LEARNING EXPERIMENT

- Hypothesis-driven testing and experimentation in the context of the user experience is the process of formulating and testing assumptions or hypotheses about a new behavioral intervention or solution.
- The goal is to learn how the solution can be improved to evaluate the effectiveness of the solution for a target audience.

FEEDBACK LOOPS

- The goal of feedback loops is to rapidly iterate and refine the solution until it meets a desired outcome or validates a hypothesis.
- Feedback loops help teams continuously improve their solutions from data gathered during user testing and incorporate them into the design process. It helps ensure that the final solution is not only usable and functional but also addresses the needs and expectations of the target audience and stakeholders.



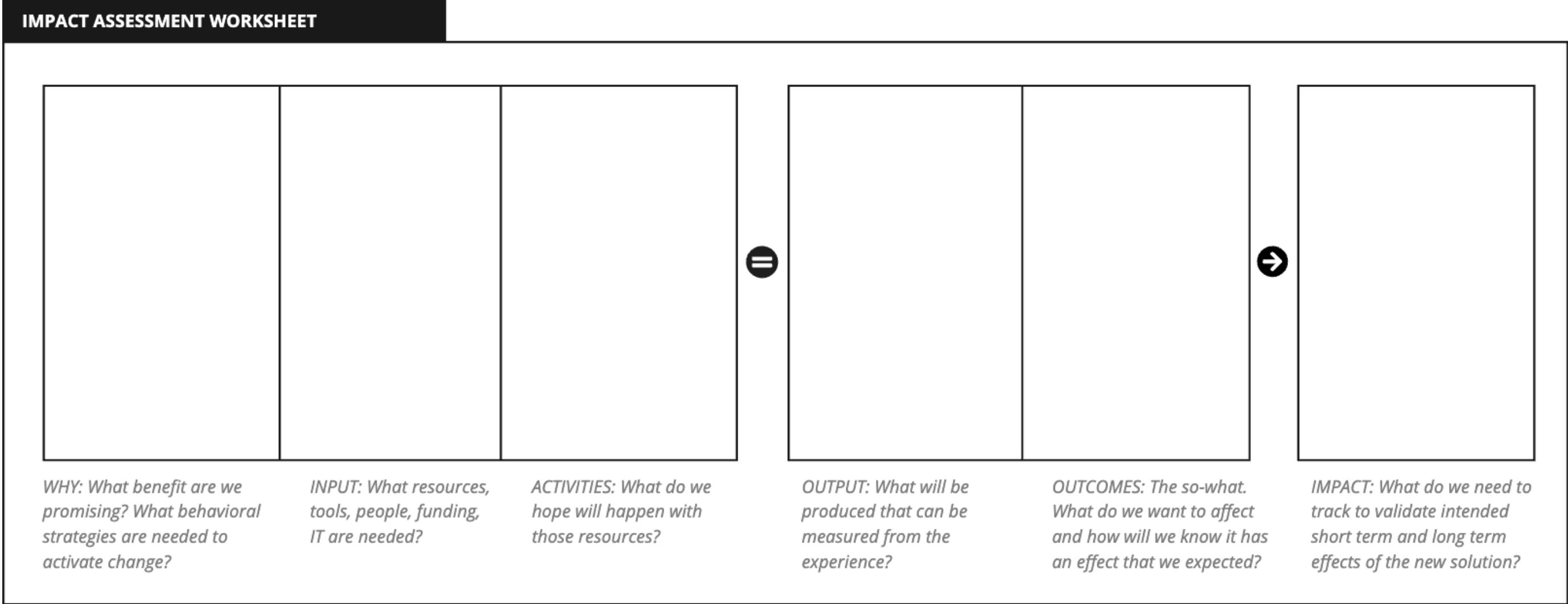
Activity: Meaningful Measures to Assess Impact

WHAT YOU NEED TO KNOW

Define with stakeholders what is important to measure to indicate progress. What’s the operational model and governance that’s needed to enable successful transformative change. The Impact Assessment worksheet will help you ask critical questions to arrive at measures that are meaningful to track.

INSTRUCTIONS

- 1 - Complete the Impact Assessment Worksheet by reviewing the questions under each box.
- 2 - What teams and spaces will be needed to manage change?
- 3 - What will you measure to validate impact and track progress?
- 4 - Highlight any unintended consequences. E.g. if everyone works two 12-hour shifts, an unintended consequence could be no continuity in patient care.



References

Behavior Change Strategies



Lean Development (MVP)

<https://blog.crisp.se/2016/01/25/henrikkniberg/making-sense-of-mvp>

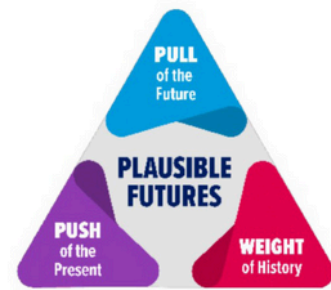
Sketch Notes

<https://evalotta.shop/collections/littlepeople>

Additional Literature



Futures Thinking



The **Futures Triangle**, a tool developed by [Sohail Inayatullah](#), offers us a way out of this trap of succumbing to urgent needs.

Future State Journey Map

<https://www.nngroup.com/articles/journey-mapping-approaches/>



Futures Thinking Now: Drivers of Change and Futures Triangle
How can we apply futures thinking tools, such as the Futures Triangle, to help us look at possible futures in times of crises?

<https://knowledgeworks.org/resources/futures-thinking-now-drivers-change-futures-triangle/>

Additional Tools & Resources

<https://raindrop.io/rachaelacker/design-and-innovation-30395844>



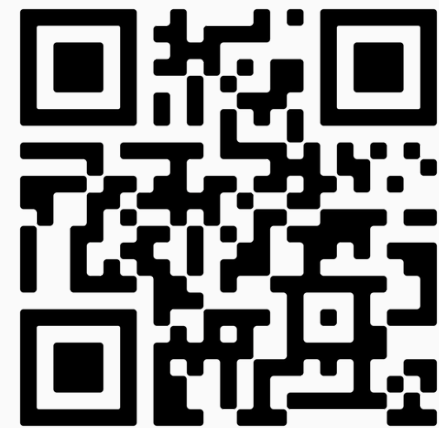
Notes



Notes



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