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This handbook is for educational purposes only and is intended to be an introduction to various strategies that may be used to improve healthcare systems. It is not intended to apply to any particular fact situation, provide specific advice, or guarantee any particular result can be achieved in any specific matter. Reliance on any information herein is solely to the risk of the reader. The handbook is not a substitute for professional consultation and we recommend you always seek the advice of a qualified professional with any questions you may have regarding strategies described.



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About CERC

Stanford's Clinical Excellence Research Center (CERC) is the first US academic medical center dedicated to researching and teaching processes that promote high quality healthcare services while lowering the overall cost of care. Its publications have been frequently cited by national and international authorities and its trainees have played important roles in healthcare organizations. With the CERC High Value Health Care Incubator CERC aims to promote innovation in California safety net clinics and other non-profit organizations serving the Medicaid/MediCal population.

<https://med.stanford.edu/cerc.html>

What is in this booklet?

Introduction to the CERC High Value Health Care Incubator

Before Pitch Night



Phase 1: Scope

Explore the data and the organization. Determine what to work on.



Phase 2: Prepare

Gather your team and plan the project.

Pitch Night

During Design Camp



Phase 3: Discover

Conduct research in order to understand the problem space.



Phase 4: Synthesize

Interpret learning and define opportunities.



Phase 5: Generate

Brainstorm and conceive new ideas.



Phase 6: Prototype

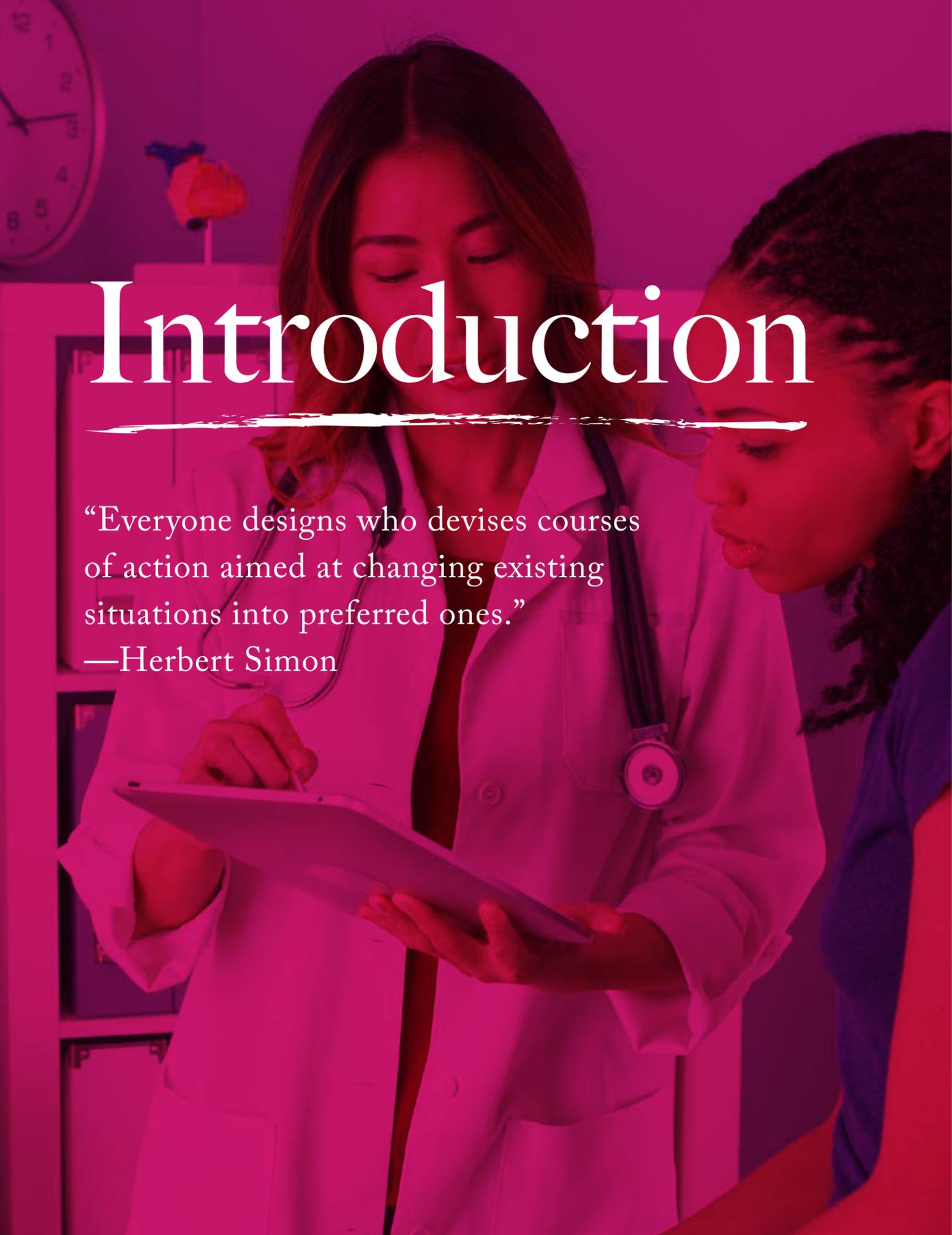
Select promising ideas to develop and test.

After Design Camp



Phase 7: Pilot

Pilot your idea in successive stages. Prove its value by measuring impact.



Introduction

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

—Herbert Simon

Core Values

The CERC High Value Health Care (HVHC) Incubator combines four core values that makes it unique from most programs or policies that encourage innovation in the safety net sector:

1. The HVHC Incubator **solicits problems from clinics** providing care to safety net patients and guides their staff through a problem-solving process. The CERC Incubator aims to find ‘bottom-up’ solutions that can be scaled from clinic-to-clinic.
2. The HVHC Incubator **supplies hands-on coaching** and support to the clinics and teams during the year-long process of problem discovery, synthesis, brainstorming, prototyping and pilot testing.
3. The HVHC Incubator uses several techniques that have emerged from industry and academia that have proven successful in innovation projects. These include **driving change with small teams, human centered design methodologies and rapid cycle testing**.
4. The HVHC Incubator uses the **power of competition** to select candidate proposals to select those most likely to have positive impact and to scale across multiple sites.

CERC HVHC Incubator

The year-long program will follow this process:



How the Incubator works

The HVHC Incubator is a year-long project involving three Northern California FQHC clinics that seek to solve an operational problem affecting their clinical practice and the communities they serve. The three FQHC clinics participating in the 2021-2022 Incubator will be selected from applicants during a "Pitch Night" event (9.15.21). The organizing theme of HVHC Incubator's inaugural year (Fall 2021-Fall 2022) is 'Redesigning Access'.

FQHC clinics wishing to participate in the HVHC Incubator must first identify and describe an access problem in their practice having downstream negative effects on service, outcomes, and cost. Clinics must also carefully select a small team of staff who can participate part-time in an online "Design Camp" where they will be joined by design experts and CERC faculty. A detailed description of how an access problem is proposed and how team selection is made is found in the formal application.

Time Requirements

Design Camp will be an online experience that will require participation in 2x2hr meetings per week. With related project work outside this meeting, this is expected to add up to an expected average time commitment of 8hrs per week per team member.

Why Design Camp?

Innovation has been viewed historically as an innate, qualitative skill possessed by only a few. In recent decades, however, problem-solving and innovation have been extensively studied by several disciplines including psychology, sociology, economics and engineering. From these studies there has emerged both theory and evidence to form a 'science of innovation' that describes explicit mental frameworks and methods that can improve problem solving in numerous settings.

The 'science' of problem-solving and innovation has moved forward rapidly, acquiring, the general moniker of 'design thinking.' Formal institutions such as Stanford's Hasso Plattner Institute of Design, known as the 'D School' have greatly contributed to the field, partnering with the local tech industry and the innovative Silicon Valley design firm IDEO and others.

A distinct branch of design thinking that is especially useful for complex problems is human centered design. This approach emphasizes user experiences, identifying needs and individual 'work-arounds' as central factors in a multi-stage pathway of defining, ideating, prototyping and testing potential solutions. Design thinking and practices are now widely used in a variety of settings including within health care, where the phrase 'patient-centered' has lately become a cliché. In efforts to make care more effective, health care organizations often struggle to engage with the people most responsible for health outcomes - the care team and the patients themselves. Leading healthcare organizations including the Mayo Clinic, Kaiser Permanente, Sutter Health, Robert Wood Johnson Foundation and Stanford School of Medicine have applied elements of human centered design to improve processes and outcomes.

“We can't solve problems by using the same kind of thinking we used when we created them.”

—Albert Einstein



The designer's mindset

Although we describe a specific set of tools, Design Thinking is as much a mindset as a methodology. As an approach to innovation, it is characterized by principles as well as processes, values as well as data, inspiration as well as analysis. For designers, these mindsets are the foundations upon which effective initiatives are built. Design Thinkers tend to be optimistic, empathic, inclusive, experimental, curious, and action-oriented:



Optimistic

The designer's mindset is fundamentally optimistic and focused on what could be; without the confidence that we can achieve positive results, what is the incentive to dive in and take action? A room full of design thinkers will resonate with “What if...?” and “How might we...?” rather than “That will never work,” or, “We tried that last year.”



Empathic

Rather than frame their approach in terms of technological capabilities or institutional realities, we approach problems from the perspective of the people who experience them. We listen to what they say (and don't say), observe what they do (and don't do), and elevate their “local” expertise.



Inclusive

To unlock the power of collaboration, the best ideas must be permitted to rise to the surface, irrespective of their source. We identify opportunities collectively, we conceive and refine them in concert, we prototype solutions and test them with people in real-world situations, and everyone shares credit and assumes responsibility. Design Thinkers are more likely to speak in terms of “we” and “us” than of “I” and “me.”



Experimental

We emphasize the freedom to explore many ideas with the expectation that the eventual solution will be the richer and more sustainable. The experimental mindset is comfortable with ambiguity and trusts in the process to open up ideas to life in a repeating learning cycle.



Curious

The most powerful insights often come from the most unexpected sources, so we draw our inspirations from wherever we can find them—and not just from the field of healthcare! Creative people need to explore many paths and peer around many corners. In the words of legendary humanitarian Linus Pauling, “If you want to have good ideas, you must have many ideas.”



Action-oriented

Designers are always experimenting with ways to give form to ideas: “Show, don't tell” is their common refrain. More than white papers and reports, designers will communicate ideas by drawing pictures, constructing storyboards, building models, and finding imaginative ways of simulating experiences. Systems live in the real world, and the best way to test whether a solution might work is to make it visible and tangible.



1 Joining the HVHC Incubator

Preparing an application

In the pages that follow you will find further information describing how the HVHC Incubator works as well as background information about human-centered design which plays a central role in its operation. We hope that this material will be helpful and inspiring.

Section 1 includes information that will help you prepare an application and create materials for 'Pitch Night' for selected applicants.

Section 2 offers a view of the complete structure of the Incubator program, and may help you think about your challenge and approach.

Applying to the HVHC Incubator

We invite Federally Qualified Healthcare Clinics (FQHCs) receiving this booklet to contact us with any questions or comments. For those clinics wishing to apply to participate in the HVHC Incubator, a link to the Application Form is found here:

<https://med.stanford.edu/cerc/research/organizational-innovation/high-value-health-care-incubator.html>

As part of the application process, you will be requested to complete versions of the forms that are introduced below on pages 21, 22, 23 & 35.

I.I Scope

“The question is not, ‘What is the answer?’
The question is, ‘What is the question?’”

—Henri Poincaré



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

In Design Camp, we try to answer the following questions before committing ourselves to a project:

Is the problem a priority?

While the data points to a problem that might be important to you, it is important to establish that the problem matters to the organization.

For systemic change to occur, it will need the support of executive leadership: What is the story leaders will want to be able to tell at the end of this project? Is there a problem they want to solve, or a data point they want to affect? What do they want key stakeholders to say about the project once it is complete?

While the support of leadership is essential, support alone from leadership is insufficient. Any wide-ranging change initiative will need the support of the key stakeholders who will need to be engaged throughout the life of the project.

Will it garner frontline engagement?

Design Thinking calls for deep engagement with people at the frontline of care, and works best when they are involved in the process. Nothing is more difficult than introducing a new project to busy people who do not view your effort as adding value to them. Tackle something where a single key stakeholder group (doctors, nurses, patients) already feels the pain of the issue. Are they available to take part in your project? Does it resonate with them? Would a solution be perceived as a benefit by the people for whom it is intended? If possible, involve members of these groups in the scoping effort.



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Do you have strong partners?

Do you have adequate executive sponsorship for the project? Will the relevant decision makers ensure you have a clear path as you move through the project from launch to implementation? Will they remain active through the life of the project? Do you have enough cover to let you navigate the difficult political dynamics that will inevitably arise?

Learn from previous endeavors. Are there teams or leaders in your organization who have earned a reputation for collaboration and effectiveness? Are there opportunities to partner with them? Any change is perceived as disruptive by someone. To mitigate the pushback, engage people who are hungry for change and with whom you already have strong personal relationships. Do you have key champions who are motivated to commit time to participating in design activities and have the authority and resources to test them?



Set yourself up for success by exploring partners *before* you launch your project. We were tasked with a project to improve medication workflows. In an exploratory meeting, we brought together physicians, pharmacists, nurses, administrators, and patient advocates to share our initial insights and see who might be interested in partnering with us. Several potential partners came forward and some offered suggestions of other people we should involve. The meeting was invaluable for helping identify where and with whom we should direct our efforts—and places to avoid!

Is it ripe for design?

Some projects are more amenable to design solutions than others. Does yours involve a system of people, where motivations, feelings, and behaviors are relevant? Do people’s behaviors not make sense or deviate too far from training or standard operating procedures? Are there multiple stakeholders? Is this a problem where new ideas are desired? Are there multiple possible “right” answers? These are the spaces where Design Thinking thrives.

In healthcare environments, almost everything is regulated. Be sure to understand whether your project needs to be subject to rigorous scientific protocols.

Is it approachable?

Does somebody else have responsibility for solving the problem you are interested in? Is it already being studied? If others are already interested or working on the problem, they might be enthusiastic partners and sources of talent, resources, and energy. On the other hand, you may be viewed as competing or duplicating efforts already underway.

If the problem areas you are looking at seem to be supported by the data and are amenable to design, you are ready to put together a project proposal. However, it may be advantageous to explore the value-creation potential of your project in order to garner sufficient attention and investment to begin.



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Secure a mandate

Get the necessary buy-in.

Once you are confident that you have identified a problem space that is supported by the data, is institutionally appropriate, holds promise to deliver a sufficient return on investment, and is proportionate to the time, resources, and outputs you will need to deliver, it's time to create and present a concise project proposal to your stakeholders.



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

All parties must be fully aligned on the scope of the project and what the expected outputs will be. This will be critical in releasing the appropriate resources to your team and garnering the sufficient buy-in across the organization.

Whether the proposal takes the form of a one-page report, a chart, or a PowerPoint deck, confining the summary to one page helps to focus your thinking and provides a useful executive summary for sharing with senior stakeholders.

Project Name

Create a unique name for your project that captures interest. Your project name should inspire people.

Project Sponsor/s

Who is/are the senior leader/s with ultimate oversight for the project?

Project Lead/s

List the key contacts for the project.

Objective

Generate a concise statement of what the project is intended to achieve. At this stage, this can be narrow, bold, or aspirational.



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Background

Include important background or context for the project. Why is this important at your organization? How important is this nationally and beyond? What's been done?

Problem Overview

What is the problem (expressed in data, financials, or otherwise)?
Where is it occurring? Who are the key stakeholders and end users?
What are our current hypotheses as to why the problem exists?
What are the unknowns about the problem?
What are the costs or risks of doing nothing?

Milestones & Deliverables

Description of the desired impact and timing of the key milestones and outputs of your project. Use the Design Camp phases as a guide. What constitutes success? What is the reporting mechanism? For example:

Approach

Short summary of the proposed approach and activities to solve the problem.

Constraints

Items that are out of scope or other guardrails of the project.

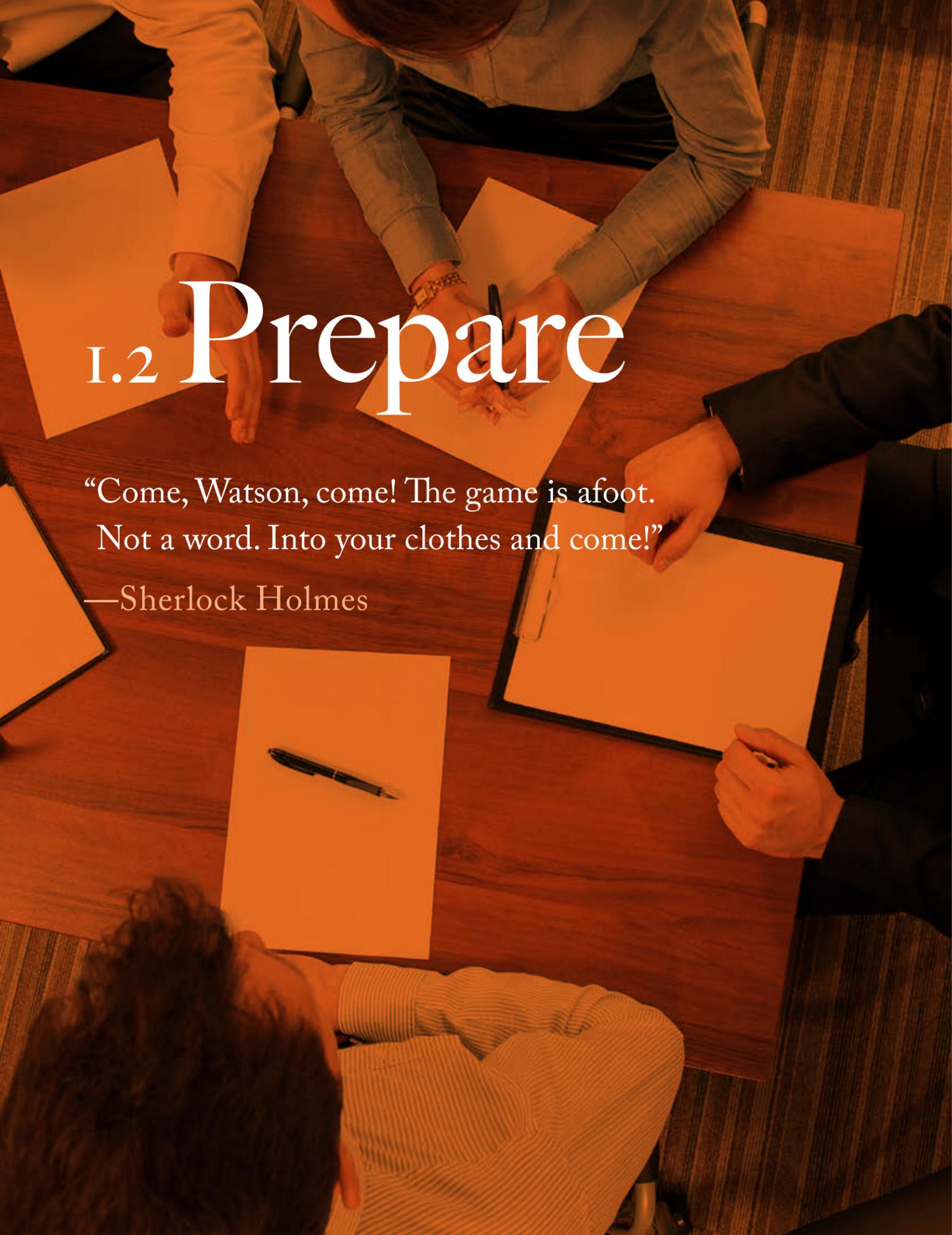
Team

Who is responsible for the work? Who are you partnering with?

Budget & Resources

Time, material, finance, and human resource requests.

You have now scoped the project. It's time to build your team, create a plan, and assemble the resources that will enable you to tackle it.



1.2 Prepare

“Come, Watson, come! The game is afoot.
Not a word. Into your clothes and come!”

—Sherlock Holmes



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Starting a new project is like moving a boulder. It takes an enormous amount of effort at the start, but once it gets rolling, momentum takes over and the process itself gives you energy and direction. In Phase 2 of the Design Camp process—Prepare—you will begin gathering the elements you’ll need to get started: a team, a plan, a space, and materials. By the end, you will be ready to begin your exploration of the problem space, seeking to identify opportunities for design.

Process steps

Build your team

Build project and advisor teams to support rapid decision making.

Create a project plan

Determine where you should be, who will do what, and what you will need.

Prepare for pitch night

Pull together your materials ready to share!



Build your team

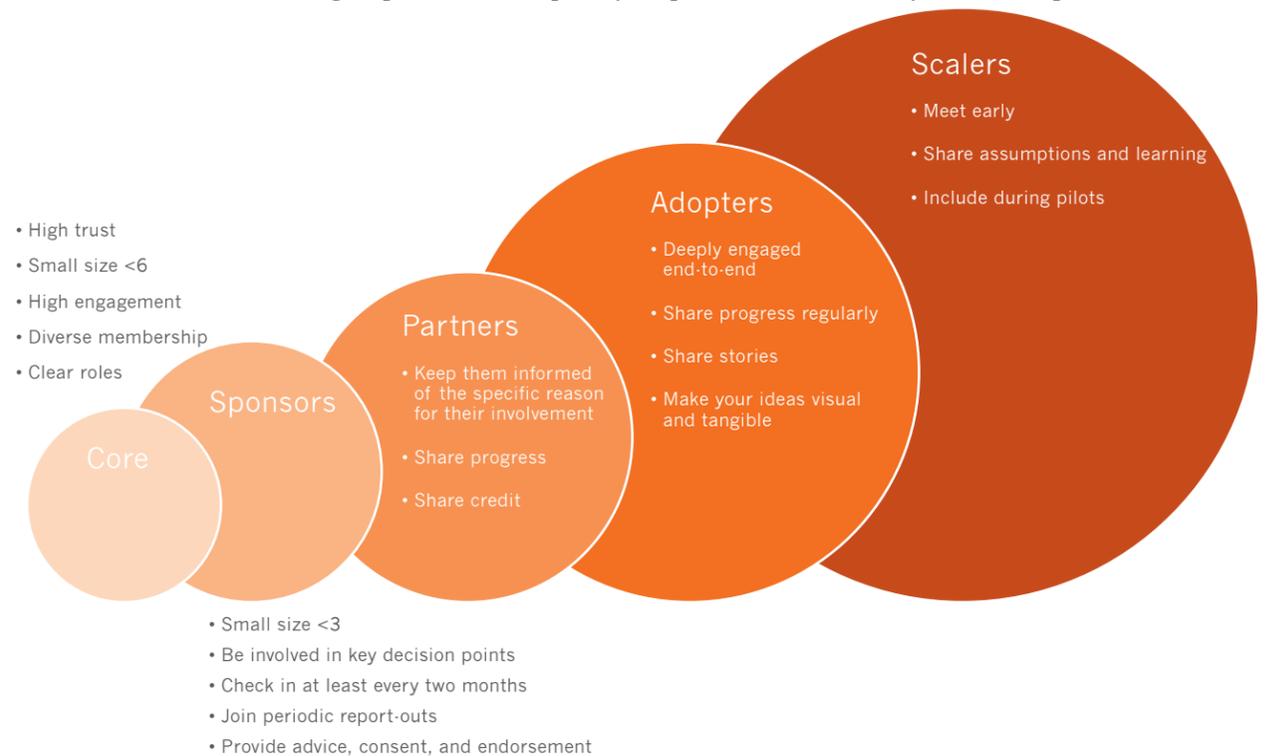
Build project and advisor teams to support rapid decision making.

In the field of healthcare improvement, we are often asking people to abandon the status quo and embrace the unknown. Decision makers who are tasked with ensuring stability are naturally risk-averse and may be wary of initiatives where outcomes may be uncertain. It's of the utmost importance, then, to engage in an ongoing, collaborative dialogue with the stakeholders and community surrounding your project.



Any design effort should seek to make everyone's life better and no one's worse. This is especially important in healthcare, where a single change can affect a broad spectrum of people ranging from physicians, pharmacists, nurses, medical assistants, and health coaches to patients, their families, and community. Inevitably, organizational politics will affect whether an idea is accepted and implemented, but you can mitigate their effect by building a community of support and maintaining it through the life of the project.

The first step in preparing to launch your project, then, is to identify the key stakeholders and begin building a network. This will include a core team that will be tasked with moving the project forward and is responsible for producing results; sponsors who provide high-level support, oversight, and accountability; partners who will take responsibility for various aspects of the work; adopters who are the first to try, develop, and test new solutions; and finally, scalars, whose role is to spread the idea throughout the organization. In some organizations, these groups will be completely disparate; in others, they will overlap.





Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

The Core Team

Design is a team sport. As you go about the important work of building your core team, we suggest some factors that will influence its success:

High trust

The most important indicators of team performance are less about who is on the team and more about how the team works together. High-trusting teams are high performing teams and the ability to build trust is dependent on the values and personalities of team members, and the culture you are able to create together. The strongest teams:

- **offer vulnerability:** people are willing to take risks and be vulnerable in front of other team members; people who are comfortable with bringing their “whole selves” to their work.
- **demonstrate empathy:** people care about their colleagues as people, pay attention to the unspoken needs and mental states of others, and are able to respond effectively and empathically.
- **are flexible:** people are comfortable with ambiguity and operate effectively when the path forward becomes unclear.
- **stoke optimism:** people bring optimism and energy to the team, and add value and encouragement by their example.
- **model dependability:** people deliver on their commitments on time and with excellence.
- **are mission-driven:** people see their work as a purposeful and connected with meaning; they really care about making a difference.
- **are supportive:** people support each other through confidentiality, dialogue, mediation, and encouragement when the going gets tough; they would never “throw someone under the bus.”
- **build friendship:** people are inclusive in interpersonal settings and look for opportunities to get to know each other; you might see them take each other to coffee, lunch, happy hour, or outings.



Story:

In 2012, a team from Google launched a project code-named “Aristotle” to identify the elements that made some teams succeed and others flounder. They surveyed 180 of their teams across the globe, and discovered that the number one determinant of performance was “psychological safety,” defined by the study lead as “a blend of trust, respect for each other’s competence, and caring about each other as people.” Teams with high psychological safety exceeded their targets by, on average, 17%. In contrast, those with low psychological safety missed their targets by, on average, 19%. In these teams, members feel safe to take risks and be vulnerable with others without feeling insecure or embarrassed.

Small size

The optimal size for an effective core team is three to five people. Two is a bare minimum, and more than six can slow you down. Creative ideas emerge from the team, and there are also practical tasks that require collaboration. For example, during interviews, it is useful for one person to talk and the other to listen and take notes; a single person cannot do the job alone.

Larger groups tend to diffuse responsibility and increase the burden of team management. More importantly, it becomes impossible for the group to meet productively and form a cohesive, collective view of the project. During later phases, teams can grow much larger, and complex tasks involving execution and implementation can be subdivided into smaller ones.

High engagement

It’s often the case that teams will need to juggle multiple projects as well as their routine jobs. Nevertheless, effective projects demand high focus and high engagement from every member of the core team. Your core team should commit to meeting at least weekly and communicating daily.

Watch out for “partial commitments.” Team members who are neither in nor out are more likely to be disruptive than to make a positive contribution. The team will be distracted by the need to bring the partial member up to speed.

Diverse membership

A mix of thinkers, doers, and makers will greatly enhance the group’s ability to deal with the complex challenges facing any healthcare organization. Aim for people who bring different backgrounds, skills, strengths, and perspectives, and who love collaboration.

Consider including someone from your Risk, Safety, and Quality office; a nurse or a physician. Try including a patient (most organizations have a patient advocate or patient council) or someone from Social Work or Guest Services. Don’t forget people who can speak to the needs of management in addition to those who understand the shop floor.



Beyond their formal roles, think about individuals who might bring a unique skill to the team, such as facilitation, storytelling, system thinking, etc. The best teams include visionaries who are able to see the way ahead and task-oriented “doers” with a reputation for getting things done.

Here are two examples from some recent projects:

- The core team on a design project focused on improving patient experience after adverse surgical outcomes consisted of a VP-level sponsor (time commitment 5%), two senior risk managers (20%), one patient advocate (20%), a project administrator (40%), and one designer (20%).
- An open-innovation project on medication administration safety included a VP-level sponsor (time commitment 10%), a project lead (50%), two designers (80% and 40%), a pediatric cardiology nurse (25%), a senior RN in Quality and Safety (20%), and a Human Factors fellow (25%).

Clear roles

It helps if all members of the team feel they’ve been assigned to roles in which they can add maximum value, such as:

- the leader who has overall responsibility for the project
- the communicator who keeps all the key stakeholders up to date
- the energizer who pushes the big ideas and fuels the enthusiasm
- the coordinator who keeps everyone on track
- the ambassador who is skilled at negotiation and conflict resolution

Sponsors

In most organizations, it will be necessary to have a sponsor who will support your goals, authorize your budget, and provide advice and resources. Depending on the scope of your project, your sponsor should:

- be involved in key decision points
- check in periodically, at least every two months
- join periodic report-outs
- provide advice, consent, and endorsement

Your sponsors will typically be one to three key stakeholders and decision makers who have the authority to deploy resources and set priorities. This may include members of the executive team, key mid-level managers, or anyone who has the power to remove barriers and roadblocks for your project.

We recommend that you have one executive who has decision-making authority over the project and others as necessary for buy-in, advice, consent, and support. But beware of too many cooks!

If you don’t have an official sponsor, identify a friendly ally in leadership who should be kept informed about your work. Senior stakeholders should be aware of your project at key stages throughout the process, especially at moments such as:

- decisions around the framing and launch of the project
- learning from Discovery and Synthesize
- the review of proposed design solutions
- the decision to implement
- the review of the implementation and pilot plan
- monitoring, evaluating, and celebrating impact

“Not finance.
Not strategy.
Not technology.
It is teamwork
that remains
the ultimate
competitive
advantage, both
because it is so
powerful and
so rare.”

—Patrick Lencioni



Partners

Partners can include people from across the health system who should be kept up to date as the project unfolds, but who may not need to be part of the core team or the sponsor team. There may also be people who have key skills that can be useful during one section of the project. The more people know about your project from the beginning, the more resources you will have to help with knowledge expertise, recruiting, bridge building, and gate keeping. Their support can be extraordinarily helpful to the success of the project.

Partners may come from affiliated parts of your organization that share points of common interest. They should expect you to:

- keep them informed of the specific reason for their involvement
- share progress
- share credit

Adopters

The people who will actually implement your design solution should be part of your extended team. With adopters you should:

- share progress regularly
- tell stories
- make your ideas visual and tangible

It is imperative that you involve those who will eventually adopt your solution and keep them informed about what you are doing along the way. Ensure that you share progress with the adopter group via periodic report-outs. Share stories and photos with them, and work out ways to make progress on the project seem visible and tangible. Host milestone workshops throughout the project to demonstrate that you have incorporated their feedback and involved them in the ultimate design of the solution.

Scalers

If you are to implement your ideas across your entire organization, you will need help on many fronts. To prepare those who will help you scale your ideas, you must:

- meet early
- share your assumptions and learning
- gather their feedback during pilots

Your ultimate goal is to disseminate your solution throughout the organization. You'll therefore need to meet early with managers and leaders of groups who will eventually adopt your idea once it has been proven in a test environment. Meet with them one-on-one, collect their feedback, and think of them as part of your extended project team. Share your assumptions and learning with them, and invite them to participate during pilots.

“You can design and create, and build the most wonderful place in the world. But it takes people to make the dream a reality.”

—Walt Disney



Build your team

The goal of this exercise is to build an inclusive project team, identify sponsors and partners, recruit key decision makers and gatekeepers, and mobilize the groups that will eventually adopt your solution and those that will scale it.

- Using sticky notes, brainstorm all of the people who relate to the problem space of your project. You can be as general as a whole group (“residents”) or as specific as a particular person (“Nurse Jones”).
- Cluster the stakeholders into the following groups:
 - Core team
 - Sponsors
 - Partners
 - Adopters
 - Scalars
- For each key group, come up with a statement that expresses their key concern, motivation, or expectations.
- Assign priorities to each stakeholder group or person based on the importance of their engagement in the project and the value that they might bring. Remove those who are of less importance to the project.
- Finally, list the names of key individuals in each group and assign a role for each of them. For example, a chief medical officer may be a key project sponsor. That person’s role in the project might be to provide advice at key decision points or simple administrative cover. Then set a goal in regard to that advisor—for instance, to meet with them once a month throughout the life of the project.

Stakeholder Guide

Core Project Team	
TEAM MEMBER NAME	ROLES AND GOALS

Sponsors	
SPONSOR NAME	ROLES AND GOALS

Partners	
PARTNER NAME	ROLES AND GOALS

Adopters	
ADOPTER NAME	ROLES AND GOALS

Scalars	
SCALAR NAME	ROLES AND GOALS

A person in a light blue shirt is standing at the front of a room, presenting to an audience. The audience members are seen from behind, seated at tables. The room has a greenish tint, likely from stage lighting. The text '2 Pitch Night' is overlaid in large white letters, with 'Sept 15th 2021 6-8pm' below it.

2 Pitch Night

Sept 15th 2021 6-8pm

“The greatest challenge to any thinker is stating the problem in a way that will allow a solution.”

—Bertand Russell

Make the case

Pitch Night is an online event for FQHCs to present their teams and selected problem to a small panel of judges. Three teams will be selected for funding and participation in the inaugural CERC HVHC Incubator. Pitch Night presentations are intended to be crisp, brief summary descriptions of the team members and the problem they have selected for innovation. Teams can supplement their oral Pitch Night presentation with a written, single page document (~250 words) providing additional information but it is not a requirement.

Pointers for a Pitch Night Presentation

- Limit presentations to 10 minutes
- Brief introduction of team members
- Fewer than 5 slides/presentation
- Background info on clinic/clinic population/environment
- **Problem statement:**
 - Why is it important?
 - Relevant factoids: History/frequency/prevalence
 - Who/what does it impact?
 - What would change were the problem to be solved?

2 After Pitch Night

“If I had only one hour to solve a problem, I would spend up to two-thirds of that hour in attempting to define what the problem is.”

—Anonymous

The road ahead

For those teams selected at Pitch Night, the second part of the booklet is extracted from the book 'Discovery Design: Design Thinking for Healthcare Improvement,' (2019) to help you understand the subsequent process - designing and implementing your ideas. It features excerpts from the complete Incubator syllabus, creating an outline of the Design Camp process. You are invited to use this material for reference when preparing your application.



Outreach to providers/
clinics in the PHP
Network for proposals
and teams

First year theme:
"Redesigning Access"

- Primary Care
- Specialty Care
- Virtual Care
- Behavioral health

Teams make pitches
Ranking criteria:

- Originality
- Meaningful to patients and providers
- Cost reduction
- Feasibility
- Scalability
- Likely successful
- Team structure

3 FQHC teams selected for \$150k support each for 11-month implementation. Approx. 0.2 FTE effort expected from team

Teams work closely with design experts, Stanford faculty and students to develop initial prototypes

- Human-centered design process
- Budget
- Milestones
- Plan for scaling across local network

Milestone reporting
Rapid Cycle iterations
Formal assessment & scaling plan across FQHC network sites

“500 coffees”

After being selected at Pitch Night: meet, meet, meet. Informal conversations are often better for finding alignment than emails or cold telephone calls. Talk to many people up and down the organization, beginning with “friendly allies” and expanding from there. As you go, look for people with the following characteristics:

- People whose own agendas will benefit from your project
- People who have a track record of “getting it done”
- People with skill sets that complement your own
- People who are spoken of highly by leaders and frontline stakeholders
- People who are excited about the problem you want to work on
- People with whom you feel you can have a vibrant working relationship
- People who are fun to work with!



This was our core team on a recent clinical risk management project: a clinical nurse specialist, a lawyer, an anthropologist, and a communications designer. Everyone brought something completely different to the team and trust and momentum was built by setting an intention to meet outside the office at regular intervals.

Create a project plan

Determine what should be done, who will do what, and what they will need.

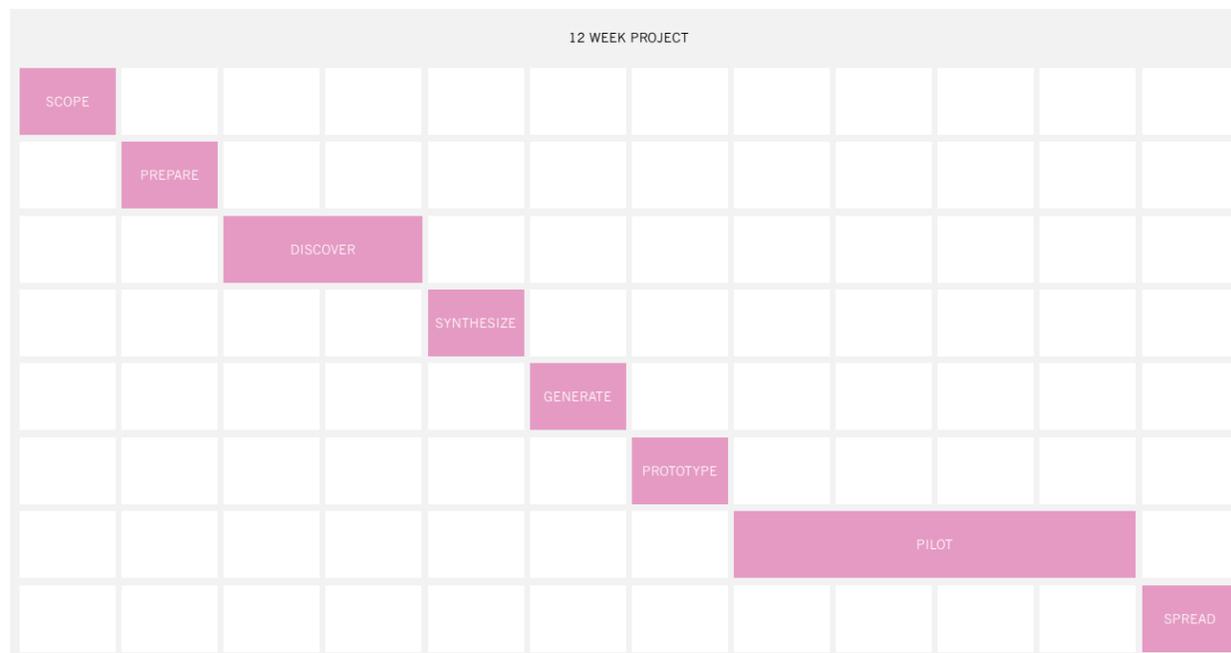
Once you have defined the scope and direction of your project and identified the people that will form your team, the next step is to create a detailed project plan. You will avoid a fuzzy front end and get your project off to a running start if you forecast the challenges you are likely to encounter along the way and the resources you'll need to meet them. Book meetings for the entire project now. A project plan will give you a sense of the tasks that await you and the logistics you will need in order to realize it.

Timeline

The sample project chart below shows a suggested timeline based on a twelve-week project, two to three FTEs with 50+% dedicated time to the project. But how you divide out your efforts between the different phases may vary significantly, depending on the scope of the challenge that you are taking on. Completing the process entirely in twelve weeks is realistic for a relatively constrained scope—one that exists within a single team or redesigning a specific discrete element of a system.

For more ambitious scopes, you may have to divide the eight steps into two or three twelve-week design cycles, each building on the other. It is important that you give yourself enough time to achieve real results, but not so much time that your team loses momentum along the way. As you review the various steps in this handbook, assess how much time you will need for each task, and be prepared to discover additional directions you'll want to explore and others that can be passed over.

Example Timeline



Advance planning

It's a good idea to plan your workshop and key meetings as far in advance as possible; we recommend you print out our twelve week or six month project poster and mark key meetings, activities, and dates so that all members of the team can plan accordingly (people in more traditional organizations may not be used to moving as quickly). Set major deadlines as early as possible, and try to identify the tasks that are most likely to hold you up.

The biggest challenge to your timeline is likely to be finding people to observe in context and setting up interview times; this can be difficult, so in any Design Thinking project, this should be your top priority. Once you have determined the number of observations you will need and figured out how to gain access to the people you want to meet, you are ready to build a plan.

The key meetings should include the following:

- **Project kickoff**
This gathering will serve to get everyone on the same page and build energy and momentum.
- **Synthesize review**
Along the way it will be necessary to review research findings, consider new opportunities, and confirm directions to pursue. This is an opportunity for the wider team to hear stories from the field and to bring your research findings to life. By the end of this meeting you should have identified top user needs and developed a solid framework for addressing them.
- **Solutions review**
Review assessed solutions and recommendations. As the project advances toward its conclusion, you will need to gather the core team, key decision makers, and perhaps invite experts to share their viewpoints.

A project tracker can be a very helpful tool to help plan everything that needs to be done, especially those activities that may be dependent on others or where bottlenecks might arise. For example, you might need the chief medical officer's support to launch the project, but there might be three other committees that oversee the workflow you intend to change. When do they next meet? How long will the review take? What are they likely to say? Space, staffing, uniforms, permissions, time, material, cash on hand, and many other details will all need to be thought through. It's not uncommon for a chart to include hundreds of tasks.

Beware of what Nobel laureate Daniel Kahneman described as the planning fallacy: the tendency for people to grossly underestimate the time that will be needed to complete a task. Leave sufficient slack in the project to account for unexpected delays. Try to assume that everything will take three times longer than you think is reasonable. And even that might not be enough.

Here is a very simple Excel tracker for a 6-month project that you can adapt to your needs. Follow along on the very top menu bar:

- **Tasks:** Note all of your tasks and subtasks in the Task column. In this example, we have greatly simplified the plan by noting the project phases only. You might identify anywhere from dozens to hundreds of tasks depending on the complexity of your project.
- **Schedule:** Enter your plan according to the hours, days, weeks, or months that your pilot will run. We recommend you track progress against a daily or weekly timeline. As you move through the project, note which week you are in using a big dotted line denoting the beginning of the next phase. In this example, we are half way through Discover & Synthesize. Shade in the box when each particular task is meant to be completed on or by. Whenever a task is complete, place a big X in the relevant schedule box or shade it in.
- **People:** Next, note who will be responsible for each task and those who will be helping them.

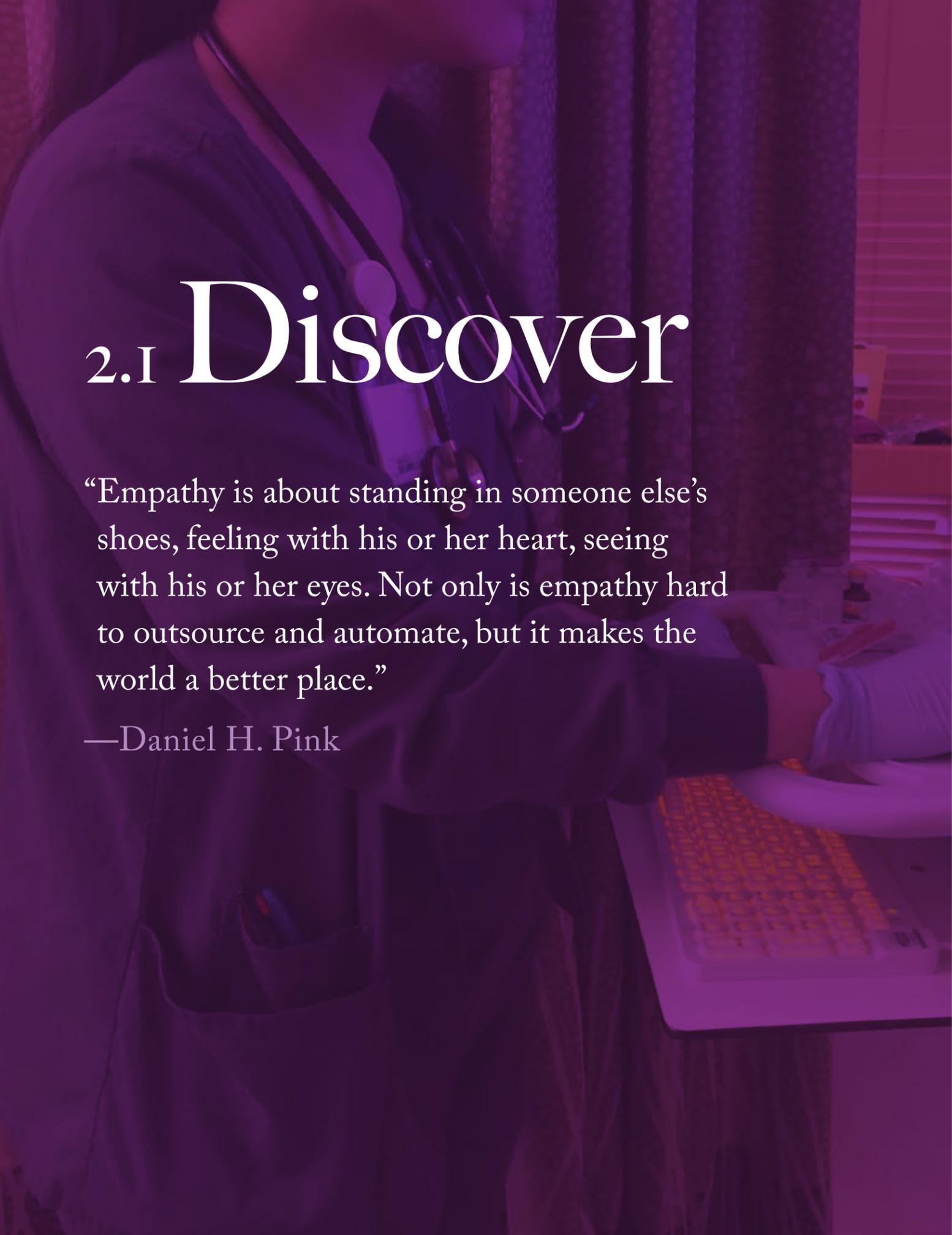
- **Resources:** List all the resources that will be needed to complete each task. This exercise usually uncovers additional tasks that need to be completed to gather them!
- **Comments:** Finally, use the Comments and Tracking box to communicate updates with your team at your daily or weekly huddles.
- **Tracking:** As you move throughout the pilot, indicate whether tasks are on track, falling behind, or require escalation by shading the relevant box in green, orange, or red.

Green means the task is proceeding satisfactorily: on time, as desired.
Orange means the task is at risk of delay or partial completion, but the team can fix it and is working on it.
Red means the task is at risk of failure, and the team needs to escalate the matter for attention.

Example

TASKS	Project Schedule						Team Lead & Helpers	Resources Needed	Comments and Tracking
	J	F	M	A	M	J			
Scope & Prepare	x						Lucie & Simon	Analyst Project space Meeting with CMO	1/15: Proposal accepted. 1/30: Project plan built; team recruited. Ready to go.
Discover & Synthesize		x					Kara & Svava + Improvement team on CU456	Permissions, camera, supplies, workroom at the hospital	2/28: Research complete 3/1: Preparing for synthesize review
Generate & Prototype							Rob & Soren leading workshops	Funds to pay for nurses' time	2/28: We do not have funds for nurses time. Svava to meet with CNO.
Pilot & Spread							Simon & Shannon	Build measurement tools. IRB submission.	3/4: Rob has submitted IRB

Tracker
Performing Satisfactory
Requires Action
Requires Escalation



2.1 Discover

“Empathy is about standing in someone else’s shoes, feeling with his or her heart, seeing with his or her eyes. Not only is empathy hard to outsource and automate, but it makes the world a better place.”

—Daniel H. Pink

Having identified an area of opportunity and being selected for funding at pitch night, you are ready to prepare for Design Camp and enter the Discover phase. If the previous stages gave you the “what” and the “where,” Discovery uncovers the “how” and the “why.” This is where an innovation team learns to question its assumptions, widen its perspective, and deepen its insight.

Our goal in Discover is to uncover nuances that may lie concealed in the depths of the problem space and to attain a deeper understanding of the people within it. Assuming a beginner’s mindset, your team will build empathy with people affected by the problem you plan to address, probe the social and system context, collect inspiration, and learn from experts in your own and adjacent fields. You will explore the connections among hard data, competing mental models, and stories that illustrate human behaviors and motives.

Process steps

Plan your exploration

Identify sources of inspiration and prepare to meet people in real-life contexts.

Gather inspiration

Learn from users, experts, and secondary research.

Share stories and learning

Capture and share your learning with your team.

Host a fieldwork snapshot meeting

Review learning and collect feedback.



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Plan your exploration

Identify sources of inspiration and prepare to meet people in real-life contexts.

In some contexts it can be of benefit to approach a new design challenge with a blank slate. The healthcare environment, however, involves highly specialized units, divergent cultures, vulnerable populations, extensive regulations, and a multiplicity of fluid interactions among people, systems, and technology. There are always opportunities for improvement and innovation, but these must be situated within a framework that is built upon evidence and assures efficacy and safety. It is essential that you enter this environment with a deep understanding of the history, context, and science behind your challenge.



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot



Story

During research in an academic medical center, we realized that conversations and involvement in improvement activities seemed to focus almost entirely on the day shift staff. When we asked about night shift, there seemed to be a general impression that “things were different,” but not much clarity about how and why.

The only way of really understanding this other world was to join the night shift. It was immediately clear that specific constraints were different: typically fewer staff members on duty, reduced support (many hospital resources are closed at night), and senior hospital staff were unreachable.

By talking to them about their experiences, we learned how night-shift staff felt distant from improvement work; change was sometimes communicated to them late in a transition process and didn't acknowledge their realities. As a result, there was a negative impression of and resistance to change.

Secondary research

What does the literature say about the common causes and contributing factors to the problem you are working on, and what lessons can be drawn from it? What solutions have others employed? You should read the research—not just review articles—and evaluate the methods used and the subjects studied. Review the literature with the same critical eye you applied to your data in Scope. In addition to the medical literature, be aware that there is much to be learned from such adjacent fields as behavioral economics, human factors and ergonomics, and psychology. Do they discuss situations similar to those you are observing? Are there research-based models you can use to frame your exploration? Have they identified solutions that inspire you?

In-context interviews, observations, and immersion

In Design Camp, we supplement quantitative data and published research with direct experience. The goal of qualitative, human-centered design research is to gain insight into the people involved with patient care generally and with your design challenge in particular. The best way to do this is to conduct in-context interviews, observe people in their native environments, and create experiences that allow you to immerse yourself in the problem space.

Remember that you are not testing a hypothesis or proving a theory. Instead, lay aside your assumptions and agendas, and explore possibilities you might not have thought about before. We use the word “empathy” to describe the goal of understanding others’ experience informationally, but also emotionally. It’s not the same as agreeing with their points of view, but being able to identify with how they came to hold them and why they behave in a certain way. The people you speak with should feel your genuine interest in what matters to them.

Design research is illustrative, not definitive; it captures stories, not numbers. We seek inspiration, not validation. We’re looking for “moments that matter” in the daily lives of people in patient care settings, and we pay close attention to the relationships between people and people, people and resources, and people and systems. Always remember that the qualitative insights you gather through interviews and observations, because of their



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

nature (anecdotal) and sample size (small) won't prove anything. Nor are they intended to: The purpose of qualitative design research is to reveal underlying meaning and focus our attention on opportunities.

Expert perspectives

Schedule one-on-one sessions to learn from internal or external subject matter experts. You will get the most out of their time by conducting background reading and preparing thoughtful questions in advance. Extend your topics of discussion beyond content expertise: How do ideas move through the organization? What are the successes and failures they've seen? What else should you be thinking about? Can they connect you to others from whom you might learn? Identify the experts, contact them, and see if they will share their thoughts with you.

Analogous experiences

Seeking inspiration from contexts outside your own can lead to fresh insights and new perspectives. Think of situations that might illuminate your challenge from an analogous perspective: What can you learn about an emergency room by observing a restaurant kitchen or a kindergarten playground? The "customer experience" is central to healthcare; how does Disney do it? Or Airbnb? Or Trader Joe's?

Data dive

What other data might be useful for understanding the system for which you are designing? Nursing staff ratios, patient volume, revenue, tests ordered, patient satisfaction surveys, and staff engagement scores might all be useful for understanding the system and the people. Reach out to other departments to see what other measures might be useful. Quantitative data and qualitative research have a push-pull dynamic: data can reveal gaps where research can be helpful, while research can give deeper meaning to data needed for innovation and design.



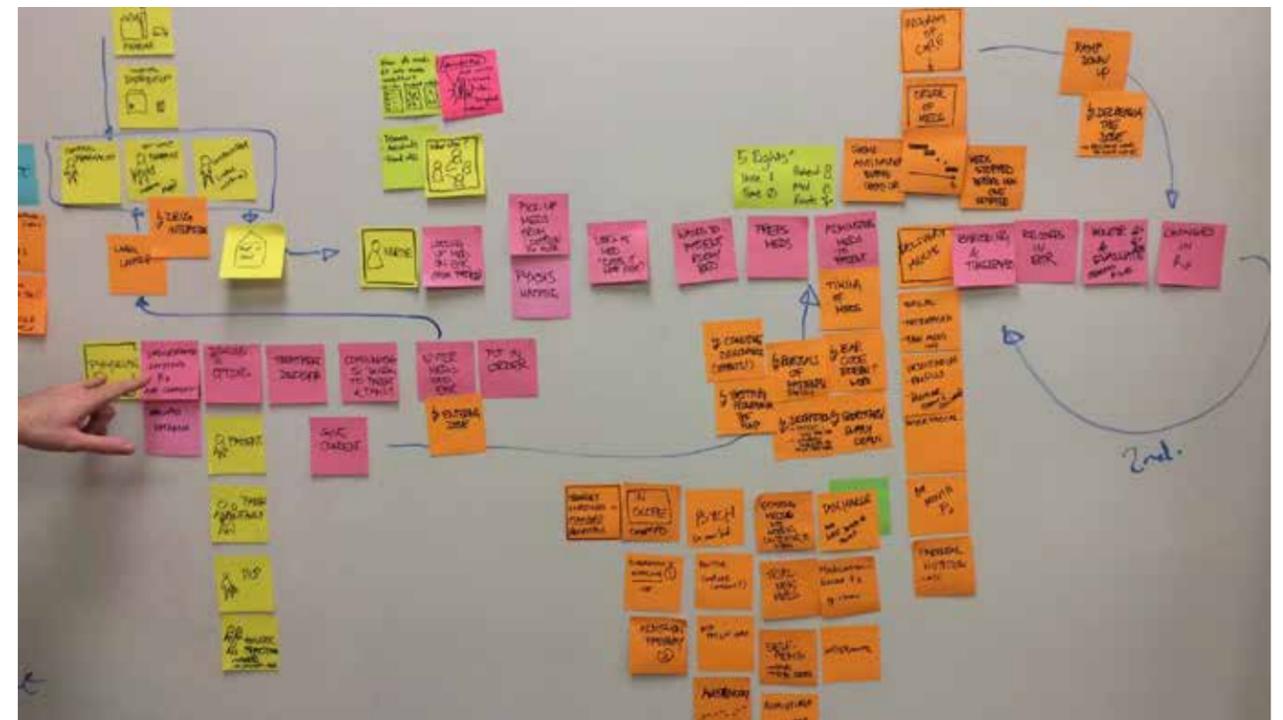
Story

While investigating the experience of diapering an infant, we wanted to see how other people optimized changing clothes for speed and convenience. For example, the team visited the backstage of a theater to see how people got quickly in and out of their costumes; we then observed how rock climbers got quickly in and out of their gear.

Selecting candidates

Healthcare is complex, and to come up with solutions that work it is necessary to understand the work environments of the people for whom you are designing. Map the inputs and outputs of the system from the perspective of flows and take account of roles and functions within it: patients, staff, nurses, physicians, and others who may be less visible.

Most team members will have a mental model of the systems in which they are working, but these may contain unproven assumptions. Having your team draw their mental models and share them with you early in the project will highlight areas that need more exploration. Use your supply of sticky notes to represent individuals, and roles, and the flow of information, processes, products, and tasks.

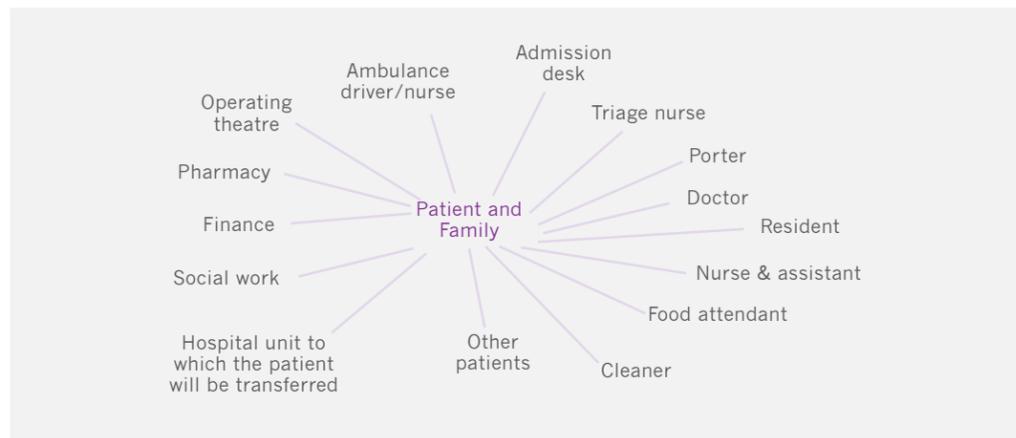


This example shows a map of medication flows through a healthcare organization. It took about 30 minutes to create and facilitated a conversation around project scope and candidate selection.



Your candidates are representatives of unique behavioral segments and groups that have a special story to tell. To begin, try mapping all of the key stakeholders involved in the problem space you are investigating.

For example, the diagram below suggests a field of possible interview candidates for a team hoping to improve the admissions process from a patient point of view:



Some of these stakeholders might be directly involved in providing care: physicians and nurses, for example. Others—the pharmacist, the food service worker, the hospital cleaning staff—might be less visible but also have important roles to play. And remember, the person most intimately connected with the patient is...the patient! Always try to include patients and family networks in your research. Their perspective is essential for a complete picture and often contains unique observations and insights no one among the project or healthcare teams will have thought of before.

Ideal candidates

Wherever possible, arrange a short phone conversation with patients, clinicians, administrators, or experts you are thinking of meeting with. You can usually get a good read of their style. The ideal candidate might have some of the following qualities:



Story

When designing new experiences for lab workers, we looked for people with an extreme fear of needles. This prompted us to ask what changes in environment, tools, roles, and processes might make them more comfortable. The results not only addressed needle safety, but pointed the way to approaches that generally reduced anxiety and stress for all lab workers.

- has a unique point of view or experience that is directly relevant
- is naturally talkative and opinionated
- is interested in your agenda, not their own
- is aware of the area related to your challenge
- has witnessed a shift in practice

- has developed own practices/protocols
- is particularly frustrated with the current practices
- has witnessed a reluctance to change
- loves to try out new ideas!

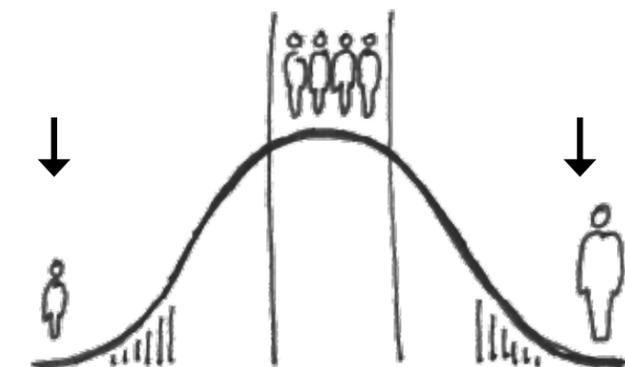
Inspiration from the margins

Interviewing people in the mainstream has value, but findings will likely be incremental due to similarities in their experiences, workflows, and personalities. We therefore seek inspiration also from those at the margins where we are more likely to discover new information and make new connections. These are people on the edges of the spectrum whose needs may be amplified and whose attitudes, behaviors, emotions, and work-arounds may be revealing precisely because they are atypical. And your solutions must work for them as well.

Examples of various interesting or atypical stakeholders include:

- the most experienced and least experienced
- the very young and the very old
- those who break the rules or create work-arounds
- high energy or low energy
- unique use of technology, such as apps or devices
- extreme attitudes toward technology, processes, or tools
- highly motivated patients who care well for themselves vs. patients who need strong guidance

Look for inspiration from users at the margins



2.2 Synthesize

“Observation reveals what is happening, but it takes interpretation and speculation to understand why.”

—Jane Fulton-Suri



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Having laid the groundwork for your project, you are ready to weave together the strands of your research and translate them into insights that inspire action. We refer to this process as synthesis. It draws from a rich tradition of social science and design methodologies in order to identify themes from your research, discover hidden meaning, and define new directions for design. Relying in equal measure upon intuition and analysis, the act of synthesis helps us to make sense out of the underlying motivations that animate people’s behavior.

The goal of this phase of the Design Camp process is a sharp definition of insights and opportunities that will help you decide what is important, why it is important, and to identify the real problem. You will then be ready to generate a wealth of ideas about how to solve it.

Process steps

The synthesis kickoff

Gather your assets and prepare to engage.

Look for themes

Cluster observations into groups that make sense.

Create frameworks

Build a conceptual model.

Generate insights

Turn themes into insightful statements.

Define opportunities for design

Create design challenges in the form of “How might we...?” statements.

Synthesis review

Test your assumptions.

2.3 Generate

“We want to give ourselves the permission to explore lots of different possibilities so that the right answer can reveal itself.”

—Patrice Martin



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Once you have explored the territory, synthesized your learning, and fashioned insights into a design challenge, it's time for idea generation. Brainstorming encourages expansive and creative thinking and opens up new avenues to apply evidence-based solutions. From a large set of potential directions, you will engage your intended audience with the most promising concepts. Once you have done so you will be ready to test them with rough and scrappy prototypes.

Process steps

Brainstorm ideas

Generate a large number of potential solutions and select the most promising

Create a concept

Create a concept from the best ideas; show how it might work in the real world.

Design principles

Identify design principles that emerge from your insights and ideas.

Research ideas

Collect inspiration that might inform your concepts.

Refine ideas

Review your concepts and decide whether to carry it forward.

2.4 Prototype

“Do not seek praise. Seek criticism.”

—Paul Arden



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Designers have learned the importance of prototyping as a way to work out the kinks before seeking regulatory approval, manufacturing support, or taking other major steps. Sometimes a strip of duct tape and a bar of soap are enough to give form to an idea to clarify its underlying design principles. It's fast, and cheap, and as a learning tool it can provide maximum return on minimum investment. Once you have tested your idea through a series of rough prototypes, gathered feedback, and made the necessary adjustments and refinements, you will be ready to pilot it in a real-world setting.

Process steps

Build your prototype

Learn how to prototype a product, a service, an interface, or an environment.

Capture and integrate feedback

The point of a prototype is to elicit feedback.

Refine

Iterate and refine until you are satisfied that you're ready to carry your idea forward.

Share the concept for launch

Bring your idea to life.



Build your prototype

Learn how to prototype a product, a service, an interface, or an environment.

What is a prototype? A prototype is anything that allows you to express an idea. The goal is not to make a beautiful model, but to gather feedback to see if the idea has value. Prototyping is a critical tool in the Design Camp process as it lets us test our assumptions through a series of safe, fast, and inexpensive experiments. Unlike scientific experiments that aim for strict, repeatable results, prototypes are more akin to prompts for conversation; they are allowed to change, and we expect them to.



Prototypes start simple and are iterative: They build on what you have learned and become increasingly sophisticated as they address increasingly complex problems. For that reason, it is important to be clear about the question you are trying to answer. A single question could be answered by various prototypes, and iterations can lead to more questions. You'll need to proceed quickly but cautiously. Precisely because it is rough and unfinished, a prototype is vulnerable and can be dismissed too easily. Make sure you have captured what's right about it and not just what's wrong.

Your team should be prepared to create as many prototypes as possible, in each case finding the cheapest and fastest way to test the assumptions underlying an idea. Don't expect to test everything at once; each element will likely go through several rounds of prototyping in varying degrees of resolution as you move from drawings to PowerPoints, process maps, and even physical artifacts. This may sound like a lot of work, but it is an excellent risk mitigation strategy and will save time in the long run. It's also loads of fun!

In the risk-averse world of healthcare, failure implies error, harm, and injury. Design Thinking takes the opposite approach: failure implies learning. We believe that in a complex innovation effort there are always many more ways to fail than to succeed and that the best strategy, in the words of IDEO's David Kelley, is to "fail early to succeed sooner."

“If you're not prepared to be wrong, you'll never come up with anything original.”

—Sir Ken Robinson



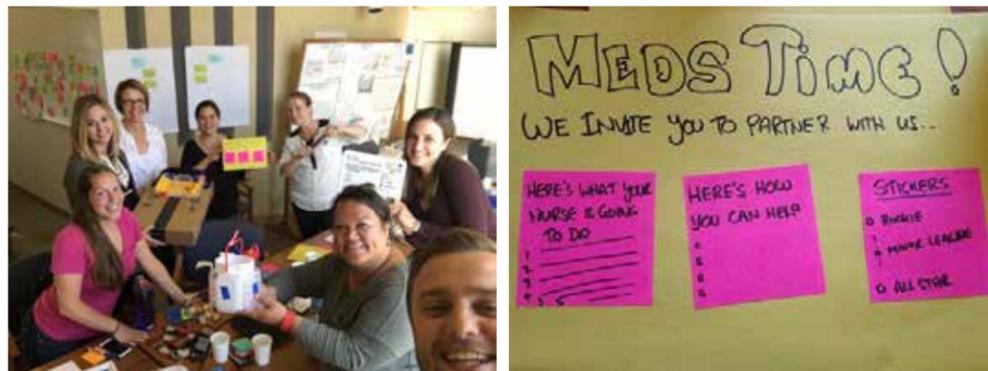
The evolution of a concept

We worked with patients, families, and nurses at a children’s hospital to imagine, “how might we enable patients and families to partner with nurses in medication safety?”

The process began with nurses and patients brainstorming ideas together:



Nurses and patients then built prototypes to explore different directions:



In the lo-fi pilot, nurses tested and iterated the ideas on the unit:



In the later pilots, the team made small refinements, evaluated impact, and received approval to implement the solution organization-wide.





Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Why prototype?

There is a common misconception that a prototype is the first version of the idea that you intend to implement. This type of thinking is risky and wasteful. The more finished the drawing or model, the more difficult it is to let go of it, even in the face of negative feedback. It can lead to an “escalation of commitment” to an untested solution.

Designers prefer to think of prototyping as a series of small, low-cost experiments from which to learn quickly. The point is to test a broad range of ideas as early as possible to dispose of most of them. A new electronic health record interface can be prototyped by affixing sticky notes to the screen of a phone. A new discharge procedure can be prototyped by drawing a rudimentary storyboard or performing a simple skit.

Prototyping can be a fun and immersive experience, so involve as many of your team members as possible. It is an excellent way to build ownership, especially as new team members enter the process. Take them through your early Observation and Insights phases and let them absorb stories and develop a connection to the big picture. Make sure that everyone has frequent opportunities to share their input and ideas and that they do not feel that key decisions have been made prior to their input. Above all, remember that during the Prototype phase we are not just prototyping solutions. We are prototyping ideas to test our assumptions about a solution.

In this chapter, we will explain how to move from an idea to something that can be tested in a clinical setting. We will also learn how to prioritize questions that can be answered by prototyping and how to gather feedback. Remember that a prototype needs only to be “good enough.” At this stage of the Design Camp process, the key is to move quickly to learn as much as possible.

Choose a prototype form with the right level of investment. It should represent the experience you are bringing to life and ask the questions you hope to answer, with minimum time or resources. Think paper and pipe cleaners, stick figures, and sticky notes for your first round of prototypes.



Story

A sports clothing manufacturer wished to sell a smart shirt with integrated sensors. The design team prototyped these shirts by placing painter’s tape on various sport shirts and taking them out to athletes. This crude prototype led to a discovery that completely changed the design direction: men loved wearing old race shirts! They had an emotional connection with certain shirts that reminded them of successful races they had participated in. The company responded to this observed behavior by designing a clip for the shirt instead of smart clothing.

Emphasize the strategy to address the need, not the “thing”

Nearly all solutions will include some kind of “thing”—a checklist, a widget, or a communication protocol. There is a high likelihood that people unfamiliar with your process will confuse this tangible “thing” with your solution. Be careful to emphasize the kind of experience you have created, the behaviors your solution has changed, and the system you have created; what you have created is a strategy to address a need, not a thing. Don’t let your audience be distracted by details of your current implementation. “I don’t like the typeface” is the last thing you want to hear.

Capture the design intent

Tell the audience what is really important about your idea from the point of view of experience. Review your design principles from Step 5-3. Use headlines—for example, “Peer-to-peer sharing,” “Natural language communication of medicines,” or “face-to-face connection among user groups”—that capture the design at the highest level. While the details of an idea might change, these strategic principles are where the design intent resides and are what people should refer to in future.

Tell stories

Concentrate on communicating the experience that your concepts will create. Show a situation that represents something that you saw during observations, and show the impact your solution will have. Support it with data, direct quotations, and photos of the solution in use.

Be visual

People have attended thousands of presentations, and their first reaction to a slide deck may be to pull out their smartphones and check their email. Try to distinguish your meeting from others by the way you engage the audience and the language you use. You have engaged in a creative process for this project; use that expectation to your advantage. Make sure your process is represented in the space and not just in the deck, for example, by hanging up posters with images from your observations. Create working spaces with whiteboards and posters with written questions that



engage the audience. Markers and pads of sticky notes on each seat invite everyone to participate.

Be tangible

Include artifacts. If you can make the ideas feel real by producing visualizations with little effort, do so; this can help people imagine the reality of the idea and elicit helpful feedback. Examples include brochures, posters, and hand-drawn software screens. Moderate your effort accordingly. The danger of over-developing an idea is that you can become committed to it before your stakeholder team has had a chance to suggest ways of improving it.

Provide a takeaway

You want people to think about these ideas after the meeting, so leave them with a printed notebook or a set of cards with key quotes from research—something impactful that they would want to share with colleagues.

Solicit feedback

While your presentation marks the end point of the design process, it's actually the kickoff to its wider implementation. Even in this final meeting, it is important to be open-minded. It's appropriate to be strong and confident about your insights and opportunities, but let your audience know their precise form and tangible expression is still up for development.

Looking Forward

Paint a picture of what continued development of the solution might look like. Give people something to say “yes” to, rather than expecting them to figure out what should come next. This will prevent your ideas from descending into “business as usual” and getting stuck in committee. It also helps in sending the message that this is not the end of a process but the beginning of its realization.

Virtual Pharmacist

Improve the value and effectiveness of communication between pharmacy and nursing.

- Reduce distractions and burden on pharmacy
- Improve information flows between pharmacy and nursing
- Support nurses in medication administration

ENHANCE COMMUNICATION



- A live person to contact when a nurse has a question/concern related to medications.

TRIAGE QUESTIONS



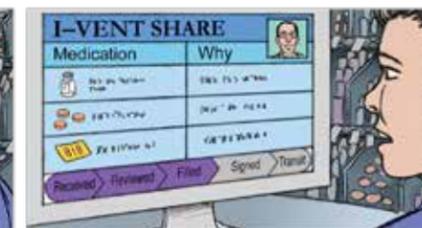
- Question types can be triaged by nurse for the most rapid answer.
- Simple pharmacy and logistics questions are answered immediately while scheduled times available for specialists.

LEVERAGE EXPERTISE



- The expert can answer questions about medication interactions, dosage, allergies, etc.
- The pharmacist can immediately process drug changes and route for MD approval if needed.

ON THE SAME PAGE



- Pharmacist can share screen, including the iVent screen that may contain valuable information about change in prescription.
- A progress bar shows where in the system an ordered med is with an ETA.

BUILDING BRIDGES



- System builds trust and enhances communication between nursing staff and pharmacy teams.
- Improving information flow enhances patient care and improves medication safety.

PILOT OVERVIEW



- Uncover the types of questions nurses ask pharmacists and time taken to respond.
- Create time and budget for a pharmacist to participate in the prototype.
- Socialize with pharmacists to identify volunteers to take part in pilot.



- Set up Skype station in a medication room. Define office hours.
- To measure behavior change, define a single month prototype period with periodic reviews.
- Co-host with Innoventure Lab staff.



- Log the types of questions that the pharmacists receive and see how the questions evolve over time.
- Measure impact on pharmacy/nurse relationships.
- Understand common causes for late meds.

2.5 Pilot

“A design isn’t finished until somebody is using it.”

—Brenda Laurel



Scope



Prepare



Discover



Synthesize



Generate



Prototype



Pilot

Seeing a fresh new idea evolve into a product, plan, or policy that creates lasting impact is the high-water mark of Design Thinking, the reason why we do what we do. Here, the rubber meets the road! In this phase, you will learn how to introduce a new idea into the live environment and how to tell if it’s working. Once you have successfully piloted it in real-world settings, you will be ready to spread it across your organization, and even beyond.

Process steps

Develop a pilot strategy

Many prototypes lead to several pilots.

Develop a measurement strategy

Demonstrate the impact.

Launch pilots

Let’s get tactical.

Evaluate your idea

Is it desirable? Feasible? Viable? Achievable?



Develop a pilot strategy

Many prototypes lead to several pilots.

A prototype, as we have seen, is a way of visualizing how a solution might behave in the real world; it is purposefully fast, cheap, rough, and iterative. A pilot, by contrast, is a sustained, fully executed engagement, the purpose of which is to find out how and whether a concept will work with existing staff, space, and resources. You carve out a safe space with friendly allies and grow and scale it from there.

Congratulations! ... and now you are ready to implement!



When do we stop prototyping and start piloting?

Before every pilot, there are many prototypes and many rounds of iteration. To move from prototype to pilot, you will need to meet three conditions:

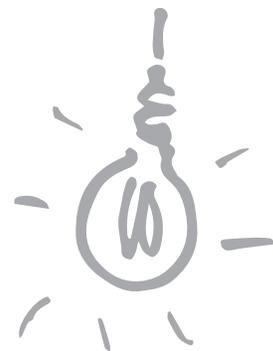
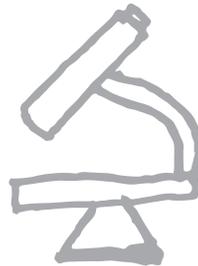
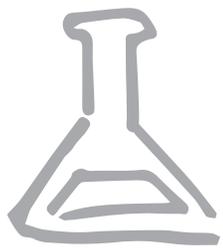
1. You have established a sufficient level of performance and safety to permit real-life usage.
2. You have secured sufficient resources (money, time, people) to develop a robust, sustainable version of your idea.
3. You have built an appropriately broad community of support, including leadership, that understands and supports your efforts.

The purpose of a pilot is to determine what is required to move an idea from concept to full implementation. It's best accomplished in successive phases, starting small and expanding over time. The key question at this point of the process is always, "How might we validate this concept?"

In the Design Camp process, we have found it useful to break the pilot phase into three distinct stages—lo-fi, alpha, and beta.

“When I’m working on a problem, I never think about beauty. I think only how to solve the problem. But when I have finished, if the solution is not beautiful, I know it is wrong.”

—R. Buckminster Fuller



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