Extremes and Mainstreams

Designing a solution that will work for everyone means talking to both extreme users and those squarely in the middle of your target audience.

When recruiting people to Interview (p. 39), go after both the big broad mainstream and those on either extreme of the spectrum. An idea that suits an extreme user will nearly certainly work for the majority of others. And without understanding what people on the far reaches of your solution need, you'll never arrive at answers that can work for everyone. More importantly, talking to people at the extreme end of your product or service can spark your creativity by exposing you to use cases, hacks, and design opportunities that you'd never have imagined.

STEPS

TIME
30-60 minutes

DIFFICULTY
Moderate

WHAT YOU'LL NEED
Pens, notebook

PARTICIPANTS
Design team, people you're designing for

01 Think about all the different people who might use your solution. Extremes can fall on a number of spectrums and you'll want variety. Maybe you'll want to talk to someone who lives alone and someone who lives with a large extended family. Maybe you'll want to talk to both the elderly and children. Each will offer a take on your project that can spur new thinking.

02 When you talk to an extreme, ask them how they would use your solution. Ask them if they use something similar now and how it does or does not suit their needs.

03 Select appropriate community contacts to help arrange meetings and individual Interviews. Make sure you're talking to men and women. You might even stumble across an extreme user in another context and want to talk to them there.

04 Be sensitive to certain extremes when you Interview them. They may often be left out of discussions like these so make them feel welcome and let them know that their voices are critical to your research.

Extremes and Mainstreams

Though extreme users can spur all kinds of new thinking, each specific project will dictate who you should talk to. There are certain factors you should always take into account, like gender, age, income level, and social status. But make sure that your particular challenge leads you to more nuanced extremes. If you're working on delivering clean water, you'll want to talk with people who have to travel especially long distances to get it, or perhaps people who used to seek clean water but have stopped. What constitutes an extreme user will vary, but your commitment to talking with them shouldn't.
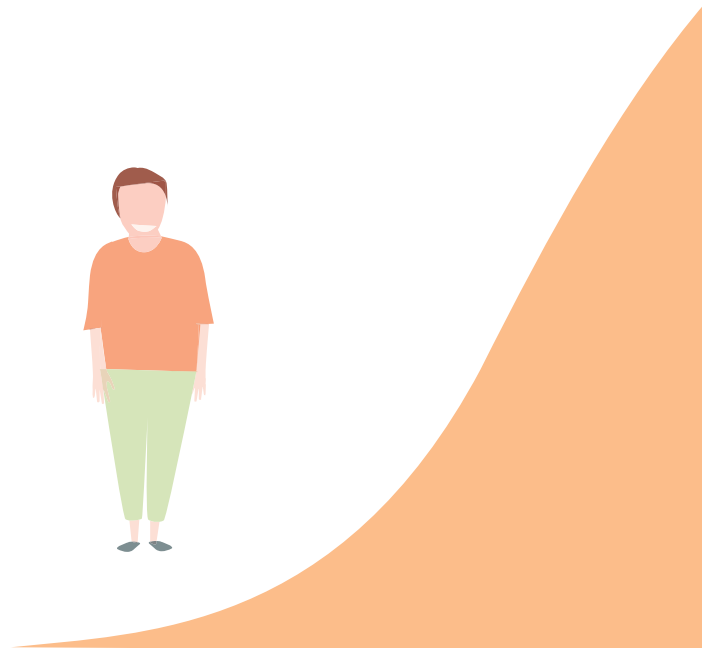
Find Themes

As you share your learnings with your team, patterns and themes are likely to emerge. Here's how to spot and make sense of them.

Once you've had a chance to Download Your Learnings (p. 77) and Share Inspiring Stories (p. 78), you're ready to Find Themes. Take a good long look across your Interviews (p. 39), Analogous Inspiration (p. 53), and other learnings. Have any patterns emerged? Is there a compelling insight you heard again and again? A consistent problem the people you're designing for face? What feels significant? What surprised you? These themes are bound to change, but as you move through the Ideation phase, continue to Find Themes and sort out what they mean.

STEPS

TIME
60-90 minutes

DIFFICULTY
Moderate

WHAT YOU'LL NEED
Your Post-its and boards from previous Ideation sessions

PARTICIPANTS
Design team

01 Gather your team around your Post-its from previous Ideation sessions. Move the most compelling, common, and inspiring quotes, stories, or ideas to a new board and sort them into categories.

02 Look for patterns and relationships between your categories and move the Post-its around as you continue grouping. The goal is to identify key themes and then to translate them into opportunities for design.

03 Arrange and rearrange the Post-its, discuss, debate, and talk through what's emerging. Don't stop until everyone is satisfied that the clusters represent rich opportunities for design.

04 Identifying these themes will help you Create Frameworks (p. 89) and write Design Principles (p. 105).

Create Insight Statements

A critical piece of the Ideation phase is plucking the insights that will drive your design out of the huge body of information you've gathered.

You've heard a lot from a lot of different people, downloaded learnings, and identified key themes from your research. The next step in the synthesis process is to Create Insight Statements, succinct sentences that will point the way forward. Insight statements are incredibly valuable as they'll help you frame How Might We (p. 85) questions and give shape and form to subsequent Brainstorms (p. 94). It's not always easy to create them, and it will probably take some work editing them down to the three to five main insights that will help you drive toward solutions.

STEPS

TIME
60 minutes

DIFFICULTY
Hard

WHAT YOU'LL NEED
Pens, Create Insight Statements worksheet p. 176, your work from Find Themes

PARTICIPANTS
Design team

01 | Take the themes that you identified in Find Themes (p. 80) and put them up on a wall or board.

02 | Now, take one of the themes and rephrase it as a short statement. You're not looking for a solution here, merely transforming a theme into what feels like a core insight of your research. This is a building block, not a resolved question.

03 | Once you've done this for all the themes, look back at your original design challenge. Sift through your insight statements and discard the ones that don't directly relate to your challenge. You only want three to five insights statements.

04 | Take another pass at refining your insights. Make sure that they convey the sense of a new perspective or possibility. Consider inviting someone who is not part of your team to read your insight statements and see how they resonate.

METHOD IN ACTION

Create Insight Statements

Working with Eram Scientific, an eToilet manufacturer in India, an IDEO.org team set out to help them make their electronic toilet experience more intuitive, user-friendly, and safe. Eram's eToilet is self-cleaning, coin-operated, and programmed to gather data on its usage, but there were key pieces of the user and brand experience that were ripe for a rethink.

The design team focused on Eram's target market in urban areas of southern India, and began their field research in Bangalore and Trivandrum. The team conducted over 100 interviews ranging from those who avoided using public toilets to frequent users. In addition, the team undertook extensive research with Eram staff, cleaning and service personnel, and even government officials.

Some key themes the team found were that cleanliness, reliability, and viability for women were the biggest concerns people had when making the choice to use a public toilet. The following worksheet shows some of the insights that this design team used as a starting point when identifying their opportunities for design. It's not an easy process, but one that your team will rely on as it drives toward an ultimate solution. You might take a couple stabs at forming your insight statements to get the hang of it.

Create Insight Statements

Write Your Design Challenge

Our design challenge is to make the eToilet experience more intuitive, user-friendly, and safe.

Theme: Women's needs

Insights:

1. Women want a private space in which to enter and exit the toilet.

2. Women greatly prefer single-sex toilets, but may still use unisex if they are clearly labeled.

3. Most women are forced to dispose of sanitary products by flushing them down the toilet.

Theme: Cleanliness

Insights:

1. Cleanliness is the defining quality of any toilet experience.

2. Without proper maintenance, toilets will become dirty very quickly.

3. Most people feel that free toilets are dirtier than paid ones, but many are still more likely to use a free toilet.

Theme: Reliability

Insights:

1. Reliability drives routine and gets people to return and use facilities frequently.

2. The people who live and work near a public toilet play a crucial role in directing users toward or away from it.

3. Most people care more about basic functionality than extra technology.

How Might We

Translate your insight statements into opportunities for design by reframing them as "How Might We" questions.

By Finding Themes (p. 80) and Creating Insight Statements (p. 81), you've identified problem areas that pose challenges to the people you're designing for. Now, try reframing your insight statements as How Might We questions to turn those challenges into opportunities for design. We use the How Might We format because it suggests that a solution is possible and because they offer you the chance to answer them in a variety of ways. A properly framed How Might We doesn't suggest a particular solution, but gives you the perfect frame for innovative thinking.

STEPS

TIME
60 minutes

DIFFICULTY
Moderate

WHAT YOU'LL NEED
Insight statements, pens, Create How Might We Questions worksheet p. 177

PARTICIPANTS
Design team

01 Start by looking at the insight statements that you've created. Try rephrasing them as questions by adding "How might we" at the beginning. Use the worksheet on p. 177.

02 The goal is to find opportunities for design, so if your insights suggest several How Might We questions that's great.

03 Now take a look at your How Might We question and ask yourself if it allows for a variety of solutions. If it doesn't, broaden it. Your How Might We should generate a number of possible answers and will become a launchpad for your Brainstorms (p. 94).

04 Finally, make sure that your How Might We's aren't too broad. It's a tricky process but a good How Might We should give you both a narrow enough frame to let you know where to start your Brainstorm, but also enough breadth to give you room to explore wild ideas.

METHOD IN ACTION

How Might We

As you may recall from the example that accompanies Create Insight Statements (p. 81), IDEO.org partnered with Eram Scientific, an eToilet manufacturer in Southern India, to make their electronic toilet more intuitive, user-friendly, and safe.

Identifying key insights started the team down the path of finding opportunities for design. The next step was to reframe those insights as generative questions. Review the Create Insight Statements worksheet on p. 83 and then take a look at the How Might We questions (on the next page) that the team created from their insights.

Further thinking and eventually tangible design solutions emerged from many of these How Might We's. For instance, the team answered the first gender-focused question by coming up with a small L-shaped wall outside the door of the toilet. When prototyping this addition, the team heard from women who said that they loved having a place to retie their saris in private.

Another design that emerged from these particular How Might We's was increased visibility of the cleaning process. From the cleanliness-focused question, the team designed a system next to the entrance that would notify users not just when the eToilet was occupied but also when a cleaning session was in process. By allowing customers to visualize a cleaning between each use, they began to associate the toilet with a strong sense of cleanliness.

Create How Might We Questions

Turn Your Insights Into How Might We Questions

Insight:

Women want a private space in which to enter and exit the toilet.

How might we create a private zone for women before they fully exit the toilet?

Insight:

Without proper maintenance, toilets will become dirty very quickly.

How might we design toilets to be easily serviced and maintained?

Insight:

The people who live and work near a public toilet play a crucial role in directing users toward or away from it.

How might we create an experience that will drive the surrounding community to encourage more use?

Brainstorm

Energize your team and drum up a staggering amount of innovative ideas.

At IDEO.org, we use Brainstorms to tap into a broad body of knowledge and creativity. Over the course of your project you should do them not only with your design team, but also with partners and the people you're designing for. Refer to Brainstorm Rules (p. 95) for the specifics of what makes for a fruitful brainstorm, but remember that the best policy is to promote openness, lots of ideas, and creativity over immediate feasibility. Brainstorms work best when the group is positive, optimistic, and focused on generating as many ideas as possible.

STEPS

TIME
30-60 minutes

DIFFICULTY
Moderate

WHAT YOU'LL NEED
Pens, Post-its, a large sheet of paper or whiteboard

PARTICIPANTS
Design team, partners, community members

01 Pass out pens and Post-its to everyone and have a large piece of paper, wall, or whiteboard on which to stick them.

02 Review the Brainstorm Rules before you start.

03 Pose the question or prompt you want the group to answer. Even better if you write it down and put it at the top of the paper, wall, or whiteboard.

04 As each person has an idea, have her describe to the group as she puts her Post-it on the wall or board.

05 Generate as many ideas as possible.

Brainstorm Rules

At IDEO.org we have seven little rules that unlock the creative power of a brainstorming session.

We've all been in Brainstorms (p. 94) that went nowhere. At IDEO.org, the goal isn't a perfect idea, it's lots of ideas, collaboration, and openness to wild solutions. The last thing you want in a Brainstorm is someone who, instead of coming up with ideas, only talks about why the ones already mentioned won't work. Not only does that kill creativity, but it shifts the group's mindset from a generative one to a critical one. The only way to get to good ideas is to have lots to choose from.

TIME
5 minutes for review before a Brainstorm

DIFFICULTY
Easy

WHAT YOU'LL NEED
Print out the Brainstorm Rules

PARTICIPANTS
Design team, any partners or people you're designing for who are relevant

STEPS

01 | **Defer judgement.** You never know where a good idea is going to come from. The key is to make everyone feel like they can say the idea on their mind and allow others to build on it.

02 | **Encourage wild ideas.** Wild ideas can often give rise to creative leaps. When devising ideas that are wacky or out there, we tend to imagine what we want without the constraints of technology or materials.

03 | **Build on the ideas of others.** Being positive and building on the ideas of others take some skill. In conversation, we try to use " yes, and…" instead of "but."

04 | **Stay focused on the topic.** Try to keep the discussion on target, otherwise you may diverge beyond the scope of what you're trying to design for.

05 | **One conversation at a time.** Your team is far more likely to build on an idea and make a creative leap if everyone is paying full attention.

06 | **Be visual.** In Brainstorms we put our ideas on Post-its and then put them on a wall. Nothing gets an idea across faster than a sketch.

07 | **Go for quantity.** Aim for as many new ideas as possible. In a good session, up to 100 ideas are generated in 60 minutes. Crank the ideas out quickly and build on the best ones.

Create Frameworks

A framework is a visual representation of a system and a great way to make sense of data. Use them to highlight key relationships and develop your strategy.

During the Ideation phase it can feel like you've got tons of information but no way to organize it. At IDEO.org, we Create Frameworks to help synthesize our learnings and find clarity in what are often highly complex challenges. Frameworks like 2x2s, relational maps, and journey maps help you start to visualize patterns, understand the perspectives of the people you're designing for, and help you unpack the context you're working in.

STEPS

TIME
60-90 minutes

DIFFICULTY
Hard

WHAT YOU'LL NEED
Pens, Post-its, paper

PARTICIPANTS
Design team

01 | As you Share Inspiring Stories (p. 78), listen for moments when the topic seems to fit into a larger system or feels related to something else you heard.

02 | When patterns start to emerge, draw them. At first they can be simple frameworks like Venn diagrams or 2x2 matrices. These simple diagrams can help you map a few forces at work at once.

03 | As the systems you hear about become more complex, and you start to think about what you might design, your frameworks will too. For example, a journey map—which charts the steps from first hearing of your product to trying it to recommending it to a friend—might become relevant.

04 | Keep refining your frameworks as you move through the Ideation phase and feel free to invent new ones. Your frameworks are bound to change, and that's OK. Frameworks are only meant to help you visualize your system, not to capture it perfectly the first time out.

Create Frameworks

Journey Map
A journey map, allows you to visualize a process beginning to end. This simple framework will help you to more easily imagine the entire flow of an experience, whether it's how a service may work or all the touchpoints of a customer's journey with a product. This doesn't need to be an in-depth, detailed representation, but rather a quick-and-dirty way of thinking out how a process unfolds.

Relational Map
A relational map is used to see how different ideas relate to one another. This type of framework can organize some of what you've learned during the Inspiration phase, visualize how things connect, and help you to find patterns. You might start by putting one idea at the center and then mapping how your other ideas and insights play off of it.

2x2
A 2x2 gives you a way to plot your ideas along two separate axes and then home in on insights and themes. By sorting information in this way, you'll uncover patterns that allow you to draw broader inferences. For instance, you might sort things based on different behavioral, societal, or environmental classifications, using each end of the axis as the extreme. If you were looking into behavioral characteristics associated with the use of adopting a new technology, the x-axis might read risk-taking versus risk-averse, while the y-axis could be digital versus analog.
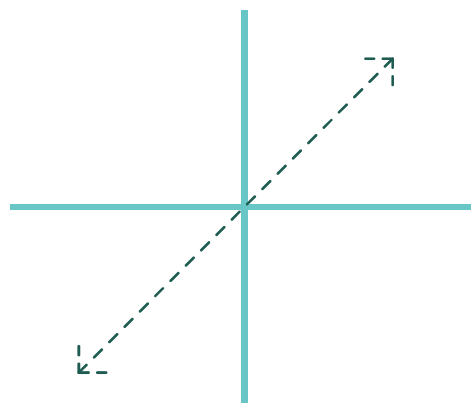
Types of Frameworks

Journey Map

Relational Map
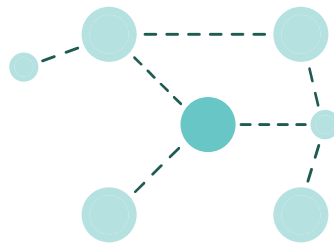
2x2

METHOD IN ACTION

Create Frameworks

In an effort to improve healthcare for informal urban workers, IDEO.org partnered with the Rockefeller Foundation and embarked on a project to identify behaviors, opportunities, and insights about their lives and circumstances.

The informal economy underpins the lives of many cities around the globe and informal workers provide services like manufacturing, domestic work, construction, waste picking, street vending, and many others. Unlike formal workers, informal workers are often exempt from any healthcare benefits or worker health standards set by the government.

So the IDEO.org team set out to better understand behaviors of informal workers, their perspectives toward health, and what influences their decision-making when it comes to health-related concerns. By more deeply understanding the emotional, spiritual, and physical realities of informal workers, the team was able to effectively identify opportunity areas and brainstorm potential healthcare interventions.

Following dozens of in-depth interviews across four countries—Kenya, South Africa, Thailand, and the Philippines—the team used 2x2 frameworks to help them sort through what they heard from people and to identify key insights. For instance, by mapping levels of disposable income across various axes, such as strength of their support network, they uncovered incredibly useful findings. These frameworks allowed them to visualize patterns in the informal workforce that could be articulated in segments. Segmentation then helped them to better define characteristics of the people they were designing for and create opportunities for design around each group. This particular 2x2 identified the Caretakers—those who have some level of disposable income and go out of their way to care for those around them—and the Survivors—those who are living day-to-day with little or no support.

In addition to the example used on the following page, the team mapped out a number of variables relating to time, financial stability, work segmentations, access to technology, and societal factors. A 2x2 is an incredibly flexible type of framework, so don't feel constrained to these examples. Change what the two axes represent until you find the 2x2 that's right for your challenge.

Has Support

Lives Day-to-Day

Has Disposable Income

Doesn't Have Support

- Isra

CARETAKERS
- James
- Sunan
- Faith

- Maria

- Aran

- Pakpao

- Angela

SURVIVORS
- Zulu
- George
- Kenneth

- Joseph

93