IDBM CHALLENGE 2021

Gathering data, making sense of data, and progressing toward insights

Dr. Ville Eloranta, Senior University Lecturer,
Aalto University, School of Business,
Dept. of Management Studies (IDBM)

Aalto University

IDBM
Design, create, lead.

Agenda

- **It is about empathy**
- Gathering data
- Making sense of your data
- Next steps

EMPATHY

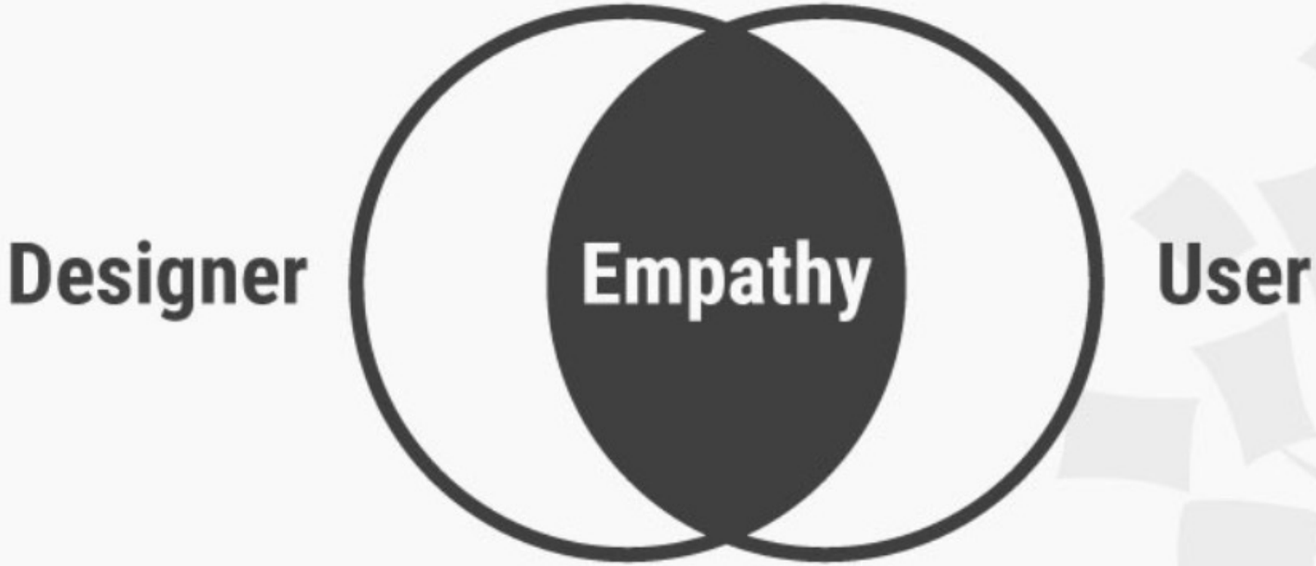
is the ability to step into the shoes of another person, aiming to understand their feelings and perspectives, and to use that understanding to guide our actions.

Empathy helps you to understand other individual's thinking, experiences, and feelings and why they behave like they do.

WHY IS EMPATHY IMPORTANT IN DESIGN?

Helps understand the unmet needs of users
(often not directly identified by the client)

=> Opportunities for meaningful innovation



STARTING WHERE AND WHO YOU ARE

Empathy is culturally related.

You best understand people who come from similar backgrounds than you.

Agenda

- It is about empathy
- **Gathering data**
- Making sense of your data
- Next steps

Start with desk research!

- Doing your “homework” before entering to the field is important for knowing what data needs to be collected.
- Find out what other people know about the phenomenon
- Review previous research findings to gain a broad understanding of the field

- Refine your field research questions based on you results from the desk research

Design research is different from marketing research. The goal in design research is to find inspiration for design, whereas the goal in marketing research is to predict the behavior of a larger group. Unfortunately, large businesses nearly always lose this critical distinction in the similar terminology and approaches. Consider the core similarities and distinctions listed in Table 4.1.

Table 4.1 Core Research Similarities and Distinctions

Design Research	Marketing Research
Focuses on people	Focuses on people
Can be qualitative or quantitative	Can be qualitative or quantitative
Borrows from the social and behavioral sciences	Borrows from the social and behavioral sciences
Attempts to *understand culture.* Looks at the styles, words, tools, and workarounds people use in an effort to inspire design.	**Attempts to *predict behavior.* Looks at what people say they would do, or what they actually do, in an effort to predict what they would do in a new situation**
***Celebrates* the unique and peculiar. The rare or obscure in observations can lead to a new or interesting design idea.**	***Avoids* the unique and peculiar. The goal is to understand mass responses; outliers are frequently ignored.**
Avoiding bias is *irrelevant*. The goal is not to be objective but instead to be rigorous.	**Avoiding bias is *critical.* The statistical analyses of data require an objective point of view.**

EXPLORAROTY PHASE:
Define opportunities

CONCEPTING PHASE:
Develop hypotheses

PROTOTYPING PHASE:
Test hypotheses

Deductive

RESEARCH APPROACH

Shots in the dark

Optimizing
Surveys

Validation
Prototyping/piloting

Integration
Synthesis
Concept generation

Exploration
Field visits
In-depth interviews
Video observations

Inductive

Nascent (low)

STATE OF KNOWLEDGE

Well-developed (high)

What do you know?

WHY: The latest published knowledge will tell you what others know, and can help you contextualise what you have learned from other research methods.

"The more that you read, the more things you will know. The more that you learn, the more places you'll go." — Dr. Seuss, *I Can Read With My Eyes Shut!*

HOW: This method involves reading across a topic, reflecting on what you've read and then writing up your findings.

An environmental scan is the quickest version of this, while a literature review is typically a more in-depth piece of work and will take longer.

Environmental scan – Identify key pieces of research (journal articles, conference papers, industry papers, &c.), list them and briefly summarise their findings. Mine the references from popular publications to help you locate relevant research. Conclude with a discussion section that identifies patterns among the research you have read.

Literature review – Explore themes that are relevant to the problem within a body of work/ discipline area. Identify and meticulously record search terms, set a target number of citations based on the time you have, identify important authors and publications, and read. Take note of emerging theories and hypotheses, and what methods authors have used to gather information. Write up your findings to include an introduction, discussion and conclusion. Share it and get feedback from peers.

Ask nicely

WHY: Want to know what somebody thinks about something? Sometimes it really is as simple as asking a question and listening to the response.

"I like to listen. I have learned a great deal from listening carefully. Most people never listen."
– Ernest Hemingway, *Across the River and Into the Trees*

HOW: There are many ways to interview. Consider the following approaches:

Semi-structured – This more casual approach to interviewing provides the opportunity for open, two-way dialogue. The interviewer explains what they are interested in discussing, and the conversation proceeds from there. The interview is guided by a pre-prepared framework.

Personal story – Ask your subject to tell their story. What life events have brought them to where they are? There are many 'ways in' to this approach and you can be creative and thoughtful in soliciting a story.

Regardless of the interview technique you choose, it is wise to develop a plan for the types of questions you want answers to, and to take notes in a way that doesn't hamper the flow of conversation.

Having recorded the interviews, the next step is to reflect on what the interviewees were *really* saying. There are a few methods for this (see the method 'Understanding Perspectives', p.148) for more detail on how to use interview data to extract themes and create deeper understanding.

Get a feel

WHY: How we feel in a particular place at a precise moment in time informs our thoughts and future choices, and puts us in a better position to empathise with how others may experience that situation. This tool is particularly useful for place-based problems.

"The world is full of obvious things which nobody by any chance ever observes."
– Arthur Conan Doyle, *Sherlock Holmes*

HOW: Choose a 'trouble' spot – such as the location of your problem, if it is place-based – or somewhere that you really love, and explore how each place makes you feel. Using this method in more than one place and time (day and night, for example) can provide a useful comparison. Bring a companion for safety if you need.

Go a bit Zen. Close your eyes, take a few deep breaths and concentrate on what your senses are telling you. Open your eyes and have a wander around, noting your sensory experience and emotional response to the place. Observe how other people appear to be feeling. You can try role-playing this exercise – putting yourself in someone else's shoes and imagining how they might feel. Record your experience in detail.

Point and shoot

WHY: Photography is an invaluable, essential and ubiquitous tool in today's highly visual world. Photographs can be used for research, to document a problem or scenario; or as a communication medium, to help explain a concept or sentiment, or persuade others.

"A picture is worth a thousand words"
– Chinese proverb

HOW: Since photographs are so versatile it is wise to take many, and often, during the course of a project. In a place-based project, photographs may constitute the primary record from a site visit (see method 'Where? Here?', p.154) and a starting point for research. In any project, photographs (of people, places, scenarios) are a powerfully emotive way to present a case for change or to convey an impression of an ideal future solution.

The method or mode in which photographs are presented is important.

A photo-essay is a visual narrative, a curated series of photographs that tells a story about people, places, events, relationships and interactions. Slideshows are a convenient way of telling your story visually, and may include captions or narrative script alongside images, or not. A 'pecha-kucha' slideshow is a popular format which consists of 20 slides, strictly timed at 20 seconds per slide. Alternatively, a feature photograph or hero shot can be all you need to make your point. Find one image that says everything.

Write the story

WHY: Writing a narrative helps both writer and reader develop empathy and a good conceptual understanding of a problem as it presents, or how a new solution could play out.

"I never travel without my diary. One should always have something sensational to read in the train."
— Oscar Wilde, *The Importance of Being Earnest*

HOW: There are many narrative forms. A couple of versatile forms that we have used in projects are:

Short story - Construct a short story that is played by actors in the problem context. The story can be drawn from personal experience, or it could be a fiction starring people you know, or a totally invented scenario. Express the experiences and feelings of each character, relationships between them, actions and consequences. Start your story at the 'beginning' (with the genesis of a problem), in the middle (as a problem scenario is unfolding), or at the 'end' (with a possible future solution).

News article or press release – Project into the future and write a press release or news article announcing a new and wonderful solution to your problem. Be wildly inventive and unrealistically positive in describing what your idea looks like. Explain how you (and others) got there, invent quotes from important stakeholders, and generally go to town.

What do you want to know?

Normal interview? (neutral)

.

.

.

Conversation starter? (provocative)

”Normal” interviews

STATS

Suggested Time

60-90 Minutes

Level of Difficulty

Moderate

Materials Needed

Pens, paper

Participants

Design team, person you're designing for

PROCESS PHASE

INSPIRATION

IDEATION

IMPLEMENTATION

Interviews really are the crux of the Inspiration phase. Human-centered design is about getting to the people you’re designing for and hearing from them in their own words. Interviews can be a bit daunting, but by following these steps below you’ll unlock all kinds of insights and understanding that you’ll never get sitting behind your desk. Whenever possible, conduct your interviews in the interviewee’s space. You can learn so much about a person’s mindset, behavior, and lifestyle by talking with them where they live or work.

STEPS

01 No more than three research team members should attend any single interview so as to not overwhelm the participant or crowd the location. Each team member should have a clear role (i.e. interviewer, note-taker, photographer).

02 Come prepared with a set of questions you’d like to ask. Start by asking broad questions about the person’s life, values, and habits, before asking more specific questions that relate directly to your challenge.

03 Make sure to write down exactly what the person says, not what you think they might mean. This process is all about hearing exactly what people are saying. If you’re relying on a translator, make sure he or she understands that you want direct quotes, not the gist of what the interviewee says.

04 What the person says is only one data point. Be sure to observe your interviewee’s body language and the context in which you’re talking.

Conversation starter

STATS

Suggested Time

30-60 Minutes

Level of Difficulty

Moderate

Materials Needed

Pens, notebook

Participants

Design team

PROCESS PHASE

INSPIRATION

IDEATION

IMPLEMENTATION

Conversation Starters are all about getting a reaction and sparking dialogue. The idea here is to suggest a bunch of ideas around a central theme to the people you're designing for and then see how they react. The ideas you generate for your Conversation Starters are totally sacrificial, so if they don't work, drop them and move on. The goal here is to encourage creativity and outside-the-box thinking from the people you're designing for.

STEPS

01 Determine what you want the people you're designing for to react to. If you're designing a sanitation system you might come up with a bunch of Conversation Starters around toilets, or privacy.

02 Now come up with many ideas that could get the conversation started. What is the toilet of the future, the toilet of the past, a super toilet, the president's toilet? Come up with a list of ideas like this to share with the person you're designing for.

03 Once you're with the person you're designing for, start by telling them that you're interested in their reactions to these Conversation Starters. Some may be silly, some may be absurd, you're only looking to get their opinions.

04 As the person you're designing for shares her take on your Conversation Starters, be open to however she interprets the concepts. When one of them strikes her, ask her follow-up questions. You can learn a lot about how she thinks and what she might want out of your solution.

After each field day... or at least regularly

Download Your Learnings

In the Inspiration phase you gathered tons of information. Here's how you share it with your team and put it to use.

Now that you've got a huge amount of notes, photos, impressions, and quotes, it's time to start making sense of them. Because teamwork is so critical to human-centered design, IDEO.org teams download their learnings as groups. One by one, you'll go around the room, capture your ideas and stories on Post-its, and put them on big sheets of paper. It's critical to pay close attention to your teammates' stories, learnings, and hunches. This is a rich and powerful way to share what you've heard and part of the goal is to make your individual learnings group knowledge.

STEPS

01 | Take turns downloading. Start by getting rid of other distractions and sitting in a circle.

02 | When it's your turn, put all key information you want to share on Post-its and use them as you describe who you met, what you saw, the facts you gathered, and your impressions of the experience.

03 | Cluster the Post-its together as you put them on the wall or on a board so that you have a record of your discussion.

04 | When it's not your turn, pay close attention. Feel free to ask questions if something isn't clear.

05 | This process is best done the day of an Interview (p. 39) or after a day in the field. Download while your experiences and perceptions are fresh.

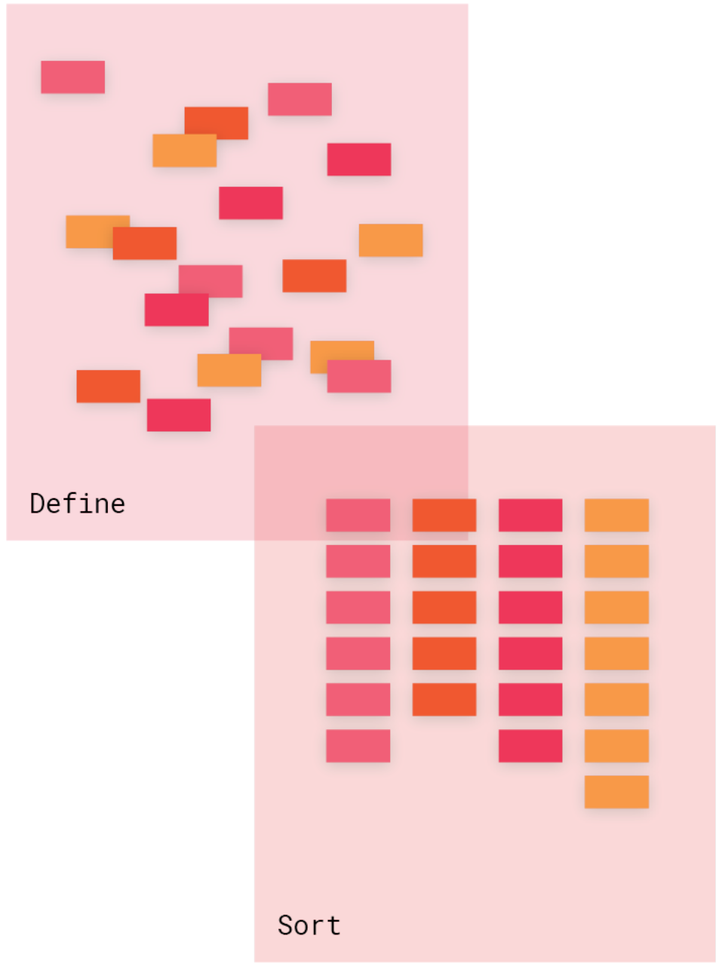
Ideo

Agenda

- It is about empathy
- Gathering data
- **Making sense of your data**
- Next steps

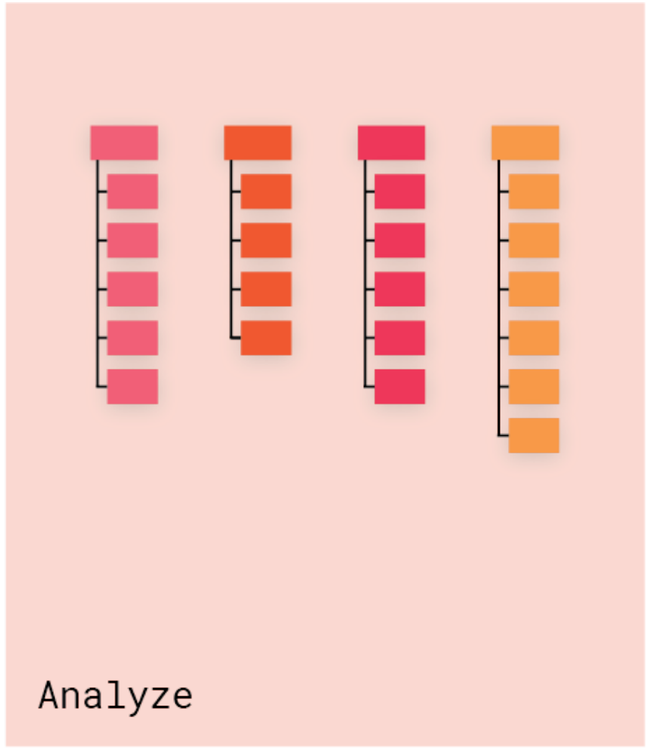
Grouping your data with affinity diagrams

1. Write each piece of data to a post-it note. A piece of data can be a word, a phrase, sentence, statement, picture, etc.
2. Spread generated cards randomly to a surface
3. Now start moving cards around, looking for patterns and groupings. Each move can be logical or emotional – but the intention should be made concrete by verbal statement
4. Collaboratively work through all data
5. Don’t “label” the groups yet!
6. Break groups larger than eight to smaller, more defined groups



Finding themes and insight statements with affinity diagrams

7. When grouping is ready, move to “focusing” phase.
8. Now you can label groups: these are your THEMES.
9. Then, develop and articulate a 2-3 sentence description for the groups (the theme of a group). These are your INSIGHT STATEMENTS.



Kolko, 2011; Illustration: Prototypr

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.*

Agenda

- It is about empathy
- Gathering data
- Making sense of your data
- **Next steps**

Q&A

MORE INFORMATION

Dr. Ville Eloranta, Senior University Lecturer,
Aalto University, School of Business,
Dept. of Management Studies (IDBM)