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Change by Design: The 5-step Human-Centered Design Process

Adopt a new way of thinking and doing

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Design thinking is neither art nor science nor religion. It is the capacity, ultimately, for integrative thinking.

Tim Brown: CEO, IDEO

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Background

At the 2019 BiiG Conference keynote speaker Russell Howcroft stated that "Australia is constipated." This bold statement recognises that many investments are failing to achieve the outcomes we seek. This situation will continue if we do not change our approaches.

Design thinking is the capacity to think outside the box. Design thinking challenges a variety of human tendencies that often hold us back and prevent innovation. The world's most successful leaders (and their companies) "win" by using integrative thinking – the cornerstone of design thinking. They constructively face the tension of conflicting ideas, and instead of choosing one at the expense of the other, they embrace a unique way of thinking that allows for the generation of new and different solutions.

Application of design thinking commits you to finding new ways to move forward and focuses your energy on unlearning practices that hold us back from creating.

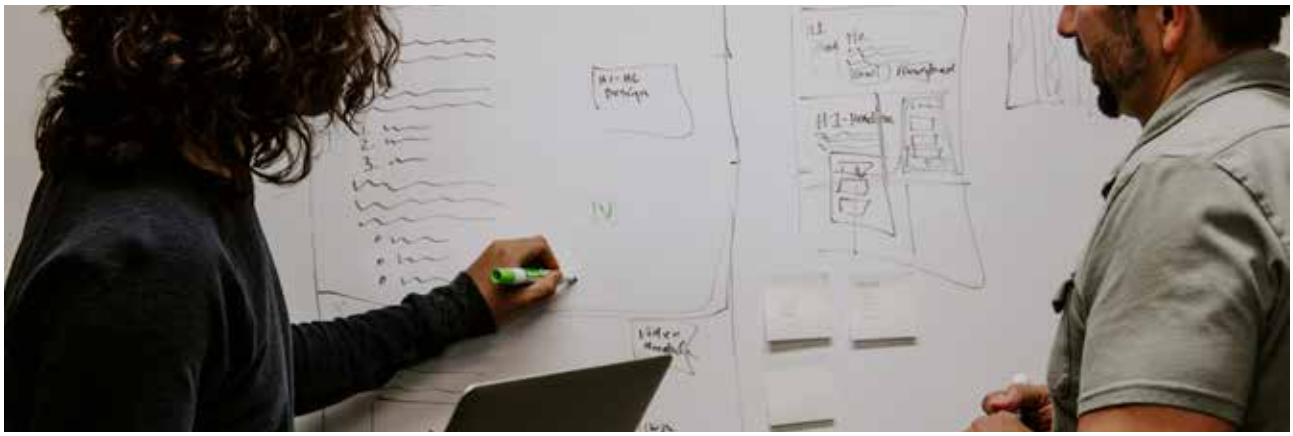
Barriers to innovation include:

- Being trapped in your own expertise and experience;
- Being overwhelmed by the volume and messiness of data;
- Dealing with multiple divided perspectives and failing to reach consensus;
- The presence of unconscious biases;
- A lack of shared understanding and/or commitment to new ideas;
- Being unable or unwilling to get "good" feedback on your solutions;
- A fear of, or reluctance to, change.

Design thinking is a **creative** and **collaborative** approach that overcomes innovation barriers. As Tim Brown, CEO of global design firm IDEO, writes : "Design thinking has its origins in the training and the professional practice of designers, but these are principles that can be practiced by everyone and extended to every field of activity" (Brown, 2009, p.2). With advancements in technology occurring at an unprecedented rate, and a rise in capital-intensive markets, we must continue to innovate. Success requires delivery of superior solutions that achieve buy-in from all stakeholders. Innovation only occurs when we step outside the box and embrace change and disruption.

Design thinking offers a new approach to innovation that challenges conventional ways of thinking and doing by focusing on **creativity** and **collaboration**. Global leaders such as AirBnB, Apple, Bank of America, Google, IBM, Nike, and Uber have all adopted design thinking. Traditionally, there has been an emphasis on hiring professionally trained designers to facilitate and drive innovation within an organisation. Thought leaders in the field of design thinking (e.g. David Kelley, Tim Brown, and Roger Martin) have shifted the perception that "only professional designers can innovate" by demonstrating how anyone can take inspiration and learn from the way professional designers think and work, and apply this knowledge to their own practice. Institutions including Darden Business School, Design Management Institute, Stanford's Hasso Plattner Institute of Design (d. school), IIT Institute of Design, and Rotman's DesignWorks have developed processes and structures that support the implementation of design thinking by "nondesigners."

There are many good reasons to be interested in design thinking. Design thinking has assisted leading organisations to address a range of internal and external challenges, including workplace culture (e.g. IBM), new product and service development (e.g. Suncorp, SAP, Toyota), new customer acquisition and retention (e.g. 3M, IBM, Bank of America, AirBnB, and GE Healthcare), and skill building (e.g. MeYouHealth, Intuit). More recently, design thinking has been used as a tool to drive social innovation and transformation (e.g. Aravind eye care system and Mobisol solar systems).



Technology moves fast,
human needs change slowly.

IDEO.org

The many views on design thinking

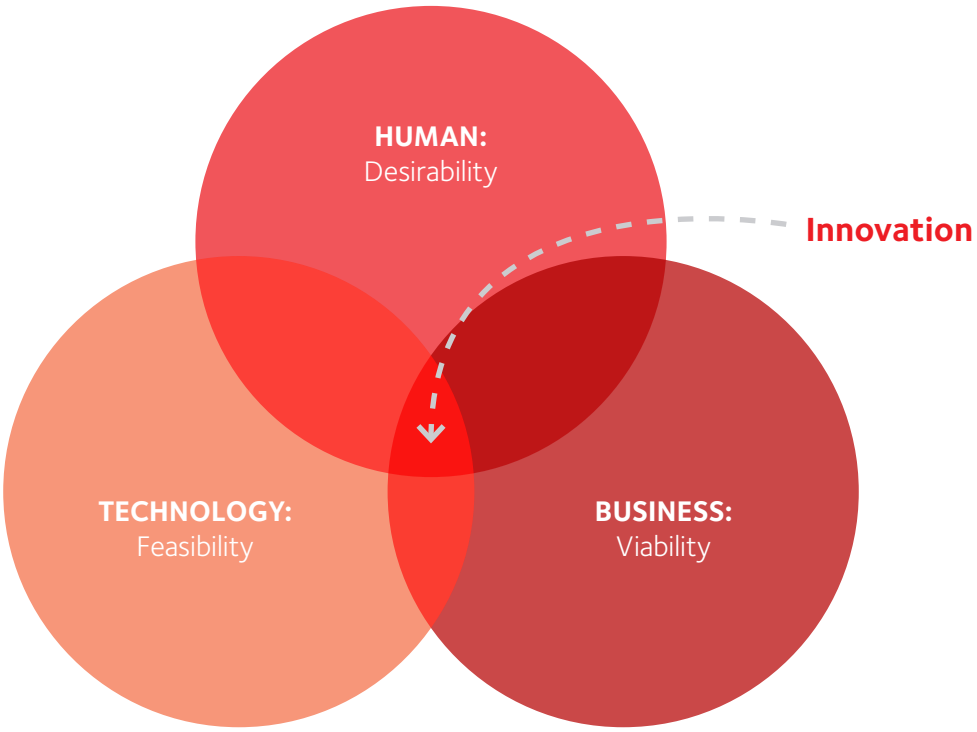
The widespread adoption of human-centered design has led to countless debates surrounding the definition and domain of design thinking. Owing to its broad applicability, many companies have (mis) appropriated the approach to serve their own interests and agendas. The seemingly endless application of design thinking creates a need to better understand the thinking that underpins the human-centered approach. Research has found, however, that even professional designers themselves cannot often express how they arrived at a final solution.

Designers can explain the steps and methods they followed, but articulating what and how they were thinking during the process is often more difficult. We do not intend on discussing the definition and domain of design thinking in detail here, but it is important to acknowledge that there are many design thinking processes available that have been developed based on slightly different interpretations of how professional designers think and work. The iterative 5-step human-centered design process outlined here is one that has been tried and tested by leading design firms, including IDEO and Stanford's d.school. In our own application of design thinking, we supplement the human-centered design process with synergistic social marketing principles and techniques.

The innovation trifecta

Innovation lies at the intersection of desirability, viability, and feasibility (see Fig. 1). In other words, if you integrate the needs of people, the possibilities of technology, and the requirements for business success you will arrive at an innovative solution that delivers shared value. Achieving the innovation trifecta (desirability, feasibility, viability) does not happen overnight; it occurs through a gradual, iterative process of human-centered design.

Figure 1: Innovation trifecta

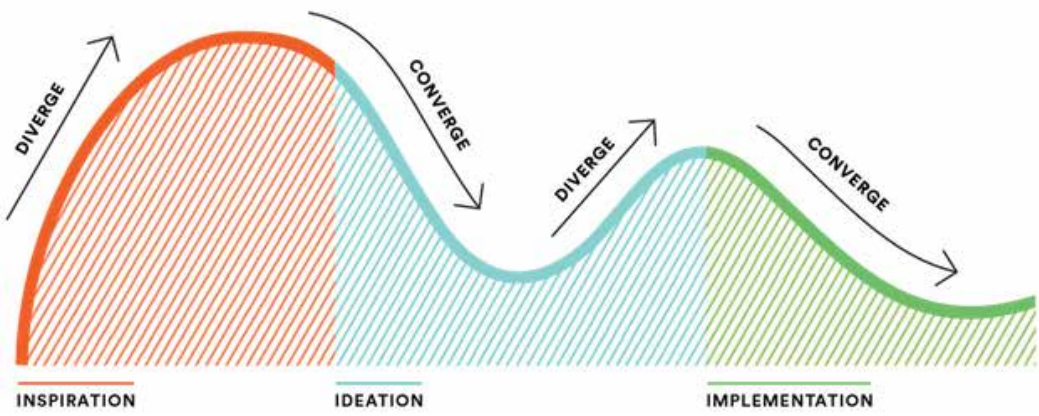


The three phases of innovation

Along the path to innovation, designers move through three general phases (see Fig 2):

1. **Inspiration**
2. **Ideation**
3. **Implementation**

Figure 2: Three phases of innovation (IDEO.org)



Inspiration phase:
The inspiration phase is all about learning on the fly, opening yourself up to creative possibilities, and trusting that as long as you remain grounded in the needs and wants of the people you are designing for, your ideas will evolve into the right solutions.

Ideation phase:
The ideation phase is all about sharing what you have learned from your inspiration research, making sense of the data you have collected, and identifying potential opportunities for design solutions that meet the needs and wants of the people you are designing for by incorporating key insights gleaned from your inspiration research.

Implementation phase:
The implementation phase is all about getting tangible by building rough prototypes of your ideas, sharing them with the people you are designing for, and receiving feedback from a diverse range of people, including mainstream and extreme users.

By taking the three phases (inspiration, ideation, and implementation) in turn, you will be able to build a deep empathy for the people you are designing for, you will figure out how to turn what you have learned into an opportunity to design a new solution, and you will build and test your ideas before presenting them to the world.

The creative process

No human-centered design process is perfectly linear (see Fig. 3). You will converge and diverge several times, and you will continue to iterate and refine your prototypes until you are ready to present a final solution to the world. As you become closer to a market-ready solution, you will evaluate which solutions are most desirable, feasible, and viable, and importantly, which is most likely to have the greatest, lasting impact.

Figure 3: The creative process

To provide more structure within the three general phases of innovation, we outline a 5-step human centered design process that will allow you to keep your design team on track and curb the human tendency to spend too long exploring a problem, or to impatiently skip ahead. These five steps will also instil confidence in your design team, and in turn, your stakeholders, ensuring shared responsibility and commitment to the design solution.

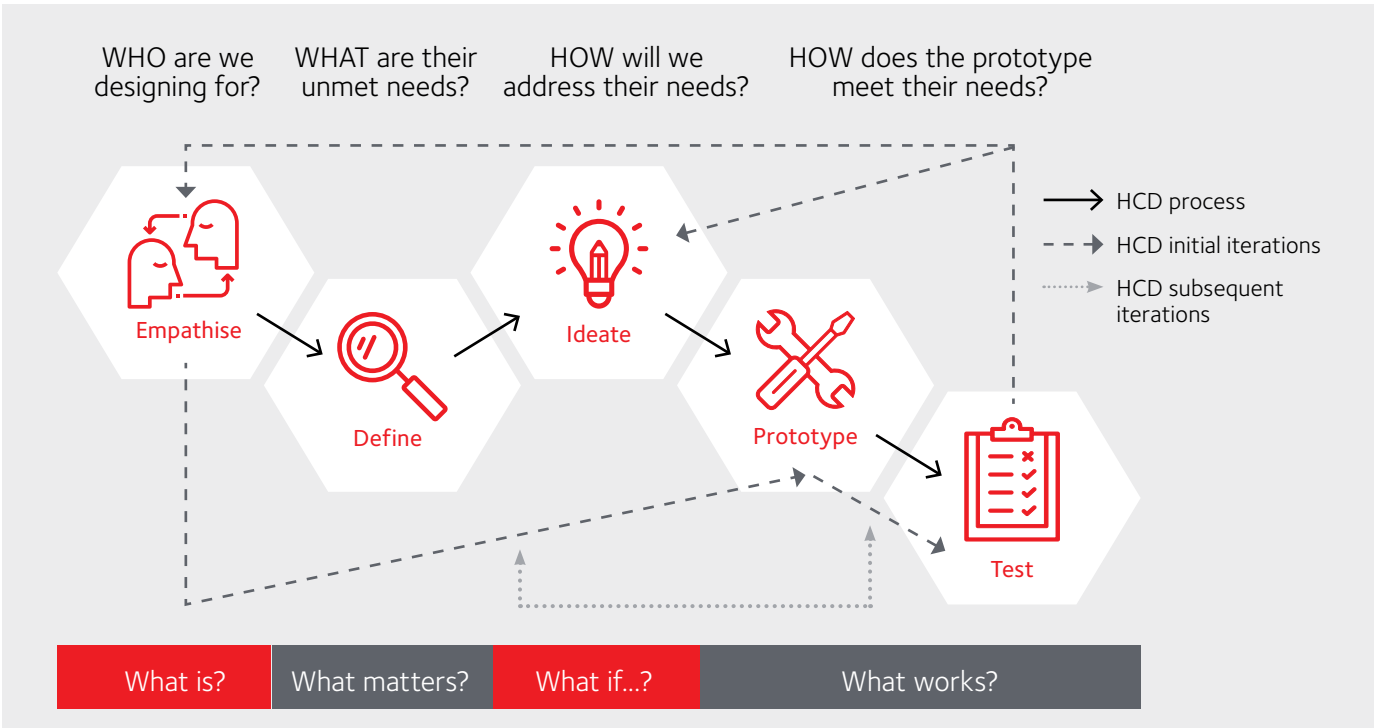
Most of us are driven by a fear of failure or making mistakes, so we tend to focus more on preventing errors than on seizing opportunities. We opt for inaction rather than action when a decision risks failure. But there is no innovation without action; thus, psychological safety is an important aspect of facilitating a creative design process. The physical props and practical tools of design thinking deliver a sense of security, helping novice innovators move more assuredly through a human-centered design process.

A 5-step human-centered design process

The five main steps in the human-centered design process are:

1. Empathise
2. Define
3. Ideate
4. Prototype
5. Test

Figure 4: 5-step human-centered design process



As shown in Fig. 4, these five main steps represent the human-centered design process; however, there will be initial and subsequent iterations in which you will move back and forward through the five steps as you build and refine your solutions. Each of the five steps are detailed next.

Empathy is seeing with the eyes of another, listening with the ears of another, and feeling with the heart of another.

Alfred Adler, World Renowned Philosopher and Psychiatrist

Step 1: Empathise

Empathy is the ability to understand and share the feelings of another. Empathy building in the context of design thinking entails gaining a deep understanding of those you are designing for using a range of market research methods (e.g. ethnography). In other words, you are actively stepping into the shoes of another, to understand their lives, and to solve a particular problem from their perspective. During this step, you consider the full spectrum (extremes and mainstreams) of people who will likely be impacted by your design solution.

Why?

Immersing yourself in another world not only opens you up to new creative possibilities but it allows you to leave behind preconceived ideas and outdated ways of thinking. Empathising with the people you are designing for is the best route to truly grasping the context and complexities of their lives. Most importantly, empathetic design ensures you keep the people you are designing for at the heart of everything you do.

Case in action: GE Healthcare

GE Healthcare is a leading provider of medical imaging, monitoring, biomanufacturing, and cell and gene therapy technologies. While GE Healthcare's diagnostic imaging procedures and technologies are cutting-edge, they can make for an unpleasant experience for patients, especially paediatric patients. Doug Dietz, industrial designer for GE Healthcare, realised something needed to change to ensure diagnostic imaging (scanning) experiences were less scary for young patients and ensure hospital scan results were optimised. As Doug states in his TED talk : "The room itself is kind of dark and has those flickering fluorescent lights." He adds: "...that machine that I had designed basically looked like a brick with a hole in it.".

Doug set out on his design thinking journey by building empathy for his paediatric patients. He started by observing and gaining empathy for young children at a day care centre. He talked to child life specialists to understand what paediatric patients went through during their hospital visits. He reached out for help—including contacting a small volunteer team from GE Healthcare, experts from a local children's museum, as well as doctors and staff from two hospitals.

Example technique:

Empathy maps allow us to sum up our learnings from engagements with people in the field. An empathy map consists of four quadrants that refer to what the user: Said, Did, Thought, and Felt. The four quadrants reflect four key traits which the user demonstrated/possessed during the observation, inspiration research phase.

Using insights from a variety of sources, including paediatric patients, Doug created the first prototype of what would become the "Adventure Series" scanner. As a pilot, this scanner was installed in the children's hospital at the University of Pittsburgh Medical Center.

In the "Pirate Adventure" patients are on a dock, there is a shipwreck, and some sandcastles in the corner; children work on the plank to be scanned. The "Coral City Adventure" in the emergency room gives children an underwater experience. It has a disco ball that makes light like bubbles around the room; children get into a yellow submarine and listen to the sound of harps whilst the procedure takes place. The "Cozy Camp" gives children the chance to be scanned in a specialised sleeping bag, under a starry sky in an impressive camp setting. The visual transformation of the existing imaging equipment creates an exciting distraction from what can be a very scary experience for young patients.

Impact:

Patient satisfaction scores went up 90%. Patients experienced less anxiety and enjoyed the scanning procedure. Children were able to hold still during scanning procedures which, in turn, prevented doctors from having to repeat the scan, eliminated the need for anaesthesiologists, and increased the number of patients scanned each day, thereby benefiting the hospital's bottom line.

Want to know more?

- See this short article on GE Healthcare's website: https://www3.gehealthcare.com/~/media/documents/us-global/products/accesories-supplies/brochures/adventure%20series/gehealthcare-brochure_adventure-series.pdf?Parent=%7BAFE522E5-B54D-4BFA-8343-F41B8A2F69D9%7D
- Watch Doug Dietz's Ted Talk on the Adventure Series here: https://www.youtube.com/watch?v=jajduxPD6H4&
- Read how Shreyas Vasanawala, MD, PhD, Professor of Radiology at the School of Medicine Stanford has implemented similar design innovations to improve imaging scan results for paediatric patients at the Cynthia Fry Gunn and John A. Gunn Imaging Center, Lucile Packard Children's Hospital Stanford: https://med.stanford.edu/communitynews/2018fall/how-stanford-research-is-making-mri-scans-safer-for-children.html

If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question, I could solve the problem in less than five minutes.

Albert Einstein, Theoretical Physicist and Nobel Prize Winner

Step 2: Define

Creating a design challenge is a way to define the focus of your project. Your design challenge will guide all activities completed during the design thinking process. Scoping your design challenge and getting the right frame is difficult at first but your frame will evolve over-time as you make your way through the design process; it is more important to just get started than it is to "get it right."

A few key things to keep in mind:

- Does your challenge drive toward ultimate impact?
- Does your challenge allow for a variety of solutions?
- Does your challenge take into account context?

Why?

Framing your design challenge from the outset will get you off on the right foot, organise how you think about your solution, and at moments of ambiguity it will help clarify where you should push your design.

Case in action: Ford

Since the first Ford Model A was produced in 1903, cars have changed how we shop, travel, and work. They have reshaped our homes, towns, and infrastructure. Today, Ford, along with the entire mobility industry, is at an inflection point. As millions around the world move into gridlocked, polluted cities, the appeal of owning a car has dulled. In some places, young people are driving less, and getting their licenses later or not at all. In particular, inner city dwellers are relying on ride-sharing services and other alternatives to car ownership.

As IDEO notes, technology underpins the shift from ownership to usership. Smartphones, sensors, and open data have enabled new ways of getting from point A to B. Car-sharing services like Zipcar, taxi services like Uber, or clever transport apps like Citymapper, allow people to travel effortlessly between the bus, a shared bike scheme, and renting a car.

In response to this shift in the market, Ford invited IDEO to explore how the company's place may evolve in the changing world of mobility. Specifically, IDEO was tasked with (i.e. their design challenge) developing and evaluating prototype experiments that reframe a car company's place in the rapidly changing world of mobility.

Example technique:

Point of view (POV) statements are actionable problem statements developed based on your understanding of the people you are designing for (users), their specific needs, and your most essential insights about them. A good POV will allow you to ideate and solve your design challenge in a goal-oriented manner where the focus is kept on your users, their needs, and your insights about them. Your POV should never contain any specific solution, or any indication as to how to fulfil your users' needs, and your POV should allow sufficient scope for your team to start thinking about solutions which go beyond the status quo.

Instead of ignoring the obvious changes occurring in the world of mobility, Ford are "determined to learn, to take risks, to challenge custom and question tradition, and to change our business going forward" says Mark Fields, CEO of Ford.

Outcome:

Out of 25 experiments, IDEO designed, developed, and tested two prototypes:

1. A pay-as-you-go insurance offer, and
2. A digital tracker that captures how cyclists, cars, and public transport interact in the city.

Want to know more?

- See this short article on IDEO's website: https://www.ideo.com/case-study/beyond-cars-designing-smarter-mobility
- See this article on Business Insider: https://www.businessinsider.com.au/how-ford-ceo-jim-hackett-is-changing-company-2018-6?r=US&IR=T
- See this short article on NineLabs: https://www.ninelabs.com/blog/ford-bets-big-on-design-thinking

If you always do what you've always done, you'll always get what you've always got.

Henry Ford: Founder, Ford Motor Company

Step 3: Ideate

Ideation is a creative process of generating, developing, and communicating new ideas. In this step of the human-centered design process you will generate as many ideas as possible by brainstorming with your team, sharing insights, and expanding your solution space.

Careful attention to effective procedures for group ideation will provide a solid basis for team-based innovation. Brainstorming is the most frequently practiced form of ideation. During the brainstorming process group members exchange ideas in order to come up with novel, creative solutions for problems, and to generate ideas for future innovations.

Why?

Brainstorming is a great way to generate a lot of ideas that you would not be able to generate by just sitting down with a pen and paper. Brainstorming allows you to leverage the collective thinking of the group, by engaging with each other, listening, and building on each other's ideas. Conducting a brainstorm creates a distinct segment of time where you intentionally turn up the generative part of your brain and turn down the evaluative part.

Brainstorming rules:

1. Set a time limit
2. Start with a plan or a goal to ensure you stay focused (e.g. POVs)
3. Defer judgement or criticism, including non-verbal
4. Encourage weird, wacky, and wild ideas
5. Aim for quantity
6. Build on each other's ideas
7. Be visual
8. One conversation at a time

Example technique:

Brainstorming (group sessions) has three siblings:

- Braindumping, (individual sessions),
- Brainwriting (a mix of individual and group sessions) and
- Brainwalking (another mix of individual and group sessions).

In a brainstorming session, you verbally bounce ideas off of each other in the hopes of finding a blended solution. In a braindumping session, participants independently write down as many ideas as possible before sharing these ideas with the group at the conclusion of the session. In a brainwriting session, participants write down their ideas before passing them onto someone else. The next person reads these ideas and adds their own, and the process continues until each person's ideas have done a full rotation. All ideas are then collected and placed in front of the group for discussion. In a Brainwalking session, the designers themselves move between different "ideation stations." Just like brainwriting, they'll add their own ideas before moving on to the next station.

It may take several ideation sessions, using a combination of different ideation techniques (e.g. brainstorming, mind mapping, storyboarding), to pinpoint and refine the idea (or set of ideas) with which you want to move forward. Once you have completed the ideation phase, you will move on to prototyping (Step 4) and testing (Step 5).

Case in action: Eram Scientific

IDEO 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 (How Might We...) questions. Further thinking and eventually tangible design solutions emerged from the questions created by the design team.

Example technique:

A good place to start before conducting a brainstorming session is to develop some "how might we...?" questions. Creating "how might we..." questions involves reframing insights obtained from inspiration research and turning those insights into opportunities for design. The "how might we..." format allows for a variety of answers. A properly framed "how might we..." does not suggest a particular solution, but gives you the perfect frame for lateral, innovative thinking. Properly framed "how might we..." questions become the launchpad for your brainstorm sessions.

The team answered the first gender-focused question (how might we...create a private zone for women before they fully exit the toilet?) 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 the how might we questions was increased visibility of the cleaning process. From the cleanliness-focused question (how might we...design toilets to be easily serviced and maintained?), 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 visualise a cleaning between each use, they began to associate the toilet with a strong sense of cleanliness.

Impact:

Eram is now developing e-toilets that are self-sustainable, nutrient, energy, and water-recovering and which meet international standards. It is collaborating with grantees of the Bill and Melinda Gates Foundation (BMGF) for recovering water, energy, and fertilizers through suitable sewage management solutions. It is expected that these projects would ultimately make e-toilets self-sufficient in water and energy requirements.

Want to know more?

- Check Eram Scientific's #toilettakeover: https://www.youtube.com/watch?v=Cz4uvl1ZCfM
- See this short article on Eram Scientific's etoilet: https://yourstory.com/2016/04/eram-scientific-etoilet

If a picture is worth a thousand words, a prototype is worth a thousand meetings.

IDEO.org

Step 4: Prototype

Prototyping is an incredibly effective way to make ideas tangible, to learn through making, and to quickly get key feedback from the people you are designing for. Prototypes are meant only to convey an idea—not to be perfect—so you can quickly move through a variety of iterations, building on what you have learned from the people you are designing for, and continually refining your solution.

Why?

Prototyping is such a powerful tool because you are organising your ideas and concepts around the needs of the end user. Prototyping provides an opportunity to determine what lands correctly and what is still missing. It is a way to depict how the experience might play out over time and to gather feedback around that. The main goal of prototyping is to bring tangibility to these intangible experiences.

Case in action: Kaiser Permanente

IDEO partnered with Kaiser to help improve the postpartum patient experience. The design team looked at both the pre and post-natal experience—the entire journey from finding out that you are pregnant to leaving the hospital with your newborn. The time after delivery and before mother and baby go home was identified as a "big area of opportunity."

There is a lot that needs to get done in the 24-48-hour period after delivery. The design team ended up creating a "journey home board" which was essentially a menu where nurses flip over cards for the steps that need to happen before mums and newborns can go home. The "journey home board" opened up communication for mums to know what still needed to be done and to ask questions about what it all meant.

Example technique:

Use prototypes to test out solutions quickly and use the results to improve future iterations. Once you determine what it is you want to test, identify key questions you want to answer through your prototype. While prototyping, keep in mind how you will test the prototype (e.g. natural environment or simulation) and build prototypes that will effectively evaluate those aspects by testing your prototype with real users. You should also consider if it would be advantageous to run a few prototype tests at once in order to test different aspects of a user or the environment.

When the IDEO design team initially prototyped the journey home board, there was concern that it would cause confusion for mums and result in more calls and questions to the nurses. So, the team hung paper versions of the journey home board in three patient rooms and asked a nurse on duty to mark the number of phone calls they received from those rooms versus the rooms without the paper prototype.

Impact:

Mums in the rooms with the paper prototypes had 60% fewer questions; a good indication that this service offer was going to make a lot of sense for Kaiser.

Want to know more?

- Check out this blog post by IDEO with 6 tips for prototyping services: https://www.ideou.com/blogs/inspiration/6-tips-for-how-to-prototype-a-service
- See this article in Harvard Business Review for more on Kaiser's Innovation Consultancy: https://hbr.org/2010/09/kaiser-permanentes-innovation-on-the-front-lines

Do not seek praise. Seek criticism.

Paul Arden: Creative Director,
Saatchi & Saatchi

Step 5: Test

You have learnt and built. Now it is time to test. Soliciting feedback on your prototypes helps keep the people you are designing for at the centre of your project, and ensures your solution is something they will willingly embrace. In this step, you can use different ways of soliciting feedback to identify what works, what does not, what can be improved, and how.

Why?

Integrating the feedback from the people you are designing for is one of the most essential elements of the human-centered design process as it allows you to refine existing prototypes, and/or come up with completely new ones.

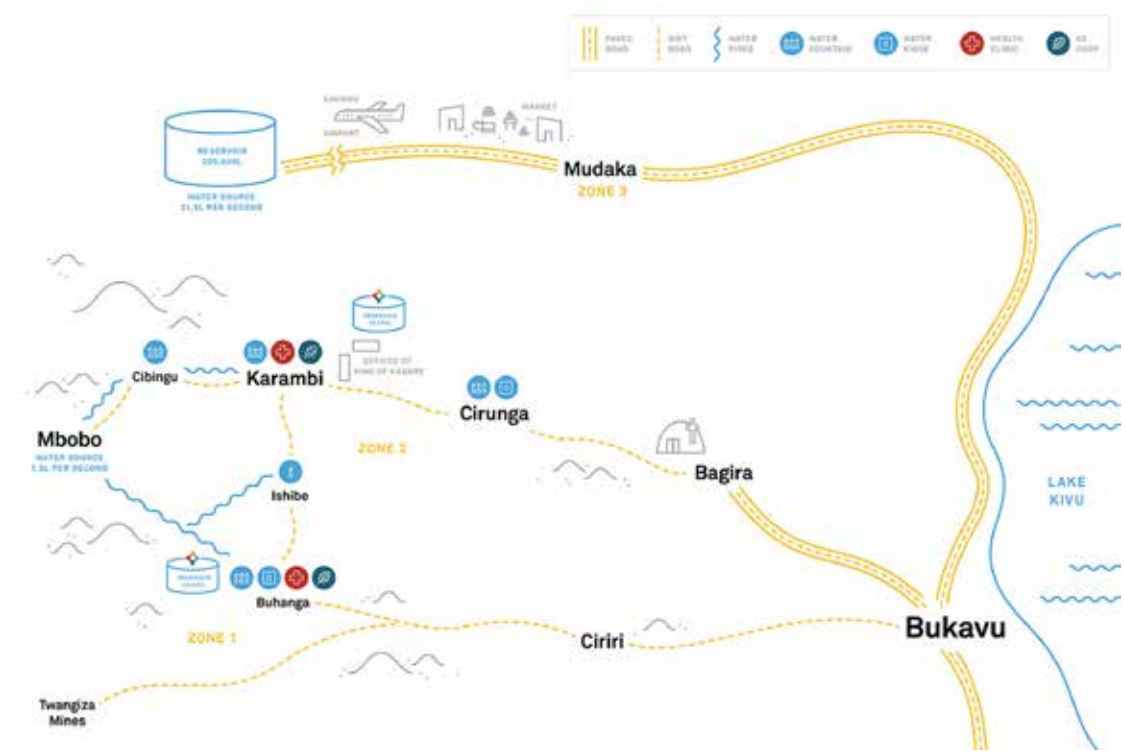
Gathering feedback from the people you are designing for is a never-ending process and is critical as you push your idea forward. When attempting to gain feedback, you should first ask "what are we trying to learn?" Whatever that may be, it helps to tell your audience that they are participating in a "test" right from the get-go. Being up front that you are trying to build or refine something better encourages participants to respond in a way that is useful. You can then use this feedback to understand what works, what does not, what can be improved, and how.

Example technique:

A "Feedback Capture Grid" is a structured way of organising feedback that is gathered from your testing sessions. The grid consists of four quadrants: likes, criticisms, questions, and ideas. You can use the grid as a way to capture feedback from your users systematically, or after the test, when you need help organising the various feedback you have gathered.

Case in action: The American Refugee Committee

The American Refugee Committee (ARC) works in 14 countries at 55 different sites, including refugee camps and settlements for displaced people, operates hospitals and other medical facilities, provides services like shelter, sanitation, and education, and handles camp management. The ARC initially engaged IDEO to help design a way to get better health care to the young children of the Democratic Republic of the Congo (DRC). One out of every five children do not live to their fifth birthdays in the DRC—a country torn by years of war and extreme poverty. Together with ARC, IDEO's design team devised a full-on sustainable business tailored to meet the realities people in the DRC face every day.



The project extended from a business model to a staffing structure, launch plan, and all components of the service. As ARC set Asili in motion, bringing it to market in one of the world's poorest countries, they went far beyond the playbook that IDEO laid out. Instead, ARC took a human-centered approach to implementing the vision for Asili.

A perfect example is how ARC continued to build on the design principle that transparency is key. Though the team designed clear signage with posted prices, ARC realised that the Asili clinic could even better serve the community if it had a patient's bill of rights. Through close collaboration with IDEO, ARC deeply understands how to implement, adapt, and grow Asili as it continues to build out the multi-offer service.

In 2011—as the world watched a record number of asylum seekers board flimsy boats and head for Europe looking for alternatives to traditional refugee camps—the ARC realised that they needed to make a more radical shift to customer service, and began working with IDEO to develop Kuja Kuja—an application that collects, analyses, and helps our partners to take action on real time customer feedback.

An early version of the service was more analytical and data-driven, but it evolved into a brand that felt playful and optimistic—using a smiley face, for example, rather than just asking how satisfied someone was. The customer service team wears branded shirts with Kuja Kuja's friendly logo on the back (the name means "come, come," something that designers initially heard when refugees invited them into their homes to talk). The system was designed to create an emotional connection, not simply gather data.

As refugees' swipe to show their level of satisfaction, that data goes to the ARC in real time, and also goes to a public website, because the organisation wanted to be fully transparent about its performance. The Kuja Kuja team brings suggestions from refugees back to a service team, who can then begin to make changes. Because the data is also available across the whole organisation, if staff working at a refugee settlement in one location sees that another camp is struggling with a problem they have already solved, they can make suggestions for solutions to test. Refugee camps have limited resources and a typical assumption is that services cannot be easily improved because of a lack of resources; however, the ARC team found that was not the case.

Impact:

"What we discovered was that we can typically get a 20% improvement in customer satisfaction over a three-month period with no additional budget and no additional training" says Daniel Wordsworth, President and CEO of the ARC.

When simple improvements reach a plateau, the organisation seeks more funding to accomplish more. The system continues to evolve. The team, which is still working with designers from IDEO, is now testing a self-swipe tablet to get feedback from more people than a Kuja Kuja staff member can get on their own. Where this new iteration is being tested, the system uses both the tablet and a person with a separate tablet.

The application is quickly scaling. This year, the ARC expanded the service from Uganda to Rwanda, Somalia, and Sudan, and hopes to move into Pakistan in a couple of months. This year, it's on track to collect more than a million responses from refugees. Within a year and a half, it expects to use the system in all of the countries it serves.

Want to know more?

- See this short blog post on IDEO's website about Asili: https://www.ideo.org/project/asili
- See this short article on Kuja Kuja on Fast Company: https://www.fastcompany.com/90365726/how-an-ideo-org-designer-created-a-yelp-for-refugees
- See this short article on Kuja Kuja on Fast Company: https://www.fastcompany.com/40575160/at-these-camps-refugees-can-give-real-time-customerfeedback

Takeaway message

In most organisations, the application of design thinking follows three general phases of innovation:

1. Inspiration
2. Ideation
3. Implementation.

Within these three phases there are five main steps that comprise a human-centered design process. Each step generates a clear output that the next converts to another output until the design team arrives at an implementable "market-ready" solution.

At a deeper level, however, there is something else much more profound happening during the design process—something that many designers themselves are often unaware of. Although design thinking focuses on understanding and impacting the experiences of users, each step in the design process reshapes and rewires the natural human tendencies of the designers themselves.

Over time, they become less driven by the fear of failure and more focused on seizing valuable opportunities for change and disruption. They become more empathetic and user driven. They opt for action rather than inaction, accepting that with all decisions comes an element of risk. They embrace the tension inherent in thinking outside the box, and choose to resolve, rather than dismiss conflicting ideas. And perhaps most importantly, they become more enthusiastic about engaging partners in co-creation after experiencing first-hand that the surest way of winning stakeholder buy-in is by involving them in the design process.

Resources

Books:

Brown, T. (2019). *Change by design: How design thinking transforms organisations and inspires innovation* (2nd ed.). New York, NY: Harper Business.

Kelley, T., & Kelley, D. (2013). *Creative confidence: Unleashing the creative potential within us all* (eds.). London, England: Harper Collins Publishers.

Journal articles:

Brown, T., & Wyatt, J. (2010). Design thinking for social innovation. *Development Outreach, 12*(1), 29-43.

Brown, T., & Katz, B. (2011). Change by design. *Journal of Product Innovation Management, 28*(3), 381-383.

Business press:

Brown, T. (2008). Design thinking. *Harvard Business Review, 86*(6), 84. Retrieved from https://hbr.org/2008/06/design-thinking

Kelley, T., & Kelley, D. (2012). Reclaim your creative confidence. *Harvard Business Review, 90*(12), 115-8. Retrieved from https://hbr.org/2012/12/reclaim-your-creative-confidence

Liedtka, J. (2018). Why design thinking works. *Harvard Business Review, 96*(5), 72-79. Retrieved from https://hbr.org/2018/09/why-design-thinking-works

Online resources:

IDEO U—IDEO's online "school" that equips individuals with design thinking tools and mindsets to enable them to tackle complex challenges and drive innovation. Read more here: https://www.ideou.com/

d.school—Stanford's d.school offers a collection of design thinking resources, including activities, virtual case studies, and tools. Read more here: https://dschool.stanford.edu/

Want more information or need help?

To learn more about how design thinking can help your organisation solve complex problems and drive innovation, please contact Taylor Willmott at t.willmott@griffith.edu.au.

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Dr. Taylor Willmott is an experienced research professional with interdisciplinary expertise in behavioural economics, consumer behaviour, human-centered design, psychology, and social marketing. Taylor has held several research and teaching appointments across leading higher education institutions in Australia including Queensland University of Technology, Griffith University, Monash University, and the University of Queensland. Taylor's mission is to apply her theoretical and applied knowledge of the science and technology of behaviour and behaviour change to create innovative solutions that benefit individuals, communities, and organisations. For more on Taylor's background and experience see: https://www.linkedin.com/in/taylorwillmott/

To find out more about how you can apply social marketing to your field of work to make a positive social change, contact socialmarketing@griffith.edu.au or visit griffith.edu.au/sm@g.

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