

# Human centred design tools

Below is a list describing commonly-used human centred design tools and when they might be of value.

<i>Tool</i>	<i>Description</i>	<i>Use this tool to:</i>
Affinity mapping	A process to analyse and synthesise information generated from research.	<ul style="list-style-type: none"><li>• organise many ideas into groups with common themes or relationships.</li><li>• bring clarity to complexity</li><li>• identify connections in ambiguous data.</li><li>• create hierarchies.</li><li>• identifying themes.</li><li>• identify factors to focus on that will support the most successful design possible from a customer's perspective.</li><li>• establish a design direction based on the associations.</li><li>• uncover significant but hidden relationships.</li></ul>
Business Model Canvas	<p>A strategic management tool help understand a new or existing business model in a straightforward, structured way.</p> <p>Using this canvas will lead to insights about the customers you serve, what value propositions are offered through what channels, and how your company makes money.</p>	<ul style="list-style-type: none"><li>• better understand a business model.</li><li>• destructure a competitor's business model.</li><li>• test a hypothesis – a new idea or business model.</li><li>• identify new markets and how to appeal to those markets.</li><li>• explore new channels to reach a market.</li><li>• document strategic partnerships important to your business model.</li><li>• develop a clear view of your value proposition, operations, customers, and finances.</li></ul>
Card sorting	A deck of cards, each with a word or single image that are used to explore relationships between content and decision-making.	<ul style="list-style-type: none"><li>• identify what's important to the end-user.</li><li>• start a conversation about values and needs.</li><li>• make it easier for others to provide insights.</li><li>• sort information you need to organise, but you're not sure how to organise.</li></ul>
Co-design	Co-design is the act of creating with stakeholders (business and customers) to design new products, services and policies.	<ul style="list-style-type: none"><li>• create a space for a community to be part of the development and feel ownership in the design solution.</li><li>• ensure the design meets stakeholder needs and are usable.</li><li>• introduce diversity: it involves different types of participants with different kinds of knowledge.</li><li>• give stakeholders the opportunity to be involved and give creative, critical input.</li></ul>

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Contextual inquiry	A semi-structured interview method where participants are observed and interviewed in context – where they live or work or in the situation where they would use a product or service.	<ul style="list-style-type: none"> <li>• make it easier for participants: they're not trying to remember what, why and how they did something, they're simply answering questions about now.</li> <li>• reveal insights users may not be aware.</li> <li>• for accuracy – observing users doing what they usually do can lead to very accurate information.</li> </ul>
Customer Journey Map	Creating a visual story of your customers' interactions with a product. At it's most basic, it maps a series of user goals and actions on a timeline.	<ul style="list-style-type: none"> <li>• help stakeholders see their business from the client/customer's perspective.</li> <li>• move the decision making from the subjective (I don't like red) to their customer's likes, dislikes and need.</li> <li>• use storytelling and visualisation to help stakeholders understand and address customer needs.</li> <li>• involve a diversity of real customers and clients.</li> </ul>
Desktop research	Find, review and summarise existing research relevant to a project's needs.	<ul style="list-style-type: none"> <li>• provide fast, credible insights.</li> <li>• save money – desktop research is less expensive to implement than primary research.</li> <li>• add context and depth to primary research findings.</li> </ul>
Design sprint	A multi-day process to solve problems through co-creation, rapid prototyping and qualitative testing with targeted users.	<ul style="list-style-type: none"> <li>• include diversity: a variety of stakeholders can gather together to find a solution.</li> <li>• encourage original thinking through experimentation and iteration.</li> <li>• reduces the cost of failure – because ideas are prototyped by sketching and modeling, incurring cost building the wrong product is avoided.</li> <li>• explore ideas that may typically be rejected by the business.</li> <li>• test a hypothesis in a short time period.</li> </ul>
Diary study	Collect information by asking participants to record entries about a particular activity or experience in a log, diary or journal.	<ul style="list-style-type: none"> <li>• gather information in a discovery or development phase.</li> <li>• gather information directly from the user in real time (so they don't have to rely on memory).</li> <li>• investigate products you want to create or replace, or problems you want your product to solve.</li> </ul>
Empathy map	A collaborate, visual tool used to gain a deeper insight into what a user thinks, feels, says and does.	<ul style="list-style-type: none"> <li>• create or increase empathy with your end user.</li> <li>• better understand end user challenges.</li> <li>• replace customer personas – instead map real people.</li> <li>• extend your understanding of the end user. Empathy maps go beyond interests, skills and lifestyles into emotions.</li> <li>• permanently display the end user's needs as a reminder to the design team.</li> </ul>
Ethnographic research	Qualitative method where researcher's observe and interact with participants. It's a wide-picture activity rather than honing into one activity.	<ul style="list-style-type: none"> <li>• understand participant's thoughts and feelings.</li> <li>• observe participants location, environment and context to better understand the problem.</li> <li>• get first-hand knowledge of activities – see for yourself rather than have it translated through other's eyes.</li> </ul>

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Expert interviews	Interviews with subject matter experts to learn about an area of interest.	<ul style="list-style-type: none"> <li>• clarify or challenge an hypothesis with an expert</li> <li>• investigate one aspect of a problem in great depth</li> <li>• gain valuable perspective quickly</li> <li>• find specific technical advice.</li> </ul>
High-fidelity prototyping	A computer-based, realistic prototype to test and finalise the details of a design. High-fidelity prototypes are high-functioning, detailed and interactive. They are faithful to the original.	<ul style="list-style-type: none"> <li>• pinpoint specific components to test.</li> <li>• get detailed feedback on certain elements of the design (that wouldn't be possible on pen and paper).</li> <li>• get accurate usability evaluation (because little is left to the imagination).</li> </ul>
Heuristic evaluation	A usability inspection method for computer software used to identify usability problems with the user interface. 'Expert' users assess product compliance against recognised design and content standards ('heuristics').	<ul style="list-style-type: none"> <li>• evaluate a solution by independent experts and measures.</li> <li>• to reveal insights to help design enhance product usability.</li> <li>• be a quick solution — easy to understand and implement.</li> <li>• for practical feedback.</li> </ul>
Ideation workshop	A collaborative workshop to help groups of people from different backgrounds work with research insights and elicit a broad range of potential solutions.	<ul style="list-style-type: none"> <li>• different people from diverse backgrounds (not just designers) can offer different perspectives.</li> <li>• harvest different views and explore different ideas.</li> <li>• generate a large number of ideas to be explored and reduced.</li> <li>• uncover unexpected ideas and thoughts.</li> </ul>
Jobs to be done	<p>A framework to define, categorise, capture or organise a need.</p> <p>Could be a task people are trying to accomplish, a goal or objective they are trying to achieve, a problem they are trying to resolve, something they are trying to avoid, or anything else they are trying to accomplish.</p>	<ul style="list-style-type: none"> <li>• identify the core function that needs to be done (not the customer or the product).</li> <li>• better define customer needs to reduce the 'vagueness' around a design solution.</li> <li>• introduce the ability to measure the success of a design solution (because needs are not vague).</li> <li>• focus on customer need at a detail level.</li> </ul>
Landscape review	A summary-style review of comparable products and services available to identify vulnerabilities and opportunities for differentiation.	<ul style="list-style-type: none"> <li>• identify and assess competitors</li> <li>• identify and prioritise features and functionalities of comparable products and services</li> <li>• collate a valuable reference for research and design activities.</li> </ul>
Literature review	A summary of existing knowledge and emerging trends, highlighting gaps for further research and design enquiry.	<ul style="list-style-type: none"> <li>• ensure you have a thorough understanding of a topic.</li> <li>• identify potential areas for research.</li> <li>• identify similar work done in the area.</li> <li>• identify knowledge gaps that demand further investigation.</li> <li>• compare findings.</li> </ul>

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Low-fidelity prototyping	A quick and easy way to translate high-level design concepts into tangible and testable products. They range from sketches to hand-drawn mock-ups.	<ul style="list-style-type: none"> <li>• to test functionality rather than the visual appearance of a product.</li> <li>• quick, economical way to test an idea.</li> <li>• think through the shell of an idea.</li> </ul>
Participant sample design	A method of deciding who and how many participants you need to ensure your sample is representative.	<ul style="list-style-type: none"> <li>• ensure a sample is diverse with no bias in selection <i>or</i> deliberately form groups of similar participants.</li> <li>• perform a robust test of a product or service.</li> <li>• be cost effective. One diverse sample built to mimic the real-user group allows researchers to gather the same answers from a sample that they would receive from the population. Reduces cost of finding people and collecting data.</li> </ul>
Post-mortem	A meeting of stakeholders after a project to use the value of hindsight to assess what could have been done better.	<ul style="list-style-type: none"> <li>• provide a healthy, safe environments where team members are not reluctant to speak up.</li> <li>• identify and document activities or decisions that might have improved the process or outcome.</li> </ul>
Pre-mortem	A meeting of stakeholders before a project to help project teams identify possible risks to, and opportunities for, a project before it has begun.	<ul style="list-style-type: none"> <li>• provide a healthy, safe environments where team members are not reluctant to speak up.</li> <li>• check there is clarity around the objectives, measures of success and scope.</li> <li>• brainstorming in possible failure and success to identify risks and opportunities.</li> <li>• delegate roles and responsibilities to risk and take opportunity.</li> <li>• use insights to rewrites the existing project plan (if necessary).</li> </ul>
Problem definition	An in-depth discussion of the project's broader context, various stakeholders' objectives, what purpose each project activity serves and known unknowns or blind spots.	<ul style="list-style-type: none"> <li>• ensure agreement is reached around the problem definition.</li> <li>• provide a starting point for resolving the problem.</li> <li>• to ensure any confusion about 'problem' is identified and resolved.</li> </ul>
Project kick-off workshop	A workshop designed to align stakeholders around the goals, outputs, timelines and constraints of a project.	<ul style="list-style-type: none"> <li>• lay the foundation for a successful project.</li> <li>• ensure the stakeholders and project team agree on – among other things – the scope, the goals, timeline and budget.</li> <li>• define roles and responsibilities.</li> </ul>
Quantitative research	Research with large or many datasets to describe 'what' happens rather than 'why' it happens.	<ul style="list-style-type: none"> <li>• quantify behaviours, opinions, attitudes and other variables that make generalisations from a larger population.</li> <li>• include objectivity and accuracy – few variables are involved as data relates to close-ended information.</li> <li>• make sense of reality, to describe and explain the social world and to develop models and theories.</li> </ul>

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Research synthesis	Turning data into insights, theories, recommendations and designs. May also be called an affinity map.	<ul style="list-style-type: none"> <li>• integrate existing knowledge and research finding.</li> <li>• increase the generality and applicability of findings.</li> <li>• develop new knowledge through integration.</li> <li>• test and validate hypothesis, understand key processes and better design future research activities.</li> </ul>
Service blueprint	A diagram to visualise the relationship between different service components (people, physical or digital evidence and processes) that are touchpoints in a specific customer journey.	<ul style="list-style-type: none"> <li>• extend a customer journey map.</li> <li>• visualise intangible services.</li> <li>• provide clarity with an ambiguous service landscape.</li> <li>• create a single source of information and truth.</li> <li>• reveal interdependencies between service components.</li> <li>• identify potential gaps in the service experience.</li> <li>• reach an aligned goal.</li> </ul>
Service safari	Team members directly experience the service in the role of customer.	<ul style="list-style-type: none"> <li>• experience the client's perspective.</li> <li>• experience a specific service (like buying a MacBook Pro at JB HiFi) or a type of service (like buying a computer).</li> <li>• explore a service from a customer-experience perspective.</li> <li>• capture a real-world experience.</li> </ul>
Service storyboard	Uses images to tell a visual story about how a user interacts with the service during a specific situation.	<ul style="list-style-type: none"> <li>• help visually predict and explore a user experience.</li> <li>• visualise how people would interact with a good or service.</li> <li>• help understand users current motivations and experiences.</li> <li>• make a powerful message - images are more powerful than words.</li> <li>• bridge any language-difficulties.</li> </ul>
Stakeholder engagement	Consultation with the decision-makers: people who will be influenced by or have power over a project.	<ul style="list-style-type: none"> <li>• translate stakeholder needs into organisational goals.</li> <li>• ensure stakeholders have ownership in the design solution – the more a stakeholder is involved the more they will be engaged in the process and interested in the outcome.</li> <li>• plan how to communicate with different groups and the best tools to use.</li> </ul>
Stakeholder interviews	One-on-one conversations about a specific topic or issue to provide a broad overview of the interviewee's opinions.	<ul style="list-style-type: none"> <li>• build rapport with stakeholders.</li> <li>• capture stakeholder opinions in a formal process.</li> <li>• reveal hidden concerns or ideas that may not be expressed in a series of questions (survey).</li> </ul>
Stakeholder relationship mapping	Visualise the internal and external stakeholders who are part of the project ecosystem.	<ul style="list-style-type: none"> <li>• visualise relationships between people, teams or agencies who could affect, or be affected by, the outcomes of a project.</li> <li>• identify who the real stakeholders are.</li> <li>• visually connect stakeholders.</li> </ul>
Survey	A tool that gathers comparative data from medium to large numbers of participants. Limited use as you will only get the answers to questions you ask.	<ul style="list-style-type: none"> <li>• gather stakeholder information quickly.</li> <li>• gather unbiased data and develop decisions based on analysed results.</li> <li>• focus your work where it's most needed – immediately address topics of importance rather than waste time and valuable resources on areas of little or no concern.</li> <li>• to test the universality of data from one on one interviews.</li> </ul>

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User testing	Test prototypes with real users to understand what works well and what needs improvement.	<ul style="list-style-type: none"> <li>• explore and analyse your target audience's behaviour when interacting with your product.</li> <li>• save time and money – a prototype can be tested before any large expenditure.</li> <li>• gain insights from users.</li> <li>• help verify a user's real issue and ensure it has been addressed.</li> <li>• get an unbiased examination of a product.</li> </ul>
Value proposition canvas	A tool to help ensure a product or service is positioned around what the customer values and needs.	<ul style="list-style-type: none"> <li>• summarise why a consumer should buy a product or service.</li> <li>• ensure there is a fit between the product and the market.</li> <li>• investigate the relationship between customer profits and value propositions (two parts of a business model canvas).</li> </ul>