Design Methods Step 1: Discover

This four-part guide is for anyone who wants to understand the methods designers use and try them out for themselves.

We've grouped 25 design methods into four steps – Discover, Define, Develop and Deliver – based on the stages of the Double Diamond, the Design Council's simple way of mapping the design process (//www.designcouncil.org.uk/news-opinion/design-process-what-double-diamond)

From rapid prototyping to personas and surveys, methods like these are used all the time in our work with partners. Browse through our case studies (//www.designcouncil.org.uk/knowledge-resources) to see how they have been instrumental in bringing about dramatic improvements to products, services and environments, ensuring they are clearly focused on the needs of users.

Step 1: Discover

Use the methods below to keep your perspectives wide, allowing for a broad range of ideas and influences.

Creating a project space

What is it?
Creating a dedicated area to organise project materials, work and meet.

What is it useful for?
Creating a project space can help you make sense of large amounts of information, keep it organised, give your project visibility and communicate the story of your project to others.

How can I do it?
Find – or make – a dedicated project zone. You could use the area around your desk, a corner of your studio or, if you have the space, a separate room. Use the walls to organise your research spatially.
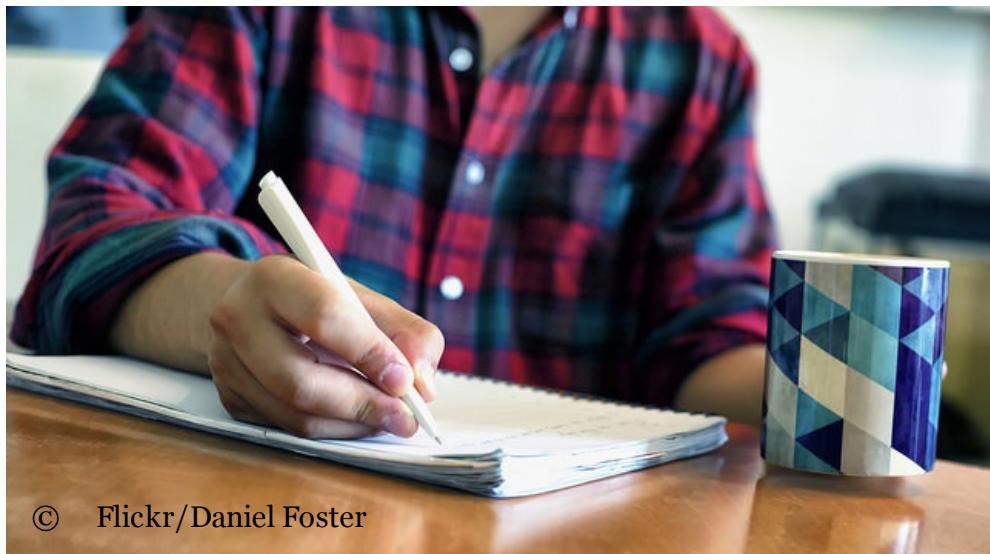
Hold all your meetings and creative sessions in this space so you are surrounded by stimuli.

Use the space to construct a story about your project so that you can share it with others and invite them to contribute.

Try not to be too precious or perfectionist about the way you present your work as people are more likely to make constructive comments on work in progress than something that looks polished.

As the project progresses, you can reorganise the space to tell the relevant story for the stage of the project.

Make the space comfortable to work in with appropriate lighting, sofas and tables as appropriate – and make it fun.

Observation

What is it?

Watching people as they interact with products, services and environments and identifying areas where problems occur.

What is it useful for?

Depending on your project, you might want to make general observations of something that already exists. For example, how people move around a shopping centre, or how people in the street use their mobile phones. Or you could test a design in a specific scenario.

How can I do it?

Pick your scenario and record your observation with photos or video. This lets you analyse the material after the event (and even catch important details you might have missed, like the expressions on people's faces). The photos or videos can also provide evidence to show to partners or stakeholders in your project.

User diaries

What is it?

Supplying users with diaries or asking them to record pictures, video or audio.

What is it useful for?
Gaining insight into the lives of your users, particularly patterns of behaviour.

How can I do it?
Supply users with a diary and ask them to keep a written record of their impressions, circumstances and activities related to the relevant aspects of their lives. The diary can be kept over a week or sometimes longer. Be careful not to ask leading questions that will distort the results you get: keep your questions open-ended and your language simple.

Giving your users cameras or asking them to record pictures, video or audio on their phones can be an effective way to get users to record important incidents and their environment.

Photo diaries can be used in conjunction with a written diary or as a stand-alone piece of evidence. But even if they're as simple as pictures of users' houses, or the contents of their fridges, they still provide valuable insights into users' habits.

You could provide a pre-printed notebook or diary with prompts or questions, making sure the visual design makes it easy to complete.

It can often be worth talking through the diary in a follow-up interview.

Being your users

What is it?
A method to put yourself in position of your user.

What is it useful for?
Building understanding of and empathy with the users of your product, service or environment.

How can I do it?
Identify your target user group, then carry out research to identify user scenarios and typical tasks users undertake.

Put yourself in the user's situation for a couple of hours, a day or even a week. Carry out the tasks that they would do, in the environments where they would do them. This could mean, for example, working on a supermarket checkout or driving an unfamiliar car for a week. Make detailed notes or keep a diary to record your thoughts.

You could also use empathy tools to simulate specific user characteristics. For example, wearing gloves and tinted glasses can simulate some of the physical effects of old age, or a pregnancy suit with a weighted 'bump' can simulate what it would be like for a pregnant woman to use your service.

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Brainstorming

What is it?
Brainstorming is a method to enable a team to work together to generate ideas quickly and effectively.

What is it useful for?
Generating ideas quickly in response to a problem.

How can I do it?
Start with a warm-up. Brainstorm a fun problem such as "How can we get every Monday morning off work?"

State the problem clearly and concisely.

Don't lose anything. Write your ideas on flipcharts, or on the wall.

Number your ideas and set a target – to get to 100, for example.

Keep the focus sharp: edgy and precise statements are better than fuzzy ones.

Keep the ideas flowing, be responsive and keep trying to approach the problem from different viewpoints.

Brainstorming will be most effective if you keep to these ground rules:

- Defer judgment – build on ideas to make them better
- Don't criticise!
- One conversation at a time
- Go for quantity – the more ideas the better
- Have wild ideas – every idea is valid
- Stay focused on the problem in hand
- Be visual – draw ideas or represent them with whatever is to hand

After brainstorming, a smaller group can cluster the ideas for voting.

Choosing a sample

What is it?
Choosing a sample helps you find the most appropriate or effective group of users to recruit to make the most of limited time and budget.

What is it useful for?
It's not possible to research each and every one of your users. Plus, creating a sample is the first step for many methods of understanding users, including one-to-one interviews and focus groups.

How can I do it?

Start by brainstorming the user attributes that you think influence behaviours in relation to your project. Then choose the most important attributes to determine a useful range of people to study.

For example, if you were designing a bike for female commuters you might want to study people who commuted by different means (train, car, bus) and in geographical areas with different weather, as well as people of different size and strength.

Other common attributes to consider might be age, life stage, ethnicity and socio-economic background, as well as emotional characteristics or attitudes.

Be wary of speaking to more people than you have time to analyse. There is a trade-off between the number of people you speak to and the number of insights you will get. Often a sample of six to nine people will be enough.

Remember, your sample doesn't have to be representative. In fact, talking to non-representative or extreme users will often yield the most insight and inspiration for your project.

For example, if you were designing a bike for commuters you might want to include a cycle courier in your sample. And don't make the mistake of only talking to people who use your products or services – speak to those who don't use them too. For example, beyond talking to people who love commuting by bike, include those who have tried it and hated it as well as those who love commuting by car. Always be mindful of whom you haven't met.

The sample you choose will depend on what you are trying to get from your users. If you are researching to identify opportunities, a diverse sample including extreme users can often yield the best

results. If you are researching to validate a resolved design (for example in a focus group) then a more representative and less diverse sample may be more appropriate.

Quantitative surveys

What is it?
Surveys which generate statistical data about your chosen sample of the population.

What is it useful for?
Understanding the big picture and providing you with statistics that can help to inform the direction of your project.

How can I do it?
There are two types of quantitative surveys:

1. Omnibus surveys are regular monthly surveys that allow you to place a set number of questions on a shared questionnaire with content from several organisations. This is the cheaper option but limited in scope.
2. Ad hoc surveys are bespoke pieces of work and allow you to ask as many questions as you need.

Both of these could involve commissioning a specialist market research agency. It's best to look for one familiar with the territory so that they will produce a usable report that directly responds to the needs of the project. Don't forget – the information you need may already be available on the web or at a reference library.

Fast visualisation

What is it?

Generating quick sketches of your ideas.

What is it useful for?

Visualising ideas will make them easier to understand and modify, and will in turn stimulate new ideas.

How can I do it?

Sketch ideas during a group brainstorm. The drawings don't need to be perfect: they only need to have just enough detail to communicate the idea.

Secondary research

What is it?

Setting aside time to explore a range of published information about your customers, your competitors and political, social and economic trends.

What is it useful for?

It's vital to explore and understand the context you're working in and to stay up to date with the latest developments.

How can I do it?

Search online or at your local reference library (where you can ask for help). Services like Google Alerts allow you to receive automated updates about new articles in your area of interest as they are published.

Hopes and fears

What is it?

A way of getting everyone involved in a project or workshop, designers and non-designers alike, to express their hopes and fears out loud.

What is it useful for?

Setting expectations to establish from the outset which hopes and which fears the project can and can't address.

How can I do it?

Ask the gathered team for their hopes and fears, write them down on separate sheets of paper and pin them up as a reminder to be revisited throughout the workshop. Discuss the outcomes of the exercise and establish from the outset which ones the project can address.

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Design Methods Step 2: Define

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Step 2: Define

Use the methods below to review and narrow down your insights and establish your project's main challenge.

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Focus groups

What is it?
Focus groups usually involve six to ten respondents in a group discussion lasting two to three hours, moderated by a skilled facilitator.

What is it useful for?
It helps you get a broad overview of users' reactions to and ideas about a topic.

How can I do it?
A facilitator can lead the group through a series of exercises designed to uncover their thoughts on the given topic. Good preparation of these exercises is vital, as is creating a democratic, supportive and informal atmosphere. The aim of focus groups is to get people talking freely and informally, so it's important that the people feel comfortable with the others in the room, otherwise they might go quiet. The sample of people you choose to come to the session will usually represent part of your user

group. Sometimes a video link or two-way mirror is used to allow the development team to observe the focus group. The session could also be videotaped for future reference.

Assessment criteria

What is it?
A method of selecting the most promising ideas to develop further.

What is it useful for?
Agreed assessment criteria are useful for taking into account the concerns of multiple stakeholders when deciding the best ideas to take forward.

How can I do it?
Brainstorm, refine and agree a shared set of assessment criteria. These need to be structured to encourage participants to consider the perspectives of the other stakeholders when making their assessments. For example, if you were selecting a product design to take forward into production you might give each of the ideas a score of 1 to 5 on the criteria of:

- Technical feasibility (the engineering team's concern)
- Cost (finance's concern)
- Passion for the idea (the project team's concern)
- Portability and size (some of the customers' concerns)

Score all of your ideas against the criteria then add up a final score for each idea.

Comparing notes

What is it?

Visually sorting and prioritising a large amount of information about a problem.

What is it useful for?

When presented with many pieces of information, it's not always obvious where to start. Sorting and grouping these ideas in order is often the best way to begin.

How can I do it?

1. Write all of your ideas on individual sticky notes.
2. Reduce the number of notes by rejecting low priority items and combining notes that deal with similar things.
3. Compare pairs of notes in turn and put the most important one higher up the list (using the same criteria for all comparisons).
4. When no more swaps can be made, the list will be in order of importance.

For example, if you wanted to determine the most important factors in choosing a pushchair you could take all the potential considerations from your research (or brainstorm them) and then compare notes to determine the most important considerations. This method also works for ranking things other than by importance, for instance in order of speed, cost, quality or desirability.

You could also use this method with users to get them to put their considerations in order of importance, for example, "What are the most important considerations connected with buying a new home?".

## Drivers and hurdles
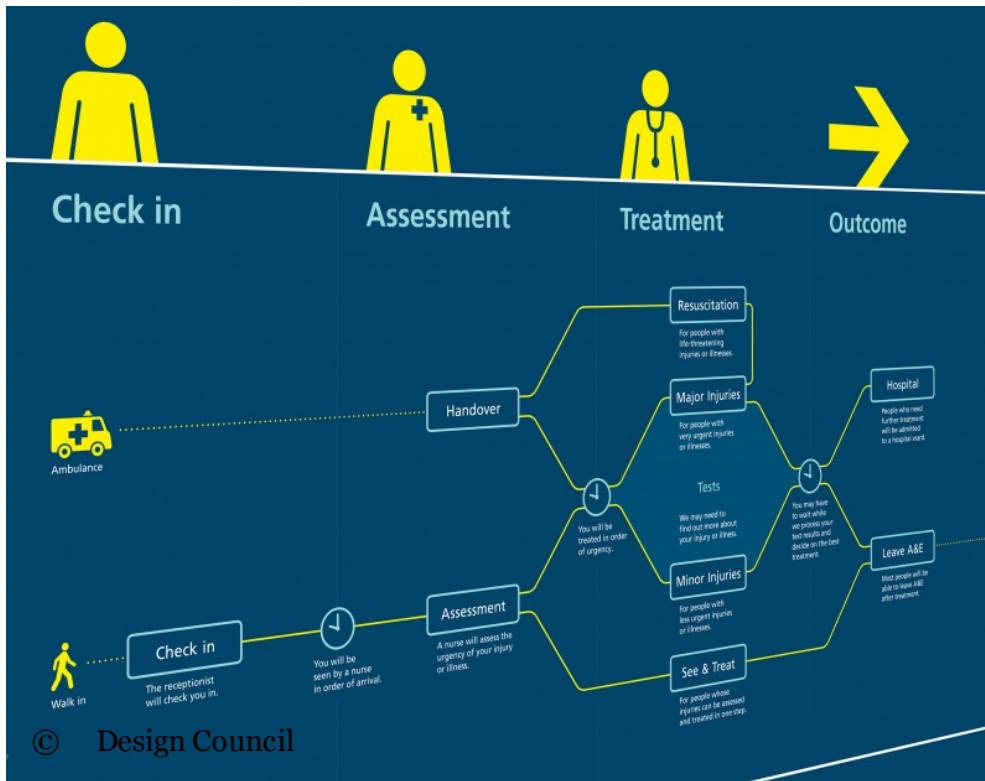
What is it?
Drivers and hurdles is an exercise to help you identify where to concentrate your energies for most effect in the next stages of your project.

What is for?
Use this method to understand people's perceptions, manage their expectations and identify where to concentrate resources for most effect.

How can I do it?
Gather together a diverse group of stakeholders in your project. Brainstorm what the workshop participants perceive to be the motivators (drivers) and barriers (hurdles) to a project's success. Collect the ideas on two separate sheets of paper. Establish what the project can and can't address, and agree which drivers it would be best to focus on in order to overcome the hurdles.

Customer journey mapping

What is it?

A visual representation of a user's journey through a service, showing all the different interactions they have.

What is it useful for?

It allows you to see what parts of the service work for the user (magic moments) and what parts might need improving (pain points).

How can I do it?

• Identify the key elements of a service
• Consider all the touch points including those front and back of house
• Understand the links between all the different elements over time
• Identify problems in a service or areas where new things can be added

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Go to Design Methods Step 3: Develop. (//www.designcouncil.org.uk/news-opinion/design-methods-step-3-develop)
Go to Design Methods Step 4: Discover. (//www.designcouncil.org.uk/news-opinion/design-methods-step-4-deliver)

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Design Methods Step 3: Develop

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Step 3: Develop

Use the methods below to brainstorm design concepts, test out what works and discard what doesn't.

Character profiles

What is it?

A way to create simple character sketches and visual representations of the most important categories of user you are designing for.

What is it useful for?

Having character profiles visible and to hand during the design process stimulates ideas and aids decision making. They can also help justify innovations to stakeholders in the project.

How can I do it?

Based on research of your user groups or a brainstorm, identify the key characters that you are going to design for. You can give the characters names and visually represent how they look and dress, their aspirations, behaviours, lifestyles and any challenging peculiarities. It is important to create profiles of extreme users as well as typical ones. It can also be useful to write 'stories' about a typical day in their life.

Display the profiles prominently. They will help you to stay on course and stop you designing for yourself. At decision points, ask yourself, "What would Mary or John think of this?"

You could also make composite profiles by merging the characteristics of real users you have met.

Scenarios

What is it?
Detailed accounts of situations in which your users will interact with your product, service or environment over a period of time.

What is it useful for?
Gaining an understanding of the context in which users may be interacting with your product, service or environment in order to refine it. It's particularly useful when a series of interactions are necessary from the user.

How can I do it?
Define a set of characters who will use what you are designing. Consider the details of their lives – their jobs, their regular activities and their attitudes. Identify key moments where these users interact with your project, then realise them as scenes in a short text or a storyboard.

Test the scenario on users or yourself. Use what you learn to improve the design further.

To investigate the full scope of user interactions, you may need to construct three or four scenarios around the needs of a different character and improve them with each iteration.

Role-playing

What is it?

Role-playing means physically acting out what happens
when users interact with products, services or environments.

What is it useful for?

Taking the role of the user and acting out their interactions can
prompt more intuitive responses and help you to refine your
design. Role-playing is particularly useful for prototyping
interactions between people, for example in a service context.

How can I do it?

Define a character or characters who will use or deliver the end
product, service or environment you are designing. Isolate key
moments where these users interact with it, and then act them
out – with or without props.

Use your intuitive responses prompted by the enactment of the
scenario to refine your design. You can also use role-play as a
method to test physical prototypes.

Service blueprints

What is it?

A service blueprint is a detailed visual representation of the total
service over time – showing the user's journey, all the different
touchpoints and channels, as well as the behind the scenes parts
of a service that make it work.

What is it useful for?

Helping everyone involved in delivering the service understand
their role and ensure the user has a coherent experience.

How can I do it?

Initially map a user's progress through different service stages,
ranging from awareness, to use, through to leaving the service. In
doing this identify touchpoint encountered. These touchpoints
each can be segmented into different channels such as face-to-
face or web.

The customer-oriented elements of a service are known as the 'front stage'. Identify and map touchpoints and processes that need to happen behind the scenes for the 'front stage' part to work. These might include back office staff, logistics systems, or IT infrastructure. This is known as the 'back stage' part of the service. A service blueprint allows you to see the interaction between the front and back stages, ensuring links and dependencies between different service elements are coherent.

Some services might have a range of different offerings and require multiple blueprints. In developing a service blueprint it can be useful to work in teams, and carry out an initial pass before developing in detail.

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Physical prototyping

What is it?

Building a model of your idea. An early model can be very simple to test underlying principles; when it comes to the later stage of the design process, a more accurate model is required to refine details of form and function.

What is it useful for?

Physical prototypes help iron out any unanticipated problems with your creative ideas. Prototypes give you insight into how your design will be used, before you create a finished version.

Physical prototypes are also particularly effective in communicating design ideas to diverse groups of stakeholders.

How can I do it?

First decide which aspect of the user experience you want to test, and build an appropriate model to test it. This will vary according to the stage of development your project is at.

At an early stage a 'quick and dirty' prototype that people are not afraid to criticise is best for testing principles.

At a later stage a you may want to create 'works-like' prototypes to detail aspects of build and functionality and a (possibly separate) 'looks like' prototype to test response to form.

For example, you might first test the principles of a new office workstation by building it in foamboard using hot glue. In later stages you may test a detail of a mechanism by building a 'works-like' mechanical prototype.

Build your prototypes using available material and test them with end users, or role play how you might use the designs yourself. Use what you learn to improve the prototype designs further.

Go to Design Methods Step 1: Discover. (//www.designcouncil.org.uk/news-opinion/introducing-design-methods)
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Design Methods Step 4: Deliver

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Step 4: Deliver

Use the methods below to finalise, produce and launch your project and gather feedback about it.

Phasing

What is it?
Delivering your product or service on a curve.

What is it useful for?
Managing risk before launching on a large scale.

How can I do it?
Test out your design project on a small group of, say, 5 users. Then try it out on a group of 50 before offering it to 100. If something doesn't work, you can solve the problem before it affects many users, limiting financial loss. Even in the final Deliver phase of the Double Diamond, the design process is iterative.

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Final testing

What is it?

Identifying any final constraints or problems before manufacture, checking a product against standards and regulations and performing damage and compatibility testing.

What is it useful for?
Ensuring that the product successfully addresses the problem it's built to solve.

How can I do it?
Assess the first item off the production line to ensure that it is fully functional. Also test the product in the environment where it will actually be used, rather than in the factory.

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Evaluation

What is it?
Reporting back on a project's success after launch.

What is it useful for?
Informing future projects, including methods and ways of working. Another aim is to prove the impact of good design on the project's success.

How can I do it?

Carry out customer satisfaction tracking surveys and see if changes in satisfaction can be linked to the new design. You can encourage in-use evaluation of designs by having questionnaires handy for users or customers.

The introduction of a new design can also be linked to other business performance metrics, such as improved sales or increased traffic.

Lastly, you can use third-party benchmarking data to compare ongoing customer satisfaction with competitors.

Feedback loops

What is it?

Feedback related to problems with a project – or suggestions for improving it – that flows back to an organisation indirectly.

What is it useful for?

Spinning off new projects or making improvements.

How can I do it?

Gather user feedback through in situ channels, for example salespeople who interact with clients or service operators for a piece of equipment.

Put aside ideas that emerge in post-launch feedback (as well as ideas that emerged during the design process) – if you decide to develop them later, they'll then go through the design process again on their own.

Equally, it's very useful to document and log lessons from the entire design process, in a library of case studies for example or a methods bank.

Methods banks

What is it?

The documentation and communication of design methods within an organisation.

What is it useful for?

Encouraging best practice in design and user experience, avoiding rework and improving robustness and efficiency of outputs.

How can I do it?

Record methods used during the design process with descriptions, videos, sketches and flowcharts on, for example, an internal website. Live or online discussions can take place around each individual method topic to incorporate everybody's experiences.

Sometimes methods banks are open only to designers. Other times, everyone in an organisation can access them so they can contribute their ideas and reflections. Formally documenting design methods in this way shows everyone in an organisation that designers' work has tangible outputs and is valuable and appreciated.

Sometimes a methods bank is also made accessible to external users. An organisation can build its reputation from demonstrating its expertise in design and development and its willingness to communicate with users. Sharing design methods like this means others will build on them, raising the bar for design in the wider world.

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