# UX Toolkit

>> 12 Essential UX Research & Design Methods

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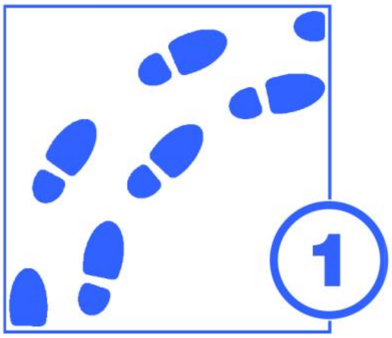
# UX Toolkit

A collection of 12 essential UX Research & Design methods. 9 research techniques for uncovering the needs and behaviours of your users and 3 design techniques to help you actively respond to the user data gathered.

## >> Contents




# BEHAVIOURAL MAPPING

### >> What is it?

Recording movements of users in a physical library space through a series of concentrated observation sessions.

### >> When to use it?

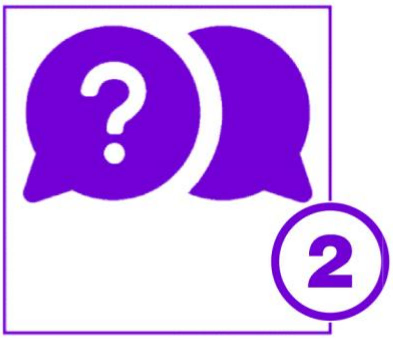
To identify user routes (known as desire lines) through a library space and to establish the efficacy of layout, furniture and equipment.

### >> How to do it:

1. Position yourself in a space in the library where you can record user movements.
2. Sketch a rough plan of the area you are going to observe showing entrances, exits, desks, shelves and other furniture. Also record the date, time and the name of the space.
3. Draw current occupancy in the space on the plan with crosses.
4. Record with a pen line anyone entering, leaving or moving through the space. Use different coloured pens for each individual user or for different types of user.
5. Record people who are sitting in the space with a cross, or stopping in the space with a circle.
6. Write notes on a separate sheet of paper describing notable behaviours and incidents in the space and use numbered asterisks to link these notes with locations on the map.
7. Ideally spend 1 hour observing one space, however, 30-40 minutes will still offer valuable data.
8. Repeat the process at the same and different times on different days until you have 5 or 6 maps. You should now have gathered enough data on user movement through the space, the main desire lines (the most popular routes), furniture and equipment use, and layout efficacy.

### >> Questions to ask in response to your data:

- Do you need to remove or add furniture or equipment?
- Is everything located in the right place?
- Are there any underused spaces?
- What could you place along the desire lines to assist the user?
- Would it help to alter any of the routes the users take?
- Should you place any gargoyles (route blockers) on the desire line to change behaviour?




# INTERVIEWS

### >> What is it?

Asking users and non-users questions about their experiences of using physical and digital library services - their thoughts, feeling, perspectives - and recording their responses.

### >> When to use it?

To understand what aspects of library services have meaning and value to the interviewee and to uncover what problems and issues they have encountered.

### >> Guerrilla (short) vs Semi-Structured (longer) Interviews

- Guerrilla: Short *ad hoc* interactions in which interviewees give their *ad hoc* reactions to a few questions in order to quickly establish general opinions (3-5 minutes)
- Semi-Structured Interview: In-depth longer interactions intended to help the interviewees open up and share their experience in as much detail as possible (30 minutes - 1 hour).

The main difference between the methods is interview duration. The golden rule is that interviews should last for as long as the interviewee is happy to talk to you.

### >> How to do it:

1. Approach anyone and everyone (not just people: you know; who seem friendly; who appear to be at a loose end). Remember that people who look busy are just as likely to stop and help you.
2. Begin with a brief introduction to yourself, the fact that you work for the library, the purpose of the interview: to improve library services for users, and a friendly thank you.
3. Smile, nod and make regular eye contact throughout (most people do not nod or smile enough while conducting user research). Be friendly and seek to build rapport.
4. As the interviewer, you should aim to speak for only 20% of the time. The other 80% should consist of the interviewee speaking. A conversation (50/50 split of talking) is not an interview.
5. Ask brief, broad, open questions. This way the interviewee can elaborate and take the interview where they want. The interview should be about their experience and opinion not staff agendas.
6. Encourage the interviewee to share by embracing silence. Make your questions concise. Remain as silent as possible when not asking questions. Remain silent after they initially answer your question rather than moving on to your next question, this allows them to explain their experience in more detail.

7. Only prepare 3 to 5 questions in advance, after that, what they tell you should help you generate additional questions. Follow-up questions should help you better understand their experience.
8. Remember that the interviewee is 100% correct throughout: accept anything and everything they say about the library.
9. Clarify and summarise what they have said to check you have understood.
10. Take rough notes during the interview and write up the key points immediately afterwards. For longer interviews you may wish to record it (with the interviewee's consent).

### >> Questions to ask in response to your data:

- What common themes of library experience emerge?
- What problems and issues does the interviewee explain?
- Are there any misconceptions that were regularly repeated by interviewees?
- Is there a difference between what people say they do and what you actually see users do?

# 3 COGNITIVE MAPPING

### >> What is it?

A user-created hand-drawn picture of experience of either a physical space or a specific aspect of your service, produced over a 6-minute timeframe.

### >> When to use it?

To understand user priorities, preferences and routines via a more creative and visual medium.

### >> How to do it:

1. Ask a user, or group of users, to draw a picture in response to a research question.
2. Example questions: ‘Draw how you use the library’; ‘Draw the strengths and weaknesses of the library service’; ‘Draw how the library fits into your routine.’
3. Reassure the user that they do not need to be able to draw well. This activity is about how people consider and share different things when drawing, as they are using a different part of their brain. It is not about artistic talent: stick-people and rough sketches are fine.
4. Ask people to try to draw pictures rather than write words.
5. Provide a piece of plain paper and 3 different coloured pens.
6. Explain that they will have 2 minutes to draw with each pen and ask them to draw a number at the side of the paper to indicate the order in which they have used them (this should help you understand their preferences and priorities afterwards).
7. Keep time until all 3 pens have been used and 6 minutes has passed.
8. Ask the user to explain what they have drawn and why. Address your questions about their experience to the picture rather than the user as this is less confrontational.
9. Remember that some people prefer expressing themselves through pictures rather than words. This method may not be your preference, but it could really work for your users.
10. Take detailed notes on what the users tells you their different drawings represent and keep that information with the cognitive map. Do not worry if they start talking beyond the map - this method is about getting people to open up rather than the map itself.

### >> Questions to ask in response to your data:

- What did the user draw first?
- What was the main message of their drawing?
- What problems and issues did they draw?
- What did the user not draw? (this might be just as illuminating as what they did draw)
- What does the map tell you about user misconceptions and perceptions of the library?

# USER-LED LIBRARY TOURS

### >> What is it?

Turning the traditional library tour on its head by having the user give a tour of the library space to a staff member.

### >> When to use it?

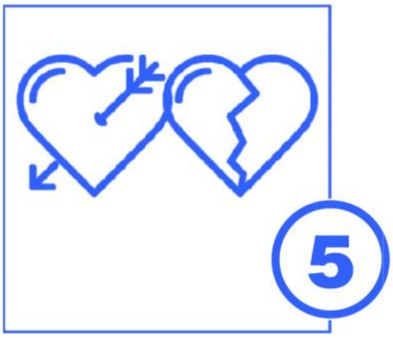
To understand how the physical library space is used, navigated and perceived.

### >> How to do it:

1. Recruit users *ad hoc* and ask them to show you where they go and what they use in the library.
2. Reassure all the people you ask that their opinion and experience matters even if they are not a regular library visitor.
3. Encourage your recruit to describe their typical activities and their understanding of the space and its resources by asking lots of open questions as they show you around. Express interest and enthusiasm in what they tell you.
4. Make it clear that you want to hear the good and the bad about the library. Your aim is to discover what problems exist in the library so that you may later solve them.
5. Maintain dialogue with the user throughout the tour and regularly ask them ‘Why?’. If they don’t say a lot, ask them to explain their reaction to spaces and services in more detail.
6. Ask the user what they call different spaces, collections and equipment as this will help you create better signage and written information.
7. Ask them what services they use and whether library spaces communicate these effectively.
8. Take brief notes during the tour and write these up in more detail afterwards.
9. After 5 to 6 tours you should have enough data to start to explore perception and popularity of different spaces and library resources, what users call things, and some key problems.

### >> Questions in response to your data:

- Do users not understand or visit certain spaces?
- How did each space make the users feel?
- What spaces have been revealed to be problematic or needing modification?
- Was any wording or naming considered to be library jargon?
- What, if anything, was considered to be missing from the library spaces?
- Were the library’s services communicated effectively to the user via the library’s spaces?



# 5 LOVE & BREAK-UP LETTERS

## >> What is it?

The writing of a letter to the library as if it was a person with whom the user is in love, or who they are breaking up with.

## >> When to use it?

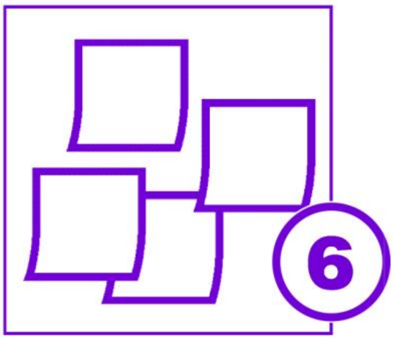
To explore more emotional and often hidden feelings by having the user anthropomorphise the library or specific library services.

## >> How to do it:

1. Invite a group of users to a brief workshop session. Ask them to write a love or break-up letter to the library as if it was a girlfriend or boyfriend they are in love with, or who they are breaking up with.
2. Explain that the letter can be written to a specific aspect of the library service (furniture, collections, the catalogue) or to the library as a whole. However, the letter must not be to a person/library staff.
3. Although you may ask for either love or break-up letters, tell the user that break-up letters are more useful to you as they contain problems and issues that you can aim to respond to. Reassure them that you will not be offended by the content of break-up letters and gladly receive them.
4. Give the user 5 to 10 minutes to write their letter.
5. A group of users writing letters at the same time as each other are likely to feel more comfortable with the technique than individual users, but you may wish to try this method a*d hoc* with individuals too.

## >> Questions to ask in response to your data:

- What are the main problems that are detailed in the letters/repeated in numerous letters?
- What do the letters tell you about library routines/behaviours?
- Does the content of the letters reveal any misconceptions about the library?
- Are there any positively-reviewed service aspects that could be improved further?




# CARD SORTING

### >> What is it?

A group of users respond to a research question on sticky notes that are subsequently arranged on a wall (or table).

### >> When to use it?

To derive visible concentrations of opinion, experiences and ideas from a group.

### >> How to do it:

1. Ask a group of users to respond to research questions by inviting them to write their responses on individual sticky notes. Use Sharpies as it is hard to read notes written in pencil or pen.
2. Possible research questions: What are the best things about the library?; What are the worst things about the library?; What library services do you use?; What library services would you change? What ideas do you have for new library services?; What is the library for?
3. Encourage the users to write as many notes as possible in response to each question and advise them that there should only be one response/idea on each note.
4. Once users have finished writing their notes invite them to add them to a large wall, window or whiteboard.
5. Ask the first person at the wall to place their notes wherever they want, provided they are spaced out enough, as they are effectively creating the first categories of the sort.
6. Instruct subsequent arrivals to add their notes to the categories already established on the wall. You may have to intervene to ensure duplicate categories do not emerge.
7. Don’t be afraid to start new categories and to have notes in their own singular categories (these are known as orphans). Generalised or vague categories are less helpful than specific ones.
8. Some people will not listen to your instructions and stick their notes up randomly or place them in unsuitable categories so be ready to get involved and move notes to the right places.
9. Ask that the notes are affixed beside each other not on top of or obscuring other notes. All notes need to be visible enough to be read and separate enough that they can be moved easily.
10. Once a sort is complete you have created a folksonomy (a user-created category tree). Summarise the responses of the group as arranged on the wall before moving on to the next question and then repeat the process with another question.

### >> Questions to ask in response to your data:

- What are the most commonly repeated issues/largest categories?
- Do any of the categories relate to each other?
- When summarising the sort, ask the group what they think about the data gathered. Is anything missing? Does the data surprise them? Do they wish they had said something that someone else has contributed?

# 7 PHOTO STUDIES

### >> What is it?

Asking users to take photographs which reflect their experience and use of the physical and/or digital library (‘Photo Diary’), or to respond to a collection of photographs curated by library staff (‘Photo Interview’).

### >> When to use it?

To explore user experience via a more visual approach to derive more aesthetic and emotional reactions and responses.

### >> Photo Diary: How to do it:

1. Prepare a list of 5 photographic subjects. Examples might include: ‘your favourite place to sit’; ‘somewhere you never go in the library’; ‘something you don’t understand’; ‘an annoying library problem’; ‘the best/worst thing about the library’ etc. The above examples are all suitable for visitors to the physical library but you could alternatively ask for screengrabs of digital library use (‘somewhere you never go on the website; ‘the best/worst thing about the catalogue’; ‘something confusing on the website’ etc.).
2. Approach users to take photographs with a library tablet (people tend to prefer to use library equipment rather than their own) advising them that the activity will only take about 5 to 10 minutes of their time.
3. Accompany the library user as they take photographs, partly to encourage them to complete the exercise and partly to keep track of the equipment. Unaccompanied users who agree to complete the exercise with their own phones rarely return.
4. Once the photographs have been taken, sit down with the user and ask them to explain why they took each image. The questions you ask should help you to understand not just about each photograph but also about their wider library use and experience. Make notes about what the user says about each photograph. The photos themselves are much less important than the user views and opinions that they prompt.

### >> Photo Interview: How to do it:

1. Take 10 to 15 photographs of different library spaces on a library tablet or phone: study desks, specific collections, the staff helpdesk, self-service terminal, toilets, printing facilities etc. (Again, the same could be done with screengrabs of digital services). It is important that you take photos of all library services and areas not just of visually appealing areas.

2. Ask users to sit down with you and respond to each of the photographs in turn with their thoughts and opinions on each service aspect/area. Ask additional questions so that you can build a wider picture of their library experience.
3. Make notes about what they say in response to each photograph.

### >> Questions to ask in response to your data:

- What subjects (spaces, places, collections, facilities) elicit the most attention and responses?
- What subjects are ignored; not known; considered less important/interesting?
- What problems do the photographs uncover?


# USABILITY TESTING

### >> What is it?

Observing and recording how a user completes a set of common tasks on the library website or another digital platform.

### >> When to use it?

To uncover problems that need resolving around digital navigation, layout, and accessibility.

### >> How to do it:

1. Invite a library user to sit at a PC or laptop on which they will be navigating a digital library platform of your choosing (the library website, the catalogue, a library app etc.).
2. Tell them that they will be conducting a set of tasks prepared in advance to help you understand how the platform is actually used.
3. Emphasise that is a test of the platform not of the user.
4. The tasks you select should not be too complicated. You are not seeking to trip the user up, or to ask them to do anything that they'd be unlikely to do, such as use an advanced search function.
5. Examples: search for a specific author/book; find the library opening hours; how to print.
6. Explain that you will be sitting alongside them as they complete the tasks in order to: observe and record where they go; offer guidance on the activity if needed (but not on how to move around the platform); ask questions at relevant moments.
7. Follow 'think-aloud protocol' throughout: this means encouraging the user to continuously narrate their activity and decisions during the test. Ask the person to try to speak in complete sentences and if they stop speaking at any point ask them to resume.
8. Record everything that the user says and does during the test.
9. Debrief the user afterwards to check on their experience of the test and to see if they would like to share anything further about their use of the library's digital resources.

### >> What about remote usability testing?

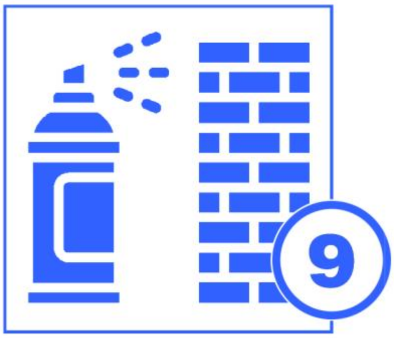
- Usability testing software is now available for remote testing with users which: is recorded; does not require installation; and which allows the test to completed by the user at a time that is convenient to them.
- Remote testing can be more valuable than in-person testing as without a moderator the user does not worry so much about doing things wrong or sharing what they really think and feel.

### >> How many users should be tested?

- Testing with one user is better than testing with none. Testing with more than 5 is too many. All usability experts suggest testing 3 to 5 users only, as with this number the most important issues will be uncovered.

### >> Questions to ask in response to your data:

- What navigational issues were encountered?
- Was there any wording or content that was not understood?
- Which tasks did they fail to complete and why?
- If testing with more than 1 user, what problems were encountered by several users?




# GRAFFITI WALL

### >> What is it?

A large wall or whiteboard on which users are invited to freely and anonymously detail their views on a service, space or product.

### >> When to use it?

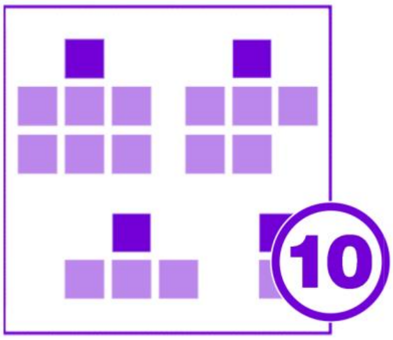
To derive more casual and less guarded responses to services through a highly accessible and visible medium.

### >> How to do it:

1. Locate the Graffiti Wall where it enjoys enough traffic to be seen. It should not be in a place where it is overlooked by library staff, as this will make people feel too self-conscious and uncomfortable to add to it.
2. For the surface of the Wall, if you use a whiteboard it is easier to refresh and start again, but regular paper is more pleasing to write and draw on. Do not use sticky notes as they feel impermanent and can be another physical barrier to people adding their views.
3. The Wall needs to be large enough so that users don’t feel self-conscious about their comments standing out. Too small a space can make regular comments look like angry shouting and also communicate that there is a limit to the amount of feedback you want to receive. ‘A0’ - that’s 16 sheets of regular A4 paper - is probably the minimum size.
4. Pin up whiteboard markers or coloured Sharpie pens on string so that there is always a writing/drawing tool available *in situ*. If you don’t provide these, people either won’t write at all or will use regular pens or pencils, making their comments hard to read.
5. Label the space as a ‘Graffiti Wall’ and encourage contributions by writing ‘add your thoughts and comments about the library below’. Alternatively, you can use the wall to ask specific questions about certain library spaces: ‘What is the best/worst thing about the library?’ or new areas/furniture you are testing. You may decide to add a few ‘fake user’ comments yourself to get the Wall started.
6. Check the Wall regularly and ensure you respond to any questions that might be asked by writing back on the Wall itself.
7. Graffiti Walls are abused by a small minority of people. Don’t overreact to this, just be ready to remove or paper over the comment.
8. Remember to archive your Walls by taking a photograph before you refresh them.

### >> Questions to ask in response to your data:

- What problems and issues have been recorded on the Wall?
- What can we learn about user routines and behaviours from the comments received?




# AFFINITY MAPPING

## >> What is it?

The transcribing of your user research data onto different coloured sticky notes arranged on a wall according to different categories and themes.

## >> When to use it?

To identify concentrations of user research data (problems, behaviours, ideas and praise) in one accessible, tangible and collaborative space. Affinity maps facilitate both data analysis and effective idea generation.

## >> How to do it:

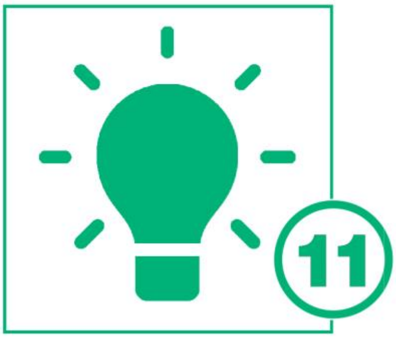
1. Invite a group of colleagues to join you to share and theme your research data.
2. Transcribe all of your data (whether it is from observation, maps, interview, drawings, letters) onto coloured sticky notes. Each note should represent just one piece of data and can either be an exact user quote ("I love to work in the area by the café"; "I only borrow physical books when I'm desperate") or a summary of a user response or behaviour (does not usually come to the library in the afternoon; the seats near the staff desk are less popular). Ensure the data is specific and not too general. Always aim to accentuate the detail of the user experiences you have gathered.
3. Write on specific coloured notes so that you are coding as you go. You can use the following coding (or choose your own): pink - problems; blue - behaviours and routines; yellow - praise; orange - ideas and suggestions.
4. Start your map by grouping your data on the wall by colour so that you have blocks of problems, behaviours, praise, and ideas.
5. Secondly, sort your notes within each colour into different themes/categories (e.g. noise, power, lighting, group work, books, website, request services, atmosphere, staffing, desks etc.)
6. The third and final stage is to merge all the notes regardless of colour so that all the notes relating to each theme are together (e.g. all the notes relating to the website, whether they detail, problems, praise, behavior, or ideas, are in one place together).
7. When all your notes are sorted into different themed categories you are ready to use the completed affinity map as the basis for idea generation and to subsequently devise prototypes to test.

## >> Why affinity map?:

- The act of transcribing data helps you commit it to memory
- Getting up and active will engage more of your brain
- On a sticky note your data is immediately more visible and tangible
- You will be able to identify concentrations, connections and data gaps far more easily
- You and your colleagues can see your data all at once and interact with it in one place (which is not easy electronically)
- But most importantly – it makes research data more tangible and accessible to your colleagues, your users and other stakeholders

### >> Where to affinity map?:

- It's a good idea to set a space aside - a room or a large wall - in a private/staff area of your library where other staff can read, flexibly work with, and live with the data. In this way, the map can be a constant and inspiring reminder of user needs and behaviours.



# IDEA GENERATION

### >> What is it?

Generating ideas for new services and approaches in response to the user research data you have gathered and sorted.

### >> When to use it?

To transform user research data into ways of delivering new or existing services and policies. These ideas should be refined into prototypes that can be tested on, and iterated with, users. You should generate ideas in response to your complete affinity map of user research data.

### >> How to do it:

Most idea generation sessions are handled badly and involve brainstorming in a group setting where the same people with the loudest voices are heard. There are better ways…

1. Successful idea generation should always begin individually and silently so that everyone has the opportunity to generate and share ideas regardless of their personality traits.
    a. Alone you don't edit yourself or worry about how your ideas will be received by others.
    b. Everyone gets to contribute regardless of how loud or confident they are.
    c. You can get into 'flow' more easily (one idea leads to another).
    d. It's far more productive in terms of number of ideas generated.
    e. You will access divergent thinking rather than convergent thinking (see point 4 below).

    After ideas have been developed initially by individuals, then they can be developed by groups.
2. The following golden rules should also be applied:
    a. Establish at the outset that there are no bad ideas. All ideas are good ideas (this does not mean all the ideas are actually good, but that you respond to them as if they are).
    b. At first, focus on quantity not quality of ideas. Don't wait for a 'Eureka!' moment, it might never come.
    c. Ignore cost, feasibility and other constraints.
    d. Recognise that 'improve' and 'make better' are not actually ideas (e.g. make the website better, improve the library).
    e. Don't be afraid of wild or crazy ideas. If you're too safe you won't break new ground.

3. Do not ignore elephant-sized problems. Whether those elephants are a difficult space, a problematic service, a digital platform. Don't be tempted to just solve the easy stuff. There are solutions out there for every problem, however huge and unsolvable they might seem.
4. During ideation, you should be free to think divergently. This means approaching problems and issues by seeking multiple solutions rather than one concrete answer. Divergent thinking is a means of generating many unusual and innovative ideas that are unconstrained by our experiences, conservatism, or societal norms.
5. Asking questions can be a valuable way of developing ideas and adding more detail, especially when moving from initial ideas to prototypes. Question-based ideation methods include:
    a. How Might We? questions (e.g. How Might We… make the library appeal to everyone regardless of age, gender, skin colour, nationality, or sexuality?)
    b. Examining Questions (What does it look like?; What is it made of?; How does it work?)
    c. Experimental Questions (What is it missing? How does it make you feel emotionally? How could we make it possible for a 3-year-old to use it? What does this idea remind you of from outside of libraries? What if we took away all the constraints and barriers? What if this was the only service that worked?)
6. Try visual ideation methods in order to generate ideas too: e.g. Crazy Eights (see '12. Prototyping'), LEGO Serious Play.
7. Ideation should always lead into prototyping and testing modified or new ideas for services.


# PROTOTYPING

## >> What is it?

A rough preliminary version of a service or product which is tested on users and modified in response to their feedback (attitudes and behaviours) and modified as a result.

## >> When to use it?

To practically test ideas that have been generated in response to user data to see if they are effective and valuable, with a view to developing them into full services that are accepted elements of your service and receive investment.

## >> How to do it:

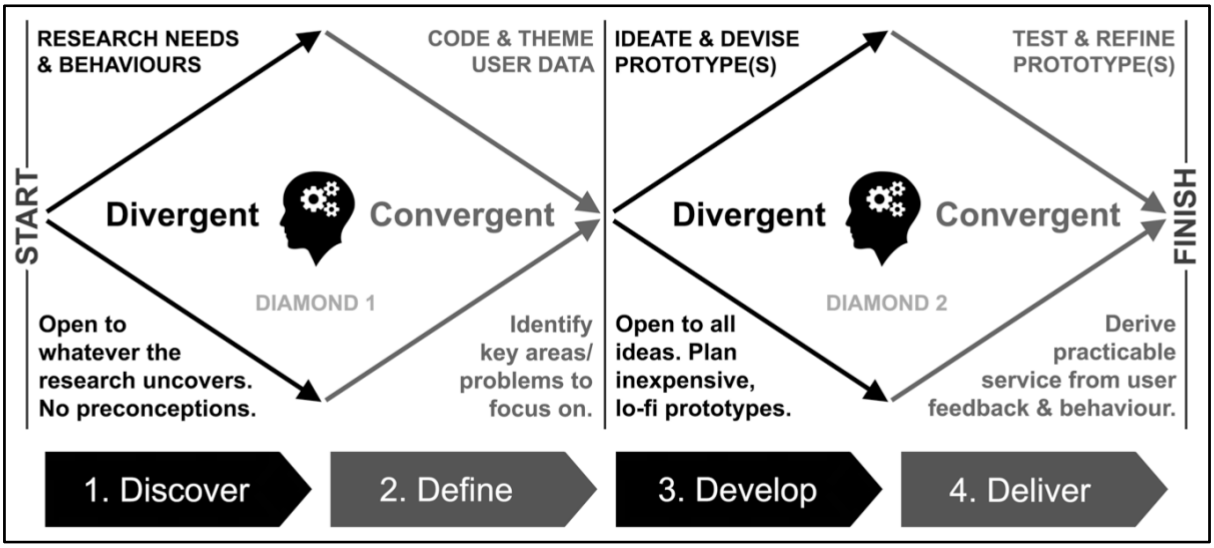
Prototyping accepts that getting things right first time is highly unlikely: failure is seen as part of the process. It also recognises that it is user feedback and behaviour that should actively shape and affect your ideas. It should be no surprise that successful user-centric design requires user involvement:

1. Select an idea generated in response to your user research data and seek to develop it into a space, facility, product, platform, or event, to prototype and pilot with users.
2. To develop your idea into a prototype, you should try to answer the following questions:
    a. What problems will the prototype solve?
    b. What benefits will the prototype offer?
    c. What will it look like? What is it made of? How will it be engaged with?
    d. What UX research methods will you use to test its value and success?
    e. What will you call the prototype service?
3. You should also devise 3 to 5 ‘How Might We?’ questions (see ’11. Idea Generation’) which will help you to better consider the obstacles and issues you might face when introducing your prototype.
4. As you devise prototypes reserve time for individual ideation as well as group work.
5. Methods like Crazy Eights (drawing versions of a prototype and how it might be iterated in 8 cells on a single piece of paper) can also help turn ideas into prototypes you can test. As well as drawing, using crafting materials that allow the creation of moodboards or 3D models can help.
6. The prototype you end up testing should be inexpensive and incomplete: an unfinished representation of your idea. Do not be tempted to spend money or offer a finished service immediately. The prototype should have just enough features and functionality that it is

possible to see if it solves the problems it was devised to respond to, and/or offers the benefits intended.

7. Actively test your prototype with your users. Spend time engaging with the people who are using it, discovering their opinions and behaviours in response to it. Use UX research methods to do this, such as: interviews, observation and behavioural mapping, a graffiti wall near the prototype, and usability testing if it is a digital product.
8. Ignore staff complaints or opinions about the prototype. They are devised in response to user data not staff opinion and should therefore be judged by users only. If you are challenged by angry or upset staff about the prototype, remind them that it is temporary and ‘only a pilot’ you are testing.
9. While prototyping it is important that you remember to ‘love the problem’ you are trying to solve rather than your solution. Seek to fully understand and explore your problem rather than obsessing about your particular idea and how much you like it.
10. Be flexible and humble enough to change your prototype in response to user behaviour and feedback. Expect, and be ready, to iterate your prototypes as you gather more information.
11. Ensure you test prototypes quickly so that you ‘fail fast, fail cheap’.
12. Once a prototype has proved successful you should seek support and investment for it.

# THE UX RESEARCH & DESIGN PROCESS




### >> What does the model show?

The overall UX process, from start to finish, based on the internationally-recognised Double Diamond model (devised by The Design Council and so named because of the two central diamond shapes) detailing 4 key activity phases:

1. Discover (researching user needs and behaviours)
2. Define (sorting, coding and analysing user research data)
3. Develop (idea generation in response to the data and devising prototypes)
4. Deliver (testing and iterating prototypes with and for users)

N.B. Phase 1 is ‘UX Research ‘and Phases 2 to 4 are ‘UX Design’. Library practitioners tend to be comfortable and familiar with Phase 1 but often fail to progress into Phases 2 to 4.

### >> The 4 Activity Phases in more detail:

1. **Discover:** During this first phase, you should be using a range of different attitudinal (user opinions and feelings) and behavioural (actual user behaviours) research methods to uncover the needs and activities of your users. You also must be open to whatever your research uncovers and ignore both your assumptions and preconceptions. This phase is divergent in approach as you should be trying to remaining open to any possible user research findings and not to come to early conclusions. This divergent phase opens up the first diamond.

2. **Define:** This second phase is about processing and analysing the gathered user data. Rather than using word processing or spreadsheet applications you should physically transcribe your data onto colour-coded sticky notes with colleagues and create an ‘affinity map’ of categories, which makes your process visual and collaborative and helps point up new opportunities and directions. This phase is convergent in approach as it involves converging on key problem areas to focus on going forwards, in this way, the first diamond shape is closed.

3. **Develop:** This third phase involves generating ideas in response to your affinity mapped data. Ideas should be generated individually and then developed as a group into possible prototypes. Ideally ideation (idea generation) sessions should be held with users as well as library staff. Ideation should be free and unconstrained. This phase is once again divergent in approach, as you remain open to possibility and opportunity (ignoring financial and practical constraints), as you agree on ideas to explore in more detail as possible prototype services to test. As this phase is divergent, it opens the second diamond.
4. **Deliver:** This final phase involves testing ideas for new or modified services as physical or digital prototypes with your users. Prototypes should be unfinished, inexpensive and iterated in response to user behaviour and feedback. The second diamond is closed during this second convergent phase as it involves developing your prototype, based on more user feedback and behaviour, into a practicable and successful user-centric service.

The process is rarely as linear as detailed above, but following these four phases makes for an effective and informed direction of travel. You may prefer the term ‘ethnography’ to ‘UX Research’ and ‘Design Thinking’ to ‘UX Design’, but essentially, they mean the same thing.

Good luck!

Andy