

Playbook: Context & User Research

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Purpose

To ensure that our DataScienceSF algorithms and outputs meet the needs, requirements, and constraints of users. An algorithm without useful implementation is just academic.

Overview of steps

1. Draft research plan
2. Conduct secondary research
3. Conduct user research
4. Share Research

Step 1. Draft research plan¹

Decide

- what you want to learn about your users
- how you want to learn it

Key tasks

- identify stakeholders (involve project champion). See appendix.
- write your research questions (or ‘unknowns’) and group them by theme
- decide what user research activities will help you answer your questions
- agree the types of users you want to do research with (try a stakeholder map)
- decide how to [recruit participants](#) for each activity
- request any existing research / prior reports / analyses / business process diagrams or documentation
- identify any challenges or deadlines that may influence your research plan

Things to prompt research questions

- what you’re trying to achieve (do you want to understand your users’ behaviour, try out new features or both?)
- ask who what when where why how
- which problems you’re trying to solve
- which assumptions or beliefs about your users or service you want to test
- what you need to know to be able to make an informed decision about what to do next
- who your likely users are and what they’re trying to do
- how they do it currently (for example, what services or channels they use)
- the problems or frustrations they experience
- what users need from your service to achieve their goal

¹Adapted from <https://www.gov.uk/service-manual/user-research/plan-user-research-for-your-service> and <https://www.gov.uk/service-manual/user-research/plan-round-of-user-research> <https://www.gov.uk/service-manual/user-research/user-research-in-discovery>

- Review list of [business process questions](#)

Step 2. Conduct secondary research²

1. Review documents / reports / process flows / analytics / logs etc that cover this topic or closely related topic
2. Site analytics / system analytics
3. Scan landscape³
 - a. What are known best practices?
 - b. What are similar cities doing, or what have they tried?
 - c. Which organizations are pushing the edge?
 - d. What's failed in the past, and why?
 - e. What are general opportunities in the field moving forward?
 - f. Is anyone working in this space outside of government?

Step 3. Conduct user research

Treat any opinions or suggestions that don't come from users as assumptions that have to be proven by doing research.

Step 3.1 Conduct research activity

Typical Research Activities

To learn more about your users and their needs, you can:

- [map the user journey](#) of people who want to do the task your service provides
- observe people to see how they do things now and what problems or barriers they face
- interviews and visits to explore relevant aspects of their lives and work⁴
- user observations⁵
- shadowing
- ⁶examine existing data (for example analytics, back-office workflow and support logs)
- review previous user research
- popup research⁷
- event cards⁸
- moderated usability testing⁹
- surveys

² <http://www.designkit.org/methods/21>

³ <https://civicservicedesign.com/set-the-stage-scanning-the-landscape-639ee588341e>

⁴ <https://www.gov.uk/service-manual/user-research/using-in-depth-interviews> & <http://www.designkit.org/methods/2> & <http://www.designkit.org/methods/66> & <http://www.designkit.org/methods/20> & <http://www.designkit.org/methods/43> & <http://www.designkit.org/methods/64> &

<https://www.interaction-design.org/literature/article/how-to-conduct-user-interviews>

⁵ <https://www.interaction-design.org/literature/article/how-to-conduct-user-observations>

⁶ <https://www.interaction-design.org/literature/article/shadowing-in-user-research-do-you-see-what-they-see>

⁷ <https://www.gov.uk/service-manual/user-research/doing-pop-up-research>

⁸ <https://www.gov.uk/service-manual/user-research/researching-user-experiences>

⁹ <https://www.gov.uk/service-manual/user-research/using-moderated-usability-testing>

Who to research with

You must understand the needs of all kinds of users, not just ‘typical’ users. You also have to consider the needs of people who provide the service or support other users (for example, caseworkers, call centre agents, inspectors, lawyers and charity workers).

When researching, focus on users who have problems using existing services or getting the right outcome. This will help you create a simpler, clearer, faster service that more people can use.

Step 3.2 Analyze

For each research session, be sure to stop and analyze it following three main steps¹⁰:

1. Capture observations
2. Sort
3. Identify findings

Identify any new questions to incorporate in the next round of research.

Step 3.3 Document

Artifacts

At the end of this process, you may have:

- a journey map¹¹ that describes your users’ current experience
- descriptions of different types of users (for example, personas)
- sets of needs for different types of users
- user stories¹²

Writing user needs

Once you have a good understanding of your users’ needs, you should write them down and add them to your descriptions of users.

User needs are usually written in the format:

- I need/want/expect to... [what does the user want to do?]
 - So that... [why does the user want to do this?]
- If it’s helpful, you can add:
 - As a... [which type of user has this need?]
 - When... [what triggers the user’s need?]
 - Because... [is the user constrained by any circumstances?]

I [need/want/expect to] <do something>, so that <benefit>

You can also embellish:

¹⁰ <https://www.gov.uk/service-manual/user-research/analyse-a-research-session>

¹¹ <https://www.gov.uk/service-manual/user-research/creating-an-experience-map>

¹² <https://www.gov.uk/service-manual/agile-delivery/writing-user-stories>

As a <type of user>, I [need/want/expect to] <do something> when <trigger>, so that <benefit>

Step 3.4 When to stop

You'll have done enough research when you understand the different kinds of people who use your service and what they need from it, including those with support and access needs. Best practices/research suggest one can learn a lot from talking to 5 to 8 users¹³. Particularly if you do a good job in step 1. User research doesn't have to be too daunting!

Step 4. Share research

Once you've learned about the different kinds of users of your service, you should present what you know in a way that's easy for others to understand and share¹⁴. You can present what you know by creating:

- experience maps¹⁵ that show how users interact with existing services
- user profiles or personas that describe groups of users with similar behaviour and needs

¹³ <https://www.nngroup.com/articles/how-many-test-users/>

¹⁴ <https://www.gov.uk/service-manual/user-research/sharing-user-research-findings>

¹⁵ <https://www.gov.uk/service-manual/user-research/creating-an-experience-map>

Appendices

Readings & Online Resources

Online

- <http://www.designkit.org>
- <https://www.gov.uk/service-manual>
- <https://www.interaction-design.org>
- <http://www1.nyc.gov/assets/servicedesign/index.html>
- <https://civicservicedesign.com/>
- <https://www.interaction-design.org/>
- <https://methods.18f.gov/>
- <https://www.nngroup.com/articles/>

Books

Joy has these by desk:

- [Strategic Market Research](#)
- [Designing for the Digital Age](#)

UX Techniques: Table of strengths & Weaknesses

Technique	Strengths	Weaknesses
Analytics	• Quick way to determine areas of interest in the way users interact with existing products • Enables you to focus other research efforts	• If you have no data you can't use analytics • If there's very limited budget analytics can prove expensive • You can discover the "what's happening" but not "why it's happening"
Benchmarking	• Very useful in highly competitive markets • Can help you quickly become familiar with a new industry or sector	• Time consuming and may interfere with short deadlines • May offer little value if you are already familiar with the industry or sector
Contextual Research	• The best way to determine how users behave in their own environment	• Cost and time intensive and won't suit projects with low budgets and/or tight deadlines
Customer Experience Mapping	• Let's you quickly see when a product fails to meet user expectations	• Cost and time intensive in some cases - a lot of research required to be effective
Expert Reviews	• Quick, cheap technique to get a high level understanding of an existing product's issues	• Doesn't provide any deep insight into the users

Guerrilla Usability Tests	• Good low budget solution to get users interacting with the design	• Poor solution if you want to involve clients in user testing • Very specific and may miss broader issues
Ideation Workshops	• Developing a shared project vision for UX • Brings input from all affected parties early in the process	• If a client prefers to be "hands off" they may not want to participate
Information Architecture	• Must be done for all projects in some form	• Scope of work varies significantly with the complexity of a project
Lab Usability Tests	• Gets client input into usability tests • Allows you to keenly observe users	• Expensive and won't be good for a small budget • The act of creating an artificial environment may influence outputs
Prototyping	• Allows you to test a product thoroughly prior to production • Creates quality inputs for user testing	• Expensive and time consuming - no good for small budgets or tight deadlines • Overly complex prototypes may require significant adjustments
Requirements Planning Workshops	• The best way to understand highly complex projects, clients and teams	• Heavy resource requirements and may not be useful for small budget/tight deadline projects
Sketching	• Cheap and effective for getting quick feedback on ideas	• May not be well received by clients if they're used to seeing higher quality work during the design phase
Stakeholder Interviews	• Good for getting input from key figures on a project • Good for developing a thorough project understanding	• Time consuming and may be inappropriate for tight deadlines • Bad for making decisions on design - too limited a scope of input
Surveys	• Collecting lots of information quickly • Gathers both qualitative and quantitative data	• Data may be flawed • Analytical efforts can be time consuming and expensive
Task Modelling	• Gives a high degree of confidence in the UX • Gives strong insight into process at the user level	• Can be expensive and time consuming
User Journeys	• Great for simplifying processes for the user • Ensures all essential tasks will be completed	• Pointless for single-step tasks
User Personas	• Models a generic user to give all project members insight into user expectations • Develops a greater level of user understanding during development	• Should not be used as a substitute for contact with real users
Wireframes	• Offer a deeper level of insight into design with users than sketching • Helps develop a clear understanding	• Limited use in highly complex products where prototyping may be essential

	of project direction with users and clients	
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Stakeholders

Potential Stakeholders

Here is a list of potential stakeholders:

- The project manager. The person with the ultimate responsibility for the project's delivery.
- The project sponsor. The person who brought the project to the table, ensured that it had a budget etc.
- The project team. You can't run a project in isolation; the exact makeup of a team varies from project-to-project, but you need to understand the contributions of everyone to some extent to get your work right.
- A customer representative. If your project is client-facing, you'll need a customer service operations manager's input.
- Customers. Hopefully the customer representative can find you some "friendly" customers to work out any specific concerns that they may have. Customers may be internal.
- Subject matter experts. Whatever product you're creating, there's an in-house expert or a consultant that needs to be involved to ensure that you're hitting the minimum requirements.
- Technology and Infrastructure. Implementing your project probably requires help from your database managers and other technology staff.
- Executive leadership. If they're available the CFO, CIO and Department head can offer big insight into finances, technologies and the vision.
- Communications / PIOs. It's useful to know exactly what is going to be expected in terms of the overall organization's communications objectives so you can complement them.
- End users. If you're not involving end users, you're on a path to failure. You can please all of the above, but if the user hates your work, it's not likely to be a roaring success.

Questions to ask

- What is your name, title and role in the project?
- Who are your customers at the moment?
- What products and services do they use?
- What changes are coming up on the product/service roadmap?
- What is your vision for this service?
- How do you feel about the current system?
- What are the main weaknesses of the system?
- What are the strengths of the current system?
- Why are you interested in a new approach?
- What would a successful outcome of this project look like to you?
- How will you measure the project's success?
- What must be addressed in this project?
- Is there anyone else in particular you think we would benefit from interviewing?