

08 Research and analysis

- 8.1 Introduction**
- 8.2 Case study: The Burnaby Starter Project by InWithForward**
- 8.3 Interview with Sarah Schulman, Leader of InWithForward**
- 8.4 Case study analysis**
- 8.5 Methods and tools**
 - Research planning and strategy**
 - Conducting landscape analysis**
 - Observation**
 - Interviews**
 - Self-documentation**
 - Journey maps, service blueprints, and system maps**
 - Design themes, principles, and lists of requirements**
- 8.6 Learning features**

8.1 Introduction

Research is perhaps the most critical component for determining the validity and success of a service design project. It is fundamental to the service design process that designers learn about the problems and contexts of projects they undertake.

This chapter describes how to plan and implement a research process. Crucial to developing a sound research approach is developing skills to identify the right approach to a given problem. We discuss a variety of tools and methods that can be employed to the range of contexts and situations you may encounter in a given project. In doing so, you also learn about the role of ethnography in service design.

This chapter guides you through the design research process using different kinds of discovery approaches; it also addresses how to analyze and make sense of research findings. In addition to learning key research tools and methods, this chapter also addresses how you might translate knowledge gained through research into actionable inputs for design intervention.

The whole research process can be explained as problem seeking (interviewing and observing people to understand what their problem really is) and problem framing (defining the main aspects of the problem, such as parameters, patterns, and themes).

At the end of such a discovery process, service designers should be able to frame the problem with enough confidence so that they can move into the next phase of the service design process (brainstorming and concept generation). It is important to frame your approach to research by always keeping in mind that you are researching for services and not covering all there is to know about a certain topic, which can be overwhelming. Research needs to be focused on a particular service, the “object” of your project, and aimed at uncovering specific things, such as patterns, user segments,

pain points, and uncovered demands. The research mindset is that of a focused kind of curiosity, one that doesn't go away as we move into other phases of the project development, even in the implementation phase.

8.2 Case study: The Burnaby Starter Project by InWithForward

InWithForward is a multidisciplinary social enterprise group that operates like a “change lab,” by self-initiating projects related to social services in Australia, Canada, and the Netherlands. The Burnaby Starter Project is a self-initiated project that looked into the question of urban isolation, mental health, and disabilities and how to improve the social services that surround these problems in the city of Burnaby, in the Vancouver metropolitan area in British Columbia, Canada.

The initial research phase of the project was financed by InWithForward’s own resources with in-kind support from project partners. The following phases of prototyping and piloting services were funded by a pool of multiple organizations and funders, including government social service agencies in British Columbia.

The core question that initiated the project was: “How can we support people to not just live in a community, but to flourish as part of a community? Especially for people with disabilities, and others, too often left out and disconnected?”

Existing research revealed that more people die from isolation than smoking, and it is a threat especially for the disabled, immigrants, low-income people, and senior citizens. Urban life often leads to people not knowing neighbors down the street and having no relationships and no safety net on which to rely on a daily basis.

The InWithForward team initiated an immersive research action, by renting an apartment in a social housing building and living there for ten weeks. During this time, the team members identified a few residents who, for different reasons, experienced social isolation. The team research was based on informal conversations with residents and involved building personal relationships and trust so that they

could understand the world from the residents' point of view and identify the main pain points in their lives. The goal was to gain perspective on the people rather than the organizations providing social services. They also used prompt cards and revised insights learned from users against some theoretical frameworks from psychology and behavior studies.



Figs 8.1 to 8.3 Team conducting ethnographic research, interviews, and conversations, using sets of prompt cards and other engagement tools.

The main result of this research approach was the identification of six user segments for whom to redesign supports and services.

In addition, the team engaged with service providers and conducted a series of shadowing actions within these organizations to observe and understand their side of the current service system. One of the main findings revealed through this approach was that organizations desired to recognize users' qualities rather than just the problem, needs, and deficits, but their actual approach centered on planning processes that tend to lose sight of the final users' qualities that could help produce better services.

The research insights were synthesized in multiple sessions and led to the definition of design principles that served as the base for ideation and prototyping. The team came up with five main umbrella concepts, each responding to one or more user segments and a series of recommendations.

One of the two main resulting projects that are now being piloted is Kudoz, a match-making system connecting people who are looking for events and activities in the city and whereabouts, and people interested in leading an experience.



Fig 8.4 Six segments to redesign supports and services.



8.5

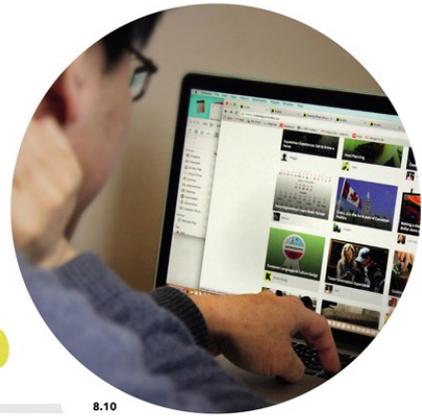


8.6

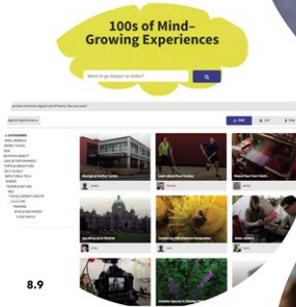
Figs 8.5 and 8.6 Team conducting data analysis work and debriefing sessions.



8.7



8.10



8.9



8.8



8.11

Figs 8.7 to 8.11 Touchpoints of the pilot Kudoz project (zine, website, game).

8.3 Interview with Sarah Schulman, InWithForward

The research conducted for the Burnaby Starter Project involved long stretches of highly immersive fieldwork over an extended period of time. What did this immersive research look like in practice?

For us, it is important to build meaningful relationships with people in order for them to open up and share what is really going on with them—the keys to good insights. What we're trying to design for is people's lives, not just a single interaction point. To do this, we really need to understand the whole of people's lives, the rhythm of their days. In this project, we moved to Burnaby and lived inside a social housing complex to conduct ethnographic research within the space we were trying to understand and build relationships.

Ethnography is about spending lots of time in people's context, across their context, to understand the world from their perspective. It is also useful in identifying disconnects between what people say, what people do, what people think, and what they feel.

Our ethnographic work is really a blend of unstructured observations, hanging out with people, shadowing them over the course of an entire day, and often several days at a time, as well as

more prompted conversations where we are bringing in projective talking tools in order to gather their reaction to a thing.

What were some other methods beyond ethnography that you used in the research phase of the Burnaby Starter Project?

In Burnaby, we used a set of stories that were loosely based on people we've met in other projects which we used to elicit insights from the people we are currently working with. We also used cards of different types of services that we might create or support. In this project, we had a set of forty "made-up" services, supports, and networks. After doing this work for ten years, we actually have a large bank of real stories. They're not fictional personas. They are based on our experience and research. The fact that the personas are based on real people that we're credibly able to speak about as ethnographers and design researchers works to create rich dialogue between us and those we work with.

Another specific tool we use is "segmentation." We make stickers with all of the people we've done ethnographic fieldwork with. We'll then take over a room and take our ten favorite theories that we've read in articles and our stickers from the people we've met and have a fun debate about where we might place people, why we would place them in those categories, and the logic behind those placements. The idea is that we don't know what patterns or interests will emerge.

Can you describe how you analyze and synthesize insights gained through the research process?

Our first step is taking all of our observations, photos, video, and other material from the field and begin to write stories with it. We then create photo stories, synthesized videos, or podcasts from that as well. Before moving to analysis, we like to return them to people first. It's a more ethical approach and often adds another layer of data, or triangulation on top of things.

We then get to a process of generating a series of themes and "What if" statements. Our goal here is to look for opportunities for things to be different in people's lives. "What if this thing changed in their environment?" or "what if they had access to something like this?" or "what if in the past there had been a different intervention, or a different interaction point?" What we are doing is simultaneously looking past, present, and future in our "what if" statements.

Then we use a lot of social science theory. This is where we move from being researchers and designers to also trying to incorporate a lot of social science research, particularly around behavior change, and what we know actually contributes to people changing what they think, or say, or feel, or do.

Can you say more about how you incorporate social science theory into your work?

In our work, we draw from various social scientific theories culled from books and journals and run them through the actual stories that are being uncovered in our field work. We ask ourselves, for example, "if stigma was the framework for understanding this story, what would it tell us, and what kinds of solutions would we develop with that framework in mind?"

We do this with at least five or six different theories so that we're generating a range of ideas based on all these different theoretical models. We then try and share that back visually in some way. I think reading things like long documents and academic articles and learning how to extract information from them is very generative and a source of creativity. You can see it as a kind of brainstorming tool.

So writing and reading are very important to your research process?

Often one of the first things we do is engage in a process of writing. More specifically, writing long-form narratives of the folks that we meet. We make great efforts to try and embody their voice using their direct quotes and the way in which they talk, or correct themselves, so that they really do come through in the writing. It's so important to be able to visualize information, and to use photos and other media to share what's happening for somebody, but it's equally important to learn how to write a great paragraph, one which can capture somebody's voice in an authentic way. And that's also what builds really good analytic skills is when you're forced to put together a point of view, a cohesive statement, about what's happening and not get lost just in a lovely photo or picture.

InWithForward emphasizes a multidisciplinary approach in its service design projects using methods and theories from a variety of different places. Can you talk about the role of multidisciplinary in service design research?

In the case of the Burnaby Starter Project, we had an initial team of six people. This consisted of myself, a trained sociologist, two service designers, a graphic designer, and two secondees from the

existing service system. One had the background in community development and the other a background in human resourcing and management. So, we were a blend of all of those different things.

For us, it's really important to have at least half of our team come from the existing service system and working with us full time. Designers are often great at having ways to move through a process, but often lack the kind of historical or philosophical context of things that have been tried before. We need that depth of knowledge and expertise. This is why we read articles from different disciplines and want to work alongside folks that have been in a particular field for ten, twenty, thirty years. They have those historical reference points. They know what's been tried and what hasn't worked. At the same time, we're trying to take a fresh approach on it. It's a really interesting dance. We are critical of the existing service system, and we're asking our secondees to have a very critical lens on the work they've done in the past as well. We emphasize that we need newer, alternative ways of doing things, while at the same time, understanding the depth of the know-how that is there.

In the Burnaby Project, you're dealing with very sensitive issues, like social isolation, poverty, disability, etc., which brings your research into contact with vulnerable communities. What are the ethical considerations that service designers and researchers must make in doing this kind of work?

Ethical consideration is always really tricky because we're trying to get authentic glimpses and data about people, and sometimes, when you reveal too much about your intent or what you're doing,

people change their behavior. In our work, we move in a light touch way where we begin to build relationships and have conversations that start with verbal consent. We identify who we're working with, explain what our organization is about, and then ask for permission verbally to have a conversation. As we get deeper, we present a kind of consent form that explains how we plan to use this data and that we would really like to share the stories back with them. On our consent forms, we have a whole slew of options where people can pick to say, "I don't want my name used," or "I want you to change all geographic details," etc. We try and give people a lot of choice about how we represent them in the story. In the Burnaby Project, we had a lot of different versions of consent forms in very clear language with pictorial representations of what we're doing. We also try to have service providers in their life also explain it if there were confusions, which there often was.

8.4 Case study analysis

Let's look into the main learnings one can extract from the Burnaby Starter Project.

Defining the central inquiry

You'll notice that the Burnaby Starter Project starts by defining a broad/wicked problem. In this case, the InWithForward team devised a central question to guide their approach: "How can we support people to not just live in a community, but to flourish as part of a community?" This is quite a broad inquiry, and part of the designer's job is being able to make or create sense out of ambiguous and often contradictory situations. As the engagement with the community of people and organizations relevant to the inquiry evolves, we can see the key themes and concerns that focus our thinking around the problem at hand: community, support, and inclusion. These themes are a good way to ensure that your investigation has a sense of direction based on a specific interest. By integrating the initial question with a focus on a specific community (in the case of the Burnaby Project, individuals with specific disabilities), the team had a clear sense of which people they needed to find to conduct their research.

Landscape analysis

In a given project, you may find that the topic you are exploring has been explored by other practitioners and scholars in the past. This pre-existing base of knowledge can inform your work. A landscape analysis of secondary data such as reports, white papers, academic publications, statistical reports, results from surveys and market research, as well as "big data" analytics showing behavior trends can help give you the historical and contextual knowledge you might need during the design process. The Burnaby Starter Project is a good example of how a landscape analysis can identify useful material that can inform the research and design process.

In addition to problem framing in the initial stages of research, the results of landscape analysis were also used in the Burnaby Starter Project to help refine the insights the team gained during fieldwork. The team used outside theories to “test” against the things they had learned from working with individuals and service providers. In service design, it can be productive to draw from outside scholarship and other fields of expertise in order to support, challenge, or enhance the insights we gather and ideas we produce.

Observation through engagement

You’ll notice that a sizable portion of the research conducted during the Burnaby Starter Project was spent in the field within social housing developments and among service provider organizations. The team didn’t just study potential users or conduct site visits. The team lived within the community they were seeking to learn about, thus bringing the larger issues they sought to understand to life. They employed a range of observational methods such as contextual interviews and both fly-on-the-wall and participant styles of ethnographic research. By immersing themselves in this way, the team gained greater access to individuals with whom trust-based relationships could be formed. In spending time and building relationships, the team was able to have a degree of access that proved invaluable in the understanding of the current service system and how it might be improved. The outcome of this process is a more empathetic, people-centered view of the issues InWithForward sought to address.

In addition to time spent among housing residents, the team spent time talking with and shadowing service providers. By both talking with service providers and examining their organizations in everyday practice, the team was able to identify gaps in what providers hoped to achieve and what they were actually doing. The space between what people and organizations say and what they do in practice can be very insightful and generative of potential ideas and concepts.

For data analysis, the team employed techniques such as clustering of ideas and definition of themes and patterns, and from there, they extracted a definition of principles that guided the further

development of the project. These principles were instrumental in bridging research and ideation.

8.5 Methods and tools

Following is an annotated index of the key methods and tools used in service design research.

Research planning and strategy

Each project requires a specific research strategy, with design ethnography being a major component of service design research. In broader terms, the design ethnography research process, according to AIGA (*An Ethnography Primer*), is based on the six following steps.

Step 1 is defining a research strategy, which consists of clearly defining the main problem at stake; in practice, this translates into defining a main research question. Often the initial research question may be somewhat fictitious and evolve as the research progresses. For that reason, the research question should be revised periodically throughout the whole project.

Step 2 is finding the key people who can help you understand the questions. They can be users, providers, managers, or experts. Step 3 is about planning the research approach—in the case of the Burnaby Project, full immersion. Step 4 is about collecting data; in the case of the Burnaby Project, the full immersion approach used tools such as observation, contextual interview techniques, and shadowing. Steps 5 and 6 represent a transition between an analytical mindset into a creative mindset. Step 5 is about making sense of the data collected. It might involve a few long sessions with the whole team and some critical analysis of how findings may translate into design principles and identification of opportunities for design intervention. Step 6 is about communicating insights and opportunities to a larger audience through visual narratives, to inform project stakeholders and allow decision making on what to do next.

| 1 | 2 | 3 | 4 | 5 | 6 |
|--|---|---|---|---|---|
| Define the problem | Find the people | Plan an approach | Collect data | Synthesize data and interpret gaps and opportunities | Share insights and recommendations |
| Identify specific issues and questions | Look for those who can provide critical understanding about these questions | Define methods and materials for observing and interacting with respondents | Through field work involving observations, interviews, informal interactions and probes | Collate data, finding patterns, themes and interpret them as design principles, personas embodying typical users, and list opportunities for intervention | Create visual narratives that can inform clients, partner organizations, user groups and other stakeholders |

Fig 8.12 The design ethnography research process, according to AIGA's six steps.



Fig 8.13 Examples of materials in a research toolkit.

A key aspect of defining a research strategy is allocating time and resources for each task (who will carry out the work, how many hours need to budgeted, is travel involved), and reaching out and coordinating with people who can be key to understanding a given context and situation (reaching out to key people, building trust, and

agreeing on activities). The preparation of a research plan and its materials should involve careful consideration.

Conducting landscape analysis

Landscape analysis involves secondary data, expert inputs, theoretical frameworks, and precedents. Secondary data include reports, white papers, academic papers, statistical reports, results from surveys and market research, and results from “big data” analytics showing behavior trends. Theoretical frameworks such as behavioral insights or historical analysis can help provide a rational structure for the research phase and beyond. Experts in the field who are not directly involved as project stakeholders may have critical information that could help designers gain important insights and perspectives. Also useful would be analyses of similar offerings, analyses of other organizations operating in the same fields or analogous case studies, and initiatives that may inform the current conditions.

No project starts from zero. And often, a project proposal is built on the success or failure of previous initiatives. After entering a new problem space, service design teams first try to cover the horizons and understand the main indicators, history, conditions, and previous experiences relevant to the context. Understanding the landscape of a project is not a finite task within the process, however. This discovery process continues as a parallel action throughout the project development by revisiting the research question and the project goals.

Secondary data may come from a myriad of sources. Research centers, census data, and governmental and other official documentation are the most reliable sources for data. Reading reports, theoretical texts, and other written sources and collating critical learnings and frameworks from them are important but not necessarily popular tasks for designers. Precedent analysis is often done through case studies containing descriptive information and visuals.

Observation

Observation techniques involve attentive looking and systematic recording of phenomena in a given context and include people, artifacts, environments, events, behaviors, and interactions.

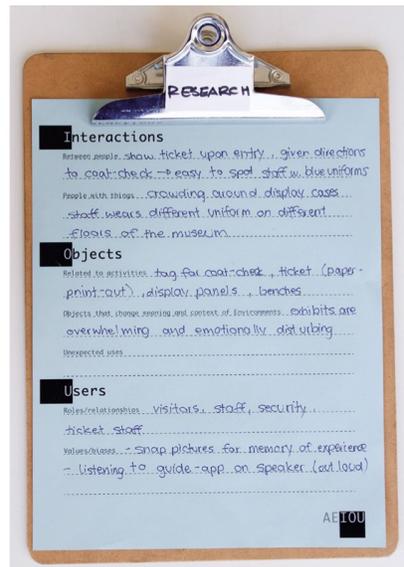
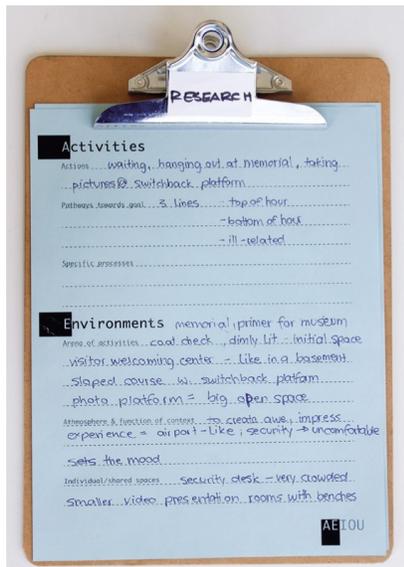
Observation techniques are used to reveal behavioral patterns or physical flows so that broader relationships (between people and people, people and artifacts, people and the environment) and motivations behind certain interactions are disclosed. It is commonly recognized that what people say they do might not correspond exactly to what they actually do because we tend to idealize our own actions. Observations are essential to reveal broader cultural and social contexts.

In the fly-on-the-wall technique, the researcher watches activities as an unobtrusive and unnoticed observer, to avoid people changing their behavior if they were aware of being observed.

As in any observation activity, an ethic approach is key. Respect is paramount, avoid judging, be empathic. The empathetic mindset involves being respectful for the other person's behavior and neutralizing your own reactions, refraining from quick interpretations.

The AEIOU framework helps structure observations according to components:

- Activities: What people do, pathways to accomplish something
- Environments: Dimensions, proportions, materials, light, atmosphere, *servicescape*
- Interactions: People with people, people with objects, people with environments
- Objects: Artifacts/*touchpoints*, physical and digital, static and mobile
- Users: People's behaviors, emotions, motivations, values, relationships, needs



Figs 8.14 to 8.16 AEIOU sheets, to support an observation activity.

Behavioral mapping is a place-centered observation approach. The researcher watches and makes sketches, noting how people move in space; and looks for patterns in relation to spaces, noting how people come and go and what they do.

Interviews

Talking to people and conducting a close observation of people as they go through experiences are effective ways for learning how people do what they do and why they do it. Research activities also

help the researcher gain perspective on the daily lives of users and staff and their social cultural contexts.

Designers tend to use qualitative rather than quantitative research methods. Methods such as questionnaires and surveys that are generally used to obtain quantitative data can be extremely difficult to structure and conduct properly, with the risk of producing invalid and biased results. Because of that, designers are discouraged from using quantitative data and from investing their time in surveys. If there is an unquestionable need for quantitative data, it is better to use prevalidated surveys and adapt the research to the one that best fits the interests of the project.

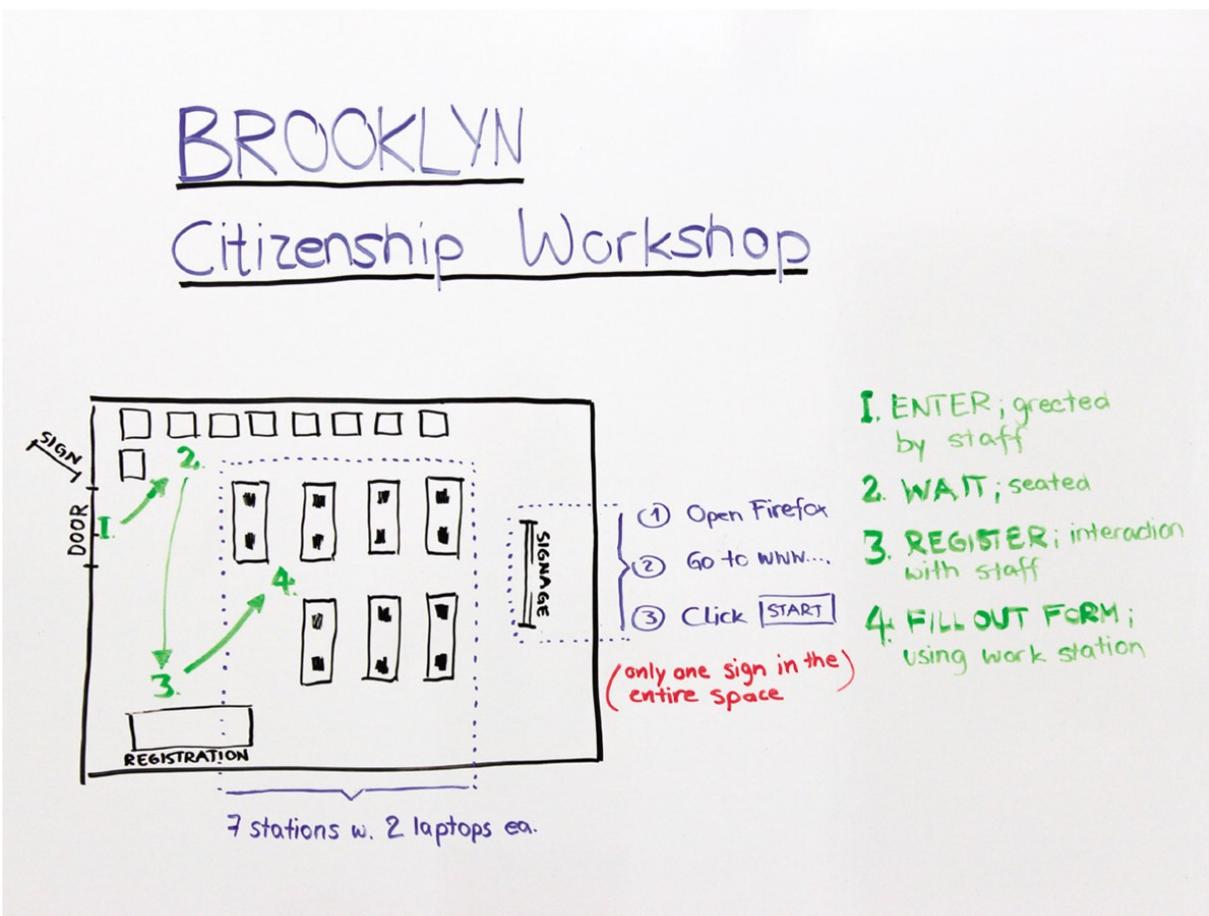


Fig 8.17 Behavioral mapping sketch of a citizenship service in a Brooklyn public library.

The best approach for designers is to rely on a qualitative research approach through personal interviews. Contextual interviews are generally open-ended, often guided by a few points that the

researcher prepares in advance to help steer the conversation. The main idea of contextual interviews is to spend time with the person in her or his own “territory” (e.g., home, workplace, neighborhood) to reveal the participant’s behaviors, motivations, and values. In this way, the researcher can capture the participant’s full story on a deeper human level. Empathy and active listening are essential approaches to interviewing. Empathy involves first listening to a person and trying to understand her or his emotional and cognitive patterns—in other words, how the person feels and why. And from there, the researcher can try walking in the other person’s shoes and in this way anticipate how she or he would think and react in a future situation.

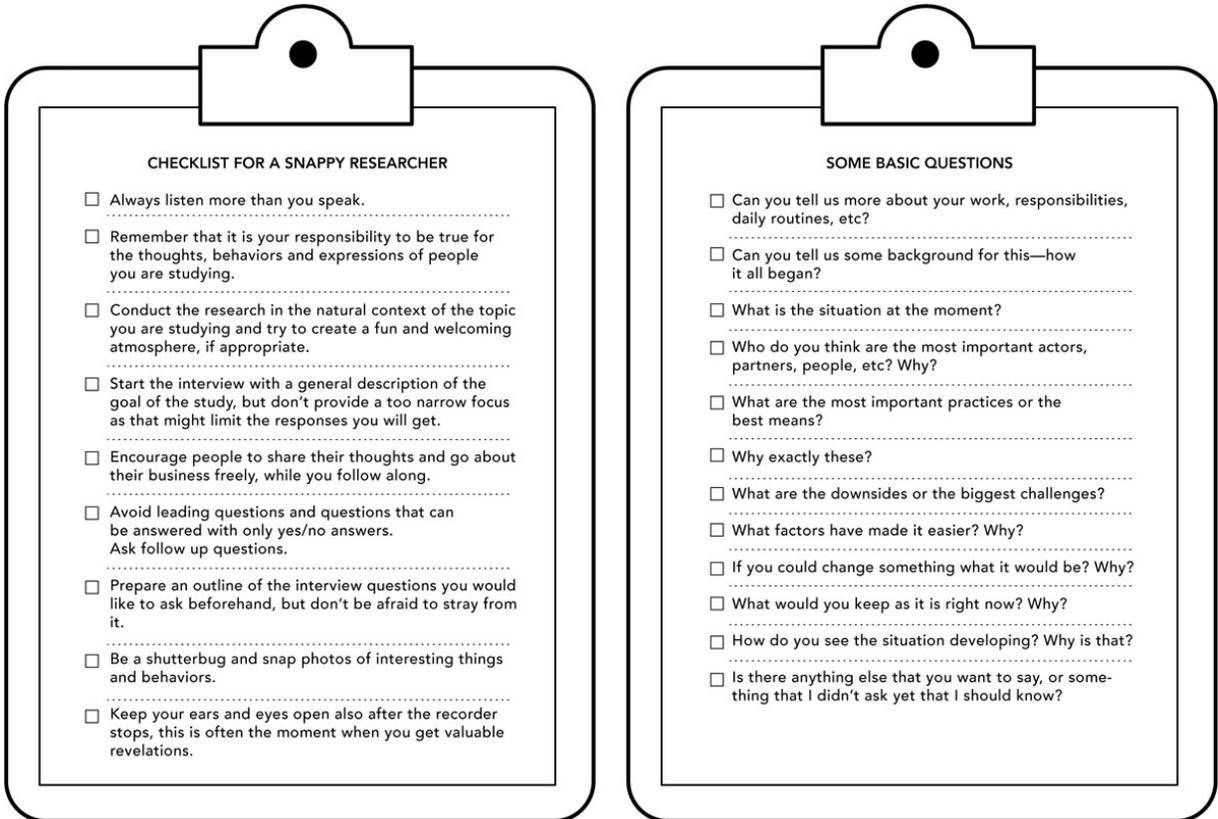


Fig 8.18 Research checklist and basic questions for contextual interviews.

A related technique is shadowing. In shadowing, a researcher is embedded in the lives of users and staff. Researchers literally shadow the participants and follow them around as they carry out their activities, filming or taking pictures.

Shadowing helps researchers understand how a current service is being used and can reveal possible gaps and opportunities for improvement. It is an opportunity to track the users' experience firsthand. In practice, shadowing can be done in a silent/removed mode as well as in a participatory one in which the shadower asks questions of the persons being observed or even has conversations with them.

Self-documentation

Participant self-documentation involves users using tools such as journals and diaries as well as disposable cameras. The idea is to capture, in images or words, the participants' activities, thoughts, and feelings. The participants are usually briefed on how journals and cameras should be used, what to register, and how. Today, it's relatively easy to reach out to users through social media and have all the self-documentation created remotely. Recruiting is critical to this kind of research. Design researchers report using websites such as Craigslist to recruit users for research.

The mobile ethnography practice involves researchers becoming the users and going on a field trip so they can experience a service by themselves, usually making use of mobile technology to document the experience. This technique can be used when design research teams want to have a first-hand experience of the service, throughout the sequence of interactions of the service. It can also be helpful to service providers to experience their services through the lenses of end users. It is also useful when benchmarking service competitors.

Researchers visually document their experience capturing images, audio, and video, using smartphones or cameras. Disposable cameras are still used because they are practical to distribute, whereas wearable cameras such as GoPro enable no-hands shooting. Apps such as Days and ExperienceFellow are useful mobile ethnography tools.

Even though the term *service safari* is widespread and adopted by the service design community, we suggest the term *mobile ethnography* instead because service safari may sound slightly disrespectful to those who provide or use the service you are

researching. People should be treated and regarded with respect at all times; they are not subjects of an external gaze but are autonomous agents of their lives.

Journey maps, service blueprints, and system maps

Journey maps, service blueprints, and system maps are tools for synthesis and analysis.

Journey maps (also know as *customer journey maps* or *experience maps*) are among the main service design tools because they cater to the time-based and experiential nature of service design. Designing services need to take into consideration sequential actions and the creation of narratives over time. The journey map is basically a visual timeline that graphically documents a sequence of service engagements and interactions, showing multiple *touchpoints* and channels throughout. It captures the user's whole route through the service.

The journey map is essentially a user-centered tool. The point of view is always that of users—what they see, feel, and experience. The journey map tries to capture motivations and causal effects behind people's actions. It can be used both as a research tool, to map out existing services, or as an ideation tool to help generate new service sequences and features.

Common techniques tend toward a more humanized approach rather than a technical one, with images, anecdotes, photos, and quotes from interviews, rather than just diagrams and flowcharts. Journey maps can become rich with information observed during research visualizing people's emotions as they experienced the service at different points. Capturing emotions in a journey map is not a practice used by all service designers. While it is possible to capture one specific person's emotions throughout a service journey, it might be difficult to make general assumptions about emotions and perceptions.

This tool can be used at different phases of a project development: in the research phase, capturing a service as is and identifying pain

points and other key moments; or in the generative phase, to visualize new possible service journeys for different user groups.

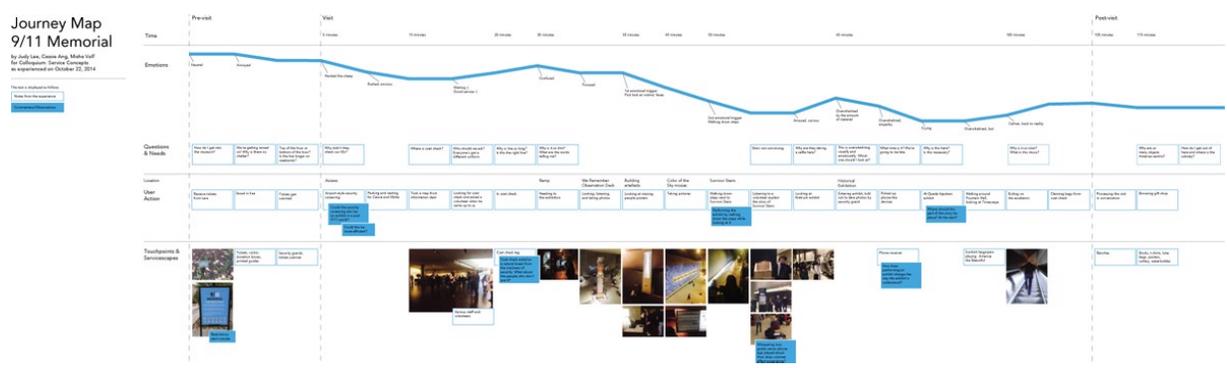


Fig 8.19 Journey map of a visitor experience in the 9/11 Museum. Note the emotional variations expressed through the bold line on the top portion of the map. In this case, students shadowed each other, and the emotions represented in the map reflect one person’s specific emotions.

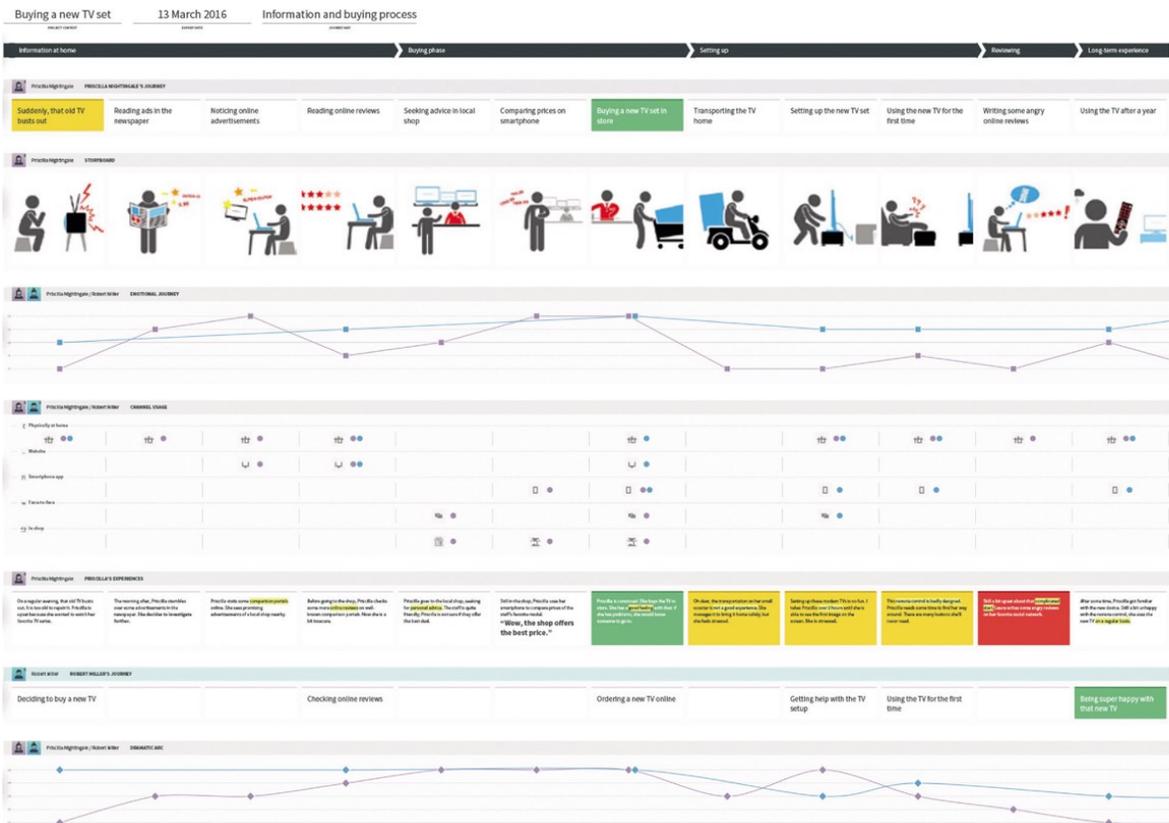


Fig 8.20 ExperienceFellow journey map, part of an online set of tools with a mobile application. The journey map has functionalities that allow for spatial mapping and inclusion of pictures taken with a smartphone.



Fig 8.21 As part of HOME-STAT, the most comprehensive street homeless outreach effort in any U.S. city, the Service Design Studio at the New York City Mayor’s Office for Economic Opportunity documented the journey from street to home for homeless residents.

The *service blueprint* is the quintessential service design tool. Different from the user journey map that focuses on the user perspective, the unique value of the service blueprint is showing the user actions in relation to the logistics and organizational actions by the service provider organization. The service blueprint breaks down all the service participants (users, staff, both frontline and back-office and supporting systems) and distinguishes the front-stage and back-stage parts of a service provision.

The purpose of doing a service blueprint can vary. A *current states* service blueprint is used as a research and analysis tool to map existing service deliveries, and a *future states* service blueprint is used as an ideation tool. The main elements of the service blueprint include five *lanes* separated by four *lines*:

- The first lane on the top shows the service touchpoints and is determined by the *interface line*. The touchpoints can be written, drawn, or shown through real pictures.
- The second lane, immediately above the *interaction line*, captures the users' actions.
- The third lane, immediately below the interaction line, captures the actions by front-office staff.
- The fourth lane captures the actions conducted by the back-office staff that are hidden from the user, behind the *visibility line*.
- The fifth lane at the bottom, below the *internal interaction line*, shows the actions by supporting systems or subcontractors involved in the service delivery.

In the horizontal axis, a service blueprint can be segmented in typical *phases of the service delivery*. For example, in a hotel scenario, the phases would be (1) booking a hotel, (2) arrival and check-in, (3) settling period, and (4) checking out.

A *current states* service blueprint starts with interviews; observational or experiential research with users, staff, and management; and transfer of all collected data into a draft blueprint. The draft blueprint can be shared with project stakeholders and work as a collective diagnostic tool, to identify gaps, pain points, patterns, and opportunities for improvement. Conversely, a *future states* service blueprint can be a tool for cocreation, helping the project team decide to work on specific segments or stages of the service and leading to recommendations, roadmaps, and concepts for new touchpoints and experiences.

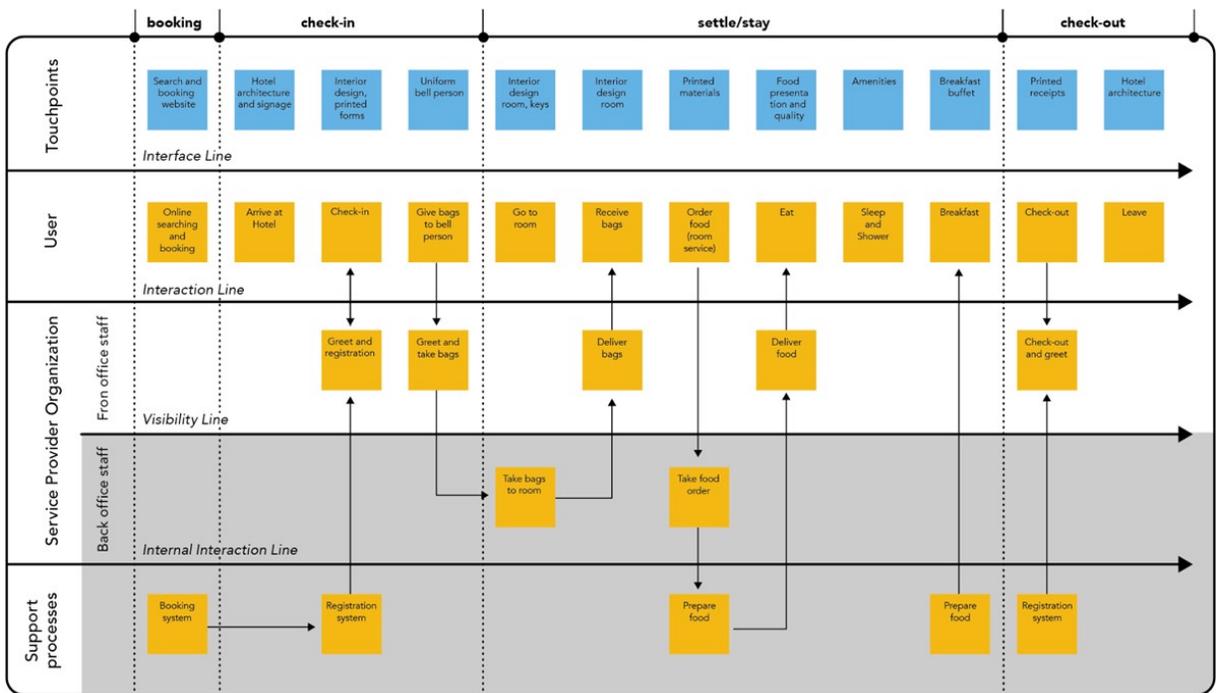


Fig 8.22 Service blueprint of a traditional hotel. Elements of this service blueprint following the lanes from top to bottom, first lane: touchpoints that enable the service (text, drawings, or pictures); second lane: actions by the user; third lane: actions by front-office staff directly interacting with user; fourth lane: actions by back-office staff, which aren't visible to user; fifth lane: actions by subcontractors and supporting systems.

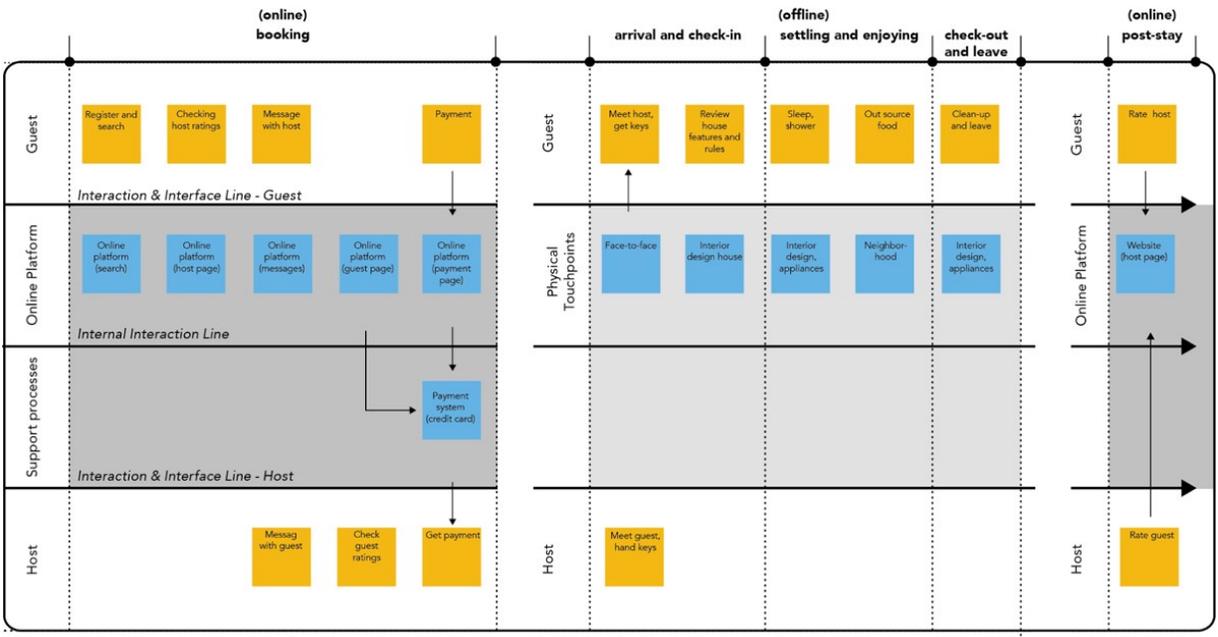


Fig 8.23 Example of service blueprint of the Airbnb service. The service blueprint should be approached as a flexible and customizable tool, reflecting the specificities and characteristics of each service. For example, the blueprint of platform-based service Airbnb requires an approach different from a traditional service blueprint. Airbnb has two types of user roles (guest and host), and the platform mediates their interaction until they meet face to face, so it might be more useful to place the touchpoints lane in between host and guest lanes. It's also important to note that differences between online and offline interactions will change the way traditional blueprints use concepts such as "visibility line" or "interaction line."

System maps (also referred to as stakeholder maps) are schematic representations of the main "actors" of a giving (service) system, from the point of view of the main service-providing organization. The actors are made up of those surrounding and those internal to the organization, including users, staff, departments, and external providers. Typically, the maps make use of pictograms or other visual representations, and lines and arrows connect the different actors, representing the different relationships and flows (of information, financial, physical, or labor based) among the various actors. Stakeholder maps and system maps are useful for identifying the boundaries of service systems, core service performances, and the different kinds of flows, both existing and aspirational.

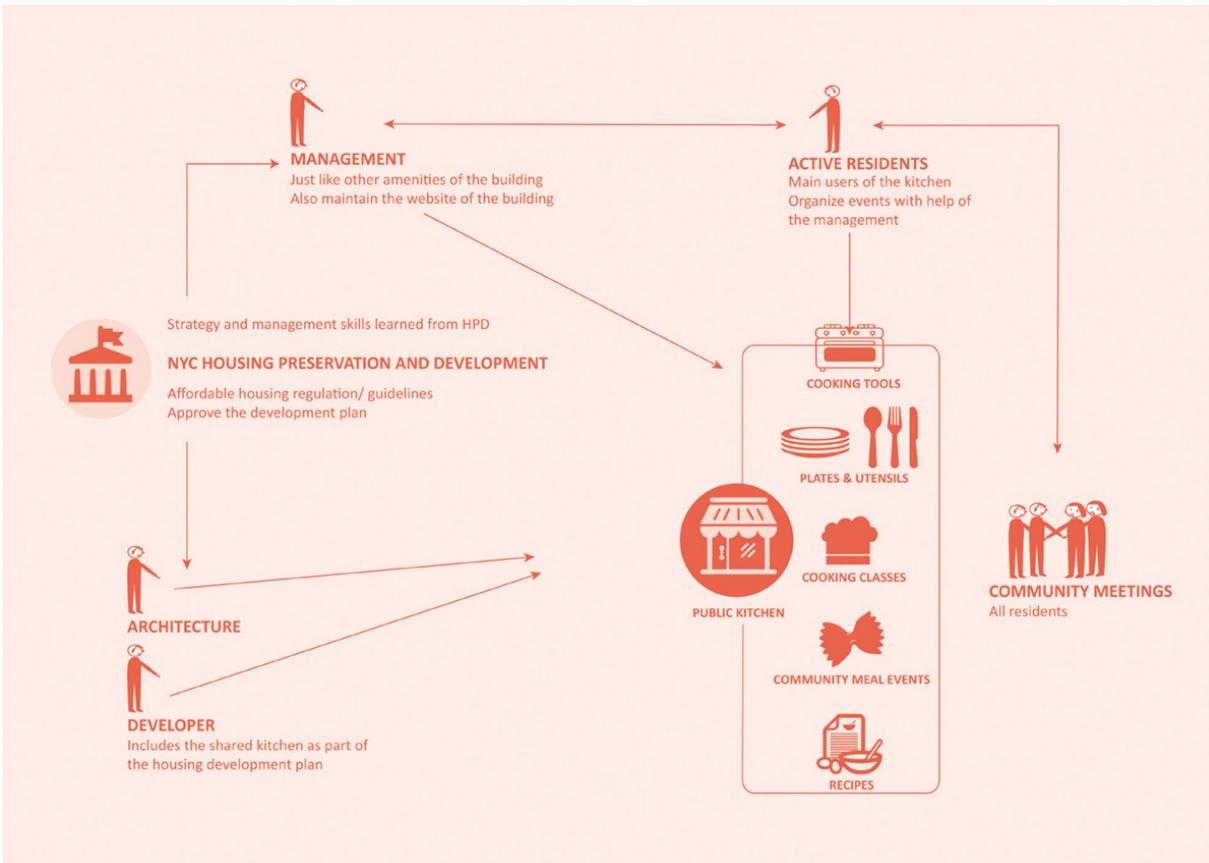


Fig 8.24 Example of a system map for a public kitchen.

Design themes, principles, and lists of requirements

Research activities result in rich data that needs to be interpreted and analyzed so that its findings can inform decision making in the subsequent steps of a service design project. For projects in which a team of researchers is involved, it is important to share research materials so that all team members acquire the same level of learning.

A key technique at this stage of a project is finding *design themes* by conducting an exercise to share research findings, followed by the identification of recurrent patterns and key themes. IDEO's *Field Guide to Human-Centered Design* (2015) describes the technique of "Downloading Your Learnings," where different researchers take turns "downloading" what they have learned from the field, each sharing their notes.

From this point, the team can start finding themes through identifying patterns, consistent problems faced by user groups, and other meaningful insights. These “themes” can help the team move from a learning mindset typical of the research phase into a more generative one, through which ideas for specific services or interventions on existing services can begin to emerge.

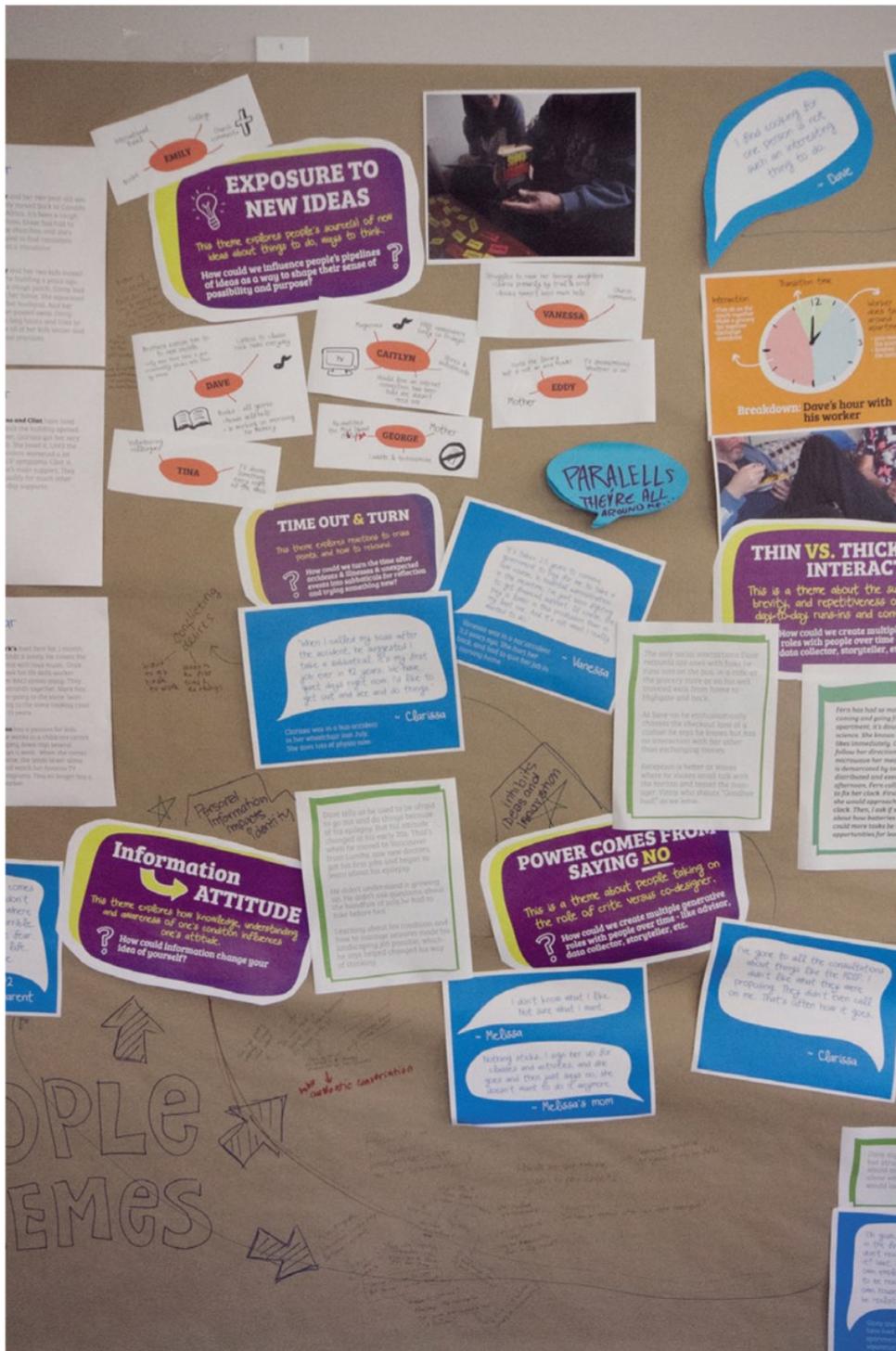


Fig 8.25 Example of cluster of themes that emerged after a downloading-and-clustering exercise in the case study Burnaby Project.

This technique involves reviewing the notes from the downloading activity and selecting the most compelling stories, insights, or quotes, and transferring those onto a new board where they can be grouped in affinity clusters. *Affinity clusters* are formed when the research team members start going through their research materials (such as stories, insights, or quotes) and sort them in groups of elements that are like each other. This kind of activity is important because researchers will gather long lists of issues coming from their research, and forming groups helps them make sense of large amounts of information.

Forming affinity groups is largely an intuitive, subjective process and may involve several rounds. Techniques are simple: sticky notes, note taking, preferably on a flipchart or whiteboard. Plan for sessions over two hours. The use of sticky notes is common because they can be rearranged several times.

Often, different stories and observations touch on similar and recurrent themes. After an initial round of sharing, it should be easier to identify commonalities in your data, such as common themes, recurrent patterns, a problem that keeps reappearing, or a consistent constraint.

Once clusters are formed, the research team can start prioritizing some issues over others, realize if there are knowledge gaps that need to be covered by further research, and also start identifying the main themes that can then be translated into actionable opportunities for design, moving from a learning mindset typical of the research phase into a more generative one, with new service ideas or interventions on existing services.

Based on themes, the design team can define the design principles and the list of requirements that will guide the generative phase.

IDEO's *Field Guide to Human-Centered Design* (2015) defines *design principles* as the core principles underpinning the themes, functioning basically as "guard rails" for the ideation process, keeping ideas focused. Design principles can include a decisive constraint about users, for example, focusing on families rather than

single users or specific modalities. Design principles are high-level indications rather than detail-level design ideas (e.g., a logo must be blue).

The list of requirements details essentially some of the conditions that need to be observed in the concepts, such as the technological abilities of users, specific requirements, or constraints coming from clients (e.g., costs of final artifacts).

OUR DESIGN MUST:



Utilize the NYCitizenship Clinic in the New York Public Library as a touchpoint.

We may create additional material touchpoints and involve the library staff outside of the NYCitizenship programs.



Be multi-lingual and culturally sensitive.

We cannot assume our users are fluent in English or fully accustomed to American culture.



Be reproducible and scalable.

Our design needs be applicable across the New York Public Library system and perhaps to other institutions.



Require a reasonable amount of time from a user with full-time employment.

Our design must focus on accessibility for users with busy schedules.



Leverage the New York Public Library brand.

Research show that a wide variety of communities across New York City trust and seek assistance from the library



Have a prototype prepared for a pilot program in January 2016.

Fig 8.26 Sample list of requirements. Initial research involved interviews, observations, and mapping of typical journeys, conducted by different themes.

8.6 Learning features

Activities

In-context design ethnography

- Working in pairs, plan a visit to a local museum, where you will observe or shadow each other. Start your research by defining your research approach and research toolkit (e.g., notebook and color pens, use a smartphone for pictures and video). Start your research from a distance: observe how your teammate acts and note his or her reactions along the experience. Note specific interactions with staff, fellow visitors, and the whole service infrastructure of the museum.
- In the next step, become more interactive: Ask careful questions about why your teammate did one thing and not another. What moments were especially enjoyable or challenging? Refrain from any judgment: just listen. During and after your time together, take notes, attach photos, and transcribe memorable quotes regarding the service interactions. Make sure to ask permission before taking pictures or recording video that includes other people.
- Finally, synthesize the data you collected through your observations and interview. Create your user's journey map using the template.

- Sort your findings to develop a series of insights: What are the pain points, or what is entirely missing in the service that you observed? What positive moments could be further amplified by service improvement? Use these insights to define design principles and/or a list of requirements to inform future design development.

Recommended reading

Remis, N., and the Adaptive Path Team at Capital One (2016). *A Guide to Service Blueprinting*. Adaptive Path.

Crouch, C., and Pearce, J. (2012). *Doing Research in Design*. Bloomsbury Academic.

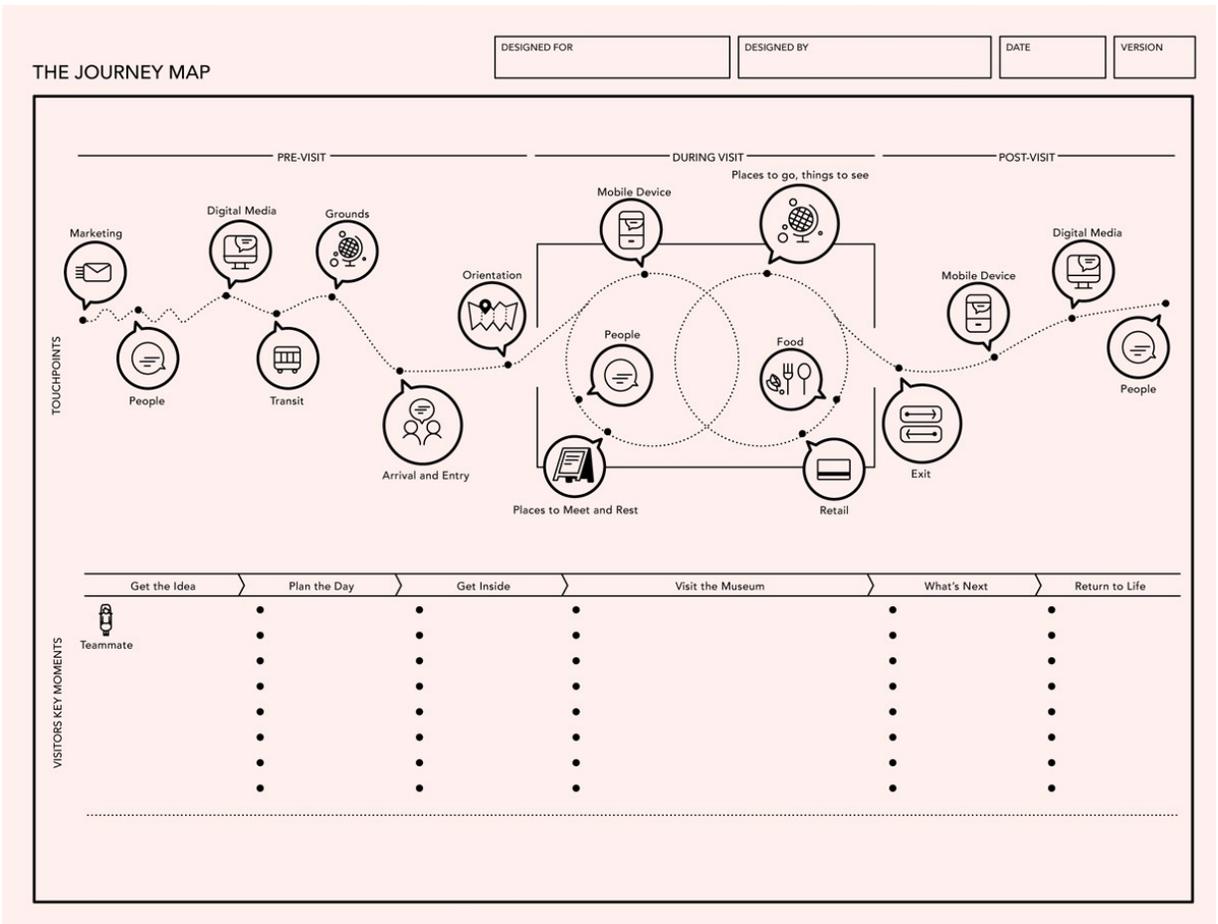


Fig 8.27 Journey map template.