

# Journey Mapping Toolkit

This toolkit champions the use of the Service Design method of journey mapping to support further human centred innovations throughout the MECS programme. This toolkit was developed based on the use of journey maps by the SD4MECS team in the CREST trial Living Lab. The purpose of the toolkit is to enable application of this method to other field trials of modern energy cooking services within the MECS programme and beyond.

**Service Design** is a HCD approach that helps to innovate (create new) or improve (existing) services to make them more useful, usable, and desirable for users, as well as more efficient and effective for organisations [1]. It supports not only the design of the end user service experience, but also the organisational structures and resources needed to deliver it.

The Modern Energy Cooking Services (MECS) programme is a £40 million (\$50.5 million) UK Aid supported initiative aimed at promoting modern energy cooking services in the Global South. The programme works through a multi-partner program of activities, led by Loughborough University in the UK, to catalyse the transformation of the clean cooking and electrification sectors that can enable widespread uptake of modern energy cooking services. This could generate inclusive environmental and development benefits for the poor by enabling technological, institutional, and market innovations. The MECS programme is designed to leverage the enormous progress that has been made globally on access to electricity to drive forward the clean cooking sector. Electric cooking (eCooking) has long been considered ‘inappropriate’ for use in development programs. However, the landscape of electricity access has changed, with many more people now connected to both grid and off-grid electricity and the quality of supply becoming increasingly more reliable. What is more, an array of new energy-efficient electric cooking appliances is now available, opening a myriad of new opportunities for access to cost-effective and convenient modern energy cooking services. This data and material have been funded by UK AID from the UK government; however, the views expressed do not necessarily reflect the UK government’s official policies. An updated and more usable version of this working paper is planned for publication in the year 2022. Please contact Dr. Marianna Couleantianos for further information.

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## What are journey maps?

From *Universal Methods of Design*, 2019 [2]

“A user journey map is a visualization of the experiences people have when interacting with a product or service, so that each moment can be individually evaluated and improved.

A user journey map tells a story about an individual’s actions, feelings, perceptions, and frame of mind—including the positive, negative, and neutral moments—as they interact with a multi-channel product or service over a period of time.”



Lambe et. al., 2020, [3] exemplified using journey maps of everyday cooks to better understand the transition to clean cooking. The journey map in Figure 1 represents the journey of adoption of clean cook stoves in Nairobi, Kenya, for the archetype user group whose goal was ‘saving money’.

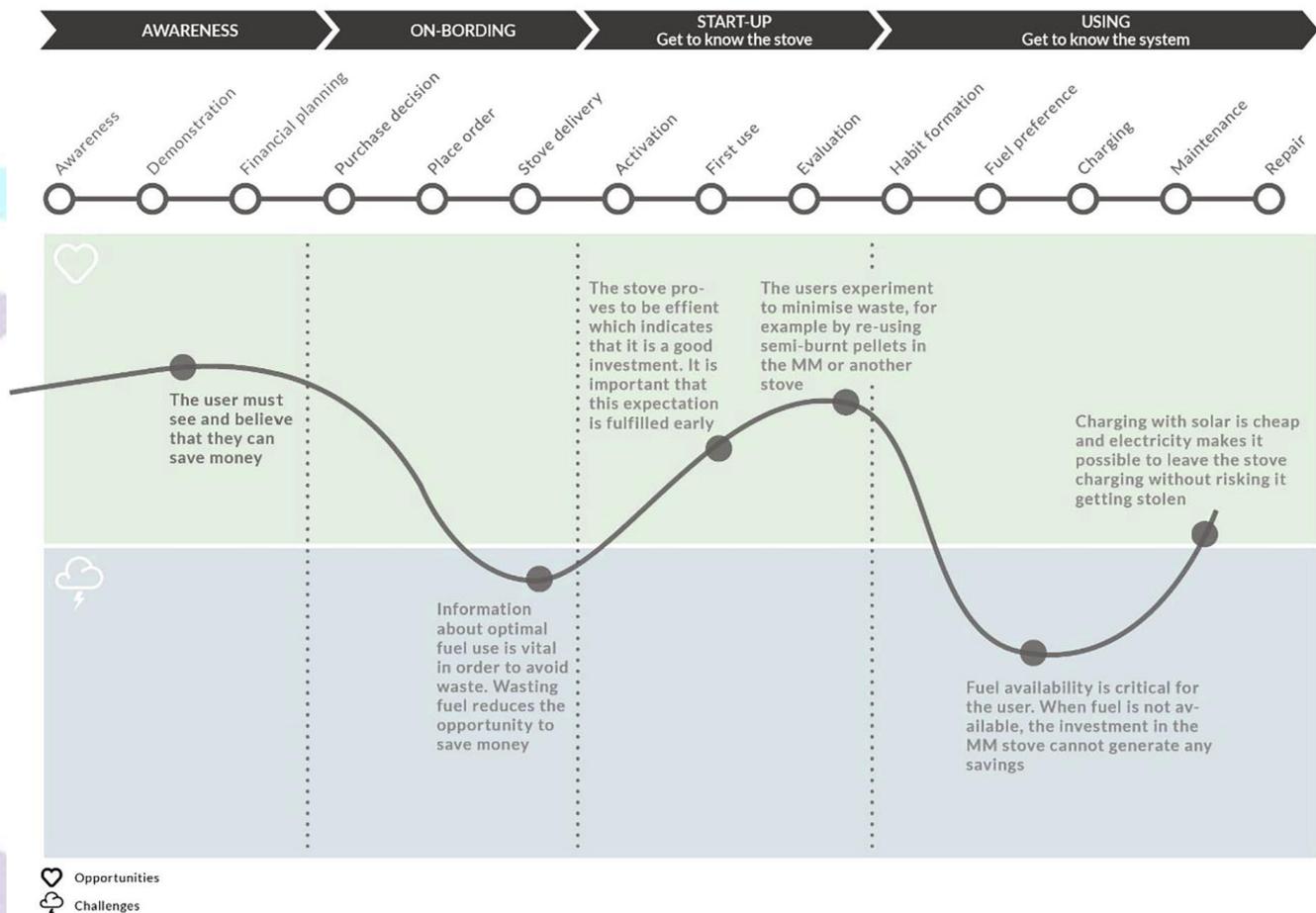


Figure 1: User journey for using the Mimi Moto stove of the archetype group 'saving money' [3]

## Why should I use journey maps?

Journey maps are a key method to help one understand the experiences of everyday cooks.

From *Universal Methods of Design*, 2019 [2]

“By documenting the series of events and interactions that a person experiences, the user journey map can shift an organization’s focus from an operational, system-centred view to the larger context in which products and services are used in the real world. It also helps teams pinpoint distinct moments that elicit strong emotional reactions and are ripe for redesign and improvement. By creating discussions around which interactions are working optimally, which are insignificant, and which are failing altogether, the user journey map helps teams develop a shared vision about ways to more effectively and augment existing user behaviour within their actual contexts of use.”

### Example: Why use journey mapping in the MECS trial?

Journey maps were used to understand the current cooking experience: the journey maps serve as a synthesis of qualitative data collected and provide an engaging way of communicating such data. Examples of journey map uses for MECS are given in Figure 2. Journey maps of each participants’ current cooking experience were given to each participant during the first workshop, thereby giving participants their data back, and asking for their reactions and corrections. This approach fit the ethos of SD4MECS to engage participants as co-creators.

We will use journey mapping to understand and represent ...

...**the current cooking experience** – what people enjoy about the current cooking experience and what frustrates them? (Interview 1 + Workshop 1)

...**the study experience** – how was is for participants to transition to using the PowerHubs? (Interview 2 + Workshop 2)

...**the potential transition to electricity-based cooking** more widely – what services could help people transition? (Interview 3 + Workshop 3)

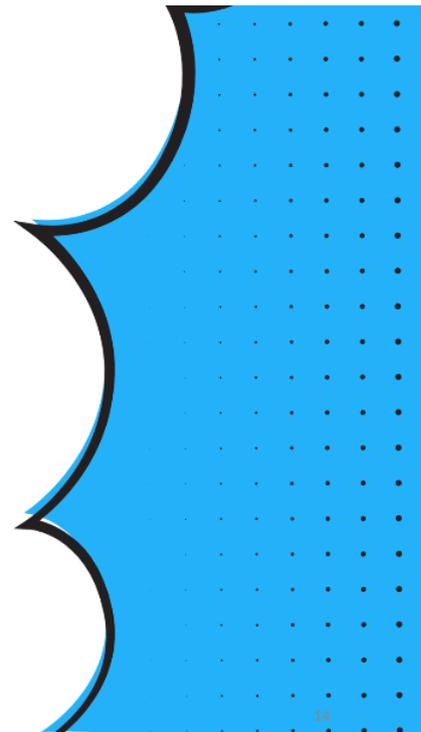


Figure 2: Example uses of journey maps in MECS

Journey maps can also be used as prospective tools, to map the aspirational journey map for example. They can be used as a collaborative tool to work with stakeholders in building an understanding of needs and aspirations.

## How to create journey maps?

From *Universal Methods of Design*, 2019 [2]

“Rich, qualitative data that is a result of primary research is the only way to be sure to craft deep, compelling narratives that reflect people’s actual needs, feelings, and perceptions that occur before, during, and after product interactions. [...] For the benefit of the internal team, the map should also articulate the event it illustrates, this can be either an entire relationship life cycle, or can be limited to a specific scenario. The map should be an honest representation of an experience, and include moments of indecision, confusion, frustration, as well as delight and closure.”

A. Identify the parameters of the journey map you’d like to create (where does the journey start, where does it end, what does it encompass). For example, in the CREST trial, we had to decide whether to include the shopping for cooking ingredients as part of the experience of cooking. While it was ultimately included, it was not emphasized as an important part of the journey.

B. Collect Data. Qualitative data and mixed-methods approaches are encouraged. For example, you can create open-ended interview questions that cover the journey you are trying to map, see the CREST trial LL interview protocol #1 as an example.

C. Create a template for your journey map, you can adapt existing ones (see section “Journey map template”), so they serve your needs best.

D. Split your data into single pieces of information that are relevant to a part of the journey map. For example, you may have a quote from a participant talking about cleaning up the kitchen before and after cooking, which you might split into two parts – a quote about washing up before cooking and one about washing up after eating. Other snippets of data you may have include: data about how much charcoal a participant buys each week; how a participant lights a wood stove; why cooking is important to the participant.

E. Having made your data snippets and/or working directly with a participant (if co-creating a journey map), fill out a journey mapping template with the snippets. As a first pass, don’t worry too much about creating the perfect map for each participant’s experience; once created, you can try to validate the journey map with the participants.

F. Look across the individual journey maps and see if you can see patterns. Are key similarities and differences emerging? If so, try to combine maps to create a representative journey for a group of users. When key differences (maybe even conflicts) arise, you must decide if this conflict is central to your research questions and if you should split your users across this difference or disregard the difference. For example, if we had found that half the participants love washing up after cooking and half hate it, we might have explored what about washing up relates to the e-appliances we were testing: advertising that an e-appliance is easy to wash might be impactful for only a subset of users.

Reflect on what these users have in common and if possible, represent these users as an ‘archetype’ or persona (for more on Personas, see section titled “Personas in journey mapping”). A persona is a fictional character that represents a group of users with similar attitudes or behaviours in this case represented by the experience captured by the journey map. Depending on the project you may end up with one persona representing all everyday cooks in this context or more likely several that highlight key differences in the cooking experience and why they may be occurring. In this way personas can be created from your journey maps and used elsewhere in the project, for example, when considering opportunities for service improvements or completely new products or services.

## Journey map template

Many journey maps follow a similar format as depicted in Figure 3: at the top, a specific user, a specific scenario, and corresponding expectations or goals in the middle, high-level phases that are comprised of user actions, thoughts, and emotions; at the bottom, the takeaways: opportunities, insights, and internal ownership.

Figure 4 depicts the SD4MECS journey map template used in the CREST trial, which includes persona elements at the top: name, cooking scenario, goals; and is organized around three phases of cooking: before, during, after; it further details action steps, likes, and dislikes.

### CUSTOMER/USER JOURNEY MAP

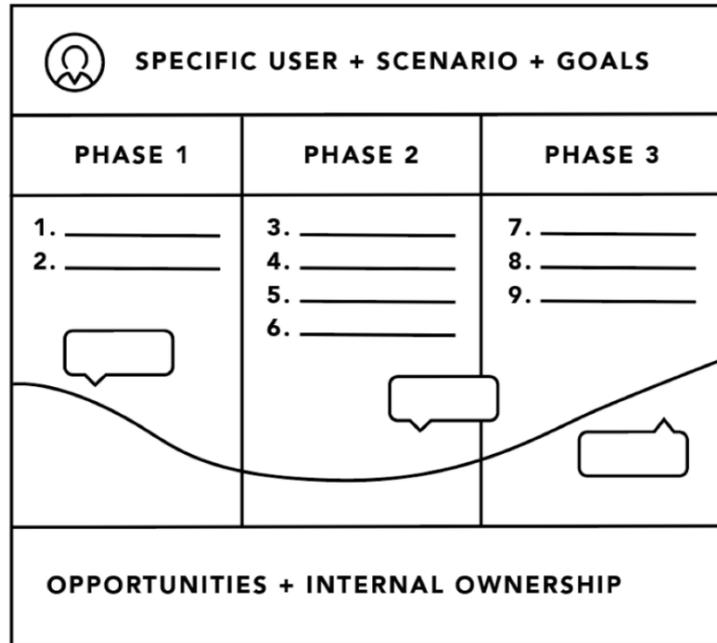


Figure 3: journey map template, Nielsen Norman Group [4]

<ul style="list-style-type: none"> <li>Name</li> <li>Cooking scenario (who do I cook for, what do I use to cook...)</li> <li>My goals (what are my top motivating factors chosen at the start of the workshop)</li> </ul>		
<b>Before</b> (planning, shopping, storing, finding time...)	<b>During</b> (preparing ingredients, using appliances, waiting, accidents, burning...)	<b>After</b> (washing, storing, serving, eating, leftovers...)
Actions	Actions	Actions
Likes / positive emotions	Likes / positive emotions	Likes / positive emotions
Dislikes / problems	Dislikes / problems	Dislikes / problems

Figure 4: SD4MECS journey mapping template.

## Example from the CREST trial

Journey maps were selected as an analysis tool, with three methods of data collection (interviews, mobile research, and workshop) each complementing each other and iteratively helping to create more complex, in-depth, and accurate representations of the everyday cooks' journeys as the trial unfolds. The template depicted in Figure 5 was selected from the Nielsen Norman Group [4].

Interviews	SPECIFIC USER + SCENARIO + GOALS		
	PHASE 1	PHASE 2	PHASE 3
	1. _____ 2. _____	3. _____ 4. _____ 5. _____ 6. _____	7. _____ 8. _____ 9. _____
Mobile Research			
Workshops	OPPORTUNITIES + INTERNAL OWNERSHIP		

Specifically, the data from qualitative interviews helped create personas (specific user + scenario + goals) and understand the cooking journey maps of everyday cooks. The mobile research helped clarify and focus on the emotions associated with different steps in the cooking journey. The workshops were deep dives into the opportunities based on the pain points identified in the cooking journeys.

Figure 5: LL methods matched to the framework of the NN Group journey map

**Spotlight on Interview #1:** The first round of interviews was implemented in late November 2021 in Kenya and Tanzania. Participants were interviewed for around 45 minutes about their cooking experiences, based on a semi-structured guide. Enumerators were encouraged to make conversation, let the conversation flow, and ask follow-up questions. Some interview transcripts came back filled with insights, showing that despite the difficulties of working remotely and across cultures, we were successful in training up country partners and supporting them in training enumerators to conduct qualitative interviews with participants. Journey maps for each participant were then created based on this interview data. One journey map is featured in Figure 6. Some journey maps created based on the interviews were less rich, which highlights the need to clearly communicate your expectations regarding the data collected and how deep to go with the interview.

<p>I am the main cook for my family of 5, but my husband sometimes cooks too and helps with chores. I cook breakfast (tea) and supper, sometimes I also cook lunch. I have an improved biomass cookstove, an LPG stove, and a basic biomass cookstove. I use firewood, charcoal, and LPG. I think cooking is important for healthy bodies and for the growth of my kids. I enjoy cooking for my family. When cooking, it is important for me to have leftovers that can be eaten the next day, and to cook food that my children like.</p>		
<p><b>Before</b> (planning, shopping, storing, finding time...)</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>I buy mandazis and bread, the rest I cook myself. Sometimes I buy some chips from the streets when in town and I find myself hungry.</li> <li>I always start by looking for mixed vegetables</li> </ul>	<p><b>During</b> (preparing ingredients, using appliances, waiting, accidents, burning...)</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>I cook supper around 7pm when I close my grocery.</li> <li>I wash and prepare vegetables then I light the jiko, and start heating the water. As it heats up, I am cutting the vegetables.</li> <li>When the water boils, I add maize flour and I stir it till it's firm. I then give it time to cook. As it cooks, I now prepare the onions, tomatoes and other spices.</li> <li>When the Ugali is ready, I start cooking the vegies with the same jiko. I usually use one jiko so after I am done with Ugali, I add charcoal and then cook the vegetables..</li> </ul>	<p><b>After</b> (washing, storing, serving, eating, leftovers...)</p> <p><b>Actions</b></p> <ul style="list-style-type: none"> <li>when ready, I heat water on the jiko for cleaning the utensils. After am done with the utensils I am now done, I relax at around midnight.</li> <li>We have leftovers that we eat at breakfast and lunch the next day.</li> </ul>
<p><b>Likes / positive emotions</b></p> <ul style="list-style-type: none"> <li>I use three stone jiko because it's locally available, with my 50Kshs I can access firewood.</li> </ul>	<p><b>Likes / positive emotions</b></p> <ul style="list-style-type: none"> <li>I love chopping vegetables</li> <li>I like cooking rice because it is so easy</li> <li>Cooking with wood cooks the food soo quickly and it's fast. Compared with charcoal it saves time.</li> </ul>	<p><b>Likes / positive emotions</b></p>
<p><b>Dislikes / problems</b></p> <ul style="list-style-type: none"> <li>When it comes to LPG gas, it is costly. So accessing it is not easy and I can't cook all the meals with LPG.</li> </ul>	<p><b>Dislikes / problems</b></p> <ul style="list-style-type: none"> <li>I don't like lighting the jiko.</li> <li>I don't like stirring Ugali, it makes my arm ache.</li> <li>Cooking with wood creates smoke, inhaling the smoke gets me sick, I am Asthmatic that disturbs me. Charcoal the same. The carbon affects me a lot .putting the jiko inside the house brings alot of carbon that also affects my kids when they are asleep.</li> <li>I have also tried baking cake but it has not made me happy.</li> </ul>	<p><b>Dislikes / problems</b></p> <ul style="list-style-type: none"> <li>The whole process makes me feel tired</li> <li>I don't have a fridge so I usually place the leftovers somewhere safe because of rats. Sometimes the food spoils and we give it to the dogs.</li> <li>If the food is not cooked enough and I have visitors, I become very frustrated.</li> </ul>

Figure 6: Example of a participant journey map made from participant interview data. The emojis are used to illustrate a subset of emotions and activities which makes the map more engaging when used in co-design activities with participants.

## How to use a journey map?

From *Universal Methods of Design*, 2019 [2]

The early versions of the [journey map] can then serve as a springboard for discussion on the team. Print out an early version of the map on large-format paper, pin it up on a board, and hold a review session where everybody can get up close to the document and mark it up with questions, ideas, and suggestions for improvement. The hands-on, inclusive design activity that brings all decision makers together can go a long way in ensuring that the user journey map becomes a living document for the organization.

Below, we give several examples of how one might use journey mapping.

### Example A: Identify different experiences with new technology adoption [3]

### Example B: Communicate qualitative data and insights

Use a journey map to communicate current experiences and cooking practices, in reports and research papers. Such journey maps can then be used in subsequent studies as a starting point to evaluate new technology ideas against current cooking practices.

### Example C: Collaborate with study participants

Use journey maps to communicate what the researchers have understood from participants and verify with participants that nothing was omitted and that no major mistakes were made. Going one step further, journey maps can be used as a collaborative knowledge creation tool and a reflective tool, to prompt conversations with participants and identify opportunities. In a future facing activity, journey maps can be used to imagine an ideal cooking scenario.

### Example D: Compare different cooking situations

Use journey maps to compare 'current' cooking with 'new' cooking practices after introducing a new technology, highlighting key differences in types of actions, sequence of actions, time to do actions, likes and dislikes of participants, shifts in preferences and priorities, etc.

### Example E: Understand participants' experience in the trial

Journey mapping was also used in the CREST trial to understand the study experience. Based on a study journey map that represented the trial as a journey experienced by participants, SD4MECS asked: *Are we asking too much of participants? Are we engaging with participants in meaningful ways across the entire duration of the study? Are we forgetting critical points of engagement? How can we make the study a pleasurable experience?* Through the process of creating a journey map for the trial experience, we were able to think through these questions and make meaningful changes to the study activities and their sequence.

Journey maps could be also created about the 'actual' study journey once feedback has been gathered from participants to represent their journey through the study. This journey mapping activity could serve to identify painful moments of the study so MECS can work on removing those in future trials, as well as identify joyful moments that could be amplified in future trials.

Below we present two version of the journey map of the whole study (Figure 7 & Figure 8).

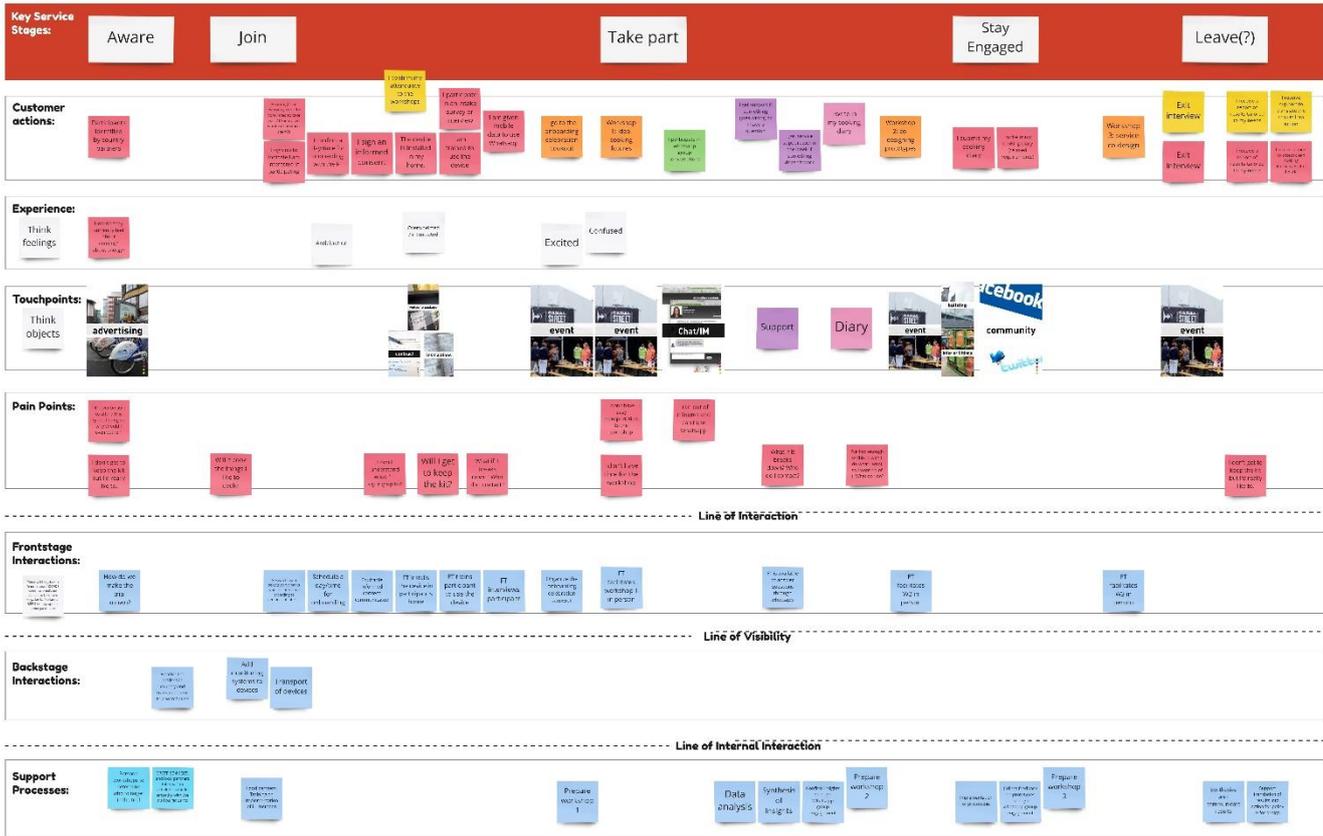


Figure 7: (Above) Study participant journey map enhanced with elements from 'service blueprint' tool (in blue) which depicts the back-end actions necessary to provide the service. In this case, those activities include all actions of the enumerators, country partners, and Loughborough researchers. This added section helped us identify bottlenecks in the work (such as rapid turnover of translations and transcriptions) that we needed to account for in the laying out of study activities.

Figure 8: Synthesized version used in a presentation (below)

	AWARE	JOIN	BASELINE PARTICIPATION	E-COOKING	NEW INITIATIVE	LEAVE
<b>PARTICIPANT ACTION</b>	I AM CONTACTED BY AN ENUMERATOR	INFORMED CONSENT; INTAKE SURVEY; TRAINING	DAILY VISIT OF ENUMERATOR; DATA COLLECTION; DAILY ENGAGEMENT	POWER SYSTEM INSTALLED; TRAINING; COOKOUT; DATA COLLECTION; DAILY ENGAGEMENT; WORKSHOPS	WORKSHOP; DATA COLLECTION; DAILY ENGAGEMENT	EXIT SURVEY; COOKING COMPETITION; UN-INSTALLATION; GOODBYE; REPORT OF LEARNINGS
<b>TOUCHPOINTS</b>	ONE-ON-ONE CONVERSATION	COOKING DIARY; SMARTPHONE; INCENTIVES	DIARY; SMARTPHONE	NEW APPLIANCE; EVENT; DIARY; SMARTPHONE; SUPPORT	NEW APPLIANCE; EVENT; DIARY; SMARTPHONE	INCENTIVES
<b>PAIN POINTS</b>	WHY SHOULD I PARTICIPATE?	I DON'T UNDERSTAND THE INFORMED CONSENT OR EXPECTATIONS	DATA MISRECORDED; DEMANDS OF THE STUDY ARE TOO HIGH	I GET COVID; I DON'T LIKE E-COOKING; IT BREAKS; BURN ACCIDENT	I DON'T HAVE TIME; I CAN'T TRAVEL TO THE WORKSHOP LOCATION; I DON'T WANT TO PARTICIPATE ANYMORE	I WANT TO KEEP THE POWERSTATION
<b>EXPERIENCE</b>	INTRIGUED	OVERWHELMED; EXCITED	TIRED	EXCITED; AFRAID; CONFUSED	EMPOWERED; DISCOURAGED	SAD; RELIEVED

## Activity to get familiar with journey maps: map your own cooking journey

To familiarize your team, spend 1.5 hours on these journey mapping activities.

Example: in the CREST trial, we did a journey mapping workshop with the Country Partners to familiarize themselves with journey maps and encouraged them to do the same with enumerators, so the enumerators knew what type of information to look for in the interviews and other interactions with participants.



Provided: examples of 'auto-journey maps' created with Lboro researchers and CPs to get familiarized with the tool.



Marianna lives with her partner Eric, and a roommate, she is the main cook for her and Eric. She knows some base recipes but would like more variety in what she cooks.

Her goal is to be efficient and for her and Eric to have home-cooked meals for lunch and dinner.

Shopping	Cooking	Eating and Clean Up
<ol style="list-style-type: none"> <li>Marianna and Eric take notes on the fridge of the food they run out of.</li> <li>Marianna and Eric go shopping by car at the nearest grocery store that stocks all their favorites, they make sure to get what is on the list and otherwise peruse the aisles and decide what to buy for the week.</li> <li>Once home, Marianna puts the food away.</li> </ol>	<ol style="list-style-type: none"> <li>Marianna cooks batch meals on the weekend and will cook smaller meals throughout the week as needed.</li> <li>Marianna has several pots going at once.</li> <li>Once she is done cooking, she packs the food in Tupperware and lets it cool on the counter.</li> <li>It's Eric's job to clean up the kitchen after Marianna cooks.</li> </ol>	<ol style="list-style-type: none"> <li>Eric and Marianna grab Tupperwares from the fridge and heat them up in the microwave.</li> <li>If eating together, they will set the table, if not, they will eat at their computer directly out of the Tupperware.</li> <li>Eric does the dishes!</li> </ol>

**Opportunities**  
 A recipe planning tool could help Marianna add variety to her menu. Maybe Marianna would be interested in cooking classes.  
 A grocery delivery service could remove the tiring process of transferring groceries from the store to the house.  
 A service that connects local farms with customers could interest Marianna.



Mercy is the main cook for her household, she lives with her 4-year old child.

Mercy is very busy with work and needs to be able to cook a healthy meal in 20-30min on most weekdays. She can spend a little more time cooking on weekends.

Her goal is for cooking to be convenient, meaning fast and for her to be able to multitask while cooking.

Planning and shopping	Cooking	Eating and Clean Up
<ol style="list-style-type: none"> <li>Mercy plans her meals on Sunday, it helps her budget and be more efficient during the week.</li> <li>Mercy buys groceries on the way home from work. She stops by the market to buy food for supper.</li> <li>Once home, Mercy doesn't start cooking right away, she gets her child a snack and does some work around the house first.</li> <li>Once a month, Mercy buys a 6kg cylinder of gas from her workplace: SCODE, and brings it home.</li> </ol>	<ol style="list-style-type: none"> <li>Mercy starts by washing the utensils, and she starts cooking when the sun goes down.</li> <li>She usually uses her LPG stove to cook in the evenings because it is fast, she can cook inside (vs firewood), and she doesn't have to worry about the battery running out (vs EPC).</li> <li>Mercy cooks meals that take her 20-30 min to make, and makes enough for supper and next day's breakfast. She usually cooks while watching tv.</li> </ol>	<ol style="list-style-type: none"> <li>Mercy and her child eat their dinner.</li> <li>Then Mercy stores the leftovers in the cooking pot, to be eaten the next day at breakfast.</li> <li>Mercy then washes the dishes.</li> </ol>

**Opportunities**

## Personas in journey mapping

Personas are characters that represent archetype groups – their attitudes, behaviours, and goals. The templates presented in the section titled “Journey map template” each included a section at the top for the ‘persona’. This template area should include key variables that will influence, from the perspective of the end user, their experience of modern energy cooking. These include factual information, such as grid connectivity, available payment systems (e.g. on-bill financing, PAYGO, Co-ops/ Chamas), and information related to attitudes, behaviours, and goals in cooking, key cultural differences relating to household roles, and the role of community in service delivery and adoption.

To introduce personas in more detail, we included below the slides from a presentation on Personas given in the summer 2021 as part of the MECS webinar series.

### Personas in Human-Centered Design



Human-Centered Design asks: who is the everyday cook we are working for/with?



Hard to always have users in the room, Personas can be a proxy



Personas can help us understand and formalize how users differ from each other



Personas introduce nuance and specificity, moves us away from 'it depends'

5

**JUSTIN, 31**

DEMOGRAPHICS

- Owns a 2-bedroom apartment in a dense urban area. Monthly rent is \$1,200.
- Recently engaged to his girlfriend of 5 years who plans to marry in NYC in the winter.
- Works full-time as a software engineer in a startup with an annual income of \$120,000.
- Graduated from a community college with honors and held office in a campus-wide club.

BEHAVIORAL IDENTIFIERS

- Enjoys watching sports, reading, and listening to podcasts.
- Values time spent with family and friends. Enjoys social activities.
- Works from home and has a dedicated workspace.
- Enjoys trying new recipes and experimenting with different ingredients.
- Values convenience and efficiency in his daily routine.
- Enjoys trying new recipes and experimenting with different ingredients.
- Values convenience and efficiency in his daily routine.

PERSONAL GOALS

- Wants to save money on energy bills and reduce his carbon footprint.
- Wants to improve his health and fitness.
- Wants to spend more time with his family and friends.

### A Persona is...

... a **profile** representing a particular stakeholder group, focused on the **goals, motivations, behavior, and characteristics** most relevant to a particular type of product

... **built on real data** (collected through interviews, surveys, ethnography...)

... a tool to help **prevent self-referential thinking**.

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## Personas are used to...

### ... Design

- Build empathy with stakeholders: challenge your assumptions
- Analyze and synthesize research data: get at the intangibles
- Serve as a reference throughout the design process (e.g., when defining requirements and specifications)
- Prioritize design features and fixes
- Ideate & think differently

### ... Communicate

- Share research findings in a compelling and memorable way
- Get teams on the same page
- Communicate with stakeholders about your audience

### ... Other

- Market a product
- Onboard new project team members



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## How do I use Personas?

- **Make as many personas** as it takes to **express the unique behavior patterns and goals in your data**
  - Typically, 2-6 personas per stakeholder category
- **Bring your Personas to the meeting**, don't refer to the 'everyday cook' anymore, talk about Personas as real people
  - *"Would George [the Persona] use this feature?"*
  - *How would George carry out this task using our service?"*
- **Use visual reminders:** in reports, in meeting documents...
- **Role play & advocacy:** one person responds as if they were that Persona

The primary purpose of the persona set is to inform the design of retrofit energy saving measures by providing insight into the everyday domestic contexts within which these measures will need to fit.

From: Home Improvement Personas [Internet]. figshare. Loughborough University; 2020 [cited 2021 Jun 29].

### The Aesthetic Pragmatist – the property is a home



*"It's like as long as she enjoys an aesthetic possible because it's a traditional house"*

Over the years, Ben & Eleanor have created a home that meets their practical needs as well as being full of character and charm. Eleanor loves home-making and carries out most of the minor decorating and small repair jobs, but they rely on professionals for everything else. Ben & Eleanor love reading the local newspaper in their home and will pressure their plumber and electrician. They're interested in energy saving and are not particularly concerned about stability.

**Ben Dixon age 50**

Ben lives with the wife Eleanor in a stone cottage called Bristol. Ben is an occupational therapist, works part time as an Occupational Therapist.

#### Attitudes & Motivations

- Motivated to live in their property because of the character & space it offers

- Enjoy having a pleasant though not impressive garden. The house furniture & appliances within the home will be of higher quality than necessary of some or non-essential maintenance

- Enjoy to receive some news from the diary through frequent subscription

- Value of the staff solution, preferring to have them from a local area rather than from a large city or town.

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#### Opportunities for Retrofit

- When they first purchase the house or within the regular cycle of decorating and refurbishment

- The color of the walls is chosen by aesthetic criteria, e.g. the house for sale when they want to sell the house

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8

**PERSONA**



**Morena Rivera**  
Name

**36** **Accountant at railway company**  
Age Sex Occupation

**Married, 1 son** **Spanish**  
Marital status Nationality

**"Relaxing on my couch ... watching TV all night is sometimes just what I need."**  
Typical quote



Morena is just that friendly mother next door. She has a secure job at the national railway company. Together with her husband Marco, she earns a monthly income of 5,000 after tax. Marco loves the outdoors, so whenever possible, the couple takes long hiking tours with Josh, their nine-year-old son. **Morena is not very interested in technology, she wants things to just work.**

General description

20,000	24%	3	377
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A couple of years ago, Katie bought a pocket digital camera so she could post photos of completed jobs on the company's Web site, which she put together using iWeb on her Mac. As she started experimenting with getting the best images, Katie realized that photography offered many of the creative opportunities she enjoyed in painting. She was hooked. Looking for a more capable camera that wouldn't break the bank, Katie went to CNET.com for advice. After looking at a few comparisons but not reading detailed reviews, she went to the nearest Best Buy and bought a Nikon D70 with its kit lens and an inexpensive tripod, relegating her compact camera to snapshots at family events. She also considered Canon's Digital Rebel, but chose the Nikon because it "felt more like a professional camera".

**KATIE'S GOALS:**

- Be able to capture what she sees in her "mind's eye." Katie knows she has an eye for composition, but is frustrated when her inability to master difficult lighting makes for a lackluster photo.
- Enjoy the scenery. Katie takes photos of nature as a way to enjoy its beauty. She doesn't want to be so focused on the mechanics of using her camera that she forgets to enjoy what she sees.
- Feel like a "real" photographer. Katie is proud of some of her images, but hesitates to think of herself as a photographer because she feels she hasn't mastered some of the fundamentals.

Guess the project

*You're doing it wrong if your Personas ...*

- Aren't based on real data
- Lead to the creation and reinforcing of stereotypes
- Become an excuse not to talk to users
- Don't get used
- Are based on averages
- Are a list of demographics (triggers stereotypes)
- Use fake quotes
- Don't face any problem
- Are based on the wrong attributes and unimportant details



## The MECS Persona Toolkit could include

- Example MECS Personas from various contexts
- A decision map to help decide whether Personas are an appropriate tool for a given MECS project
- A process for building Personas for a specific MECS project
- Guidance as to how to use MECS Personas effectively throughout the project
- Help for researchers to follow the 'leave no one behind' ethos of MECS

*Example: Personas can help you think through who the target end users are, how they might differ in what they want, how to find out about those key differences, which differences matter to designers, and how to factor them into a design.*

**PI: INNOVATOR**

My neighbours started a bakery and my kids love bread. If I can bake bread, I can sell it and make some money. I want to learn to bake. My sister will support me to study baking in the future."

Ms. Hui Seng grew up on the outskirts of Hanoi, now making her home in a business for cooking. She moved to her town centre after getting married, and lived there for 15 years with her husband and two kids. At the time, her neighbour owned a bakery selling bread, which was their main source of income. It attracted her attention because of cooking equipment her neighbour owned and the income potential. She wanted to become a baker and make a plan to adopt electric cooking appliances.

A few years after her husband passed away, she returned and moved back to the outskirts of Hanoi. She has two kids and is a single parent. She has her own bakery and currently owns a house with her always attached to the front. She is an energetic bakery owner and currently owns a house with her always attached to the front. She is an energetic bakery owner and currently owns a house with her always attached to the front.

**Household Cooking Needs:**

- PREPARATION:** 7:00-8:00 am, 6:00-7:00 am, 10:00-11:00 am, 1:00-2:00 pm, 4:00-5:00 pm, 7:00-8:00 pm, 9:00-10:00 pm
- PRELACE:** 7:00-8:00 am, 6:00-7:00 am, 10:00-11:00 am, 1:00-2:00 pm, 4:00-5:00 pm, 7:00-8:00 pm, 9:00-10:00 pm
- FEEDBACK:** 7:00-8:00 am, 6:00-7:00 am, 10:00-11:00 am, 1:00-2:00 pm, 4:00-5:00 pm, 7:00-8:00 pm, 9:00-10:00 pm

**EVERYDAY COOKING TIMELINE:**

- 7:00-8:00 am:** Breakfast (Electric Cooker)
- 6:00-7:00 am:** Breakfast (Electric Cooker)
- 10:00-11:00 am:** Lunch (Electric Cooker)
- 1:00-2:00 pm:** Lunch (Electric Cooker)
- 4:00-5:00 pm:** Afternoon tea (Electric Cooker)
- 7:00-8:00 pm:** Dinner (Electric Cooker)
- 9:00-10:00 pm:** Dinner (Electric Cooker)

### 3.2 Communal energy pioneer



**Nang Cham**

Nang Cham lives with her husband, their only daughter, and parents in a rural village. She completed only primary education before leaving school to work with her parents on the farm.

They live in a house with a cement floor, and corrugated iron sheet walls and roof. They collect rainwater in a plastic barrel from the roof, which means her household is classified as deprived in terms of a poverty index. The main light source is a 24-hour a day, but is reliable enough to charge her smartphone, which she uses to send and receive messages. She uses social media on her smartphone, but does not otherwise use the internet. Neither does she use a mobile money service.

#### Cooking practice

The cookstove is made a few times a week, and corrugated iron sheet walls and roof. They collect rainwater in a plastic barrel from the roof, which means her household is classified as deprived in terms of a poverty index. The main light source is a 24-hour a day, but is reliable enough to charge her smartphone, which she uses to send and receive messages. She uses social media on her smartphone, but does not otherwise use the internet. Neither does she use a mobile money service.

#### Collect on fuel

Even though she can afford, she finds it is not safe and it is expensive, but it is the most readily available fuel. On the other hand, it is difficult to get hold of. They feel that LPG is readily accessible but choose not to use it.

Although she uses wood, she feels strongly that it is harmful, and even more strongly that smoke is a health problem. She has heard news in whether charcoal is convenient or makes food taste better, but does not recognise that it is harmful to health. She has friends who use LPG so she doesn't really believe it is too expensive, but she does strongly believe that electricity is expensive.

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