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Knock Knock: Opening the door to service design

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Knock Knock: Opening the door to service design

How can you be sure that the person at your door is really from British Gas? Or the IT engineer is really from Waterstons? How can an app help answer those questions? Innovation Consultant Katie explains why service design helps centre a product around the user, why we love it, and why we are using this approach with our projects and clients.

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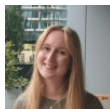
Katie Fallon

Innovation Consultant

Email

katie.fallon@waterstons.com

Recently I was invited to the team's Software Roadshow at our Durham office to talk about an app we have been developing using React Native and Expo, called 'Knock Knock'. The purpose of the app is to verify that individuals who come to your door (or business) in a professional capacity, are who they say they are by providing a QR code or one-time verification code.

What is 'Knock Knock'?

Knock Knock is designed to help verify the identity of those at your front door, or visiting your business, giving peace of mind that anyone you're allowing access into/on your property are legitimate.

The idea came about after the issue was raised a colleague, and we realised that this is a challenge many individuals and organisations face. For example, social housing associations and universities send contractors to clients' homes or halls of residence; and manufacturers and engineers want to know that those entering their sites are indeed who they say they are for safety and security purposes. As the saying goes, we knew there was an app for that.

We had a vague idea of how the app could work: maybe it would include QR codes, or perhaps different logins depending on whether you are a visitor or homeowner, but we quickly realised that we only had a broad awareness of the question we were asking and needed a better insight into what people would really use the app for. To do that, we had to understand the problem itself, the journey each customer would take, and what would make someone use this app. That's where a service design approach came in.

What is service design?

Service design is a way of thinking about and approaching a problem, and my favourite 'definition' is:

"When you have two coffee shops right next to each other, and each sells the exact same coffee at the exact same price, service design is what makes you walk into one and not the other."

The five principles of service design, as outlined in the Book This is Service Design Thinking, are:

1. User-centred: Services should be experienced through the customer's eyes
2. Co-creative: All stakeholders should be included in the service design process
3. Sequencing: The service should be visualised as a sequence of interrelated actions
4. Evidencing: Intangible services should be visualised in terms of physical structure
5. Holistic: The entire environment of a service should be considered.

Put simply, service design is taking a challenge a client has and designing a software solution to it.

What is the step-by-step approach we took?

We started with a question: 'How do I know who is at my door?'. From this we researched the market and interviewed potential clients, before iteratively designing and developing our app.

Market research

While many apps verify identity, there seemed to be a gap in the market for our particular use case. For example, the Post Office has an app that is used as an identity card, but due to lack of publicity and training, very few people know about it - to the point where customers who try to use it are met with confused staff who have never heard of it.

We decided that, rather than having to upload a passport or driving licence, the visitor/contractor simply needs to sign into a Microsoft work account to be instantly recognised as a current

member of staff, allowing them to generate QR codes and one-time codes.

Interviews

From interviews with those who might use the app, we realised it needed to be as simple as possible; the reason homeowners don't use currently available apps is because they don't want to make an account, they just want instant feedback.

We also realised the importance of allowing the app to be used offline as contractors may not always have access to the internet, especially if visiting remote areas, and homeowners may not have data or Wi-Fi.

From these interviews, we discovered our app had a big problem: what if they weren't in fact who they said they were? To resolve this anxiety, we ensured that Knock Knock QR verification was tested through thick double glazing, as well as allowing one-time codes that can be called out through a letterbox or window, meaning there isn't a requirement to open the door. In time it is hoped that this technology can be linked to intercoms or ring doorbells.

Prototyping

From what we learned, we began envisioning what the app might look like; which screens would be needed for the initial viable product of our app; what is the basic functionality we would need to get this app working?

We decided to break the app into two:

- A contractor app allowing staff to login and generate QR codes and one-time codes. The QR code would include encrypted data about the contractor, requiring an internet connection only when generating the QR code.
- A homeowner/business-owner app: allowing users to scan and decrypt the QR codes and one-time codes to receive instant feedback on whether the contractor is registered in our database, which would work entirely offline.

We then created basic wireframes of these apps using Balsamiq, then decided on a name, branding and colour scheme.
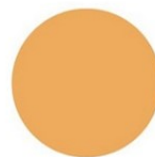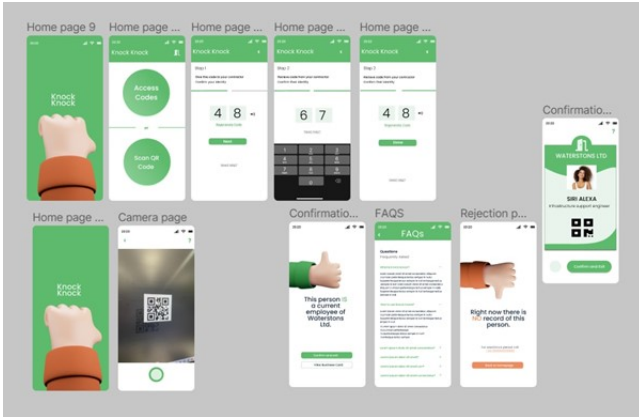

We began using Figma, an interactive design tool that allows you to rapidly create app prototypes to do just that.

User research

With the prototype up and running, we used a questionnaire to ask randomly-selected test subjects whether they would use the app, what they liked about it, how easy they found it to use, and what could be improved, iteratively updating the designs to meet these needs.

We learned a lot about writing a good questionnaire, including the importance of making sure users understood the journey they were taking by using the prototype. By using Microsoft Forms we were able to gain statistics from the responses, and branch together common feedback.

One downside of using questionnaires is a lack of in-depth responses, as people tend to either say they liked the app or simply that they wouldn't use it. Face-to-face interviews better help to gauge people's reactions and emotions to a product, which in turn better help us find pain points and killer features that will help create a great final version.

Development

In the space of three weeks, we developed the apps using React Native and Expo, allowing for rapid development and testing of applications on the fly, delivering a basic working application that we hope to bring to clients to gain further feedback.

What's next?

We're in the process of those we initially interviewed to receive their feedback on the app, keeping them in the loop and plan to approach more clients and partners to keep gathering information.

It is important that we make sure this app is something that people will use, and are aware of – we don't want the same fate as the seemingly unknown Post Office app.

The goal is, and has always been, to ease anxiety about visitors to homes and businesses and add an extra layer of security to this using technology available at users' fingertips.

Why does service design matter?

Without interviewing those who could potentially use the app, the end result would have been more complicated and featured unnecessary elements such as including document uploads, or for home and business owners to create an account to use the app. Based on feedback we quickly realised the app needed to be as simple and accessible as possible.

By answering a simple question and following the service design process, in six weeks we have created a viable product that in time can be taken to market.

Taking this approach forward

'Knock Knock' was a simple project borne out of a random conversation highlighting an every day issue, but what it did was enable us to use service design in the most simple way. While this project was short, the same ideas apply to much larger, long-term, and complex pieces of work.

Our Innovation Workshops can help you to identify the small but significant issues within your business, understanding the simple questions that can lead to solutions that can solve them.

For more information get in touch with the Innovation Team here, or directly to alex.waterston@waterstons.com