

# Module #2 - Human-centred design for digital services

Digital Transformation Learning Modules

Time	Slide #	Script (text and actions)
<b>Human-centred design for digital services (186:05)</b>		
<b>Introduction (02:30)</b>		
00:15	1	 <b>Share screen</b>  Welcome everyone, and thanks for attending today's session.
00:30	2	 I'd like to remind everyone of a few Zoom house rules: <ul style="list-style-type: none"><li>• Make sure your name is displayed</li><li>• Keep your video on unless you have connectivity issues</li><li>• Mute if you're not speaking</li><li>• Don't hesitate to ask questions by raising your hand or using the chat</li></ul>



00:20	3	<p>Today's session is the 2<sup>nd</sup> of a series of 7 sessions on the topic of digital transformation in government. We'll build up on what we saw yesterday, especially around the topic of inclusivity and the importance of building digital government services that anyone can use.</p> <p>Before we start, do you have any questions about our previous session?</p>
00:30	4	<p>These are the 3 main objectives of today's module. At the end of our session, you should be able to explain the concept of human-centred design, appreciate the value of user research, and know the basics of how to conduct user research interviews.</p>
00:55	5	<p>We're going to explore 2 topics in this session:</p> <ul style="list-style-type: none"><li>• First, what do we call human-centred design in the context of digital government services? I specify services, because human-centred design can also apply to other types of government initiatives, like human-centred policies and programmes. But in this session, we'll focus on public services.</li><li>• Second, how can civil servants use what we call 'user research' to build human-centred services? In this 2<sup>nd</sup> part, we'll go together through an example of a user research process for a specific service, and we'll share with you some practical tips that you may be able to reuse if you're involved in the design or revamping of services in government.</li></ul>

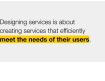


## Introduction to human-centred design (72:20)

### a. Definitions (18:30)

00:10	6	 <p>Let's start with some definitions to introduce the concept of human-centred design for digital services.</p>
00:30	7	 <p>Design is a word that's used a lot to describe many different things: fashion design, interior design, etc. In its broadest sense, designing means planning for the construction of an object (like a designer dress) or for the construction and the implementation of a system.</p>
01:10	8	 <p>Here, we're focusing on designing digital services - whether it's about the development of brand new services or the revamping of existing services.</p> <p>You can see here on the screen what we call a user journey map. It's a visual map of the different steps users have to go through to access and use a service. In this case, users are Syrian refugees asking for a resettlement in the UK (the service). These visual maps can be very useful when designing services. We'll get back to them later in the session.</p> <p><a href="https://hodigital.blog.gov.uk/2016/11/25/the-power-of-pictures-in-service-design/">https://hodigital.blog.gov.uk/2016/11/25/the-power-of-pictures-in-service-design/</a></p>
00:35	9	<p>What does design exactly mean in the context of public services? Two things really. First, designing services is</p>



	 Designing services is about creating services that <b>efficiently meet the needs of their users.</b>	about creating services that meet the needs of their users. Let's take an example to define what we mean by user, need and service.
00:25	 10	Let's say someone, a retailer, needs to build a new storage unit to store their stocks. The need here is 'getting new storage space'. The user - the person who expresses this need - is the retailer. Where does the public service come into play?
01:00	 11	You can't build a new building - here a storage unit - without an authorisation, and the delivery of authorisations falls under the authority of public authorities. So the user - the retailer - will have to apply for a construction permit from their local authority, in order to be able to fulfil their need: building a new storage unit.  A service is a means to an end, for which you need the help of an external party, and in the context of public services, that external party is the government.
00:20	 12	What we call user needs are the actual goals, values and aspirations of the users. They are the things people need from a service in order to do something.
05:00	 13	<b>Group discussion</b>  Are you involved in the delivery of any services? What user needs do they solve?
00:20	14	User needs are often confused with requirements, or are considered to be a different way of writing service

	User needs + requirements	requirements. But that isn't the case.
00:30	15 	Let's take an example. Here you can see a train. The train company thought they'd answer their passengers' needs by offering wi-fi onboard. However, after they equipped their trains with wi-fi, passengers kept complaining. Why?
01:00	16 	If you've ever used on-train wi-fi, error messages like this might be familiar to you. Whilst you can connect to the wi-fi network, it's usually rubbish. You can't actually download anything or send email with attachments. The real need here was not wi-fi, but being able to communicate with people outside of the train. This implied having enough wireless broadband to send emails with attachments, but the train company had not really thought about this.
00:30	17 	Let's recap. What are the user, user need, service and requirement here?  Our user may be a worker on a train, travelling to a conference. Their need is to send their presentation to the conference organiser ahead of the event.
00:30	18 	So the service they need from the train company here is on-board connectivity. And to deliver this service, the train company needs to equip its trains with Wifi facilities. But that's the requirement, not the user need.
00:25	19	We said earlier that designing public services meant 2 things. <ul style="list-style-type: none"> <li>First, answering the needs of their users.</li> </ul>



		<ul style="list-style-type: none"><li>• Second, doing this in the most efficient manner.</li></ul>
00:15	20 	Here again, let's take an example. Our user is a group of friends, whose need is to plan a long week-end together.
00:20	21 	The service they need from their government is to tell them when the next public holiday is, so that they can start planning their trip.
00:10	22 	This is a website that shows public holidays in the UK.
00:10	23 	This is another website that shows just the same.
00:10	24 	According to you, which website best answers user needs, and why?
05:00	25	<b>Activity</b>



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		<p>I will pause on this slide while you think about your answer so that you can compare the 2 websites.</p> <p><b>Ask the questions again, and go through the audience.</b></p> <p>The website on the right gives you automatically the date of the next public holiday. It saves you time and effort. You don't have to go through all the lines and columns of the table on the left. Yet, it still gives you the opportunity to scroll down and look at further public holidays in case the date of the next one is not what you were looking for. In a nutshell, it answers user needs in a more efficient manner.</p> <p>How does it do that? It's all about design, but not just service design. Let's look at other forms of design that can be useful for service teams.</p>
<b>b. The different types of design in government (23:35)</b>		
00:10	26	
		Now let's look at the different types of design in government.
00:30	27	
		Let's start with visual design, also called graphic design. Visual design is about how service materials - like web pages - look. Visual design influences how users understand information.
01:00	28	
		Please take a few seconds to look at this slide. <b>Pause.</b> What did you start reading? We most certainly all



		started with the title, next the sub-title, then the small paragraph at the bottom right corner before trying to see what the small paragraph says. This is all due to visual design.
01:30	29 	Graphic designers use typography, grids, imagery, colour and space to influence how users receive information.
01:05	30 	<ul style="list-style-type: none"><li>They tell us what to look at first, creating a hierarchy between content. So that we can quickly access key information, and not lose time going through pages of content to draw a simple message.</li><li>In general, designing for government services involves communicating information in the most legible manner. There's no better compliment than 'simple' to a government website. People can be tempted to add graphic flourishes but if they aren't needed, they shouldn't be there. Just like service design, the goal of graphic design is to answer user needs, no more, no less.</li></ul>
01:10	31 	Another type of design is content design. Content design is the work of writers, editors and communicators, but more generally, of anyone who has to write in their job. If you ever have to write emails, or reports, then you're also content designers to some extent.  Just like service design and visual design, the goal of content design is to answer user needs, in a simple way. Content designers help people get the information they need, in the way they need it. They translate difficult concepts into something that's easy for people to understand.
01:55	32	Which of these 2 signs do you find most efficient? The one on the left has 8 words, whereas the one on the

		 <p>right has only 4 words. But in just 4 words, it says exactly the same. Why would you need to tell no driving and parking when just saying no vehicles is enough? And it has an illustration. Content design is about words, but it's also about identifying when images can support text, or even replace it sometimes.</p> <p>Content design is an important part of service development. Everything written that's aimed at service users needs to be adapted to them. You don't address a person who's registering a child birth the same way as you would with someone registering a death. You have to be careful of the language you use.</p> <p>Content designers also need to make sure that the language they use can be understood by everyone, whatever their level of digital literacy is.</p>
02:55	33	 <p>There are some general rules that you can apply to any government services:</p> <ul style="list-style-type: none"> <li>• Put the most important information first. Users only read about 20 to 28% of a web page. If you want to make sure to convey an important message, put it at the very beginning. Web-user eye-tracking studies show that people tend to 'read' a web page in an 'F' shape pattern. They look across the top, then down the side, reading further across when they find what they need.</li> <li>• Avoid having questions as titles. They often take more words and spaces than regular text. For example: 'What do you need to apply for a visa' is longer to read than 'Visa eligibility criteria'. Avoid capital letters, unless they are absolutely needed, as they are harder to read, as you may have noticed on the previous slide.</li> <li>• Use common words, the words that people use the most. And short sentences, with simple structures.</li> </ul>

		<p>Try to avoid passive sentences. For example, you should rather write ‘Please also fill in the form’ than ‘furthermore, the form needs to be filled’.</p> <ul style="list-style-type: none"> <li>● Avoid using acronyms and abbreviations.</li> </ul> <p>There’s no magic recipe to achieve this. Just write, review, and iterate until your text is as simple as possible. There are some online applications that can help you do this, like <a href="#">Hemingway Editor</a> with the English language. <b>Share the link in the chat.</b></p>
00:20	34	<p>We’ve talked about visual design and content design. But as the former CEO of Apple said, design is not just about what it looks like. Design is how it works.</p> 
00:20	35	<p>That’s where interaction design comes into play. Interaction design is the creation of a dialogue between a user and a service.</p> 
01:00	36	<p>For example, this webpage has a ‘get started’ button. What happens when you click there? Do you land on a new page with a form to fill out? How many questions are there to answer? Do you need to create an account and login? This is the type of questions interaction designers think about. Interaction designers design the detailed actions a user needs to make in order to use a service.</p> 
01:40	37	<p>The fourth type of design, which is at the core of today’s session, is service design. As we said previously, service design consists in answering user needs, in the most efficient manner. We’ll see in part 2 of this</p>



		<p>session and in our next session on agile ways of working the different steps service designers need to go through to build human-centred services. But you may have already guessed that it's a lot about research - speaking with users and observing them - to understand their needs, feelings and frustrations. Based on these research findings, service teams share ideas on how to deliver a better experience to users, test the ones that make most sense, until they have a service that efficiently meets the needs of their users.</p> <p>Ask participants who is responsible for each of the 4 types of designs in their organisation at the moment.</p>
10:00	38 <small>Take a few minutes to consider a service that you find particularly well or poorly designed. Why?</small>	<p><b>Group discussion</b></p> <p>Think of an online financial or e-commerce service that you find particularly well or poorly designed. Why? Can you share your screen and take us through the service?</p>
<p><b>c. Inclusive service design (30:15)</b></p>		
00:25	39 <small>Designing for human-centred design Everyone... It's about understanding the needs of service users but also their limitations</small>	To finish the first part of today's module, and before we dig into the process of doing user research in government, I'd like to share with you what designing human-centred services means, and why it's important.
00:40	40 <small>Human-centred design is an approach to service design. It's about understanding the needs of service users but also their limitations</small>	We've highlighted so far the importance of taking into account user needs in service design. This is an important part of human-centred design. Another important aspect of human-centred design is to consider potential limitations that could make it hard for users to access or use services. And by users, we mean any human.



10:00	41	What do you think can prevent or make it hard for people to use digital services? And what can governments do about it?  <small>What do you think can prevent or make it hard for people to use digital services? And what can governments do about it?</small>
00:50	42	What could be these limitations? We mentioned in our last session the difficulties some people may have to access online services because they don't own a connected device, or because they don't benefit from high-quality and affordable connectivity.  That's why it's important for service teams to offer support services on different channels, like over the phone or face-to-face.
02:00	43	Digital literacy can be another barrier to using digital services. Digital literacy is not just the ability to read something online. It's the ability to use digital technologies to find, create, or communicate information. For example, using a search engine to look at the opening hours of a store, or creating a profile on social media.  There's often a digital literacy gap between what we call 'digital natives' - people who were brought up during the digital era and got to use computers and internet from an early age - and older generations. But this is not the only source of digital literacy gaps. Very often, internet access and digital literacy go together, making it hard for the poorest populations or people living in remote rural areas to gain advanced digital skills.  To make services inclusive despite digital literacy issues, service teams can offer offline support services. But it's also important for governments to invest in large-scale digital literacy programmes.
00:30	44	This is what Singapore has been doing with the 'Digital for life' programme. Thanks to this programme, seniors



	 <a href="https://www.imda.gov.sg/for-community/digital-readiness/Digital-For-Life">https://www.imda.gov.sg/for-community/digital-readiness/Digital-For-Life</a>	receive personalised coaching to help them pick up essential digital skills such as communication, video calls and cybersecurity, enabling them to be digitally connected.
01:10	45 	Trust is another aspect that can impact people's ability to use digital services. We'll have a full module dedicated to trust where we'll unpack this concept in detail. For now, just be aware that there are different levels of trust. For example: <ul style="list-style-type: none"><li>• Trust in a government, and their ability to fulfil their mandate</li><li>• Trust in governments' ability to keep users' data safe, and use it in an ethical manner</li><li>• Trust in the ability of digital services to meet user needs</li></ul> Digital service teams can't influence all levels of trust. But there are a few things they can do.
04:55	46 	First, delivering good services that answer user needs. If users have a good experience when they use digital services, their confidence in using digital public services will increase. But they can even go further.  What do you think these 2 pictures are? On the left, you have a screenshot of the online form you have to fill in to ask the UK government to recognize your foreign driving licence. On the right, you have a screenshot of the online form you have to fill in when registering a death to the UK government. Is there anything that strikes you? They look exactly the same! Titles, subtitles and text use the same font and size. The selection button is the same circle, and the next step/continue button is a green rectangle in both cases. You also have at the bottom of both pages a section called 'Your answers' where users can see and change what they answered in the previous questions they were asked.



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There is a strong similarity between both pages despite the fact that the first service is delivered by the UK Driver and Vehicle Licensing Agency which is an executive agency sponsored by the Department for Transport whilst the second service is delivered by the General Register Office which is an agency of a different Ministry, the Home Office.

This is what we call ‘design patterns’. Patterns are best practice design solutions for specific user-focused tasks and page types. They are sets of practical guidelines for building services (or bits of services) that are repeated across government.

There are services which are repeated hundreds of times across governments in completely different ways. Getting a construction permit or a fishing licence amounts to the same thing. They both involve getting permission from the government to do something.

Why should each agency invest time and money in developing their own online forms when they could use the same template?

Design patterns remove duplication of effort, but they also help to build trust by offering a consistent experience of government. As a user, you’re more likely to trust a government service that has the same design as a service you’ve already used.

This is just a small example of how service teams can help strengthen users’ trust in using digital services. We’ll explore other aspects in the module about ‘Building trust in digital government’.



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00:20	47	<p>Last but not least, human-centred design is about building services that can be used by anyone, even if they don't share the same abilities.</p>
03:30	48	<p>In our mind, we often associate disability with permanent health problems. This is not it is. Disabilities are not personal attributes, they are context dependent. According to the World Health Organisation, “Disability is not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person’s body and features of the society in which he or she lives.” Disability happens at the points of interaction between a person and society. Physical, cognitive, and social exclusion is the result of mismatched interactions.</p> <p>This picture comes from Microsoft’s inclusive design toolkit. It shows how motor based impairments can impact anyone. Someone who has lost motor function in one arm might find operating a keyboard to be difficult. But if you broke your arm skiing, you could experience some of the same barriers. This is called a temporary impairment, since over time your arm will heal. The final end of the spectrum is a busy new parent who is holding their child, restricting the use of one arm. This is a situational impairment. Designers need to build services for everyone on this spectrum, whatever their impairments may be. Eventually, it’ll benefit everyone.</p> <p>A striking example of this is video subtitles. People with hearing impairments find them extremely useful. But people with a good hearing too. Imagine you’re in a bus, without headphones, you can’t put the sound on because you’d disturb people around. It’s a situational impairment, which makes you appreciate video subtitles.</p>



		<p>There are many examples like this. The blur feature you may be using right now on Zoom, to hide your background was initially developed by an engineer with hearing impairments at Microsoft. She found that it makes it much easier for people to read lips, otherwise they can easily be distracted by people's background. And now this feature is widely used to help people working from home protect their privacy.</p> <p><a href="https://www.microsoft.com/design/inclusive/">https://www.microsoft.com/design/inclusive/</a></p>
03:00	49 	<p>To help service teams build digital services that can be accessible online to as many people as possible, there are some international guidelines called WCAG, which stands for Web Content Accessibility Guidelines. The 4 design principles of WCAG are (1) perceivable, (2) operable, (3) understandable and (4) robust:</p> <ol style="list-style-type: none"><li>1. Making a service perceivable means making sure users can use it with the senses that are available to them. For example, by providing text alternatives for pictures so that people with visual impairments can use a screen reader to hear what there's to understand from the pictures.</li><li>2. A service that's operable should make it easy for users to navigate with their keyboard, and give them the time they need to read and use content.</li><li>3. A service needs to be understandable to be considered accessible. This can be about languages, but also content design: making sure the web page does not contain unusual words and abbreviations, and is adapted to people with a basic reading level. It's also about making the service predictable, letting you anticipate what will happen after you click somewhere, and leaving you with the opportunity to go</li></ol>



		<p>back if you need to correct any of the information you provided.</p> <p>4. Making online content robust means that it can be interpreted reliably by a variety of users whatever screen or browser they use, and whatever assistive technology they may need (like screen readers or magnifiers).</p>
00:25	50 	<p>Let's look at service accessibility through an example. SingPass is Singapore's national digital identity platform. It allows people to prove their identity and access government services. To make it inclusive, they progressively added accessibility features.</p> <p><a href="https://www.tech.gov.sg/products-and-services/building-products-and-services-for-everyone/">https://www.tech.gov.sg/products-and-services/building-products-and-services-for-everyone/</a></p>
00:15	51 	<p>People don't need a password to login - that can be easily forgotten - they can use login shortcuts or facial recognition.</p>
00:15	52 	<p>People with visual impairments can use the voiceover command on the app, and the team enabled high contrast for improved legibility and readability when using the app.</p>
00:10	53 	<p>The main pages of Singpass website and app are available in Singapore's 4 official languages.</p>



00:30	54	 <p>They have developed an in-app solutions to make it easier for users to get help (live step-by-step guides, callouts for new features). And people are not required to use Singpass, they can still prove their identity in-person.</p>
01:20	55	 <p>We've talked a lot about physical or sensory impairments (e.g., vision, motor, hearing), but impairments are not always physical, they can be about cognitive capacities, and states, like anxiety. Anxiety is something we've all experienced. As a matter of fact, research shows that many people are immediately anxious whenever they receive a communication from the government, or have to use a government service. This is why it's important that digital government teams build services with anxious users in mind.</p> <p>What does designing for users with anxiety look like? This is a poster from the UK Home Office. It's a list of do's and don'ts for their service teams to keep in mind. For example:</p> <ul style="list-style-type: none"><li>• Explain what will happen after completing a service, and do not leave users confused about next steps or timeframes</li><li>• Let users check their answers before they submit them instead of leaving users questioning what answers they gave</li></ul>



<b>Short break (05:00)</b>		
<b>Doing user research in government (77:00)</b>		
<b>a. Introduction to user research (16:20)</b>		
02:00	56 	<p>In the rest of this session, we're going to focus on the process through which service teams can explore user needs. This process is called user research. We'll start with defining what user research exactly is. Then, we'll illustrate the user research process through a service example. And at the end, we'll share with you some tips on how to conduct user research that you may be able to reuse if you're ever involved in such activities.</p> <p>Please note that we're going to talk about user research through the lens of public services, but user research can be useful in other contexts, for example to inform the design of government policies, or even inform the way you write communications documents to people inside or outside government. Delivering information can actually be considered as a type of service. So whether you're involved in the development of public services or not, you should be able apply the lessons from this session.</p>
00:30	57 	What's user research? Let's watch this 30-second video from a user research in the UK government to find out more about her role.



01:15	58	<p>User research gives insights empathy inspiration</p> <p>User research gives insights empathy inspiration</p> <p>needs unmet</p> <p>To deliver a service that meets the needs of their users, service teams have to understand:</p> <ul style="list-style-type: none"><li>• who their likely users are</li><li>• what they're trying to do</li><li>• how they're trying to do it now and if they're using an existing service to do it, what their experience looks like - do they run into any problems, do they have any frustrations?</li><li>• among their likely users, who may have the most difficulty with using the service</li></ul> <p>The better service teams understand their users, the more likely they are to design and build a service that works well for them.</p> <p>Now, great contextual user research doesn't just tell service teams what users say, it tells them what users think, do and feel. All these things can be very different, and contradict each other. User research can reveal unmet needs that people can't, or won't tell. And that's where the deepest, most powerful, most impactful insights come from.</p>
00:40	59	<p>User research gives insights empathy inspiration</p> <p>drive new ways of working and unlock opportunities</p> <p>new ways of working and unlock opportunities</p> <p>insights empathy inspiration</p> <p>But user research does not only give insights. It does offer the opportunity to get a deep understanding of the service from users' perspectives.</p> <p>But it also a way for service teams to unlock empathy and inspiration. Em</p> <ul style="list-style-type: none"><li>• <b>Empathy</b> because when you understand your users, and what they need, it gives you the drive and the</li></ul>



		<p>motivation to design great services that can change people's lives.</p> <ul style="list-style-type: none"><li>• <b>Inspiration</b> because it opens you to new ways of thinking. User researchers get rid of their assumptions, and force themselves into adoption a problem approach that can push expansive new ways of designing solutions.</li></ul>
00:10	60	<p>There are different ways service teams can conduct user research.</p> <p>There are lots of methods to conduct user research.</p>
02:15	61	<p>Here are just a few of them. The most obvious one, or well-known, is user interview. We'll look at it in further detail in our next section.</p> <p>But there are other methods like, focus groups, surveys or user experience testing. User experience testing consists in putting a solution prototype in the hands of users to observe how they use the tool, their reaction and feelings. This allows service teams to identify what works and what does not.</p> <p>Empathy and mystery shopping experiences consist in putting yourself in the user's shoes to find out what their service experience feels like. For example, calling the contact centre of a government agency asking for information about a service to assess how the support team handles inquiries, and make sure all users receive consistent and high quality help.</p> <p>Data mining and desk research are other ways to get information on service usage, this time by looking at evidence of what users have done in the past. Evidence can be data generated by users over time, for example</p>

		web analytics - how long users spend on a webpage, where they usually click - or qualitative data, for example call transcripts from service support call centres.
02:00	62 	<p>The outputs of user research can be either qualitative or quantitative data. One is not better than the other. They're complementary.</p> <p>Qualitative data is important to extract when you're not sure what you're looking for. For example, let's say you're part of the service team in charge of revamping an online service that fell into disuse, and you have no idea why. You need rich, contextual insights to understand the reasons why the online service is not really used. This is the type of information you can get from user interviews.</p> <p>Quantitative data on the other hand is often more useful when you have a small idea of what you're looking for, and you want to validate it. Do you remember the example we looked at at the beginning of the session on the public holiday finder? The first version of the service was a long list of all the public holidays, whilst the second version highlighted the next coming public holiday. Why do you think they made this design change?</p>
01:45	63 	<p>They looked at the website data, and most specifically two things: the queries that were used to access the public holiday finder, and when people accessed the page.</p> <p>What they realised, and what you can see here in the table on the left of the screen is that a significant number of people typed 'next public holiday' in Google to access the government website, which shows they were not looking for any public holiday, but the next one in particular.</p> <p>The graph on the right shows the dates when most users accessed the webpage. The peaks you can see are</p>



		<p>just before public holiday weekends, which also suggests that most users are interested in the next public holiday, not any public holiday. Hence changing the design of the website to make it easier to see when the next public holiday is.</p> <p>Qualitative data is useful to deliver specific insights around how much something is happening.</p>
00:25	64	<p>Another thing I'd like to highlight on user research is that it happens at every stage of the service development process, not just at the beginning.</p>
02:50	65	<p>We'll explore in detail the development process of digital services in our next session. This is just a brief overview to show you the importance of conducting user research at every phase of the process.</p> <p>The first phase of service development is often called Discovery, because its goal is to understand who service users are, and what they need. This phase is exclusively about user research.</p> <p>The next phase is the design and development phase. It starts with an ideation stage, where service teams brainstorm on how to best answer user needs, based on what they found from user research in the Discovery phase. Then they shortlist the ideas that look most relevant, and turn them into prototypes that they can test. This is where user research comes into play again. Users can test prototypes, and share feedback.</p> <p>The last phase starts when a service has been sufficiently tested and improved to such an extent that it satisfies user needs. The service then goes live. But this does not mean user research stops there. A service is like a bike, if you stop pedalling, you fall. If you stop improving a service, it falls into disuse. It's good to keep</p>



		<p>doing some user research, even just a little, once in a while, to make sure that the service still meets the evolving needs of its users. It's also the opportunity to test new features. Here, the goal of user research is to help inform how to refine solutions.</p>
02:30	66 	<p>Who are user researchers? User researcher is a fairly new role in government. And even more generally. Today, you can easily find dozens if not hundreds of user research trainings online, but this wasn't the case 20 years ago. So in many countries, there are not that many user researchers with lots of professional experience, especially in the public sector. There's a huge disparity between some governments with hundreds of full-time user researchers, and some governments with just a few part-time user researchers, sometimes none.</p> <p>What do user researchers look like? There's really no rule in terms of diploma. User researchers are often people with great empathy skills, and a good ability to analyse and synthesise.</p> <p>It's important for government teams that have never done user research before to get external help to set up user research processes and set the bar for what good looks like. Unfortunately, very often, people don't want to invest time and money in hiring user researchers. But not having user researchers should not mean not doing user research. With the right tools and mindset, civil servants with little experience in the field can already achieve a lot.</p> <p><a href="https://govinsider.asia/digital-gov/ashri-nooraida-permana-ux-researcher-jabar-digital-service-west-java-indonesia-women-in-govtech-2021/">https://govinsider.asia/digital-gov/ashri-nooraida-permania-ux-researcher-jabar-digital-service-west-java-indonesia-women-in-govtech-2021/</a></p>



b. How to conduct user interviews (74:05)		
00:10	67	<p>In this next section, we're going to zoom in on one user research method: user interviews.</p> 
01:20	68	<p>Why user interviews, and not another research method?</p> <p>One, because they're really effective at revealing user needs since you get to interact directly with users, and assess their feelings, frustrations and needs.</p> <p>Second, because anyone can learn the fundamentals of user interviews, but it's hard to do them well. So, in the next fifteen minutes I'm going to try to give you all the information you need to run user research interviews. The goal is for you to feel able to repeat the process by yourself, outside of this training.</p> <p>Three, because the barrier to doing them is low. If you've ever been involved in the future in the design or revamping of a service, you can proactively take the initiative of setting up user interviews without asking for permission or budget approval.</p>
00:25	69	<p>And to explore the process of running user interviews, we're going to use the example of an online business registration service.</p> <p>Let's all assume that we're part of a team who's been asked to revamp a business registration service that was</p>



		first designed a long time ago, and has not been reviewed since then. Where do we start?
00:15	70 	The process for user interviews can be divided into 3 stages: <ul style="list-style-type: none"><li>• Plan and set up the interviews,</li><li>• Conduct the interviews,</li><li>• And analyse and document the findings.</li></ul>
00:20	71 	The first thing that we need to ask ourselves is why are we doing this research? What do we want to get out of it? Setting research objectives helps you define what your research needs to achieve. Objectives can be described as the main reasons you want to conduct the research. What are the questions you want answered? What do you want to learn? Objectives need to be discussed and agreed within the service team.
05:00	72 	<b>Activity</b> In our scenario, what could be research objectives? <b>Let participants answer.</b>
01:30	73 	Our overarching goal is to inform the revamping of the business registration service. To do this, we need to understand: <ul style="list-style-type: none"><li>• How people currently do to register their business, from them wanting to register their business to their business being actually registered</li></ul>



		<ul style="list-style-type: none"><li>• And at every stage of this journey, what users experience and by this I mean their fears, frustrations but also what they like, and what works well</li></ul> <p>If we achieve these 2 goals, then we - as user researchers - should be able to deliver relevant information to the rest of the service team, who'll then brainstorm on what needs to be changed in the way the service is delivered, and how.</p>
01:10	74	<p>Plan and set up user research interviews</p> <ol style="list-style-type: none"><li>1. Define objectives and success criteria</li><li>2. Identify and recruit representative users</li></ol> <p>Next, we need to ask ourselves who should we speak to in our research? We need to think about who the people are that will really help us find answers to the problem we are trying to solve - improving a service for its users.</p> <p>We need to do our best to ensure those people we choose to speak to, represent users of our service. In user research, we must consider diversity, accessibility, and inclusion when deciding who we should speak to. If we are not intentionally inclusive, we risk unintentionally excluding people who should be represented in our research, to ensure we design services which work for everybody.</p>
10:00	75	<p><b>Activity</b></p> <p>Who do you think our representative users are, and how can we reach out to them?</p> <p><b>Let participants answer.</b></p>
00:30	76	Representative users are also called personas. Personas are fictional characters which you create based on your research to represent the different types of users of a service. Based on the services we're looking at,



		personas can include a variety of details, like people's occupation, gender, skills.
00:30	77 	For this exercise, please consider the following categories: age, occupation, place of residence, level of digital literacy, potential barriers to using digital services.  <b>Let participants answer.</b>
02:45	78 	Our representative users can be business founders, but also lawyers or accountants who may help business founders in their business registration process. And among business founders, we may want to distinguish different types of businesses, from self-employed contractors to larger companies. We can also distinguish business founders based on the sector of activity of their business, or where they're based.  We can reach out to business founders by visiting the government's agency where people go to register their business. Or by adding a banner on the government's agency website, asking for volunteers to be interviewed. We can also contact startup incubators or business associations and ask to be put in touch with their members. We can get out of our office and visit small business owned shops.  Now, you may wonder, how many people should we interview? Unlike quantitative approaches which require large numbers of participants to obtain numerically meaningful data, qualitative approaches which involve rich, in-depth data, require fewer participants. The number of people you should speak to will depend on the characteristics of the participants. But typically, in user research we aim to speak to about 6-12 participants who share similar profiles.



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		<p>So this means if you are interested in understanding about people who have lots of very different characteristics, for example startup founders and food stallholders, you will need to speak to more people.</p> <p>A good rule of thumb is: stop interviewing, when you start hearing the same things again and again.</p>
02:45	79	<p>We now have clear goals, and our representative users. The next stage is to write a discussion guide. I say discussion guide, and not script, because interviews tend to be exploratory, they're not meant to be a verbatim script. The goal is to understand people, so the guide is a starting point that allows for digression, if things get interesting. Also, scripts don't build trust with interviewees, they feel too formal.</p> <p>Using a discussion guide during the interview are helpful to make sure we don't forget any of the key important questions during the session, and prioritise what's most important to ask users, in a limited time frame.</p> <p>A good discussion guide starts broad, and then gets narrow. People feel much more confident and trusting when you start on familiar, broad topics, than going immediately into detailed questions. There's always a temptation to think you're 'wasting' time with broad topics, but they're also enormously revealing about how people think about the world, and can lead to big insights. Equally, though, make sure you get into the nitty gritty, and don't be afraid to ask for details, and examples. People often aren't good at explaining what they mean, and talk in abstractions or generalisations. Both are bad for design and understanding. A surefire trick to get round that is asking for concrete, detailed examples. 'Can you tell me a time when?' or 'Can you give me an example?'</p>
01:20	80	A good discussion guide ask open ended questions. A critical part of exploratory user research is getting



		<p>✗ What does it feel like to be asked this question? Is it too long or too short? Does it require a lot of thought? Is it clear what you're asking?</p> <p>✓ Are there any other ways to ask this question that might be more effective or efficient?</p>
		<p>people to explain their thinking, and the best way to do that is by asking open-ended questions. Closed ‘yes’ or ‘no’ questions are dead ends for that. Ask ‘why’, and ‘how’ all the time, and don’t be afraid to keep asking why, you’ll get to more insightful answers the further you go.</p> <p>And good questions are built in a way that doesn’t influence how the person answers them.</p> <p>For example, you would not say “When you were struggling with this task, what was happening?” because you imply the person was having a bad experience. You should rather ask: “What was easy or difficult about completing that task?” The interviewee will say by themselves whether they found the task easy or difficult to complete. For the same reason, you wouldn’t say “How well would this save time for you during the registration process?” but rather “How might this affect your efficiency, if at all?”</p>
05:00	81	<p><b>Activity</b></p> <p>These questions are poorly phrased. Can you explain why, and suggest alternatives? <b>Ask participants to answer.</b></p> <ol style="list-style-type: none"><li>1. Do you find the current business registration service easy to use? This is a closed-ended question, you can either say yes or no. You could rather say, “if any, what parts of the service do you find frustrating and why?”</li><li>2. Would you like it if we move this service online? Here, you’re suggesting a solution to a potential pain point: having to travel because you’re not able to access the service remotely. User research is about problems, not solutions. You’ll have plenty of time to brainstorm on solutions afterwards. It’s also not your role to put ideas in</li></ol>



		users' minds. To try to understand if an online solution would be a good idea, you could ask "How do you currently access this service?" and "How would you qualify the way you access the service?" If the person says it's cumbersome because they have to travel half the city and queue an hour before they can apply, then you can later deduct that an online solution could be a good thing to explore.
00:40	82	 <p>It's not enough to identify potential representative users, you have to 'recruit' them', by which I mean inviting them for interviews. You can do this directly or through a contracting specialist company. Sometimes you have to consider offering incentives to research participants, to compensate them for their time.</p>
00:25	83	 <p>You also have to explain to them what you're trying to achieve, and ask for their consent, especially if you're planning to record the session. Everything has to be done in compliance with the country's regulation on personal data.</p>
00:10	84	 <p>We're now ready for the most interesting bit of the process, running the interviews!</p>
01:35	85	 <p>Building trust is a really important part of the research process.</p> <ul style="list-style-type: none"><li>• Trust means people are more likely to be honest, telling you things that may be sensitive, or uncomfortable.</li><li>• Trust means people won't try to second guess, or please you, with answers that aren't honest.</li><li>• Trust means people are more likely to be generative, open to sharing new or 'silly' ideas that can be</li></ul>



		<p>hugely inspiring.</p> <p>How can you build trust?</p> <ul style="list-style-type: none"><li>• First, manage expectations and address reservations. Invite the interviewees to share any concerns they may have about the research process before asking them any questions.</li><li>• Create a safe and comfortable space. Offer them a coffee, tell them it's ok not to answer every question if they don't feel like it.</li><li>• Be compassionate and empathetic, by using small phrases, like 'I understand', 'thank you for sharing this'.</li></ul>
01:50	86	<p>Build trust, and learn about the participant. Feel free to detach from the discussion guide. One of the most important skills of user researchers is the ability to know what to do when a user says something unexpected.</p> <p>Let's imagine an interviewee makes a vague comment about having started their business registration online, but they stopped midway through it. The worst thing to do would be to put an answer in the user's mouth: "Is that because you're missing some information?". Instead, just ask why.</p> <p>And if the answer does not come easily, just embrace the silence. We're hardwired to want to avoid awkward pauses in conversations. But they're often when participants are deep in thought, trying to articulate what they may not have before, or wanted to. Moreover, they may feel the need to fill the silence, too. Always give them the time, it can reap huge rewards. User researchers train themselves to say as little as possible. Their job is to listen. Never interrupt an interview!</p>



15:00	87	<p><b>Activity</b></p> <p>Let's create groups of 3 (1 interviewer, 1 research participant and 1 observer) and imagine we're in a user research interview with a business founder who's recently registered their business and volunteered to share feedback on the process.</p>
01:00	88	<p>It's important to capture interviews so the whole team can hear from users, to be informed, share their interpretation, and be inspired. You can do this either through note taking, audio or video recording.</p> <p>Video and audio recording are great to capture quotes and keep track of things you may miss when writing notes. But video recording can be a bit intimidating. What's important is that users feel comfortable. So, unobtrusive equipment, that's simple, easy and fast to set-up, and needs little attention, is best.</p>
00:10	89	<p>After the interviews are done, comes the analysis stage.</p>
01:00	90	<p>It's important to document your findings. There are different ways you can do this, for example through a short document outlining what you've learnt about users but also your research methods and who you spoke to, as this can add or damage the credibility of your insights. It's good to have a short report with user research findings as a fixed record of what you knew at that point and therefore why the service team made their next decisions.</p> <p>The next stage is to communicate findings with the service team.</p>



00:10	91	<p>And to start building insights.</p> <p><small>Analyse and document findings</small></p> <p><small>1. Document and communicate findings 2. Make changes</small></p>
01:35	92	<p>Analysis is the process of turning raw data into meaningful insights. Its aim is to make sense of the data by looking for patterns and themes that emerged through research. It's important to refer to research objectives and analyse the extent to which observations answer the key research questions.</p> <p>You should aim to do your analysis as soon as possible after the sessions so the information is still fresh in your mind. It can be helpful to involve people who observed the research interviews to gather group consensus and to ensure you eliminate researcher bias, that is, only focusing on what you think is important.</p> <p>To group raw data into common themes, post-it notes can come handy!</p> 
01:00	93	<p>At the end of the analysis phase, you should be able to build what we call a journey map. A user journey map is a visualisation of the process that a person goes through in order to accomplish a goal. A journey map describes step-by-step how a user interacts with a service. The process is mapped from the user perspective. It describes what happens at each stage of the interaction, and what obstacles and barriers users may encounter. Done successfully, it reveals opportunities to address users' pain points, and create a better experience.</p> <p><small>A <i>journey map</i> is a visualisation of the process that a person goes through in order to accomplish a goal</small></p>
04:20	94	<p>This is what a user map looks like.</p> <p>User journey maps are usually made up of a horizontal and a vertical axis (basically they're a grid).</p> 



The horizontal axis represents time. It shows the different stages users go through from the beginning to the end of a service journey - the beginning being when they express the need for the service, and the end when their need has been fulfilled.

The vertical axis contains any additional layers of information you need to understand about the user journey. There are no fixed rules about what to include in a user journey map. It's up to the project team to decide what's most useful to include. It usually consists in:

- The different activities users have to go through
- The touchpoints they have with whoever delivers the service, and the different channels that are available (phone, web, mail, face-to-face, etc)
- Their feelings - as revealed by the research interviews
- And opportunities for improvement, based on the research findings

You can see on the screen the journey map of Linda, a US citizen trying to get government benefits. Her journey map starts with a touchpoint, when she shares her financial distress with a friend, who suggests that she looks for grants online. So she does an online search on Google (activity 1), which sends her to the US grants website. At first she's confused, she's not sure she landed on the right page, and needs comfort and reassurance. When she finally finds the information she needs, she's asked to answer a webform that she finds overwhelming, and discourages her. These are feelings identified through user research. And it's based on these insights that the service team brainstormed on opportunities for improvement, like "simplifying the benefits.gov contact page" or "creating a popup asking if website visitors want to apply for personal benefits"

<https://digital.gov/2015/08/12/journey-mapping-the-customer-experience-a-usa-gov-case-study/>



05:00	95	 <p>This is what a user map looks like, at the end of our user research phase.</p> <p>User journey maps are usually made up of a horizontal and a vertical axis (basically they're a grid). The horizontal axis represents time. It shows the different stages users go through from the beginning to the end of a service journey - the beginning being when they express the need for the service, and the end when their need has been fulfilled.</p> <p>The vertical axis contains any additional layers of information you need to understand about the user journey. There are no fixed rules about what to include in a user journey map. It's up to the project team to decide what's most useful to include. It usually consists in:</p> <ul style="list-style-type: none"><li>• The different activities users have to go through</li><li>• The touchpoints they have with whoever delivers the service, and the different channels that are available (phone, web, mail, face-to-face, etc)</li><li>• Their feelings - as revealed by the research interviews</li><li>• And opportunities for improvement, based on the research findings</li></ul> <p>You can see on the screen the journey map of someone willing to register their business. X is enthusiastic about their entrepreneurial project, and starts by looking for information online about the different legal structures that exist in their country, to identify what makes most sense for their business. X does an online search on Google but struggles to identify the government business registration website. X visits private company websites that try to sell them counselling. This creates frustration. Eventually X lands on the official government registration website, but after reading its content, X is still uncertain about what legal structure they should choose for their business. The service team behind the business registration website could try to</p>
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		<p>improve its referencing on Google, so that entrepreneurs find their website more easily. They could also improve the content on the website to give clearer information on the pros and cons of each business legal structure, or even build a form for entrepreneurs to self-assess which legal structure is adapted to their business based on a relevant set of questions.</p> <p>X finally starts a business registration request online, but can't upload the required documents. X tries to call the government agency, but no one answers after 20 minutes, so X decides to visit the government's agency and do their request there. In terms of opportunities of improvement, the service team should investigate the document upload issue. They could also consider adding an online chat for service users to flag this type of incident, or ask for support.</p> <p>This is a very simplified journey map. But it gives you an idea of what type of information journey maps contain.</p>
00:10	96 	Depending on your role you may be familiar with process maps. Process maps also visualise a process, but they're not the same as a journey map.
01:00	97 	The main difference is that process maps start inward and look out of the government organisation, while journey maps start outward and look inward at the organisation. <p>Journey maps tell the story of what a user experiences, often in a first person narrative.</p>



		<p>The two types of maps complement each other very well. It's not a matter of choosing between one or the other. You can create them in tandem, so that the internal perspective that arises from the process map is developed in conjunction with an understanding of user needs.</p>
02:00	98	<p>What are the benefits of journey maps? There are two broad types of benefits of journey maps, depending on when you build them, and for what objective.</p> <p>As-is journey maps are used to describe how users are currently accessing a service. They describe an existing situation. As-is journey maps are useful to capture observations from user research, and communicate a common understanding of users and their journey to the service team. The journey map we just saw, with Linda trying to apply for government benefits, is an as-is journey map.</p> <p>To-be journey maps, on the other hand, come later in the process. To-be journey maps are used to describe the future state of a service. Their purpose is to communicate a future vision for a service, based on the ideas for improvement of the service team. To-be journey maps are useful to keep a basis for decision making. They're a support tool for the service team, that can help them communicate their plan and reasoning to project stakeholders, like senior leaders.</p>
10:00	99	<p><b>Group discussion</b></p> <p>What would the purpose of a journey map be in our context? What conversations will the map support?</p>



c. Good practices in user research (15:50)		
00:30	100 	In the last minutes that we have, I'd like to share with you some good practices on how to conduct user research. These apply to user research interviews, but also to other user research methods.
00:30	101 	First, do a little, but often. Frequent research helps teams iterate on a service and validate decisions more often, which helps promote a human-centred culture.
01:20	102 	<p>Do you remember this slide? This is the service development cycle. We'll focus on this tomorrow.</p> <p>It's better to do small batches of user research in every iteration of each development phase - starting in discovery and continuing throughout live. This is more effective and efficient than doing one or two large studies at the beginning or end of development.</p> <p>Doing this means service teams can:</p> <ul style="list-style-type: none"><li>• save time by building only the things that they know users need</li><li>• reduce risk by learning quickly whether the things they are building work well for users</li><li>• respond to changing user behaviour and feedback to continuously improve the service</li></ul>
00:05	103 	Second, work as a team.



01:40	104 	<p>User research is a team sport. Everyone in service teams should be involved. User researchers shouldn't be working on their own. They oversee the user research process, but all team members can participate and observe, especially in user testing sessions, to watch real users interact with the service and talk about it.</p> <p>Team members who observe research can then take part in analysis sessions to help agree on the findings and any resulting actions.</p> <p>This helps the development team:</p> <ul style="list-style-type: none"><li>• understand the highs and lows that people experience when using your service</li><li>• learn the language that people use when talking about your service</li><li>• think and talk about users in terms of real people with real needs to develop empathy for the people they're writing or designing for</li></ul>
00:20	105 	<p>Three: Watch what users do. Not just what they say.</p>
01:40	106 	<p>Have you ever heard this quote? It's from Henri Ford, the founder of the Ford company. He said: "If I had asked people what they wanted, they would have said faster horses." Don't get me wrong, it's very important to ask people their needs and their frustrations in interviews or surveys. But it's not enough. People are not here to give you the solution but the problem. And sometimes they can struggle to articulate what they need. This is why it's important to combine different user research techniques, and not just focus on interviews. A varied research toolkit helps get a richer and more accurate understanding of users and their needs. We previously mentioned usability testing, or looking at analytics from call centres or web activity, like heatmaps.</p>



01:10	107	<p>This is a heatmap. Heatmaps do exactly what it sounds like: they map out the most-trafficked (hot) and least-trafficked (cold) areas of web pages, usually based on data from the mouse movement and click behaviour of users. You can see here USA.gov website. The grey and blue colours mean there was little movement in those areas, while the red and white denote very popular areas. This type of data visualisation can help understand the behaviour of users, and what parts of a service they used the most.</p> <p><a href="https://digital.gov/2014/04/04/heatmapping-tools-show-whats-hot-on-your-pages/">https://digital.gov/2014/04/04/heatmapping-tools-show-whats-hot-on-your-pages/</a></p>
02:00	108	<p>Four: Embrace a large, diverse population of your users. Public services are used by many different people. These user populations have a wide variety of skills, circumstances, experience, aspirations and motivation. The best user research fully embraces this diversity.</p> <p>It starts with any existing evidence about users with specific needs, and works hard to meet and learn from those users. Where little is known about the user population, researchers start with a broad mix of participants and identify specific groups as they learn more.</p> <p>It's not always easy to recruit diverse research participants. It requires being proactive. If you launch an open call to user research participants online, you will only target digital natives. This means service teams can have to get out of their office, and visit users where they are.</p> <p>To build human-centred services, user research is not enough. Service teams need to make sure they engage with a diverse pool of research participants.</p>
01:30	109	<p>Five: Make sure to listen to what users have to say. Very often, service teams have a little idea of what users</p>



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		<p>Good practices in user research:</p> <ol style="list-style-type: none"><li>1. Do it early, clearly define what you want to know.</li><li>2. Work with teams.</li><li>3. Listen to what users do. Not just what they say.</li><li>4. Create a design, observe participation of your users.</li></ol>
		<p>may need, before they engage with them. And unconsciously, they either influence how research participants answer their questions, or misinterpret what they say.</p> <p>It's important for user researchers to get rid of their preconceptions, and welcome what users have to say in a very open and neutral way. This is especially relevant when user researchers are working on their own, and don't have anyone to challenge their analysis of research findings. Or when they work with user participants who are not used to being asked what they need and feel. In this scenario, research participants can easily be manipulated.</p>
02:50	110	<p>"If you think good design is expensive, you should look at the cost of bad design."</p> <p>Dr Roger Quinn, former CEO, Jaguar</p> <p>We're coming to the end of this session on human-centred design. I hope that this concept is more familiar to you now, and most importantly that you understand how valuable it is, especially in the context of service development.</p> <p>We went through what a research process looks like, and some of you may think that it's a lot of work. Depending on the projects, it can be. It requires time, resources and effort. So you'll find many people in government willing to skip this stage, and rush into the actual development stage, where you build the service. They think it will save time and money. But it won't. I'd like to finish this session with a quote from the former CEO of Jaguar cars. He said: "If you think good design is expensive, you should look at the cost of bad design". The user research stage is what allows you to understand user needs, and feelings. If you don't take the time to unpack these, you're likely to end up with a service that works poorly, leading to lots of complaints or support requests. Eventually it will cost governments more time and money to process these. But it's not just about money. A bad government service gives a poor image of government, and damages trust.</p>



01:00	111	<p>1. Introduction to human-centred design</p> <ul style="list-style-type: none"><li>• Human-centred design is an empathetic approach to service design. It's about understanding the needs of service users and their limitations.</li><li>• User needs are different from service requirements. They express people's goals, values and aspirations.</li></ul>
01:00	112	<p>2. Doing user research in government</p> <ul style="list-style-type: none"><li>• User research is the deliberate study of users to reveal insights on their needs, problems and context to inform the development of services.</li><li>• There are many ways to conduct user research, at every stage of the service development process.</li><li>• Conducting user interviews is only one of them, but one worth trying out!</li></ul>
00:15	113	Thank you all! I look forward to seeing you again for our next session on agile and open ways of working.