

Human-centred design for digital services

Digital transformation training programme
Module #2



ASIA AND THE PACIFIC

**Regional
Innovation Centre**

A few zoom we start

house rules before

- Make sure your name is displayed
- Keep your video on unless you have connectivity issues
- Mute if you're not speaking
- Don't hesitate to ask questions by raising your hand or using the chat

Where we are

1. Introduction to digital government

2. Human-centred design for digital services

3. Agile and open ways of working

4. Building trust in digital government

5. Data: uses, opportunities and risks

6. Managing digital technology risks

7. Navigating barriers to digital government

Learning objectives

- ✓ Explain the concept of human-centred design
- ✓ Appreciate the value of user research
- ✓ Introduce the basics of how to conduct user research interviews

1. Introduction to human-centred design
2. Doing user research in government

1. Introduction to human-centred design

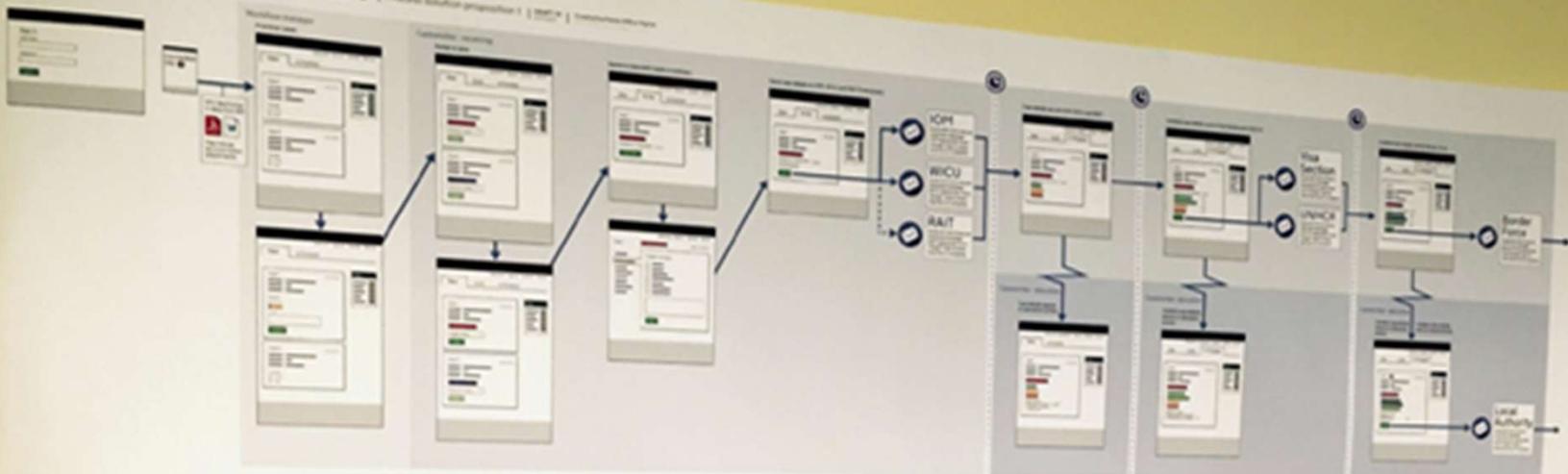
Definitions

Different types of design

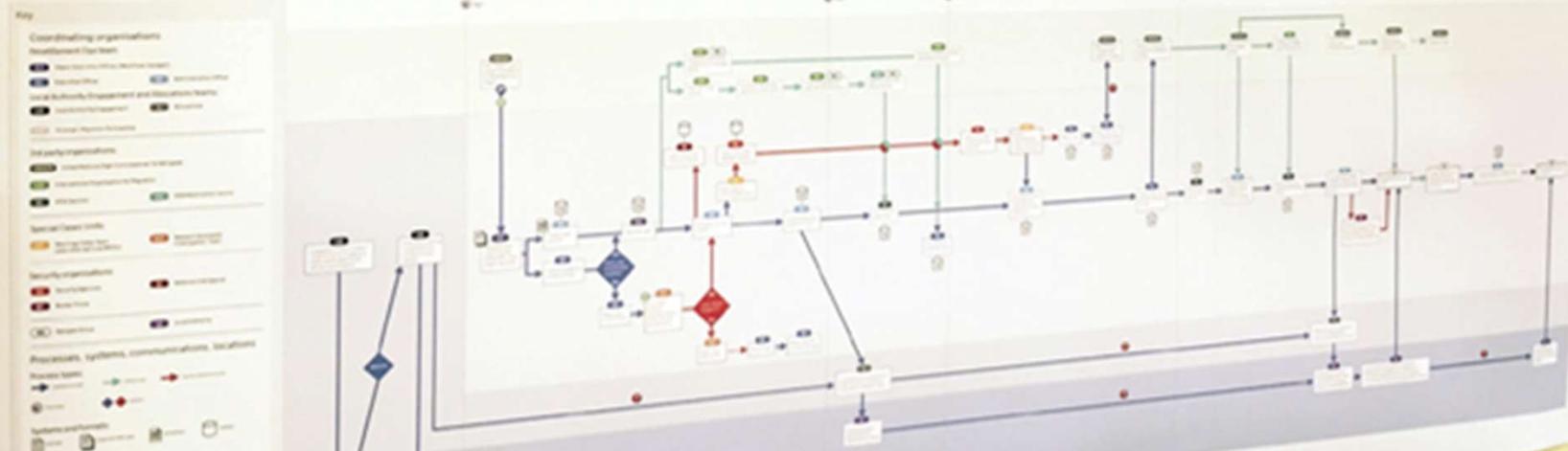
Human-centered focus

2. Doing user research in government





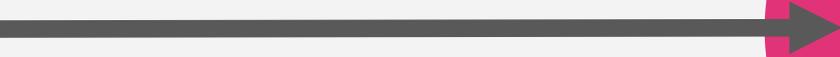
We're building
a service
to help resettle
20,000
Syrian refugees
more efficiently.



Designing services is about
creating services that efficiently
meet the needs of their users.

User

User need



User

Service

User need



User needs express people's goals, values and aspirations.



5-min group discussion

Are you involved in the delivery of any services?

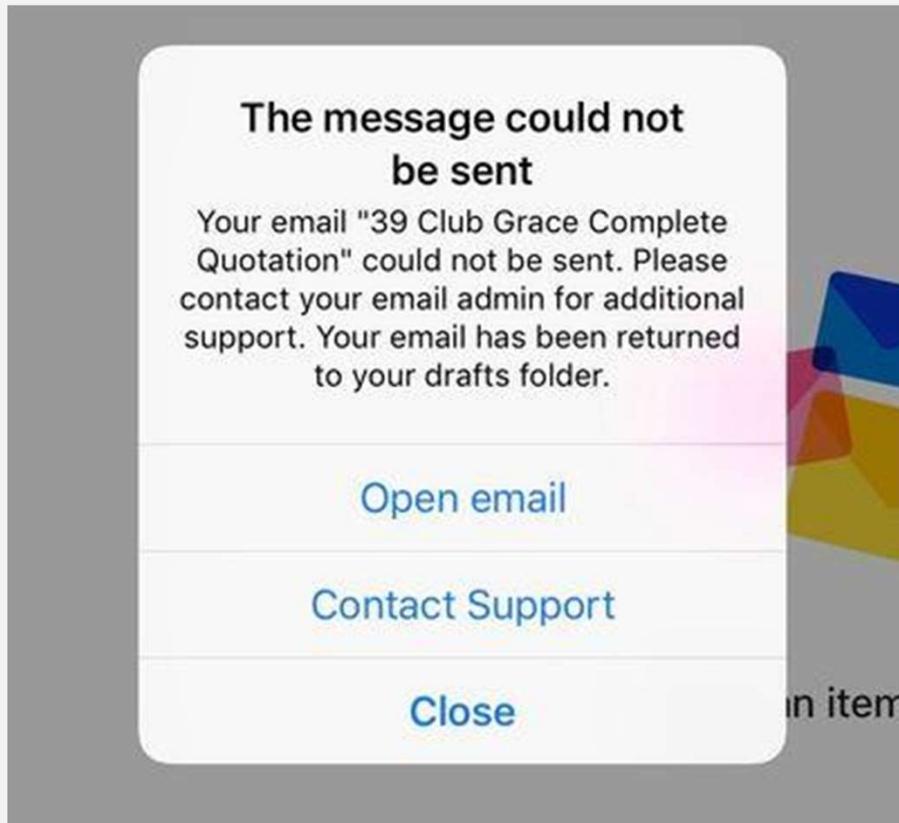
What user needs do they solve?

User needs \neq requirements



Requirement:

**Wifi on
the train**



User need:

**Send an email
with an
attachment**

User

**a worker
travelling
to a
conference
by train**



User need

**needs to
send their
presentation
beforehand**

User

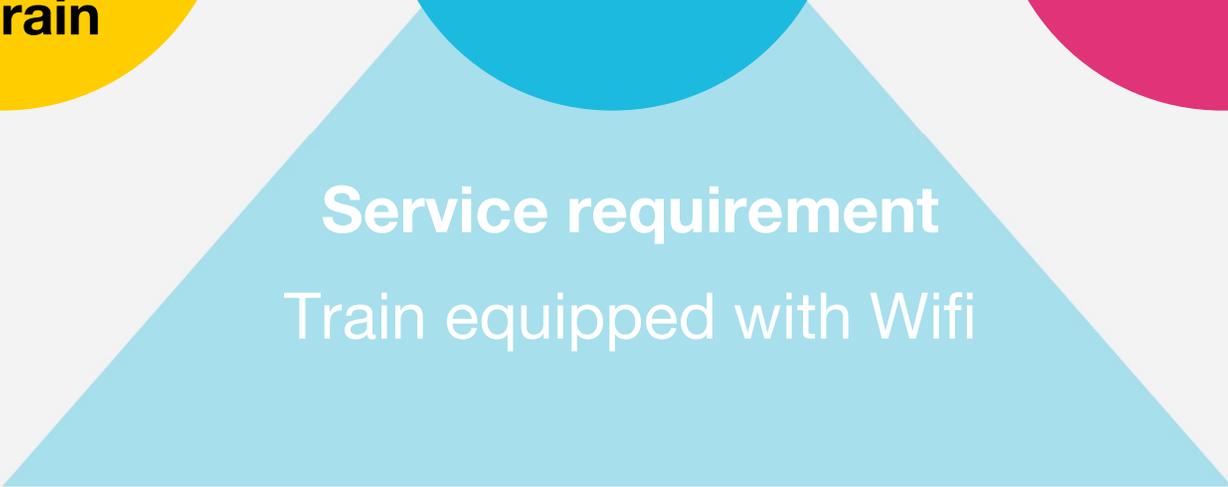
**a worker
travelling
to a
conference
by train**

Service

**wants on-board
connectivity**

User need

**to send their
presentation
beforehand**



Service requirement
Train equipped with Wifi

Designing services is about
creating services that **efficiently**
meet the needs of their users.

User



User need



User

Service

User need



Browse by subject

- ▶ Crime and justice
- ▶ Education and learning
- ▼ Employment
 - ▼ Employment terms and conditions
 - ▶ **Time off and holidays**
- ▶ Environment and greener living
- ▶ Government, citizens and rights
- ▶ Health and well-being
- ▶ Home and community
- ▶ Money, tax and benefits
- ▶ Motoring
- ▶ Pensions and retirement planning
- ▶ Travel and transport

Browse by people

- ▶ Young people
- ▶ Britons living abroad
- ▶ Caring for someone
- ▶ Disabled people
- ▶ Parents

Employment

Bank holidays and British Summer Time



Bank holidays are holidays when banks and many other businesses are closed for the day. Public holidays are holidays which have been observed through custom and practice. Find out about the bank and public holiday dates and when the clocks go forward and back for British Summer Time.

Bank and public holidays in England and Wales

England and Wales	2012	2013	2014	2015
New Year's Day	2 January*	1 January	1 January	1 January
Good Friday	6 April	29 March	18 April	3 April
Easter Monday	9 April	1 April	21 April	6 April
Early May Bank Holiday	7 May	6 May	5 May	4 May
Spring Bank Holiday	4 June*	27 May	26 May	25 May
Queen's Diamond Jubilee	5 June	-	-	-
Summer Bank Holiday	27 August	26 August	25 August	31 August
Christmas Day	25 December	25 December	25 December	25 December
Boxing Day	26 December	26 December	26 December	28 December*

* substitute day

There are different bank and public holidays in different parts of the UK. There are currently six permanent bank holidays in England and Wales and an additional one in 2012. Christmas Day and Good Friday are public holidays.

The expected bank and public holidays for England and Wales are listed in the table above.

Special bank holidays

There are laws that allow the dates of bank holidays to be changed, or other holidays to be declared, for example to celebrate special occasions.

There is a special bank holiday in 2012 to celebrate the Queen's Diamond Jubilee. The 2012 late May bank holiday has been moved to Monday 4 June 2012 and an additional Jubilee bank holiday will be on Tuesday 5 June 2012.

Substitute days

When the usual date of a bank or public holiday falls on a Saturday or Sunday, a 'substitute day' is given, normally the following Monday. For example

Example

[Topics](#) | [Government activity](#)

[Coronavirus \(COVID-19\)](#) | Latest updates and guidance

[Home](#) > [Working, jobs and pensions](#) > [Holidays, time off, sick leave, maternity and paternity leave](#)

UK bank holidays

England and Wales | Scotland | Northern Ireland

The next bank holiday in England and Wales is

15 April

Good Friday

Related content

[Holiday entitlement](#)
[School term and holiday dates](#)

Upcoming bank holidays in England and Wales

2022

15 April	Friday	Good Friday
18 April	Monday	Easter Monday
2 May	Monday	Early May bank holiday
2 June	Thursday	Spring bank holiday
3 June	Friday	Platinum Jubilee bank holiday
29 August	Monday	Summer bank holiday
26 December	Monday	Boxing Day
27 December	Tuesday	Christmas Day (substitute day)



10-min group discussion

According to you, which website best answers user needs, and why?

Example

Directgov

Public services all in one place

Home | Contacts | Do it online | Newsroom | Video

Browse by subject

- ▶ Crime and justice
- ▶ Education and learning
- ▼ Employment
 - ▶ Employment terms and conditions
 - ▶ **Time off and holidays**
- ▶ Environment and greener living
- ▶ Government, citizens and rights
- ▶ Health and well-being
- ▶ Home and community
- ▶ Money, tax and benefits
- ▶ Motoring
- ▶ Pensions and retirement planning
- ▶ Travel and transport

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- ▶ Parents

Employment

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▼ Topics
▼ Government activity

→ [Coronavirus \(COVID-19\)](#) | Latest updates and guidance

[Home](#) > [Working, jobs and pensions](#) > [Holidays, time off, sick leave, maternity and paternity leave](#)

UK bank holidays

England and Wales

Scotland

Northern Ireland

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Related content

- [Holiday entitlement](#)
- [School term and holiday dates](#)

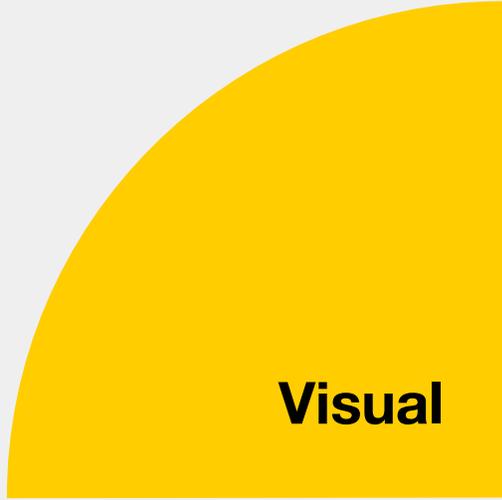
1. Introduction to human-centred design

Definitions

Different types of design

Human-centered focus

2. Doing user research in government



YOU

At some point you may come back to read this line or maybe not.

WILL READ THIS FIRST.

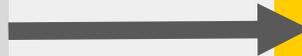
And then you will read this line next.

You will go back to read this body copy if you want to know more. It takes the most effort to read because it has a lot of text in a small font in a light weight with tight line spacing. Many people will skip paragraphs like this unless if they aren't engaged right away. This is why it's important to draw attention to your message using visual hierarchy.

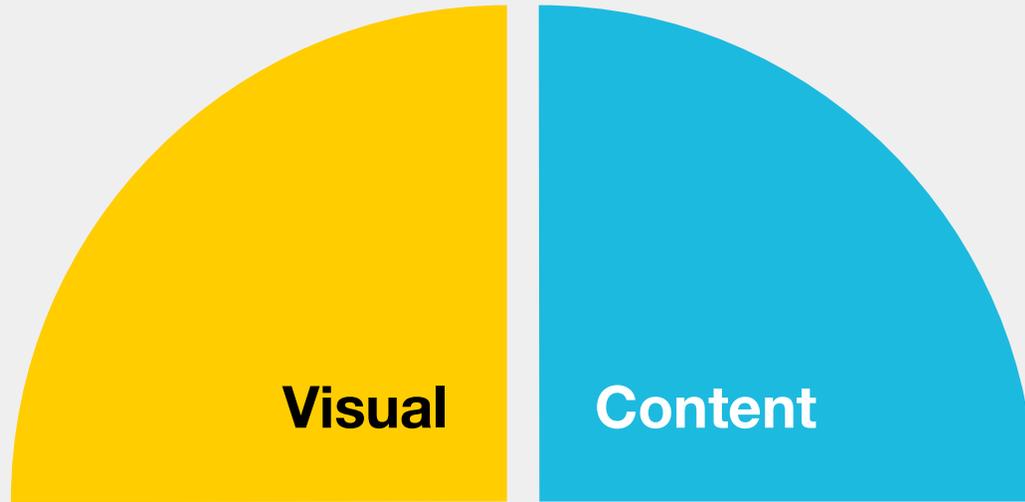
You'll probably read this before the paragraph.

- typography
- grids
- imagery
- colour
- page furniture
& space

- typography
- grids
- imagery
- colour
- page furniture
& space



- hierarchy
- legibility &
readability
- accessibility

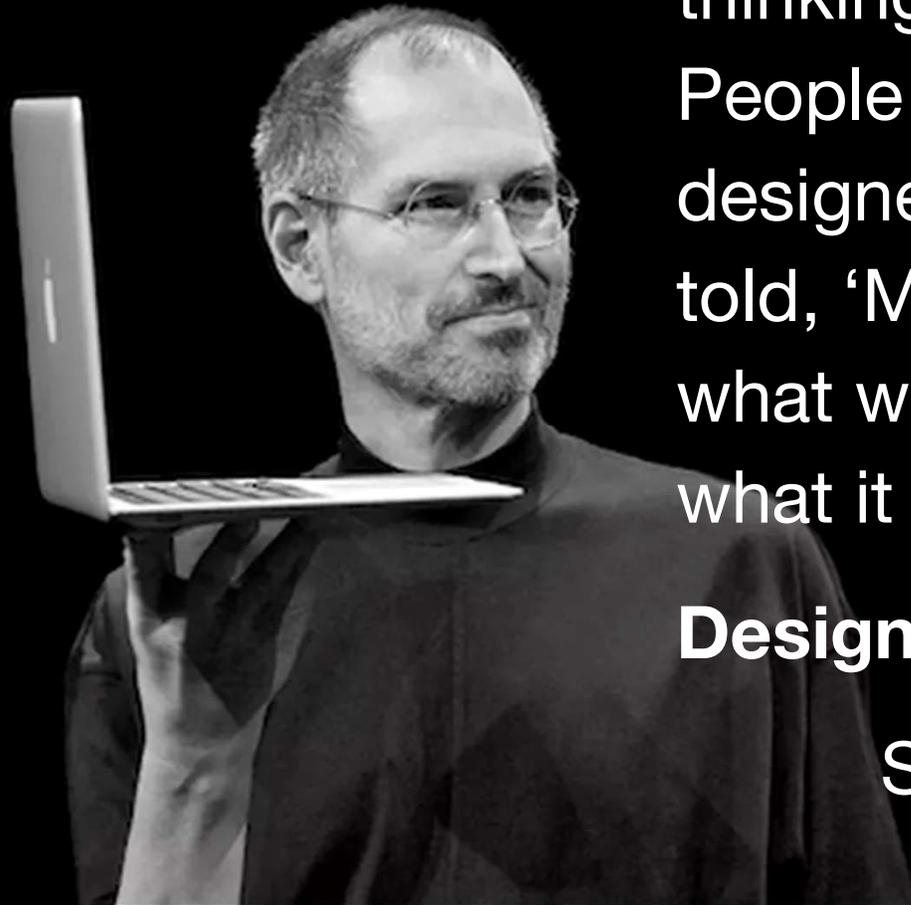


**Please
Do Not
Drive
Or Park
On
Grass**



A few content design tips

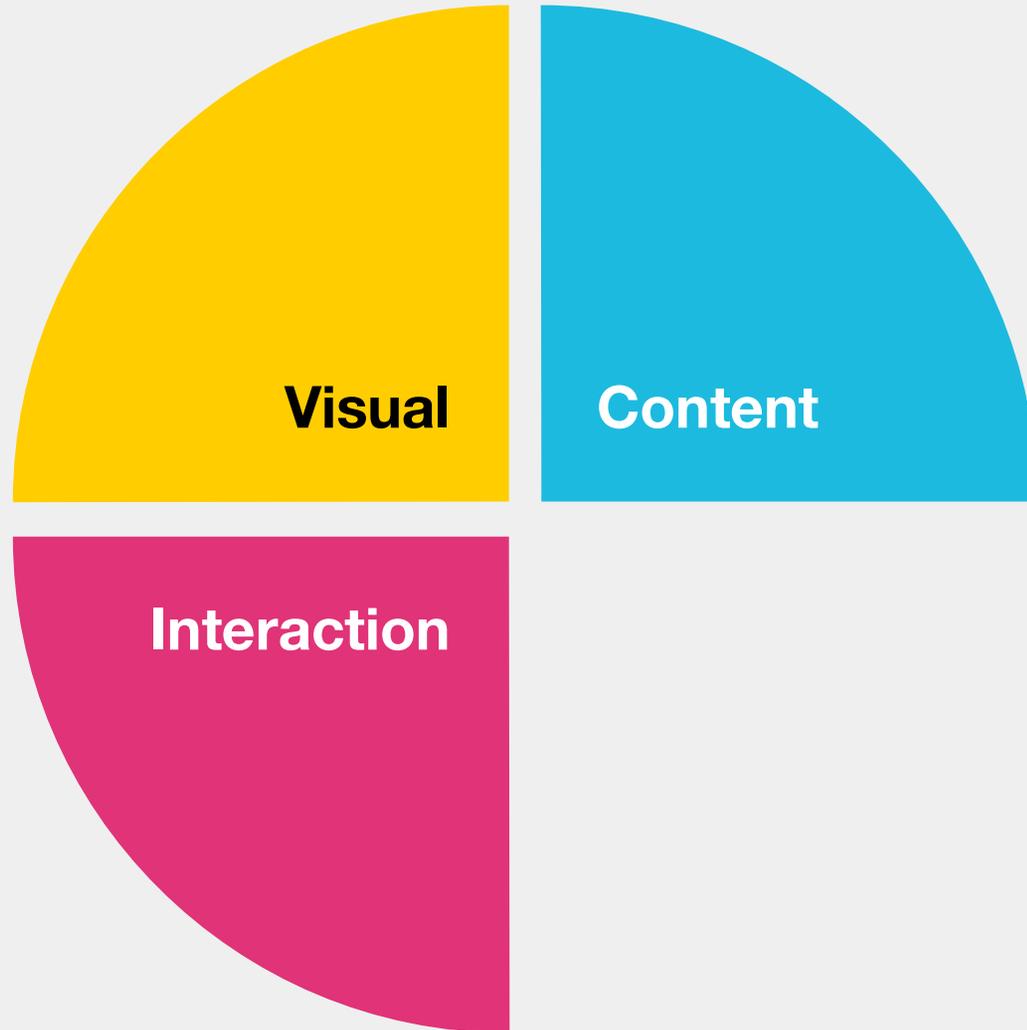
- Put the most important information first
- Avoid having questions as titles and using capital letters
- Use common words and short sentences
- Avoid acronyms and abbreviations



“Most people make the mistake of thinking design is what it looks like [...] People think it’s this veneer — that the designers are handed this box and told, ‘Make it look good!’ That’s not what we think design is. It’s not just what it looks like and feels like.

Design is how it works.”

Steve Jobs, former CEO of Apple



company

About

Product

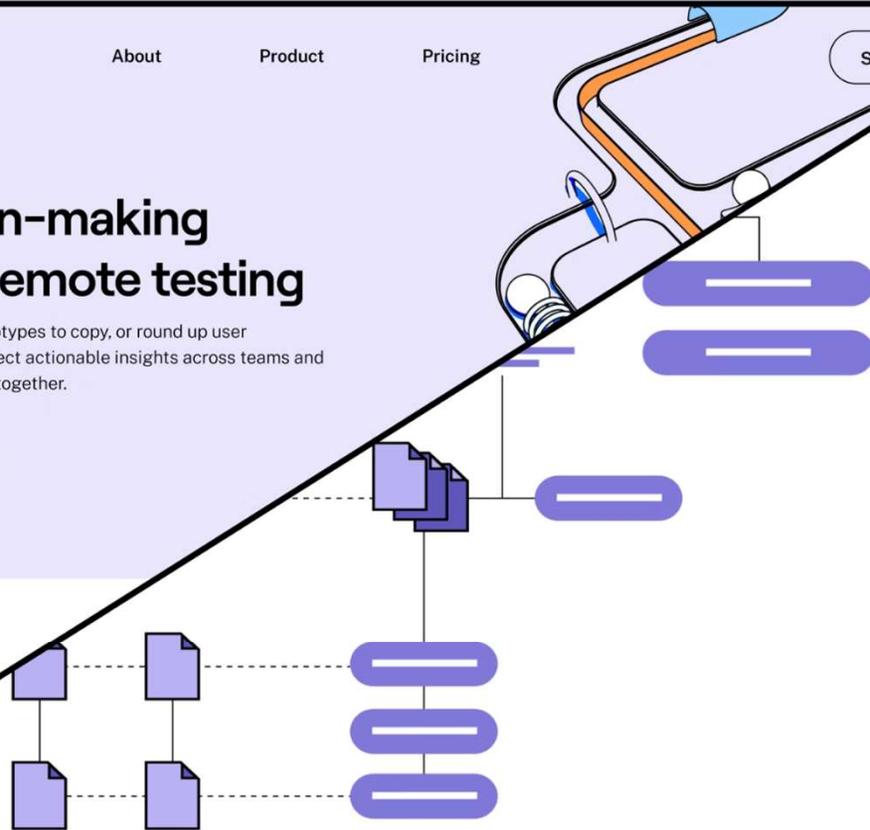
Pricing

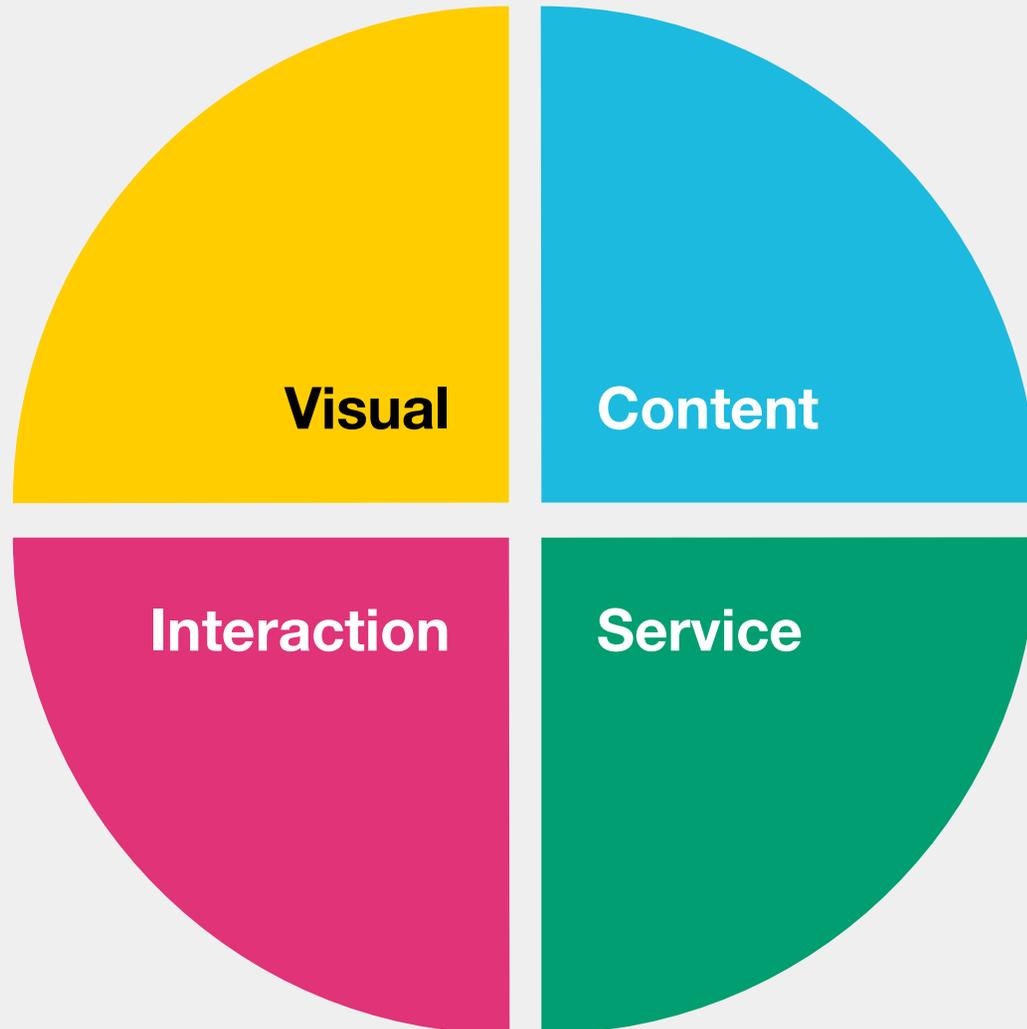
Sign up

Fuel decision-making with rapid, remote testing

Rapidly test anything from prototypes to copy, or round up user feedback — all in one place. Collect actionable insights across teams and create better user experiences, together.

Get started free







Think of an online financial or e-commerce service that you find particularly well or poorly designed.

Why?

1. Introduction to human-centred design

Definitions

Different types of design

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Human-centred design is an **empathic** approach to service design.

It's about understanding the **needs** of service users but also their **limitations**.



10-min group discussion

What do you think can prevent or make it hard for people to use digital services?

And what can governments do about it?

Barriers to using digital public services:

- Access

Barriers to using digital public services:

- Access
- Skills

Example



DIGITAL FOR LIFE



Barriers to using digital public services:

- Access
- Skills
- Trust

Example

 Topics

→ [Coronavirus \(COVID-19\)](#) | Latest updates and guidance

[Home](#) > [Driving and transport](#) > [Driving licences](#)

Exchange a foreign driving licence

2. What kind of licence do you have?

Your licence will say what type of vehicles you can drive.

Car or motorcycle

Lorry, bus or minibus

[Next step](#)

Your answers

[Start again](#)

1. Are you a resident of Great Britain? Yes [Change](#)

 Topic

→ [Coronavirus \(COVID-19\)](#) | Latest updates and guidance

Register a death

Did the person die at home, in hospital or elsewhere?

At home or in hospital

Elsewhere

[Continue](#)

Your answers

[Start again](#)

Where did the death happen? England or Wales [Change](#)

Barriers to using digital public services:

- Access
- Skills
- Trust
- Ability

Microsoft Persona Spectrum

	Permanent	Temporary	Situational
Touch	 One arm	 Arm injury	 New parent
See	 Blind	 Cataract	 Distracted driver
Hear	 Deaf	 Ear infection	 Bartender
Speak	 Non-verbal	 Laryngitis	 Heavy accent

The Four Principles of Accessibility

Perceivable

The content must be available to users via sight, hearing, and/or touch.

Understandable

The content must be readable and predictable, with clear labels and instructions.



Operable

The product must be keyboard-accessible, navigable, and compatible with different input methods.

Robust

The product must work with a variety of assistive technologies, browsers, and devices.

Source:

<https://www.w3.org/TR/UNDERSTANDING-WCAG20/intro.html>

Example

singpass



NEW AUTHENTICATION OPTIONS FOR SINGPASS TRANSACTIONS



1 MULTI-USER SMS 2FA

Users can now get a OTP (One -Time Password) sent to another SingPass user's mobile number! This is especially useful if you have elderly parents who need help accessing SingPass.

2 FACE VERIFICATION

Users also can access SingPass by doing a face scan to authenticate themselves. This can be done on an Internet-enabled computer with a web camera, or a mobile device with a front-facing camera.



Example



Example

身份证 这是什么?



新加坡共和国
全国数码身份认证

您可使用...
来...
即...

||||| 显示条形码

我的个人资料 查看全部

- 文件
- 个人
- 经济
- 汽车和驾驶执照

NRIC Apakah ini?



REPUBLIC SINGAPURA
KAD IDENTITI DIGITAL NASIONAL

adalah kad...
yang anda...
membu...
h banyak la...
ketik kad ini u...

||||| Lihat kodbar

Profil Saya Lihat semua

- Dokumen
- Peribadi
- Kewangan
- Kenderaan &

SingPass Mobile



SafeEntry check-in

Keep your app updated to use the in-app scanner or check-in button below for SafeEntry. Soon, you'll also be able to add favourite places for quicker check-ins.

COVID-19 Resource Hub



SAFEENTRY CHECK-IN



Home / Reset password

Reset password

NRIC or FIN number*

NRIC / FIN

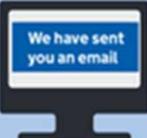
Date of issue*
(As in NRIC or FIN card)

DD / MM / YYYY



Date of Issue
23-08-1991

Designing for users with anxiety

Do...		Don't...	
give users enough time to complete an action		rush users or set impractical time limits	
explain what will happen after completing a service		leave users confused about next steps or timeframes	
make important information clear		leave users uncertain about the consequences of their actions	
give users the support they need to complete a service		make support or help hard to access	
let users check their answers before they submit them		leave users questioning what answers they gave	

1. Introduction to human-centred design

2. Doing user research in government

Introduction to user research

How to do user interviews

Good practices in user research

What is user research?

Users



User research **reveals unmet**
needs.

User research gives

insights,

deep understanding of the service from users' perspectives

empathy,

drives, motivates and excites the team to design great services

inspiration.

new ways of thinking, that can push expansive ways of designing solutions

There are lots of methods to
conduct user research.

User interview

An interview with a current or future user, ideally at home or in context.

Empathy experience

Doing something to put yourself in the user's shoes.

Focus group

A group session with 4-6 participants for shared discussion.

Mystery shopping

Live the user's experience incognito.

Surveys

For a broader view of user needs.

Data mining

Explore raw data and experiment with visualising it.

User experience testing

Putting a prototype in the hands of users and observe them using it.

Desk research

Gather existing knowledge online and from literature.

Qualitative

Reason

We're not sure what we're looking for, we want to discover.

Data

Delivers rich, contextual insights around how and why.

Examples

User interview, mystery shopping

Quantitative

Reason

We might know what we're looking for, we're testing and validating.

Data

Delivers specific insights around how much something is happening.

Examples

Survey, data mining

Example

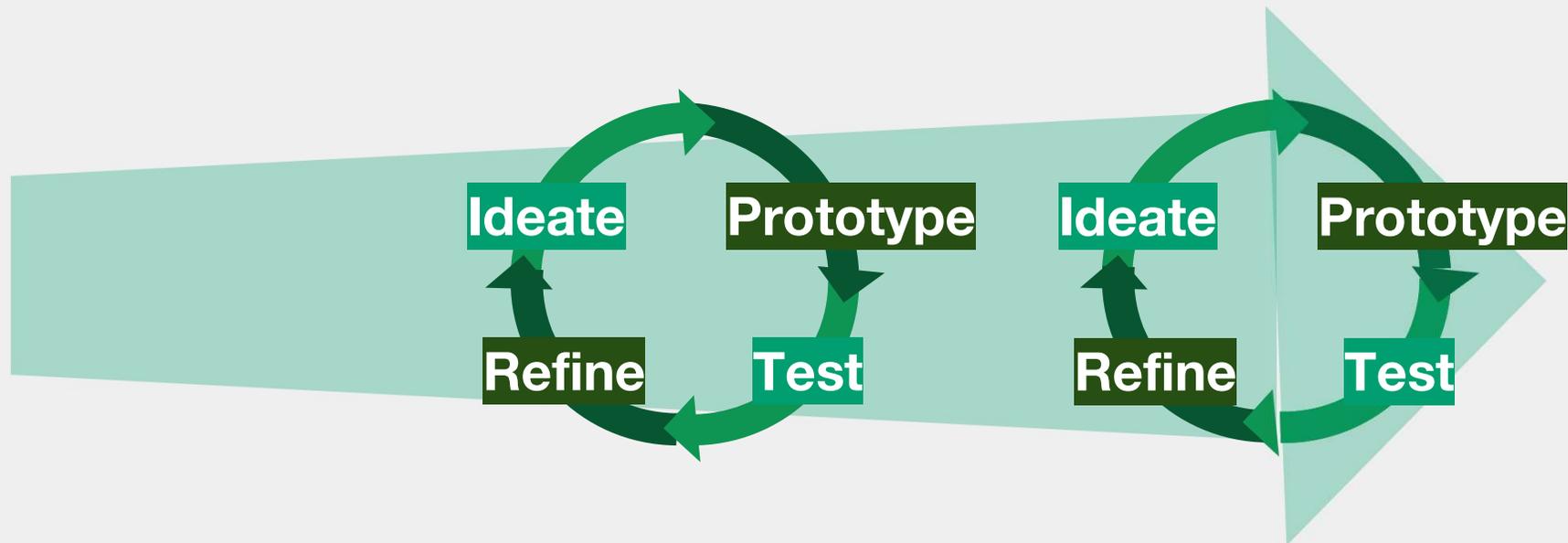
Keyword	Visits	↓
1. uk bank holidays	1,730	
2. (not provided)	1,604	
3. next bank holiday	1,290	
4. when is the next bank holiday	1,014	
5. next bank holiday uk	478	
6. uk bank holiday	445	
7. when is the next bank holiday in uk	118	
8. bank holidays uk	96	
9. when is next bank holiday		
10. bank holiday uk		
11. next uk bank holiday		
12. next bank holiday monday		
13. uk bank holidays 2013		
14. when is the next bank holiday 2012		
15. when is next bank holiday 2012		

Timely information



User research happens
at every stage of the service
process cycle.

Service development process



Discovery

Understand
user needs

Design & development

Prototype and test
solutions with users

Live

Launch and
continuously
improve

Ashri Nooraida Permana, UX Researcher, Jabar Digital Service, West Java, Indonesia

Women in GovTech Special Report 2021.

By [Yun Xuan Poon](#)

16 DEC 2021

DIGITAL GOV



1. Introduction to human-centred design

2. Doing user research in government

Introduction to user research

How to conduct user interviews

Good practices in user research

Why user interviews?

1. Because they're really effective.
2. Because they're hard to do well.
3. Because the barrier to doing them is low.

We're going to focus on the process for **user interviews**, through the example of a business registration service.

Process for user interviews

**Plan and
set up user
research
interviews**

Conduct
user
research
interviews

Analyse
and
document
findings

Plan and set up user research interviews

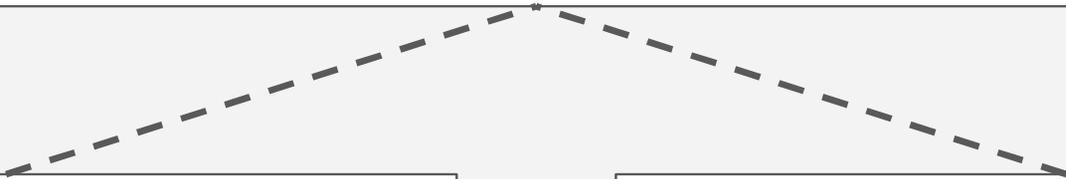
1. Define objectives and success criteria



5-min group discussion

What are our research objectives?

Inform the revamping of the business registration service



Understand the end-to-end experience of how people register businesses

Understand what works well and the pain points in the current business registration process

Plan and set up user research interviews

1. Define objectives and success criteria
2. Identify and recruit representative users



10-min group discussion

Who do you think our
representative users are, and how
can we reach out to them?

Claudia



54 years old social worker

Sight impaired (partially sighted)

Uses a screen magnifier and changes colours to increase contrast

Chromebook help

If you're lost, go back to the top left to re-orientate yourself.

Ashleigh



24 years old arts graduate and administrative assistant

Severely sight impaired (blind)

Uses a screen reader

Chromebook help

Screen reader quick guide:

Use Tab to move from links and form elements to the next, Shift + Tab to go back, Search + Arrow Right/Left to read text in between those.

Ron



82 years old, retired

Multiple conditions: arthritis, losing his hearing, cataracts, hip replacements

Doesn't use any assistive technology

Chromebook help

As Ron is not very technical, don't use anything which might help. For example, don't zoom into the page and don't use the keyboard to navigate.



Name

Age

Occupation

Place of residence

Level of digital
literacy

Potential barriers to
using digital
services

Other

Example



Individual A
Female, 24
yrs

Co-founder of a tech
company
Lives in the country's
capital city
Great digital skills
Anxious when using
government services



Individual B
Male, 42 yrs

About to launch his
small grocery shop
business
Lives in a small village
in a remote area
Does not have access
to a computer nor
internet on a regular
basis



Individual C
Male, 58 yrs

Lawyer providing
assistance in
company registration
Little digital literacy
Has visual
impairments which
make it hard for him
to read online

Plan and set up user research interviews

1. Define objectives and success criteria
2. Identify representative users
3. Write a discussion guide



When you were struggling with this task, what was happening?



What was easy or difficult about completing that task?

How well would this save time for you during the registration process?

How might this affect your efficiency, if at all?



Rephrase these questions:

1. Do you find the current business registration service easy to use?
2. Would you like it if we move this service online?

Plan and set up user research interviews

1. Define objectives and success criteria
2. Identify and recruit representative users
3. Write a discussion guide
4. Recruit users

Statement of informed consent

Purpose of this study

The purpose of this study is to understand how you use the government's business registration service. Your participation in this study will help us inform the revamping of the service.

- The researcher has explained the purpose of the research to me.
- I have had an opportunity to ask questions about the study.

Freedom to withdraw

Your participation in this study is voluntary.

You can refuse to take part at any time.

You can take a break at any time.

You can ask questions at any time.

Process for user interviews

Plan and
set up user
research
interviews

**Conduct
user
research
interviews**

Analyse
and
document
findings

Conduct user research interviews

1. Build trust

Conduct user research interviews

1. Build trust
2. Learn about the participant



15-min group discussion

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.

Conduct user research interviews

1. Build trust
2. Learn about the participant
3. Capture the interview

Process for user interviews

Plan and
set up user
research
interviews

Conduct
user
research
interviews

**Analyse
and
document
findings**

Analyse and document findings

1. Document and communicate findings

Analyse and document findings

1. Document and communicate findings
2. Build insights

Understand RC
on PR, tap into

The Planner

2. PROBLEMS / PAINS

Which problems do you solve for your customer?
There could be more than one, explore different ones.
eg. existing solar solutions for private houses are not considered
a good investment (1).

X
TOO MANY
POINTS FOR
COMPARISON
(FI)

Hard to
coordinate
booking for
a group.

TOO MANY
TABS
Too much
irrelevant
info on SL
cards

TOO MANY
POINTS FOR
COMPARISON
(FI)

James
High
of
Region

TOO MANY
POINTS FOR
COMPARISON
(FI)

A **journey map** is a visualisation of the process that a person goes through in order to accomplish a goal.

Stage



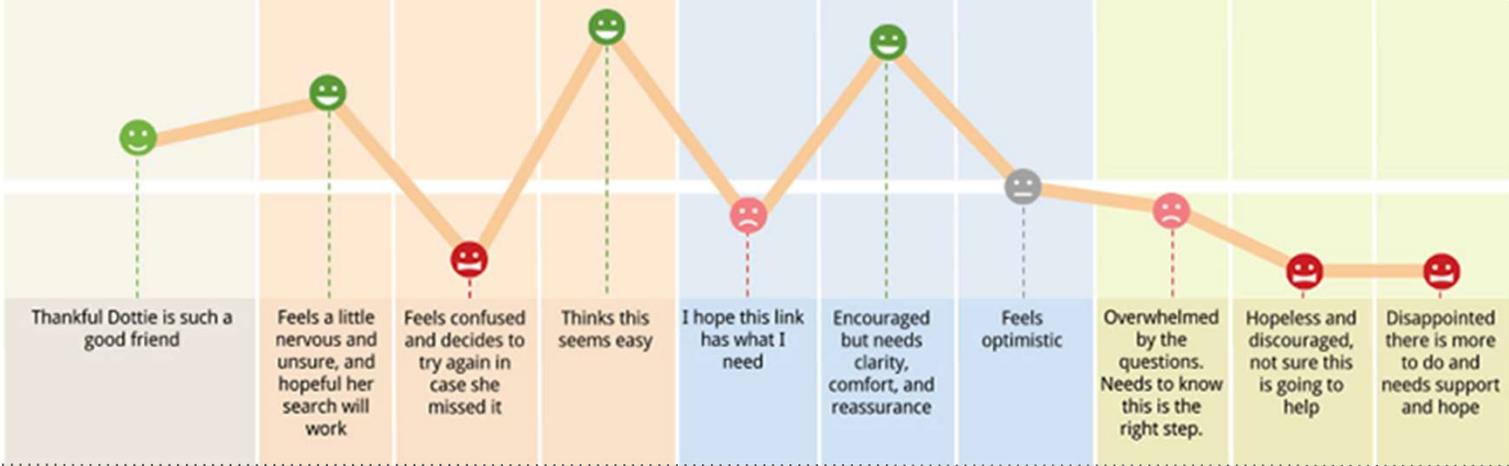
Activities

Linda's friend, Dottie, tells her to look for grants	Turns on computer and Googles "Government Grants"	Clicks on Grants.gov and then Search Grants	Doesn't understand Search Grants information and goes back to Grants.gov Homepage	Clicks on USA.gov link on Grants.gov home page under Financial Assistance	Reads USA.gov Benefits, Grants, and Loans page and realizes she is not eligible for a grant	Clicks on link to Benefits.gov	Begins Benefits.gov Benefit Finder , but it takes too long and she clicks "Contact Us" to find a real person	Fills out Benefits.gov webform and types a message to ask how she can get financial help	Checks her e-mail later and sees response from Benefits.gov
--	--	--	--	--	--	---------------------------------------	--	---	---

Touchpoints



Feelings



Opportunities for improvement

- Simplify benefits.gov contact page
- Make the benefits finder more like Turbo Tax
- Add questions to benefits.gov email form to help agents give better responses
- Create task force for benefits related sites/agencies
- Merge grants.gov, benefits.gov, and govloans.gov
- Become benefits program manager - benefits.usa.gov
- Integrate benefits finder and unclaimed money search
- Add APIs to integrate with state benefits info
- Integrate benefits.gov FAQs into content pages on benefits.gov
- Create an infographic to explain benefits finder
- Ask Grants.gov to add a popup asking if you want personal benefits
- Add benefits finder directly to USA.gov page

Stage

Consideration

Exploration

Business registration

Activities

X wants to launch their business

X looks for information about legal structures and registration process

X starts their business registration request online

Touchpoints



Feelings

😊 X is enthusiastic about their project

😞 X is frustrated as they struggle to find the business registration website and understand which legal structure is best for them

😱 X is scared because they started their registration online, but X can't upload the required documents. X tries to call unsuccessfully, and visits the agency

Opportunities for improvement

- Improve referencing
- Create a form to suggest legal structures

- Investigate the document upload issue
- Create an online chat

Journey map \neq process map

Differences between process and journey maps

Main focus

The organisation

The user

What is visualised?

The organisation's internal processes, functions, and activities

The user experience

Terminology

Terms and jargon specific to the organisation

The user's language

Who is involved?

Process mapping specialists, specific teams

All teams involved in the user experience

Benefits of journey mapping

As-is journey maps

- Communicate an understanding of the user
- Drive conversations

To-be journey maps

- Share a vision
- Keep a basis for decision making



10-min activity

What would the purpose of a journey map be in our context?

What conversations will the map support?

1. Introduction to human-centred design

2. Doing user research in government

Introduction to user research

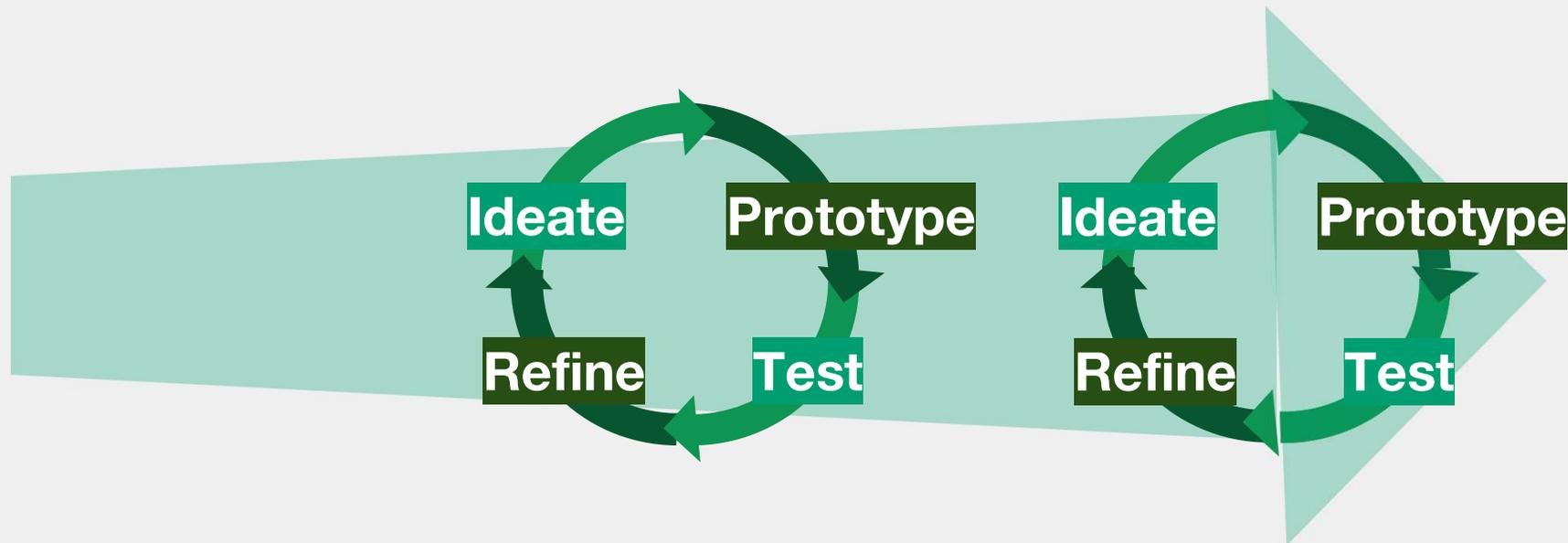
How to do user interviews

Good practices in user research

Good practices in user research

1. Do a little, often.

Service development process



Discovery

Understand
user needs

Design & development

Prototype and test
solutions with users

Live

Launch and
continuously
improve

Good practices in user research

1. Do a little, often.
2. Work as a team.

User
research
is a team
sport



Good practices in user research

1. Do a little, often.
2. Work as a team.
3. Watch what users do. Not just what they say.



‘If I had asked people what they wanted, they would have said faster horses.’

Henry Ford

Example

The image shows a screenshot of the USA.gov website with a heatmap overlay. The heatmap consists of numerous small, semi-transparent colored circles (red, yellow, green, blue) scattered across the page, indicating areas of user interaction or focus. The website layout includes a top navigation bar with links for 'Home', 'Search', 'Email Your Question', 'RSS', and 'Free Publications'. The main header features the USA.gov logo, a search bar, and social media icons. Below the header, there are navigation tabs for 'Services', 'Blog', 'Topics', 'Government Agencies', and 'Contact Government'. The main content area is divided into several sections: 'Holiday Travel Resources' with a traffic image and a 'TRAVEL TIPS' button; 'Popular Topics' with a numbered list of links; 'Just for You ...' with a list of audience categories and a 'MORE AUDIENCES' button; 'App: Hurricane by Red Cross' with an app icon and a 'FIND MORE APPS' button; and 'Check Your Credit Report' with an image of a laptop and a 'CHECK MORE FAQs' button. At the bottom, there is a 'Get E-mail Updates' section with an email input field and a 'SUBSCRIBE' button, and a footer with 'Stay Connected to USA.gov', 'RSS', and 'Get E-mail Updates' links.

Good practices in user research

1. Do a little, often.
2. Work as a team.
3. Watch what users do. Not just what they say.
4. Embrace a large, diverse population of your users.

‘If you think good design is expensive, you should look at the cost of bad design.’

Dr Ralph Speth, former CEO Jaguar

1. Introduction to human-centred design

- Human-centred design is an empathic approach to service design. It's about understanding the needs of service users and their limitations.
- User needs are different from service requirements. They express people's goals, values and aspirations.

2. Doing user research in government

- User research is the deliberate study of users to reveal insights on their needs, problems and context to inform the development of services.
- There are many ways to conduct user research, at every stage of the service development process.
- Conducting user interviews is only one of them, but one worth trying out!

Next module:

Agile and open ways of working



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