

## Design Thinking for Data Science Projects

Using design thinking to deliver better data science projects



The WA Data Science Innovation Hub (WADSIH) was established to enable the application of data science for the benefit of all West Australians. It is jointly funded by the Government of Western Australia's New Industries Fund and Curtin University.

The Hub's mission is to enable Western Australia to build a data driven ecosystem and culture by fostering collaboration, promoting expertise, advocating and enabling data literacy across the community, industry, academia and government for all Western Australian.

The Hub aims to ensure Western Australia remains at the forefront of the digital revolution by increasing the uptake, education, training and awareness of data science.

#### **Our services**

#### **Upskilling the WA workforce**

WADSIH is supporting the WA workforce to access the benefits of data science through the delivery of training and upskilling. We partner with industry experts, such as Halliburton, to deliver technical training. We also offer a a range of fit-for-purpose upskilling options focused on applying design thinking principles to delivering data science projects.

#### Supporting internships and work placements

We deliver and promote events that facilitate collaboration across WA industries. We focus on partnering with industry experts and identifying real-world opportunities for data-driven projects and collaborations.

#### Connecting industry with data science specialists

We work directly with industry to connect businesses with data science specialists able to bring their data-driven projects to life.

## Advising small-to-medium enterprises (SMEs) and start-ups

We provide SMEs and start-ups with one-on-one advice and support to help them identify, define, design and deliver their own data science projects.

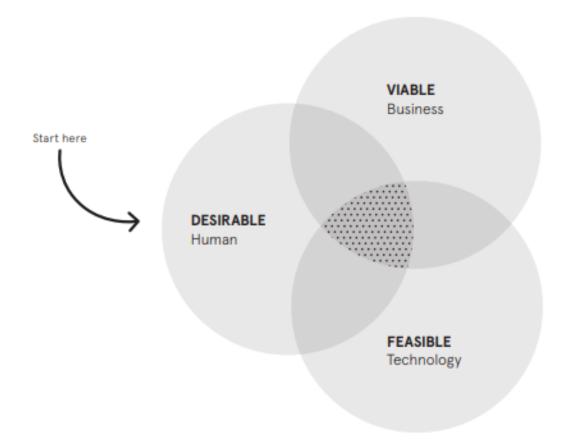
### Enabling collaboration across academia, industry and government

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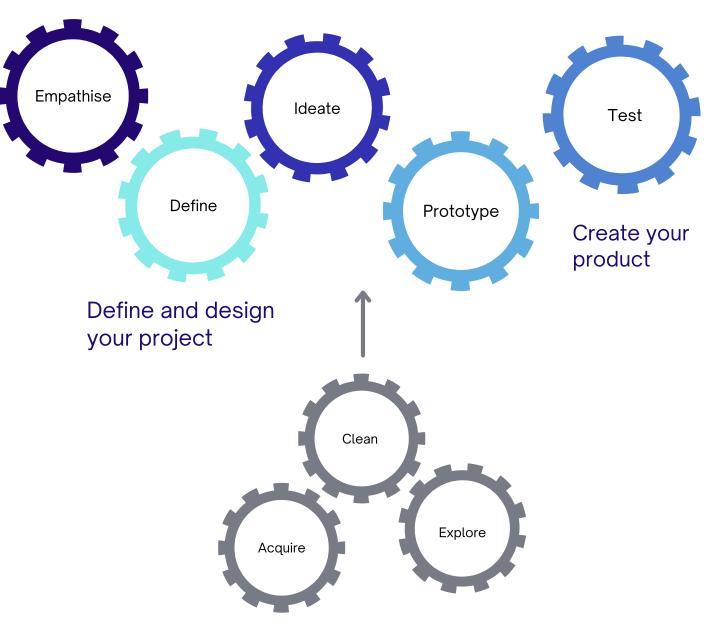


## What is design thinking?

Design thinking places humans at the centre of innovation



## Design thinking approach for data science projects



Prepare your data



#### Empathise

#### WHO

Who is experiencing this problem?

Think about those inside and outside of your organisation.

Who will need to be involved in the solution?

Persona Mapping

Journey Mapping

#### 2 Define

#### **WHAT**

What is the current state?
What is the problem?
Where are their gaps in the current process or technology?

#### WHY

Why is this a problem?
Is the problem different for different people?
What would be the outcome or benefit of solving this problem?

Problem Definition

#### 3 Ideate

#### HOW

How can we solve this problem?

What data and digital technologies will be required?

What other factors are necessary for success i.e. business processes, governance etc.?

Brainstorming

Do you have the data?

Is your data clean and ready to use?

How does your project align with your strategy and business goals?



## **Activity 1**

WHAT DOES SUCCESS LOOK LIKE FOR YOUR DATA-DRIVEN PROJECT?

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# Empathise Persona Mapping Journey Mapping



## **Activity 2**

Brainstorm the key stakeholders both internal and external to your organisation. These are your personas.

#### INTERNAL

Who inside your organisation will need to be involved in this project?

Who will be effected by the project?
Who will use the end-result?

# Who will use the end-result?

#### **EXTERNAL**

Who is your customer/client?

Do you have other stakeholders i.e. contractors, funding bodies?

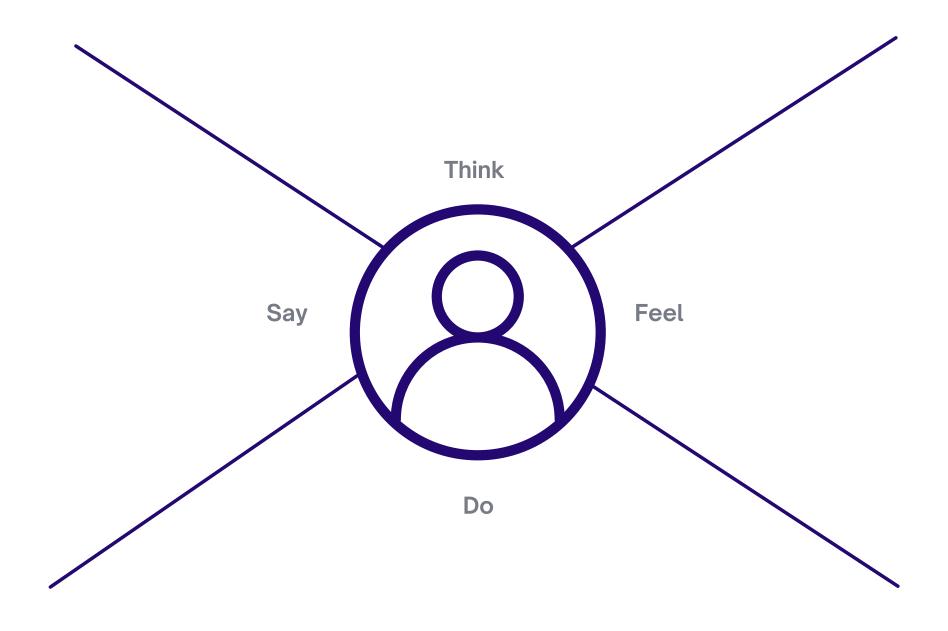


NAME

## **Activity 3**

#### PERSONA MAPPING

The creation of fictional, but realistic profiles of key stakeholders that address characteritsics including personal attributes, goals, motivations, attitudes and frustrations.



PAIN POINTS

GOALS





- A visual representation of the process a person goes through to accomplish a goal.
- Maps a process followed by one of your personas.

What is happening?

What frustrates the persona about this step?

What are the opportunities?



## Define

Problem Statement





What is the problem?	How do we know this is a problem?	How will we know when we've solved this problem?



## Ideate



## **Activity 5**

Ideation

What is the problem?

What are the opportunities?

What are the solutions?

## Find out more

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