

As a visitor on this land, coming from Aotearoa New Zealand, I strive to deepen my own understanding of the local communities.

I would like to acknowledge the Traditional Owners of the land on which we meet today. I would also like to pay my respects to their Elders, past and present.

# Progressing Sensitive RDM maturity – our journey.

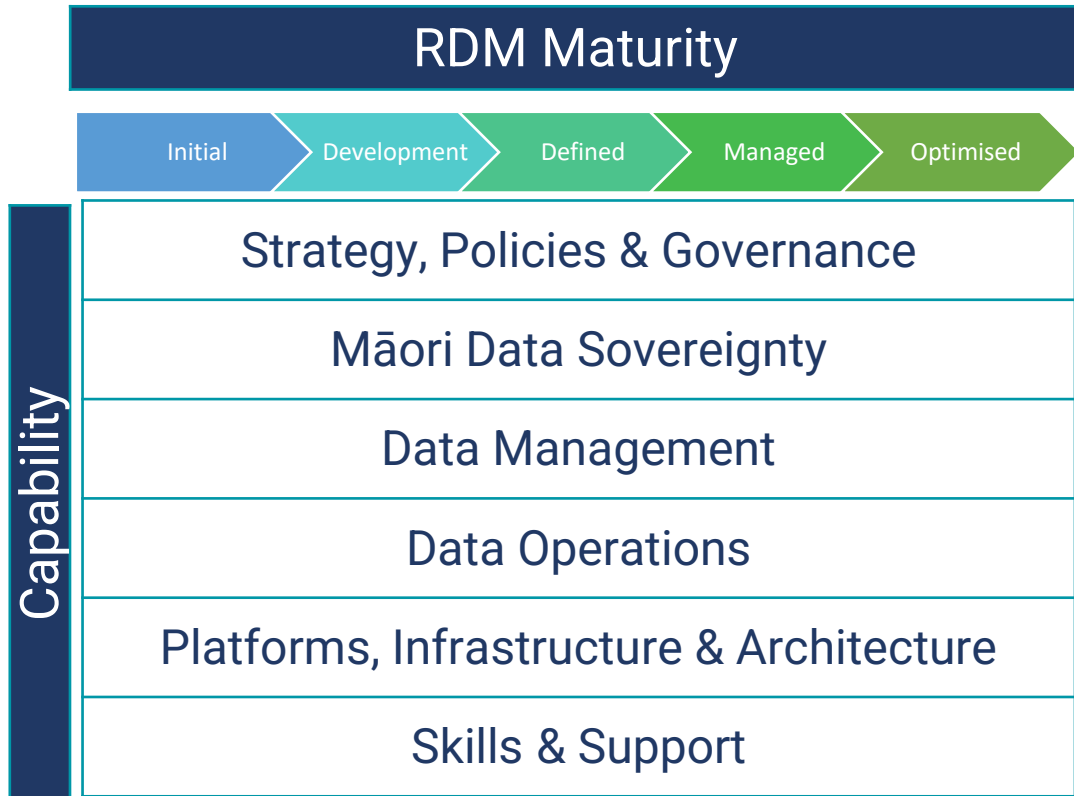
eRes Australasia 2024

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Picture Generated by Copilot AI

# Our RDM journey



**2020:** Towards an integrated Research Data Management Framework - RDM Project

**2021:** Waipapa Taumata Rau RDM Capability Maturity Model, & RDM Project Stocktake Report  
20 recommendations to lift maturity to Level 3 – Defined

**2022:** Developing RDM Policy (July 2023), Research Data Classification, RDM Programme initiatives

**2023-4:** SRE user requirements, PoC and pilot SRE

RDM capability Maturity Model:  
<https://doi.org/10.17608/k6.auckland.16993660.v1>

RDM Policy Guidance: <https://research-hub.auckland.ac.nz/article/research-data-management-policy-guidance>

PUBLIC

INTERNAL

SENSITIVE

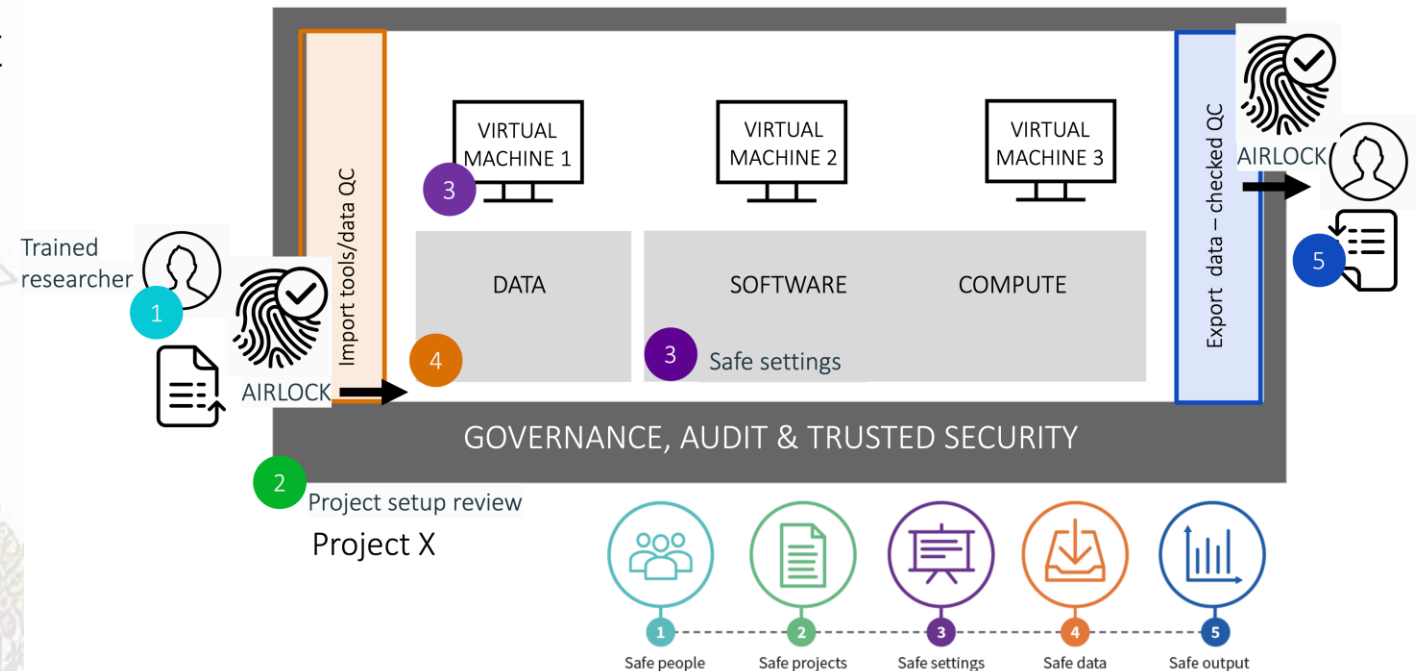
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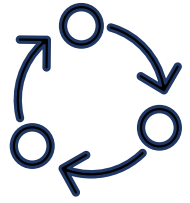
# SRE Drivers

- Changing landscape sensitive data (legislative requirements, ethical considerations, data security from funders/data provider)
- Approved reproducible 'houses' – conformant to standards – faster implementation
- Managing acceptable risk
- Balance security and enablement

## **Secure Research Environments (SREs)**

*Trained Researchers (Safe people) can access their data and tools (Safe data) via a restricted virtual desktop for a given project (Safe settings and projects). Only approved data can be exported through a data review process (Safe output).*





# Our SRE pilot process



Co-design partners (63) from

- Academic researchers (different career stages and faculties), Research support teams (data managers, statisticians), SRE technical team, RDM programme team

## REQUIREMENTS

- co-design partners
- interviews
- analysis of interview data
- landscape analysis
- feedback of findings and requirements prioritisation

## PROOF-OF-CONCEPTs

- co-design workshops
- candidate recruitment
- co-design feedback
- data analysis
- feedback of findings

## PILOT SYSTEMs

- co-design workshops
- participant recruitment
- pre-pilot survey
- onboarding and training
- user testing
- post-pilot survey and feedback capture
- data analysis
- feedback of findings

# Interviews: user requirements

## Five safes framework

### Safe Outputs:

Has the output been checked and is non-disclosive?



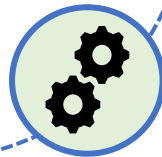
**Safe People:** Does the person have appropriate authority to access the data?



**Safe Project:** Does the project deliver a public benefit?



**Safe Settings:** Does the environment limit unauthorised use of data?



**Safe Data:** Is the data protected with appropriate controls?



## Requirement themes

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Granular access control

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Audit trails and Logging

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Security and compliance

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Standardised software

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Data egress and ingress controls

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Training and support

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Familiar interface/ Easy to use

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Data backups

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# Proof-of-concepts (PoCs)

## Co-design engagement activities

- Session on process
- Video demonstrations
- Assessment (criteria from requirements)
- Feedback
- Workshop: feedback, enablers and barriers

## Findings

- Pilot two systems



# Pilot: Co-design workshops

Understanding the needs  
and diverse requirement  
from end users of SRE

1. Compute requirements of users. Operating system, software, packages and libraries, data types, and levels of virtual computation
2. Support and guidance. Research hub content, types
3. Onboarding projects and users. Setting up process through request form and consultation
4. Training needs. Expectations, important areas, types and modes of delivery modes, and the sequence

# Co-design: Training workshop findings

## Expectation

- tiered workshops
- user guide
- video tutorial + FAQs
- workflow scenarios
- troubleshooting guidance

## Structure

- how to use
- guidance-sensitive data
- best practices
- other resources related topics

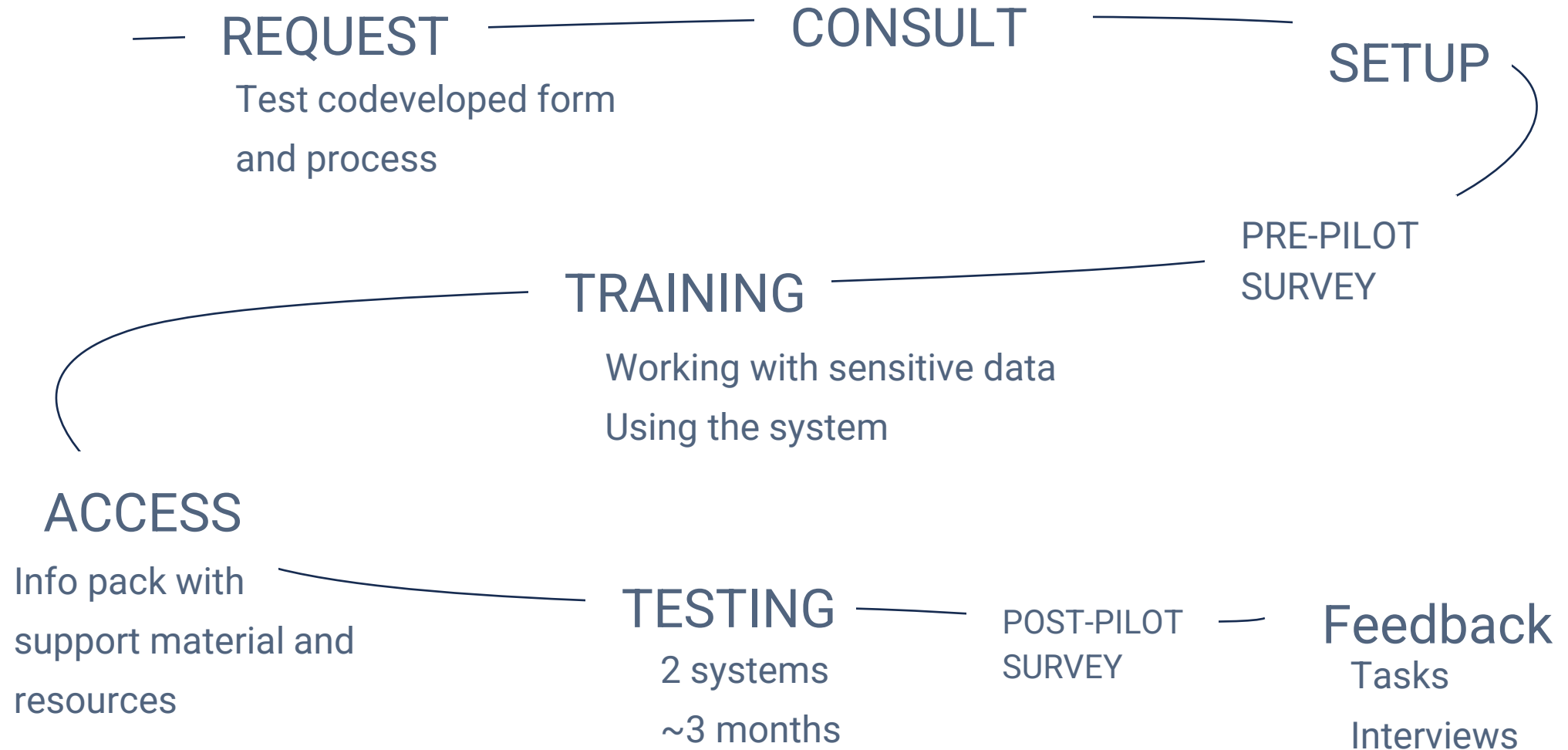
## Who + level

- working with sensitive data
- all users using tool
- project or group-based
- role-based training for data owner or custodian

## Delivery modes

- online + in-person
- monthly
- 1-2-hours
- community discussion groups
- hands-on components

# Pilot onboarding and feedback process

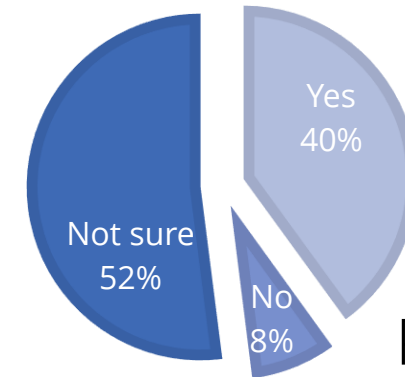
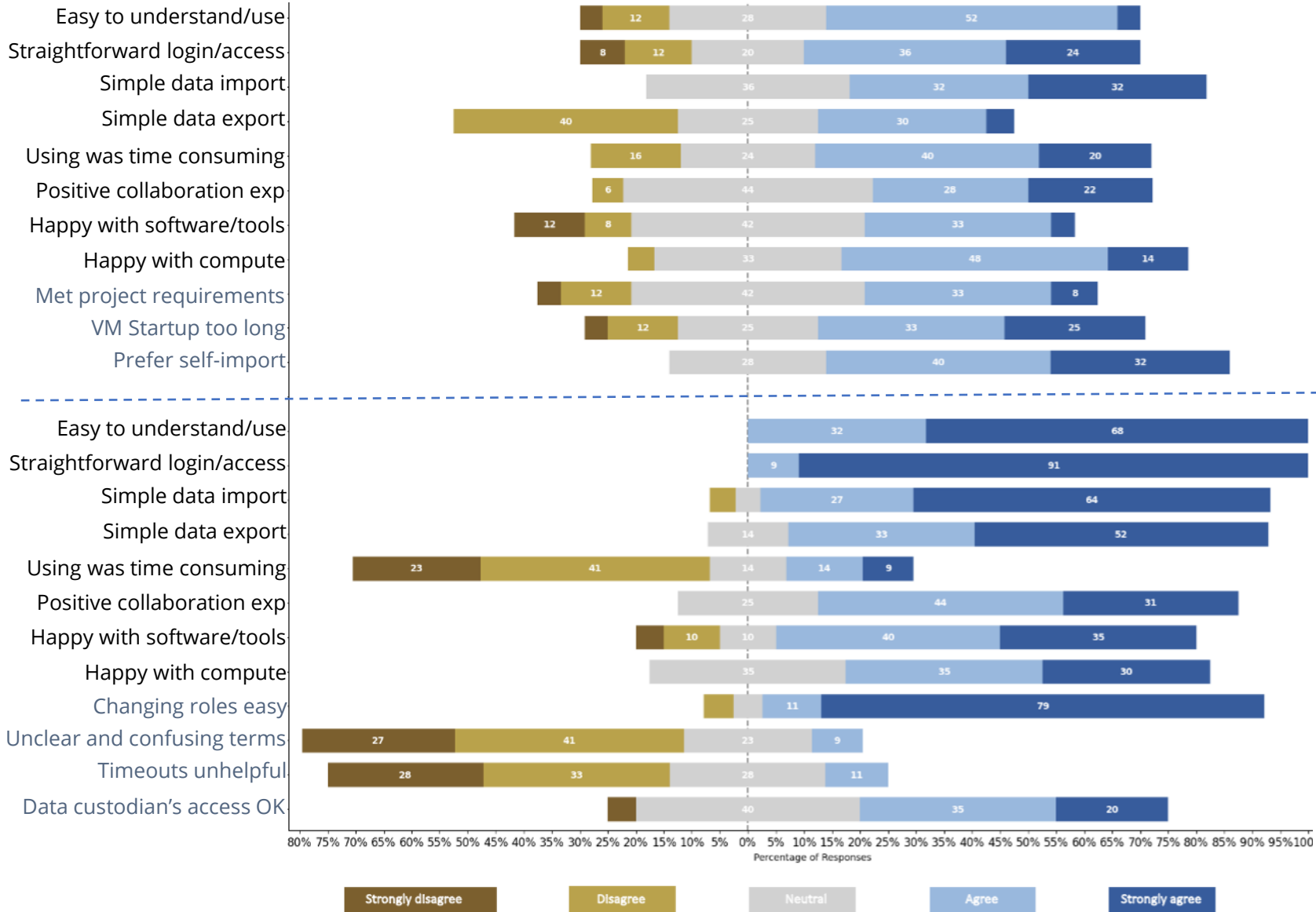


# Pilot user testing

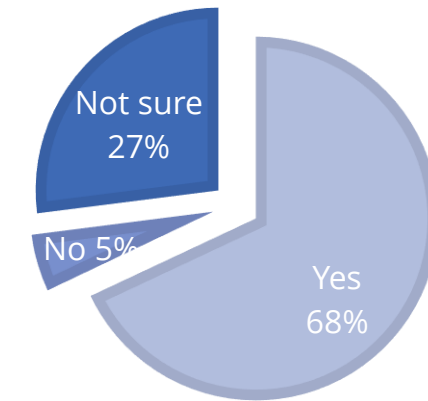
- Staggered testing (February – April 2024)
- User task lists based on SRE roles
- Drop-in sessions for support

Tasks	Enablers – things I like and why	Barriers – things I dislike and why	Any other comments
Login as researcher			
Connect to a VM, run software			
Data ingress request			
Data egress request			
Log off			
Switch to Data Custodian and perform specific tasks			

# Participant user experience

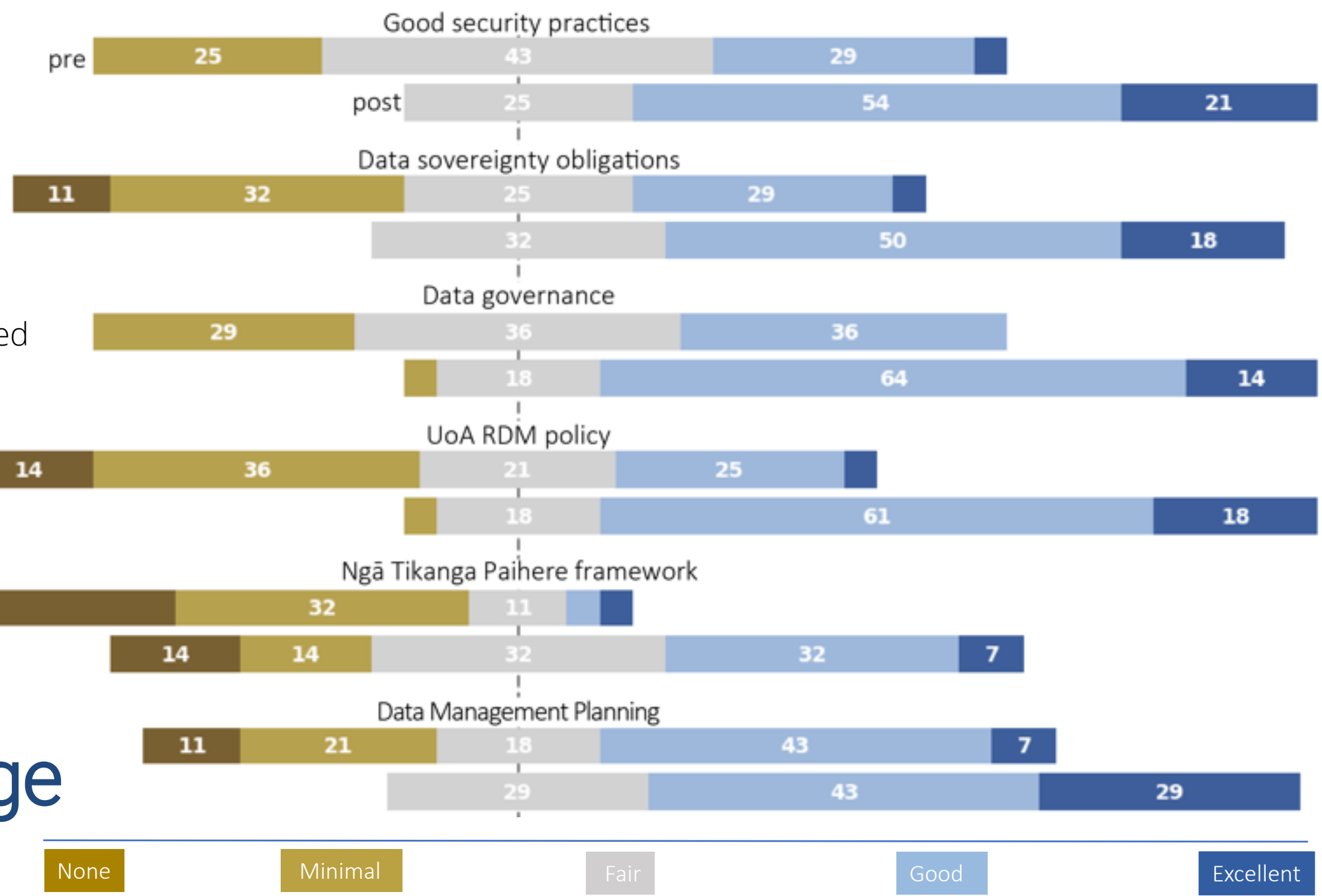


Public cloud  
on-prem



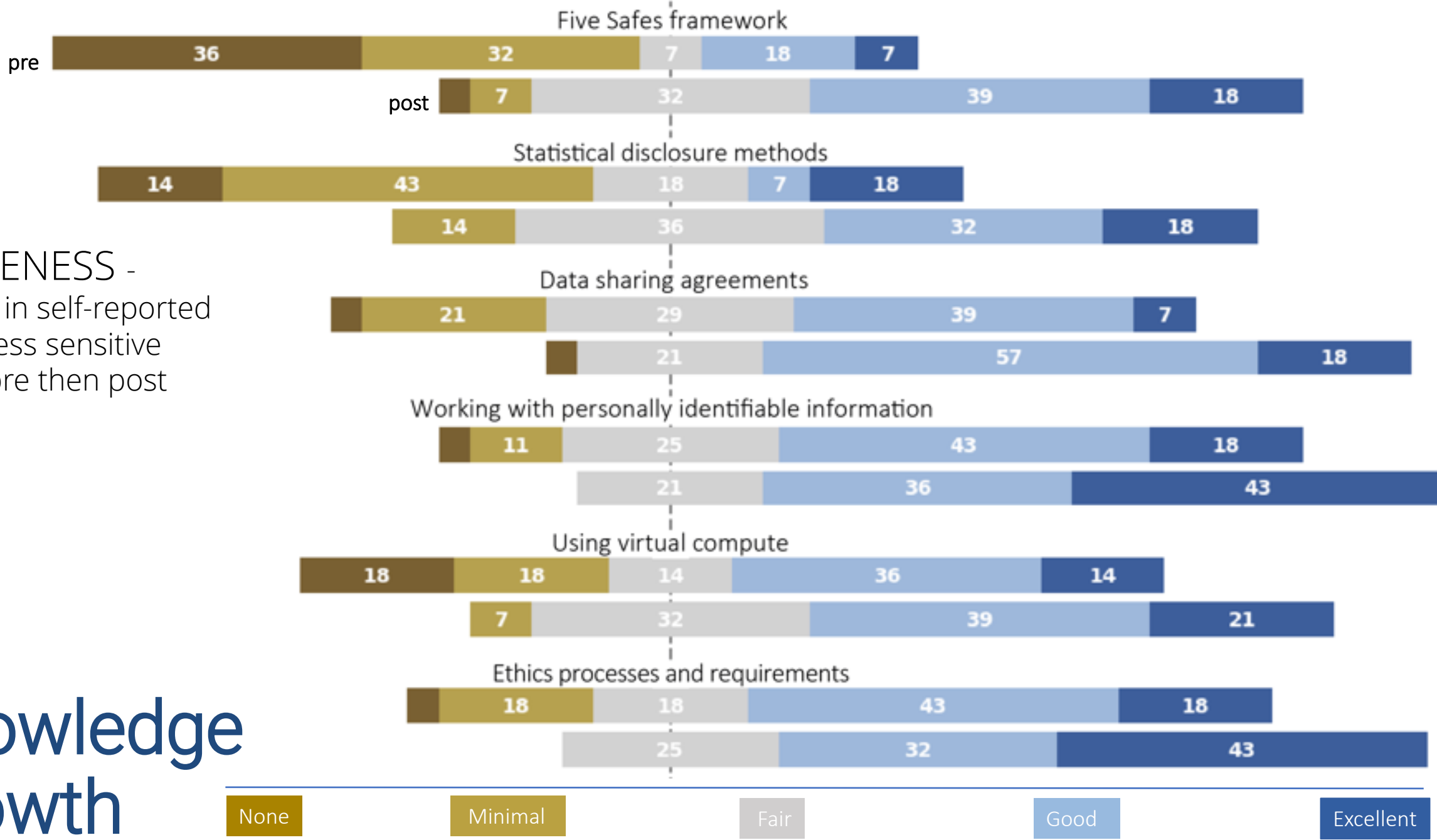
AWARENESS -  
Change in self-reported  
awareness sensitive  
data – pre then post  
pilot

# Knowledge Growth



AWARENESS -  
 Change in self-reported  
 awareness sensitive  
 data – pre then post  
 pilot

# Knowledge Growth



None Minimal Fair Good Excellent

# Hurdles and enablers along the way



## Hurdles

- Infrastructure delays and building two systems
- Licensing – limited software options
- Financial processes for OPEX spending (consumption-based cloud technologies)

## Enablers

- Two pilots (using public and private cloud) technical learnings
- Co-designing the systems with the end users (insights)
- Pilot increasing awareness about managing sensitive research data
- Architectural standards



# Questions?

Co-design process information and resources

<https://doi.org/10.17608/k6.auckland.27362115>

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