



Optimising app interface design for a under served workforce – How co-designing with home care workers has shaped a resource to support end-of-life care.



Research Centre for
Palliative Care, Death & Dying

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Acknowledgement of country

I acknowledge the Traditional Custodians of the many lands and waters throughout Australia, and I also recognise our Indigenous peoples continuing connections to the land, seas, and their communities.
I pay my respects to Elders past, present and future.

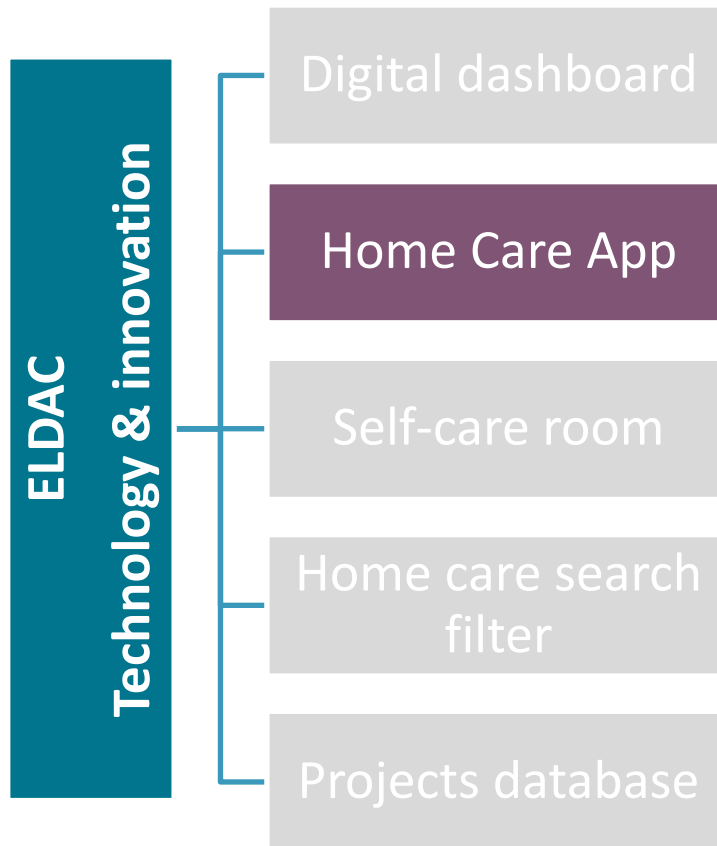


Who are home care workers?



- Care for everyday needs of older people who are living at home and are receiving a Commonwealth funded home care package.
- Provide care to people who are:
 - In decline,
 - In the last months or weeks of their lives, or
 - Actively dying.

Why the need for a palliative care resource?



1. End of life care is core business for the aged care workforce
2. Only 7% of all care workers have any formal training in providing palliative and end of life care [1]

Under-served, under-resourced population

- Lack of information and resources to support care practice.

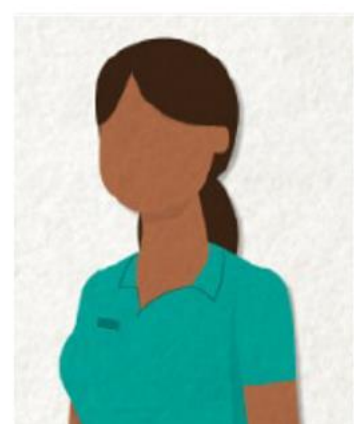
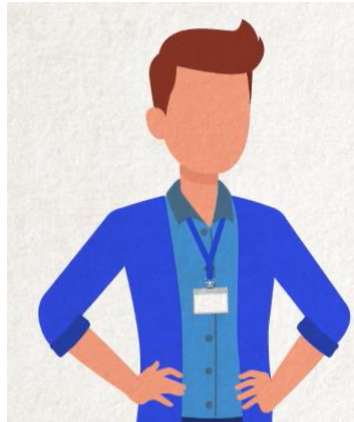
App and home care workforce – A perfect match?



Home care workforce and technology:

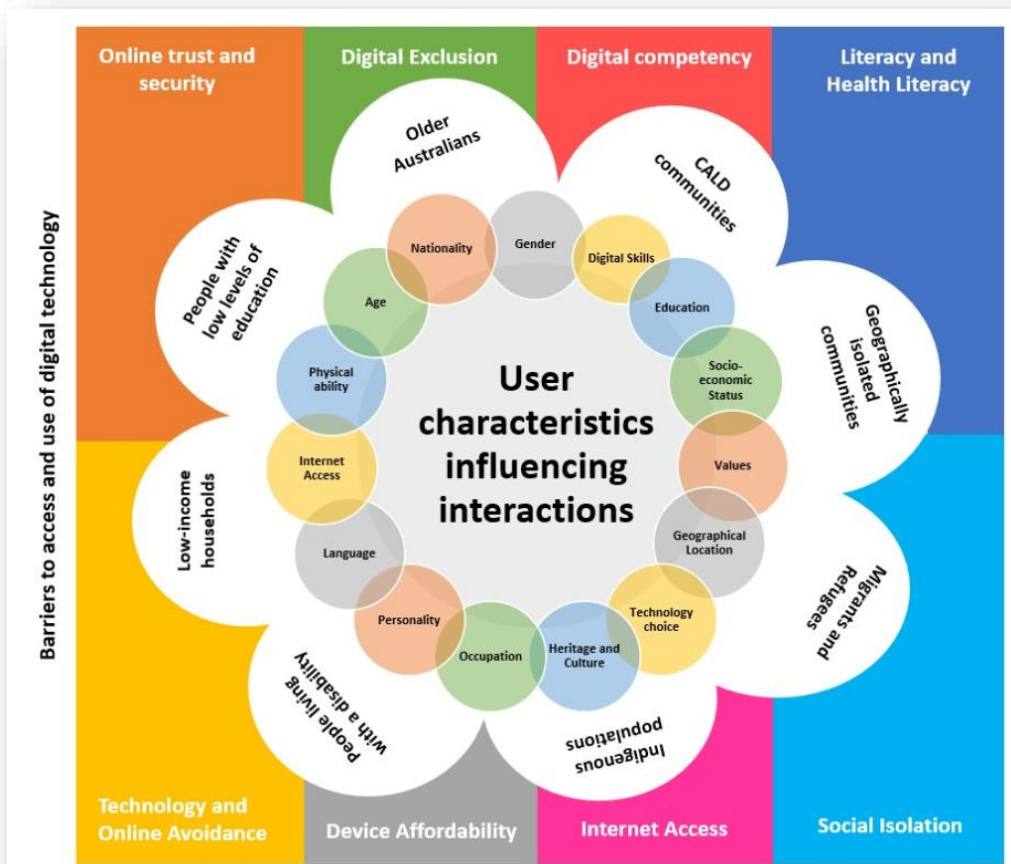
1. Regularly use smartphones
2. Isolated – working autonomously
3. On the road – moving between client homes

Consider diversity of an under-served workforce



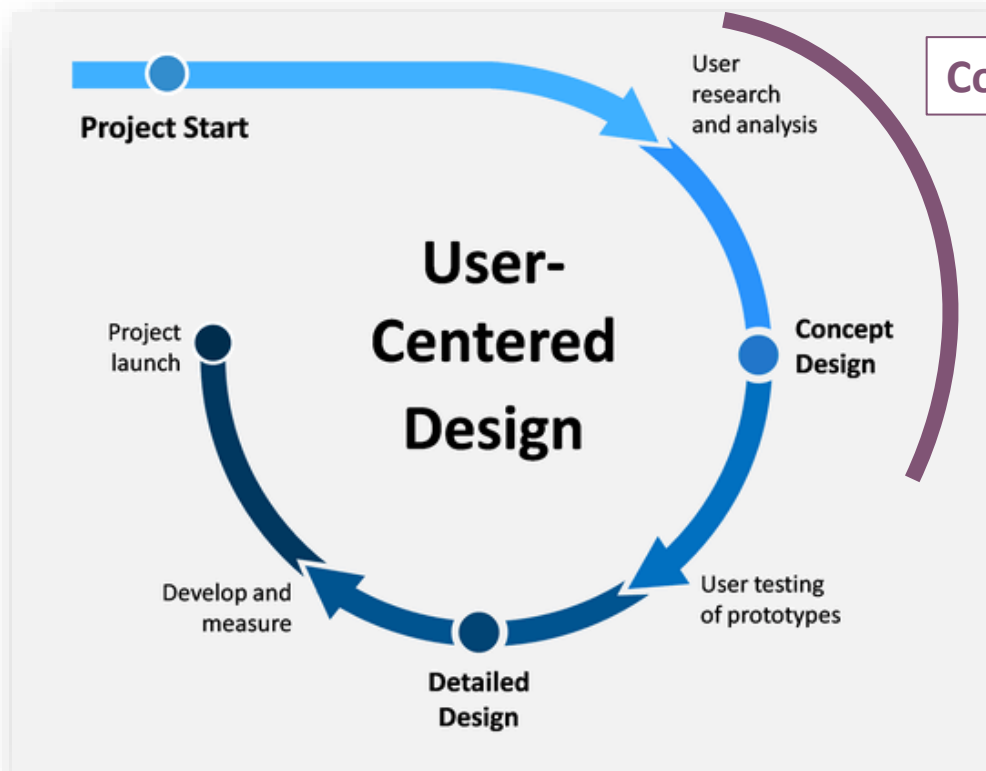
- Home care workforce reflects diversity within our communities

Understand impact of diversity on interactive success



- Likely to experience barriers to use, access and understandability of digital interfaces

Co-design approach within our UCD process

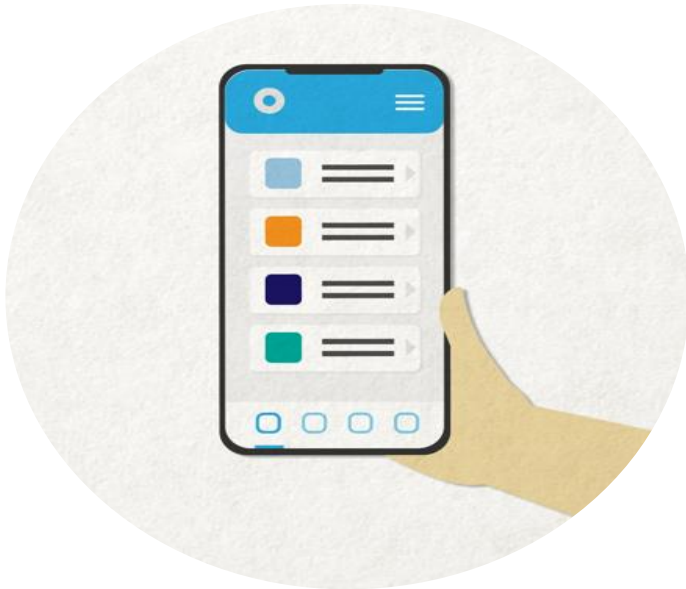


- Collaborative approach involving home care workers / managers who are not trained in product design [2]

- Identifying needs and requirements
- Context and environment of use

<https://www.sketchbubble.com/en/presentation-user-centered-design.html>

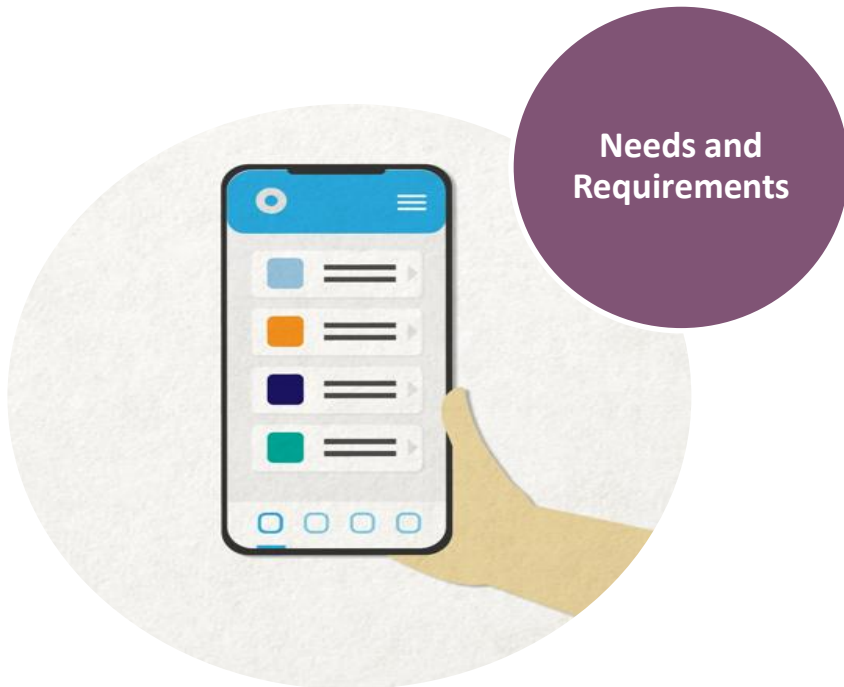
Co-designing with the home care workforce



Three co-design activities, each explored a different facet of interface design.

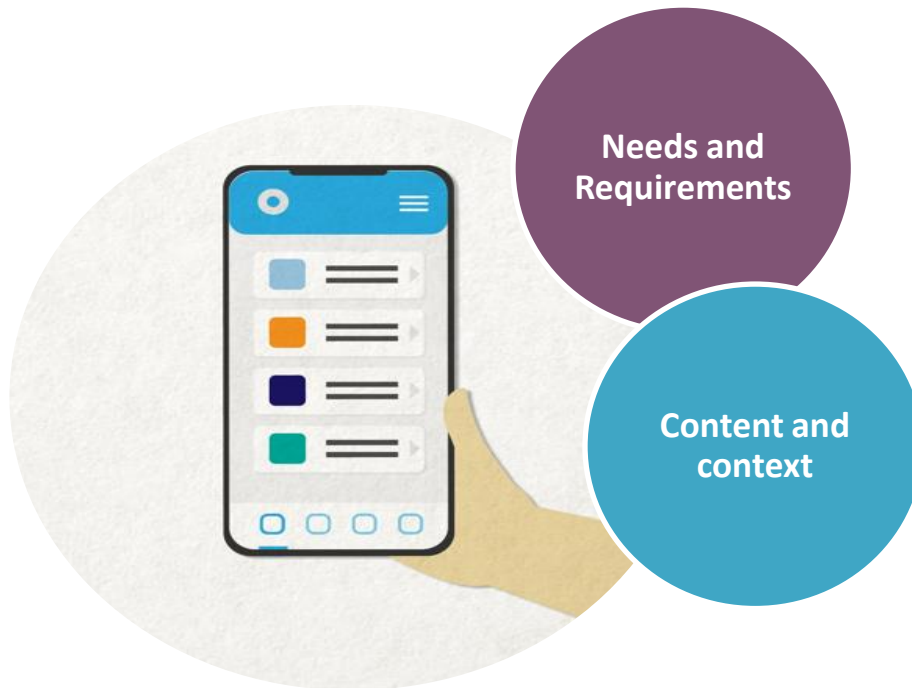
- Involved home care workers and home care managers as representative end users
- Home care managers provide perspectives on home care worker practice

Co-design 1 – Interviews (Scope and expectations)



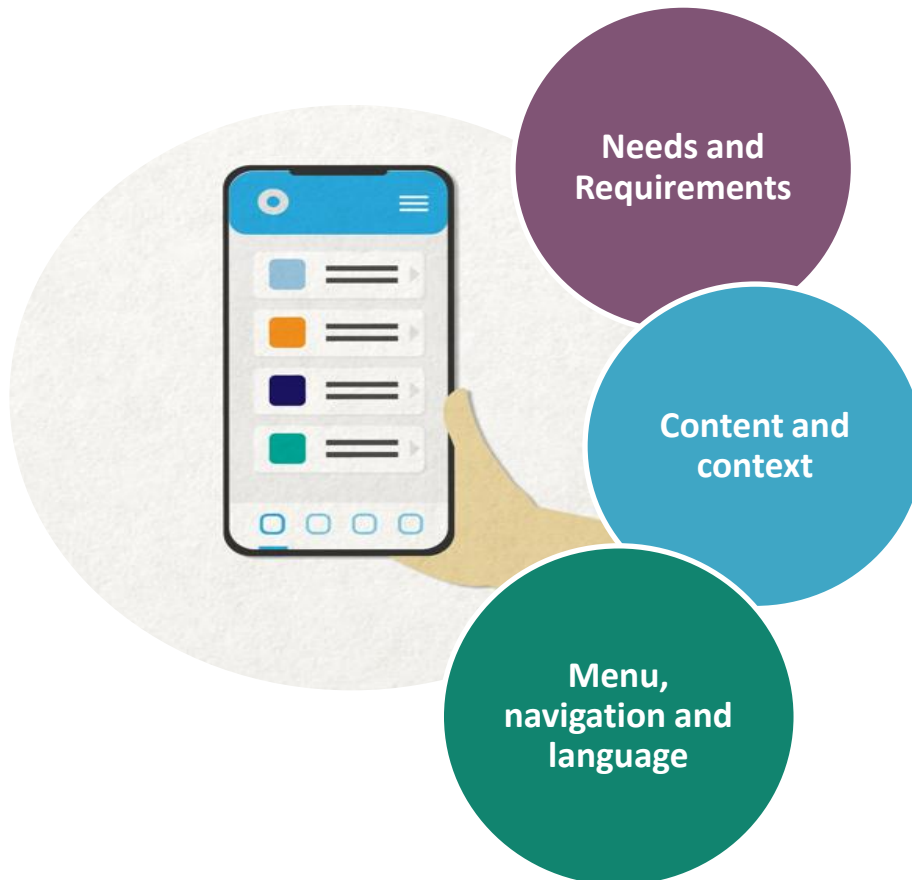
- Interviews with home care workers and home care worker managers (n=12)
- Practicalities of providing end of life care within scope of practice
 - Context of app use
 - Informational requirements
 - Gaps in knowledge or practice
 - Difficulties faced by home care workers

Co-design 2 – Interviews (Practicalities of care)



- Second round of interviews with different cohort of end-users (n=10)
- Lived experience of providing end of life care:
 - Specific content
 - Practical information was needed to support care
 - Wish list of content areas, functions or features.

Co-design 3 – Closed Card Sorting (UI design and IxD)



- Second group of users also completed a remote closed card sorting activity
- Sorting concepts into groups to map relationships



Closed Card Sorting – Concept cards

Menu,
navigation and
language

16 End of life care concept card list for card sorting from interviews

- How to work with others to care for someone at the end of life
- Tips for recognising change and deterioration
- When to tell someone that things are changing
- Feeling confident about caring for someone at the end of life
- Communication Tips
- Conversation starters
- Responding to people asking about advance care planning
- Feeling confident about signs of change and symptoms
- What you can do in your role to care for someone in the last weeks of life
- Understanding how to care for yourself and seek support
- Taking part in planning and delivering care
- How to talk about death and dying
- What to say and do when people are distressed
- Understanding the SPICT-4-ALL
- Sharing observations with the team
- End of life tips for careworkers



Closed Card Sorting – Category Labels

Menu,
navigation and
language

Sort 1
ELDAC Care Model
Category Names

- **Formal**
- **Clinical terms**
- Advance care planning
- Recognising end of life
- Assessing and providing palliative care
- Work together
- Responding to deterioration
- Managing dying
- Bereavement
- Self-care*

16 content concepts
from co-design
interviews



OptimalSort

Sort 2
Descriptive
Category Names

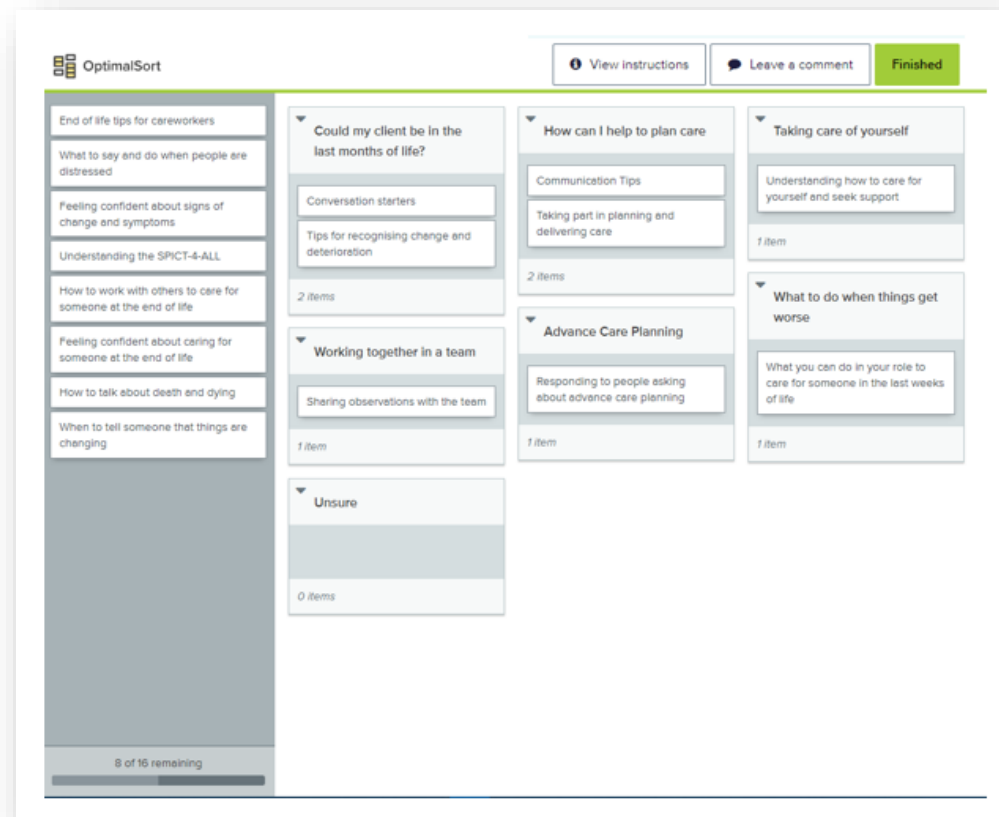
- **Informal**
- **Everyday terms**
- Advance care planning
- Could my client be in the last months of life?
- How can I help to plan care
- Working together in a team
- What to do when things get worse
- Taking care of yourself



Closed Card Sorting – Optimal Sort Platform

Menu,
navigation and
language

- Participants dragged and dropped concept cards into categories



The screenshot shows the OptimalSort interface. At the top right, there are three buttons: "View instructions", "Leave a comment", and "Finished". The main area is a grid of categories with a dropdown arrow on the left of each category name. The categories and their contents are:

- Could my client be in the last months of life?** (2 items): Conversation starters, Tips for recognising change and deterioration.
- How can I help to plan care?** (2 items): Communication Tips, Taking part in planning and delivering care.
- Working together in a team?** (1 item): Sharing observations with the team.
- Advance Care Planning?** (1 item): Responding to people asking about advance care planning.
- Taking care of yourself?** (1 item): Understanding how to care for yourself and seek support.
- What to do when things get worse?** (1 item): What you can do in your role to care for someone in the last weeks of life.
- Unsure** (0 items):

On the left side, there is a vertical list of menu items: "End of life tips for careworkers", "What to say and do when people are distressed", "Feeling confident about signs of change and symptoms", "Understanding the SPiCT-4-ALL", "How to work with others to care for someone at the end of life", "Feeling confident about caring for someone at the end of life", "How to talk about death and dying", and "When to tell someone that things are changing". At the bottom left, it says "8 of 16 remaining".



Closed Card Sorting – Data: Informal Category Names

Menu,
navigation and
language

Placement matrix from sort with descriptive category labels

	Advance Care Pl...	Could my client ...	How can I help t...	Working togethe...	What to do when...	Taking care of yo...	Unsure
Responding to people asking abo...	90%		10%				
Feeling confident about caring for...	40%	20%	20%		20%		
How to talk about death and dying	30%	30%	20%		20%		
Feeling confident about signs of c...	10%	50%			40%		
Tips for recognising change and ...		50%			50%		
End of life tips for careworkers	20%	30%	10%	20%	10%	10%	
What you can do in your role to c...	10%	30%	20%	30%	10%		
Taking part in planning and delive...	30%		60%	10%			
Conversation starters	10%	20%	30%		20%		20%
Sharing observations with the team				100%			
How to work with others to care f...	10%		10%	80%			
Communication Tips	20%		20%	40%			20%
What to say and do when people ...				10%	90%		
When to tell someone that things ...				20%	70%		10%
Understanding how to care for yo...						100%	
Understanding the SPICT-4-ALL	10%	10%	20%		10%		50%

- Descriptive category labels created *less diffuse* sorting **patterns**
- Participants were more confident and precise when categorising their sorts.

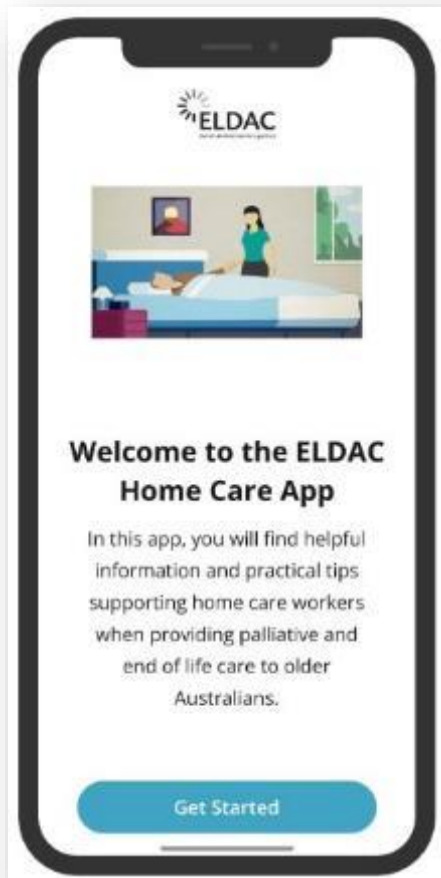
Closed Card Sorting – App UI Design and IxD

Menu,
navigation and
language



- Sorting patterns helped to understand how concepts fit together for end-users
- Data from card sorting provided:
 - Information architecture
 - Menu structure
 - Navigation and information flow
 - Language and tone

End-user involvement post co-design



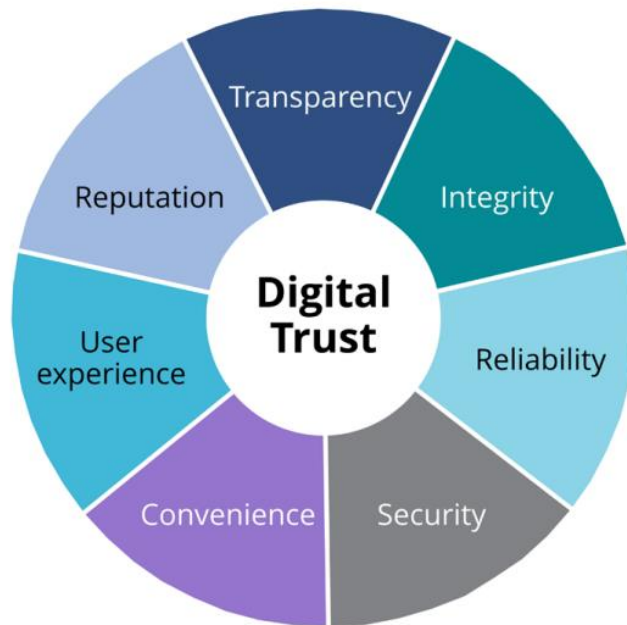
- Formative usability evaluation of production prototype
 - Usability testing
 - User testing
- * Opportunity to be involved in post-release evaluation study

Home care workers influence on interface design



- Participation has ensured the Home Care app interface is:
 - Understandable, contextualised and relevant
 - Supports end of life care within scope of practice
- * User experience optimised through formative usability evaluations

Home care workers influence on interface design



- Home care worker involvement also:
 - Enhances app quality
 - Builds credibility and trustworthiness
 - Supports sector buy-in and adoption by services



Thank you, questions?



Find out more about our Home
Care App

Dr Amanda Adams



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