



The case of Golden Jubilants: using a Prototype to support Healthcare Technology Research

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HOST INSTITUTION

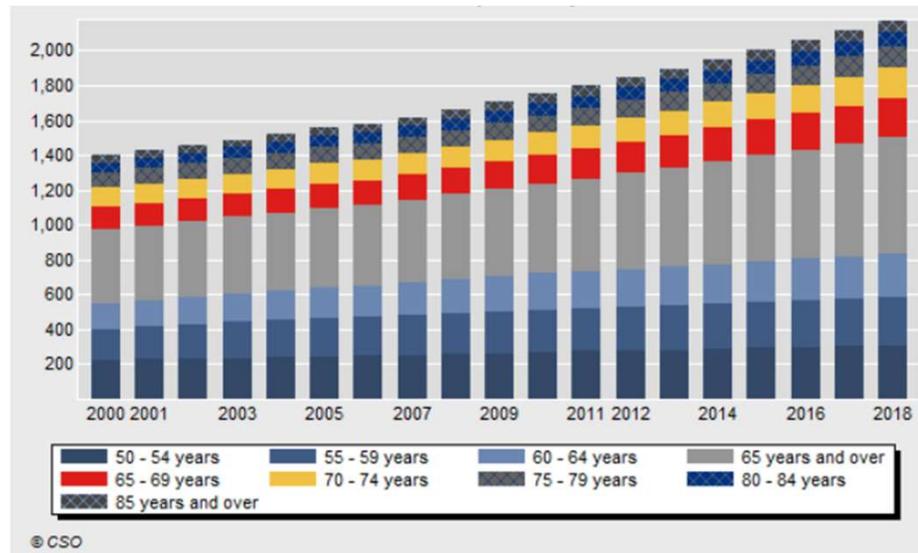


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Summary of Presentation

- Developing recommendations
 - Smartphone development for older adults
- Future use of prototypes



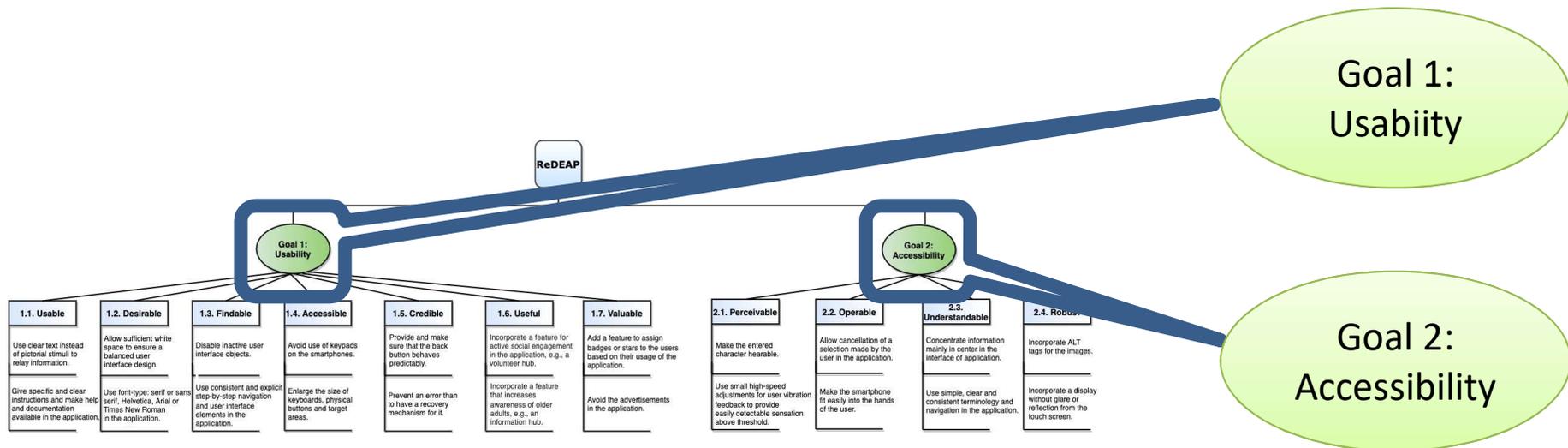
- Problem: Older adults are underserved by technological solutions

Reference: Central Statistics Office Ireland (2017), *An Age Profile of Ireland* [online], available: <http://www.cso.ie/en/csolatestnews/pressreleases/2017pressreleases/>

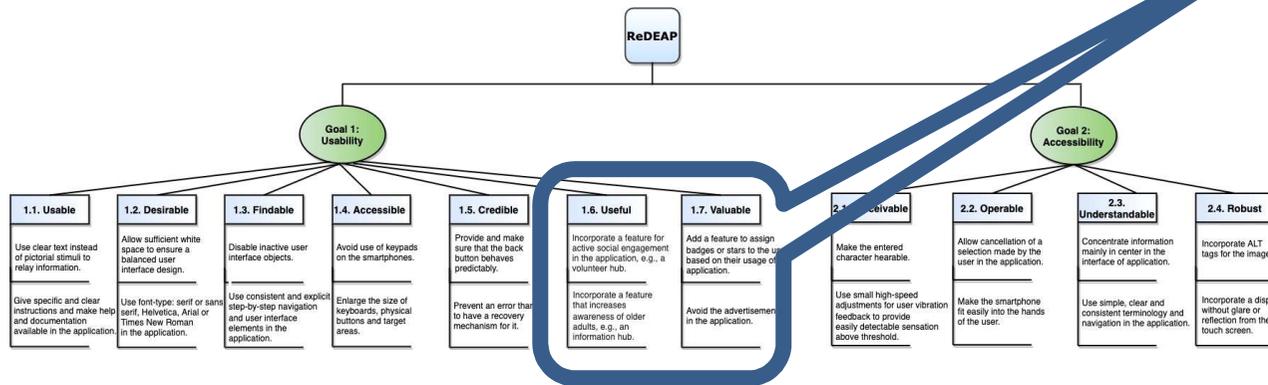
Research Question

What are the recommendations that need to be considered by practitioners to make applications usable and accessible for older adults?

ReDEAP: DEveloping smartphone Applications for an aging Population



ReDEAP: 11 Sub-Goals and 44 recommendations

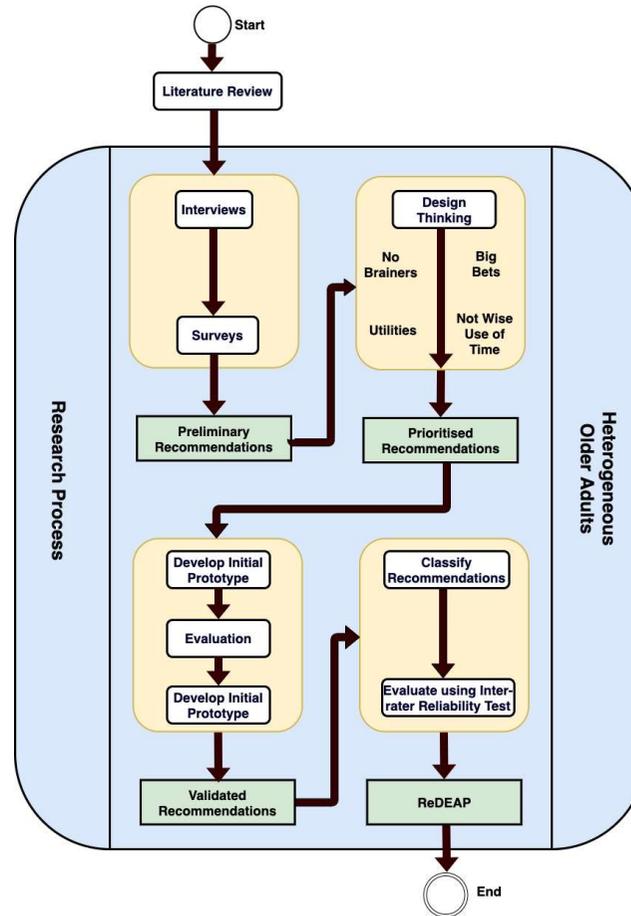


1.6. Useful	1.7. Valuable
Incorporate a feature for active social engagement in the application, e.g., a volunteer hub.	Add a feature to assign badges or stars to the users based on their usage of the application.
Incorporate a feature that increases awareness of older adults, e.g., an information hub.	Avoid the advertisements in the application.
helps older adults to keep track of and maintain their health. It can be presented in pie charts and graphs for tech-savvy OAs.	Grant physical rewards / certificates to the user upon completion of certain services through the application.
Incorporate fraud protection features in the application.	Provide an alternative paid version which does not contain commercial advertisements.

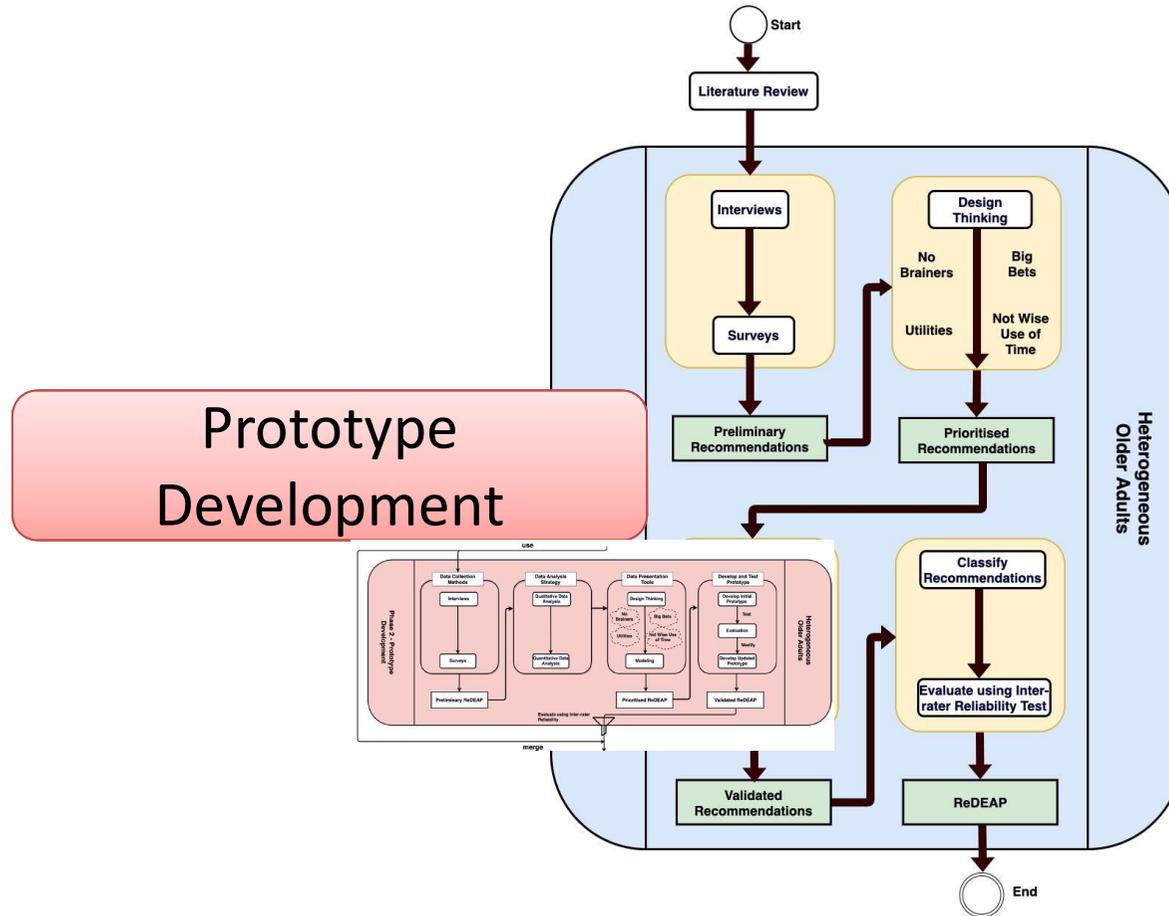
Recommendations described using Patterns

Use consistent and explicit step-by-step navigation and user interface elements in the application.	
Problem	If there is a need to have multiple interfaces for different functionalities, then the application might appear different. Older adults consider that they have to re-learn the new features, leading to reduced usage [1-2].
Rationale	If consistent navigation and menus are used throughout the application, it will aid older adults with cognitive decline [1-2].
Solution	1. Use consistent and explicit step-by-step navigation and user interface elements [1, 2].
Type	Usability
Sub-type	Findable
Related Patterns	Disable inactive user interface objects; Avoid scrolling in the application or only allow vertical scrolling in for such scenarios; Incorporate simple and quick signup process in the application.
References	[1] Coelho, J. and Duarte, C., 2016. A literature survey on older adults' use of social network services and social applications. Computers in Human Behavior, 58, pp.187-205. [2] Norval, C., Arnott, J.L. and Hanson, V.L., 2014, April. What's on your mind? Investigating recommendations for inclusive social networking and older adults. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 3923-3932).

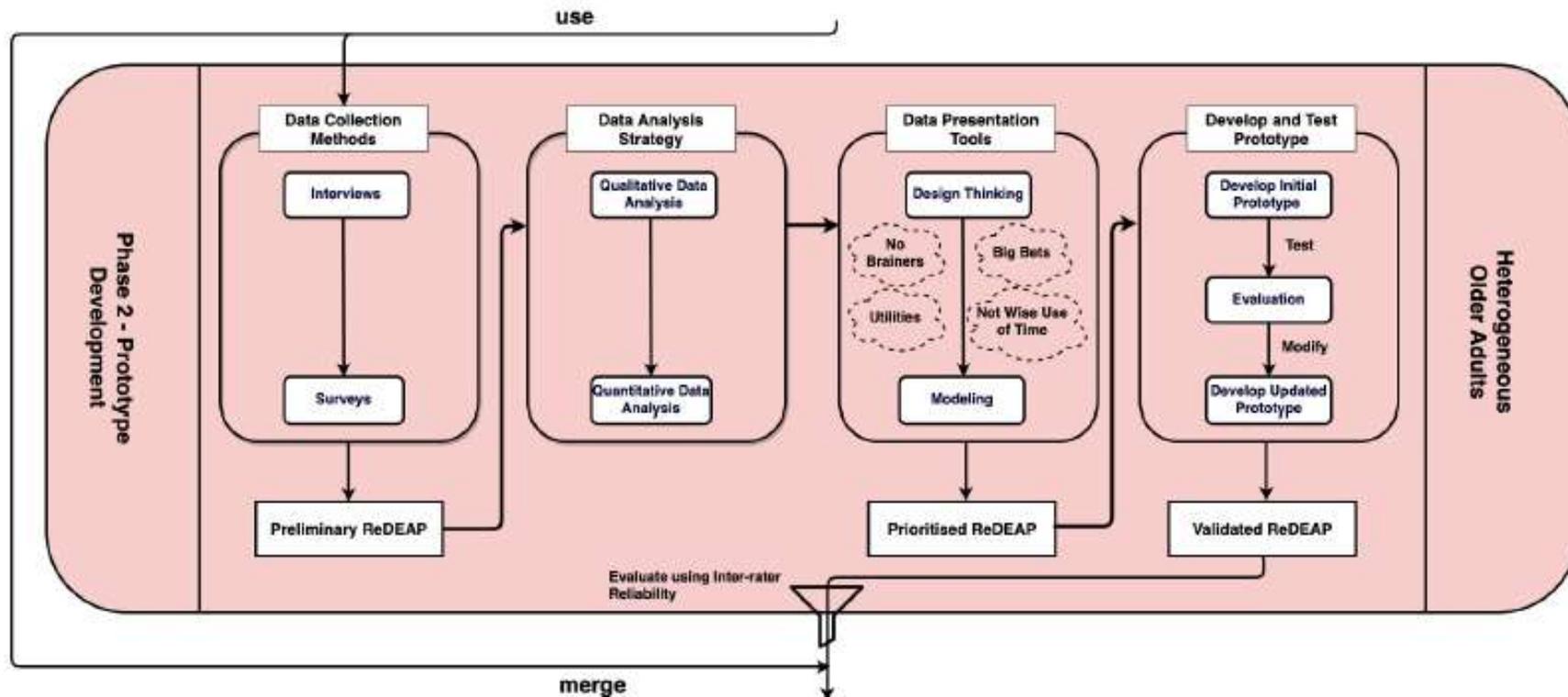
Research Methodology



Research Methodology



Prototype Development



Learnings: using prototypes

- Research should include public and patient involvement
- Use available tools and techniques
- Develop a needed and tangible prototype
- Involve other stakeholders

Public and patient involvement (PPI)

- Increasing use within healthcare
- PPI: “research being carried out “with” or “by” members of the public rather than “to,” “about” or “for” them”
- Include non-researcher stakeholders from research design stage
 - Design the research project
 - Questionnaires
 - Feedback on research stages
- Research outcome improves
- How can we integrate PPI in our future research?

Available tools and techniques

- Interdisciplinary research requires variety of tools and techniques
- System Usability Scale (SUS)
 - Questionnaire easy to use for OAs
- Evaluation with Cronbach's Alpha
- Use of Design Patterns

Prototype

- ReDEAP was about developing recommendations
- Prototyping invaluable method
- Consider value of prototype to user group
- Golden Jubilants: mediator to keep OAs connected with communities through volunteering
 - Aim: reduce social isolation
 - Investigated OA interests
 - Relevant prototype ensured engagement

Premise for development of Golden Jubilants



Social Networking Services help to overcome social isolation

but



Uptake by older adults is low

- Due to privacy issues, lack of knowledge, difficulty in operation and lack of purpose

Why a volunteering system?



Socially Isolated older adults

effects



Value of community



Can we provide solutions?



HELLO!
"We don't grow older, we grow riper!"



Please touch to Start
"Finding Volunteer Opportunities, Play your favorite music and more!"



I am your constant companion!
"I can help you find volunteer opportunities"

What is your name please?
my name is jason kamy

Hey jason kamy ! Let me know if you need any help or get stuck looking for opportunities.
can you please tell me what do you know about me?

No worries! We are fully compliant with GDPR laws. Can you just tell us your email or mobile number?
kamy@gmail.com

Following are the details saved in our system about you:

- 1. Name: Sarah beecham**
- 2. Email: kamy@gmail.com**
- 3. Phone Number: 1.234.5678988**

 Please Click and Write here to start! 

Other stakeholders

- IBM: industry partner
- Input from those with technical experience
- External group input broadened our thinking

Conclusion

- Collaboration with an interested user group
- Strong and useful outcomes
- Current project: identifying recommendations for health information systems for clients with mild intellectual and developmental disability
- Prototyping provides level of objectivity
- Excellent outcomes for healthcare research

Acknowledgements

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Thank you



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For what's next