Co-Designing a Digital Solution using PROMs for People with Dementia

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Patient Reported Outcome Measures

PROMs are **medical questionnaires** used to **assess** and monitor a patient's condition and quality of life from **their own perspective**.

Routinely completed by patients during treatment PROMs are an effective way to **measure success**, **influence future decision making** and **give patients a voice** on the care they receive.

A New Approach

While PROMs have seen increased use & success in various healthcare fields[1], **traditional PROMs** can **be challenging for People with Dementia**.

One possible way to improve PROMs is the use of the **Intelligent Virtual Assistants**, devices that allow users to **communicate, interact** and **respond** using a variety of different ways such as **Text**, **Voice** and **Visuals**. This approach gives users more ways to communicate their PROMs, collect them instantly and adapt to patients changing needs

Co-design Study

In order to improve PROMs, we plan to conduct a study where will invite **People with Dementia** and their **Carers** to participate in multiple workshops where they will be tasked with **testing** and **developing** various **prototypes** that will allow them to complete PROM questions using a variety of different methods including:


Text Based

Verbal/ Audible

Visual/Pictorial

Mixed methods

Participants will then be asked to **provide feedback** on their experience using the prototype and how best we can improve the prototype, the questions that we ask and the overall process. They will then be asked to vote on which features they would like improved.


Initial Research — Prototyping — Testing — Analysis — Product Release
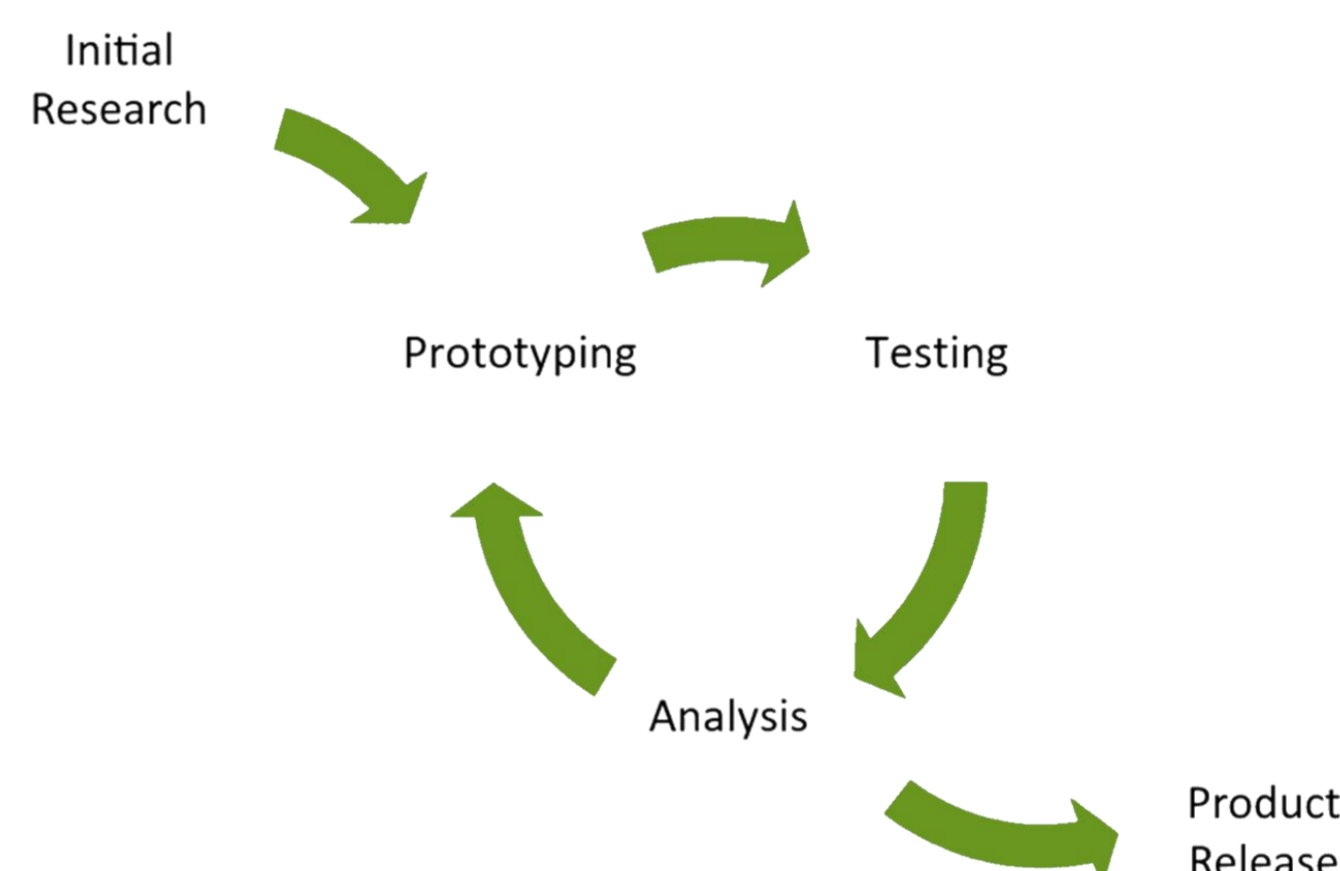
All this Feedback will then be **analysed** in order to develop a **new prototype** that will be **re-tested** by participants in the next workshop. This process will be **repeated** through **multiple iterations** with each prototype improving on the previous.

We plan to go through 3 iterations of workshop development:
- **Low Fidelity Prototype:** concept sketches which can be drawn on paper and used to come up with initial ideas for the applications overall appearance and features.
- **Wireframe Prototype:** a digital version that shows the skeleton and layout of menus and elements in the application and how they interact between pages.
- **High Fidelity Prototype:** a digital revision that aims to replicate a functional app and styling that offers a high level of interactivity and refinement.

These processes will be repeated until a final functional prototype is created.

Our study follows the concept of **Co-design**, where key stakeholders (People with Dementia) are directly involved in every step of the design and development process for this application. This allows the people who will be using the app the most to have a direct say in what features are included. This makes it better suited for future implementation and adoption on a large scale as the app will have been tailor built **for People with Dementia, by People with Dementia**.
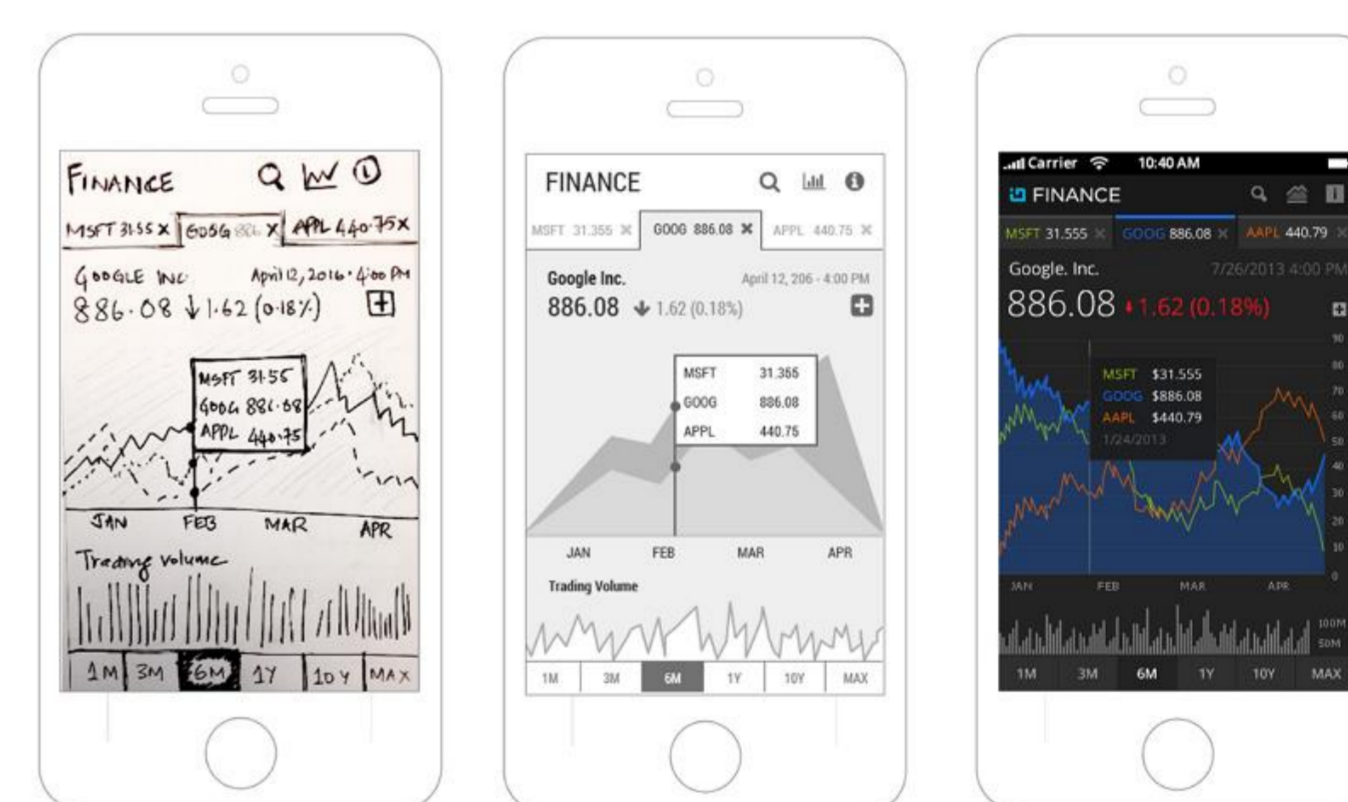
Stages of Prototyping: Low-Fidelity, Wireframe and High-Fidelity Prototypes[2]

Next Steps

The study has recently received **NHS IRAS approval** and we are currently cooperating **with NHS Forth Valley** to recruit volunteers to participate in the study. Once enough participants are recruited, the study will take place over a period of 6-9 months with the results then being analysed and to be published with the final thesis by the **end of 2021**.

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CAPITA

Resources

1. Nick Black, 2013, Patient reported outcome measures could help transform healthcare. BMJ British Medical Journal. 2013;346 https://www.bmj.com/content/346/bmj.f167
2. Summer Ye, 2018, High-Fidelity & Low-Fidelity Prototyping: What, How and Why?. http://ow.ly/tcn230mb5Uy
3. Icons designed by Iconpic & Iconnice from Flaticon, https://www.flaticon.com/