

POSTCARD Memories

Developing a mobile postcard application using
a novel approach to multi-level system design

Research Note presentation at GRAND 2014 by
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Research objectives

We seek to gain a deeper understanding of narrative storytelling in general, and collaborative digital/physical artifact creation and collection alongside narrative arrangement in particular on a tablet computer, with a specific population of caregivers, and associated geriatric outpatients at Toronto Rehabilitation Institute who have mild to moderate dementia and memory loss of the Alzheimer's type.

Participants

- Elders with a diagnosis of "Early Stage Dementia" (ESD); or mild to moderate dementia of the Alzheimer's type, and their:
- Family members
- Friends, and/or caregivers



A tablet application with digital and physical outputs

1. Digital *Postcard Memories* gallery and book;
2. Physical postcards, which can be mailed through Canada Post (using their API which is embedded in the application) and/or can be printed from within the application;
3. A *Postcard Memories* book, which will allow collected postcards to be arranged and rearranged by the elder and their family members or caregivers into a pleasing narrative format.

Research goals

- Sharing, re-telling, and preserving memories
- Use of speech and facial recognition software to identify changes associated with dementia
- Study of engaged and sustained social interactions with an original touchscreen tablet computer application



Research Design

- Create a concept map of the research design and methodology to reduce # of slides here.

Flowchart development

- We created a flowchart to visualize the application workflow with the software application, "Inspiration" (v. 9)



INSPIRATION - COMPREHEND. CREATE. COMMUNICATE. ACHIEVE MORE.

OVERVIEW

WHAT'S NEW IN INSPIRATION 9

EXAMPLES

TESTIMONIALS

Inspiration⁹ Grades 6 - Adult



Comprehend. Create. Communicate. Achieve More.

The screenshot displays the Inspiration 9 software interface. The main workspace shows a diagram with nodes for 'American Revolution', 'Political Events', 'Civil War', 'The Emancipation Proclamation', and 'Scientific Discoveries'. A video player is overlaid on the diagram, showing a play button. The video player's progress bar indicates 00:43 of 01:53. To the right of the video player is a table of contents for the video.

Diagram	01:53
Outline	01:39
Map View	01:12
Presentatio	02:25
Conclusion	00:14

Inspiration v.9 [8] is a rapid concept mapping program that allows users to:

- Create text on a single mouse click;
- Rearrange the text on the page;
- Change the shape and colour of the text bubbles according to hierarchy and meaning;
- Add directional arrows to link relational text bubbles;
- Change the line thickness and stroke of the arrows and textboxes.

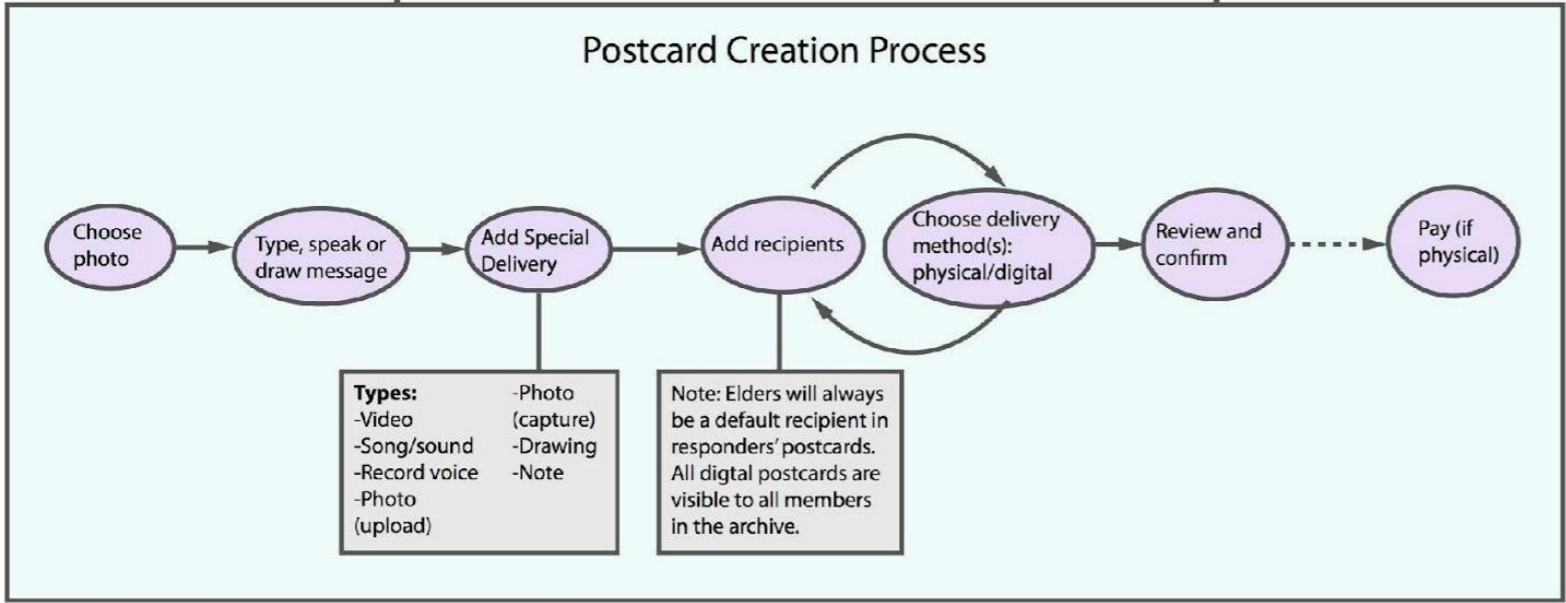
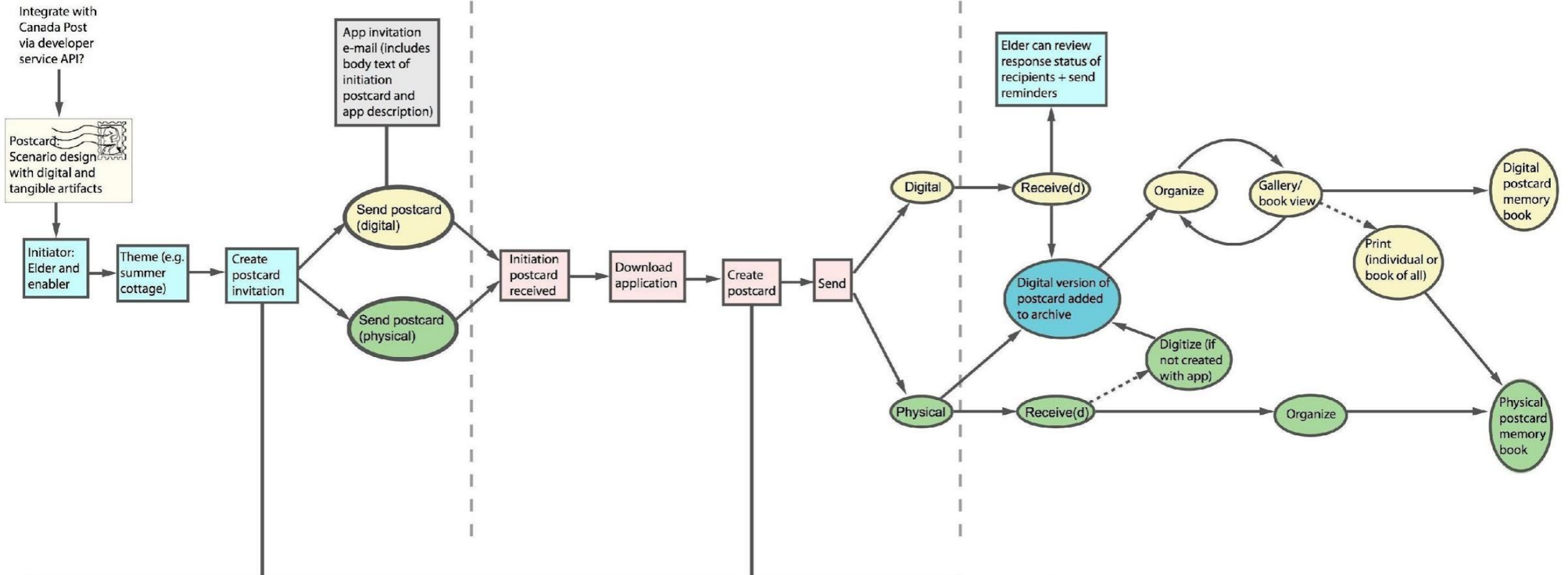
Flowchart development

- The flowcharting process elicited three stages involved in postcard creation: initiation; response; accept, review, and organize.

Stage 1: Initiation

Stage 2: Response

Stage 3: Accept, Review and Organize

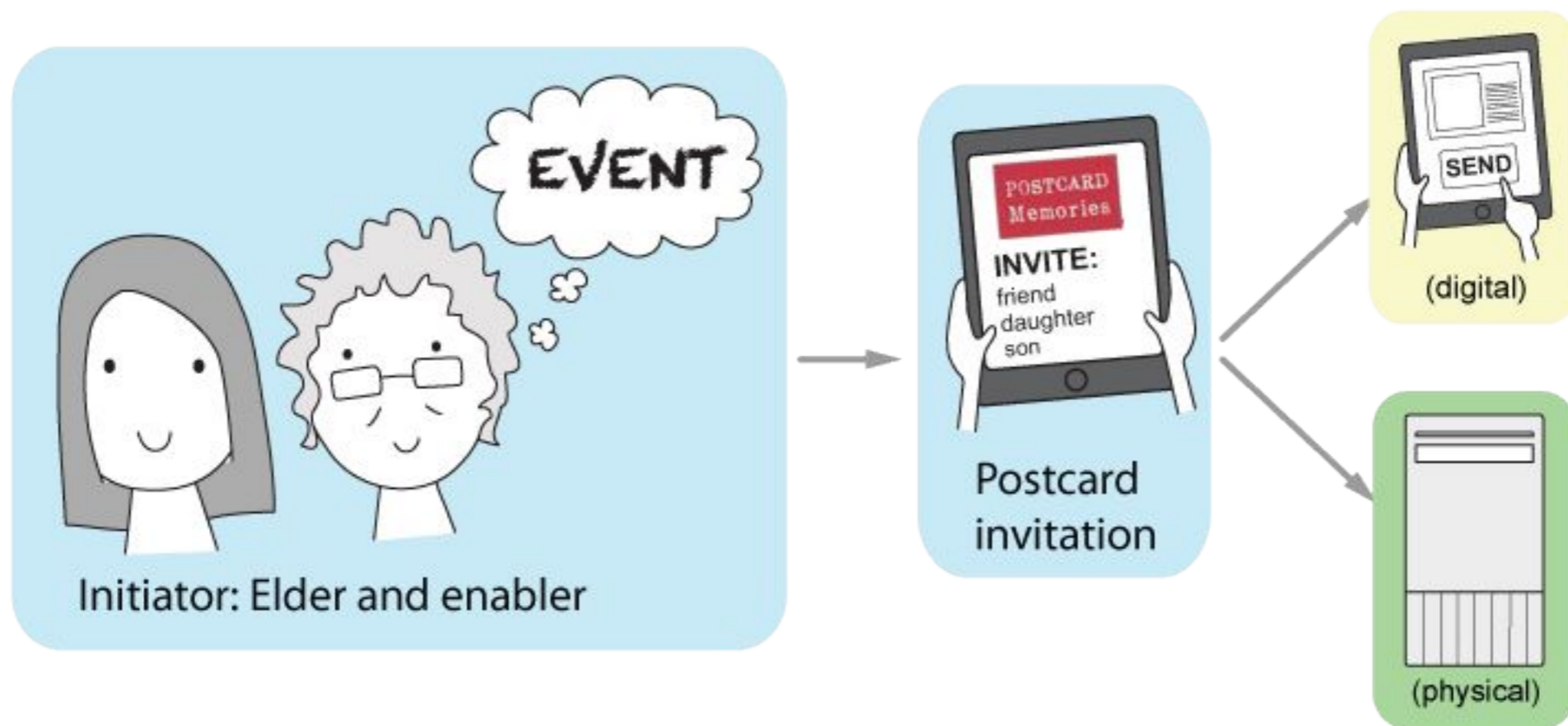


Legend

- Actions completed solely on the part of the elder/enabler
- Actions completed solely on the part of the responders
- Notes and additional information
- Actions relating to physical postcard objects (primarily elder but also responders)
- Actions relating to digital postcard objects (primarily elder but also responders)
- Actions relating to both digital and physical postcard objects
- Actions involved in creating postcard objects (both elder and responders)
- Direct relationship between steps
- - - → Indicates an optional step

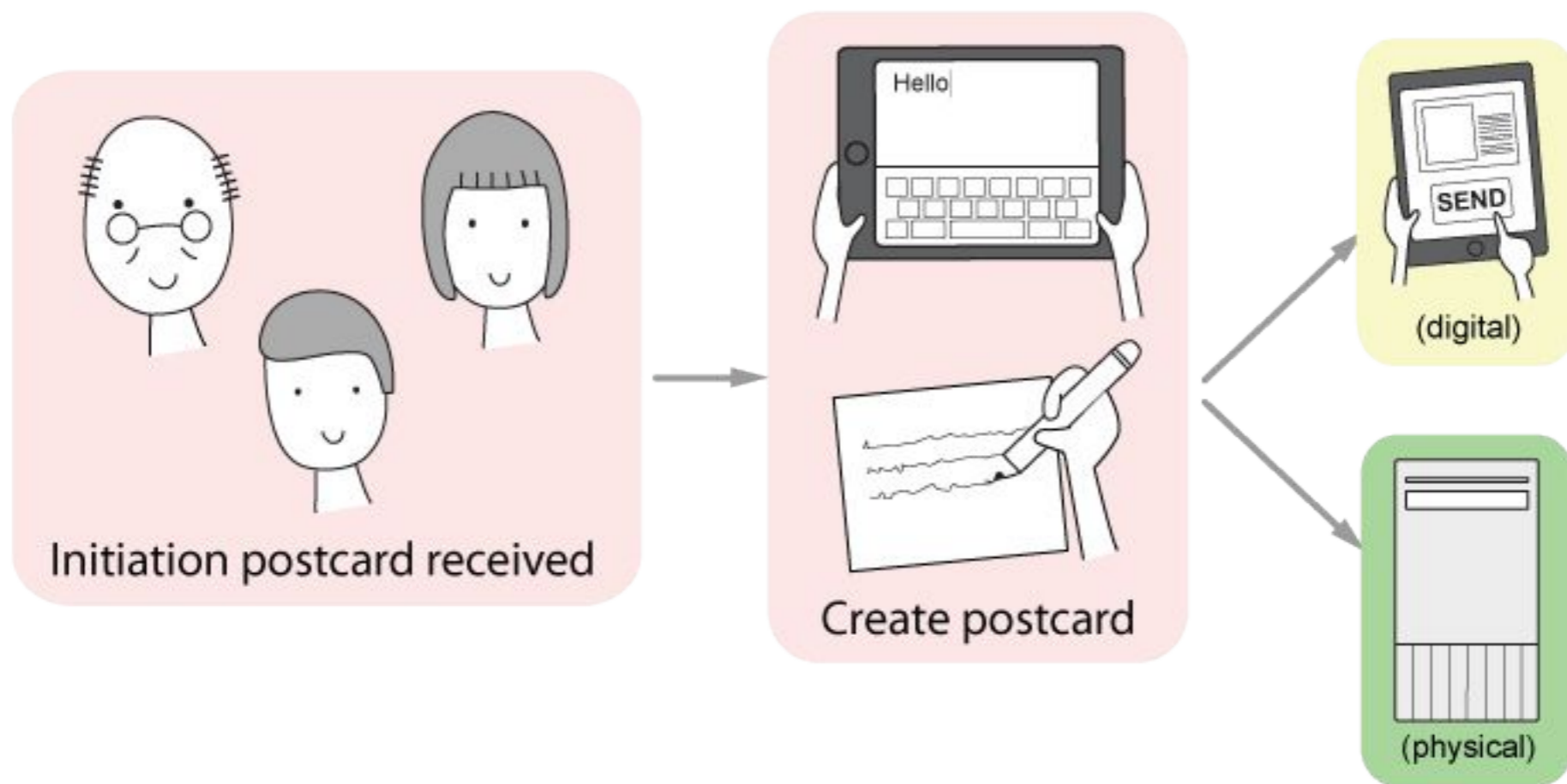
Stage I: Initiation

Participants create physical/digital postcards inviting family members to respond to an event or activity concerning the elder. Audio, video, photos, drawings or notes can be attached to the digital postcard.



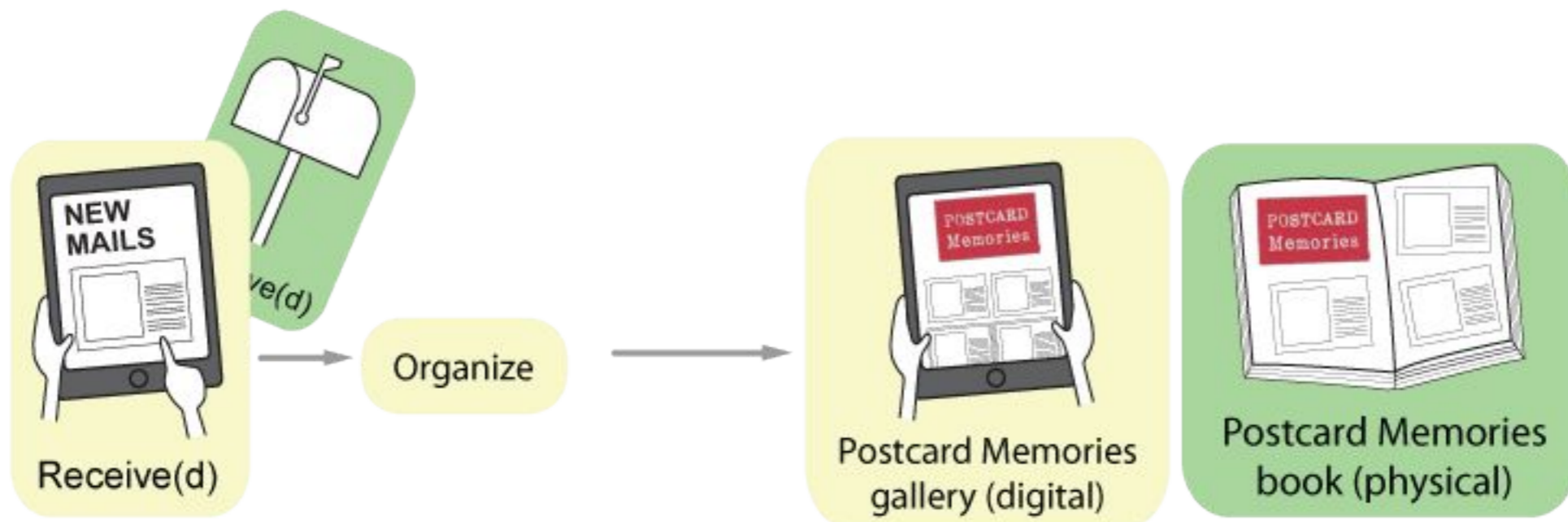
Stage 2: Response

Initial postcard is received; recipients may create their own postcard to respond to the initial postcard and send postcards to others in their group.



Stage 3: Accept, Review & Organize

Digital and physical postcards are archived; postcards can be organised into a pleasing narrative which can be viewed in the Postcard Memories gallery. Postcards can be printed and/or compiled into a digital or physical Postcard Memories book.



Benefits of using Inspiration for research design/ design research projects:

- A diverse team of programmers, interface designers, architects, and social scientists can ask questions at the development stage, and make quick decisions, changes, and suggestions;
- Flowchart be saved in different formats, such as a PDF, which the entire team can work with.
- Significantly, creating the flowchart at the same time as writing the research ethics protocol was advantageous, as it reassured the team that our study research design matches the application design, and vice-versa.

Future directions of our research

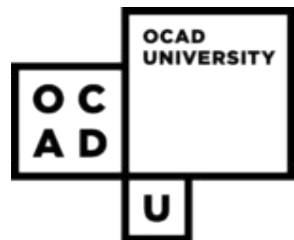
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Acknowledgements

We would like to thank Dr. Ronald Baecker for his original inspiration for this project; Dr. Frank Rudzicz (Toronto Rehabilitation Institute, University Health Network); and research assistants at the Mobile Experience Lab for their contributions: Ruzette Pangan Tanyag, Pavika Chintraruck, Pei Zhou, Jessica Peter, and Maziar Ghaderi.

Project Website:

<http://research.ocadu.ca/mobilelab/project/elders-memory>



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