Considering Older Adults in Mainstream Technology Development

Cindy Riemenschneider

ICIS 2022 Considering Older Adults in Mainstream Technology Development

Panel

Introduction

Older adults are often left behind or rather not considered in the initial mainstream development of technology. For example, it has become apparent that personal device hardware and software vendors view older adults as a catch-up group, which is a group that is addressed after the mainstream users are successfully engaged in the newest technology. Often older adults are seemingly missed as a focal group for inventing, designing, prototyping, and deploying the next devices, apps, and the internet of things. In this work, devices may include hardware like smartphones, tablets, wearable technology, and apps, including social media, news sites, and health software. However, we acknowledge that older adults are a focal group for technology that addresses age-related issues. And research reveals that older adults may carry on an active life into their later years and are willing to use technology when meaningful benefits are evident. Moreover, the independent and active older adult may require less social service (Choudrie et al., 2021) in an aging world.

The panel's work is to consider and recommend reasons that vendors might include, not exclude, older adults in developing socially acceptable mainstream technologies. Mainstream technology is "any technology that is intended for general use rather than for use entirely or primarily by people with disabilities" (Institute of Medicine 2007, p. 189). Mainstream would include technology that was not designed for people with disabilities yet has been adapted to address people with disabilities. However, more universal designs (an inherent design where adapting is not necessary) are developing slowly (Institute of Medicine 2007). Awareness of the need for technology differences in the disparate population of older adults and their variables is a start for the design process. Addressing these variables as barriers to technology acceptance may reduce the avoidance of technology by older adults (Caprani et al., 2012). Consideration of the cognitive age of older adults versus their chronological age is paramount in application design (Ghasemaghaei et al., 2019). Moreover, even the experienced users of today's technology will need to adapt to health changes that require a different navigation use as they rely on old technology habits (Ganor & Te'eni, 2016).

A key to designing technology that older adults will use is "… to reject a mindset that aging is disabling, to understand that aging is a process, and to recognize more positive aspects of that process" (Knowles et al., 2021, p. 67). This effort would be at the innovative stage of technology development and not as an afterthought. The panel will prepare a follow-up report consisting of its discoveries and recommendations or determinations and submit it to the fast track of *CAIS*.

Issues

Each of the panelists conducts research in the broad area of healthcare IT. However, we will focus on how technologies and systems can assist the elderly by addressing various issues regarding mainstream technology development addressing this specific age group. We will begin the panel with specific questions offered by the moderator. However, the audience will have multiple opportunities to ask questions, so the panel is an interactive event filled with audience participation. Some of the issues that could be addressed include

Panelists:

The following people in the information systems discipline are the invited panelists.

Dr. Michael Milovich Jr., Associate Professor in MIS, Rowan University, Glassboro, New Jersey, US

Dr. Lysann Lysard, Associate Professor in MIS at Telfer School of Management, University of Ottawa, Ottawa, Ontario, Canada

Dr. Iris Reychav, Associate Professor in Industrial Engineering & Management, Ariel University, Ari'el, Israel

Dr. Heiko Gewald, Professor in Information Management, Neu-Ulm University of Applied Sciences, Ulm, Germany

Moderator:

Dr. Cindy Riemenschneider, Professor in Information Systems & Business Analytics, Baylor University, Waco, Texas, US

Panel Structure:

The timing for the session is 60 minutes, and the following outline illustrates the time allocation.

7 minutes: Moderator introduction of each panelist and asks the first question to each panelist.

The floor is open to audience questions. If there is a pause in audience questions, the moderator will follow the proposed agenda:

20 minutes: **Topic 1 – Have IT vendors accommodated or not accommodated older adults**

> * What are prominent definitions of social inclusion?

> *How do you encourage vendors/software developers to consider cognitive age versus chronological age in new app development?

> * How do older adults (people age 65 years or older) fit in that definition?

25 minutes: **Topic 2 – Key interpretations that placed older adults as a socially excluded group**

- Why should older adults be included in the mainstream focus of new technology?

- How have IT vendors accommodated or not accommodated older adults?

- What are some key interpretations that placed older adults as a socially excluded group in mainstream technology?

8 minutes: The last question from the audience, wrap-up, and gratitude to panelists

Participation Statement:

Dr. Michael Milovich, Dr. Cindy Riemenschneider, Dr. Lysann Lysard, Dr. Iris Reychav, and Dr. Heiko Gewald have committed to attend the conference and serve on the panel if the panel is accepted.

Biographies:

Michael Milovich Jr. is an Associate Professor of Management Information Systems within the Rohrer College of Business at Rowan University. He has co-authored multiple conference proceedings and written papers for Communications of the Association for Information Systems, Journal of Information Systems Education, and MIS Quarterly Executive. Additionally, he has refereed papers for journals, such as Business & Information Systems Engineering, European Journal of Information Systems, and The Journal of Strategic Information Systems. Mike has over 30 years of technology experience in small and large companies. His work has been performance-focused in IT vision, convergent strategy, and tactical foresight as a business champion. He has leading expertise in cost controls, developing and managing teams, recruiting, and retaining key reports, worldwide-integrated IT solutions, and process improvements. His experience is in operations and back-office technology roles. In addition to consulting, he is a former vice president of information technology for a Fortune 500 company, responsible for the company's global data

center. His community service work includes the role of former city council president in a suburb in Ohio. (856-256-4788, https://business.rowan.edu/faculty-staff/milovich-faculty.html, milovich@rowan.edu)

Cindy Riemenschneider is a Professor of Information Systems in the Hankamer School of Business at Baylor University. She also holds the Helen Ligon Professorship in Information Systems. Her publications have appeared in *MIS Quarterly*, *Information Systems Research*, *Journal of Management Information Systems*, *Journal of the Association for Information Systems, Information Systems Journal*, *European Journal of Information Systems*, *IEEE Transactions on Software Engineering*, and others. She currently conducts research on IT workforce issues, women and minorities in IT, IT professional turnover and turn away intention, and ethical issues surrounding IT use. She served for 6.5 years as Associate Dean for Research and Faculty Development during her time at Baylor University. (254-710-4061, https://business.baylor.edu/directory/?id=C_Riemenschneider, C_Riemenschneider@baylor.edu)

Lysann Lysard is an Associate Professor of Management Information Systems and MBA at Telfer School of Management, University of Ottawa. She received a Ph.D. in Information Systems from the University of Toronto's Faculty of Information. She also holds a Master's degree in Information Technology (M.Sc.) from Téluq - Université du Québec à Montréal (UQAM), and a B.A. in Communications from UQAM. Professor Lessard's studies have been funded by the Social Sciences and Humanities Research Council (SSHRC), the Fonds de recherche du Québec - Nature et technologies (FQRNT), and the Ontario Graduate Scholarship Program (OGS). She currently holds a grant from the Natural Sciences and Engineering Research Council of Canada (NSERC). Her many scholarly publications include the chapter article "Service Systems Design: An Intentional Agent Perspective," published in 2013 in Human Factors and Ergonomics Manufacturing & Service Industries, 23(1), 68-75, with co-author Eric Yu. (613-562-5800 x 2468, https://telfer.uottawa.ca/en/directory/lysanne-lessard/, Lysanne.Lessard@telfer.uOttawa.ca)

Iris Reychav is an Associate Professor in the collaborative learning technologies lab at Arial University. She holds B.Sc. and M.Sc. in Industrial Engineering and Management, Ben Gurion University of the Negev. Dr. Reychav spent 10 years at Motorola in the field of information systems. She earned her Ph.D. from Bar-Ilan University's Graduate School of Business Administration and did her post-doctoral work at Tel Aviv University in cooperation with INSEAD. She served as the Head of Industrial Engineering & Management Department and Head of the Graduate Program in Robotic & Human Factors between 2015-2017. Fostering the experience of learning with disruptive technologies, Dr. Reychav emphasizes teaching and research in tight connection with industry. She believes in the importance of exposing the students to real-life practices and enhancing their skills to work in the environment of the 21st century. In this context, She established a collaborative lab where she holds undergraduate courses in information systems and customer relationship management in an interactive team methodology. (972-3-9066322, https:// www.ariel.ac.il/projects/trp/GeneralInformation.asp?numRec=59&numtafrit=1&id_lang=1&d=, irisre@ariel.ac.il)

Heiko Gewald is a Research Professor of Information Management and Director of the Center for Research on Service Sciences (CROSS). He holds a MA in Business Administration from the University of Bamberg, Germany, a European Master of Business Science from Heriot-Watt University Edinburgh, the UK, and a PhD in Information Systems from Goethe University Frankfurt. His research focuses on HealthIT, the use of digital resources by the aging generation, and outsourcing. Dr. Gewald often speaks at conferences on the use of digital resources by the aging generation. His work has been published in the Journal of Economic Commerce Research, Information Technology and Management, International Journal of Electronic Finance, Health Systems, Communications of the ACM, and Information & Management. (+49 731-9762-1521, https://www-hnu-de.translate.goog/heiko-gewald?_x_tr_sl=de&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc, heiko.gewald@hnu.de)

References:

Caprani N, O'Connor NE, Gurrin C. (2012). Chapter 5: Touch Screens for the Older User. In *Assistive Technologies* Edited by Auat Cheein FA. Intech; 2012:95-118 (ISBN 978-953-51-0348-6).

Choudrie, J., Zamani, E., & Obuekwe, C. (2021). Bridging the digital divide in ethnic minority older adults: an organisational qualitative study. *Information Systems Frontiers*, 1-21.

Ganor, N., & Te'eni, D. (2016). Designing Interfaces for Older Users: Effects of Icon Detail and Semantic Distance. AIS Transactions on Human-Computer Interaction, 8(1), 22-38.

Ghasemaghaei, M., Hassanein, K., & Benbasat, I. (2019). Assessing the design choices for online recommendation agents for older adults: older does not always mean simpler information technology. *MIS Quarterly*, *43*(1), 329-346.

Institute of Medicine (US) Committee on Disability in America; Field MJ, Jette AM, editors. The Future of Disability in America. Washington (DC): National Academies Press (US); 2007. 7, Assistive and Mainstream Technologies for People with Disabilities.

Knowles, B., Hanson, V. L., Rogers, Y., Piper, A. M., Waycott, J., Davies, N., ... & Yuan, I. Y. (2021). The harm in conflating aging with accessibility. *Communications of the ACM*, *64*(7), 66-71.