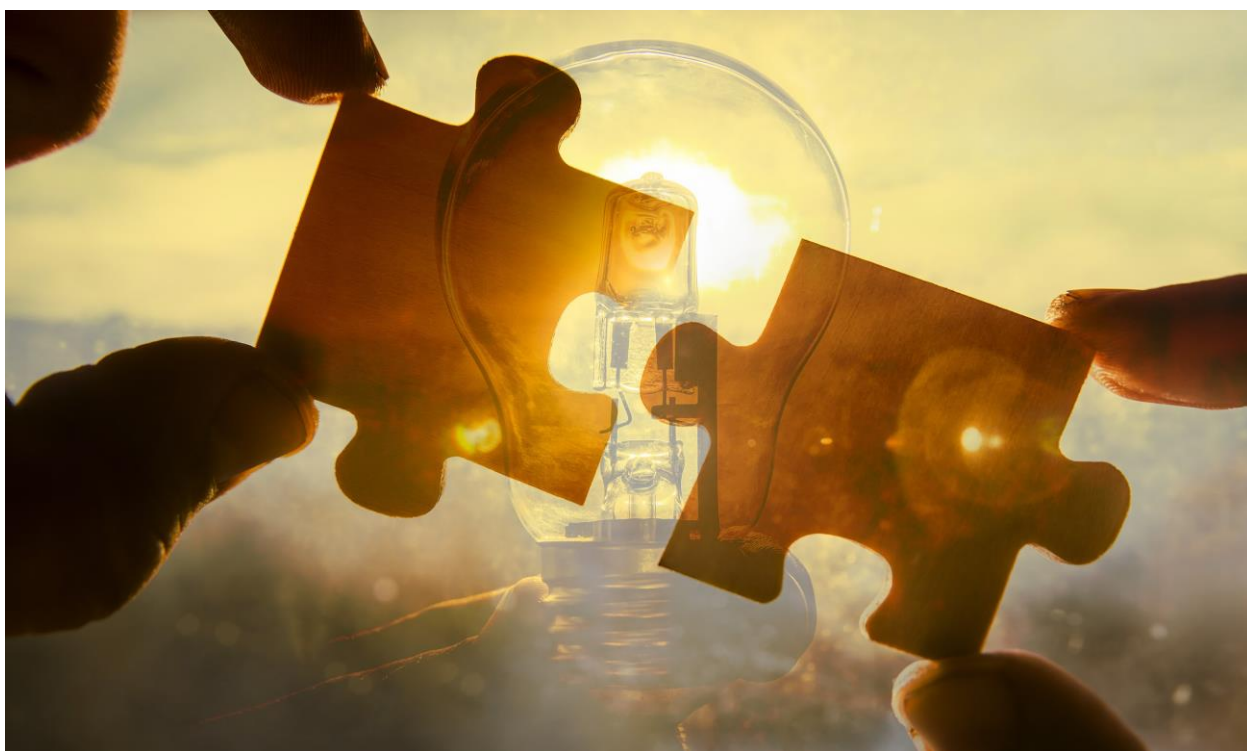




Aging Gracefully across Environments using Technology
to Support Wellness, Engagement and Long Life

Making Connections:

Working Together with Technology to Support Social Inclusion for Older
Adults



Workpackage 7: POLICY-TECH

September 17, 2018
Kitchener, Ontario



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KEY TERMS & CONCEPTS

Gamification

Use of games, digital or otherwise, to understand an issue/develop skills etc.

Innovation

The process where economic or social value is extracted from knowledge, by creating, diffusing, and transforming ideas to create new or improved products, services, processes or policies.

Technology

The application of scientific knowledge for practical purposes.

Regional innovation (eco)system

Refers to the linkages between knowledge producing hubs such as universities and public research labs within a region, and innovative firms and the community. These linkages allow knowledge to spill over between different organizations, increasing a region's overall innovativeness. The ecosystem also includes community stakeholders, and the built environment (such as roads, wireless internet, theatres, restaurants etc.) that contribute to attracting and retaining skilled people who contribute to and build the ecosystem.

Social Inclusion

The ability of individuals and groups to participate in society and thereby improve their ability and opportunity to contribute. This is particularly important for those whose access and dignity may be disadvantaged based on their identity.

Social Isolation

A condition that may be experienced by those who have low quality or quantity contact with others; the severity can vary depending on whether the isolation is voluntary or involuntary. Effects of social isolation can include poor mental and depression, reduced quality of life, and increased chance of premature death.

PREFACE

Launched in 2015, AGE-WELL NCE (Aging Gracefully across Environments using Technology to Support Wellness, Engagement and Long Life Network of Centres of Excellence Inc.) is federally funded through the Networks of Centres of Excellence program. AGE-WELL NCE is dedicated to the creation of technologies and services that can benefit older adults and their caregivers. AGE-WELL NCE encourages research that is user-driven, involves diverse teams from different disciplines, focuses on training programs, partnerships, making outcomes readily available and the commercialization of developed technologies.

The following is a summary report from a knowledge mobilization workshop entitled *Making Connections: Working Together with Technology to Support Social Inclusion for Older Adults*. This workshop was delivered by AGE-WELL NCE's Workpackage 7: POLICY-TECH that includes three specific research projects:

Policy and Regulatory Issues in Enabling Technological Innovation – 7.1 PRI-TECH

This project is interested in policy and regulatory issues in enabling technological innovation. The research conducted in PRI-TECH centres around understanding the current policy and regulatory landscape in Canada related to health technologies for seniors' health, developing recommendations for how policy frameworks might evolve to support development and appropriate adoption of health technology innovations.

Developing Regional Health Innovation Ecosystems – 7.2 DRIVE

This project explores how technology innovations can be fostered and driven in what we are calling Regional Health Innovation Ecosystems (RHIEs). The research team is developing models for AGE-WELL that facilitate partnerships and local collaborations between researchers, government, practitioners, end-users and industry to drive innovation and create technologies and services that benefit older adults.

Data-Driven Decision-making in Healthcare – 7.3 3DHC

The objective of this project is to develop and prove the feasibility of home health monitoring and data-driven decision-making systems. Recent advances in mobile devices, sensor technology, cloud computing, telecommunications and big data analytics can empower older adults and their caregivers to continuously monitor their health.

It is our intention for this report to reflect-back and summarize the workshop for participants, to share our findings with interested stakeholders, and to inspire ways forward. We welcome all feedback.

EXECUTIVE SUMMARY

On September 17, 2018, 73 community, industry, government, research, and non-profit representatives participated in a workshop entitled *Making Connections: Working Together with Technology to Support Social Inclusion for Older Adults*. Participants contributed their diverse knowledge and expertise toward an interactive activity that aimed to develop innovative ideas and solutions for local issues linked to social isolation.

Prior to the workshop, an environmental scan identified the top seven regional **priorities**:

1. Affordable Housing
2. Communication and Information
3. Social Participation and Programming
4. Community Support and Health Services
5. Respect and Social Inclusion
6. Public Transportation
7. Recognition of Diversity

Workshop participants were asked their opinion on what contributes to the social isolation of older adults in the Waterloo region, and their responses were generally consistent with these seven priorities.

Participants worked in groups to brainstorm issues within each of these priorities, and then discussed innovative approaches to address the issues, with a particular focus on novel technologies as part of the solution. The generative discussion identified numerous issues within the region which can contribute to older adults feeling socially isolated, such as inadequate access to public transportation. The technological solutions were rarely complex, and focussed primarily on breaking down barriers to older adults' access to and adoption of technology. Technologies such as virtual reality, digital games and simulations were discussed in the context of accessing programs, and breaking down barriers and biases. The discussion was summarized into eleven emergent **themes** that provide important context to the problems and generated solutions. These included:

1. No Issue Stands Alone
2. Empathy and Understanding
3. Building on Existing Resources
4. Overcoming Funding Structures
5. Developing & Using Innovative Technologies
6. Breaking Down Barriers
7. Looking Elsewhere for Success Stories
8. Focussing on Prevention
9. Accessibility, Affordability and Appropriateness
10. Addressing Privacy and Confidentiality
11. Creating Adaptive Technologies

1. BACKGROUND

Our team of researchers from the University of Waterloo and Wilfrid Laurier University are conducting research funded by the AGE-WELL NCE (Aging Gracefully across Environments using Technology to Support Wellness, Engagement and Long Life Network of Centres of Excellence, Inc.). Through this work, we have explored questions such as:

- How might the policy and regulatory landscape in Canada evolve to better support the development of technology innovations to support healthy aging?
- What regional infrastructure, stakeholders and resources are needed to encourage the development of innovative technologies to support healthy aging?
- What role does 'big data' play in supporting and developing planning and decision-making around innovative age-related technologies?

The research team is now interested in sharing findings with the local community, and believe there is an opportunity to focus on the practical application of our findings to support the improved health and quality of life of older adults in our local Waterloo Region ecosystem. In consultation with a variety of local stakeholders we chose to build on the region's previous data collection and public engagement that identified social inclusion as a priority area. Waterloo Region is one of the most successful and highly-evolved innovation ecosystems, and there is growing interest in developing local capacity to encourage development and commercialization/implementation of novel technologies (products, services, programs and policies) related to health and aging. Social isolation, both complex and with many intersecting factors that impact health and aging, warrants collective action and innovative solutions.

Why a regional focus?

There is strength in numbers, and a shared history of collaboration with our neighbours. Regional initiatives allow for shared strengths amongst partners, creation of networks and trusted relationships, and other benefits such as employment and shared infrastructure which create a virtual cycle of innovative activities.

Why the Region of Waterloo?

Our region is home to world-class universities, research institutes, and a startup scene with one of the fastest-growing tech ecosystems in the world. We are also home to an engaged older adult population who are supported by innovative community services and organizations. At the center of both of these worlds is a collaborative culture and the potential to work together.

Why social inclusion?

Through a number of community consultations with the Region of Waterloo, Wellbeing Waterloo Region, and the University of Waterloo's Network for Aging Research, the researchers were made aware of a mature and committed collaborative of community stakeholders who have been working on the issue of social inclusion in our communities. The root causes of its corollary, social isolation, are closely connected.

2. LOCAL PRIORITIES FOR SOCIAL ISOLATION

To direct our efforts towards addressing issues related to social isolation, we conducted an environmental scan of the work done within the Region of Waterloo to determine a set of locally-identified priorities. The scan focused on reports and publications from within the region, with a focus on those that involved consultation with older adults.

The findings were categorized into 14 priorities (full list below). Of these, the **Top 7** most frequently identified priorities are:

Affordable Housing

Access to affordable housing was identified as a priority, especially affordable housing options that allow older adults to age in their communities.

Communication and Information

Access to timely and relevant information in age-friendly formats was noted as essential for staying connected to current events in a community.

Social Participation and Programming

Social participation and programming includes access, affordability, and availability of leisure, cultural, and spiritual events and activities within the community.

Community Support and Health Services

Access to community and health services within a community is a priority for older adults in Waterloo Region, particularly diverse, affordable, and accessible services.

Respect and Social Inclusion

Relationship development and ties within a community are influenced by the treatment of older adults, including public perceptions, ageism and one's perceived place within the community.

Public Transportation

Public transportation was identified as a priority, especially the provision of affordable, accessible, appropriate, and reliable public transportation.

Recognition of Diversity

Waterloo Region recognizes that there is a lot of diversity within the older adult community, requiring awareness of diverse needs and experiences.

List of All Identified Priorities

1. Affordable Housing
2. Age-friendly Housing
3. Neighbourhood Factors
4. Communication and Information
5. Respect and Inclusion
6. Recognition of Diversity
7. Intergenerational Interaction
8. Intercultural Interaction
9. Public Transportation
10. Personal Mobility/Walkability
11. Physical Infrastructure
12. Social Participation and Programming
13. Community Support and Health Services
14. Civic Participation and Employment

In addition to the environmental scan, we asked participants to disclose their top priorities for social isolation. The responses reflected the findings of the environmental scan, with many participants drawing insightful connections between the priorities, as complex and interconnected issues. Participants pointed out that we need to consider social isolation from systemic, interpersonal, and individual perspectives. Systemic ageism and inequality influence the affordability, accessibility, and appropriateness of programs and services. Interpersonally, life changes and transitions play a major role in social connections and access to needed services. Individuals may experience physical or mental health challenges that impact social inclusion and isolation.



Fig. 1. Working groups participating in a solutions-focused discussion

3. WORKSHOP SUMMARY

On September 17, 2018 we hosted a community workshop aimed at achieving the following **goals**:

- Facilitate meaningful interaction and communication between researchers, industry, government, older adults and other stakeholders to promote knowledge building and exchange.
- Raise awareness of regional capacity and available resources to promote social inclusion for older adults through technology and innovation.
- Increase awareness of AGE-WELL funded research within the region
- Identify opportunities to develop innovative technological solutions that address regional priorities related to building a more socially inclusive community for older adults
- Explore how technology could enable solutions to support socially isolated older adults within the region.

To achieve these goals, the workshop brought together diverse stakeholders from the community, government, industry, non-profit, and research. In total, 73 participants attended the event. Participants were purposively assigned to one of eight tables to ensure diverse perspectives at each table.

Table 1. Attendance Based on Role

ROLE OF ATTENDEE	TOTAL PRESENT
Community (Older adults, caregivers, community member)	17
Government (municipality, social services, etc.)	11
Industry (tech start-up, business, etc.)	8
Non-profit (Alzheimer's Society, etc.)	15
Researcher (institute, university, etc.)	22
TOTAL	73

The workshop began with presentations, aimed at providing all participants with an overview of AGEWELL (and the three AGEWELL projects represented at the workshop), issues around social isolation, and the local priorities for social isolation outlined in Section 2 of this report. The local priorities were kept on display for the duration of the workshop, to help guide conversation. After the presentations, each table turned to a solution-driven and interactive activity, using the priorities as a starting point.

Each table began with round-table introductions. A prompt question, ‘How can technology help build a more socially inclusive community for older adults in the Waterloo Region?’ was displayed at each table along with a list of “idea stimulators” that included the following prompts: problems, technologies, populations/groups, needs, solutions, data, services, policy.

Participants individually brainstormed different responses to the prompt question within the selected priority areas, then shared them with the table. Generative discussion at the tables identified technologies and/or potential solutions to the issues.

Facilitators used the following prompts to guide the discussion:

- **Problems:** Explain each issue you brainstormed individually.
- **Technologies:** What technologies do you think could make a difference and how i.e. databases that

could be combined to provide novel insights, virtual reality for those who are housebound.

- **Stakeholders:** Who needs to be involved in this issue? What are their perspectives on this issue?
- **Needs:** What are the needs of those experiencing the issue and do we have enough information i.e. who is experiencing social isolation, where do they live, how do we find out what they need?
- **Solutions:** Are there other solutions that illustrate how social isolation has been prevented or addressed - with or without technology - what works/what doesn't work, what resources are needed?
 - **Resources:** what human and or financial resources are needed to explore or solve this issue?
 - **Data:** What data would specifically help to clarify the issue or to better design solutions? Do these data already exist? If not, suggestions on how to gather?

Each table took approximately forty-five minutes to work through these prompts (see 4. Results of Table Discussion for summaries of these discussion). At the end of the session, highlights from each group were shared in a wrap-up presentation by a workshop facilitator, followed by a “gallery walk” where they had an opportunity to review the generated notes and outcomes from each table.



Fig. 2 Participants brainstorming solutions for social isolation.

4. RESULTS OF TABLE DISCUSSIONS

The following are summaries of the solution-focussed generative discussion at each table during the interactive activity session. A categorized list of the Problems and Solutions is included in Appendix 2.

Table 1: Affordable Housing

Within the priority area of affordable housing, Table 1 noted that the costs of housing are too high for seniors with fixed incomes, and wait-lists for group or supportive housing are too long. During the initial brainstorming session, it was pointed out that it is necessary to reframe what the terms home ownership and renting should mean and that there should be a shift in housing development to one that emphasized community.

Participants came to a consensus that a shared housing model would be an optimal approach to address the issue and pointed out that this approach to dealing with affordable housing was not novel and is readily used in many communities. In fact, within the group, there were older adults already living in shared homes, citing it as the only way to afford rent in the KW market.

Participants outlined a model whereby older adults rent out part of their living space to alleviate the financial burden of home ownership and at the same time to reduce their vulnerability to social isolation by sharing living space. The discussion indicated that the burden of upkeep associated with the homes also contributes to issues of affordability. In such cases, older adults may also rent out part of their living space at a reduced cost, and in exchange for services related to home maintenance.

The table discussed the barriers to shared housing and out of this, participants noted that KW lacks a readily accessible platform to introduce potential renters to homeowners willing to rent. The table concurred that the region lacks a reliable way to communicate important information (about programs, services etc.) to older adults. Everyone agreed that the Internet is the best platform for wide-scale communication, and that it could be considered in some ways a universal right.

Participants shared examples of other cities that had promoted shared housing. Online applications have been successfully used to connect interested parties and our group agreed that an online application that matches individuals interested in various forms of home sharing would be most beneficial for the Waterloo region. Participants noted that KW has an extensive student population, many of whom would benefit from subsidized rent and able to contribute to home maintenance.

One participant indicated that they had been involved with applying for funding through the government for an online application such as the one the group is proposing for the KW region, however the application was not successful. Funding, especially from the government, for technological innovation and/or services that are age-friendly or focused solely on aging-well or in place, are not readily accepted. Even when funding is granted, it is time sensitive and not always a means to sustain programming after the grant expires. Also problematic, is that those using and developing the technology, and those providing the services, are not involved in funding decisions and those responsible for granting funds are not in the community and may be out of touch with the needs of older adults. One suggested solution was to restructure funding guidelines to adopt long term funding strategies and include input from all stakeholders as to what services are required.

Excessive costs to access the internet and the lack of readily available internet in many rural communities was another noted barrier. A suggested solution is to consider offering government subsidies for older adults to support access to the internet. Government subsidies to telecommunication providers to reduce costs for older adults might also be effective. Additionally, cities could be responsible for providing universal access to Wi-Fi.

Older adults' lack of familiarity with technology and ability to troubleshoot when issues arise is an additional barrier to the application. Older adults and other users may also have concerns about privacy and safety. One suggestion was to provide ongoing, community-based education (i.e. workshops at libraries, YMCA) focused on updating tech related skills and knowledge in older adults to increase knowledge and confidence. Additionally, applications should be designed to be accessed through a secure and trusted site (i.e. City of Waterloo).

Digital devices and applications used to access the internet are not designed to meet the unique needs of older adults (i.e. sensory related issues, movement disorders that impede use). This poses an additional barrier to the housing application. Leverage the knowledge of stakeholders at all levels (i.e. older adults using it, investors, and developers) to identify and address the unique needs of older adults early and often, with an emphasis on co-design.

Table 2: Respect and Inclusion

The group discussed their ideas about how to promote respect and inclusion by reducing ageism that incorporate technology. Some of the ideas that were shared included:

- Respect requires empathy- is there a way to know and promote or share (and by doing so, validate) older adults experiences and stories
- Older adults unfamiliarity with technology exacerbates ageism
- Raise awareness of older adults' issues through gamification of daily challenges
- How to use social media to promote community services and programs
- Use of drama or vignettes to educate/reeducate
- Not all meaningful connection needs to be in-person

The group felt the best way to build empathy and respect for older adults would be for others to “walk a day in older adults' shoes”. This might be a virtual reality experience that included different simulations to address different components of an older adult's life. The group brought up: navigating your community without a car, the emotional isolation associated with social isolation and how it contributes to ageism, and completing activities of daily living with mobility or health challenges as three simulations they would like for decision-makers to experience.

Initially they mentioned policy-makers as an important target population as well as government ministers, local dignitaries and CEO's. This initial target population was people the group felt were change makers or those who would hold influence over others. The group felt that technology developers could benefit from this solution, which would lead to better technologies being developed. They also mentioned future clinicians as good candidates for such a simulation.

The table brought up that this solution might be hard to get funding and buy-in for to have it adopted and that they wanted to ensure it covered the emotional aspects of ageism and isolation, not simply the physical challenges. There was a long discussion about how this solution might not work to change older adults' self-image and the ways they internalize ageist ideas. They thought a separate simulation could be created showing older adults how to link to community support services, and have a positive outlook on the aging process.

They felt that such a simulation would require training or support and felt it was not suitable as an application. They envisioned having an outreach team that could offer workshops and have the simulation equipment (which would be expensive) travel around with them. The table thought using social media could make this idea more affordable. The group thought the public sector was the main stakeholder but agreed there are many companies such as Revera, Chartwell and other robotics companies who could act as partners.

Table 3: Social Participation and Programming + Communication and Information

Table three discussed the relationship between the two priority areas: social participation and programming, and communication and information. They noted that issues with communication often impact the accessibility and appropriateness of programming and support services. For this reason, the table chose to focus on issues related to the intersection of communication and services.

Through individual brainstorming, the issue of communicating with the right people, in the right way, at the right time came up as an issue to explore further. The table asked: how do we find the right people in order to access the right programming and services? The solution that the table brought forward was to develop a mechanism for identifying people who may benefit from programming and services that can reduce social isolation.

When asked which stakeholders would be involved in this process, the table recognized that it is not only health professionals and family members or caregivers that may spot the signs of social isolation, but also those involved everyday interactions. These identified stakeholders included:

- Family
- Neighbours
- Health care team
- Faith community
- Day to day services (such as grocery store clerks or pharmacists)
- Social spaces (such as coffee shops, recreation centres)
- Government services (such as postal workers of the Ministry of Transportation)

Recognizing that such a range of everyday citizens could be involved in spotting the signs of social isolation in older adults, the table noted these people may also be able to refer those at risk to the right services. The table came up with the idea to develop some form of application that could be used to teach everyday citizens about the signs of social isolation, and to provide them with tools or resources that they could pass along to older adults.

The first challenge that the table discussed was around consent and privacy. Training everyday people to be champions for social isolation could involve being intrusive, or compromising an individual's desire for privacy. Another obstacle noted was our individualistic culture which does not promote looking out for those outside our immediate network of friends or family. To get around this obstacle, the table had the idea to embed incentives into the proposed **application**. One participant mentioned the Carrot **application**, which gives points to users for achieving daily fitness goals. The **application** would also challenge our tendency to rely on formal procedures, and leverage informal everyday interactions to combat social isolation.

The table discussed possible funders or developers for the **application**, including: municipal, regional, provincial, or federal governments, LHIN, universities, private sector, community foundations and faith groups.

Table 4: Social Participation and Programming

Table four discussed the importance of meeting people where they are and building a sense of community—both physically by connecting with older adults where they are located/creating natural hub's and environments for people to go, and personally, by making sure we understand what older adults want and not making assumptions about what is good for them. Relationships and relational care were also brought up often by participants. Building trust and making connections was felt to be extremely important. The table talked about the need to do a lot of outreach to find those that really need support.

Through this discussion a lot of barriers/challenges were identified with reaching out and identifying older adults in need, for example those dealing with mental health issues, transportation challenges, those living in rural areas, language barriers, income challenges, trust issues, and needing access to more information and education about services and supports. Additionally, if using technology as a solution, ongoing technology help and assistance would be required, especially if they do not have regular support or live in rural communities without Wi-Fi.

Many felt that information about health services, social events, and programming needs to be more accessible and available and that we need to do a better job of creating equity in community programming. There was discussion that digital communities can be as effective as physical communities (example was given around dementia caregivers seeking support from one another online); and for those that have challenges with leaving their home (for a variety of reasons e.g. transportation, not having clothing they feel comfortable leaving the house in, maybe they don't have dentures and feel uncomfortable, maybe they do not have money to participate in programs, or have mobility or functional issues), technology could be a solution to help them stay connected. However it was noted that technology assistance would be needed as many may find technology hard to learn or overwhelming.

Another common idea that came out is the importance of prevention and primary care and streamlining programs and assessments. Many felt that we need to get away from silos in services and assessments as it is not good for the provision of services and that we need to liberate information so health care providers can access information across sectors (although they understand problems of confidentiality and privacy). Similarly, one participant questioned how do we evaluate current programs and how do we know what is most effective?

Some other generated ideas include:

- Chatbots: a way to send ‘nudges’ or messages to socially isolated older adults
- Courses/services/programming/recreation etc. through a variety of ways and incorporating technology (in person; phone; conference calls; skype)
- Virtual groups/matching system to match people with similar interests
- A service where older adults can get help with their technology needs (television or radio segment). Could develop a helpline for digital assistance—maybe it could be run by students who need community service hours
- A friendship bench (if someone is sitting there, it means that they want someone to sit down and talk with them)
- Former nurses could help people get to and from appointments—they understand information and follow-up
- More presentations/courses for those that are not tech savvy (community centres; presentations in the community; computer courses)
- Providing more caregiver support in workplaces/connecting caregivers (many are caring for loved ones in another city and do a lot of driving)

Throughout discussion, the table kept circling back to ideas around including younger generations in getting older adults connected to technology and engaged. They felt like this could be a reciprocally benefiting relationship. One idea that emerged is to approach a school or college and run some sort of program to connect younger people to older people.

Some ideas were given about what the program might look like:

- AV club could film a segment about technology that is aired on TV;
- 10 minute call in period where older adults could call in or they could pair up in-person
- Learn to play games together (online or in person)
- Learning languages with older adults paired with a student learning another language (they could skype or have phone calls)
- Post-program community get together to bring together the older adults and younger students

There was a lot of discussion around the challenges of finding the older adults that would benefit most from a program like this or just generally how to engage those that really need programs the most. The table asked: how do we share information and access individuals that may not be already connected to the health system?

The table noted some overarching themes that would impact any interventions, including:

- Need for a multifaceted approach to identifying older adults in the community
- Relational care/trust and extensive outreach is needed
- Involving those that want to be involved
- Looking to existing intake services to identify older adults or those that are connected to existing services that would benefit
- Primary care/Long-Term Care
- Community spaces; community centres, grocery stores, technology stores (if older adult is buying an iPad or computer, could you advertise there to help if they have challenges?)
- Flyers, newspaper, radio, television

- The importance of physical spaces and for people to congregate
- Offering a variety of ways for people to participate—using skype, phone etc. to engage those that are unable to attend things in person.

Table 5: Social Participation and Programming

The table brainstormed ideas to address barriers to social participation and programming. Some participants identified cost of public transportation as ‘prohibitive’ and negatively impacts social participation and program attendance. Potential solutions included:

- find a way to subsidize the cost of transportation to bring it in line with the student transit rate;
- develop a subsidized GPS rental program available through the library;
- Create a ride sharing service or carpooling group.

Older adults may face challenges with mobility which contributes to social isolation. Potential solutions to this barrier include:

- Develop technology to support users with physical challenges to navigate the community
- Virtual clubs via live-feed video, Skype, webinars, podcasts
- Enable remote library technologies/interactive assistance tools to share information and resources
- Mobile leisure activities where a rec student travels to different facilities/buildings where older adults live to get them involved in their own setting
- Social gatherings with a community presenter in places where older adults live and includes a live-stream for those not attending in person (e.g. travel education series)
- Telephone visiting.

Accessibility and usefulness of resources (including technologies e.g. applications) and programming for older adults, may be limited due to health challenges (e.g. sensory impairment, cognition) and geography. Potential solutions to this barrier include:

- Provide teaching or mentoring to help older adults learn about resources that are available including facilitating the use of social media
- Better use of large monitors/screens or kiosks to provide information in places where older adults live/visit e.g. libraries, elevators, group residences, etc.
- Develop online community calendar focused on older adult with daily updates
- Make large print books and iPads more accessible
- Mark hard copy versions of information, maps etc. available
- Remove jargon from resources
- Make technology more user-friendly for older adults e.g. touch screens, voice-activated tech, print screens
- Researchers and tech developers should include older adults in the design and advertising of products for older adults
- Develop tool where older adults can provide location where they want to go and all route options are presented
- Develop technology that provides information about activities happening based on interests e.g. meetup
- Provide incentives for older adults (free giveaways, coupons, etc.)

The table raised some overarching issues to consider when developing solutions to address barriers to social participation and programming. These include:

- Requires a systems level approach with efforts at multiple levels
- Programming based on ability not age
- Involve older adults in solutions – e.g. Top 7 Over 70 awards program in Calgary AB
- Engage community champions to spread information– e.g. older adults have relationships with their hairdresser and the lottery salesman at the mall kiosk who see them regularly
- Consider other important audiences e.g. the local LHIN’s resource website was accessed most often by middle age people in Toronto looking at services for their parents
- Responsibility of institutions to monitor clients who are socially isolated and activate the “right supports”.
- Engagement of older adults starts with building trusted relationships
- Build out mentoring programs that already exist in the region
- Pay and train mentors rather than just relying on volunteers.

Table 6: Public Transportation

While affordable housing was raised as an issue, the participants decided to focus on public transportation as their priority issue. The specific issues the table focused on included snow clearing and walkability.

Through individual brainstorming, many ideas were generated. These included:

- facilitating factors for public transit (access to stops, sidewalks, clearing snow on sidewalks as well as bus platforms, benches for waiting)
- flexibility of transit, especially for rural areas (smaller vehicles, different routes)
- how to manage the change when the LRT starts to operate (changing bus routes to align with LRT service – how to communicate?)
- cost/affordability
- losing driver’s license as an important point in a person’s life, and good opportunity to get them some more information.

Through the roundtable discussion, one participant discussed the GRT travel training program, which includes individual public transit training, including a ride-along where the trainer rides the bus with the learner. The table thought about increasing the demand for and capacity of that program by asking the Ministry of Transportation to include information about the training with letters to seniors regarding their license renewal process at age 80.

Another idea involved creating a toolkit of transit alternatives for primary care physicians (esp. at Community Health Centres that serve lower-income older adults). The toolkit would consist of resources for older adults who can’t drive anymore. Presentations and workshops could also help to get information available before the license removal.

The group was interested in exploring the possibilities of shared transportation, especially in rural areas which are now growing faster than urban centres in the region. The table talked about matching up those who need help, with those willing to provide it, but acknowledged the difficulty of vetting, safety and

privacy legislation. Ideas for overcoming those problems included schools as brokers, and a sign in window to signal need for help with snow-clearing.

Table 7: Transportation, Diversity and Healthcare

The first priority area the table discussed was transportation, specifically the issue of older adults driving for too long in order to maintain the personal freedom of having a car. Innovative ideas the table had for this issue included an **application** to bring effects or impact of driving beyond the time you should to life, an equivalent of MADD for driving beyond your ability, an UBER volunteer that would drive folks in need where they want to go, and making bus and train schedules more accessible digitally for older adults.

The table also discussed issues related to housing. Older adults with mental health issues often have few options, very specific needs, and difficulty communicating them. The table generated the idea to create technologies that allow service providers to “walk in their shoes” so that they better understand lived experience and key issues. Another idea generated was to have Airbnb’s for older adults. Older adults who have space in their home who need companionship and help with light chores, could give this away to students who live free. This could be a controlled process with training for good matches. The idea of low cost monitoring of older adults at risk living in affordable housing involves using their own phones perhaps but also have to build services or intelligent systems and algorithms that can report unusual patterns or events. A lack of staffed affordable housing with supportive care could be addressed through policies and programs to support older adults setting up co-ops where they share housing, care for each other, and socialize.

With respect to ageism and diversity, the table generated a number of ideas. To address the issue of biases toward aging adults, online games could be developed that include playing in leagues and then having social time after the shared experience. This could be done to include teams from diverse groups who are only revealed once they start socializing. Additionally, entertainment in nursing homes could be developed to encourage acceptance and exposure to diversity. Other proposed interventions include encouraging the use of reflective language by all and ensuring data privacy and permissioning by **applications** to ensure safety.

The table also had ideas for how to use education to promote intergenerational interaction and to promote awareness of the needs of older adults. This could be done by developing programs that encourage youth and older adults to learn and benefit from one another. Technology could be developed to teach the public about the needs of older adults, beyond physical decline.

In order to engage older adults more in research, better volunteer recruitment platforms could be developed, such as a Kijiji platform for volunteers. In order to address accessibility, technology should be adaptable and accessible, and can utilize social opportunities to introduce forms of technology, such as interactive games.

When it comes to developing innovative solutions to social isolation, there should be councils on aging that contribute to projects. Adaptive technologies that change over time as patterns of use change (i.e. **application** get louder as hearing reduces, tablet screens are less sensitive with Parkinson’s) can be incorporated to avoid static technologies that are rejected or discarded. Decision making should be based on clear information and real choices that are important to users, with potential links to medical records to ensure viability. It is also

important to consider privacy issues related to data collection, and to ensure that data is being used responsibly.

Finally, the table discussed issues related to healthcare. The table discussed the challenge of the increased need for home care with a shrinking workforce. This can be eased through the support for the development and commercialization of products that promote independence, such as autonomous vehicles, wearables, and digital records. There is also the challenge of monitoring older adults as they move through the healthcare system to ensure they receive the supports they need to prevent social isolation. This can be done through the development of algorithms that check for key events related to social isolation. To deliver the right care at the right time, the table discussed developing a platform, like LinkedIn, that could be used by healthcare providers to learn more about their patients.

The table had some additional remarks of note:

- RECYCLE RATHER THAN CREATE NEW - Do we need to continually create new application for digital programs to assist with social connectivity? Why don't we either adapt or improve others that are already out there?
- TRANSITIONS for older adults are so often referred to in negative terms and involve loss (i.e. losing license, selling home, moving to assisted care), rather than with younger individuals where transitions often involve new opportunities or chances to grow and develop. Can we help older adults move from loss to growth? Does giving people a voice address the issue that these transitions are times where they feel that even if they have options, there is no real choice (i.e. they can't ever drive their own car again even if they can take the bus, taxi or walk).
- ASK WHY TO UNDERSTAND - example of the current flooding crisis where people who didn't evacuate weren't just infirmed or obstinate, they had pets who were their family and there were no places they could evacuate to that would take them and their pets
- MAKING CHOICES – older adults will often rely on word of mouth to make good choices. When older adults become isolated they don't have those trusted networks and so they will either retreat or can end up making poor choices.
- IT TAKES JUST ONE – An 'out' manager is a rarity in the nursing home or assisted living context, but having them in that position increases sensitivity. For example, one care facility invited a drag queen show to the home that folks enjoyed, reduced the stigma, and created a positive space for conversation.
- DIGITAL DIVIDE – not just generational, also divides between older adults who are connected and use applications, and those who aren't, between urban and rural. Technology and programming must be intelligently adapted for different needs
- HETEROGENEITY – older adults are not a homogenous group; those building technology and programming must understand segments.

Table 8: Social Participation and Programming

Table eight discussed the need for social participation to be seen as a spectrum, with different meanings for diverse groups of people. Health issues can compact social isolation and access to resources (both mental and physical health) and there is a big challenge when it comes to getting the resources to the people who need them most, and reaching out to isolated people.

Some issues the table brought up around social participation include:

- Neighbours don't know each other- communities are crumbling and this contributes to people feeling alone
- People who live alone are at risk, especially if they don't have any family
- We need to understand who we are targeting- this is a life course issues- not just older adults
- Issue is complicated when agency is transferred from older adult to caregiver (e.g., because of lowered cognition). How do we know who to offer services to if an older adult refuses but a family identifies a need?
- Loss of driving is a major transition to older adults and can contribute to isolation- there are "ride the bus programs" but people don't know about them and their funding is precarious
- Community infrastructure needs to be addressed- age friendly communities include spaces for gathering (like community centers)
- Stigma is a major societal issue- compounded here by many isms- ageism, classism, racism, etc.
- Funding that is currently available for programs that might help socially isolated people is usually time limited- pilot fatigue
- We need to advocate for "social participation" to be a basic need
- New immigrants- access to information- language and cultural barriers- not enough to "google" programs at community center, you don't know what it will be like to go there and it is intimidating
- More could be done at the regional level to market available programs- is this the regions responsibility? What would this look like?

The table discussed technologies that could be used to address these issues, noting many of the current solutions use technologies. One innovative solution the table focused on was a co-housing solution modelled on current pilots with Toronto's Senior Strategy to partner University students with older adults living in the community who have extra space and a need or desire to live with a student. The table recognized that it is important to consider that simply being with someone else does not ensure meaningful interaction nor prevent loneliness. The technology in this case is an innovative program to support new model of housing in the community. Components of the intervention might include help with applying to this program and then monitoring success, which could potentially take the form of an **application** and include connectivity across a network (digital or otherwise) of those involved in the program to provide tips, information, and support.

Stakeholders who might be involved in this type of solution include:

- Older adults and caregivers
- Service providers
- Local tech companies
- Velocity at UW (startup incubator)
- Communitel (innovation hub)
- HackingHealth (not-for-profit)
- Community service providers (like those around the table, e.g., social planning council)

Solutions such as this have been implemented in other Canadian communities. Moving forward, work would need to be done to: identify those who are experiencing social isolation and what their needs are; identify a sustainable funding model; measure impact to evaluate program success; develop an **application**; and understand processes to make appropriate matches, train staff, etc.

5. CONCLUSIONS

The inclusion of government, researcher, industry, health system and community perspectives enriched our generative discussion to conceptualize enabling technologies to address social isolation in older adults residing in the Waterloo Region. The inclusion of older adults in this workshop reflected the importance of their involvement in technology research and development at the earliest stages to ensure that solutions developed for them address their actual rather than assumed needs. While the workshop was limited by time and the availability of participants with important expertise and knowledge, the diversity of perspective and skill was an important factor in both understanding the issues, but also in conceiving potential solutions.

Despite having a tech focus for this event, the table discussions were broad and solutions reflected the rich diversity and experience at each table. Current and suggested technological solutions were discussed in the context of programs, services or resources presently in use, and helped underscore that novel solutions generally evolve rather than disrupt, and thus must be integrated and work within current systems. Solutions tended to focus on highly practical but important issues such as affordable housing, transportation and access to services; and while some regional priorities, such as civic participation and employment, were not addressed this was more of a reflection of individuals' interests on the day rather than its importance or relevance to the issues of social isolation.

The workshop participants generated 97 solution concepts to 38 identified problems related to social isolation in the older adult population. It is by no means exhaustive; but the table discussion narratives and group summary of problems and solutions provide the structure and context for constructive future discussion and actual solution development.

Finally, the table discussions provided some insights which we have structured into a narrative along 11 themes. These themes can be used, in concert with other data, to guide the further development of a regional response to the issue of older adults' social isolation, and the role of technology in prevention or mitigating its impact.

1. No Issue Stands Alone

It is important to consider the interconnectivity between all of the major priorities and issues that contribute to social isolation. While participants at each table were interested in delving deeper into one or more issues, it was a challenge to maintain focus on one specific area. Social isolation is one response to our complex community environments where very little is predictable, constant or independent. As such the region's response must evolve with their understanding of the issue and how it intersects with other issues and system components, and the variables which exert the most control. Structural and systemic problems such as the affordability of internet access and institutionalized '-isms' exacerbate social isolation, and create an additional layer of complexity.

2. Empathy and Understanding

It is important to learn from and with those with direct and lived experience. Older adults should be a part of developing any solutions or technologies, to ensure it meet addresses their actual rather than assumed needs. Many of the solutions or big ideas participants had involved building empathy for older adults (i.e. simulation, training, and applications).

3. Building on Existing Resources

There is no doubt that some technologies, such as smartphones have changed the world, however our obsession with developing the latest ‘gadget’ causes us to overlook novel uses or repurposing of older technologies. Taking a strengths-based approach can build on what already works, and in collaboration with users communities take it further to address important gaps and needs. For example, some tables discussed adapting existing platforms like LinkedIn or Airbnb, or repurposing old technologies to meet specific needs of older adults. Others discussed leveraging existing relationships to support older adults in new ways.

4. Overcoming Funding Structures

The challenges around securing funding present a barrier for many innovations. Participants noted from experience that funding often will take the form of grants, which do not always support sustainability and long-term impact. Available funding can also have narrow goals and objectives, and limit proposed projects. Seeking unique partnerships with community members, and building at scale through regional cooperation may be unexplored avenues.

5. Developing & Using Innovative Technologies

When developing innovative technologies or programming, it is important to keep the end user at the front of mind. For older adults, supports may be needed to introduce new technologies or enable access to programming. The adult population over 65 is not a homogenous group - they have varying familiarity, interests and abilities when it comes to manipulating technology, so it is important to have appropriate supports available. Too often, their ability to access programs or supports depends upon their, their family, or friends’ ability to access and navigate online resources. Some tables suggested that without enshrining the right to accessible and affordable internet access, we risk creating a systemic digital barrier that excludes our most vulnerable.

6. Breaking Down Barriers

A number of the solutions generated from table discussions sought to break through systemic barriers and cultural norms. Systemic ageism and cultural norms that promote individuality were noted as opportunities for targeted innovation, but also as obstacles for the success of other proposed innovations. As many of the technological solutions to the prevention and mitigation of social isolation rely on access to affordable and robust internet and wireless infrastructure, some tables discussed the need for access to free or subsidized communal digital connections.

7. Looking Elsewhere for Success Stories

Many table discussions looked to precedents in other cities, or other countries, where innovative approaches to address social isolation have been successful. When looking elsewhere, it is important to acknowledge the unique characteristics, history and context of the local region, and to assess how an approach would have to be adapted to meet local needs and priorities.

8. Focussing on Prevention

Improving engagement and research with those who are socially isolated can promote better understanding of their needs, but it is hard to locate and reach out to people who are experiencing social isolation. Preventing social isolation through appropriate health care i.e. for those with chronic diseases or other isolating conditions such as chronic ulcers, and knowing the triggers and signs was a major focus in the brainstorming session. Many innovative ideas revolved around using technologies to recognize the signs of or triggers for social isolation, and ways to prevent it.

9. Accessibility, Affordability and Appropriateness

Many of the technology solutions and ideas generated, were either impacted by or revolved around ensuring that the interventions were not only effective, but accessible, affordable, and appropriate.

10. Addressing Privacy and Confidentiality

Certain innovative ideas raised group concerns over confidentiality and privacy. It is important to ensure that the 'right' people have access to the 'right' data, while respecting privacy and confidentiality. Older adults who have experienced marginalization in the past may find themselves in residential or long term care facilities where their privacy is not guaranteed and where they may be re-victimized by the entrenched biases of other residents or staff.

11. Creating Adaptive Technologies

It is important to avoid creating static solutions. Older adults experience change throughout their lives, and technologies, programs, and policies, should be able to meet them 'where they are'. Additionally, older adults are not a homogenous group, and innovations needs to recognize this by embedding mechanisms for individual and ongoing customization.

6. MOVING FORWARD

The AGE-WELL National Centre of Excellence aims to harness technology for high quality, sustainable services, products and policies to meet the needs of the current and future generations of older adults in Canada.

Current research conducted by AGE-WELL's Workpackage 7 is focussed on understanding how the regional ecosystem can be developed so that it encourages collaboration amongst university, government, industry, health system and community agencies, to foster innovative technologies, services, programs, policies and uses of data that help older adults live more independently, longer. The collaborative process of both conceiving the workshop, inviting participants, developing content, and generating this report, has demonstrated the importance of collective action in mobilizing resources, and sharing information to achieve the goals of improving the lives of older adults.

Social isolation is a complex, inter-generational issue that can have a significant impact on the health and well-being of older adults. The Region of Waterloo has a number of highly engaged individuals and groups who, either directly or indirectly, are working to promote the inclusion of older adults who are experiencing social isolation in our communities. However, there is strength and economy in scale. The table discussions amongst a broad and diverse group of stakeholders from universities, government, industry, the health system, community agencies and older adults themselves, from around the region, suggests that there is value in a broad coalition. Inviting the technology community, researchers and industry into discussions to understand the intersectionality of issues, and the opportunities for development of innovative and novel responses to complex societal issues, may be one way forward. Other communities, such as Boston in the United States, have used these broad coalitions to not only build an economically diverse and resilient community, but to purposively advance their region as one where age-related innovation and technology development is building practical solutions to improve the lives of older people.

Participant feedback from Making Connections commended the workshop's collaborative exercise in brainstorming solutions, and described the event as a highly valuable networking opportunity. The Workpackage research team has committed to similar workshops in three other Canadian regions, and will continue to work to advance the development of the Waterloo Region as a health innovation ecosystem focussed on healthy aging, and the development of novel solutions that work to reduce social isolation for older adults.

This report is intended to encourage further discussion and action, and we welcome your suggestions and contributions.

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APPENDIX 1: Workshop Agenda

Making Connections - An AGE-WELL/Waterloo Region Workshop: Building Technology to Address Social Inclusion for Older Adults

Date: September 17, 2018

Time: 08:30 - 13:00

Location: Lions Hall (attached to Lions Arena) 20 Rittenhouse Rd. Kitchener

Goals:

- Facilitate meaningful interaction and communication between researchers, industry, government, older adults and other stakeholders to promote knowledge building and exchange.
- Raise awareness of regional capacity and available resources to promote social inclusion for older adults through technology and innovation.
- Increase awareness of AGE-WELL funded research within the region
- Identify opportunities to develop innovative technological solutions that address regional priorities related to building a more socially inclusive community for older adults
- Explore how technology could enable solutions to support socially isolated older adults within the region.

Agenda:

TIME	ACTIVITY
08:30 - 09:00	Registration & refreshments
09:00 - 09:35	Welcome & Opening Remarks
09:35 - 09:45	AGE-WELL 3 Minute Presentations
09:45 - 09:55	Regional Priorities for Social Inclusion
09:55 - 10:00	Explanation of Table Activity
10:00 - 10:10	Break
10:10 - 11:45	Guided Table Activity
11:45 - 12:00	Report Back & Closing Remarks
12:00 - 13:00	Boxed Lunch & Gallery Walk

APPENDIX 2: Problem & Solution Summary

Problem	Solution
AFFORDABLE AND AGE-FRIENDLY HOUSING	
<p>KW lacks a readily accessible platform to introduce potential renters to homeowners willing to rent.</p> <p>Older adults who have space in their home who need companionship and help with light chores</p> <p>Monitoring of older adults at risk living in affordable housing</p> <p>Lack of staffed affordable housing</p>	<p>An online application that matches individuals interested in various forms of home sharing would be most beneficial for the Waterloo region</p> <p>Airbnb’s for older adults where students who live free</p> <p>Co-housing solution modelled on current pilots with Toronto’s Senior Strategy to partner University students with older adults living in the community</p> <p>Using their own phones perhaps but also have to build services or intelligent systems and algorithms that can report unusual patterns or events</p> <p>Policies and programs to support older adults setting up co-ops where they share housing, care for each other, and socialize</p>
COMMUNICATION AND INFORMATION	
<p>Excessive costs to access the internet and the lack of readily available internet in many rural communities</p> <p>Lack of awareness of current programs</p>	<p>Internet is the best platform for wide-scale communication</p> <p>Government subsidies for older adults to support access to the internet.</p> <p>Government subsidies to telecommunication providers to reduce costs for older adults</p> <p>Cities could be responsible for providing universal access to Wi-Fi</p> <p>Use social media to promote community services and programs</p>

Problem	Solution
Supposedly random acts or behaviours	<p>Community champions to spread information</p> <p>Ask why to understand, and gather data - example of the current flooding crisis where people who didn't evacuate weren't just infirmed or obstinate, they had pets who were their family and there were no places they could evacuate to that would take them and their pets</p>
SUPPORT FOR NEW TECHNOLOGY DEVELOPMENT & ADOPTION	
<p>Those using and developing the technology, and those providing the services, are not involved in funding decisions and those responsible for granting funds are not in the community and may be out of touch with the needs of older adults</p> <p>Engage older adults more in research</p> <p>Technology should be adaptable and accessible</p> <p>Number of applications and solutions</p>	<p>Restructure funding guidelines to adopt long term funding strategies and include input from all stakeholders as to what services are required</p> <p>Better volunteer recruitment platforms could be developed, such as a Kijiji platform for volunteer</p> <p>Councils on aging that contribute to projects</p> <p>Utilize social opportunities to introduce forms of technology, such as interactive games.</p> <p>Adaptive technologies that change over time as patterns of use change (i.e. application get louder as hearing reduces, tablet screens are less sensitive with Parkinson's) can be incorporated to avoid static technologies that are rejected or discarded</p> <p>Recycle older technologies and improve them so that we're not writing millions of lines of new code for minimal improvement</p>
PRIVACY & SAFETY	
Concerns about privacy and safety	<p>Applications should be designed to be accessed through a secure and trusted site (i.e. City of Waterloo)</p> <p>Data privacy and permissioning by applications to ensure safety</p> <p>Data must be used responsibly</p>
TECHNOLOGY DESIGN & USE	

Problem	Solution
<p>Digital devices and applications used to access the internet are not designed to meet the unique needs of older adults (i.e. sensory related issues, movement disorders that impede use).</p>	<p>Leverage the knowledge of stakeholders at all levels (i.e. older adults using it, investors, and developers) to identify and address the unique needs of older adults early and often, with an emphasis on co-design.</p> <p>Provide teaching or mentoring to help older adults learn about resources that are available including facilitating the use of social media</p> <p>Better use of large monitors/screens or kiosks to provide information in places where older adults live/visit e.g. libraries, elevators, group residences, etc.</p> <p>Develop online community calendar focused on older adult with daily updates</p> <p>Make large print books and iPads more accessible</p> <p>Mark hard copy versions of information, maps etc. available</p> <p>Remove jargon from resources</p> <p>Make technology more user-friendly for older adults e.g. touch screens, voice-activated tech, print screens</p> <p>Include older adults in the design and advertising of products for older adults</p> <p>Develop technology that provides information about activities happening based on interests e.g. meetup</p> <p>Technology and programming must be intelligently adapted for different needs of a heterogeneous older adult population – understand the population</p>
<p>Older adults’ lack of familiarity with technology and ability to troubleshoot when issues arise</p>	<p>Provide ongoing, community-based education (i.e. workshops at libraries, YMCA) focused on updating tech related skills and knowledge in older adults.</p>
<p>Unfamiliarity with technology exacerbates ageism</p>	<p>Ongoing technology help and assistance</p> <p>Service where older adults can get help with their technology needs (television or radio segment). Could develop a helpline for digital assistance—maybe it could be run by students who need community service hours</p>

Problem	Solution
	Presentations/courses for those that are not tech savvy (community centres; presentations in the community; computer courses)
CULTURAL CHANGE, DIVERSITY & AGEISM	
<p>Respect requires empathy</p> <p>Decision-makers (i.e. policy makers, clinicians and technology developers) don't understand older adults</p> <p>Older adults internalize ageist ideas</p> <p>Transitions for older adults are so often referred to in negative terms and involve loss</p> <p>Connecting young and old through technology programs</p>	<p>Promote or share (and by doing so, validate) older adults experiences and stories</p> <p>Raise awareness of older adults' issues</p> <p>Gamification of daily challenges</p> <p>Virtual reality experience that included different simulations to address different components of an older adult's life</p> <p>Use of drama or vignettes to educate/reeducate</p> <p>Including younger generations in getting older adults connected to technology and engaged - approach a school or college and run some sort of program to connect younger people to older people.</p> <p>Programming based on ability not age</p> <p>Create positive spaces for diversity i.e. nursing homes</p> <p>Build simulations such as:1) navigating your community without a car, 2) the emotional isolation associated with social isolation and how it contributes to ageism, and 3) completing activities of daily living with mobility or health challenges</p> <p>Simulation could be created showing older adults how to link to community support services, and have a positive outlook on the aging process. Outreach team that could offer workshops and have the simulation equipment travel around with them. Using social media could make this idea more affordable.</p> <p>Help older adults move from loss to growth perspective by focussing on and providing choices</p> <p>AV club could film a segment about technology that is aired on TV</p>

Problem	Solution
<p>Older adults have biases</p>	<p>10 minute call in period where older adults could call in or they could pair up in-person</p> <p>Learn to play games together (online or in person)</p> <p>Learning languages with older adults paired with a student learning another language (they could skype or have phone calls)</p> <p>Post-program community get together to bring together the older adults and younger students</p> <p>Developing programs that encourage youth and older adults to learn and benefit from one another. Technology could be developed to teach the public about the needs of older adults, beyond physical decline.</p> <p>Online games could be developed that include playing in leagues and then having social time after the shared experience</p> <p>Entertainment in nursing homes could be developed to encourage acceptance and exposure to diversity Use of reflective language by all</p>
ACCESS TO PROGRAMS & SUPPORT	
<p>How do identify people who are isolated and find the right people to help access the right programming and services as there are barriers such as mental health issues, transportation challenges, those living in rural areas, language barriers, income challenges, trust issues</p> <p>Individualistic culture which does not promote looking out for those outside our immediate network of friends or family</p>	<p>Develop some form of application that could be used to teach everyday citizens about the signs of social isolation, and provide tools or resources that they could pass along to older adults</p> <p>Outreach to find those that really need support</p> <p>Embed incentives into proposed applications (i.e. Carrot Rewards application)</p> <p>Courses/services/programming/recreation etc. through a variety of ways and incorporating technology (in person; phone; conference calls; skype)</p> <p>Looking to existing intake services to identify older adults or those that are connected to existing services that would benefit</p> <p>Leverage informal everyday interactions to combat social isolation</p>

Problem	Solution
<p>Tendency to rely on formal procedures</p> <p>Information about health services, social events, and programming needs to be more accessible and available especially for those with challenges leaving their home</p>	<p>Chatbots: a way to send ‘nudges’ or messages to socially isolated older adults</p> <p>Do a better job of creating equity in community programming</p> <p>Digital communities can be as effective as physical communities</p> <p>Technology could be a solution to help them stay connected</p>
BUILDING COMMUNITY & TRUST	
<p>Connecting with older adults where they are located</p> <p>When older adults become isolated they don’t have those trusted networks and so they will either retreat or can end up making poor choices</p>	<p>Creating natural hub’s and environments for people to go</p> <p>Making sure we understand what older adults want</p> <p>Building trust and making connections</p> <p>Virtual groups/matching system to match people with similar interests</p> <p>Friendship bench (if someone is sitting there, it means that they want someone to sit down and talk with them)</p>
HEALTH SERVICES	
<p>Importance of prevention and primary care and streamlining programs and assessments</p> <p>Silos in services and assessments</p> <p>Older adults with mental health issues often have few options, very specific needs, and difficulty communicating them</p>	<p>Former nurses could help people get to and from appointments—they understand information and follow-up</p> <p>Monitor clients who are socially isolated and activate the “right supports</p> <p>Build out mentoring programs that already exist in the region and Pay and train mentors rather than just relying on volunteers</p> <p>Liberate information so health care providers can access information across sectors</p> <p>Technologies that allow service providers to “walk in their shoes” so that they better understand lived experience and key issues</p>

Problem	Solution
<p>Decision making should be based on clear information and real choices</p> <p>Shrinking workforce</p> <p>Monitoring older adults as they move through the healthcare system to ensure they receive the supports they need to prevent social isolation</p>	<p>Potential links to medical records to ensure viability</p> <p>Support for the development and commercialization of products that promote independence, such as autonomous vehicles, wearables, and digital records</p> <p>Development of algorithms that check for key events related to social isolation to deliver the right care at the right time</p> <p>A platform, like LinkedIn, that could be used by healthcare providers to learn more about their patients</p>
TRANSPORTATION & MOBILITY	
<p>Many are caring for loved ones in another city and do a lot of driving</p> <p>Challenges with mobility</p> <p>Barriers to social participation and programming- cost of public transportation ‘prohibitive’ and negatively impacts social participation and program attendance</p>	<p>Caregiver support in workplaces/connecting caregivers</p> <p>Technology to support users with physical challenges to navigate the community</p> <p>Virtual clubs via live-feed video, Skype, webinars, podcasts</p> <p>Remote library technologies/interactive assistance tools to share information and resources</p> <p>Mobile leisure activities where a rec student travels to different facilities/buildings where older adults live to get them involved in their own setting</p> <p>Social gatherings with a community presenter in places where older adults live and includes a live-stream for those not attending in person (e.g. travel education series)</p> <p>Telephone visiting</p> <p>Develop tool where older adults can provide location where they want to go and all route options are presented</p> <p>Subsidize the cost of transportation to bring it in line with the student transit rate</p> <p>Develop a subsidized GPS rental program available through the library</p>

Problem	Solution
<p data-bbox="183 405 558 436">Facilitating use of public transit</p> <p data-bbox="183 842 699 873">Losing license is critical transition for some</p>	<p data-bbox="803 338 1377 369">Create a ride sharing service or carpooling group</p> <p data-bbox="803 405 1451 468">Access to stops, sidewalks, clearing snow on sidewalks as well as bus platforms, benches for waiting</p> <p data-bbox="803 504 1446 567">Flexibility of transit, especially for rural areas (smaller vehicles, different routes)</p> <p data-bbox="803 602 1143 634">GRT travel training program</p> <p data-bbox="803 669 1333 732">toolkit of transit alternatives for primary care physicians</p> <p data-bbox="803 768 1346 800">Shared transportation, especially in rural areas</p> <p data-bbox="803 835 1411 940">Application to bring effects or impact of driving beyond the time you should to life, an equivalent of MADD for driving beyond your ability</p> <p data-bbox="803 976 1437 1081">UBER volunteer that would drive folks in need where they want to go, and making bus and train schedules more accessible digitally for older adult</p>