Group ID: 10-42
GA4: Circumstance Improvisers

Based on Analysis of the Team's Chosen Community / Organisation in Mid-Term and Final Evaluation

Community / Organisation Studied:The elderly committee (elderly aged 60 and above)

STEP 1. Identify Challenges

Read the Future Scene carefully and generate ideas for challenges, concerns, and possible related problems. Choose the 5 most important challenges and write them in the space provided.   Include applicable research with appropriate in-text citations.

Elderly require more coaching to adapt to new technology.

Based on our survey, we asked 39 Elderly how good they were at handling technology on a scale of 1 to 15, with 1 meaning that they are very bad at handling technology and 15 meaning they are very good at it. 33 out of 39 elderly had chosen the choice 1 to 8, with 6 of them choosing 1 meaning that 85% of the elderly had stated that they are bad at handling technology. New technologies these days are widely used and that it is important that one knows the functions and how to use it so as to improve efficiency and effectiveness. Research has shown that the elderly would learn faster with the help of another person's help as the elderly may not even know what is new technology.The elderly, which is a community where most of them are bad at handling technology, would hence require more coaching from others in order to learn and understand the functions and how to use it as they are bad at handling it and take more time to learn new things.Therefore, the elderly require more coaching from others to adapt and learn new technology.

Elderly do not understand the importance of learning new technology.

Based on the survey that we had done on 39 of the elderly, 26 out of 39 of the elderly, which is 65% of the elderly, answered that they would rather do things like how they usually would rather than use new technology. The reason why the elderly are not willing to do things using technology and artificial intelligence is mainly because they are not used to it and think that it is not a need to change. Although learning about new technology and coping with it is very essential, most of the elderly are not willing to change as they do not understand the importance of it and they do not want to waste their efforts in learning new technology. In addition, some elderly mistakenly think that the digital and technology revolution, which are new technology, are just distractions. Hence, this showed us that the majority of the elderly do not understand the importance of learning new technology.

Elderly require more effort to adapt to the 4th industrial revolution.

Based on the survey that we had done on 39 of the elderly, we asked them how fast they thought they were at learning how to use technology. 14 of the elderly said they think they learn at a slow speed, 9 of them said they think they learn very slowly, and 8 of them said they were a little slower than average, and 1 doesn't want to learn. This means that more than 80% of the elderly said that they learn new technology at a slower pace than others. This has also been shown in research that elderly needs more time to learn than other age groups as their brain will not be as efficient in remembering things and adapting to new surroundings. Thus, the elderly will take a much longer time and a lot more effort to adapt to using new technology in the 4th industrial revolution as they learn slower than other people.
Read more at
https://www.todayonline.com/singapore/big-read-feeling-lost-digital-world-some-elderly-shun-te chnology

Elderly will not play a big impact in the 4th industrial revolution.

Based on our survey on 39 elderly, although 71.8% of them said that they are equipped with a mobile phones and 28.2% of them do not, when we asked them if they preferred to do things the way they were used to(which is without technology) or to do things using new technology, more than 65% of them said they would do things like how they usually would. This implies that the

majority of the elderly are not willing to learn new technology and apply it into their daily life although they have a chance to learn, hence they may play a huge part in the 4th industrial revolution. As the elderly are already very old, they will not understand or know how to make use of the 4th Industrial revolution and thus causing them to be not willing to learn and will play a very little part in the development of the 4th Industrial revolution.If teaching them is already really difficult,the impact played by them will thus be ignored or forgotten, as people will not even take note of the possible contributions the elderly makes towards the 4th Industrial revolution. Therefore, we can conclude that the elderly will not play a big impact in the 4th Industrial revolution.

Elderly are do not understand the detrimental effects that they will suffer if they are left behind in the 4th Industrial revolution.

Based on our survey on 39 elderly, 56.4% of them said that they have never shopped online before and 59% of them say they do not know how to shop online. This means that more than half of the elderly do not shop online because of these reasons. As more and more new technology has been developed over the past few years, many of the things the elderly may be used to may change because of the new technology. For example, if one day because of new technology, all the real life stores are gone and the only way to purchase is through online, given that more than half of the elderly do not know how to shop online, it means that they will suffer from not having enough of daily necessities. This is not due to the lack of money, but the lack of ability to purchase things, which is caused by the fact that the elderly did not learn how to purchase things online. Also, as the elderly grow older and more technology are being developed, it would be much more difficult for the elderly to learn the new technology. Therefore, the elderly may not know the detrimental effects that they will suffer if they are being left behind in the 4th industrial revolution.

STEP 2. Craft the Underlying Problem

Using the challenges listed in Step 1, identify a problem of major importance to the chosen community / organization in the future. Write your Underlying Problem making sure your question clearly explains the action that will be taken and the desired results/goal of that action.

Given that elderly might not be able to adapt smoothly when new technology comes during the 4th industrial revolution because of not understanding the importance of it and being slower at learning it, it seems that the elderly might be left behind. How can we help to improve the effectiveness of the elderly in adapting to new technology in the retail industry so that they would not be left behind from the years 2030 and beyond in Singapore?

Incorporating Challenge(s)

STEP 3. Produce Solution Ideas

Generate solution ideas to the Underlying Problem in Step 2. Choose the 5 most effective solutions and write the elaborated ideas in the space provided. Include applicable research with appropriate in-text citations.

Solution 1 Robots

We, a country which is aging very quickly, could use robots and other voice communication technology in helping the elderly to change their habits and learn to cope with online shopping faster. With this idea in place, elderly could learn from robots, which could be adjusted to the ability of each elderly and teach them at different paces, hence the elderly would not have to rush. For a start, a volunteer worker may be needed to teach the elderly how to use the robot or technology, but apart from that, elderly would be more familiarised with it and hence not much manpower is actually needed.Volunteers also cannot be around to help 24/7 but these robots can. Besides being able to learn from the robots, the elderly could also get used to them at the same time. Experience with the robots and new technology will ensure the elderly developing a habit of using them,to their various benefits. Therefore,the elderly will learn and adapt to the new technology faster and most importantly ,learn about online shopping .So we can help solve 2 problems.

Solution 2 Technology for Elderly

Since there is the 4th IR and new technology available why not put them to good use.In an article by Forbes, AI, which is artificial intelligence, can even help in cyber security. It can detect hackers and help to warn the user of any potential hackable places.AIs can also do more than an employee can.An employee cannot check everything and can only do limited things.They can also get overwhelmed.But AIs don't get overwhelmed easily,they can predict and prevent breaches and much more. AI cyber security can help solve a big problem whereby a lot of elderly don't want to go online because they are afraid that their accounts will get hacked and they will lose their money.This can help them to feel more assured that their accounts will be safe.In the future.Whatsmore is that in the future more shops will go online and e-commerce will grow,do elderly need to be able to learn to shop online and technology can help them feel safe and be safe. Delivery men can also wear a watch .All the elderly needs to do is to scan their fingerprints to confirm the transaction. The elderly will also have a special card,it is like a phone but a bit thinner.There will be the online shops on it and the elderly can use it to make their order,the AI

will also be on it as an assistant.When the elderly need help the AI will guide and help them the AIs will also help protect the user online. Lastly,when the delivery man comes the device can be used to tap on the scanner and the elderly just needs to scan his or her fingerprint.Some elderly might have problems moving around to buy food or might have problems carrying heavy grocery bags home. This makes things easier and more convenient for them. In conclusion, technology can help the elderly not fear that their accounts will be hacked and AIs can help keep them safe online.

Solution 3 Elderly Smart

We could create a mobile phone application called "Elderly Smart". This mobile app will have the elderly's strength and weakness in online shopping. The app will take note of the areas of technology each elderly is not so good at, and if the activity is available to participate in the community centre, the app will notify the elderly to go and participate in it. Also, the app will be connected to the elderly's neighbours and friends, and if one of them is participating in an activity, the app will also notify the elderly on it, so as to persuade the elderly to also join them.Being connected to their friends also allows them to ask their friends if they have any question because maybe it might be easier for their friends to explain to them. In addition, the app will promote the events in the community centre on the days where they did not go for activities, so as to keep the elderly occupied. If this application is being launched, not only will the elderly learn new technology, they will also be occupied with activities everyday so that they are not bored.

Solution 4 Advertisements

We could launch an advertisement on television, promoting the elderly to participate in activities to learn more about online shopping. During these days, because more and more elderly have nothing to do and are bored or do not want to leave their houses, they spent a lot of time watching television programmes. Thus, a lot of elderly would be able to see the advertisement and go and try out the activities. Also, if one elderly tries the activities and thinks that it is fun and informative, he or she would most likely to spread the activities around to his or her friends, hence many eldery would be able to benefit from the activities. Therefore, if the advertisements are on the television, not only will the elderly get to learn about online shopping, they will also share it to their friends, causing more elderly to participate in activities.

Solution 5 Posters and volunteers

We could also place more posters teaching the elderly how to shop online at the void decks or in the lifts of HDB flats in elderly communities.There can also be posters to invite and encourage the elderly to go for classes As the void deck is a place where everybody would pass by very frequently every single day, there would be a very high chance for the elderly to see the posters and go to community centres. When they are there, trained volunteers will assist them in how to shop online and and guide them . For example, if they have difficulties in learning how to shop online, for example, they do not know how to make the payments, they could go to the nearby community centres to ask the volunteers, and also have a chat with their friends over there. If this plan is in place, not only will the elderly get to know more knowledge on online shopping, but they would also be accompanied and can ask the volunteers questions when they do not understand something.

STEP 4a. Select Criteria

Generate criteria to determine which solution idea does the best job of solving your Underlying Problem and/or addressing the Future Scene situation. Select the 5 most important criteria for measuring solution ideas and write them in the spaces provided.

Criterion 1:Take the least amount of time
Criterion 2:Least Cost
Criterion 3:Most convenient for the elderly
Criterion 4:Have the most lasting effects
Criterion 5:Elderly's preferences

STEP 4b. Apply Criteria

List the solution ideas from Step 3 on the grid.   Use each criterion to rank the solutions on a scale from 1 (poorest) to 5 (best).   The weighting for one important criterion may be doubled if necessary.

Step 3 Sol'n #	Solution Idea	Criteria					Total
		1	2	3	4	5	
#1	Robots	4	1	5	4	3	17
#2	"Elderly Friendly"	5	4	2	5	5	21
#3	Mobile Applications	2	3	4	1	1	11
#4	Advertisements	1	2	1	2	2	8
#5	Posters and Volunteering	3	5	3	3	4	18

STEP 5. Develop an Action Plan and Evaluate its Feasibility

Action Plan

Potential assistors: Delivery Companies.

Potential problems: They might be reluctant to have the watch implemented.

How to overcome these obstacles: Persuade the company to help the elderly and have only a couple of watches in the store. If the person ordering delivery is an elderly, the delivery man would wear the watch and deliver the items,otherwise they would not wear the watch.

Why this plan would solve the problem: This way companies can save lots of money as they only need to have about 5 to 7 in hand in every branch instead of buying one for every delivery man. Companies need not spend too much money, can attract elderly customers and help the elderly this way.

Implementation Timeline:

From now till before 2025, data will be collected and added and the device will be created. By 2030, we plan to have companies and shops like NTUC,or some popular hawker shops and others,use our Elderly friendly-transaction watches for the elderly's convenience and support and elderly use our paying and ordering device.

Evaluation of Action Plan

For our feedback survey, 59 people responded. From the results we got,most of the feedback was positive. 42.4% replied that they thought our product was convenient,33.9% thought it was okay and 10.3% said it was good.The other 13.5% thought it was not good and inconvenient to them.

When asked on a scale of 1 to 5(1 meaning it would not benefit them at all and 5 being it would benefit them a lot) how much they thought the device would benefit them,44 out of 59 respondents chose a number of 3 or above and only 15 chose 2 or 1. We kept the survey short this time so the elderly would want to do it ,if the survey was too long they might not want to do it.

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