Longitude Explorer Prize

How to use the activity plans:

Each activity - apart from the introduction presentation - has a plan for you to follow, a powerpoint presentation and list of materials needed for the session.

Some activities recommend handing out materials during the session so it is advised to spend roughly 15 minutes prior to prepare.

Below is an example activity plan schedule, however, it is up to you how much you think the group you are supporting will benefit from the activities.

Example activity plan schedule:

Week 1: Introductory presentation & An introduction into AI activity (40 mins)
Week 2: Living Longer activity (40 mins)
Week 3: Product development activity 1 & Product development activity 2 (40 mins)
Week 4: Product development activity 3 & finalise your application form (40 mins)

Theme 1: Living longer

Learning objective:
This activity aims to provide young people with an understanding of the first theme og Longitude Explorer Prize, which is about the challenges that come with an ageing population, and to get them to begin thinking about potential solutions.

Time:
- 35-40 mins

Materials needed:
- Living Longer PowerPoint Presentation
- Living Longer information sheet
- Idea generation materials (whiteboard, pen/pencils, A3 paper, post-its)
- Design thinking template

Slide 1:
Explain that the first theme focuses on the needs of older people. This is significant because the UK has what is called an 'ageing population'. This means that the average age of the people in the UK is increasing - people are in general living longer.

This also means there is a larger number of elderly people and people over the working age.
- The elderly population is set to more than double by 2050 world wide![1].
- By 2040, nearly one in seven people in the UK is projected to be aged over 75.[2].

Slide 2:
Ask the participants to split up into small groups of 2 or 5. Hand out post-it notes, and ask them to write down at least 3 answers to the Q. What do you think people will need as they get older?

1. WHO 2019 [ONLINE]: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health
2. Government Office for Science (2016) Future of an ageing population London: Government Office for Science [ONLINE]: https://www.gov.uk/government/publications/future-of-an-ageing-population

If groups are struggling for ideas then you might want to provide some of these ideas:

- *As people age their potential for health issues often increases and so could need more doctors/hospital visits - this could put pressure on the NHS and healthcare systems.*
- *As people age they may face challenges like a loss of mobility and so need more help from other people in their day to day tasks - so there is a growing need for more people to care for them.*
- *As a workforce grows older there may be more barriers to staying in work, for example they may need to retrain or develop new skills.*
- *Older people can become more socially isolated - especially if their ability to leave the home and take part in social activities becomes more limited.*

Using a clear wall or whiteboard ask groups to share their ideas one group at a time by sticking them up at the front - grouping similar ideas together to start to create themes.

Once this has been completed summarise the key ideas from the groups and hand out the **Living Longer information sheet**.

Slide 3:
Explain that the challenge for this theme is: how can we use artificial intelligence to meet the needs of older people?

Ask the group if they need a reminder of what AI is. If yes, show the what is AI video using the link on slide 3.

Slide 4:
Take participants through the two examples or ask them to discuss in their groups about how AI is already being used to provide solutions.

Example 1: Assistive Social Robots

Example 2: Smart Personal Assistants & Smart Homes

Slide 5:
Hand out the templates at the end of this session plan to the groups and ask them to use it by starting with a problem or challenge that was identified in the first exercise, e.g. older people needing to keep up to date with new skills in the workplace.

They can then work through the different questions using the case studies and other resources to help them brainstorm ideas.

Encourage groups to use the case studies as examples but not to feel limited to these - all ideas are welcome no matter how different!

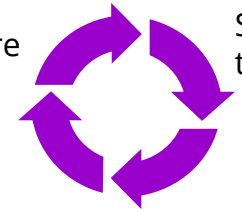
Slide 6:
To close the session ask one of the group members take home their templates and any notes they made about their ideas.

Explain that over the next few sessions they will get the opportunity to continue to develop their ideas further so make sure they bring them with them next time.

Encourage participants to continue to think about their ideas in between the sessions - thinking about the key steps for design thinking:

Step 1: Observation (What issues are there to be solved?)

Step 2: What's the story? (How do you feel about those issues?)



Step 3: Generate ideas (Work as a team to submit the best idea!)

Step 4: Planning (How you can turn your idea into reality?)

Remind them that there are lots of fun and useful resources available to them through the prize at **https://longitudeexplorer.challenges.org/** which can help them develop their ideas further.

What is the challenge/problem? *E.g. Older people need extra help with day to day activities.*	**What is needed to solve the challenge/problem?** *E.g. Someone or something to help older people with day to day activities.*	**How can AI help?** *E.g. Machine learning: AI can learn to do specific task without human instructions.* *E.g. Natural language processing: AI can be used to help a computer understand human language (speaking or writing)* *E.g. Image recognition: AI can be used by a computer to see what is happening in images/videos*	**What are the risks?** *E.g. If a computer takes over some of the caring tasks for older people, who is still responsible for the care of these individuals (doctors/nurses? family?)?*	**Your idea!**