Insight
Technology Enabled Care

#YSObservatory

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Introduction

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The Technology Enabled Care Programme commissioned Young Scot to bring young people from across Scotland together to look at how digital technology could improve young people's health and wellbeing.

As a generation who have grown up with digital technology, young people are well placed to bring their knowledge and experiences to the co-design process, and eager to adopt and integrate digital technology into the ways they access healthcare and health information. This report provides a series of insights into how and why young people use digital technology, alongside their ideas and suggestions for how technology could be used to support young people in the future. These insights and ideas will hopefully go on to inspire the Technology Enabled Care Programme to develop new solutions which will improve the health and wellbeing of young people in Scotland and look into how existing Young Scot services can support this.

Background

In December 2016, Young Scot's Healthier Scotland Youth Investigation Team delivered their report on "Creating a Healthier Scotland" to the Cabinet Secretary for Health and Sport.

This project gave young people the opportunity to explore what really matters to them about health and social care, and to make a positive contribution to the shaping of policy and service delivery. The Youth Investigation Team considered the Scottish health system as a whole and identified four key themes to be tackled:

The Youth Investigation Team created 34 key actions for the Cabinet Secretary and the Scottish Government to consider, however they didn't specifically address the role digital technology could play in supporting and enabling these key themes. This provided an opportunity for young people, Young Scot and the Technology Enabled Care Programme to collaborate to explore how digital technology can be used to support these themes.
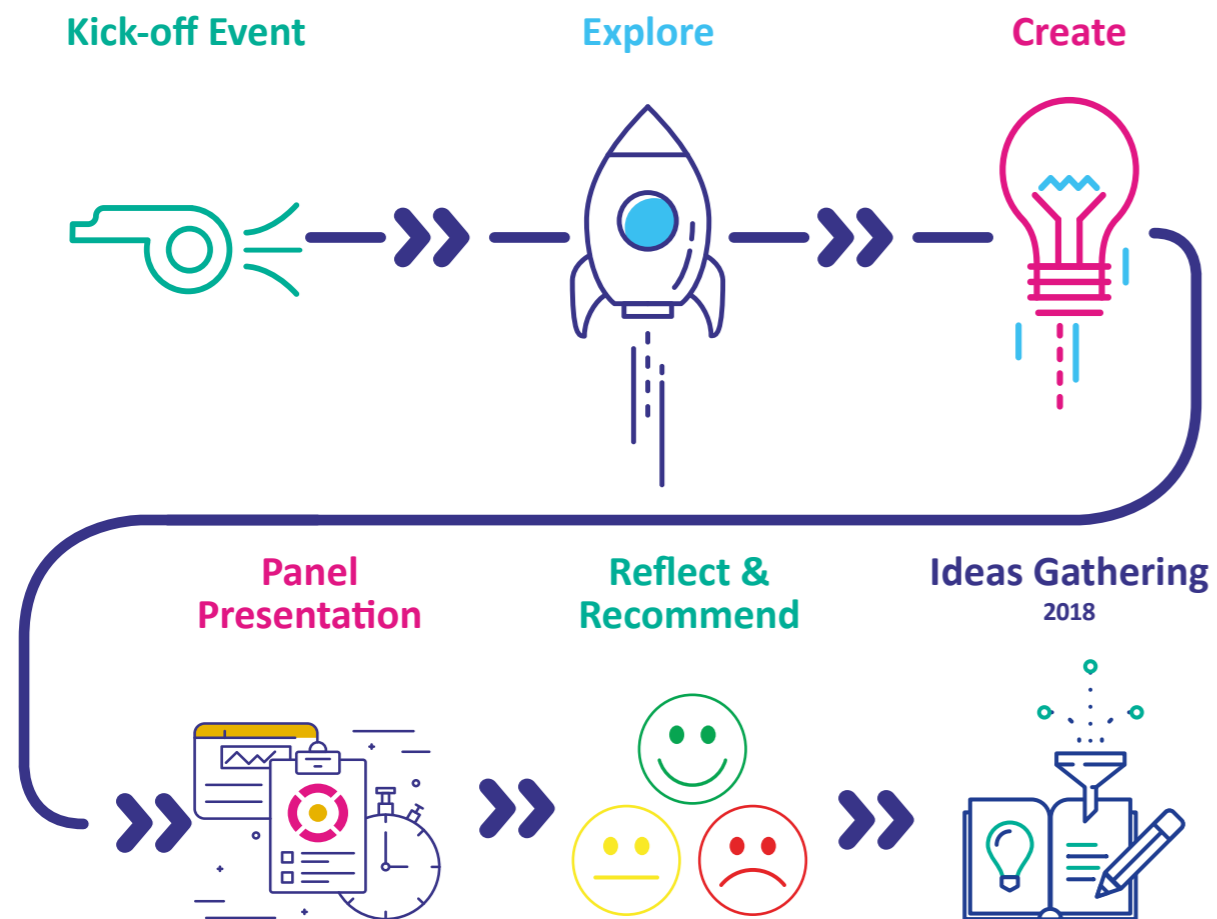
1
Education
change the delivery, structure and content of personal, social and health education, and physical education in schools to ensure all young people are equipped with the knowledge and tools to live healthy lives.

3
Relationships with professionals
health and social care professionals in Scotland should improve their relationships with young people through more accessible services and effective communication.
tools to live healthy lives.

2
Stigma
introduce a zero tolerance system where young people are equipped with the knowledge they need to understand mental health, wellbeing and the negative effects that stigma can have.

4
Eating and fitness
effectively communicating to young people how healthy eating and fitness affects their body and aim to encourage healthy lifestyles and behaviours early.

Co-design Process

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Young Scot's co-design process takes young people through four stages of idea development, explore, create, reflect, and recommend (Appendix 1). To obtain a range of views to inform the final recommendations, Young Scot delivered a series of engagement workshops in Edinburgh, Inveraray, Wishaw and then in Edinburgh again, involving 36 young people from a range of backgrounds, aged between 11 and 23, and with a variety of health experiences.

During these engagement workshops, Young Scot guided the participants through the explore and create stages of the co-design process. The young people worked on a series of activities to define the most relevant health and wellbeing issues for young people, considering how different life experiences can impact health and wellbeing. They explored the technology they use, why they like and dislike certain technologies, and what the future of technology could mean for young people's health and wellbeing. These explorations led into the create phase of the project, with participants across the sessions contributing almost 100 ideas for using digital technology to support young people's health and wellbeing.

Following the engagement workshops, Young Scot brought together a panel of young people from different workshops at an Ideas Development Session. The Ideas Development Session was a chance for the young people to reflect on the issues and ideas generated at the engagement sessions, and to evaluate and combine ideas to come up with a number of key concepts and recommendations to pass on to the Technology Enabled Care programme for further consideration and development.

Kick-off Event → **Explore** → **Create**

Panel Presentation ⟶ **Reflect & Recommend** ⟶ **Ideas Gathering** 2018

A Summary of Key Concepts for Technology Enabled Care

The key concepts created at the Ideas Development Session are explored in more detail later in the report, but this is a brief summary of the ideas.

Augmented Reality App
Key issues this is addressing: Lack of exercise, poor mental health, social isolation

This is an app which allows users to download and apply different augmented reality maps over the street map on their mobile phone to encourage users to increase their level of physical activity and explore their community to increase fitness and improve mental health, with links to Young Scot Rewards and 'Connect Your Tech' capability.

Digital Doctors Surgery
Key issues this is addressing: Worry about visiting the doctors, barriers to healthcare

This is a website which provides multiple functions to enable easier access to frontline health care, including comprehensive information on every GP surgery, online appointment booking, and remote video appointments.

Mental Health Chat Service
Key issues this is addressing: Access to mental health support, reducing stigma around mental health

This multi-platform service would provide a digital live chat service to young people where they could connect with a mental health professional to talk about their mental health and receive guidance and support, potentially building on Young Scot's Infoline service and with input from the Young Scot Youth Commission on Mental Health.

Health & Wellbeing Online Resources
Key issues this is addressing: Access to mental health support, reducing stigma around mental health, healthy eating, poor mental health, lack of exercise, worry about visiting the doctors, study pressure

A development of the Young Scot health and wellbeing information platform, the website **young.scot**, which is tailored specifically for young people and co-designed with them to provide easy to understand information and guidance on a wide variety of mental and physical health topics, acting as a one-stop-shop for young people.

Health & Wellbeing Priorities for Young People

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During the engagement workshops, participants were asked to identify the key issues affecting their, and other young people's, health and wellbeing. A wide range of topics were covered through this process, but the most frequent topics raised by the young people are summarised below.

Across all the workshops, young people identified a greater number of barriers to achieving good mental health, and no-one mentioned barriers to physical fitness specifically (such as lack of access to sports equipment), which suggests that the underlying reasons behind young people not exercising are more complex.

Mental Health

There were a number of key issues raised by almost all of the young people, with a focus by many on peer relationships (or lack of) and the pressures they are under from various places to look, act or behave in a certain way. The key issues around mental health raised were:

- » Peer pressure
- » Bullying
- » Loneliness or social isolation
- » Unsupportive or negative friendships
- » Anxiety or social anxiety/shyness
- » Pressure from social media
- » Exam stress and pressure to do well at school
- » Poor school environment
- » Lack of support or encouragement
- » Poor family or home relationships
- » Discrimination

Additional issues that young people cited included concerns about body image, low self-esteem, lack of confidence, and feeling like people are judging you.

Physical Health

Barriers to good physical health were mentioned fewer times in total, but most young people did mention one or two issues, including:

- » Not eating healthy food / unhealthy snacking habits
- » Lack of time to eat better
- » Fast food
- » Eating disorders
- » Alcohol use / abuse
- » Addiction
- » Smoking
- » Lack of/disrupted sleep
- » Stress and anxiety
- » Abuse (physical or sexual)

In addition to the above factors, your people also identified some of the larger issues which may contribute to poor physical health, such as poverty, homelessness, living in a deprived area, and funding cuts to social services.

Other Factors

The young people also identified barriers which could affect both physical and mental health:

- » Not knowing where or how to get help
- » Difficulty getting appointments
- » Misconceptions about what being healthy is or how to be healthy
- » Information about and quality of services
- » Lack of training for health professionals on some topics

These factors can be seen as primarily about access to services and information.

Young People's Use of Digital Technology

Young people use a wide variety of digital technology in their daily lives for a wide range of purposes. It is important to bear in mind throughout this report however, that a significant minority of young people struggle to access digital technology, and many who do have access may struggle with digital literacy.

This is especially noteworthy as those young people who do not have access to technology may also be the most vulnerable, experiencing homelessness or poverty, and thus potentially in need of greater mental and physical health support that young people in more secure circumstances.

In this section we will explore what technology young people are using and for which purposes, what they like and dislike about tech, and how they find out about new tech.

What tech do young people use?

When discussing digital technology with young people, the vast majority of technologies used are mobile phone applications (apps). However, in addition to mobile phones and their apps, which will be discussed below, young people use the following:

- » Computers
- » Tablet devices and associated tech (e.g. Apple pencil)
- » Computer games consoles (PlayStation, Xbox)
- » Wearable tech (Apple watches, Fitbits, sphygmomanometers)
- » Video conferencing tech (webcams, speakers, Skype, Facetime)
- » Virtual assistants (Siri, Alexa)
- » Smart televisions
- » Virtual reality devices
- » Cameras (non-mobile)
- » Drones
- » E-books / E-readers

Computers and table devices, along with mobile phones, were the most frequently cited technology used by young people, which is unsurprising given their fundamental necessity for many of the activities young people are involved in (school, college, university, work, volunteering).

Mobile phone technology

Mobile phones have become an essential part of a lot of young people's daily life. In this section we will summarise the ways in which the young people used their phones and the apps on them.

Connecting with other people

The social connections that digital technology can facilitate is one of the most important elements for young people. Connections can be between existing friends and family members, between members of a digital community, or between young people and people in the public eye. Some platforms may also facilitate communication between learners and teachers, colleagues, or young people and services they engage with.

Function	Examples of apps used by participants
Private messaging, video calls	Skype, iMessage, Facetime, text messaging, Yammer, WhatsApp, Kik, ASKIP, Facebook messenger, Discord, Houseparty, Mydol, Tinder, Hangouts
Social media	Snapchat, Twitter, Facebook, Instagram, Pinterest, Letterboxd, Sarahah, tumblr, Whisper, Amino
Message boards	4chan, Reddit, Yahoo Answers
Communication	Gmail, phone, MSN

Entertainment

Mobile phones can provide a wealth of entertainment for young people. Some entertainment is consumption based, such as watching TV programmes or listening to music, but many others are used by young people to actively create images, videos, fiction, reviews, and other content for their peers or the internet at large to engage with. Alongside mobile gaming, these forms of entertainment are not static resources, but platforms to facilitate creativity, connection, and skills development.

Function	Examples of apps used by participants
Film, television, videos	YouTube, Viki, Netflix, Amazon Prime, Sky Go, ITV Hub, LUSHxpressions, NowTV, YouNow
Photography, image manipulation, video making, drawing	Instasize, Video Star, iMovie, TikTok, YouTube, camera, ArtGrid, YouNow
Reading, writing	Wattpad, Archive of Our Own, Quotev, notes, Google Docs, Word
Shopping	PrettyLittleThing, Missguided, eBay, Just Eat, Amazon, Boohoo, Adidas, Joom, Lush, Superdrug, Wish

Information

When young people use their mobile phones to access information, it is largely a function of necessity. They might check the bus times or weather before leaving the house, download a boarding pass to an airline's app, check their bank balance on the go, or find a good deal at their favourite online stores. For young people in education, there are more reasons to seek information on their phone – revision notes, class timetables, learning aids and so on.

There is another way that young people use information on their phone, most obviously with health related apps, which is to store and access information about themselves. This could be tracking nutrition, recording running routes, working through a stepped exercise programme, or learning how to cope with anxiety.

Function	Examples of apps used by participants
Internet browser, search engine, information point, news	Google, Wikipedia, Bing, Safari, Internet Explorer, BBC, Daily Mail, weather
Travel, events	Bus timetables, Google Maps, Stagecoach, RyanAir, Ticketweb, Ticketmaster
Banking	Royal Bank of Scotland, TSB, Apple wallet
Education, work, volunteering	Glow, MySQA, Google classroom, LinkedIn, No Fear Shakespeare, BBC Bitesize, Duke of Edinburgh's Award, Egenda, Mathletics, Duolingo, Children's University e-Passport, Linguascope, Firefly, Showbie, Speak Out

What tech do young people currently use to support their health and wellbeing?

In addition to the mobile phone apps related to health and wellbeing that young people used, and the fitness related wearable tech such as Fitbits, young people frequently mentioned that they use other tech to support their health and wellbeing. This kind of support can be instructional, social, or about self-management.

Instructional exercise or workout videos on YouTube were one of the most popular suggestions here, with some others pointing to Instagram as a good source of information, inspiration and suggestion for exercise and healthy eating. Others sought out instructional videos on topics such as make-up application or hairstyling. Especially for young women, learning and practicing these kinds of skills allows them to be more successful in their social circles, increasing popularity and bolstering social standing and friendships. This kind of skill acquisition therefore plays an important role in supporting mental health and preventing social isolation.

For some, the social networks that tech can support were more important, with many young people mentioning the way that messaging technology and apps like Snapchat allow you to keep in contact with support networks and ask for help when needed. For others, access to online communities based around shared interests was a way of not feeling so alone and of connecting with people around the world.

Many young people though, use a variety of technology for self-management. This includes a wide range of behaviours, such as listening to music to relieve stress or improve mood when feeling down, consuming media and playing games to keep the mind occupied or distract oneself from feelings of anxiety, or writing thoughts and ideas down as a method for self-reflection and expression. One young person mentioned that they listen to autonomous sensory meridian response (ASMR) videos to help them sleep, and another mentioned reading on their Kindle as a way to maintain happiness. Finally, some young people talked about using technology that supports time management and organisation, such as calendars, email, and banking apps. Keeping on top of responsibilities made them feel less stressed and more able of managing their schedules.

Instructional exercise or workout videos on YouTube were one of the most popular suggestions here, with some others pointing to Instagram as a good source of information, inspiration and suggestion for exercise and healthy eating.

What do young people like and dislike about the technology they use?

Young people at the engagement workshops were asked to rank the technology they used from their most to least favourite, and then to tell us why they liked or disliked certain pieces of tech. As is reflective of the predominance of mobile phone apps in the list of technology young people use, many of the issues raised relate to mobile apps.

The favoured pieces of tech varied from individual to individual, but three key areas emerged from this activity.

Usability
Usability was by far the biggest deciding factor in whether young people liked the technology they used. The many issues raised under usability indicate that app design needs to be well thought out and tested by a young audience to work through bugs before launch. After launch an app needs a dedicated team of staff working behind the scenes to create seamless updates without changing fundamental aspects of the app design and keep on top of feedback from users about difficulties, likes and dislikes, and crash reports.

Factor	Positives	Negative
Usability	Fast, attractive design, efficient, reliable, easy to work out how to use, kept up to date, convenient for you when you need it, versatile, free, accessibility.	Google, Wikipedia, Bing, Safari, Internet Explorer, BBC, Daily Mail, weather

Usefulness

The next factor which got a lot of feedback was usefulness. The usefulness of an app reflects whether it serves a valuable function to users that is genuinely more convenient that other ways of doing the same thing. Young people were keen that technology helps them in some way, while also being wary of apps that can be turned to negative uses in a way that is detrimental to individuals. This indicates that thought will need to go in to functions provided by new tech to determine what is genuinely useful for young people, and what could make their lives easier. Attention should also be paid to data collection, with young people increasingly wary of sharing personal data without good reason or trusted security measures in place.

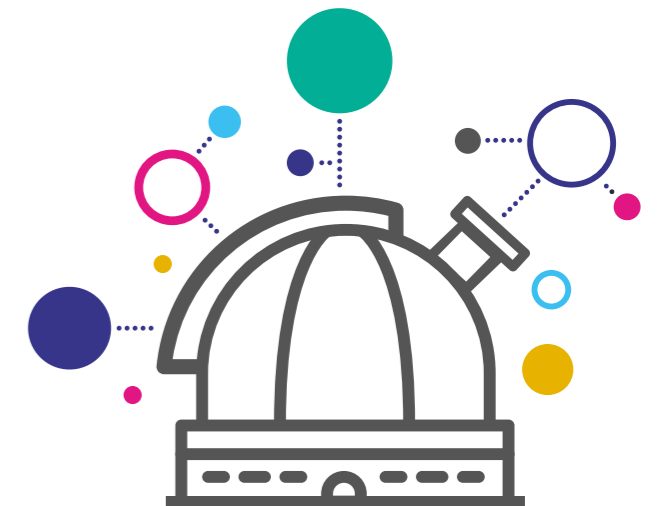| Factor	Positives	Negative
Usefulness	Relieves stress, has a functional purpose, learn something with it, keep in touch with people, connect with people all over the world, save and share memories, access to knowledge, help you to relax and cope with poor mental health, can express your feelings, help you to understand class work, record what you've been up to.	Can be used negatively (e.g. YikYak), steals your information, doesn't really have a point, social media can push negativity and make you unhappy, too much hassle when there's another way of doing things, has incorrect information.

Enjoyability

The final factor that was raised by young people was enjoyability. This can link in with good design but is also about an app being entertaining or allowing young people to do something novel and fun. Information needs to be presented in an engaging way, with intuitive design allowing users to navigate in a way that doesn't frustrate or bore them. This indicates that the content and functions of an app could be co-designed by young people so that the language, style, and design and youth friendly, engaging and easy to understand and use.

Factor	Positives	Negative
Enjoyability	Funny, entertaining, good variety, you can make cool movies/videos	Boring, annoying, rage inducing

How do young people find out about new technology?

There were a variety of ways in which young people said they found out about new technologies, but the most frequently mentioned avenues for hearing of new tech was through recommendations from friends or peers. This was followed by social media and internet based advertising (e.g. YouTube adverts) or awareness raising (e.g. through reviews on other websites).

- Friend recommendations / word-of-mouth
- Social media (e.g. Facebook, Instagram)
- Internet adverts
- Websites
- Adverts before videos on YouTube
- TV adverts
- Adverts before movies
- Self-initiated search
- Through the news
- Reviews
- Billboards or posters
- Press conferences
- Through using other technologies
- Class
- Scottish Government
- Colleagues

The list of avenues through which young people had found out about tech suggest that they absorb information from a wide-variety of sources, and therefore any advertising campaign to promote a new piece of technology should aim to cover different media and information outlets.

Building on the Healthier Scotland Key Themes

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In 2016, Young Scot worked with a group of young people to look at the future of health and wellbeing in Scotland. The young people involved in that project co-designed a series of recommendations showcased in the "Creating a Healthier Scotland" report published by Young Scot in 2016.

The young people taking part in the Technology Enabled Care project built on this work by looking at how they could take the four themes identified in the report in a new digital direction. Within each theme, young people identified a number of topics that technology could help address:

» **Education** – healthy eating, games for learning, study support, physical education, mental health

» **Stigma** – reducing the gender gap, awareness raising and education, greater availability of support, public awareness

» **Relationships with professionals** – demystifying appointments, accessing services

» **Eating and fitness** - personal tracking and support, gamification, access and inspiration, information

These topics are explored in more depth below.

Education

Many of the ideas that came out of the education theme revolved around using digital technology as teaching aids, especially in a way that encouraged young people to use the tech at home as well as at school.

Healthy Eating

Young people suggested some simple idea like emailing healthy food recipes to students and parents, or working through video tutorials in food technology classes and sharing these for use at home. Other suggestions included tech to assist young people to plan healthy meals on a budget, a diary like feature for recording meals, and games to match foods up with food groups or learn about labelling.

Games for Learning

In fact, using games was a big theme across the board, with young people suggesting using games or quizzes (such as Kahoot!) to find out information in a fun way, to check learning, and provide tangible benefits from in-game rewards being exchanged for real life rewards. Game playing could replace traditional homework activities, or act as a 'brain gym' style warm-up at the start of lessons. Young people could be directly involved in creating such technology, linking up with other subject areas at the same time**.**

Study Support

Digital technology could support independent study with apps for mind-mapping or revision support, and teachers could use digital platforms such as chat rooms to provide support and answer questions, allowing people to study from home. Artificial intelligences could even act as teaching supports, able to offer help with homework and revision, or even used in class. Virtual Reality devices were another form of tech that could be used as a learning aid to understand the effects of drugs and alcohol on the body, or to see physical exercises demonstrated by a virtual instructor.

More generally, tablet devices could be used during class to provide access to useful tools, and young people should be allowed to type instead of writing by hand, especially during exams. This was one aspect of a desire for educational experiences that utilised interactive technology more, such as using digital voting or surveys to hear from young people anonymously about topics like mental health or healthy behaviours. The results of such a survey could spark interesting discussions and allow educators to target gaps in people's knowledge.

Physical Education

Digital technology could support fitness by enabling young people to use things learnt in lessons after school. Suggestions include the ability to add exercises that have been learnt in PE for use at home, logging your physical activity and recording personal bests, or a structure personal fitness programme which encourages planning future learning. Fitness apps could also be incorporated into PE lessons, with teachers supporting people to navigate a new app and learn how to make the most of it. School technology such as TV screens and email bulletins should also be used to raise awareness of local sports clubs and classes.

Mental Health

Digital tech to support learning about mental health could be deployed in a similar way to those mentioned above, acting as a source of information, providing games and knowledge checks, and guiding young people through a programme of learning. Tech could also be used in school to provide direct support to students with a digital chat service that students could access privately during moments of need, or perhaps using like read aloud technology to allow an anxious student to communicate with a teacher without having to speak.

Stigma

For the reducing stigma theme, there were two main areas that young people made suggestions about, one was widening access to services and the other was promotion of mental health. Young Scot and the Scottish Association for Mental Health (SAMH) are currently supporting a Youth Commission on Mental Health whose findings, when published, will further illuminate this topic and provide a wealth of ideas for consideration.

Reducing the Gender Gap

Multiple people suggested that digital services should make more of an effort to promote or tailor themselves to boys and young men. There was wide acknowledgement that boys and young men have greater difficulty expressing their emotions and seeking help, and that this translates into a higher suicide rate. Apps and services that are targeted at boys and young men, and co-designed with them, could be one way to tackle this issue.

### Awareness Raising and Education

Digital tech could be a powerful tool in raising awareness of mental health disorders and common symptoms, or a guide to what language to use to talk about mental health. Tech could provide basic, clear, easy-to-access information about mental health, could teach people how to detect signs of poor mental health in others and suggest tips and advice on how to support them. Such tech should be available to key figures like teachers to provide them with guidelines on how to promote mental health in class or tackle mental health related bullying or misinformation.

Greater Availability of Support

Many ideas for tackling stigma were about accessing support services and supporting self-management, suggesting that reducing stigma might mean normalising the use of mental health services and growing these services extensively. Specific ideas include online groups chats to gain support from people with similar experiences, video calls with counsellors or therapists, and the ability to access support anonymously - whether one-to-one or in a group format. For self-management, young people emphasised apps that can teach distraction techniques or coping mechanisms, or tech that facilitates self-exploration to allow young people to gain insight into their thoughts and emotions.

Public Awareness

It noted by a few young people that the general public also need to be targeted when taking measures to reduce stigma. Any of the tech that serves to educate and raise awareness needs to be rolled out to adults across society, and that partnerships with the media can be forged to raise awareness too. There may be different challenges in changing the perceptions of the general public, so work should be done with different populations to look at the messages and information that would appeal to them.
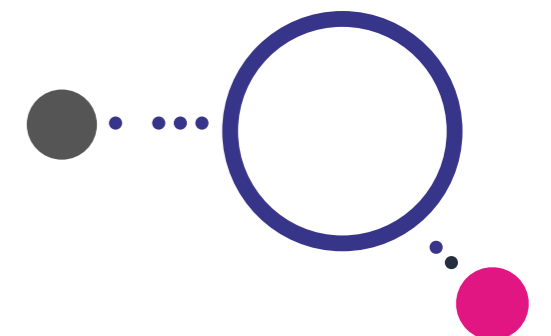
Relationships with professionals

When it came to relationships with professionals, the main concern was making it easier to access services and getting professionals to embrace the channels of communication that young people use.

Accessing Services

For many young people, being able to chat to professionals via instant messaging or video conferencing software would be incredibly useful, and there was some call for being able to access digital support services like group chats and one-to-one's anonymously. Online chat services were a popular idea for accessing mental health support workers as well as GPs. Young people wanted some digital support services to be available on demand, especially for crisis help, but also for less urgent things like booking an appointment. In general, young people wanted health professionals to communicate with them on platforms young people already use, and for these platforms to be accessible, for example using Talking Mat software to enable people to communicate using pictures instead of words.

Demystifying Appointments

For some, attending an appointment with a health professional can be a cause of anxiety of uncertainty, so suggestions were made to use digital tech to raise awareness of what happens when someone seeks help and support. This could include descriptions of different health services, how referrals work, what an appointment will be like, what you will be asked about, what confidentiality policies health professionals abide by, and so on.

There was a desire by young people to know the health professional they would be seeing ahead of a meeting, so they feel prepared and comfortable. Digital tech could facilitate an introductory meeting or conversation, or provide information about staff at a health centre, so that the person they will see is not a stranger. This could even be a group chat online ahead of a one-to-one appointment. Another benefit of this kind of intervention is to reassure young people that health professionals will be familiar with the issues young people face and that they will receive appropriate care from a supportive and understanding source.
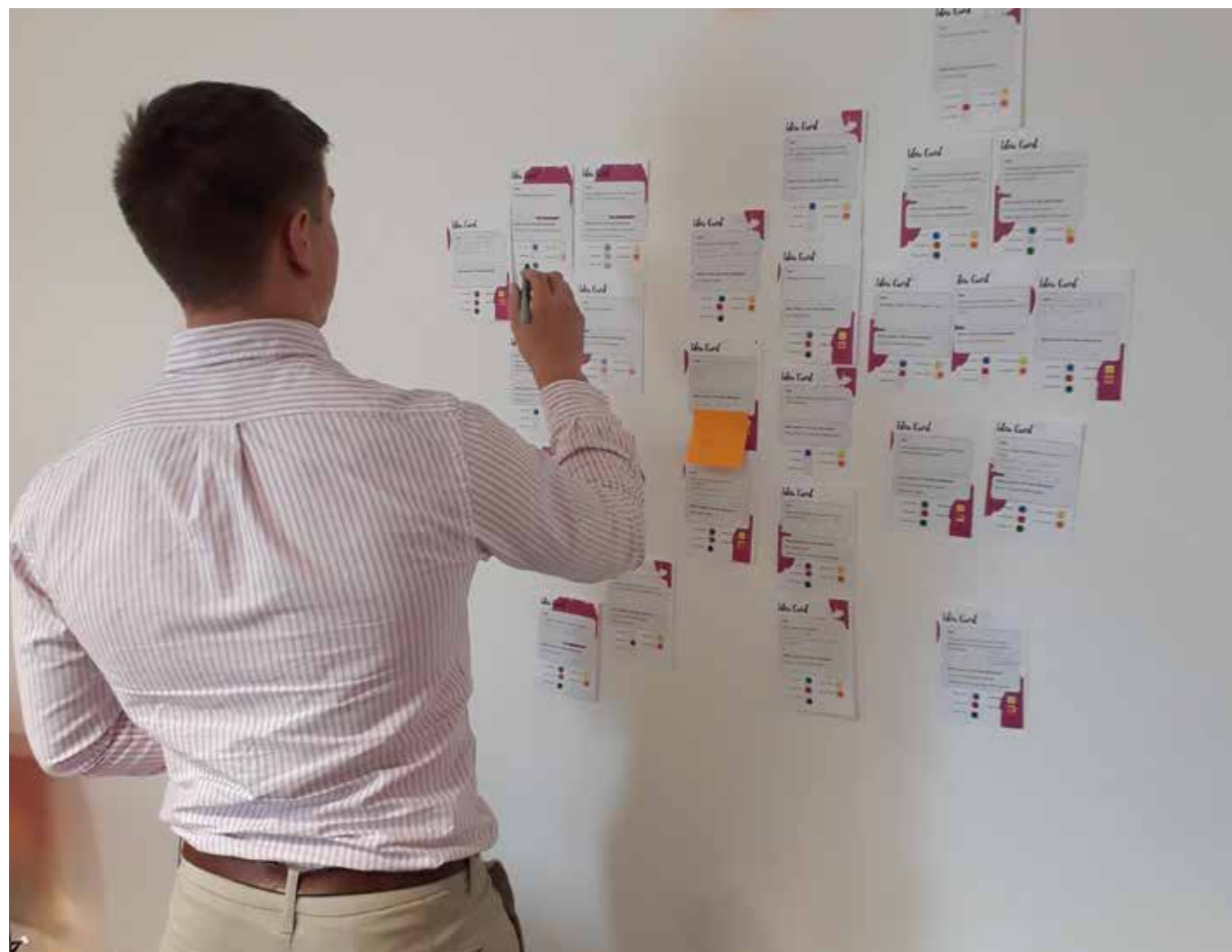
Eating and fitness

Encouraging healthy eating and fitness is a complex task, but young people have identified a number of ways that technology could help motivate people to work better at it.

Personal Tracking and Support

For both fitness and healthy eating, young people emphasised the ability of digital technology to be tailored to the individual. A fitness app could build up fitness at your pace, keep track of your activity, and help set achievable goals for the future. Similarly, for health eating a diary-like tracker could let young people record what they're eating, make suggestions for ways to improve diet, and suggest healthy recipes or ways to plan a balanced meal.

Gamification

Young people wanted to make fitness more fun by incorporating games and rewards into activities. People could receive virtual or real-life rewards for achieving goals, they could be presented with new and fun fitness challenges to work on by themselves or with friends and family, potentially tapping into trends such as the 'Bring Sally Up' workout challenge popular on YouTube.

Fitness challenges could take people out of the house, with young people drawing inspiration from the augmented reality game 'Pokémon Go' to suggest a game where people move around their outdoor environment to find rewards. Games like this could take on a social dimension with competitions or even collaborations to unlock certain goals. Fitbits or smart watches could be linked up to this game to enable people to track their movements and activity.

Access and Inspiration

Digital technology could enable those who want to exercise to find sports clubs or fitness classes using an interactive map or by making recommendations based on personal interest. For a cheaper option, digital tech could support a multimedia home workout programme, providing free videos, podcasts, tutorials, and voice guidance for different exercises. Having famous sports or fitness people promoting exercises or activities can act as inspiration for people to get active, and digital tech could offer a platform for collaboration with individuals like this.

Information

Healthy eating can be a confusing topic and digital tech could tell you what food or meals are healthy and allow you to scan barcodes to find out the nutritional value of food you are buying. Misleading or conflicting information about things like sugar or popular diets can be tackled via tech to enable young people to make better decisions about their food. A number of young people brought up so called 'pro-ana' (pro-anorexia) websites that promote eating disorders and wanted reliable information to raise awareness of the dangers of disordered eating.

Tech could also provide information about cheap food, where to buy cheap ingredients, and recipes for making healthy meals on a low budget. Whatever the topic, young people emphasised that the way information is presented needs to be engaging and interactive to a younger audience.

Key Concepts for Technology Enabled Care

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Following the engagement workshops and armed with the information in the previous section, a final 'Ideas Development Session' was run with young people. During this session the young people examined the issues that had been raised, evaluated all the ideas from the engagement sessions, and decided on a final set of key concepts to present in this report.

Augmented Reality App
Key issues this is addressing: Lack of exercise, poor mental health, social isolation

This is an app which allows users to download and apply different augmented reality maps over the street map on their mobile phone to encourage users to increase their level of physical activity. The app could also support mental wellbeing, not only through getting people out of the house but also by providing a distraction for people who are experiencing a particular low. The app could incorporate music related to your current mood, incorporate gamification aspects (e.g. 'Zombies, Run!' app) to increase use, and a implement rewards system for achieving goals potentially linked to the Young Scot card. Young Scot users can currently take part in a programme called 'Connect Your Tech' which allows them to sync their wearable fitness devices or mobile phone apps to the Young Scot Rewards programme. Young Scot Discounts could also play a part in such a service, making young people aware of discounts on goods or services near them which could support their health and wellbeing.

Different augmented reality maps could be coordinated between different services and organisations, for example See Me, VisitScotland, Google Maps, Local Authorities, and sports and fitness providers. Users could follow art trails around their local area, discover playlists or reading lists related to places they are visiting, find out about local history, discover nature walks or outdoor gym equipment, and much more. A social aspect could be introduced to encourage people to work together or share their achievements.

Digital Doctors Surgery
Key issues this is addressing: Worry about visiting the doctors, barriers to healthcare

This is a website which provides multiple functions to enable easier access to frontline health care. The website would provide comprehensive information on every GP surgery including details about the doctors professional experience, any specialities they have and perhaps a blurb about them. This will enable young people to find out more about who they will be seeing ahead of time, allow them to pick a doctor best suited to their needs, and reduce anxiety about walking into a GP appointment without knowing who they will be seeing. Other health professionals operating out of the surgery would also be included in this package of information.

In addition, there would be two key functional elements to this web service; booking online appointments, and remote video appointments. The online booking service would allow people to see the availability of appointments and self-select a time that is convenient for them. As well as increasing efficiency, the online booking system will also be easier for young people to navigate as many dislike speaking on the phone and don't have the flexibility or time to make an appointment in person.

Remote video appointments would be conducted by a doctor and/or nurse specifically scheduled to be dealing with online appointments in a consulting room at the surgery. They would work regular practice hours, potentially with an after hours on call service, or a regular after hours service. Video appointments would enable people to access health care without travelling to their surgery in person, which can be difficult if you do not have access to convenient personal or public transport, would find it hard to get to the surgery within opening hours, or would have to miss large chunks of school or work in order to attend. The digital service would be framed as an 'initial consultation' or only for specific health problems, as the importance of a physical examination is obviously fundamental for some ailments.

Mental Health Chat Service
Key issues this is addressing: Access to mental health support, reducing stigma around mental health

This multi-platform service would provide a digital live chat service to young people where they could connect with a mental health professional to talk about their mental health and receive guidance and support. This service would run from 9am-9pm to be accessible when young people need it. By providing preventative support and a listening ear, this service could reduce the waiting list for Child and Adolescent Mental Health Services and help many young people to avoid reaching a crisis point. This service would be promoted to all young people via school and other avenues, and Young Scot's Infoline advice service could be developed in alignment with NHS services to deliver such a platform.

In addition to the 'service on demand' nature of this platform, the digital format would allow young people to speak to someone without having to talk on the phone, and to do so in private from any location. Not having to physically attend an appointment or call on the phone can reduce anxiety and to address their mental health in a physical location that they are comfortable in. To be useful to those young people without wi-fi or data on their phone, an offline service provided by a pre-programmed AI could offer tips, advice and signposting.

Young Scot and SAMH's Youth Commission on Mental Health are currently exploring mental health service provision in depth and their recommendations and proposed actions will provide a key source of information for developing digital mental health services. The Youth Commission's report should be available in early 2019 for analysis and further action.

This service could work to address a variety of specific issues in addition to its basic functionality, including tailored support for young men, rehabilitation support for people recovering from addiction, and a focus on accessibility (e.g. using emojis or pictures to start a conversation about mood or feelings).

Health & Wellbeing Online Resources
Key issues this is addressing: Access to mental health support, reducing stigma around mental health, healthy eating, poor mental health, lack of exercise, worry about visiting the doctors, study pressure

Young Scot's website, http://young.scot, is Scotland's online youth information platform and is tailored for young people and to provide easy to understand information and guidance on a wide variety of topics, including mental and physical health. The Young Scot website is the perfect platform for such an online resource to be developed and co-designed with young people, and content can be co-created with different organisations to develop a knowledge base and key signposting information. Using the existing resource The Lowdown, available at https://young.scot/get-the-lowdown/, and the expertise of the Young Scot team, health and wellbeing content can be provided in a range of formats and targeted to different key groups of young people. The Young Scot app in particular, currently in development, will further enhance the reach and usability of the Young Scot information platform.

The Young Scot website would act as a one-stop-shop for young people, signposting them to useful apps, NHS services, third sector organisations, Local Authority services, or even opportunity providers. The platform would demystify services, explaining how to access them, how long you might have to wait, what your rights are around confidentiality and service standards, and what to expect when you get there.

In addition to basic information explaining different health conditions and options for support, the platform would also provide information on healthy lifestyles as a preventative measure. This could incorporate easy-to understand information about healthy eating and fitness, in-built games (e.g. to learn about food groups, food labelling, quick exercises), tracking or diary functions (to keep track of things like what you eat, fitness or mood), and tailored recommendations for healthy recipes, local sports facilities, or even meal budgeting.

This platform would be interactive and reactive, responding to current issues such as exam stress, eating disorders, self-harm, or diet fads. As a trusted source of advice and information, young people would be informed and given the tools to manage an array of health and wellbeing needs.

Next Steps

Following on from the potential solutions to supporting young people's health and wellbeing in Scotland outlined above by the Technology Enabled Care project participants, it would be valuable for the Technology Enabled Care Programme to consider taking a selection of these ideas forward to a developmental stage.

In line with the Technology Enable Care Programme's belief that technology become integrated into health and care services, the ideas outlined above provide a jumping off point for future collaborations between young people, industry experts, designers, and healthcare providers. Where there are ideas to build upon Young Scot's existing services, Young Scot would be willing to discuss these and explore future opportunities.
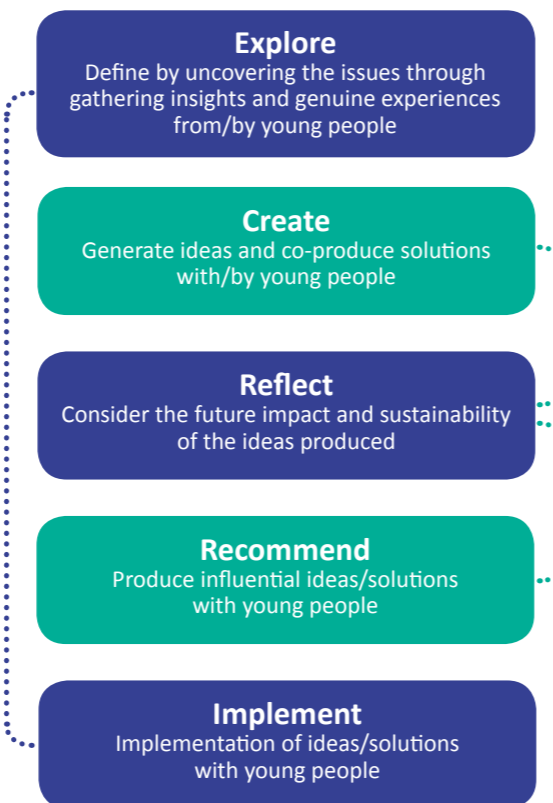
Appendix 1

Young Scot has extensive experience in engaging with Scotland's young people to seek their views and input in the development of the services they use. Young people have a significant role to play in encouraging organisations and communities to adopt a more collaborative culture, focusing resources to effectively meet the needs of individuals and communities.

Our co-design service involves young people systematically creating, designing and delivering solutions in collaboration with organisations. Young people are involved much earlier in decision making process through a highly participative approach developing informed insights, ideas, recommendations and solutions for policy and practice.

Supporting people to co-design ideas has been shown to have a radical impact on service innovation. We know using a co-design approach enables a more distributed, decentralised approach to innovation that supports Scotland's ambitions to cede power and responsibility directly to young people.

This approach ties into key policy areas including:

» United Nations Conventions on the Rights of the Child
» Public Service Reform/Christie Commission
» Community Empowerment Act
» Getting It Right for Every Child

Explore
Define by uncovering the issues through gathering insights and genuine experiences from/by young people

Create
Generate ideas and co-produce solutions with/by young people

Reflect
Consider the future impact and sustainability of the ideas produced

Recommend
Produce influential ideas/solutions with young people

Implement
Implementation of ideas/solutions with young people

get in touch

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