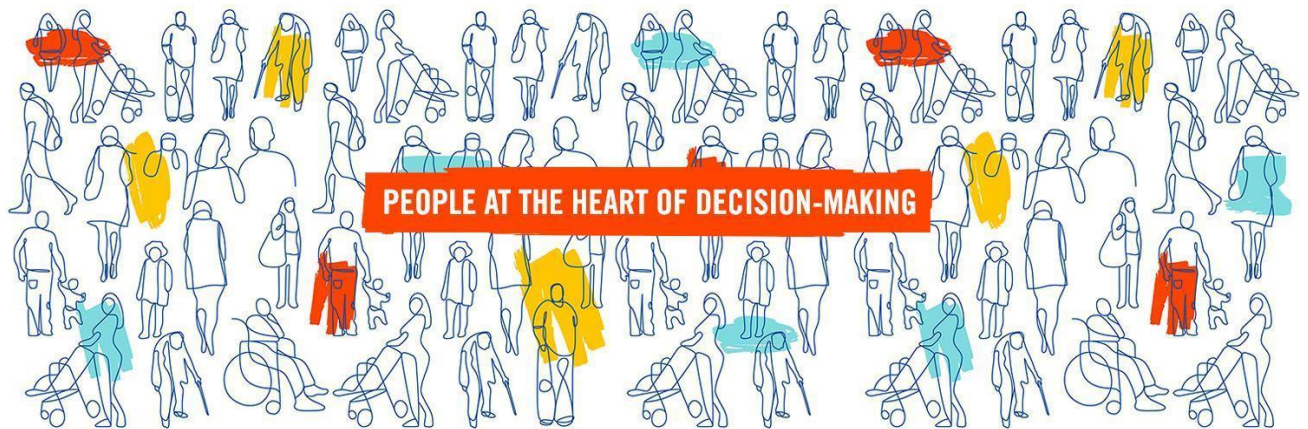




National Digital Ethics Public Panel

Insight Report



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1. Introduction

The National Digital Ethics Public Panel brought together a broadly representative group of 30¹ people from across Scotland to learn, discuss and deliberate on key aspects of digital ethics. The Public Panel was designed to run alongside, and complement, the work of the Scottish Government's National Digital Ethics Expert Group, chaired by Dr Claudia Pagliari.

Background to the National Digital Ethics Public Panel

The 2019 -20 Programme for Government included a commitment to explore the ambition of Scotland becoming an ethical digital nation:

*"In the coming year, we will develop principles and frameworks setting out how we will become an ethical digital nation. These will be clear statements of how Scotland will use digital, data and artificial intelligence to improve public services, boost productivity and drive inclusive growth in ways which protect privacy, enhance security and promote accessibility, inclusion and diversity."*²

A National Digital Ethics Expert Group was established to gather evidence and develop recommendations for a framework of digital ethics for Scotland. Carnegie UK were awarded funding from the Scottish Government to project manage a parallel process of public engagement, bringing in [Involve](#) (one of the UK's most experienced participatory engagement charities) as a delivery partner.

The National Digital Ethics Public Panel was convened to support the work of the Expert Group by providing a forum in which the views, preferences, and priorities of the public on the topics they were considering could be explored in a deliberative way.

Process of Panel meetings

The Panel met for six blocks of meetings between September 2020 and June 2021, with each block involving 8 hours contact time with Members. Due to the ongoing Covid19 restrictions the meetings took place online.

The Panel meetings were designed and facilitated by Involve and consisted of a mixture of presentations to introduce information, facilitated discussions in small break-out groups (average 6 people), and online exercises to record data and findings. The meetings were convened using the Zoom video-conferencing platform and a limited range of other digital tools - specifically Jamboard, Mentimeter and Googleforms - were used to support and encourage participants' engagement.

During meetings Members spent much of their time in the break-out groups to enable productive conversations. On each occasion these groups were pre-allocated to ensure that all discussion groups were mixed in terms of age, gender, and socio-economic status. Over the course of each week the Members typically worked in 2 - 3 different groups. This was considered important to ensure that Members were able to hear from as many fellow Panel Members throughout their discussions, and to build the sense of this being a collective endeavour. Further details of the methodology used to design and deliver the work of the Public Panel can be found in Chapter 2.

¹ The original intent was to establish a Public Panel of 30 Members, selected as a 'mini' version of the Scottish public. Initially 33 Members were recruited to allow for inevitable drop-off over time. More information about the recruitment and make-up of the Panel can be found in Chapter 3 of this report.

² Scottish Government, Programme for Government 2019-20, page 73

Content of the Panel Meetings

In the first block of Panel meetings Dr Claudia Pagliari, the Chair of the Government's National Digital Ethics Expert Group, introduced Members to a range of ethical factors for consideration throughout their deliberations. Identified as 'Objects of Trust', these eight categories were used throughout the Panel meetings as a tool to help Members organise their thinking about the ethical implications of the uses of digital technologies. Although they are not used explicitly to structure this report the language used within them reoccurs regularly as the Members' embraced this framework as a way to help articulate their conclusions.

The 'Objects of Trust' Framework



Each block of Panel meetings was focused on a particular form of digital technology (for example, social media) or context for the use of digital (for example, in the workplace, in education or for monitoring and surveillance). After each block of meetings an Output Report was prepared and shared with the members of the Expert Group to illustrate the evolution of Members' thinking around each use of digital and their interim conclusions. Designed to present the specific discussion outputs from each topic these reports provided the Expert Group with a 'snapshot' of Members' responses to the questions they were considering but should not be taken as standalone reports from the Public Panel.

This Insight Report

This Insight Report was prepared after the conclusion of the Public Panel's meetings. It draws together the cross-cutting themes explored by the Panel Members over the whole process and, in Chapter 4, presents the Public Panel's overarching conclusions and expectations of what an ethical digital Scotland should look like.

In Chapter 5, this report also outlines some of the wider impacts participation in the process had on the Members, both in relation to their individual digital behaviours and wider political engagement, and, in Chapter 6, the Members' evaluation of the online deliberative process. These Chapters give an insight into the public's experience of being part of a substantive, long-form deliberative process and are intended to provide a resource for those considering similar public engagement activities in the future.

2. Methodology

The National Digital Ethics Public Panel was convened as a long-form, deliberative mini-public to address the overall question:

How should Scotland best respond to the digital revolution in an ethical way?

Established to support and provide input to the National Digital Ethics Expert Group, the delivery of the Public Panel was understood from the outset to be an iterative and collaborative process involving a range of stakeholders. To ensure this was achieved successfully a Project Team was created to feed into the planning of the Public Panel meetings. This Project Team comprised of:

- The Chair of the National Digital Ethics Expert Group, the body to whom the Public Panel would ultimately be presenting their report, to ensure that the questions considered by the two groups were complementary.
- Staff from Carnegie UK whose role included identification and engagement of speakers and contributors to present at Panel meetings; management of the delivery partner; leading project meetings; monitoring project timescales and milestones; and liaising with key stakeholders. Carnegie UK also contributed their cross-cutting organisational expertise to the development of the programme content particularly around digital participation, data, online harms, engagement techniques and wellbeing.
- Staff from the Scottish Government Digital Directorate, who served as the Secretariat to the Expert Group, and were able to bring additional insights from the Group's discussions to identify priorities for further public engagement.
- A deliberative process design specialist from Involve, who had the responsibility for developing the relevant content into deliverable, engaging and productive workshops for the members.

Working together this Project Team created a programme of work for the Public Panel that would provide interim responses from the public on key questions being considered by the Expert Group as well as this final report, drawing together insights from throughout the process and the Members' own considered priorities for realising an ethical digital Scotland.

Why convene a deliberative mini-public?

The questions about the challenges that will need to be addressed to enable Scotland to become an ethical digital nation that were being considered by the Government's Expert Group are a highly suitable focus for deliberative work with a representative mini-public. This is because they are complex questions that will benefit from public participants being given access to balanced and in-depth information about the issues, time to consider what they have heard, and the opportunity to discuss their opinions with others before being asked to draw conclusions.

As such a deliberative process can:

- 1) give decision-makers a detailed understanding of informed public opinion on complex issues and/or value-laden and controversial questions; and
- 2) open up space for revealing consensus, identifying where trade-offs have to be made, and find solutions that respect the constraints of the policy and practical environment.

It is important to note however, that the findings from a deliberative mini-public are unlikely to mirror wider public opinion, despite its membership being selected to be broadly representative of the public as a whole. This is explicitly because of the time devoted to learning and shared inquiry through dialogue and deliberation. The value added by this type of approach, and therefore its

usefulness to inform decision-making, is based on the rationale that the structured diversity of the recruited membership means that their conclusions can serve as a proxy for wider public opinion, if the wider public were provided with the opportunity to go through a similar process of learning, dialogue, and deliberation.

Principles of the design process

The key principle that underpinned the design of the Panel meetings was the adoption of the core characteristic of a deliberative engagement process. This three-phase process is what distinguishes deliberative engagement from other forms of public consultation.

- **A dedicated learning phase:** A central feature of a deliberative approach is the learning component wherein participants are able to develop an understanding of the issue based on unbiased information and/or the clear presentation of arguments from different perspectives. Throughout this phase information can be presented in a variety of ways including presentations from experts and advocates, written information, case studies/ examples, and through facilitated discussions. In the case of the Public Panel the learning phase was spread across the first five blocks of Panel meetings. At each stage a different topic or thematic area was used as a way of introducing the Members to new aspects and uses of digital to help ground their consideration of the ethical uses of these technologies in real world applications.
- **Discussion focused on developing dialogue:** To enable this, the participants in a deliberative process tend to spend most of the time in small groups engaged in discussion about the topic, supported by trained facilitators. This allows time for people to develop and test opinions on issues that are new to them (and on which they do not have a fixed opinion), explore their pre-existing opinions in light of what they have heard and develop a wider understanding of the opinions of others. The aim is to encourage the development of a constructive dialogue between participants. Dialogue is a specific discursive form that asks participants to become part of a collaborative process of shared inquiry, exchange, listening and reflecting, and as such requires skilful facilitation to support participants to move beyond presenting surface level views. Where possible subject matter experts should also be available to be called on by the participants to answer questions and provide clarification, but it is important that the participants themselves are able to drive the conversation as a process of collective 'meaning making'.
- **The deliberation phase:** This stage of a deliberative engagement process involves participants coming to some conclusions based on what they have learnt through a process of public reasoning. This involves participants weighing options and making choices together. While consensus based decision-making processes are the ideal, at this stage voting systems will often be used, as was the case in the Panel meetings, to ensure clear outputs are attained at each stage. While there were elements of deliberation built into all the Panel meetings in order to negotiate and evaluate positions in regard to each topic area, the main deliberations of the Panel took place in the fifth and sixth blocks of meetings. Here Members had the opportunity to look back over all that they had learnt and considered to produce collective conclusions and priorities for Scotland becoming an ethical digital nation.

Delivery of Panel meetings

This Panel met for six blocks of meetings between September 2020 and June 2021. Each block involved Panel Members coming together for 8 hours during the space of 1 week (2 hours each on a Tuesday and Thursday evening and two 2-hour sessions on the Saturday, with a 90-minute lunch

break). This structure was designed to allow Members sufficient time to learn about, discuss and deliberate on the topics covered, whilst also not placing an undue burden on them of lengthy sessions on Zoom (which can prove quite demanding, particularly for people who are not already familiar with using video conferencing platforms).

Each meeting was led by Kaela Scott, Director of Innovation and Practice at Involve, and supported by a team of 5 professional facilitators with extensive experience in developing dialogue among diverse groups and encouraging effective deliberation online. Central to sustaining Members' engagement in a long deliberative process like this is the variety of exercises and techniques used throughout the sessions. In this case considerable care was given to designing a process that would support all participants to use Zoom (and a limited number of other platforms) to engage with quite complex information in a way that enabled them to put their opinion forward on their own terms. Therefore, each of the blocks was designed to include a range of ways for Members to participate including:

- facilitated breakout discussions;
- collaborative question and idea generation sessions using Jamboard;
- plenary discussions;
- group ranking/negotiation activities in breakout rooms;
- time for individual reflection and note taking;
- opportunities to question the speakers (in breakout rooms and in plenary);
- live interactive polling to instantly gauge the sentiment within the 'room' on key discussion points;
- online worksheets after each block to collect quantitative and qualitative data from each Member.

Building this variety into the process design ensured that all participants were able to contribute in ways that suited them best – verbally during breakout discussions, through written inputs on Jamboard and in post-event worksheets, and through time for reflection between meetings. Detailed facilitation plans were produced for each meeting which identified clear outputs from each activity that could be analysed sequentially, and cumulatively, to produce the findings that are presented later in this report.

The facilitators' role in these discussions was also vital for ensuring the Members were able to deliberate inclusively and effectively. The skills required by facilitators are fundamentally the same if they are facilitating online or in face-to-face meetings, although building a relationship with the Members can be more difficult online as some visual and verbal clues about their feelings of inclusion and engagement may be more difficult to spot. The facilitators in this context have a unique responsibility to look after and support the needs of their specific group (and the individuals within it) while also being responsible for the timely delivery of the process as a whole. Their impartiality is key, but they also need to ensure that all Members have the opportunity to contribute and that their opinions are respected and valued within the discussions.

Overview of the content covered by the Panel meetings

The topic of Digital Ethics is a vast and complex one, and there was no expectation that the Panel Members would become technical, ethical or policy 'experts' throughout the process. Instead, their role was to undertake a process of cumulative learning which would enable them to reflect on questions and draw conclusions in an informed and considered way.

Below is an overview of what was covered at each meeting of the National Digital Ethics Public Panel. It demonstrates how the learning and understanding of Members, and the complexity of the information they were being asked to consider, was built up over time. Despite the extensive set of

issues covered and used to illustrate ethical questions there was naturally a limit to the range of topics that could be explored throughout the process in any meaningful way. In planning the Panel meetings, the long list of possible areas for consideration derived from the Expert Group's areas of interest was refined into something that would be manageable and achievable for Panel members, particularly given their diverse range of experiences and pre-existing understanding of the topic.

Consideration was also given to the importance of the members hearing a range of views and from a range of different types of speakers. While the Chair of the Expert Group operated as a voice of continuity for Members across the Panel meetings, helping to locate the other invited presenters within their wider discussions, the Members heard from 20 different speakers in total including representatives from local and national government, the third sector, the private sector, academia, and trade bodies.³

In most cases the speakers were invited to present for 10-20 minutes on a particular topic or explore a specific question. In inviting and briefing the speakers attention was also given to providing clarity about the role they were being asked to play – either an exposition role (presenting factual information about the current situation), or an advocacy role (presenting arguments for how things could/should change) - and this was also made clear to the Members. To complement the invited speakers the Panel were also presented with other types of evidence including survey data, pre-existing videos from expert organisations, or case study materials.

Block 1 – September 2020

What is digital and what is digital ethics?

The purpose of these meetings was to:

- Meet each other and establish ways of working together, including participants becoming familiar with the technology and main platforms to be used;
- Introduce the concept of Digital Ethics;
- Explore how Members use digital technologies themselves, and any changes in this in the context of the Covid-19 pandemic;
- Increase Members' understanding of where, how, and why digital data is collected about individuals – their digital footprint – and explore opinions on different ways this data is used in the public and private sectors;
- Use the context of Covid-19, and the debates taking place at the time about Covid Apps and location tracking, to explore the acceptability of different uses and the factors that determine this.

Block 2 – November 2020

In an ethical digital Scotland how should we protect or mitigate digital risks & harms at individual and societal levels (and what are the constraints)?

The purpose of these meetings was to:

- Identify what were Members' biggest concerns about interacting online;
- Explore the concepts of misinformation and disinformation in the context of trust;
- Develop the Members' understanding of the current situation for addressing some of these issues - regulation, education, policy, platforms' responsibilities etc.;

³ A full list of the speakers who presented to the Public Panel can be found in Appendix B.

- Consider where the balance of responsibility should lie between individuals, government/regulation, and businesses for preventing and mitigating harms (with a particular focus on social media platforms).

Block 3 – February 2021

How do we strike a fair balance between the economic and social benefits from digital innovations, while also preventing negative effects?

The purpose of these meetings was to:

- Explore the growth of digital technologies and innovations for businesses and their role in the Scottish economy;
- Use the example of the Gaming Industry to illustrate some of the benefits and challenges of having a thriving digital sector in Scotland;
- Consider what a digitally thriving 21st century Scottish economy would look like;
- Use the context of workplace recruitment to explore the acceptability of different uses of algorithms to make decisions, and identify the factors Members considered in this evaluation;
- Explore the 'benefits' and 'threats' automation brings to business, the workplace, and the economy more broadly;
- Consider the ethics of using algorithms and automation in the workplace, using the context of productivity monitoring to ground the conversation.

Block 4 – February 2021

Can Digital Technologies help to reduce inequalities for individuals and provide opportunities for society to become more inclusive?

The purpose of these meetings was to:

- Explore the impacts of digital inclusion and digital exclusion on individuals;
- Involve Members in the consideration of what a digitally inclusive society would look like;
- Explore the opportunities for individuals and societies of digital approaches to democratic engagement and social and cultural participation;
- Consider the strengths, weaknesses, opportunities and threats of the increased use of digital technologies, and a digital by default approach to service provision, on tackling inequalities and promoting inclusion;
- Identify where Members believe the balance of responsibility lies for reducing digital exclusion.

Block 5 – April/May 2021

Can the ever-increasing use of digital tech in Scotland be balanced with environmental responsibility?

In an ethical digital Scotland, how far should public and private sector bodies be allowed to go in the use of digital technologies and surveillance to make decisions and direct services?

The purpose of these meetings was to:

- Expand Members' understanding of the environmental impacts of the use and production of digital technologies;
- Explore what Members saw as the biggest / most difficult challenges to overcome if society is to balance the increased use of digital tech (and the benefits it brings) with environmental responsibility;

- To discuss where responsibility for minimising negative environmental impacts lies, and whether it is 'fair' to call for individual behaviour change to reduce emissions from personal use;
- Develop Members' awareness of how digital providers, and businesses dependent on digital technologies, are seeking to address environmental impacts;
- Explore how big data and digital technologies can provide environmental benefits, using an example of Smart Cities and the Internet of Things to inform the conversation;
- Examine questions of fairness and justice in the use of big data and surveillance for decision making on service planning, delivery, and eligibility – using examples drawn from the field of education to illustrate the range of potential uses;
- Explore the acceptability of digital technologies and surveillance technologies being deployed in the context of crime, justice, and policing, using the example of facial recognition software to initiate a wider conversation;
- Step back and consider the range of topics and issues covered in the Panel meetings so far, to enable Members to identify the most important issues and unresolved challenges for becoming an ethical digital Scotland that they wanted to focus on in block 6.

Block 6 – May/June 2021

What are the outstanding challenges, opportunities, and tensions for becoming an ethical digital nation?

The purpose of these meetings was to:

- Give Members an opportunity to identify the trade-offs and balances required to overcome the key challenges they had identified as being at the heart of working towards becoming an ethical digital nation;
- Develop the 'messages' they wanted to send to the Expert Group regarding what they would expect to see in an ethical digital Scotland.

At the end of each block of Panel meetings an Output Report was produced by Involve and shared with the Expert Group, Scottish Government and Carnegie UK. These reports presented the interim conclusions drawn by Members on the specific topic areas they had been discussing during that week's meetings. Together these Output Reports trace the Members' developing understanding of the overall topic of digital ethics, as well as provide insight into their growing understanding of some of the wider questions about how digital technologies are, and can be, used across society. These Output Reports are however only a 'snapshot' into the process and should not be considered as standalone reports from the National Digital Ethics Public Panel.

3. Membership of the Public Panel

The 30 Members of the National Digital Ethics Public Panel were selected to be a representative sample of the overall population of Scotland i.e. a mini-public. As far as possible in a group this size, the selection was made to mirror the demographics of Scotland, as recorded in the most recent census and by the Office of National Statistics. Given the nature of the topic, the Members were also explicitly recruited to reflect the range of digital skills evident across the population (as measured in the Scottish Household Survey).

Recruitment methodology

Membership of the Panel was determined through a process of stratified random selection to (as closely as possible within a group of this size) match the demographic characteristics of Scotland.

The recruitment of participants was undertaken by the Sortition Foundation - a not-for-profit social enterprise dedicated to promoting fair, transparent, inclusive, and effective deliberative processes by ensuring accurate representative and random sampling during recruitment. The method they use is based on the principle that every resident in the area should have an equal probability of receiving an invitation to take part.

To realise this 6000 invitations to participate were sent to households across Scotland, randomly selected from the Royal Mail Postcode Address File - the most complete and up-to-date address database in the UK. The invitations were issued in a specially designed, attractive, and informative envelope (with Scottish Government branding) and included a FAQ sheet and an individual registration code to use to express interest in joining the Panel.

Experience has shown that this method of recruitment does typically tend to attract more expressions of interest from people from professional backgrounds and with higher levels of education. To help counter this potential skewing the Scottish Index of Multiple Deprivation⁴ was used to identify postcode areas with the highest levels of deprivation and proportionately more addresses were selected from these areas. This meant in practice that 80% of the addresses selected were from the entire Postcode Address File (including areas of deprivation) and the remaining 20% from postcodes with a Scottish Index of Multiple Deprivation decile rating of 1-3 (the most deprived areas).

The invitation also included the offer of a £120 cash thankyou gift per week of Panel meetings (a total of £720) to encourage those who might not otherwise be interested to be motivated to apply. While we recognise that not all mini-publics provide a financial honorarium to participants, we consider it good practice to do so. As well as demonstrating that their participation and engagement is valued, the honorarium helps to ensure that a diverse range of participants (including those who are on low or inconsistent incomes, unemployed or with caring responsibilities) can participate. It also encourages people not intrinsically interested in the topic or the opportunity to engage with government to attend, increasing the likely diversity of views brought to the discussions.

Anyone aged 16 or over who was living in a household that received an invitation could register their interest in becoming part of the Panel. Potential participants were given two ways to register their interest, online or over the phone. As part of registering their interest respondents were asked to provide a range of socio-economic and demographic data to enable stratification and relevant exclusions (e.g. people holding elected office or directly employed by a political party). 313 Members

⁴ The Scottish Index of Multiple Deprivation is a relative measure of deprivation across 6,976 small areas (called data zones). SIMD looks at the extent to which an area is deprived across seven domains: income, employment, education, health, access to services, crime and housing.

of the public applied to be part of the Panel, confirming they were available for all of the dates and times required.⁵ This represents a response rate of just over 5%, which is typical for this type of recruitment process.

From the pool of interested respondents a second, stratified random selection was performed to match the latest Scottish data on six dimensions: age, parliamentary region, gender, education level, urban / rural classification, and level of digital literacy. While there were a range of other demographic criteria that could have been used to stratify the selection, in a group of this size choices have to be made. These dimensions were therefore chosen as being most relevant to ensuring that, collectively, the Panel would bring the broadest range of views and experiences relating to digital engagement from across Scotland as possible.

Once the selection of Members was complete the Sortition Foundation sent further information to the Members containing more details of the events. Intention to attend was also confirmed by phone before the details of the representative sample of 33 people (an over-recruitment of 10%) were sent to Involve to continue the on-boarding process.

Onboarding process

In order to ensure that all recruited Members of the Panel were able, and likely, to participate in the meetings Involve undertook a process of 'on-boarding'. This included initial email contact to introduce the team, ensure Members had the practical and process information they needed to feel prepared and ask about any additional support they might require.⁶ A short survey was also used to assess Members' access to the internet and a computer, laptop or suitable tablet, as well as their self-declared IT literacy. Members who did not have access to suitable equipment and/or low levels of digital literacy were given further individual support to ensure they could participate. Depending on individual circumstances this support included:

- providing Members with chromebooks, webcams and/or headsets if they did not have suitable devices to participate effectively on Zoom;
- providing mobile data to participants who might not have suitable internet infrastructure at their home by using prepaid USB Modems, Pocket WiFi devices or data bundles to enable them to hotspot from a mobile phone;
- 1-2-1 phone calls to support Members to learn the skills required to participate, such as the basics of using Zoom. As additional online tools were introduced in the meetings the Members were also supported through 'keep-warm' calls between Panel meeting to build up their online skills.

Panel Members

- 33 Members completed the first block of meetings (a 10% over-recruitment of the original target of 30 members to allow for the inevitable drop off of members over time).
- 28 Members participated in the 4th block of meetings (originally intended to be the final block) with drop-outs due to a combination of illness, lack of engagement (i.e. deciding the process wasn't for them) and changes in circumstances (e.g. family demands).

⁵ In the original iteration this was four blocks of meetings September – March 21.

⁶ For the very limited number of selected Members who were not able to supply an email address this initial contact took place by phone, with Members then offered support to set up an email address they could use throughout the process.

- 26 Members completed the 6th meeting. This represents a retention rate of 79%.⁷
- As can be seen from the table below, there was not a significant pattern evident among those who dropped out of the process over the 10 months from any key demographic group, apart from those with Level 1 qualifications.

Demographic characteristics of Members

	Baseline targets	Initial Membership	Members block 4	Members block 6
Gender				
Female	52%	54%	54%	54%
Male	48%	46%	46%	46%
Age				
16 – 29	22%	23%	22%	23%
30 – 44	23%	23%	18%	19%
45 – 64	33%	34%	38%	38%
65+	22%	20%	20%	20%
Urban/ Rural				
Urban	82%	82%	83%	81%
Rural	18%	18%	17%	19%
Geography				
Central Scotland	12%	11%	14%	12%
West Scotland	13%	11%	8%	7%
South Scotland	13%	14%	11%	12%
Glasgow	13%	14%	17%	19%
North East Scotland	14%	18%	17%	19%
Mid Scotland and Fife	12%	9%	8%	4% ⁸
Highlands and Islands	8%	9%	8%	7%
Lothian	15%	14%	17%	19%
Digital confidence (Assessed across 5 capabilities ⁹)				
Confident	77%	77%	75%	77%
Not Confident	23%	23%	25%	23%

⁷ Percentages are used throughout this report for illustrative and comparative purposes only. In a group of this size percentages carry little statistical significance and it is worth noting that a single person accounts for over 3% of the sample size.

⁸ Although this may look like a significant drop in participation, area of residence (particularly when it is within the central belt), is unlikely to have any significant impact on the representativeness of the Panel Membership in terms of their views on digital ethics.

⁹ The five capabilities, as used in the Scottish Household Survey, were the self-assessed levels of confidence in: Sending and receiving emails; Using a search engine; Shopping online; Being able to tell what websites to trust; Controlling privacy settings online (81%) [Scottish household survey 2018: annual report - gov.scot \(www.gov.scot\)](http://www.gov.scot)

	Baseline targets	Initial Membership	Members block 4	Members block 6
Level of Education¹⁰				
No Qualifications	17%	18%	22%	23%
Level 1	22%	20%	11%	7% ¹¹
Level 2 or 3	30%	31%	31%	35%
Level 4	31%	31%	36%	25%
Living with a disability¹²				
Living with a disability	20%	- ¹³	17%	19%
Do not have a disability	80%	-	83%	81%
Ethnic identity				
From a Black or minority ethnic background	5%	-	8%	12%
White British / white other	95%	-	92%	88%

¹⁰ Definitions of the categories used:

No qualifications: you have none of the qualifications (or none yet) listed below.

Level 1: (approx. 16-year-old school leaving certificate) O Grade, Standard Grade, Access 3 Cluster, Intermediate 1 or 2, GCSE, CSE, Senior Certificate or equivalent; GSVQ Foundation or Intermediate, SVQ level 1 or 2, SCOTVEC Module, City and Guilds Craft or equivalent; Other school qualifications not already mentioned (including foreign qualifications).

Level 2: (approx. 18-year-old school leaving certificate) SCE Higher Grade, Higher, Advanced Higher, CSYS, A Level, AS Level, Advanced Senior Certificate or equivalent; GSVQ Advanced, SVQ level 3, ONC, OND, SCOTVEC National Diploma, City and Guilds Advanced Craft or equivalent.

Level 3: (approx. non-University post-school qualification) HNC, HND, SVQ level 4 or equivalent; Other post-school but pre-Higher Education qualifications not already mentioned (including foreign qualifications).

Level 4 and above: (Tertiary/University degree or higher) Degree, Postgraduate qualifications, Masters, PhD, SVQ level 5 or equivalent; Professional qualifications (for example, teaching, nursing, accountancy); Other Higher Education qualifications not already mentioned (including foreign qualifications).

¹¹ While there appears to have been a substantial reduction in the proportion of participants with Level 1 education levels, we believe that when considered alongside the sustained participation rate for people with 'No qualifications', this is unlikely to have had a significant impact in skewing the overall level of educational qualifications represented.

¹² There is no official national baseline statistic for measuring the proportion of people in Scotland who identify as disabled. The formulation of '1 in 5 people is living with a disability' is therefore used here as a baseline as it is an established and recognised advocacy figure.

¹³ Additional demographic information was collected from Members midway through the process which demonstrated that the Panel Membership was also broadly representative of Scotland in terms of disability and ethnic diversity, although these were not criteria used during the selection process.

4. Expectations for an ethical digital Scotland

This chapter presents the high-level conclusions of the Panel Members about the opportunities, challenges, and tensions that they believe will be important to have considered, and overcome, in order to be an ethical digital nation. It focusses on the Members expectations of what should be in place in a future, imagined, ethical digital Scotland in order to mitigate against the potential risks and harms that the growing use and reliance on digital technologies poses to individuals, and to society more broadly, while maximising the benefits and opportunities.

Developing Statements of Expectation

Throughout the course of their meetings (18 meetings over a 10-month period) the members were introduced to, and asked to consider, a wide range of questions, tensions and opportunities associated with being an ethical digital nation – ranging from principles and limits on the uses of data through to real-world use case examples in employment, education, health and care, crime and policing, and environmental management. At each stage the Members reached conclusions on the specific topics and themes, which were reported to the Expert Group and are valuable in their own right as snap-shot to better understand public concerns, priorities, and preferences. The Panel process, however, was ultimately designed to support the Members to develop the understanding and insight that would enable them to make their own, informed determinations on what are the important factors in Scotland becoming an ethical digital nation.

In their final meetings Members were therefore given space to ‘step back’ and reflect on all the things they had learnt and considered within the meetings, alongside their own values and concerns for the future, to identify what they believed to be the big, unresolved challenges and tensions in the drive for Scotland to be both more digital, but also an ethical digital nation. For each of these they deliberated about what was at the heart of the challenge and what ‘better’ could look like. In the final meeting (using a ‘future search’ approach) the Members were invited to ‘imagine ahead’ and identify what they would expect to be in place to mitigate the risks and maximise the benefits of digital growth in Scotland. Working together they co-drafted a series of Statements of Expectation.¹⁴

Intended to send high-level ‘messages’ to the Expert Group, rather than technical policy recommendations, the Statements of Expectation sum up the things that members believed to be most important to have successfully achieved in order to be an ethical digital nation. Between the 16 Statements they call for action to have been taken by a wide variety of actors, including governments, tech companies, internet providers, employers, communities, and individuals. Across their breadth the Statements also pick up both on activity that is already underway, and the Members’ ambitions for things to be strengthened or done differently. Collectively, they paint a picture of the type of ethical digital Scotland that the Members would want to live in.

Presenting the Members’ conclusions

There were eight key thematic challenges that the Members focussed on when developing their Statements of Expectation. These have been used to structure this chapter.¹⁵

¹⁴ The Statements of Expectation were co-drafted by the Members, responding to the prompts:

In an ethical digital Scotland...

- **In order to...** (statement of the problem)
- **we would expect...** (the action taken / and by whom)
- **so that...** (the outcome we intend)

¹⁵ The order that these themes are presented is not intended to suggest the order of their importance to members. Rather the order has been chosen to assist readers to understand the way conclusions were built up throughout the process and illustrate the links made by Members between the challenges and their implications.

- a) Digital inclusion
- b) A 'green' digital Scotland
- c) Harm protections online
- d) Public awareness of data use and sharing
- e) Reliable, unbiased data and technologies underpinning algorithmic decisions
- f) Ethical limits to monitoring and surveillance
- g) Privacy by design and default
- h) The future of work in a digital economy

The remainder of this chapter presents, for each thematic challenge:

- A brief overview of the reasons why Members chose it for focus;
- The Statement(s) of Expectation produced by Members (as collaboratively written by them in small groups) and the level of support each statement received from the membership in a concluding vote of endorsement;¹⁶
- The background context for the identification of this challenge, including material drawn from the interim topic-based Output Reports;
- An exploration of where the Members felt the balance of responsibility lay for driving change and delivering ethical digital practices in these areas.

¹⁶ Statements were voted on independently of one another, and Members could vote to "strongly support" as many statements as they wanted to.

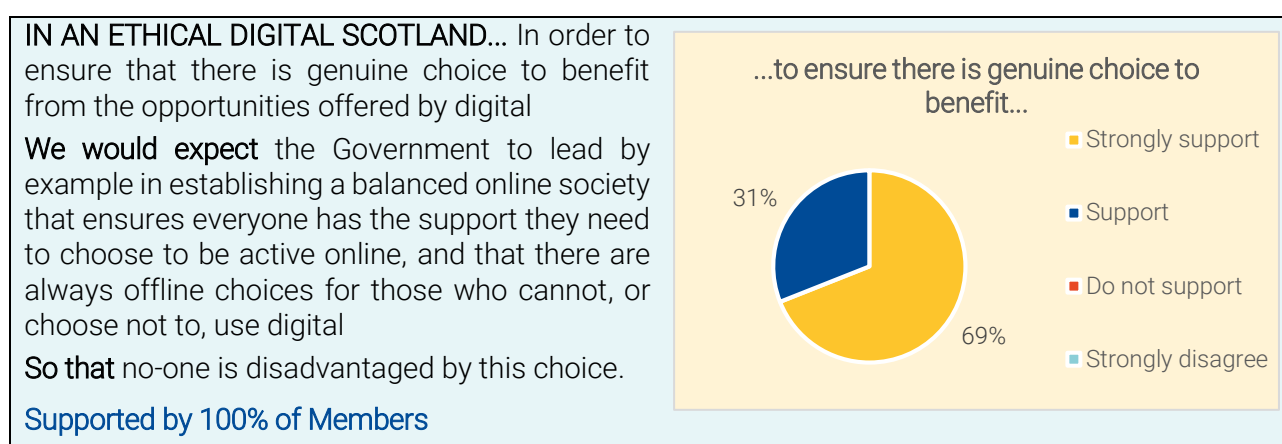
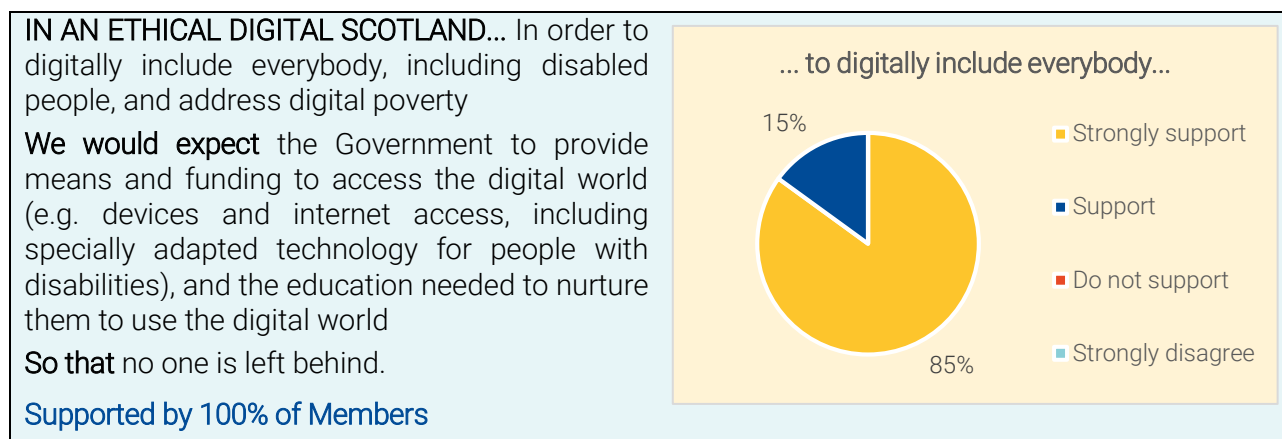
a) Digital inclusion

During the learning and exploratory meetings Members were particularly struck by the high numbers of people that they were told had no access to the internet (or very limited access), and the proportion of people in Scotland who do not possess core digital skills (i.e. the ability to communicate online, handle information and content, transact online, problem solve, and be safe, legal and confident online). As they continued to discuss the fact that digital technologies and online interactions are becoming more and more central to contemporary life, they focussed on digital inclusion as a vital prerequisite for Scotland becoming an ethical digital nation.

Statements of Expectation

The Members of the Panel developed three 'Statements of Expectation' relating to digital inclusion. These statements set out their collective expectations about key things that they believed would need to be in place, or have been addressed, to ensure digital inclusion in a future, imagined ethical digital Scotland.

Within this section the statements are presented in order of the level of support given by Members to each statement when voting individually after the final meeting, as illustrated by the graphs shown alongside.¹⁷



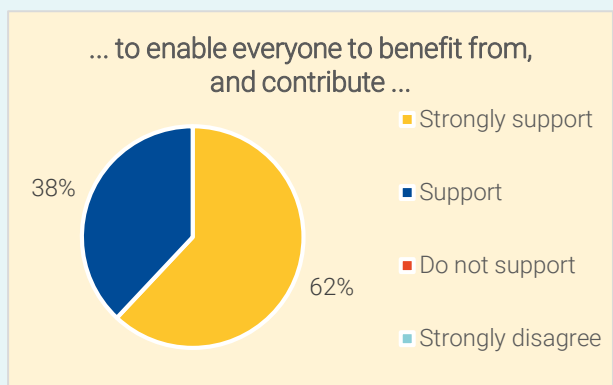
¹⁷ It should be noted that the percentages used to illustrate the findings throughout this report are provided for comparative purposes only and are not statistically significant in a group of this size (where 1 person's response counts for more than 3% of the total). Throughout this report percentages have been calculated based on the number of responses received, rather than the number eligible to vote, to account for natural variations in attendance across the Panel meetings.

IN AN ETHICAL DIGITAL SCOTLAND... In order to enable everyone to benefit from, and contribute to, digital forums and opportunities for participation

We would expect there to be universal access to basic data provision through a centralised provider with easy to access links to opportunities

So that we have full societal inclusion, and everyone's voice can be heard.

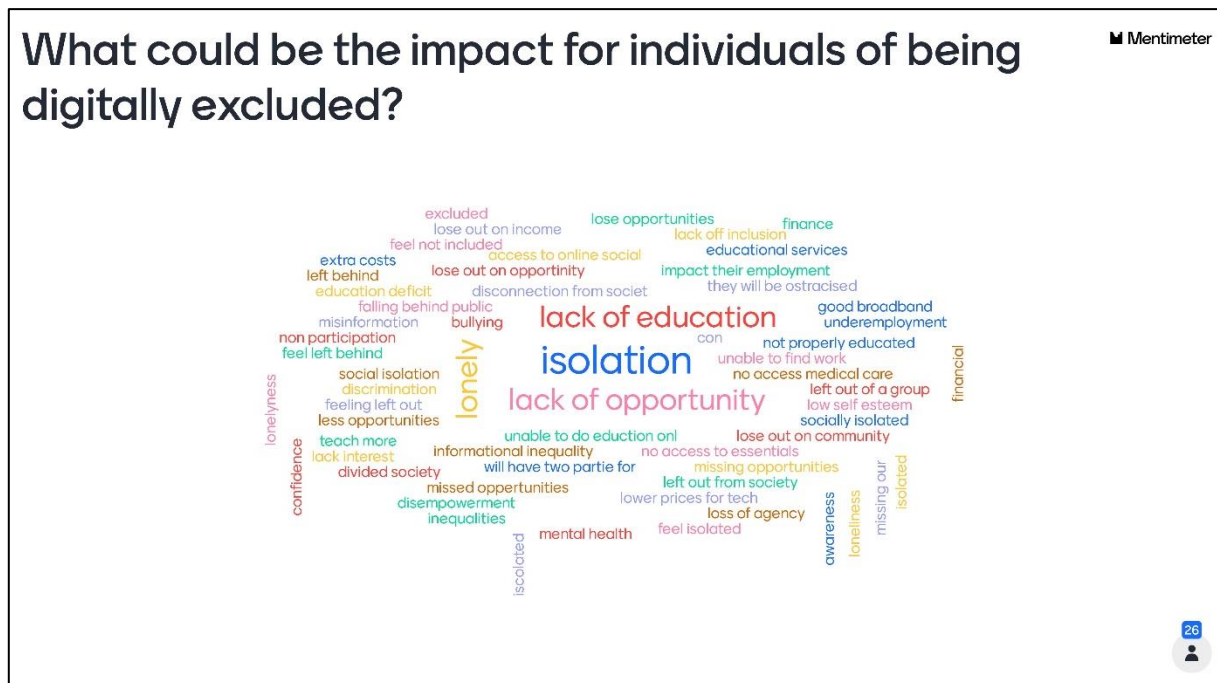
Supported by 100% of Members



Background and identification of the key challenges

When considering the impacts of being digitally excluded the Members, in their initial discussions, tended to focus on the social elements, highlighting key impacts as isolation, loneliness, and not being able to participate in activities (something that was particularly relevant to many during the COVID-19 lockdown when these workshops took place). As the conversations continued however, they began to consider some of the wider, and potentially more damaging, impacts that being digitally 'left behind' could have on a person's life and life-chances including:

- Fewer employment opportunities;
- Less access to education;
- Being information poor;
- Not able to access necessary services;
- Having to pay more for goods and services.



When considering further the challenge of achieving digital inclusion, questions of fairness became the key focus for Members. They repeatedly noted that, for people to be digitally included, there is a need for them to have access both to digital devices and the data to use them and emphasised that there were affordability issues. A particular aspect of affordability that they focused on related to the

pace of technological change and development and the fact that this requires people to regularly upgrade devices etc. in order to be able to use digital services effectively. This, they felt, compounded the risk of digital exclusion for people on lower incomes and, by default, increased inequalities of opportunity, as illustrated by the quotes below.¹⁸

Whole sections of society get left behind because they can't afford to keep up. If they give up trying to access it though they'll just fall further.

What about families in working poverty and their kids' education. Schools can provide access, but if you can't carry on at night and during the holidays, then it's a problem. Those circumstances are increasing the gap.

When considering what people need to have to be digitally included, beyond access to suitable technology (a device and data), the most important thing identified by Members was the skills required to be safe and confident on the internet. There was also general agreement that people needed access to life-long support and training, alongside an incentive to become digitally active, in order to help minimise inequalities and promote inclusion.

People who are going to get caught are the ones entering the digital world just now [during the covid lockdown]: people need to be trained and educated before they move into this world (e.g. awareness of scams, fraudsters).

Another aspect of fairness that Members concentrated on when considering digital inclusion was the ability of people to engage productively online i.e. to not only be safe but to also possess the core digital skills that would enable them to be able to communicate online, handle information and content, transact online, and problem solve. Information shared with Members about the 'face' of digital exclusion in Scotland had drawn their attention to the fact that the people most at risk of exclusion came from a much wider demographic base than they had previously expected, with poverty identified as a key factor. Prior to this many Members had tended to assume that the most excluded would likely be the older population who had not grown up with digital technologies. Many Members were also shocked by the barriers to operating online that many people with a disability face that were highlighted in the presentations.

In considering fairness further, Members focussed on the fact that becoming a digitally inclusive society would need to involve initiatives that were not just about skills or access to devices, but also addressed wider issues of disadvantage and inequality in society including:

- Disposable income;
- Literacy;
- Disability;
- Competence in English as a written language;
- Access to reliable data / broadband (due to geography); and
- Education.

We need to stop thinking it's just old people who struggle. There are some child benefits you can only get online, and my job is to help people access them – and it's almost always young people I see. They can muck about on their phones but when it comes to finding and doing a form online, they just don't have the skills.

It's all very well to be told "you can access that information online", but if I can't get decent broadband where I live, how does that help me?

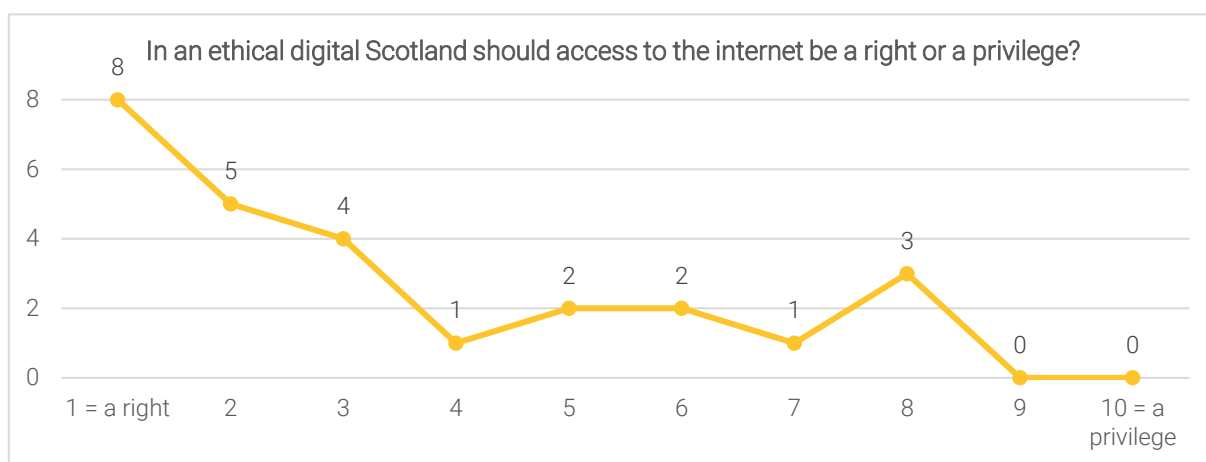
¹⁸ The quotes used throughout this report have been selected to illustrate the key points focused on by Members during their discussions. They have been sourced from the worksheets Members completed after each block of meetings, the Members' work on the Jamboards where they were responding in their own words and the facilitators' notes when they were recorded as a direct quote from a Member.

In their discussions the Members also considered how increased reliance on the internet, and the move towards 'digital by default' for many service providers, has the potential to pose a threat to wider social equalities, and actually increase existing inequalities.

The gap between the lower class and higher class might become even bigger.

Greatly favours the most educated/computer savvy. A new class system?

In exploring how to address questions of digital inclusion the Members also debated whether access to digital technologies, and the benefits it can deliver, should be a right or a privilege in an ethical digital nation. Overwhelmingly the ability to access the digital world was considered to be such a necessary part of life that Members believed governments and businesses had a responsibility to work together to ensure universal basic access for all in society. The provision of basic access to data services, that would enable people to undertake necessary functions like filling in forms, digital banking, and online communications, was generally agreed by Members as a right in contemporary society and a fundamental matter of fairness.



*Need to start talking about the internet like any other utility i.e. water, gas, electricity.
People nowadays need the right to have internet access.*

Government should provide a basic internet version to get you off the ground - a hook that gets people in and using digital. Governments have a choice of what they use our taxes for, and if this is important, then it needs to be paid for.

If Scotland wishes to become a Digital First nation, then including everyone (or offering the opportunity to everyone) is vital.

The internet is becoming fundamental to any engagement you have with establishments (Banks, Government, Local Authorities etc.) as well as central to a modern social life through sophisticated use of social media. Would it be an ethical Scotland if we create a two-tier society?

Despite recognising that we live in an increasingly digital world, and that being able to engage with this delivered multiple benefits to people, the Members still also broadly agreed that people should not be disadvantaged by the choice not to participate (regardless of their reasons). Freedom of choice was identified as a key ethical issue in relation to the growing culture of 'digital by default' and members emphasised their concern that there appeared to be an increasing lack of choice about creating a 'digital footprint' of personal information if you did not want to be disadvantaged.

I hate the thought of being left out of society – but I don't really want to be online all the time.

If I have an issue with my benefits, I don't want to have to put all the details online. They're personal, private, and not things I'm proud of. It's one thing telling a single person, it's something else knowing it's all out there in the digital sky.

Balance of responsibility

As part of the process of developing their 'Statements of Expectation' the Members identified three priority areas where they felt change needed to happen, or action needed to be taken, to achieve a digitally inclusive Scotland. These were:

- Ensuring fair and equitable access to affordable digital technology and data;
- Removing barriers so that all of the population, including those who are not already digitally engaged, recognise the benefits of becoming so, and are able to access skills development opportunities that will enable them to participate online safely, productively, and with confidence;
- Ensuring that those who are not digitally skilled (or choose not to engage digitally) are still able to access services that are provided as 'digital by default' without being disadvantaged.

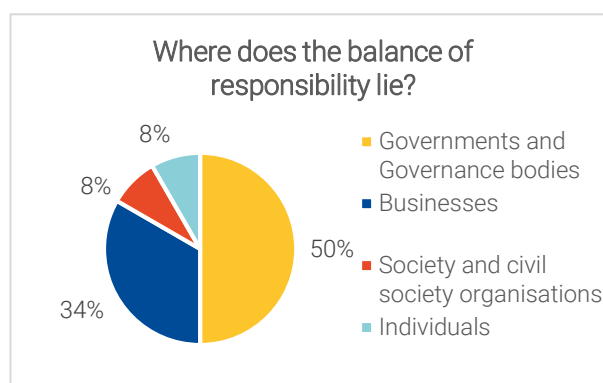
They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:¹⁹

- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);
- c) Society and civil society organisations;
- d) Individuals.

The graphs below illustrate the conclusions that Members formed about where the proportion of responsibility should lie.²⁰

Where does the balance of responsibility lie for... Ensuring access to digital tech and data is affordable, in order to prevent digital exclusion compounding existing inequalities

Members were concerned that the costs of being online, both in terms of access to data and the cost of devices, were prohibitive to people on low incomes and that the exclusion caused by this had the potential to reinforce existing social inequalities. Members were keen therefore to ensure that financial constraints were not an on-going barrier to realising the benefits that being online, with core digital skills, could bring to otherwise deprived groups.



When assessing the balance of responsibility for removing these barriers the Members felt that governments should play the greatest role, followed by tech businesses providing data, devices and

¹⁹ These categories, intended to provide a concise and simplified description of the 'key actors' with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

²⁰ When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each category.

software. They argued that government has a responsibility to regulate pricing on data provision to ensure that access to a functional data service was affordable to all.

With more and more government services becoming digital by default governments need to make sure it is affordable for those who want to / need to use it.

They further argued that businesses themselves needed to have a 'social conscience' and guarantee that basic (but functional) devices continued to be produced, and that older devices continued to be supported by software manufacturers, to ensure replacement and upgrade costs were not prohibitive.

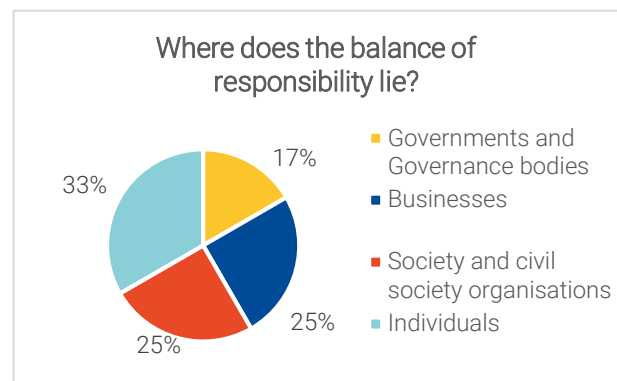
Companies need to be willing to trade off some profit to ensure that the pricing of access to the internet is fair and available to all.

Individuals and civil society were seen to have limited agency to address this matter, although there were some suggestions that community groups could support increased access to digital technology by being hubs for the re-distribution of devices that were no longer required.

If people choose to upgrade their devices there should be easy, and well publicised, ways to pass unneeded laptops etc. on so they can be used by people who want to benefit from internet access but can't afford it.

Where does the balance of responsibility lie for... **Removing barriers and supporting people who are not engaged digitally to recognise the benefits of doing so and achieve core digital skills**

Members recognised that it was not always practical barriers that meant people were not engaged digitally, but also sometimes a lack of awareness of the range of benefits that being digitally active and skilled could bring, including financial, employment, educational, informational, cultural, and social benefits. They argued that supporting people to recognise these wider benefits was an important social challenge that, in an ethical digital nation, could not be overlooked.



While governments, businesses and the voluntary sector were all considered by Members to hold a proportion of the responsibility for supporting those who were digitally excluded to be able to engage, the largest single attribution of responsibility was given to individuals i.e. the responsibility to take up the opportunities available. Members did, however, acknowledge that many people do not realise the opportunities that they are missing out on by not having core digital skills, especially if they are already using the internet in limited ways (for example on a smart phone for social media or Googlemaps for directions). They noted that it is, therefore, also the responsibility of individuals across society that are already benefiting from being digitally included to help friends, colleagues, families, and neighbours become more aware and able.

We all need to get involved and play our part to ensure everyone is able to benefit from the increased opportunities provided by digital developments and ensure no one is left behind.

Members also identified roles for businesses here as part of their corporate responsibility to their workforce. They argued that, as companies grew and become more digital, they had a moral responsibility to train employees who were not digitally confident to use the software etc., even if

this was not necessary in the employee's current role. They also felt this is something that could/should be done through internal resources allocated to promoting digital inclusion.

Ensuring all of their workforce are given training to attain the European Computer Driving Licence qualification, even if these skills aren't necessary for their current job.

Introduce a corporate 'buddying' system that pairs people with digital skills with someone with limited skills to act as a mentor.

There was also considerable debate between Panel Members about whether community members with digital skills had a responsibility to be volunteering to help others learn. For many this was seen as a way of putting something back into the community that would benefit others directly.

Leverage more digitally savvy people within the community - 'each one teach one'

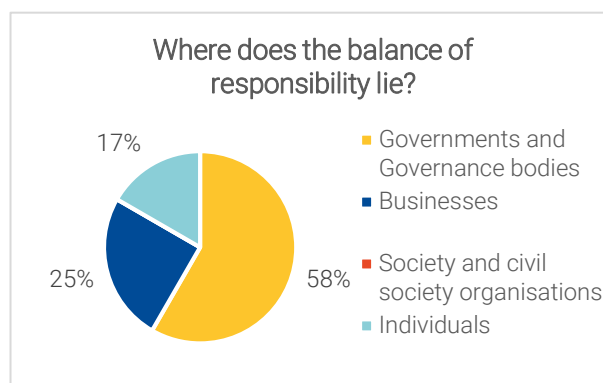
For others however, relying on voluntary activity to effectively address the digital divide risked government and businesses not being expected to share the responsibility.

Relying on volunteers to make people digitally competent is not enough. Volunteering opportunities are good, but it shouldn't just be about getting free labour. Volunteers should only be an addition to a well-formed public strategy for upskilling people, particularly working age people to reduce inequalities.

Where does the balance of responsibility lie for... **Ensuring that those who are not digitally skilled (or choose not to engage digitally) are able to access services that are provided as 'digital by default' without being disadvantaged**

There was near universal consensus among Members that, while moves towards 'digital by default' had the potential to provide benefits (perhaps even to the majority) there should always be an alternative way for people to access services without being disadvantaged in terms of cost, eligibility, or the quality of the service they received.

When attributing responsibility here Members focussed on public sector providers, including governments, local authorities, health services and other statutory services as those most needing to ensure equal access was maintained. When assigning a proportion of responsibility to business Members noted that they were primarily thinking about companies that provided essential services, like water, power, and transport, as being the types of businesses that needed to ensure those not online were not disadvantaged.



It might be OK that someone not online misses out on cheaper products shopping, but for essentials like benefits, electricity etc there must always be an alternative.

It was however acknowledged that, given the increasing role that digital transactions are playing in contemporary society and will continue to play in the future, individuals do still have a degree of responsibility for trying to ensure that they have the skills and knowledge to interact in these ways - even if they choose to minimise their interactions.

While I still prefer to make transactions in person or book appointments over the phone, and will choose to if I can, I admit I probably need to be able to do some of these basis things online –and think I could, even though I still plan to avoid it!

b) A 'green' digital Scotland

The environmental impacts of digital usage, particularly in relation to the electricity required by streaming services and the resource demands involved in producing and disposing of digital devices, was a surprise to many Members. It was also something they felt needed to be taken seriously if Scotland was to be an ethical digital society. They recognised however the difficulty of trying to balance reducing energy and resource demands with maximising the benefits available from being part of an increasingly digital world, leading to them selecting how to be a 'green' ethical digital Scotland as one of the key challenges that they felt needed to be addressed.

Statements of Expectation

The Members of the Panel developed two 'Statements of Expectation' regarding environmental responsibility that they would expect to see realised in a future, imagined, ethical digital Scotland. They are presented below in the Members' own words, alongside the level of support the statement received from the whole membership.

IN AN ETHICAL DIGITAL SCOTLAND... In order to reduce the carbon footprint of Scotland's digital use and industries

We would expect the Government and digital businesses (in conjunction with other willing partners) will have worked together to oversee and ensure that the digital economy runs in a sustainable manner, and have developed and maintained high quality data centers that use only renewable energy

So that Scotland's digital economy plays a leading role in contributing to a carbon neutral society.

Supported by 100% of Members

... to reduce the carbon footprint of Scotland's digital use and industries...

Response	Percentage
Strongly support	89%
Support	11%
Do not support	0%
Strongly disagree	0%

IN AN ETHICAL DIGITAL SCOTLAND... In order to make people accountable for their actions and use of the internet, and address the environmental impacts of increased online demand

We would expect people to have been educated about the impact of internet usage on the environment, alongside readily available information about the carbon footprint of different uses (e.g. traffic light system),

So that people can make informed (and, hopefully, less impactful) choices and help make it a safer, low carbon world.

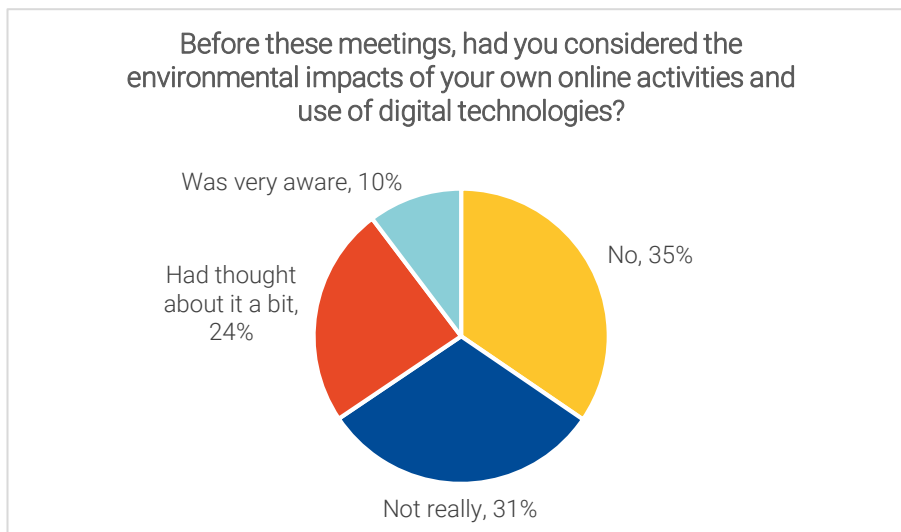
Supported by 96% of Members

... to make people accountable for their actions and use of the internet...

Response	Percentage
Strongly support	81%
Support	15%
Do not support	4%
Strongly disagree	0%

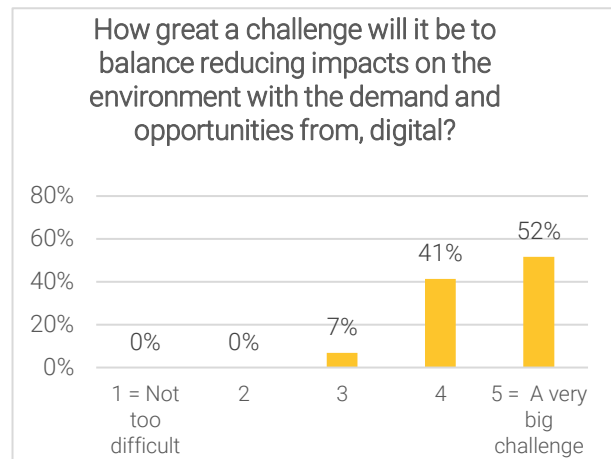
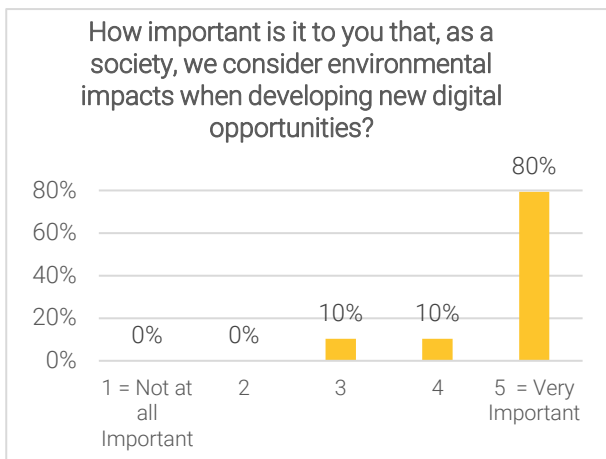
Background and identification of the key challenges

Over the course of the workshops Members recognised, and agreed, that digital technologies are part of all of our lives and here to stay – providing a range of benefits and opportunities to individuals and wider society. They acknowledged society’s growing reliance on digital communication – as emphasised and illustrated during COVID-19 lockdown – and identified, in all of their discussions, a wide range of potential benefits to individuals and society from digital advancements to improve the quality of work, enable efficiencies, enhance choice, and drive economic growth. Being confronted with the environmental impacts caused by the use of digital technologies during the latter part of the programme was therefore a disturbing shock to many of the Members, and there is evidence that prior awareness of the issue was very low.



Like a lot of people in my group I was appalled and fascinated by some of the statistics around video and cloud storage and the invisible environmental costs of this. I was aware of the harvesting of certain raw materials for phones and computers in places like the DRC and about the serious ethical problems there, and I knew a little about how the big warehouses of servers used by YouTube and Netflix and others had strong impacts on the communities that house them, but I had no idea just how big the problem really was. I think most people probably want to do the right thing and are genuinely concerned about the environment and I think that building recycling into chains of production and consumption can be rectified... but when it comes to things that people do every day like bingeing Netflix shows or watching videos on the bus, how are we going to explain to people the damage this is leading to. This seems like a massive challenge, and one that the tech companies have to find solutions for.

Although it was not an aspect of digital that many Members had given very much thought to prior it was something that, when raised, the majority considered to be both a very important and difficult challenge to overcome when looking at how to be an ethical digital nation.



In considering the need to balance the increasing demand for, and opportunities provided by, digital technologies with limiting negative environmental impacts Members identified a number of factors that seemed to pose a particular challenge.

1) Emissions from energy intensive servers and streaming sites

Members were concerned about the electricity demands created by these services and felt that there needed to be a concerted effort to ensure that sites were directly powered by renewable energy, rather than companies using other initiatives to off-set their energy use.

It's not good enough for companies like Google to say that for every search they'll plant a tree. Trees take 20 years to grow, and the emissions are a problem now.

Members were also concerned that public resistance to wind and solar farms as 'blights on the landscape' might limit the opportunity and motivation for more companies to take direct mitigating actions.

2) Lack of public awareness

Members had shared the information they had been given with family and friends between the meetings, reinforcing their initial assumptions that there was very little public awareness of the environmental impacts of digital use. This, combined with the 'invisible' nature of the impacts (often being felt in remote server storage sites), made it seem to Members as an even greater challenge to address.

3) The need for circular business models that support recycling and reuse

Members gave considerable focus to the need for businesses to adopt models that emphasised the circular use of resources and minimised the environmental impacts of mining for rare metals. There were however concerns raised by Members about the ability of Scotland to have much impact on driving changes in these business models, as they perceived the country to predominantly be consumers, rather than producers, of these technologies.

4) The lack of a common framework for measuring impacts

Members expressed concern that there was not a common, and publicly recognised and upheld, framework for measuring emissions - particularly embedded carbon. Many felt that this meant manufacturers and developers could produce false, or mis-leading, claims that aimed to minimise perceptions of environmental impacts. Members argued that there needed to be stronger mechanisms to regulate how carbon impacts were reported and a way to hold companies to account for mis-reporting.

5) Business cultures motivated by profit

Members also widely expressed the belief that there was currently little incentive for businesses to minimise their environmental impacts, or the environmental impacts of their digital products. Many members also noted that they felt there was a responsibility on consumers to use their purchasing power to support companies with good environmental impact standards as this could provide an additional incentive.

6) Lack of public motivation

As highlighted above, public reliance on and demand for digital technologies is growing and digital plays an important and valued part in many people's social lives and entertainment, let alone being vital for their work, education, or access to services. Members generally therefore concluded that there would be very little public appetite for being asked to restrict their own individual access to these benefits to minimise environmental impacts.

The problem with [digital] entertainment is it brings with it a rise in pleasure (endorphins?), whether that be using social media, gaming or music and video [streaming]. Arguably, it is human nature to be quite possessive of things that bring us pleasure.

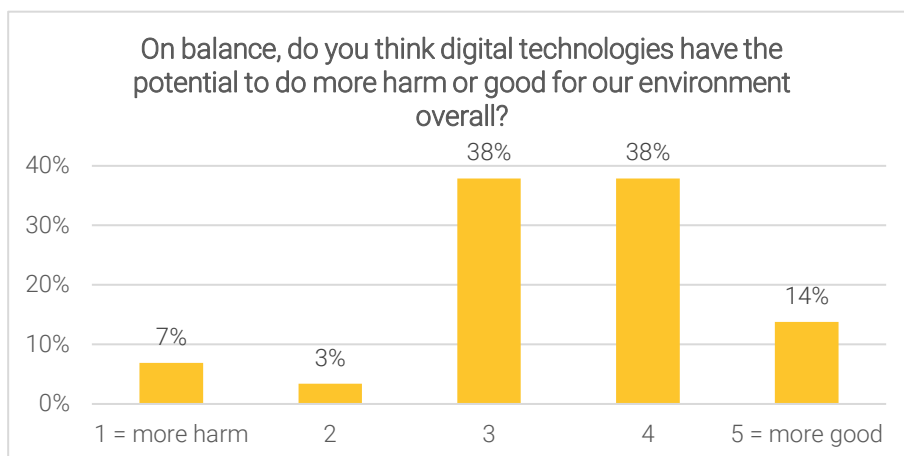
Environmental benefits from digital

In the workshops Members also explored ways that the increased use of digital technologies and advancements in digital capabilities could potentially benefit the environment and have a positive environmental impact. Potential benefits they focused on included:

- Opportunities to reduce carbon emissions from travel by working from home and using digital platforms for business meetings and conferences;
- That, if data centers invest in being powered by renewables, it sets the direction for reducing carbon emissions caused by using fossil fuels and could have the ability to feed any surplus green energy into the grid overall;
- Smart cities technologies to assist traffic management to avoid congestion and reduce emissions from vehicles;
- That digital can help individuals reduce their energy usage through smart meters and other smart home technologies;
- That digital communications platforms make it easier to "share" items rather than repeatedly recreate objects for mass consumption;
- That new technologies and robotics can give manufacturers the opportunity to be creative and ethical in their production processes – both by using new, environmentally friendly materials, and recycling and reusing materials in the products they make;
- Saving electricity by dimming streetlights when the roads / pavements are empty and turning them back up when movement is detected;
- That digital tech can help in the identification and development of futuristic energy sources;
- That digital systems of communication can be useful in connecting people across the world trying to come up with ways to solve environmental challenges;

- That developing Scotland’s economy to be one with a strong digital tech presence would have much less carbon impact than traditional Scottish industries such as steel, mining, shipping etc.

Despite recognising the challenges associated with society’s increased use and reliance on digital technologies, the majority of Members (52%) agreed that, on balance, digital technologies have the potential to deliver positive impacts on the environment overall. There did however remain considerable uncertainty about whether these technologies would, ultimately, be able to balance out their threats.



Balance of responsibility

As part of the process of developing their ‘Statements of Expectation’ the Members identified and articulated two priority areas where they felt change needed to happen, or action needed to be taken, to ensure that an ethical digital Scotland was also environmentally sustainable. These were:

- Reducing the (often unseen) carbon impacts of digital technologies – both in relation to the electricity demands of servers and streaming capabilities and the rare metals, plastics etc. required for the production of digital technologies;
- How individuals could be encouraged to be more aware of the environmental impacts of how they use their devices, particularly in relation to entertainment opportunities.

They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:²¹

- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);
- c) Society and civil society organisations;
- d) Individuals.

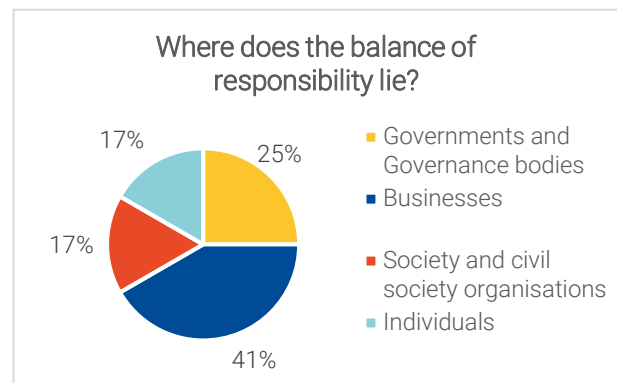
The graphs below illustrate the conclusions formed by Members about where the proportion of responsibility should lie.²²

²¹ These categories, intended to provide a concise and simplified description of the ‘key actors’ with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

²² When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each category.

Where does the balance of responsibility lie for... Reducing the (often unseen) environmental impacts of digital use and the manufacture and replacement of digital devices?

Businesses here were attributed the greatest proportion of responsibility and called on to act to reduce their energy consumption and/or invest in the generation of renewable energy (and not just tech providers but those who use and rely on high impact technologies). When asked directly 'what would be the single most important thing digital tech businesses could / should do to reduce their environmental impact?' most Members focussed on the need to invest in renewable energy production.



There was also a call made to businesses producing digital devices to work to minimise the use of rare and virgin resources and strive to eliminate the pattern of built in obsolescence that is seen in many products. Members did however acknowledge that individuals also had a role to play here in not upgrading devices until necessary and ensuring that older devices were reused or recycled.

Another aspect of reducing resource demand identified by Members was the belief that companies also have a wider ethical responsibility to consider the nature of the products and services they are producing, and whether they are actually needed given the environmental impacts their use causes. This resulted in a clear call from some Members for digital tech companies to show restraint and apply a social conscience to their product development.

Really think about the necessity of the technology. If it does not serve any real purpose or benefits, then what is the point in making it (e.g. digital nappies - why do we need this? A human is more than capable of carrying out its job). Don't just create pointless technology for the sake of money.

Minimise irresponsible business practices (using algorithms, advertising) that encourage addictive online behaviour - I accept they are profit driven and as such will not easily change how they operate but being more responsible would be a start.

Think before making it and decide if it really benefits the country and its people.

When considering where government responsibility lies for reducing the environmental impacts of the drive to become a digital Scotland, but also an ethical digital Scotland, the Members tended to focus on the need for government to work with tech companies located in Scotland to support efforts to reduce their emissions. A key way that Members thought this should happen was by government investing in renewable energy infrastructure and ensuring a policy environment conducive to renewable energy installations.

While most Members favoured a cooperative approach to supporting businesses to make the changes they believed were required, a few did place the emphasis on increased regulation. Members thought that it was important that government explored all of the options at its disposal, including unprompted suggestions being made about 'thinking out-side the box' to drive behaviour change and also fund mitigation efforts, as illustrated by the quote below.

If you are advertising online you have to pay the platform, and if you are using a lot of streaming services as a consumer you have to pay the platform. A percentage of that money should be taxed to pay for carbon offsetting and low carbon solutions and exactly what those measures are should be made known to the public. This

would be advantageous to both businesses and public - it would give businesses a chance to show the good they are doing, and consumers would feel like they were helping too. We need to be carbon costing every aspect of our economy. Finding ways to do this ought to be our number one priority overall.

Where does the balance of responsibility lie for... promoting individual behaviour change?

Members did not quantify how to apportion responsibility for this aspect of change as part of their decision-making process. There had however been considerable debate during the Panel meetings about how reasonable it was to ask individual internet users to limit their usage to help minimise environmental damage, particularly in the context of a growing understanding of the benefits that could be reaped from being part of a digital society. While some Members considered it to be a question of civic or global responsibility others felt this was an unfair responsibility to place on individuals, noting that they felt the companies that were profiting from the development, provision and use of digital technologies should take the greatest share of responsibility.

Lack of awareness was again raised as the biggest barrier to encouraging people to change the ways they use online tools in order to minimise environmental impacts. Awareness raising among the population was seen as being vital to developing a sense of personal responsibility and encouraging people to make small, self-disciplined changes that collectively could have cumulative effects.

As a result of being on the digital ethics panel I personally will act responsibly from now on and am already thinking about what technology I use and when. Is it necessary? Can what I want to do be done differently? From emailing or downloading a document to sharing photos. Most people are ethical beings and care. They want to do the right thing.

Learn from Smart meters. Use messages - like screen save messages - on peoples' phones, laptops etc so people know how much energy they are using. It could say "you have used xxx amount of carbon today, from xxx sources e.g. Facebook."

c) Harm protection when online

From the very first meeting some Members of the Panel expressed considerable concern about the risks to individuals from being online, and many themselves were nervous about their own online interactions. They also were worried about the harms that could be done to individuals, particularly by malicious users, and the implications this could have for wider society. Members however also recognised freedom of choice and expression as important social values. This made balancing the desire to maintain these freedoms, while limiting the risk of online harms, one of the key challenges they chose to focus on when looking forward to what an ethical digital Scotland should be like.

Statements of Expectation

The Members of the Panel developed two 'Statements of Expectation' regarding harm protection for individuals and society that they would expect to see in place in a future, imagined, ethical digital Scotland. These are presented below in the Members' own words, alongside the level of support the statement received from the whole membership.

IN AN ETHICAL DIGITAL SCOTLAND... In order to address cyber criminality

We would expect there to be concerted international efforts to address the issue (e.g. a Cyber Interpol)

So that opportunities for cybercrime are reduced or eliminated.

Supported by 96% of Members

... to protect society from harms ...

Response	Percentage
Strongly support	77%
Support	19%
Do not support	4%
Strongly disagree	0%

IN AN ETHICAL DIGITAL SCOTLAND... In order to prevent digital bullying, stalking and other targeted forms of harm to individuals

We would expect all online platforms to use screening technologies that enable them to intervene (i.e. where abusive behaviour is reported the platform can do editing, removal, blocking), fewer opportunities for anonymity, and the effective use of fines and prosecutions when harm has been done (that reflect the level of seriousness with which actions would be taken in person)

So that people feel more secure online and there is greater transparency in online interactions.

Supported by 96% of Members

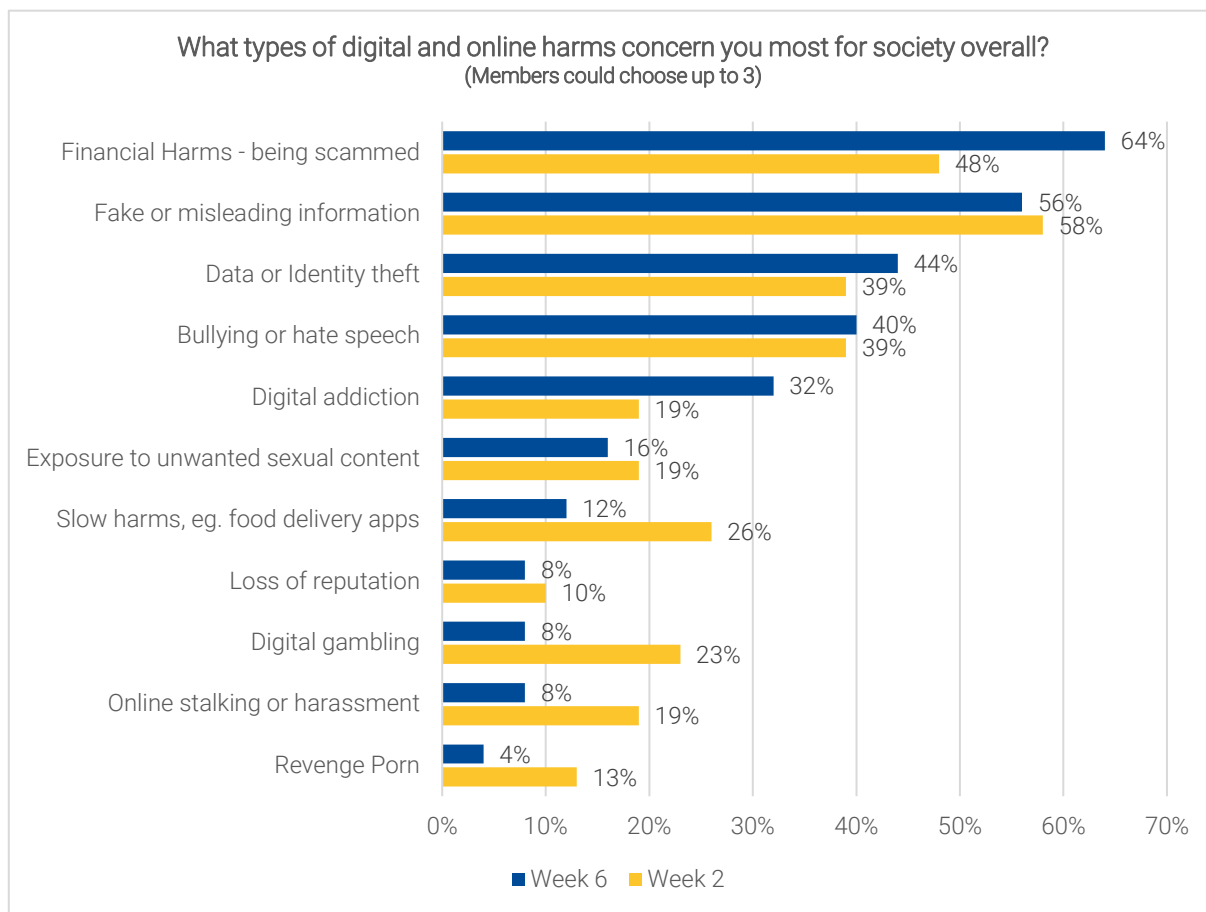
... to protect individuals from harms ...

Response	Percentage
Strongly support	61%
Support	35%
Do not support	4%
Strongly disagree	0%

Background and identification of the key challenges

In one of the early workshops Members identified, from a pre-prepared list, the types of digital harms and risks that concerned them most for society as a whole, and a vote on this was repeated after the final panel meeting. It is notable that by the conclusion of the process the percentage of Members who were most concerned about financial scams, data and identity theft being a risk to society had

increased. As their understanding of how information can be used and harvested grew throughout the workshops it was this rising level of concern that helped shape the first of their agreed expectations relating to how actively fraudulent and criminal online harms should be approached in an ethical digital society.



In the Members’ early discussions about digital risks and harms there was general acceptance that individuals held a responsibility to protect themselves online and take reasonable precautions to manage their own risk of exposure to harm – by keeping passwords secure, being aware of what information they shared online, using trusted sites and apps (and fact-checking information when they were unsure of its providence).

As users if we want to be online, we have to take responsibility for looking out for ourselves and not assuming everything is benign.

There was however also recognition from Members that, against sophisticated users’ intent on doing harm, this was difficult and therefore there was a need to protect vulnerable people from malicious acts. This concern was intensified when their discussions moved on to focus on digital inclusion. Here, their understanding of vulnerable users expanded to include people new to the internet who may not possess core digital skills to protect themselves. The heart of the second key challenge identified by Members was therefore how to balance people’s individual responsibility for their own choices and online interactions with the wider institutional responsibility of governments, regulatory bodies, and businesses to protect the public from harms.

When considering the risks and harms people can be exposed to online (excluding for the moment fraudulent and actively criminal activities highlighted above), Members explored why some types of behaviour (like bullying, abuse, stalking, hate speech and revenge porn for example) appear both prevalent and something that many people have become almost resigned to as a risk when

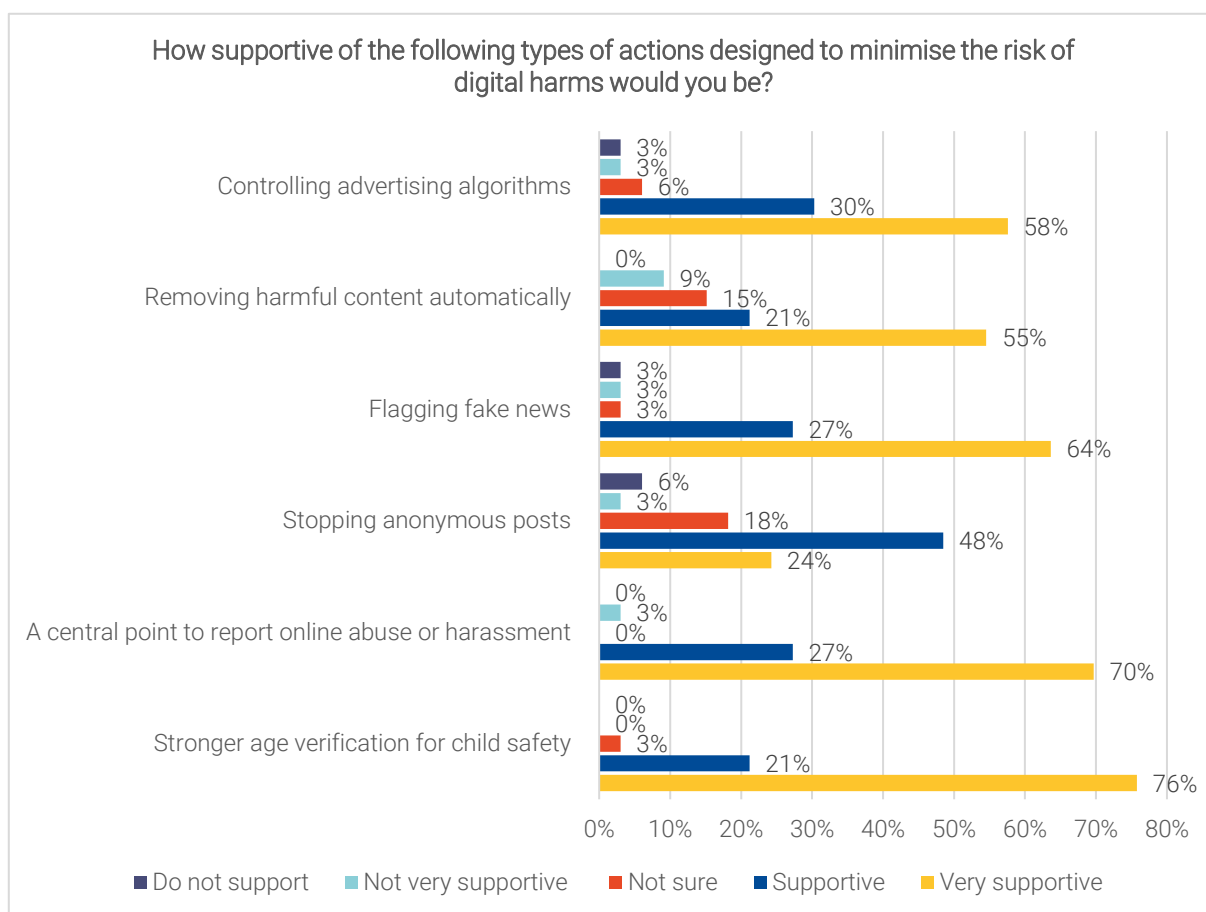
interacting online. Panel Members generally agreed that social expectations are, indeed, different between online and face-to-face interactions and identified various reasons why they believed this was the case. Many of these reasons related to the lack of accountability that can exist when engaging with people digitally.

Disinhibition - the lack of face-to-face human contact removes some empathy.

One of the reasons for this perceived lack of accountability particularly focussed on by Members was the ability to post anonymously. Many identified this as a key factor in explaining the apparent 'bravery', 'disinhibition' and claiming of 'power' they saw as characterising harmful online interactions.

You're anonymous, so don't have to own up to what saying - and [you can be] talking to someone you don't know in real life so less bothered about hurting feelings.

When asked early in the process about their levels of support for interventions designed to minimise the risks to individuals using a range of social media and communication platforms Members' overall levels of support for regulation and restriction were quite high. In fact, as the graph below illustrates, the majority of the Panel were 'very supportive' of all propositions except, despite the point made above, the one to 'stop anonymous posts'. This level of disagreement could be accounted for by the argument made by some Members, that anonymity was also a key positive feature of online interactions that should not be regulated against – although the suggestion did still receive majority support.



In a vote toward the end of the process the transparency and accountability of the institutions providing platforms, and who was policing them, was prioritised as a key issue for focus by over half of the Members when considering how Scotland could become an ethical digital nation. In part this focus stemmed from the Members' general lack of trust that providers of digital platforms could be

relied on to have the best interest of the public, and individual users, at heart. As called for in the Statement above there was also considerable focus given to having safe-guards in place to ensure that uses intended to cause harm could be addressed, removed and, ultimately, prevented: with much of the emphasis in discussion given to better policing and enforcement rather than more regulation.

If people are using it to harm others, I think pressure should be put on tech companies to review their policies on online safety and tighter restrictions should be put in place as well to deal with offenders.

Providers need to take more responsibility voluntarily to prevent the need for more draconian restrictions

Better policing – and more policing needed. Policing should be done by independent [body], not government or business pushed, although both should play active role.

Misinformation and disinformation

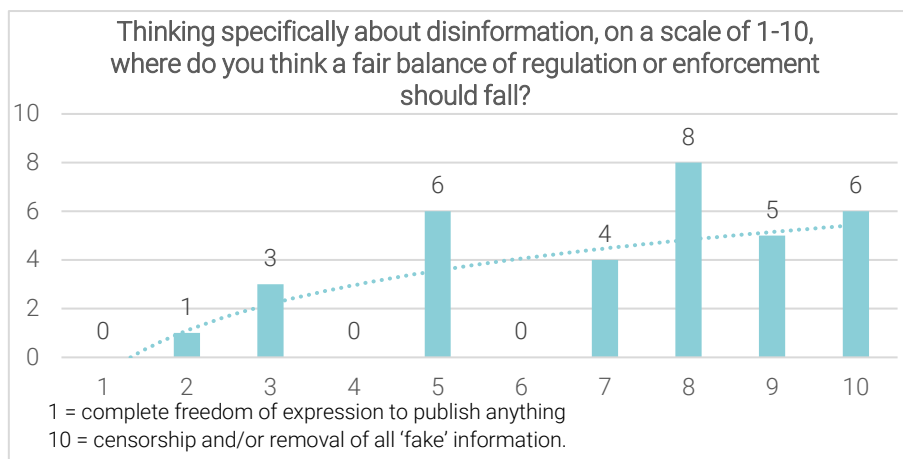
Fake and misleading information online was also a particular concern for Members, with 56% perceiving it as one of the three biggest potential risks and harms to wider society from online interactions. One of the early meetings of the Panel focused specifically on misinformation and disinformation and the Members concentrated on six key areas of risk in their discussions:

- **The potential negative impacts mis/disinformation can have on national politics and elections.** Here Members noted the capacity of social media, in particular, to spread misinformation about politics and the possibility of this impacting how people vote in elections. The example of misinformation through political advertising on Facebook in the run up to 2016 US election was highlighted by many as something they regarded as evidence of the ability of misinformation to impact election results.
- **The social divisions mis/disinformation can cause.** Some Members felt much of the mis/disinformation circulated is designed to create virtual 'punch-ups' between opposing perspectives and can have a negative impact on societal cohesion. Political division in the wake of Donald Trump's election in 2016 was mentioned by Members as a key example of this.
- **The ability of mis/disinformation to impact individual and public health.** Members were particularly concerned about the misinformation spread about vaccinations and the potential threat to public health this poses, especially in light of COVID-19.
- **The potential negative impact of mis/disinformation on mental health.** The ability to photoshop and edit images, warping public perceptions of expected reality, was discussed as a concern for people's mental health and wellbeing. Members also noted the potential for misinformation to lead to online bullying and harassment and the detrimental impact this has on mental health.
- **The potential to lead to discrimination and abuse.** Members noted disinformation often targets ethnic minorities and women, furthering racist and sexist views and abuse, and exacerbating societal divisions and tensions.
- **That high levels of misinformation make people distrustful of all online information.** Many Members felt that high levels of mis/disinformation make people cynical of information online, resulting in public distrust of potentially useful sources of information.

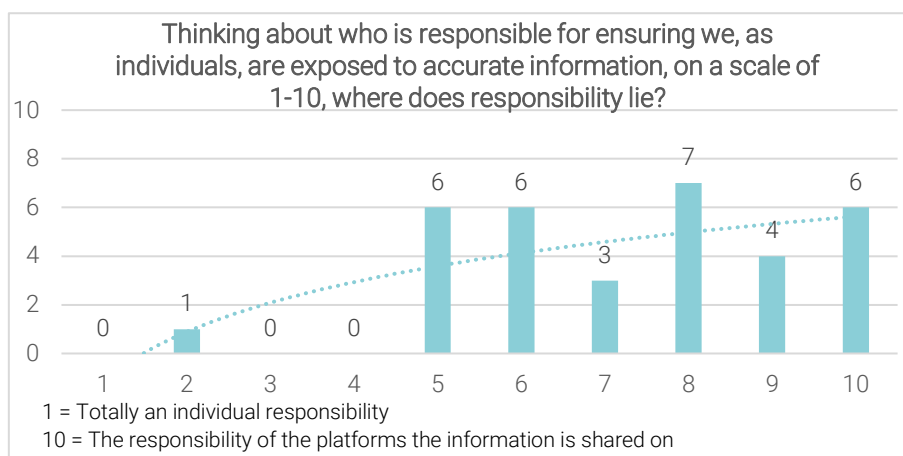
Throughout the course of their discussions, there was clear agreement formed among the Members that platform providers needed to take more responsibility for identifying misinformation, and

particularly for flagging and removing instances of disinformation designed to deceive users. Panel Members also considered the compromises between public protection and the types of systems changes required in order to prevent harms from disinformation, such as the removal of “fake content”. Following this discussion Members indicated what they considered to be a fair balance of regulation and enforcement to protect society from disinformation. As can be seen from the graph below, 70% of Members were broadly in favour of a degree of platform design intervention that would seek to actively remove intentionally produced and distributed disinformation from the internet.

Whilst I believe in freedom of speech, within the limits of actually inciting hatred and discrimination, I also believe in moderators who highlight where something might be misleading, like what they have done with Trump's tweets recently where they have flagged up 'this may be misleading', etc. I think people should have the right to view tweets and information that might be misleading, but they should do so with the framework of 'this is heavily contested' so that they are aware of the limits of what they are reading and know to research further if they are interested or concerned.



At this stage, Panel Members also explored where they believed the balance of responsibility should lie for ensuring that the public are not harmed by malicious disinformation. Overall, 52% of Panel Members felt the responsibility for ensuring the reliability of information presented online should lie primarily with the platforms that enable the information to be shared (columns 8 -10 in the graph below). This conclusion further contributed to their expressed expectation for tackling digital harms, as presented at the beginning of this section of the report.



Balance of responsibility

As part of the process of developing their 'Statements of Expectation' the Members identified three priority areas where they felt change needed to happen, or action needed to be taken, to help protect internet users from online risks and harms. These were:

- helping and protecting vulnerable individuals who would like to be computer savvy (and the wider online population) from those who are intent on causing harm;
- ensuring that there is effective oversight of digital data collection and use (nationally or internationally) that oversight bodies have the 'teeth' to enforce action against unethical practice;
- providing greater transparency about the source of information presented online (including that shared on social media) in ways that are easy to verify.

They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:²³

- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);
- c) Society and civil society organisations;
- d) Individuals.

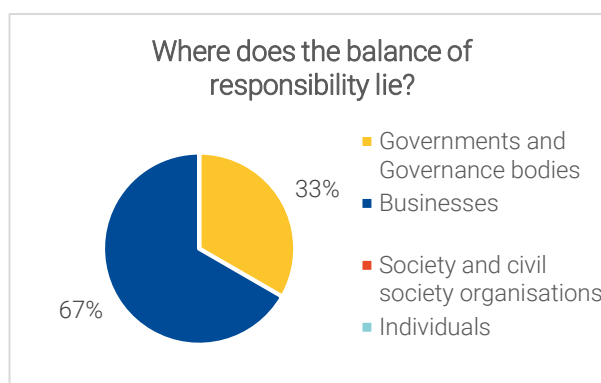
The graphs below illustrate the conclusions that Members formed about where the proportion of responsibility should lie.²⁴

Where does the balance of responsibility lie for... **Helping and protecting vulnerable individuals, who would like to be computer savvy, from those who are intent on causing harm**

While governments and governance bodies, for example Ofcom or an imagined digital ombudsman, were seen to hold a responsibility for enforcement and helping individuals seek redress from malicious and intentional harms, the balance of responsibility was attributed to the businesses who provided the platforms which enabled the attack.

Despite this priority, there was also an acknowledgement by some Members that tech companies were often leaders in preventing online hacks and leaks because of the reputational damage that these could create.

Companies are often doing better with cyber risks than governments. (e.g. Microsoft) as they can't afford to be hacked, it could ruin them if everyone just stopped using them as a result.



²³ These categories, intended to provide a concise and simplified description of the 'key actors' with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

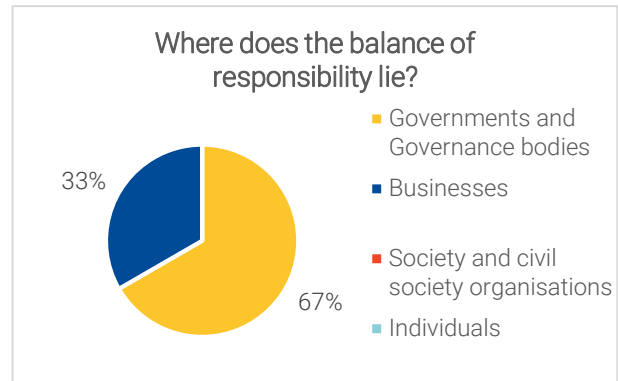
²⁴ When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each group.

Concerns remained however about international cybercrimes and the Members' perceptions of the limits faced by governments or businesses to take action against cyber-attacks from outside their jurisdiction, leading to their first Statement of Expectation relating to protection from online harms.

Where does the balance of responsibility lie for... Establishing independent oversight of digital data collection and use (nationally or internationally) that has teeth to enforce action against unethical practice

Oversight of how data is collected and used was raised in the Members' discussions as a pressing, international concern when examples like Cambridge Analytica and misinformation campaigns were discussed.

The key point made by Members when assigning the bulk of responsibility to governments and government bodies was that a stronger, enforceable regulatory framework needs to be in place (whether built on existing institutions and conventions or by establishing new ones), that can stretch beyond national borders, just as the technology does. They also noted that they believed this needed to be the result of an international effort.

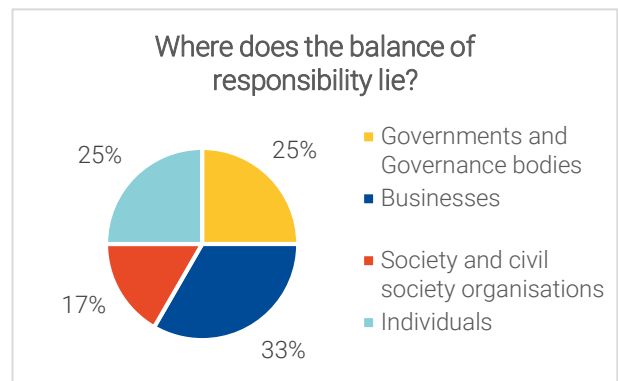


G7 / G8 global discussions need a dedicated digital part of the negotiations. We have a responsibility to agree a common set of international laws. Scotland need to be leading and advocating for this.

Where does the balance of responsibility lie for... Ensuring greater transparency about the source of information online (including that shared on social media) in ways that are easy to verify

Following their discussions about the need for greater assurances about the veracity of information presented online, many Members remained concerned that not enough has been done to counter the spread of misinformation (even if well intentioned or shared in good faith), and the active distribution of disinformation.²⁵

In considering where the obligation lay to tackle this issue the Members distributed responsibility relatively evenly across the system.



While Members assigned the largest share of responsibility to the companies that provided the sites where information was published and shared, they held little trust that these companies would choose to take action of their own volition, even to flag or remove blatantly false or misleading information. It was therefore argued that governments also need to play a role by imposing regulatory standards to compel companies to act in these cases.

²⁵ This aspect of Digital Harms was not however, one that they chose to develop a specific Statement of Expectation to cover.

While a notable share of responsibility was also seen to rest on everybody as individuals, communities and civil society organisations were also believed to have a role here in supporting individuals to develop skills to critically evaluate information and its sources and putting pressure on companies and governments to act.

Individuals really need to take responsibility and exercise judgement in what they view and believe, etc

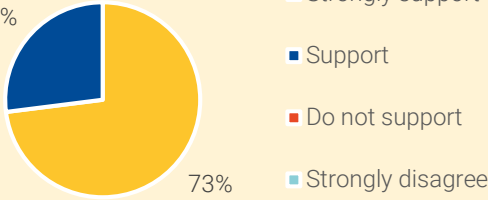
Voluntary sector organisation can provide fact checking and also skills and training... they are important cause they can/should be neutral and independent

d) Public awareness of data use and sharing

The need for greater public awareness of how data about them was collected, used, and shared, particularly in relation to targeted marketing and messaging and algorithmic profiling, was a key concern for Panel Members from their earliest meetings. They acknowledged the limits to their own understanding of how data shared online could be used to profile and target individuals, and assumed the same limited understanding was common across society. They also recognised a lack of awareness within the Panel membership about how big data is collected and used, and questioned wider society's understanding of the amount of data that is collected about them (whether it is personal data or not), and the uses that it is put to. They concluded therefore that this was another key challenge that would need to be addressed in an ethical digital Scotland.

Statement of Expectation

The Members of the Panel developed a single 'Statement of Expectation' regarding the public awareness of data use that they would expect to see in place in a future, imagined, ethical digital Scotland. It is presented below in the Members' own words, alongside the level of support the statement received from the whole membership.

<p>IN AN ETHICAL DIGITAL SCOTLAND... In order to ensure that every citizen understands their digital footprint, how data about them is collected and used, and how they can better control its use and protect themselves from misuse</p>	<p>... to educate and ensure public awareness...</p>  <table border="1"><thead><tr><th>Support Level</th><th>Percentage</th></tr></thead><tbody><tr><td>Strongly support</td><td>73%</td></tr><tr><td>Support</td><td>27%</td></tr><tr><td>Do not support</td><td>0%</td></tr><tr><td>Strongly disagree</td><td>0%</td></tr></tbody></table>	Support Level	Percentage	Strongly support	73%	Support	27%	Do not support	0%	Strongly disagree	0%
Support Level		Percentage									
Strongly support		73%									
Support	27%										
Do not support	0%										
Strongly disagree	0%										
<p>We would expect the Government to be at the forefront of an education process for citizens, and for there to be regulation implemented for the big tech companies/platforms regarding standards of transparency and information to customers</p>											
<p>So that the public are educated and more in control of their data and, perhaps, are more able to trust companies.</p>											

Supported by 100% of Members

Background and identification of the key challenges

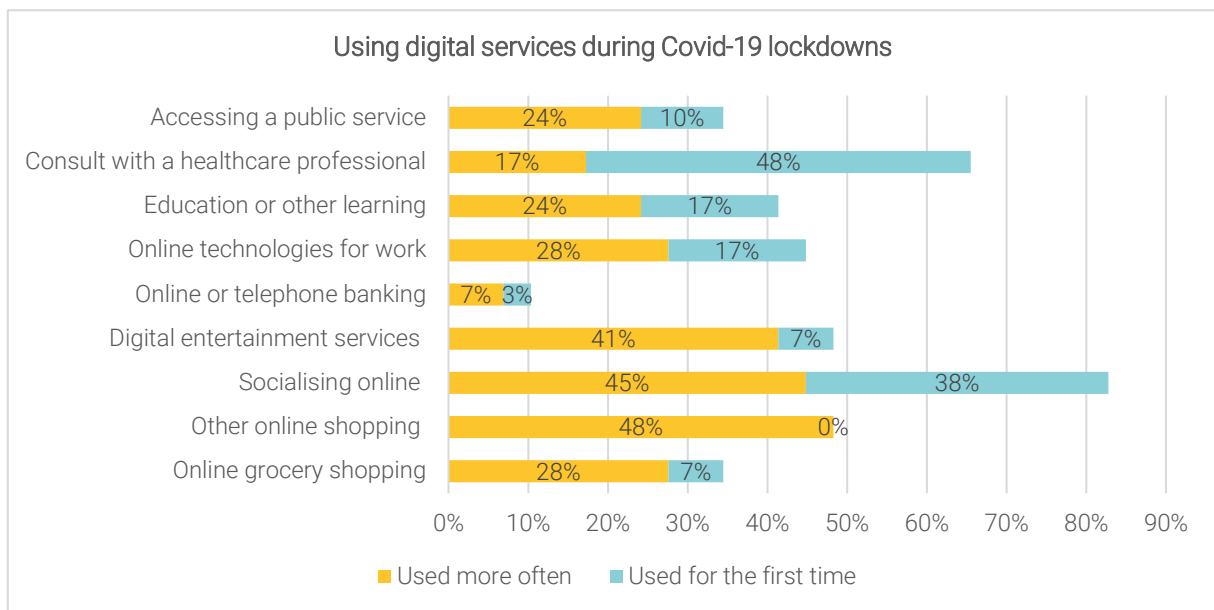
In the very first meeting of the Panel the Members were asked to reflect on their own levels of digital engagement, and how this may have changed due to the lockdown requirements introduced in response to COVID-19. Nine key uses of digital technologies were used as indicators of digital activity. Overall, Panel Members reported an increased use of these technologies, and many reported using some digital technologies for the first time as a result of the pandemic.

Many also expressed a sense that the ability to use digital communication, entertainment and access online services had been a lifeline during this time.

Consider myself a total technophobe and learned to use Zoom to communicate with family and friends during lockdown

Connected with neighbours by email and now know them better than ever

I don't know what I would have done without it and now feel relaxed about doing anything online



In the second Panel meeting Members were introduced to the idea of a person having a 'digital footprint', regardless of whether they actively engaged with activities online. The components of an individual's digital footprint were identified as ranging from data that is shared knowingly (for example setting up a social media account or shopping online), to data that is collected without many people's conscious knowledge (such as information gathered from store loyalty cards or travel passes, google map location information, cookies and trackers). For many Members, while they recognised that when they provided information online to access a particular product or service they were creating a digital trail, actively thinking about the extent of information that was held about them in different places was an eye-opening experience.

Didn't really know what cookies were, just click without thinking

That said, quite a few Members were very aware of the amount of information that is being collected about them, and actively engage with choosing what 'cookies' to accept online or used 'dummy accounts' to prevent data linkage etc. Among those with higher levels of awareness there was a general sense that leaving this digital footprint was a necessary part of the online experience.

Fairly confident that everything I do somebody has it in terms of cookies it's a question of damage limitation

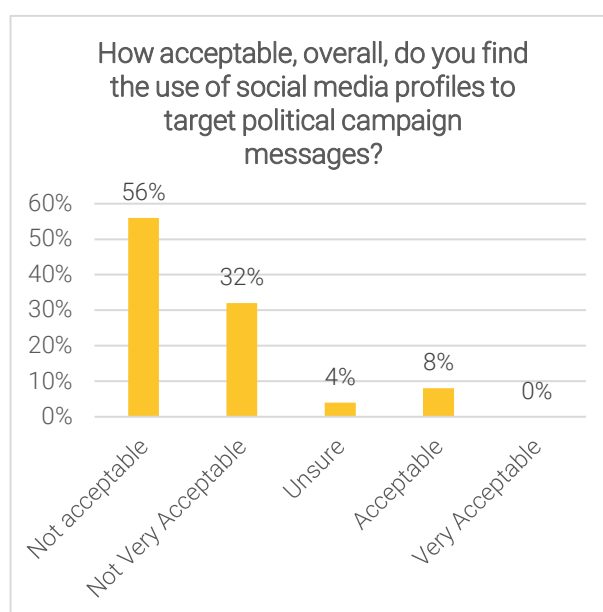
By the conclusion of the Panel meetings many Members remained nervous about the amount of information about them that was part of their 'digital footprint'. Most Members however also recognised there was the potential for individual benefits to be delivered through the collection and use of data about them, for example the personalisation of services and advertising because of past behaviours or, in an educational context, to provide automated feedback and suggestions for improvement.

There remained however a lot of scepticism from Panel members about the motivations for companies collecting data, and whether all of the data collected was actually needed. Concerns were also repeatedly expressed that the personal data people had to provide to access goods and service online was being regularly used in ways they perceived as 'misuse', for example:

- **Being sold or shared with other organisations**, even if this was in legal ways. Many members expressed considerable distrust in the commitment of commercial providers to protect the data they held about members of the public and were critical of the apparent ease in which data about them could be shared or sold. They argued that there needed to be greater independent oversight of this, suggesting the need for a specific data ombudsman. Some

Members did however acknowledge that they accepted this as a necessary trade-off for access to free apps and social media.

- **Being used to target advertising and/or cold calling.** There was a widespread belief among Members that companies are regularly selling personal data for a profit, even if this was not made clear when the information was provided. There was also a firmly held belief among some Members that governments, and government services like the Tax Office and the DVLA, regularly sell personal data about members of the public, even when 'the rules' clearly state they will not.
- **Being used to profile individuals or groups** (for example regarding insurance or eligibility for credit). Here Members emphasised concern with how the public's digital footprint was used to target marketing, advertising, political messaging, and eligibility for services. The acceptability of this was questioned and Members were keen to explore ways that people could choose to opt out of having their online history used in these ways.



Despite these concerns the majority of Panel Members, when asked, acknowledged that the benefits and convenience of online interactions meant that they would often share their personal information online even when they felt it was unnecessary, or even a bit 'creepy'.

Like most people I'd like to say no, but the answer is yes. I know that practically any website I go to will have access to things they shouldn't, which they can then sell, or will simply be taken from them in turn. I'm resigned to my data being harvested to an extent.

Awareness of the use of algorithms and 'big data'

The concept of 'big data' was one that Members struggled with throughout the Panel process, as the anonymisation and use of data for wider service planning was something that was a new concept for most prior to the meetings. Overall, this led to concerns being expressed by Members about the lack of public awareness about how data collected from individuals was being used, particularly when it was used to make decisions. They also specifically highlighted, when considering the impacts of digital technologies in the workplace and the idea of Smart Cities, that they believed there was a general lack of awareness of how people's movements, actions and interactions were, and

could be, tracked digitally (via everything from sensors in pavements to cashless payments, step-counters, and satnavs).

As Members' knowledge increased there was a growing awareness of the value that many uses of anonymised data (big data) could provide to benefit the public and the way services were delivered. This developed alongside a general willingness (although not always positivity) for data about members of the public to be used this way.

If I know it could help predict demand for services in a few years' time, then I'd be happy to share information about me

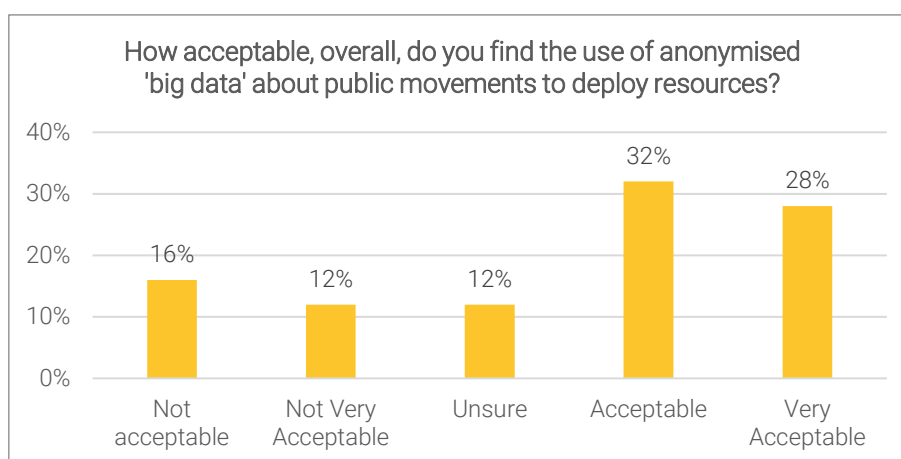
There did however remain hesitancy about:

- who you could trust with the data;
- whether people were aware / had given consent;
- whether individuals could be re-identified;
- whether groups could be unfairly profiled;
- the reliability of the data; and
- the comprehensiveness of the data– whose data is included?

These concerns were brought to the forefront during discussions focused on the example of how technologies could be deployed in Smart Cities programmes to help monitor and shape the amenity of local environments. When asked about the acceptability of undertaking anonymous monitoring of public movements and behaviours in the context of Smart Cities, 60% of Members agreed this was an acceptable use of digital technologies and an activity that could deliver public benefits. The main reasons given for considering it acceptable were that it is anonymous, that it is not personal data that is being collected and that it is providing direct benefits to society.

Assuming, which I do, that the intention is for our safety, managing traffic usage, lighting, cleanliness, then the minor intrusion is acceptable. It is not personal information about the individual, its aim is to monitor people's behaviour en mass.

If the system isn't taking individual information and is simply providing information about how society is operating, this is positive and useful information to have.



For those that questioned the acceptability of this type of data collection and use the main reasons came down to lack of public awareness and lack of trust in the organisations collecting and using the data. For these Members two key question remained - how can the public hold institutions to account for how they use data collected without explicit consent (even if anonymous), and how can the public ensure that it is used solely in ways that benefit wider society?

Acceptability depends on 3 factors:

- 1. anonymous is OK if use for social benefit & agreement sought*
- 2. Not to benefit corporations for additional profit*
- 3. Trust of companies holding data can be enforced if trust to hold safe is breached*

Balance of responsibility

As part of the process of developing their 'Statements of Expectation' the Members identified two priority areas where they felt change needed to happen, or action needed to be taken, to help ensure greater public awareness about data use and sharing. These were:

- providing everyone with the knowledge and tools to safely navigate the internet, use digital tech and be able to make informed choices about sharing their data and their online security;
- enabling people to easily identify the ownership, and links between, social media and other web-based platforms to know where information held as part of their digital footprint is being shared.

They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:²⁶

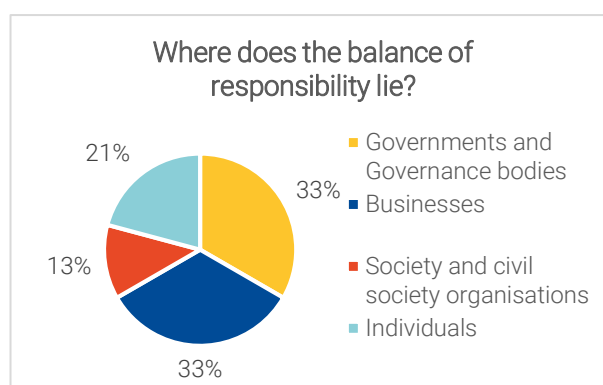
- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);
- c) Society and civil society organisations;
- d) Individuals.

The graphs below illustrate the conclusions that Members formed about where the proportion of responsibility should lie.²⁷

Where does the balance of responsibility lie for... **Providing everyone with the knowledge and tools to safely use/navigate internet & digital tech and make informed choices about sharing their data and their online security, minimising their risk of harms**

The responsibility of ensuring that the public was able to maintain their privacy and make informed choices about how personal data about them was used was seen to cut across all actors. In most cases this responsibility was seen as being a role to raise awareness so that people were better able to make informed choices.

Businesses need to raise awareness yes, but government needs to take a lead... individuals and society can't spread the message as far or as fast as government.



²⁶ These categories, intended to provide a concise and simplified description of the 'key actors' with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

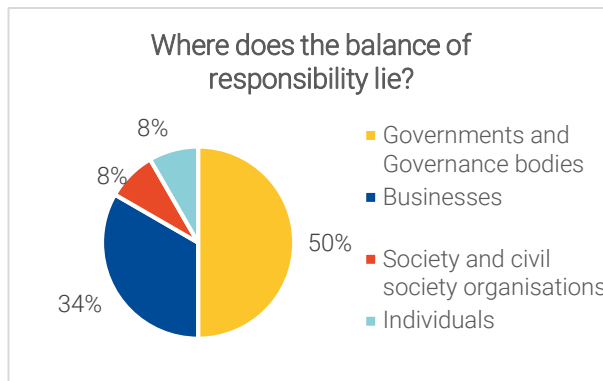
²⁷ When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each category.

It was also acknowledged however, that individuals interacting online have an important responsibility to educate themselves before providing sensitive data online that may be capable of being misused or shared in ways that they would prefer it hadn't.

Where does the balance of responsibility lie for... Enabling people to easily identify the ownership, and links between, social media and other web-based platforms to know where information held as part of their digital footprint is being shared

Members felt that knowing about the ownership of different platforms and social media providers would help the public have a better understanding of where they could, and should, expect data held about them to be shared. This would help people to make informed choices about the information they provided in online spaces.

While most Members believed that it was fundamentally the responsibility of service providers to be transparent about this, they also felt that this was not currently the case, and that at times platforms were explicitly branded in ways designed to be misleading. On this basis they apportioned the greatest share of responsibility to government as a regulator to ensure that this information was in the public domain in accessible ways.



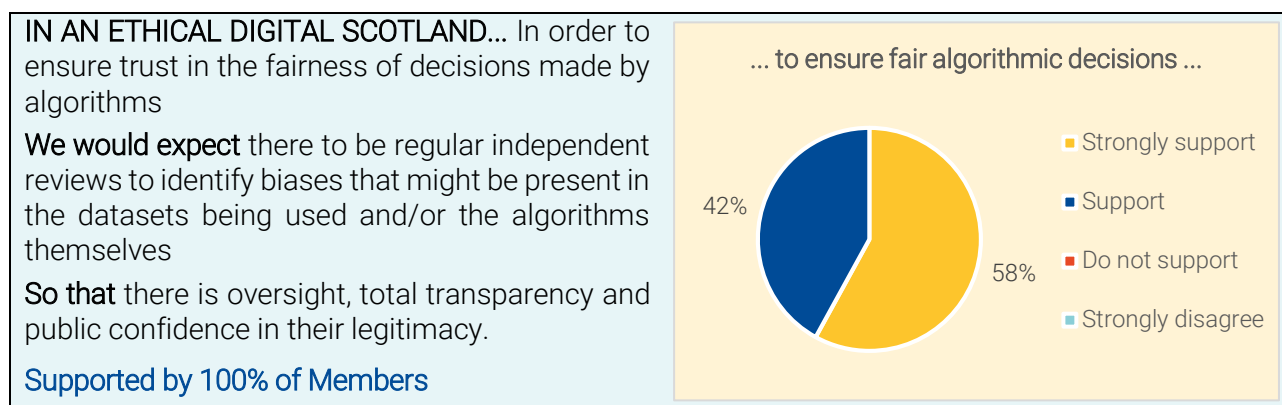
Government should ensure that businesses are transparent and provide info to customers in really clear and accurate manner

e) Reliable, unbiased data and technologies underpinning algorithmic decisions

As discussed in the previous section, concerns about the collection and use of data was a topic that permeated across almost all of the Panel's discussions as they were invited to explore both the opportunities and challenges of the increased use of digital. In the latter stages of their meetings, risks associated with the use of unreliable, biased or incomplete datasets to make decisions were highlighted to Members, with examples including the use of automated interviewing in recruitment, making decisions about access to educational materials, and the use of facial recognition software. In each case Members were concerned about the potential for unfair outcomes for individuals, particularly as, in most cases, they would have no control over how the data was collected and used. While recognising the efficiencies that the use of these technologies could, or should, deliver the challenge focused on by Members was how fairness and inclusion could be guaranteed in the process.

Statement of Expectation

The Members of the Panel developed a 'Statement of Expectation' regarding the fair and inclusive use of algorithmic decision making that they would expect to see realised in a future, imagined, ethical digital Scotland. It is presented below in the Members' own words, alongside the level of support the statement received from the whole membership.



Background and identification of the key challenges

From the earliest Panel meetings Members had expressed concerned about how algorithms are used to profile people, and to target advertising and social media content based on these profiles. Not only were they concerned about the lack of awareness of this, but believed that people may be repeatedly exposed to misleading content or biased views because of this targeting.

Controlling the advertising algorithms is essential I think because it leads to many of the problems with disinformation and people repeatedly coming across damaging content.

Over the course of their meetings the Members had the opportunity to particularly explore the use of algorithms in a decision-making context in relation to eligibility, employment, and education, where they were presented with a number of examples of current or potential uses. Central to their discussions were considerations of fairness, freedoms, and rights, including the inclusivity of the datasets and whether there are built in assumptions within an algorithm that could reinforce existing social inequalities, particularly if decisions were made based on genetic or behavioural profiling.

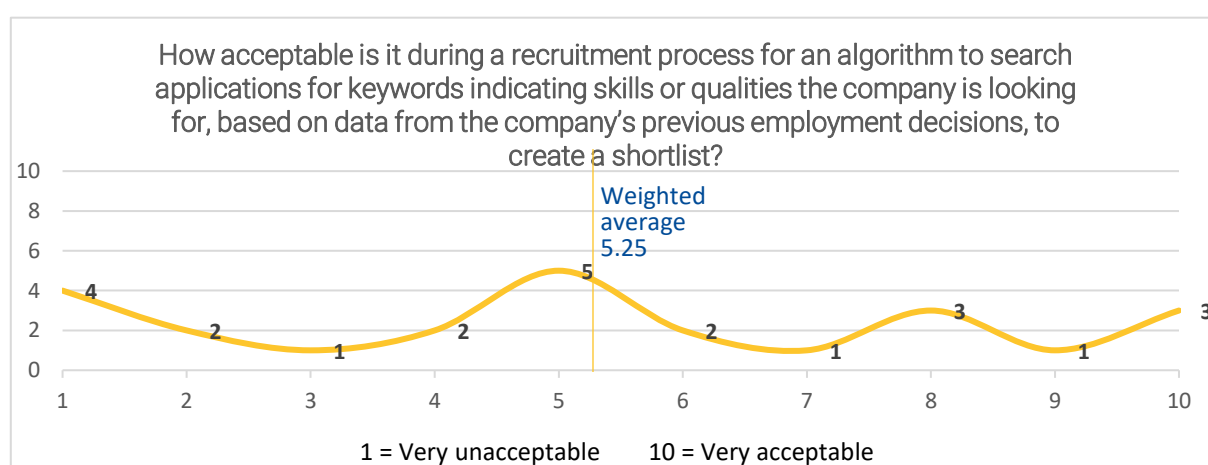
Institutions might not be looking at data that is just your health e.g. higher instance of heart disease in people from lower socio-economic background [so] would all have to pay more [for insurance] – that's unfair

Life predictions - how would the data know to change if people started to perform better.

To help Members ground their discussions about the acceptable use of algorithms to make decisions that could have an impact on individuals (be that positive or negative), a series of examples about how algorithms have been used in the context of recruitment were presented to them. One example they were asked to consider was using an algorithm to search CVs for keywords to shortlist candidates.

This use of algorithms was seen as a practical response to processing large numbers of job applications by many Members, however a considerable proportion still felt that it was unfair. The reasons given for considering it unfair tended to relate to the fact that it gave preference to those who were aware of this technique and could use it to their advantage.

It's discriminating. It creates a bias against people who are not wired into the system and can't afford to pay a company to write them a CV



Members also emphasised in their discussions that algorithms are not necessarily neutral and unbiased. In this case there were particular concerns raised that, if the algorithm in question was learning from the company's previous appointment practices, then there was a risk that rather than removing bias it would emphasise it.

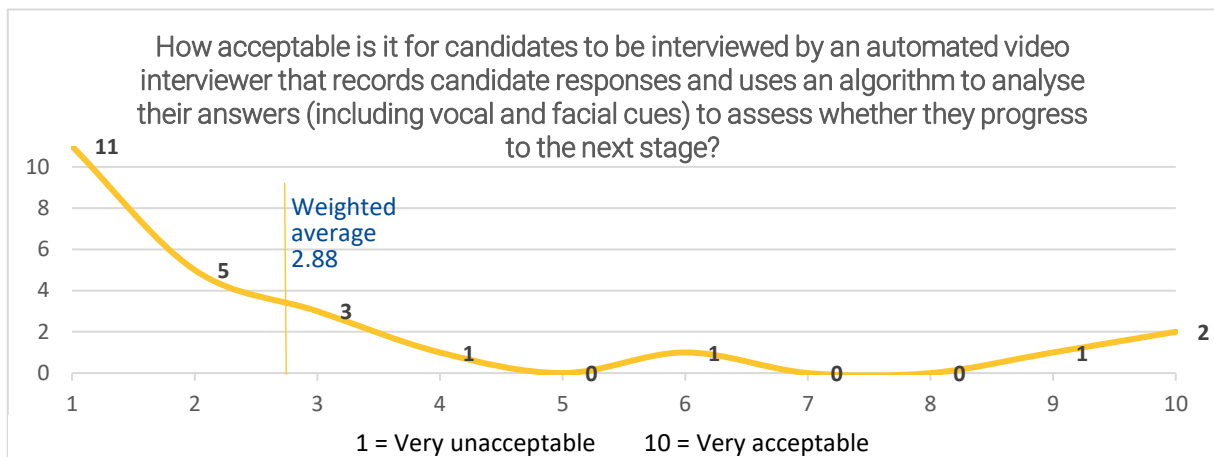
Unfortunately, there is unknowing bias in a lot of things so institutional bias is built into algorithms. It's a fact of life

An algorithm can only be as good as the information it's given, and if it is using hiring records then it might just reinforce previous prejudices.

Another example considered by members was the use of automated video interviews to shortlist candidates during a recruitment process. The use of an algorithm in this context was considered particularly unacceptable by Panel Members. The reasons given for this view were largely about the complete lack of direct human involvement, or oversight, in the decision-making process. Several Members also noted that they did not believe that an algorithm would be 'up to the task' as the human dimension of an interview was important. Members also highlighted that they felt this process potentially presented a greater risk of discrimination than being interviewed by a person, even if they may display conscious or unconscious biases.

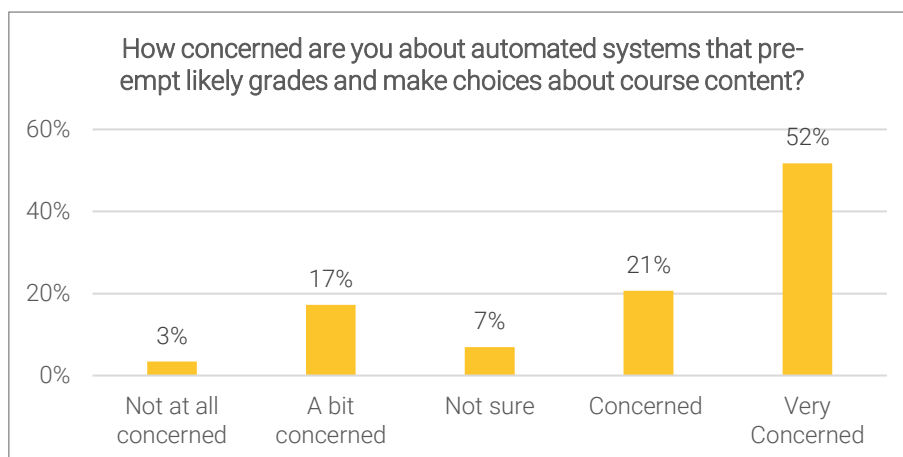
They don't seem to be sophisticated enough, humans are much more complex and nuanced than data and machines can ever be.

If a system doesn't understand your accent, then that's going to go against you. Aye in Scottish = yes.



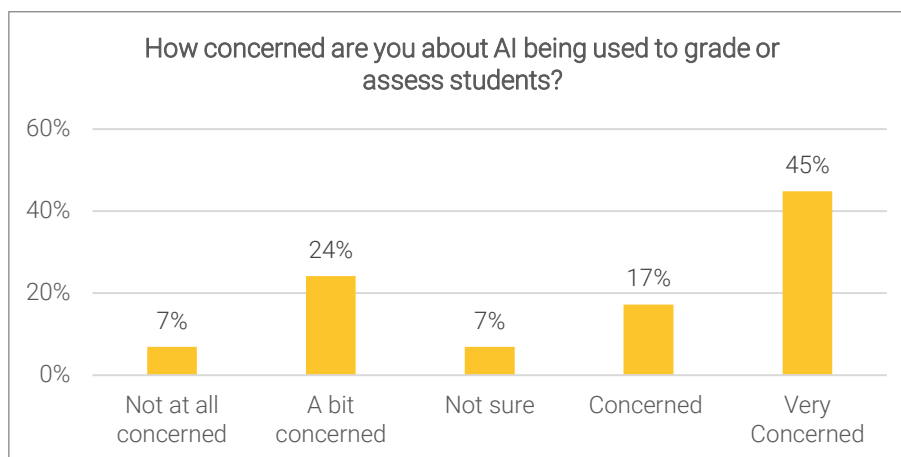
The use of algorithms in decision making within an educational context was also used to illustrate real-life applications and inform the Members' discussions. Of the examples presented, two were of particular concern to members, the use of algorithms to predict likely levels of attainment and adjust course content on this basis,²⁸ and the use of AI to grade students.

When considering the use of automated systems intended to predict likely grades and then adjust course content to focus a pupil on areas where it was considered they would have most chance of success, more than half of the Members indicated that they were very concerned about this type of use. The main reasons given for this were that if assessments were made prematurely (or inaccurately), it would lead a pupil into a particular academic route that could limit their life chances significantly. While it was acknowledged that education systems have always streamed pupils, there was a fear that automating processes like this would remove consideration of a person's wider circumstances and limit their ability to appeal the decision.



²⁸ It should be noted that this example was used at a time where there had been a relatively recent application of this technology and widescale media coverage of its reported failings.

When presented with a model for using AI to grade or assess students, 62% of Members reported concern, with 45% reporting that they were 'very concerned'.²⁹ In considering this example further the members focused on two key reasons for their concern. The first of these was that grades (particularly final school or further education grades) are very important in our society and have the potential to have a significant impact on an individual's future. The second related to a lack of trust in the reliability of AI to determine a student's results fairly, consistently, and accurately. This led to concerns therefore about relying on AI to have the nuanced understanding to effectively analyse and grade responses, particularly for subjects that did not rely on yes/no answers.



Exams and the school system is already so limiting as it only really tests one kind of intelligence- being able to remember information and repeat it under timed conditions. People cannot be accessed using an algorithm or formula as they are individuals that have different needs and strengths. It would stifle innovation and creative thinking in student, which is exactly what we need to promote.

In their final meetings Members confirmed their belief that the reliance on incomplete or biased data sets to make social policy decisions, or decisions that impacted on the life outcomes of individuals, should be considered fundamentally unfair and unacceptable. One particular example that they cited, stemming from the discussion of smart meters and smart houses, related to the use of algorithms based on online activity to inform service planning decisions when many people are still not engaged online.

If service providers are only using data collected online then they will miss the data about people who are offline, and so these people will get forgotten in the stats that influence service design.

Those still offline could be forgotten by society as they are not 'contributing' in a way that can be monitored.

Members felt that if, for example, the needs of people who were not engaging with technologies like smart homes were 'forgotten' when big data is used to help direct and manage service provision, this might have particular impacts on poorer people and communities. There were also continued concerns raised that AI learning from these datasets would be susceptible to confirmation biases if some groups across the community are missing from the datasets. They concluded that it was

²⁹ It is worth noting, that for many Members the scandal created by AI being used to award exam results during the COVID-19 closure of schools was still a very real memory, and may have contributed to the priority this use of AI was given.

difficult to use the data collected this way reliably in social policy making, or to predict service needs, until digital access was available equally to all.

Overall Members felt that the risks associated with relying on AI were still so significant that there was a need for independent review and limits on uses as a decision-making tool when there was a chance of significant harms being caused to individuals or wider society. Likewise, they believed more needed to be done to ensure that the data used in algorithmic decision making is inclusive and comprehensive so that decisions made are fair and viewed as publicly legitimate.

Balance of responsibility

As part of the process of developing their 'Statements of Expectation' the Members identified three priority areas where they felt change needed to happen, or action needed to be taken, to help ensure algorithmic decision making was based on reliable and comprehensive datasets in order to make it fairer and more inclusive. These were:

- reducing the risk of discrimination against individuals and groups based on unreliable or sub-standard technologies being used, for example, unreliable facial recognition software or biased algorithms;
- ensuring greater transparency about where the data used by algorithms to make decisions about individual entitlements or outcomes is being drawn from, for example, in decisions about insurance, benefits, or educational grades;
- reducing the risk of discrimination against individuals and groups based on unreliable, biased, or incomplete data sets.

They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:³⁰

- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);
- c) Society and civil society organisations;
- d) Individuals.

The graphs below illustrate the conclusions that Members formed about where the proportion of responsibility should lie.³¹

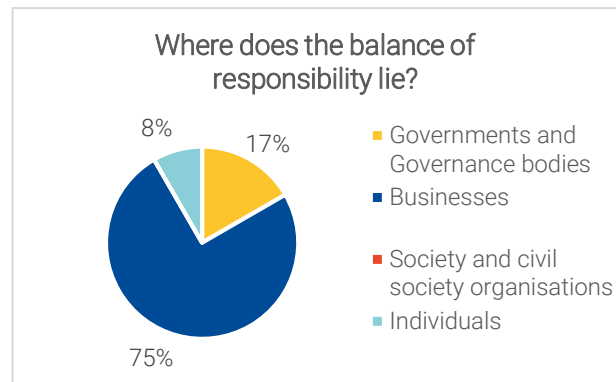
³⁰ These categories, intended to provide a concise and simplified description of the 'key actors' with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

³¹ When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each category.

Where does the balance of responsibility lie for... Reducing the risk of discrimination against individuals and groups based on unreliable or sub-standard technologies being used

During discussions about the reliability of facial recognition software and the potential for algorithms to produce discriminatory results due to inherent biases in their programming or the datasets they were learning from, the Panel Members called for limits on their use until the technologies could be demonstrated to be robust and reliable.

Here the responsibility for improvement was firmly attributed to the businesses manufacturing and marketing these products. There was also seen to be a role for government in regulating and policing the use of unreliable and potentially discriminatory technologies to protect society at large.



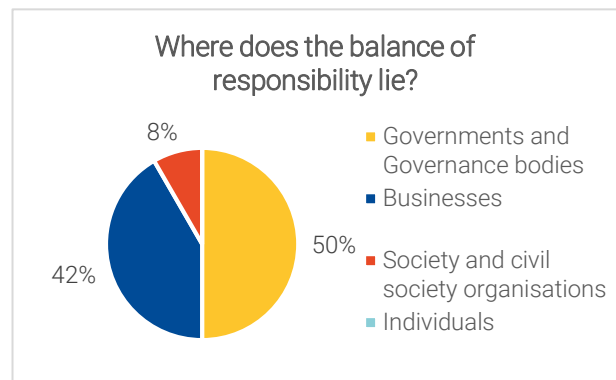
There needs to be an independent body that can monitor and call out bad practice – someone looking out for the people that we can trust that is independent.

Individual responsibility in this case was largely seen as limited to being willing to highlight when there were failures and biases evident in the system.

Government should be policing but can't do everything, individuals need to stand up and say no when discrimination occurs.

Where does the balance of responsibility lie for... Ensuring greater transparency about where the data used by algorithms to make decisions about individual entitlements / outcomes is being drawn from (e.g. insurance, benefits, educational grades etc)

Concerns about how algorithms were increasingly being used to make automated assessments that have a direct impact on people's lives and/or future entitlements were a key focus for Members. There were also particular concerns expressed that many people are unaware of this happening, how the data used to make these decisions is generated, how to check the accuracy of information held about them, or how to challenge the outcome when 'the computer says no'.

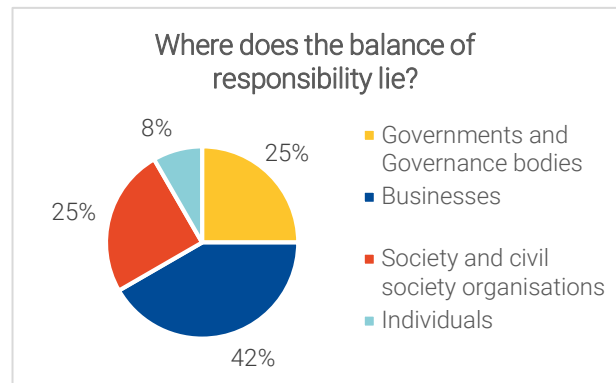


When discussing the balance of responsibility for ensuring greater transparency in these matters Members felt that the responsibility clearly lay with the data controller, whether that be public or private sector organisations, to make it clear to the public what data it was using and how.

This is absolutely the responsibility of businesses and governments...citizens are largely the subject of these decisions and should have a right to know why.

Where does the balance of responsibility lie for... Reducing the risk of discrimination against individuals and groups based on unreliable, biased, or incomplete data sets

In attributing responsibility for ensuring that these technologies, and the data underpinning them, were unbiased and reliable, Members felt that it was ultimately the responsibility of the company or public service body using them. They also argued that this should be able to be publicly and transparently justified. They did however also attribute a role to civil society as an advocate, able to call out bad practice and put pressure on organisations to justify their legitimacy.



There are some powerful and respected social movements out there that need to get involved in these debates and highlight discrimination caused by shoddy data and tech

f) Ethical limits to monitoring and surveillance

Throughout many of the Panel's meetings the public benefits able to be provided by data, whether personalised or anonymised, were contrasted with the potential risks created by surveillance, monitoring, and data collection across society. While the importance of the usefulness and efficiencies this could deliver were widely acknowledged by Panel Members, many of them continued to have underlying concerns about:

- the levels of public awareness regarding data collection;
- the transparency and wider understanding of how data is, and could, actually be harvested to deliver public and commercial services; and
- the potential for these technologies to embed discrimination if not actively scrutinised.

These concerns resulted in a perceived need to establish and embed ethical limits on the use of monitoring and surveillance technologies as an area for focus in the drive to become an ethical digital nation.

Statements of Expectation

The Members of the Panel developed two 'Statements of Expectation' regarding the ethical use of surveillance and monitoring technologies that they would expect to see in place in a future, imagined, ethical digital Scotland. They are presented below in the Members' own words, alongside the level of support the statement received from the whole membership.

IN AN ETHICAL DIGITAL SCOTLAND... In order to ensure there is no unfair use of monitoring (e.g. invasion of privacy within your own home or private life),

We would expect a world where we aren't monitored without good reason (i.e. not just watched when we walk out of our door) and if these technologies are used they should be clearly targeted, for example in areas where there are high crime rates,

So that it acts as a deterrent and provides clear benefits to the public (e.g. making people feel safer walking down the street).

Supported by 96% of Members



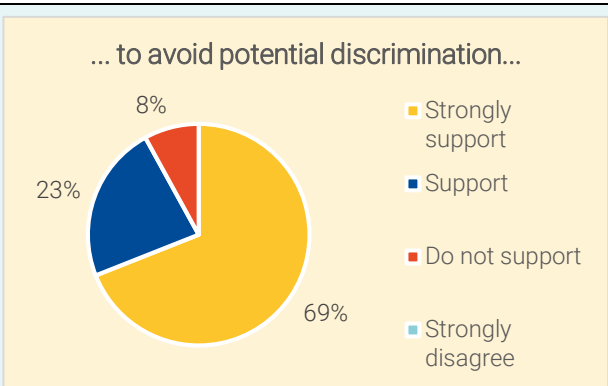
Response	Percentage
Strongly support	50%
Support	46%
Do not support	0%
Strongly disagree	4%

IN AN ETHICAL DIGITAL SCOTLAND... In order to avoid potential discrimination against minorities due to biased algorithms or incomplete datasets

We would expect restrictions on use to have been put in place until it can be independently verified that the technologies used meet high standards of effectiveness and accuracy

So that people would not be unfairly targeted due to their race, sex etc. and mistakes would be prevented.

Supported by 92% of Members



Response	Percentage
Strongly support	69%
Support	23%
Do not support	8%
Strongly disagree	0%

Background and identification of the key challenges

In several of their discussions the Members highlighted that they believed there was a general lack of awareness about how people's movements, actions, and interactions were, and could be, tracked digitally. While they recognised there was the potential for individual benefits to be delivered by this (for example, the personalisation of services and advertising because of past behaviours or tailored travel advice), they also felt there were points where monitoring felt intrusive, manipulatory and unnecessary (for example, keystroke counts in the workplace or the monitoring of social media posts to offer 'mental health advice'). Given this they argued that there was a need to put stronger limits in place.

These concerns were aired particularly in relation to some of the examples shared with Members about the use, and potential uses, of monitoring and surveillance technologies in the workplace. When considering the increasing ability of employers to use advances in digital technologies to monitor their workforce Members chose to focus on the dilemma of 'could vs should', i.e. just because employers have the capability to monitor productivity and performance in these ways, is it reasonable to do so?

Workplace monitoring

In their discussions Members drew on their own workplace experiences to acknowledge that monitoring working time, performance and productivity is something that companies have been doing for a long time, but that digital advances have made the practice both easier and more pervasive. There was also a general consensus that a certain level of routine monitoring at work was legitimate.

Members did however raise concerns that the increased ease with which workplace activity could be monitored, for example through keystroke counting, satellite tracking, and recording the pace of file usage, meant that there is a potential for this to become invasive and harmful in the workplace. Several Members shared stories of feeling 'micro-managed' and devalued by the way these types of technologies were deployed in their own workplaces.

Trust is important, and its disappearing. We work on cloud-based documents and managers can see who is opening, saving, etc. I have had calls from managers cos not saving documents often enough and told that means I'm not working hard enough.

These issues were further explored through a series of case study examples presented to Members, one of which described the technologies used to monitor employees in a large retail distribution company. It described how digital technologies were being used to monitor and direct warehouse 'pickers', in this case through the use of feedback devices worn on their arms that tell them what to collect, where to find it in the warehouse (using vibrations to guide their arm movements in order to be more efficient) and allocating them a set number of seconds to find the item.

Members used this example in their discussions (and others relating to the changing way that work is expected to be performed) to illustrate how they believed the use of digital surveillance was beginning to 'step over the line' in relation to how people should be treated at work.

It's got to the point where humans are being treated like machines, no one wants to work like that.

Widespread monitoring of the general public

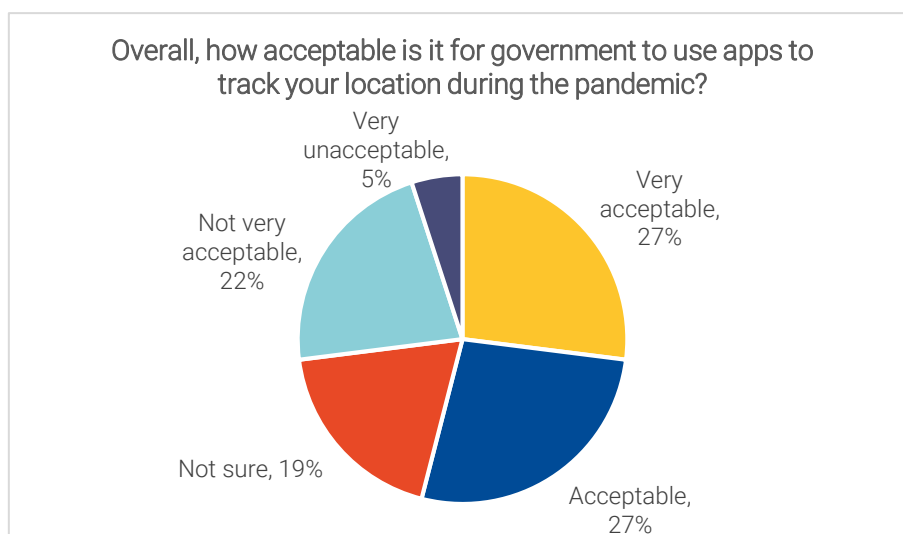
Another aspect that Members identified as being at the core of this challenge was the need to balance the public benefits derived from widespread use of anonymised data about the public, public movements, and behaviours against concerns about the public awareness of data collection and their overall trust in the institutions collecting data. Further they stressed the need to do this in accountable, transparent, and publicly understood ways.

Problems could arise when data is collected and used for reasons not laid out and that is where it becomes unacceptable

Transparency was generally seen by members as being key to public acceptability overall, and also a way of protecting against the misuse of data. Members noted that they could easily imagine big data like this being misused for political or financial ends, or to maximise profits. To ensure transparency, many Members agreed that there should be a situation wherein each case of the use of monitoring technologies would be required to outline an ethical use-case argument. They felt that undertaking such an assessment would also operate as a way of establishing limits on purpose, so that any data collected could not legitimately be shared or used in other ways that could be harmful to individuals or cross social expectation boundaries.

That data should only be collected if it is 'demonstrably useful' was also a condition raised by some Members that they felt would boost public acceptability in relation to monitoring and surveillance. Here Members argued that big data should primarily be used to address 'big' social issues, providing examples like anti-social behaviour, public health improvement, and to deliver environmental improvements that benefit everybody. Points were also raised by Members about the need for clearer limits to be set on how, and for how long, different types of data collected could be kept and stored in order to ensure it was used purposefully to provide public benefits.³²

Members' concerns about the use of digital surveillance were also explored in relation to the use of location monitoring technologies in the context of discussions about COVID-19 tracking apps in one of their early meetings. This was at the height of the pandemic and at the time when the public messaging about the introduction of tracking apps, pre-vaccine, was strongly emphasising their potential to help end the most severe lockdown restrictions. At this stage Members voted to indicate their opinion on the acceptability of government using apps to track people's location during the pandemic.



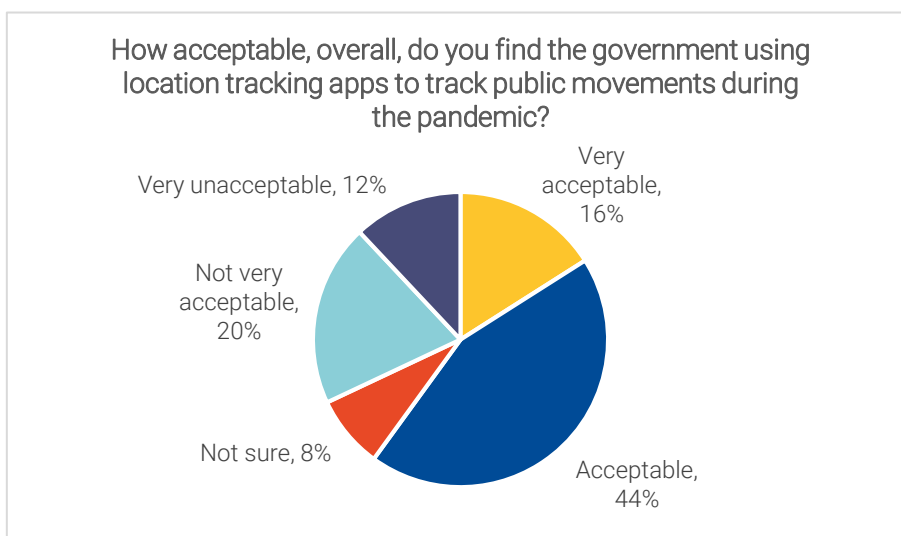
³² While some of these points are already covered by existing GDPR regulations the role of these was not something specifically highlighted to members during the learning phase of the Panel meetings or spontaneously raised by Members.

There were high levels of acceptability recorded in this vote, with 52% of Panel Members considering it to be either 'acceptable' or 'very acceptable' and only 27% of Panel Members considering this to be 'not very acceptable' or 'very unacceptable'. Reasons given by those who considered this use not to be acceptable ranged from a lack of trust in government to the need for more details about exactly how the data would be used before they might agree.

It has both pros and cons. I don't like the idea of someone knowing where I am, it takes away some privacy. However, on the other hand, it could prove useful when members of the public aren't following rules.

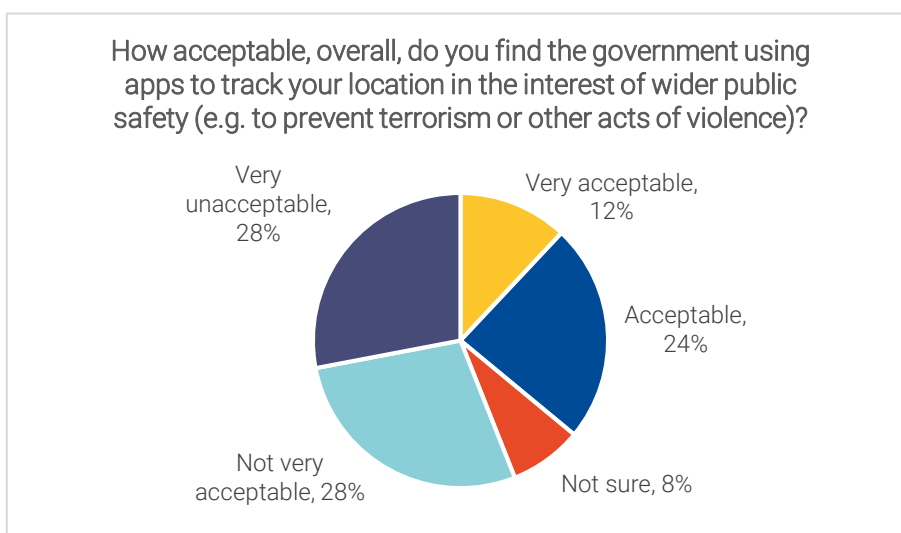
Problems could arise when data is collected and used for reasons not laid out and that is where it becomes unacceptable

When this same vote was repeated at the end of the meetings, despite the concerns Members had raised about the ethics of monitoring and surveillance, the perceived levels of acceptability were even higher (although so were the percentages considering it not acceptable).



Members however were clear in their discussions that the acceptability of this type of monitoring was very dependent on the fact that it was a public health emergency. They argued that the public must be vigilant against surveillance of the general public becoming the norm.

Privacy laws were overhauled during 'the war on terror' and that was very controversial. There is potential danger during the current crisis for further rollbacks for privacy.



The use of facial recognition software in the context of crime prevention and policing was presented to Members as another example illustrating how monitoring and surveillance technologies could be deployed for wider benefits, but also with unintended consequences. To kickstart their conversation it was acknowledged to Members during the learning stage that most of the facial recognition software available, especially for live use when people are moving, had high degrees of inaccuracy and was particularly inaccurate in determining the identity (or even the gender) of some minority ethnic groups. As a result, members were keen to focus on how to prevent monitoring or surveillance data that was ostensibly being collected to deliver wider public benefits being used to profile communities and groups in ways that may lead to discrimination or bias.

When asked after the discussions, 45% of Members indicated that they still believed the use of facial recognition software was acceptable in the context of identifying known criminals or 'trouble makers', however almost an equal amount (41%) were uncertain. Of the Members who responded positively to the use of facial recognition technologies in these circumstances their reasons tended to be justified on the bases of the importance of wider public safety concerns, even if this may be at the expense of individual rights and freedoms.

This makes me feel a sense of safety. If people that are notorious for causing trouble and are in run ins with the police etc. then I see it fair that these people are monitored to ensure they don't commit any more serious offences. However, we must be careful not to assume, so a balance would need to be found - but I think if there is a way of recognising that these people are present somewhere then it will be easy to prevent risk.

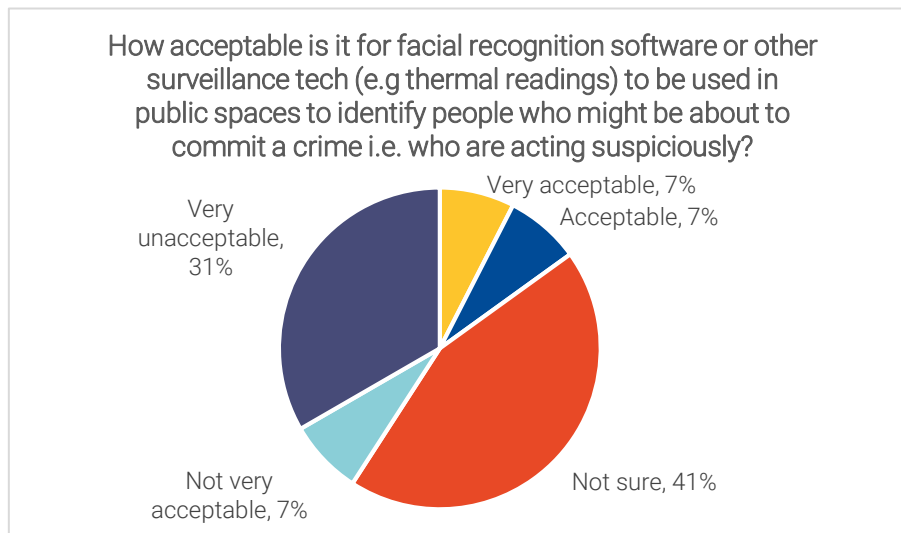
As the quote above demonstrates, there were also levels of conditionality expressed even when Members indicated overall that it was acceptable. Several of the reasons expressed for uncertainty regarding the acceptability of using facial recognition software related to its reliability, while other Members also introduced considerations of trust.

We need to be sure that the police and other authorities aren't using these technologies to victimise individuals based on their race or the way they dress. I'm not sure that we can trust that these systems won't be abused.

The technology is not yet accurate/reliable enough and could lead to increased harassment of certain groups e.g. racial groups, that the technology more frequently mis-identifies individuals within. It would only be worth it for serious dangerous criminals when coupled with reliable human confirmation.

To test levels of acceptability further Members were also asked to consider the acceptability of using surveillance technologies (including, for example, CCTV, facial recognition software and thermal readings) in crowded public places more broadly as a preventative activity, with the goal of identifying people acting suspiciously who might be about to commit a crime.

When considering this question, the Members of the Panel were quite divided. While 31% reported that this was unacceptable to them, the largest proportion of Members indicated that they were uncertain or undecided (41%). Only 14% of Members stated that they believed this was an acceptable use of digital surveillance technologies. Those who agreed that this was an acceptable use of surveillance technologies tended to frame their responses in terms of 'if I'm not doing anything wrong then...' or it being a valid response to the need for wider 'public protection'. For those who considered this questionable, or unacceptable, their reasons tended to focus on the limits of the technology: i.e. that the technologies are not advanced enough to make effective determinations of when 'acting suspiciously' might be due to the propensity of being about to commit a criminal act, or when it might be perceived that way due to an entirely innocent reason.



It is not a crime to look suspicious. We shouldn't be monitoring people who haven't done anything wrong. If we give ourselves excuses to do this all we do is play into the prejudices of our time and solidify them. If you are monitoring people in order to draw a conclusion of guilt you will find a way to prove them guilty. There are any number of reasons why a person may be perspiring, or breathing heavily, or reaching into their coat pocket - it usually isn't because they are carrying a weapon.

Again, not reliable enough. Based on what? someone looking edgy and sweating? Terrorist, or someone with a headache and a fever? Who accepts the responsibility if the police shoot someone based on such an identification?

Overall, the balance of views between Panel members was that there needed to be clear ethical limits placed on the use of monitoring and surveillance technologies across society if it was to become the type of ethical digital Scotland that they would want to live in.

Balance of responsibility

As part of the process of developing their 'Statements of Expectation' the Members identified and articulated two priority areas where they felt change needed to happen, or action needed to be taken, to prevent the indiscriminate, and potentially harmful, use of monitoring and surveillance technologies in an increasingly digitally enabled world. These were:

- ensuring that regulators (government or industry) are keeping pace, or anticipating, future digital developments and their ethical implications
- ensuring that measures of surveillance and monitoring that are deemed useful and/or acceptable in a crisis (for example, during the pandemic or in response to the 'war on terror') do not create a 'slippery slope' for unnecessary intrusions into privacy.

They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:³³

- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);

³³ These categories, intended to provide a concise and simplified description of the 'key actors' with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

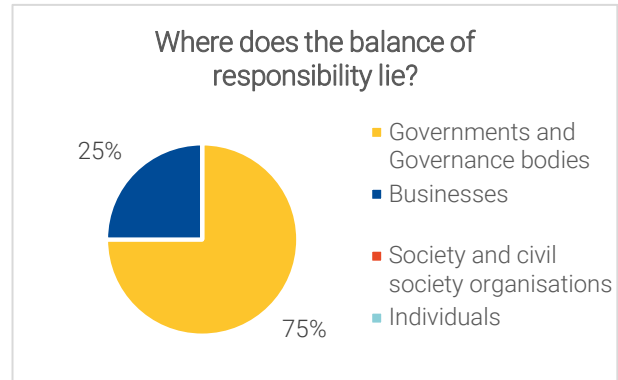
- c) Society and civil society organisations;
- d) Individuals.

The graphs below illustrate the conclusions that Members formed about where the proportion of responsibility should lie.³⁴

Where does the balance of responsibility lie for... Ensuring that regulators (government or industry) are keeping pace, or anticipating, future digital developments and their ethical implications

The need to future-proof regulatory approaches to digital developments first emerged in Members’ discussions during deliberations on the risks and harms associated with misinformation, and disinformation particularly. It was subsequently picked up as a key theme regarding the impacts of automation, algorithms, and AI on the future of work and the economy.

In assessing where responsibility lies there was a clear emphasis placed on the belief that government and formal governance bodies need to be more proactive and pre-empt developments. This was considered by Members as an important way of avoiding the risk of the power to determine what are acceptable uses being left to tech providers in the future.



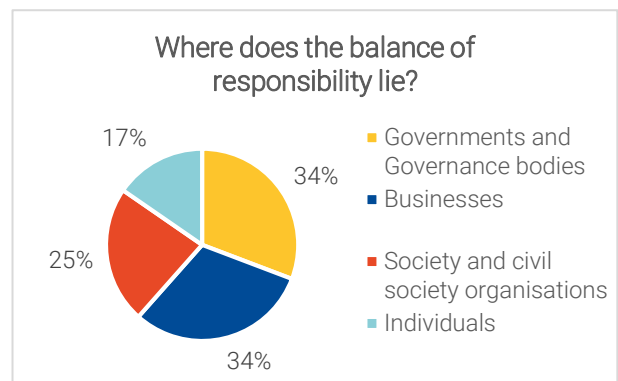
Pace of change is so fast: people in Silicon Valley might know where it's going. Not government

Multinational companies have more power than most governments. Just think, Google are holding more data than any government in the world.

Where does the balance of responsibility lie for... Ensuring that measures of surveillance and monitoring that are deemed useful and/or acceptable in a crisis (for example in a pandemic or in response to the ‘war on terror’) do not create a ‘slippery slope’ for unnecessary intrusions into privacy

Since their early meetings, surveillance and monitoring technologies were the focus of many of the Members’ discussions. In these they argued that in an ethical digital Scotland ‘because we can’ should not be allowed to drive decisions about ‘whether we should’.

In attributing responsibility for ensuring the ethical and controlled use of surveillance technologies Members argued that governments (as deployers of surveillance and regulators), and the companies developing and using these technologies shared a responsibility to do so in controlled, transparent and managed ways. They also identified a need for there to be an independent governance body to



³⁴ When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each category.

assess the identified need and public benefits of mass public surveillance or monitoring activities on a case by case basis.

Someone needs to have an independent oversight role to look at the acceptability of any plans to undertake public monitoring, something like a university research ethics review committee, to stop institutions stepping over the line.

The public, as individuals and collectively as civil society, were also believed to have a significant responsibility to ensure that moves to embed greater levels of surveillance within society did not overstep public expectations and societal acceptability.

We may have no control or say over decisions that are made to track us, but we can protest!

g) Privacy by design and default

The collection and use of personal data was a key focus for members from their earliest meetings, as previously discussed in section d). Anxieties about data sharing, data leakage, the sale of data and its potential misuses were also repeated throughout the process. Further, the protection of privacy was consistently ranked as one of the Members' most important priorities in relation to data use. It was therefore easily identified by them as an area where focus was needed to achieve an ethical digital Scotland.

Statements of Expectation

The Members of the Panel developed two 'Statements of Expectation' regarding privacy to describe the things that they would expect to see in place in a future, imagined, ethical digital Scotland. They are presented below in the Members' own words, alongside the level of support the statement received from the whole membership.

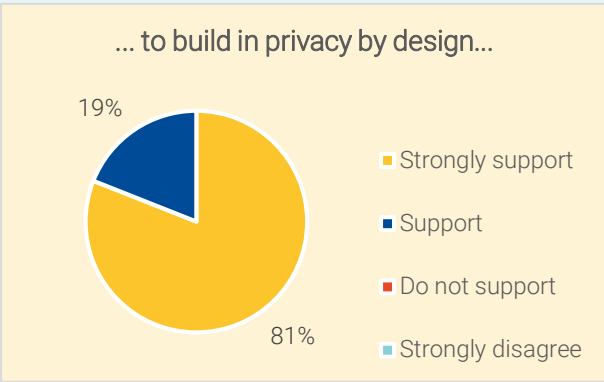
IN AN ETHICAL DIGITAL SCOTLAND... In order to minimise the amount of information people are expected to provide when accessing goods and services and ensure that people are protected from being expected to give access to data about them unnecessarily

We would expect privacy by design to be built into all apps and websites - with a clear summary at the start of any data collection process on what the information is used for, why the information is required and any third party that data will be shared or sold to

So that more transparency is achieved, and information is not collected without clear purpose.

Supported by 100% of Members

... to build in privacy by design...



Support Level	Percentage
Strongly support	81%
Support	19%
Do not support	0%
Strongly disagree	0%

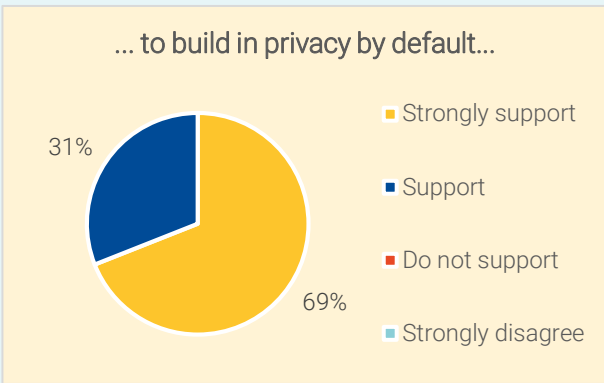
IN AN ETHICAL DIGITAL SCOTLAND... In order to make sure everyone can engage with digital tech safely and without concern about their privacy, and know they start from a level playing field

We would expect software developers and tech providers to ensure that the highest levels of privacy settings are the default and to provide clear information about how privacy settings work

So that no one's information is used or shared without their knowledge and consent.

Supported by 100% of Members

... to build in privacy by default...



Support Level	Percentage
Strongly support	69%
Support	31%
Do not support	0%
Strongly disagree	0%

Background and identification of the key challenges

Maintaining the public's privacy and protecting access to sensitive information about them was a key concern for Members from the outset when considering their own 'digital footprint'.

- When considering digital risks and harms 68% of Members indicated that data or identity theft was one of their top concerns about interacting online.

- 61% of Members also viewed financial harms, such as being scammed because of personal data being leaked, as one of their most worrying potential online harms.
- 35% of Members viewed the protection of personal privacy as being among the most important aspects of being a digitally ethical nation as they approached their final meetings.

As discussed above, throughout the Panel discussions concerns were repeatedly expressed about the personal data people had to provide to access goods and services online being used for other purposes. Members were also generally quite suspicious of how seriously apps and websites took their responsibility to hold personal data securely, and many assumed that data about them that they had been made to submit online in order to be able to use a service or complete a form was regularly shared or sold to other organisations.

Even if the terms and conditions say your data won't be shared you know it will. It's all about profit for most companies.

Despite these concerns the majority of Panel Members, when asked directly, acknowledged that the benefits and convenience of online interactions meant that they would share personal information online even when they felt it was unnecessary, or even a bit 'creepy'

... provided my reaction was that it was merely 'a bit creepy' and did not promote out and out revulsion. If I felt the benefits gained outweighed my concerns, I would let my data be used.

If I trust the source and the benefits were worth it then I probably would, however if I didn't see it of use to me and didn't quite understand it or trust it then I wouldn't.

Members were also particularly concerned about the risks of data that individuals shared online being used to their detriment and felt that this posed a greater risk for people who used the internet less frequently and were less aware of the risks.

Folk with fewer skills are more at risk than people who are computer savvy.

It was also acknowledged that there are imbalances in the amount of data held about different individuals. Members learnt that, in part, this was because people in more vulnerable circumstances (for example, those in poverty, with a health condition, or in the care system) generally have to interact with government services more often and are therefore additionally vulnerable to further harms.

When considering how to balance the desire to protect individual privacy with recognising that providing personal information online was a fundamental part of being able to benefit from access to digital goods and services, Members focussed on the types of information they are most reluctant to share or would be most concerned about if it fell into the 'wrong hands'.

Putting aside access to financial/banking details (which were overwhelmingly of the greatest concern to Members), the types of personal information people were most concerned about being shared inappropriately were:

- 30% - Contact details – address, phone, email;
- 30% - Location/ travel patterns (through tracking apps);
- 15% - Demographic info - gender, ethnicity;
- 10% - Shopping and buying habits;
- 5% - Income levels;
- 5% - Appearance i.e. images of their face;
- 5% - Health or genetic information.

Members also took the opportunity, towards the end of the process, to assess the factors that they personally took into account when considering providing personal information online in order to access the goods and services that they want. These included:

- What they need the information for;
- The perceived trustworthiness of the organisation – based on reputation and reviews;
- Past experience with the supplier;
- How the information shared will be of benefit to me;
- How personal the information being requested was;
- The security rating of the website / platform;
- Who they will share my information with;
- How necessary the service is that I'm trying to access;
- The potential to use the information they are asking for against me;
- How clearly they state their privacy and security policies;
- The levels of authentication they require (e.g. the enabling of 2-factor authentication);
- That their phone numbers and details are listed with Companies House, when relevant;
- Previous privacy issues and lawsuits.

My personal concerns when using online sites, apps etc are how well regulated are the companies who are asking for your information and how they will keep it secure and safe. This is especially applicable in terms of social media and how your information can be shared.

In stepping back and considering the wider issues, Members were fundamentally concerned with how they, and the wider public, could be supported to manage the tensions between the desire to maintain privacy while also benefiting from the gains that online transactions offered. They felt that the heart of the issue is that people are not necessarily as aware as they should/could be of how the information about them is being used.

I personally get bombarded with spam phone calls and spam emails. I know I've compromised my information by signing into many different websites, I didn't sign up to be bombarded with unsolicited calls, but I get them. So there should be a strong review on regulation towards online privacy policies.

For me as an individual I think privacy is most important because I don't really know how much of my information is out there in the digital world. So I worry.

Another aspect of privacy highlighted here was the feeling many Members had that they were not able to control how much was known about them, and by who, once information was online.

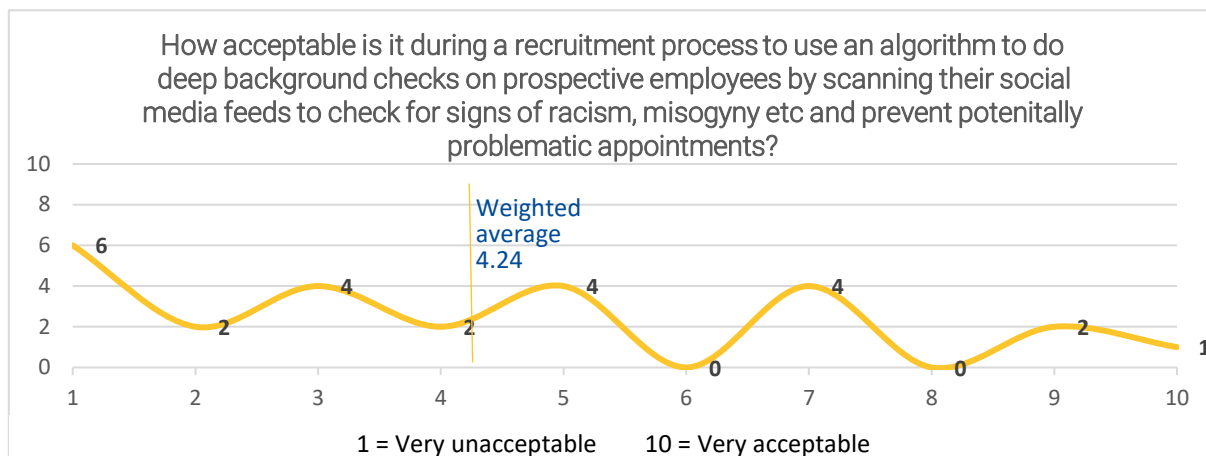
It must be the right of the individual to decide who has access to their world/life.

This nervousness was explored further through an example presented to Members about AI being used to scan social media accounts as part of background checks during a recruitment process. While some Members of the Panel individually acknowledged that they had looked into the social media accounts of prospective employees when considering new recruits, the general consensus was that an algorithm doing this in a systematic and deep way was not acceptable.

There were a variety of reasons given in the discussions for this type of activity seeming unacceptable, including the right to privacy and the right to a personal life outside of work.

Social media should be personal. You shouldn't have to be so cautious that you can't share your views or have a bit of fun.

It's a cheap and quick way for companies to do checks but is not a fair reflection of people. I'd be shocked if an employer saw some things of me online. I use it for irreverent banter



Concerns about privacy were also raised in relation to workforce monitoring, particularly when it extended outside of work hours / workplaces and into people's private lives or social media uses. There was a sense expressed that, if this was going to become the norm, there needed to be greater transparency and openness so people could make more informed choices about what information they shared online.

Balance of responsibility

As part of the process of developing their 'Statements of Expectation' the Members identified and articulated three priority areas where they felt change needed to happen, or action needed to be taken, to protect individual privacy in an increasingly digitally connected world. These were:

- providing clear, well-known, and well understood routes for users to complain and seek redress if they are hacked or their personal data is shared without their consent, and ensuring those responsible for breaches are held accountable, with systemic changes made to prevent repeat breaches;
- making it clearer if information provided by individuals to access goods and services or use social media is to be sold on for profit;
- ensuring that the regulations placed on tech companies is fair to them, as well as to users, so that they can maintain their service offer without undue restrictions.

They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:³⁵

- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);
- c) Society and civil society organisations;
- d) Individuals.

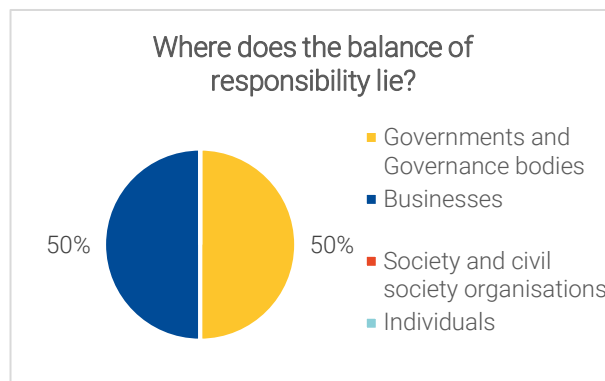
³⁵ These categories, intended to provide a concise and simplified description of the 'key actors' with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

The graphs below illustrate the conclusions that Members formed about where the proportion of responsibility should lie.³⁶

Where does the balance of responsibility lie for... Providing clear and well-known routes for users to complain and seek redress if they are hacked or their data is shared without consent, and ensuring those responsible for breaches are held accountable and changes are made to prevent repeats

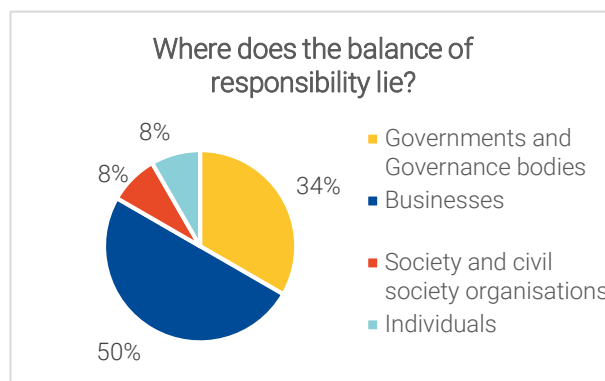
Here responsibility was seen as clearly split between the businesses providing the platforms and services (and ultimately the ones holding much of the data in question) and government (both as data controllers and regulatory enforcers).

Members argued that there needed to be stronger, enforceable regulation in place to address data breaches and, more importantly to them, that the public needed to have a clear and readily available route to highlight perceived instances of data misuse. They also noted that they felt that the companies collecting personal data needed to be more transparent about how that data would be used.



Where does the balance of responsibility lie for... Making it clear if information provided by individuals to access goods and services or use social media is to be sold on for profit

Concerns were raised during the Members' early discussions, and again in consideration of the role of private companies in education, about a perceived lack of transparency in relation to when information people provided about themselves online in order to access goods and services, or use social media, could be marketised by the provider. While many accepted that this was the trade-off they had to make to access free services, there was still considerable concern expressed by Members about the lack of transparency. Greater transparency was something that they believed was important for enabling people to make informed choices.



Once again, the responsibility for being transparent about their business practices was felt to lie with the providers, although Members did reiterate that, without regulatory intervention, they believed businesses would be unlikely to comply.

Businesses that make money from this info must be transparent and honest with individuals and Government must ensure this

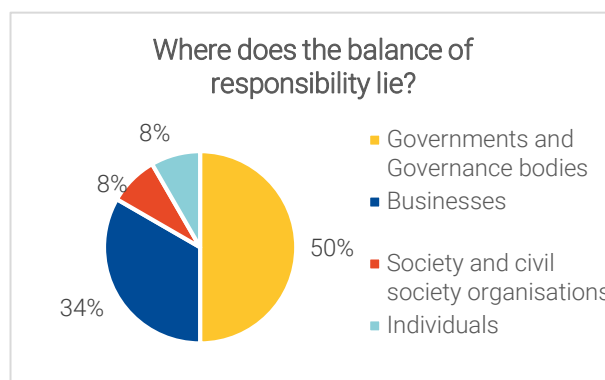
Points were also made by some members here that, both individually and collectively, the public are not powerless – and in this case have the 'purchase' power to demand better from service providers.

³⁶ When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each category.

Society and individuals do have real power and need to be able to speak up and challenge lack of transparency and bad practices

Where does the balance of responsibility lie for... **Ensuring that regulation placed on tech companies is fair to them, as well as to users, so that they can maintain their service offer without undue restrictions**

Throughout their discussions some Members repeatedly expressed concerns that moves to restrict risk and protect users could place unnecessary and unmanageable restrictions on digital companies, in ways that made some business models (particularly social media and collaborative economy models) untenable. This was seen as risking the very things that many Members valued about these platforms. It was argued therefore that it was necessary to find a balance between regulation and responsibility that was fair to all parties.



While governments were ultimately seen as having this regulatory responsibility the Members felt that this would only be effective if done through consultation with business and users. They also suggested that providers had a responsibility to develop and adopt codes of conduct that made a commitment to fair and ethical practices that users could use to make informed choices about whether or not to use a particular service or platform.

If providers could sign up to a recognised Digital Ethics Charter that set out standards for fair behaviour, then people would know what to expect and vote with their feet if they felt standards had not been upheld.

h) The future of work in a digital economy

While Members recognised many potential benefits to the economy that would come from the growth and advancement of digital technologies, they tended to return continuously to the risks and threats they perceived these developments would bring to the future of work. The potential threats of algorithms, automation, digital monitoring, and upskilling were all focused on by the Panel Members as part of thinking about the implications of digital technologies on future employment in a digitally focused Scotland. What this could mean for the future of work was therefore the final theme identified for focus by the Panel Members.

Statements of Expectation

The Members of the Panel developed two 'Statements of Expectation' focussed on mitigating the negative impacts of digital technologies on the future of work in a future, imagined, ethical digital Scotland. They are presented below in the Members' own words, alongside the level of support the statement received from the whole membership.

IN AN ETHICAL DIGITAL SCOTLAND... In order to manage the risks of job losses caused by AI and automation, particularly for low skilled workers

We would expect AI advancements to be focused on assisting with human tasks (but not eliminating them in the short to medium term) and that this is accompanied by investment in creating new jobs in the digital sector alongside upskilling programmes for workers

So that largescale unemployment is prevented, and that people have the appropriate skills for the relevant markets.

Supported by 96% of Members

... to manage the risks of job losses caused by AI and automation...

Response	Percentage
Strongly support	73%
Support	23%
Do not support	4%
Strongly disagree	0%

IN AN ETHICAL DIGITAL SCOTLAND... In order to prevent negative medical, health and mental health impacts caused by increased computer based and remote working with the spread of digital

We would expect flexible office layouts (including hot-desking and stand-up desks) to have become the norm, alongside reduced working days and shorter working weeks

So that the work/life balance is improved by more satisfying digital working.

Supported by 96% of Members

Satisfying digital work

Response	Percentage
Strongly support	54%
Support	42%
Do not support	4%
Strongly disagree	0%

Background and identification of the key challenges

From their first conversations about the digital economy, Members expressed concerns about what this would mean for the future of work, particularly worrying about the potential for widespread job losses either brought about as a result of automation and algorithmic planning/assessments, or simply because many people currently in the workforce did not have the skills required to operate in

a digital environment. Despite assurances from speakers in their learning phase that automation in the workplace offered opportunities for an improved quality of work, Members consistently returned to fears that automation would result in significant job losses across society.

Jobs are being decimated by automation. I work in a job centre and see this day in, day out. Jobs will be taken away with automation. It's worrying.

What will everybody do? Jobs will go. We'll need re-education?

Despite this fear, Members recognised the role that increased automation in the workplace could have in taking the drudgery out of repetitive tasks and driving efficiency improvements.

Some industrial jobs can be awful. It's better if machines do the work in those cases and people can do more satisfying and less mundane jobs

There remained, however, an underlying concern among Members that the driving force behind increased workplace automation was not to provide improved conditions for workers, but rather to increase profits.

Staff is the greatest cost to most businesses, automation will save money (no sick leave or pension to pay to a machine).

There were also particular concerns expressed by Members about the types of jobs that would most likely disappear due to automation, with most assuming that it would have the greatest impact on lower paid and less skilled positions held by those with the least ability to move into other types of work. Further, there was little belief expressed by Members that there would be opportunities for people currently fulfilling roles that might be lost to automation to benefit from the promise of 'less routine' work supported by automation and/or opportunities to retrain.

Entry level jobs will be impacted e.g. cleaners, cafe jobs, retail; whereas surgeons and professionals keep their jobs. I need an entry level job to support my family.

What are people are going to be re-trained to? are there sufficient options and will there be the commitment and investment to back it up?

Another key fear raised by Members in response to the prospect of increased automation was that it would result in a diminishing of personal relationships and human contact. Examples provided to them from amenities, retail, and social care where automation had replaced interaction were particularly focused on as having the potential to increase social isolation.

Loss of face to face services, for example libraries with terminals instead of people and supermarkets with self-scanning have additional impacts on isolated people who may not have spoken to anyone all day.

The example of robots replacing care workers is shocking. People prefer human interactions. We need human contact.

One of the social care case study examples presented to Members was particularly designed to help explore this tension further. It focused on how AI and robotics could be used to automate individual tasks rather than whole jobs (by, for example, moving people and objects around a building or reminding patients to take their medicine). This was designed to show how automation could support a limited number of people to do more – in this case allowing care workers more time to attend to the core care needs of patients. Despite recognising that there could be practical value to this type of automation, most Panel Members remained intrinsically resistant to the use of automation in a care setting as they saw it as limiting social interaction.

Another aspect to do with the loss of personal contact that concerned Members when considering increased automation in the workplace, was the potential impacts on workers job satisfaction if they were tasked automatically. Members were concerned that, if there was less need for face-to-face

interactions between staff and management to direct and monitor tasks, there would be limited opportunities to build relationships of trust. Trust was emphasised by Members as being a vital factor in workplace satisfaction, and part of this was argued to be realised through having the autonomy to make decisions and organise your own work.

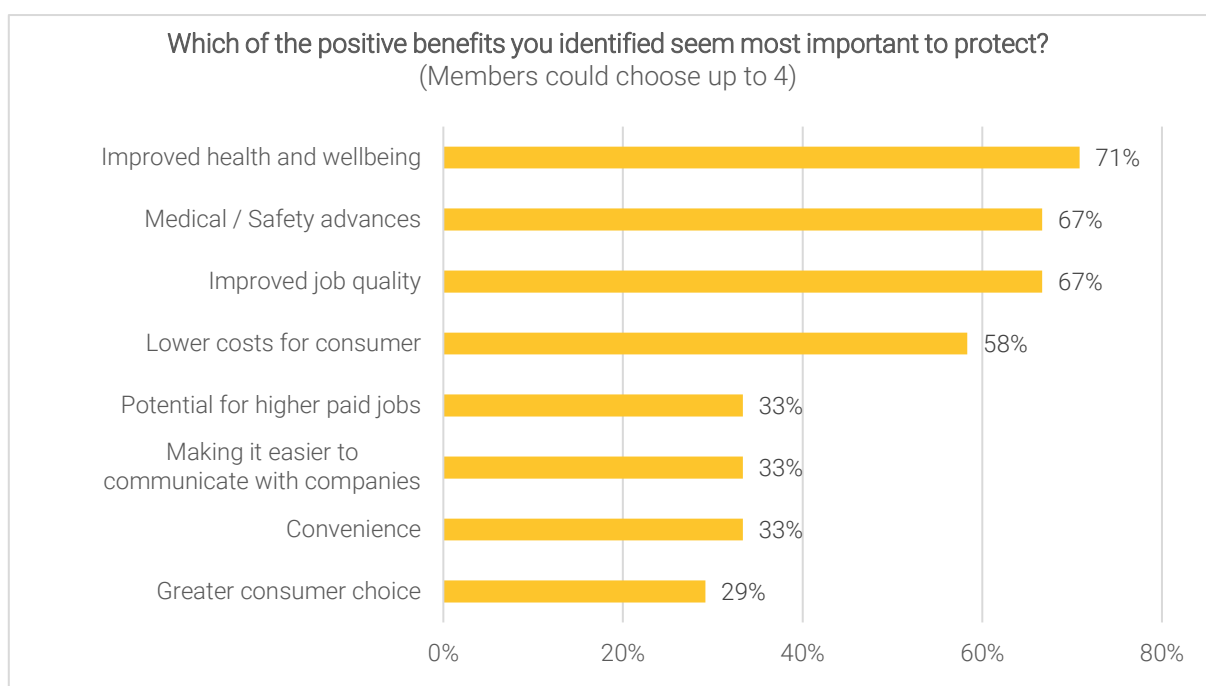
Creating a thriving digital economy

Building on what they had learnt when considering the economic impacts and opportunities the tech sector has in Scotland, many Members were keen to see greater government support for start-ups and expansion in these areas. There was a sense expressed that this would be beneficial for the jobs market in Scotland and that, if supported alongside further and higher education that equipped employees for these roles and opportunities for retraining, it had the potential to raise the quality of the local job market in positive and inclusive ways.

New industries appearing in this sector are great for employment and could involve retraining those in environmentally harmful industries for new work.

[There are] opportunities for greater national income without threatening the environment e.g. in game design

When considering the economic and social benefits and harms from the increased use of digital technologies across the economy, Members identified a range of benefits that an increased focus on digital could potentially deliver, and prioritised those that they felt were most important to protect.



The three things that they prioritised highest all related to social benefits that they hoped an increasingly digital economy would be able to deliver for society as a whole.

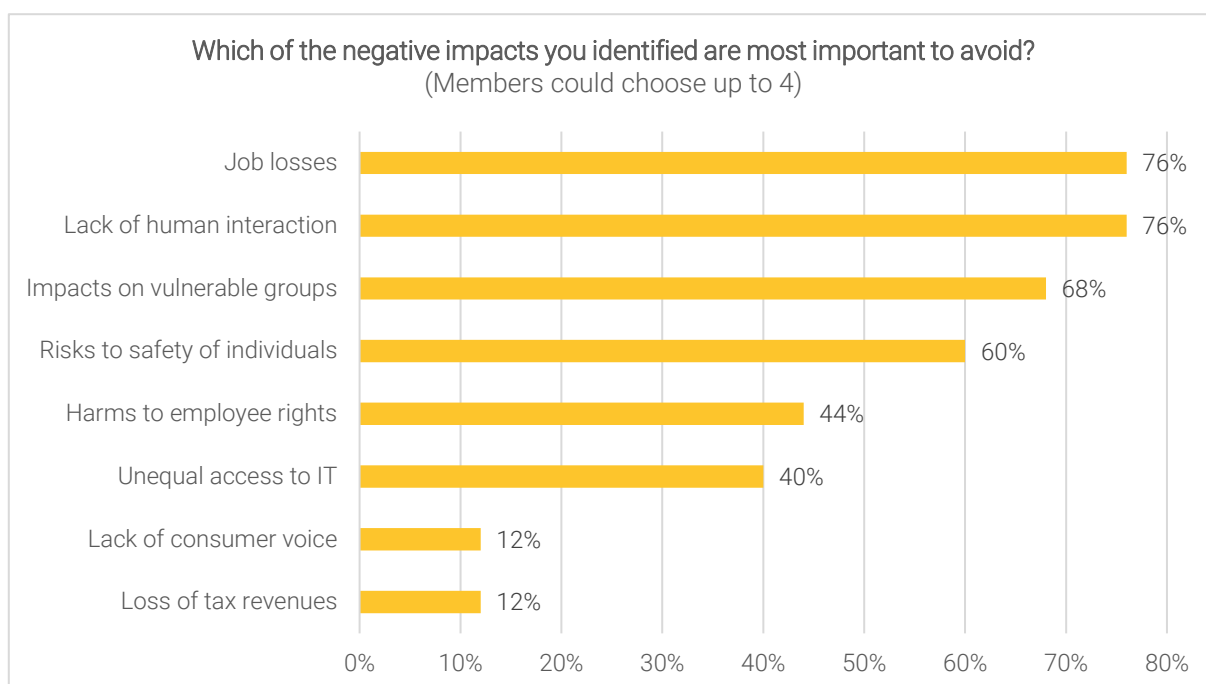
There's a critical balance to be struck between a profitable and thriving economy and societal well-being. A more efficient and profitable economy does not necessarily translate to a more thriving society.

Advances that would have a direct economic benefit to people were prioritised fourth and fifth. Here there was emphasis placed on direct consumer benefit and the hope that cost savings realised by

businesses through efficiency and (they assumed) labour cost savings would be passed on to the end user. Additional consumer benefits relating to customer service and consumer choice and convenience were ranked lowest, suggesting that, while important to some Members, wider social benefits and ethical considerations regarding fairness and public benefit were generally considered a higher priority.

Members also had the opportunity to prioritise the things that they felt needed to be avoided in a 'thriving, ethical digital economy'. When asked which of the potential negative impacts of an increasingly digital and automated economic model were most important to avoid, Members, unsurprisingly, prioritised avoiding job losses. This had been a sustained theme throughout the Panel meetings and it is clear that, despite the potential presented for automation to improve the quality of work, many Members remained unconvinced that this would benefit all sectors of society.

A main concern is that people are seen as and treated as dispensable, hence less jobs and society is damaged.



The opportunities for increased automation and digitally based employment presented as examples to Members, alongside their own experiences through lockdown of home working and changing patterns of economic activity, further served to make concerns about digital tech creating risks for a loss of human contact a prioritised risk.

Any reduction of human contact feels like a wider loss to society.

Covid 19 has demonstrated to us all the importance of human engagement and contact and how we are all challenged and diminished without it.

Balance of responsibility

As part of the process of developing their 'Statements of Expectation' the Members identified and articulated the key priority area where they felt change needed to happen, or action needed to be taken, to reduce the risk of digital technologies, including AI, automation, and robotics, having a negative impact on the future of work. This was maximising the economic and development opportunities that digital can offer to Scotland, while minimising the job losses caused by

automation and other advances, with a particular focus on the impacts this might have on lower skilled jobs.

They then spent time in their discussion groups assessing how they believed the balance of responsibility for action to achieve these changes should be distributed between four key groups:³⁷

- a) Governments and government bodies;
- b) Businesses (including digital service providers and other companies who were using these services);
- c) Society and civil society organisations;
- d) Individuals.

The graph below illustrates the conclusions that Members formed about where the proportion of responsibility should lie.³⁸

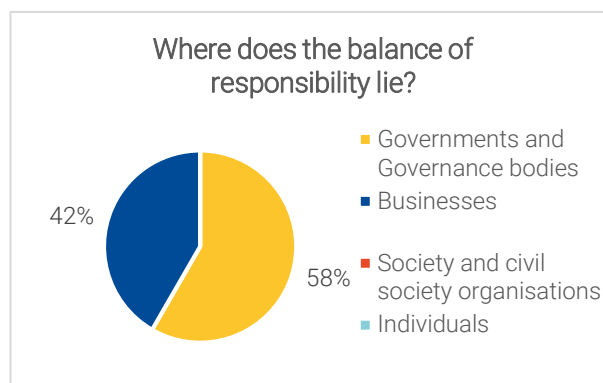
Where does the balance of responsibility lie for... Maximising the economic and development opportunities that digital can offer to Scotland while minimising job losses caused by automation and other advances, particularly impacts on lower skilled jobs

The potential impacts of digital developments on the future of work, both in relation to the quality and number of jobs available, was identified as a significant concern for Members. Their main concerns related particularly to the impacts this may have for low skilled and lower paid work opportunities i.e. the roles seen as most likely to be replaced by robots and/or algorithms.

Recognising, however, that there were widespread economic benefits for society as a whole in embracing digital developments, Members agreed that it was the responsibility of government to minimise the impacts by providing upskilling opportunities and ensuring that the education system prepared people for the types of future jobs available.

Employers were also attributed a responsibility for managing this transition in corporately responsible ways, ensuring training opportunities for staff, and using digital innovations to enhance the quality of work for staff, as well as increasing profitability.

There has to be regulations by governments, but businesses can manage their work forces to adapt. (e.g. businesses have the knowledge of what the workforce looks like, could look like and can support this change). They have responsibilities too.



³⁷ These categories, intended to provide a concise description of the 'key actors' with responsibility for creating an ethical digital Scotland, were used throughout the meetings as a device to help Members focus their discussions.

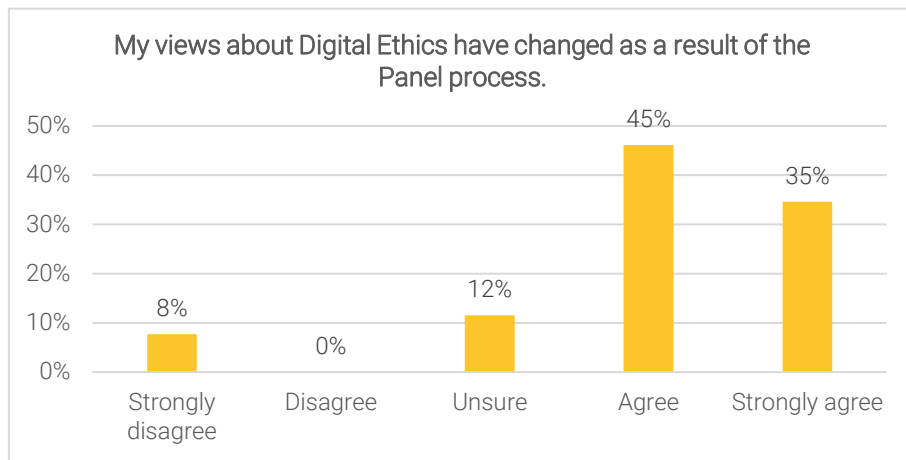
³⁸ When reading the graphs in this section it is important to recognise that the figures display the agreed proportion of responsibility for each actor, rather than the percentage of Members that attributed responsibility to each category.

5. Wider impacts on Members from participation in the Public Panel

Members of the Panel were involved in the consideration of these issues for over 10 months, and for several this also included becoming personally digitally active and developing core digital skills. In the end therefore, the impacts of this process on Members has extended beyond the learning and opinion forming they have done on the topics presented to them, into wider aspects of their own behaviours and attitudes.

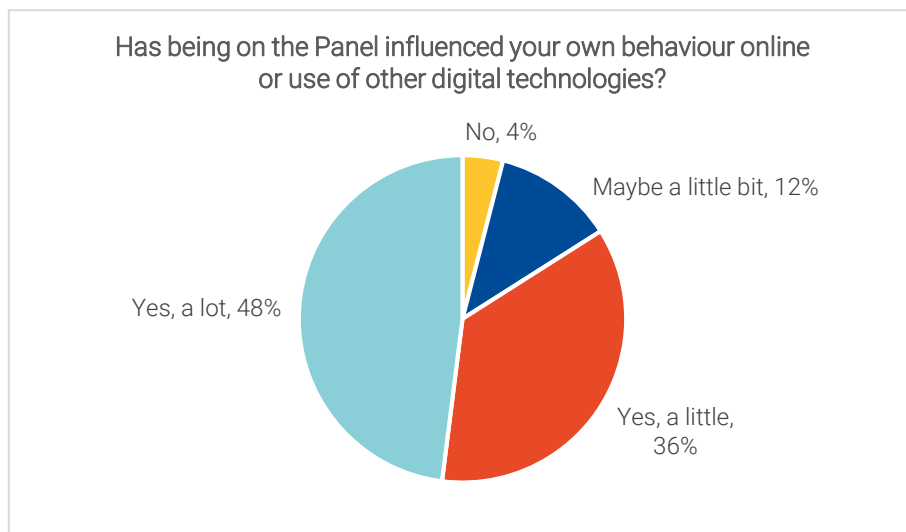
Participants' digital life

Reflecting at the end of the final Panel meeting, the vast majority of Members noted that their views on digital ethics, and ethical digital use and uses, had changed as a result of being part of the Panel.



How member's online behaviours have changed

Panel Members were also asked whether being part of the Panel had influenced their own behaviour online or use of other digital technologies, and if so, what had changed.



I'm much more aware of just how naïve I was when I interacted online. I've learnt to think about cookies and think about what information I share where.

I've become more careful about how much of my life is out there online, and I think before I was just letting my phone and the constant need for updates take over a bit.

The primary theme in reported behaviour change however was a reduction in the use of digital – both in the time spent online and the types of activity. This was primarily prompted by concerns about the environmental impact of personal digital use.

The environmental impact of digital has been very useful. I am more cautious about how much I stream, download/upload documents, send emails and avoid sharing data (photos) excessively or unnecessarily.

The environmental impact of data farms was startling to me. I've stopped streaming videos, reduced my YouTube time & consider the necessity of online meetings more carefully.

Panel Members also reported a heightened awareness of potential online harms resulting in them being more careful online – including having a greater awareness of how data was being collected and used, thinking more about privacy and security, and not accepting cookies by default. Some Panel Members further indicated that they had begun using monitoring tools on their devices and undertaking more regular digital housekeeping.

I am much more conscious of my privacy settings, am more conscious of accessibility measures on different platforms and more conscious of my digital use in relation to its carbon footprint.

I check my cookies for every site now instead of just pressing ok.

I am much more aware of security and what information I am giving people.

Communicating to others what they had learnt was also identified as a change in behaviour, and one Panel member even reported being able to use what they had learnt professionally.

I have been making an effort to inform others close to me about this topic.

I've also started a new job facilitating digitally inclusive online arts workshops with vulnerable people and being part of this panel has been really useful in learning how to go about doing that and keeping everyone safe.

Reflecting further on their own use of digital technologies, Members considered what they'd learnt, and what they wished they'd known before the Panel meetings. Key themes to emerge were:

- **the environmental impact of the growth of digital and concern that this is not widely acknowledged**

Carbon footprints, where the public are responsible for it, but the Government have held back that information on Carbon footprint. The Carbon emissions from cars and airplanes we knew but not the Internet and the technology equipment.

- **the scope of the harms and risks in digital interactions**

Slow harms. I am now very thoughtful about food apps etc and I wish I had realised earlier as it's a real hard habit to get out of.

I think that had I been aware that digital addiction was a real problem a few years ago, and it wasn't just me, that might have been valuable.

- **the prevalence of misinformation and disinformation online**

I wish I had known more about misinformation. I think everybody should be educated to some degree before going online.

That it is possible to fact check. I understand that this isn't always 100% reliable information either due to the pace at which news and information circulates. But it is comforting to know that we have organisations and people in society that are doing something positive to redress the balance. There are ways and methods to be more ethical, or more ethically aware even. I have also made an effort to share this knowledge with family and friends.

- knowing how data is collected and processed, and how algorithms use that data to target advertising and other messaging.

The size of our digital footprint and the way our data is harvested and used, as we use the internet, even when accessing services such as online banking.

Advice to others about living a 'ethical digital life'

Reflecting on what they had learnt, Panel Members identified the 'top tips' for living an ethical digital life they would share with other members of the public.

The overwhelming message from Panel Members was the need to be kind and considerate online.

Use the internet as a source for good, be kind online, use community sites to benefit others (litter collecting groups, offering free unwanted items, honest information sharing). Set an example with this positive behaviour and share what you know and what you do online with others who are less informed.

Treat people well! Just because you can't see the person's response, or don't know them, doesn't give a free-for-all license for bad behaviour.

Use [social media] technology in the ways in which they were intended and not to hurt or harm others.

Members valued what they had learnt during the Panel meetings and suggested that other members of the public should endeavour to find a trusted source to educate themselves about the pros and cons of being online, including the environmental impact.

Try and learn as much as possible before going online. Being in the sessions opened up a whole new world for me and I learnt so much.

There is more to being online than we realise. Seek knowledge so you are aware of the personal and societal impacts of what you are doing.

Be ethical, aware and careful of the impact [you] have by "just putting" something online. The digital world is far reaching and once it's out there ...who knows?

However experienced you are online it is always good to learn more. Try to find a trusted teacher(s) who can help you avoid the most costly (personal and/or financial) mistakes and enhance your online experience.

Moderating time online and turning off auto-play and location services were additional practical steps Panel Members wanted to share to minimise exposure to harms and risks.

Watch your on-line habits, from how to keep yourself safe from online harms, scams and to also make the environment a better place digitally.

Turn off the auto-play function. Avoid social media where you can. Avoid location services. Be kind to one another. Be sceptical. Support analogue services like bookshops and art galleries. Try not to get conned, but don't get obsessed about it.

*Think of Alice and beware of the YouTube rabbit-hole.
And if you find yourself overwhelmed by it all: tune out, turn off, drop the device
down the back of the couch.*

Wider political engagement

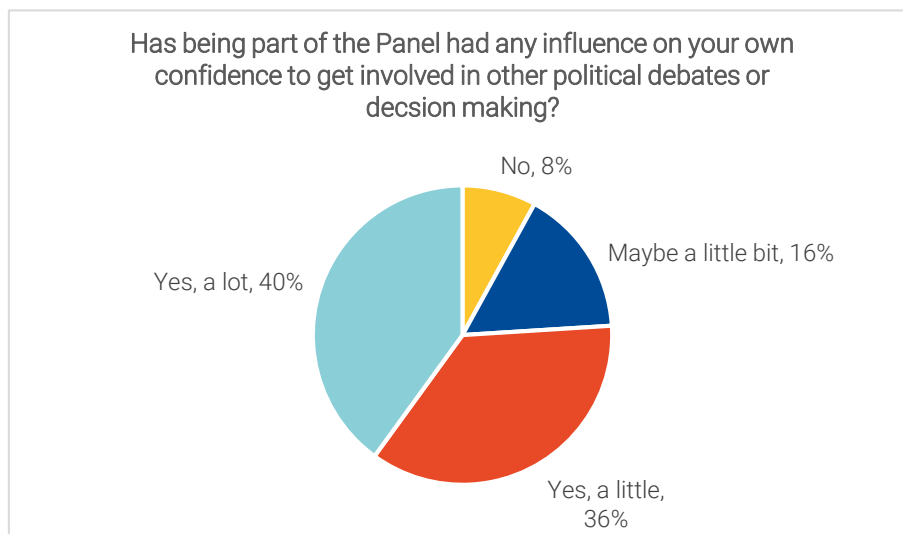
In the concluding meetings Members also began to share spontaneously how being involved in the Public Panel had encouraged them to become more engaged with politics and social affairs. To explore this further the following direct questions about political engagement and perceptions of the value of processes like this were included in the final Member's survey.

Confidence to get involved

- 40% of Members reported that their involvement in the Panel had had a significant impact on their confidence in getting involved in other political debates or interacting with decision making.

*I really didn't imagine before that anyone would be interested in what I had to say.
But now I think 'why not?' My views are just as important as the next person.*

- A further 52% (92% in total) reflected that their involvement has had some impact on improving their confidence and/or willingness to participate in political matters in the future.



*I enjoyed my time and would love to do this again. I will be actively seeking out more panels. Thanks for everything and I would love to be kept informed of the outcome.
Thanks*

It has made me more confident to speak out and I would love to be part again. I would be really interested in getting feedback about what the expert panel and government are going to do with our suggestions.

Perceptions of Scottish Government

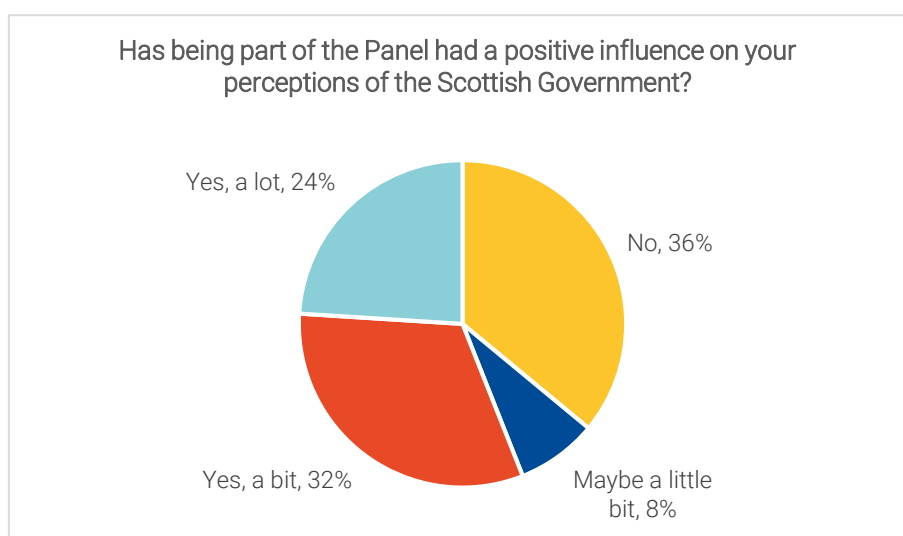
- 56% of Members reported that being part of the Panel had also had a positive impact on their thoughts about the Scottish Government (who funded the Panel process).

In commenting on the reasons for their response, Panel Members noted that it 'felt good' to be engaged in the decision-making process. They were interested to know that the Scottish Government undertook these kinds of exercises and thought this was a positive and valuable thing for government to do.

The efforts Government takes behind the scenes to look at an issue and its solution should be known to all residents. This would change perception of people about Government functioning. Many things don't change overnight.

It made me feel like they cared more about the views of citizens having commissioned the panel.

I think it's really positive that they are making real investments in bringing together Members of the public to engage in constructive debate. I know that this type of panel must have cost quite a lot, which means they must be pretty serious about this type of public engagement on big issues.



Some Panel Members were also pleased to see that this issue, in particular, was on the Scottish Government's agenda.

I would like to think that it means Scottish Government care about societal impact of digital harms. That they are trying to address the problem is comforting on some level.

I knew they got advice but I thought it was just "this is wrong how to fix it" kinda rather than actively seeking out solutions to problems that aren't even problems yet! Good on them to try and include everyone and taking steps to see how to do it properly!

However, a few Panel Members remained sceptical about how much attention would be given to their conclusions by the Scottish Government, based on their perceptions of past performance.

The Scottish government has become expert at... ignoring constructive criticism... blaming somebody else... and sweeping problems under the carpet.

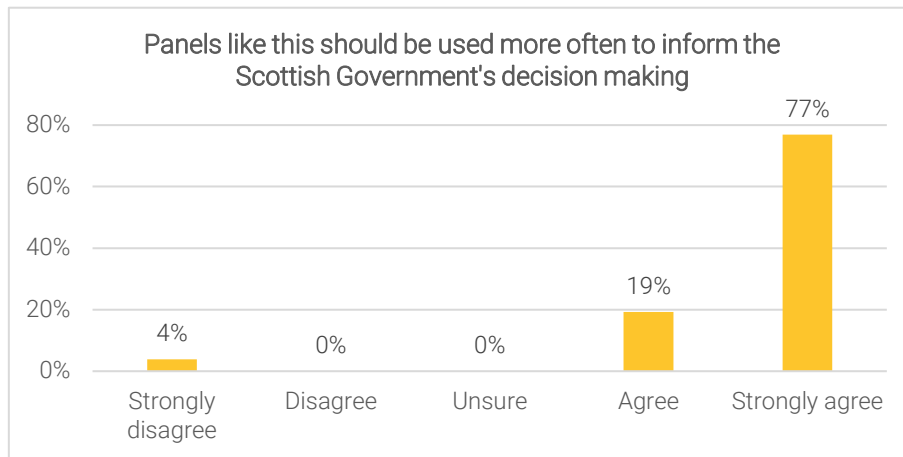
I feel it was a positive thing to do but have reservations regarding its ultimate value, as the Scottish government is not famous for seeing good ideas through.

Wider use of Public Panels

- 96% of Members agreed that they believed Panels like this should be used more often to help inform government decision making.

A fantastic experience of being part of the Panel. It gave an opportunity to give back to society and be a small contributor toward Scotland's safe and prosperous digital future.

I look forward to more panels being set up by Scottish Government. People need the chance to participate more in all political decisions.



6. Member evaluation of the process

An evaluation form completed by Members after their first week of meetings gave the organisers some initial feedback about how Members were finding the process, as well as suggestions for how the meetings could be changed to improve their experience. At the end of the final meeting, Members were also asked to reflect on the process as a whole. The results from these surveys are presented below.

<i>About the workshops</i> <i>Average (1 = Poor, 5= Excellent)</i>	After block 1	After block 6
Overall, how would you rate the workshops?	4.5	4.8
Overall, how would you rate the facilitators?	4.6	4.8

Thank you for the experience. And I am happy I decided to do this.

Excellent experience enjoyed making a contribution and represent all groups.

I am grateful and thankful for the experience and opportunity to participate in such a relevant discussion.

Thank you to all who organised and ran this so effectively. It has been a thoroughly rewarding experience due to your skill and professionalism.

I am glad I was involved... found everybody so pleasant and just hope I was of some benefit. I wish you all good luck in the future.

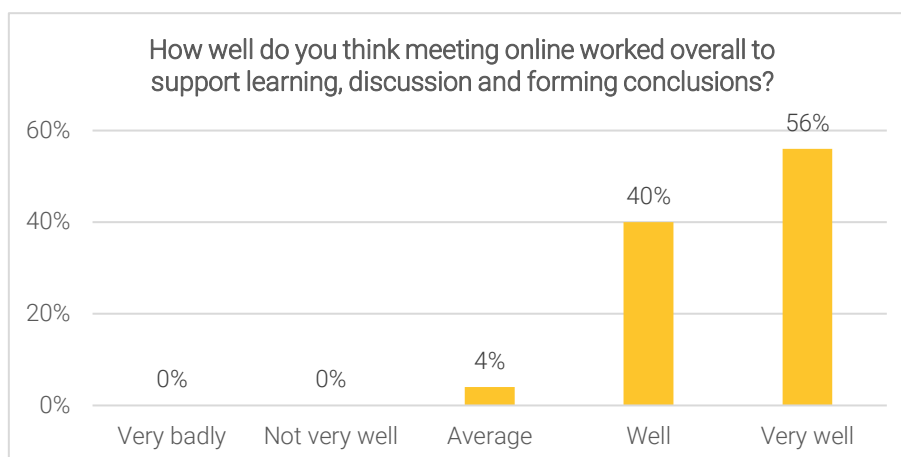
<i>About the meetings</i> <i>Percentage Agreeing</i>	After block 1	After block 6
I understand the purpose of the panel and my role	89%	100%
The information presented was clear and easy to understand	89%	88%
I've learnt a lot about the subject	81%	88%
There was enough time to discuss the issues properly	78%	58%
I was given enough information to form opinions on new subjects	86%	92%
I felt like I could ask questions	92%	92%
I felt comfortable taking part in the discussions	86%	88%
I felt my opinions were listened to	97%	96%
In my groups some Members tended to dominate the discussions	24%	30%
Group Members respected what I had to say, even if they didn't agree	86%	96%
The breakout facilitators made sure that opposing views were considered	89%	92%
My views changed or developed through listening to others	57%	85%

I found most of the facilitators were really good, and I think that was essential to the high quality of many of our discussions. Overall, I found the whole process extremely enjoyable and I'd happily do it again.

Thank you for an interesting informative experience which I would definitely repeat.

Meeting online

There were initially some concerns among the organisers about the Panel meetings taking place online. At the end of the process Members were asked to reflect on the online experience particularly. Panel Members generally noted that an online process was more convenient, less time-consuming and had a lower carbon footprint than an in-person meeting.



I wouldn't have attended if it had been in person. Doing this online means that people still have time to themselves before and after and no travel required.

It saved time & carbon footprint compared to all participants having to travel to a central location. I think it allowed greater participation since additional support (such as child or elderly relative care) was more easily managed with an online forum.

It was more convenient. I didn't have to find babysitters. No travel.

Thought there may have been more technical issues but it all worked well.

Some Panel Members also expressed that they felt more confident contributing to the discussions in an online format.

I also felt more comfortable than I would have walking into a big room of people.

I probably felt more comfortable at home than I might have elsewhere.

There is a certain degree of security and privacy being online rather than in a meeting room and I think this helped people's confidence in engaging with the group. I noticed this increasing with some of the group Members I was with several times.

It's easier to be yourself when you are online.

A minority of Panel Members however would have preferred to meet in person.

Think it was okay but would have been better to meet in person.

I missed the human contact but in terms of effectiveness it met the requirements.

Appendix A: Speakers who presented to the National Digital Ethics Public Panel

Block 1
Dr Claudia Pagliari – Chair of the National Digital Ethics Expert Group, Senior lecturer and researcher, Usher Institute, University of Edinburgh
Block 2
Dr Claudia Pagliari – Chair of the National Digital Ethics Expert Group, Senior lecturer and researcher, Usher Institute, University of Edinburgh
Paul Gray - Scottish Government Library
Areeq Chowdhury – Founder, WebRoots Democracy
Jess McBeath - Online harms and digital citizenship specialist
Ruby Wootton - Associate Director, Revealing Reality
Block 3
Dr Claudia Pagliari – Chair of the National Digital Ethics Expert Group, Senior lecturer and researcher, Usher Institute, University of Edinburgh
Stephen O’Neill - Head of Digital Economy and Data Driven Business, Scottish Government
Brian Baglow - Founder and Director, Scottish Games Network
Edafe Onerhime - Data specialist
Fabian Wallace-Stephens – Senior Researcher, RSA
Dr James Stewart – Lecturer in Science Technology and Innovation Studies, University of Edinburgh
Rachel Coldicutt OBE - former Chief Executive Officer of Doteveryone
Block 4
Dr Claudia Pagliari – Chair of the National Digital Ethics Expert Group, Senior lecturer and researcher, Usher Institute, University of Edinburgh
David McNeil - Digital Director, SCVO
Robin Christopherson - Head of Digital Inclusion, Abilitynet
Jez Hall – Director, Shared Futures CIC and PB (Participatory Budgeting) Works
Natasha McCreesh - Digital Social Inclusion Manager, Good Things
Block 5
Dr Claudia Pagliari – Chair of the National Digital Ethics Expert Group, Senior lecturer and researcher, Usher Institute, University of Edinburgh
Prof Alan Winfield – Professor of Robot Ethics, University of the West of England (UWE) Bristol
Susanne Baker - Associate Director, Climate, Environment and Sustainability, techUK
Colin Birchenall - Chief Technology Officer, Glasgow City Council
Reema Patel – Associate Director, Ada Lovelace Institute
Dr Ben Williamson - Chancellor’s Fellow, Centre for Research in Digital Education and the Edinburgh Futures Institute University of Edinburgh.

Block 6

Dr Claudia Pagliari – Chair of the National Digital Ethics Expert Group, Senior lecturer and researcher, Usher Institute, University of Edinburgh

Dr Oliver Escobar - Senior Lecturer in Public Policy, Edinburgh University and Co-director of CRITIQUE (Centre for Ethics and Critical Thought).

Appendix B: Conversation Guidelines

In the first meeting of the Panel, six Conversation Guidelines (or Groundrules) were proposed to the Members as a framework for ensuring they could have productive and constructive conversations together as Members of the Panel.

These were:

1. Step forward, step back
2. Recognise we might not agree, but agree to listen
3. Be open to changing your mind
4. Stick to the topic and task
5. No question is a bad question
6. Confidentiality and sensitivity

During the meeting the members were given time to consider these Guidelines and propose additions that they believe would help ensure they had a positive experience of participating.

The additional Guidelines proposed and agreed by the group were:

7. Respect others' points of view and their values
8. Clear processes for speaking out - i.e. raised hands physically or digitally when in breakout rooms
9. Everyone gets a chance to speak, and everyone takes personal responsibility for letting others speak (not just up to facilitators)
10. Be courteous
11. Acknowledge people may have tech issues and roll with it
12. Make sure to speak one at a time
13. There is permission to be able to ask questions of each other directly rather than it all be mediated through the facilitator
14. Speak clearly and not too quickly
15. Try to get to the point as quickly as you can