A Consultation on the Digital Strategy for Scotland: Analysis of Responses

Why Research, January 2021

Acknowledgments

Thanks to the individuals and organisations who responded to the consultation and to all at the Scottish Government who provided input and offered advice as required.

Executive Summary

In 2011, The Scottish Government published *'Scotland's Digital Future: A Strategy for Scotland'* which looked at digital opportunities and challenges facing Scotland at that time. It set out a series of actions to improve the digital infrastructure, promote digital participation and develop a greater range of digital public services and stimulate the digital economy.

Then in 2017, *'Realising Scotland's full potential in a digital world: A digital strategy for Scotland'* was published. While the high-level aims of the 2011 strategy remained appropriate, the vast majority of the actions it described had been delivered. Likewise, the nature of digital, and the understanding of the opportunities it provides, had developed considerably, and the pace of change across the wider economy and society has accelerated. The 2017 strategy set out a vision and a series of actions so that Scotland could fulfil its potential in a digital world.

Given the fast paced way in which digital technologies are changing and how people lead their lives, particularly with the impact of the coronavirus pandemic, the Scottish Government and COSLA are keen to deliver a refreshed strategy that reflects these changes, with a vision of modern, digital and collaborative government, designed around people.

In September 2020, a consultation was launched to gather views on an updated Digital Strategy for Scotland and to inform the content of the Strategy.

Respondent Profile

In total, there were 231 responses to the consultation, of which 165 were from organisations and 66 from individuals.

Table 1: Respondent Groups

	Number
Board /other network	2
Central Government	6
Creative Sector	3
Digital technology	26
Education	12
Local government	16
NHS / Health	5
Professional body	11
Public body	16
Public sector	2
Public / user interest group	5
Representative body	8
Service user	2
Third sector	33
Wider economy / business	16
Other	2
Total organisations	**165**
Individuals	66
Total respondents	**231**

Key Themes

A number of key themes were evident across questions as well as across respondent groups and these are summarised below.

- There was general support for the Strategy, its vision, strategic intents and potential actions, although many of these were seen to be interrelated and many respondents found it difficult to prioritise specific actions. To many, the coronavirus pandemic has demonstrated a capacity for organisations to respond to changing circumstances and offer a more flexible and agile service.
- The strategic intent of 'No One Left Behind' was seen to be central by many respondents.

- Collaboration across a wide range of sectors was perceived to be important; including public, third, businesses in general, digital technology businesses, academia and community groups. It was felt this would bring about workplace transformation and enable the delivery of services that work for all. However, there were some references to a need to remove the silo mentality shown primarily by public sector organisations and to demonstrate political will and commitment to the Strategy.
- There was recognition of the need to transform government and NHS bodies to become digital organisations; and references to the need to pool and share digital and data expertise.
- While collaboration was seen to be imperative, respondents also defined a need for effective digital leadership from the Scottish Government, together with a clear understanding of the roles and responsibilities of all involved.
- Some respondents wanted to see greater levels of clarity over various elements of the Strategy.
- There were some requests for strong governance, measurable Key Performance Indicators (KPIs) for each action, accountability and regular reviews to assess progress of the Strategy's implementation.
- Concerns were expressed over the levels of funding and investment that will be needed to realise the Strategy.
- Many respondents referred to the need for an education system that builds digital skills at all life stages, and for the need to increase the digital skills talent pool and increase diversity in digital roles.
- There was support for introducing a digital identity service for users, although there were also references to the need to ensure public trust and that communications would need to be managed effectively to bring this trust about.
- There was support for the adoption of common digital and data standards across the public sector.
- A number of respondents referred to the Scottish technology ecosystem: review by Mark Logan (from here on referred to as "the Logan Review") and the need for the Scottish Government to adopt all 34 recommendations.

Consultation Questions

The following paragraphs summarise the main findings from each of the consultation questions.

Main Findings: Opportunities to realise a collaborative approach (Q1)

Almost all respondents who answered this question agreed there are opportunities to realise this collaborative approach (187 agreed and only 2 disagreed). Many of these respondents simply noted their agreement with the points raised in the consultation paper.

A significant number of respondents across all sub-groups noted that the coronavirus pandemic has underlined the need for, and importance of, digital connectivity to the economy; and has resulted in increased use of digital technology and demonstrated the willingness of the public sector to collaborate with customers and partners. However, a significant number of respondents noted the importance of ensuring equal access to digital technology as well as connectivity for all across Scotland.

Collaboration across a wide range of different sectors was perceived to be important and respondents noted many opportunities for this. There were also references to a need for strong leadership, oversight and co-ordination, aligned across all sectors. Key benefits would be a streamlining of public services and a reduction in duplication of effort across services and organisations.

References were also made to opportunities for shared data and having a single and secure data portal.

While respondents were supportive of collaboration, some identified a need for higher levels of funding and investment to bring this about.

Some respondents welcomed the findings of the Logan Review and were supportive of its 34 recommendations.

Main Findings: Priority actions (Q2)

Some respondents commented that each of the strategic intents and their actions were interconnected and that a holistic approach to delivering these is necessary; and some requested a clear plan to assess what actions would have the biggest and most immediate impact and where there are interdependencies across different actions.

The key priority was for 'No One Left Behind', with respondents noting the importance of internet access for all people and businesses. Some of these respondents commented that digital inclusion is the most important element for the effective delivery of a Digital Scotland.

Across the six strategic intents outlined in the consultation paper, respondents tended to cite the same issues that were needed. There were also calls for a digital infrastructure across Scotland as this would help to support more flexible working options, and provide support to all businesses and workers. While some respondents noted their support for the Reaching 100% Superfast Broadband Programme (R100), some felt that this would still not provide full internet access to all businesses and homes.

Many respondents also referred to the need for education, skills and training to be a priority to counteract the current skills shortage and skills gaps.

There were references to the need for collaboration and a joined-up approach across sectors; this would help lead to more cost effective and efficient public services and ensure a person-centred approach. Some respondents cited the need for effective leadership, with the Scottish Government leading the way in developing a robust digital strategy across the public sector; providing an effective communications strategy. A need to bring about a change in culture was cited by some respondents so that public sector organisations would work in a co-ordinated fashion, rather than operating in silos. There were also some calls for a clear plan of action in delivering the Strategy, with timelines, measurable outcomes and offering accountability.

Some respondents referred to the importance of safety, security and privacy, based on a human-rights approach to help bring about trust between citizens and public services.

Once again, there were references to the Logan Review and the need to put its recommendations into action.

Main Findings: The vision and whether the potential actions will deliver the vision (Q3 & Q4)

There was widespread agreement that the vision set out in the supporting narrative in each of the sections of the consultation paper is the right one. Over half the respondents agreed the potential actions set out in each section would deliver the vision set out in the supporting narrative.

To a large extent, points raised echoed those seen at earlier questions, and these included;

- Concerns about digital exclusion, either because of lack of access to digital devices or because of connectivity issues; allied to this there were requests for greater broadband coverage and connectivity. There were also requests for more effective digital engagement for all individuals and businesses.
- The need for a greater focus on education and training.
- Services being designed with users in mind.
- Collaboration across government, public bodies, stakeholders, the technology industry and NHS; cross-sectoral working and utilising opportunities to build partnerships; this would help lead to less duplication and replication.
- The need for increased levels of funding and investment.
- The need for co-ordination and oversight.
- Concerns over data usage and cybersecurity issues; with strong governance, oversight, user safety and data security.
- Requests for greater clarity on the vision and some of the actions outlined.

- The need for cultural change, including leadership with much greater digital awareness and knowledge.

Main Findings: Whether any potential actions are more important than others (Q5)

A large number of respondents felt some of the potential actions were more important than others. Those respondents who disagreed with this tended to note a need for a holistic or whole-system approach to the digital strategy and felt there is a connectedness across all of the proposed actions.

A key theme emerging was of a need for funding and investment in order to realise the digital strategy.

There were some requests for timescales to be applied to the actions.

No One Left Behind attracted the most comments, with many respondents commenting that this action underpins all others. This included the need to tackle digital exclusion and provide education, training and skills to enable all to work within a digital environment.

Services Working for All was also felt to be a key building block for the digital strategy and was seen by many to be key to the transformation of public services and service improvement; with collaboration across all sectors to achieve maximum efficiency.

Key for ***Transforming Government*** was the need for effective digital leadership, the need for cultural change within and across organisations; there was some support for a Scottish Digital Academy or a Digital Services Hub.

A Digital and Data Drive Economy; respondents tended to focus on the need for collaboration, partnership working and joined-up approaches to the sharing of information as well as support for businesses to allow them to exploit economic opportunities and become digitally enabled.

A Vibrant Tech Sector; key points were of a need to promote, publicise and showcase excellence in order to put Scotland on the international digital map. There were some references to the Logan Review and the need to implement its 34 recommendations and align all sections of the digital strategy to these recommendations.

An Ethical Digital Nation attracted a relatively high number of comments, with these focusing on the need for privacy and digital rights to be at the heart of the Strategy. Allied to this were references to the need for effective communication so that individuals understand data use and can develop confidence and trust in the use of data. Introduction of a single digital identity was seen as important.

Main Findings: The reality of delivering the potential actions (Q6)

Many comments focused on support for the Strategy, although there were some requests for details of budgets and resourcing; timescales for delivery of actions; unified implementation plans; greater levels of clarity across the Strategy, with clear priorities, inputs, actions, KPIs, and outputs, targets and review points; and effective linkage across government objectives.

Once again, other issues raised were the need for;

- Collaboration, partnership and joined-up working.
- Digital inclusion for all.
- Building public trust over the handling of data.
- Funding and resources.
- Training and skills.
- Culture change within the public sector.
- Effective digital leadership, political will and commitment to the Strategy; also effective governance.
- Co-ordination and prioritisation of actions and setting realistic goals.
- Changes to procurement processes.
- Effective utilisation of the existing infrastructure and legacy systems.

Introduction

Background

1. In 2011, The Scottish Government published *'Scotland's Digital Future: A Strategy for Scotland'* which looked at digital opportunities and challenges facing Scotland at that time. It set out a series of actions to improve the digital infrastructure, promote digital participation and develop a greater range of digital public services and stimulate the digital economy.

2. Then in 2017, *'Realising Scotland's full potential in a digital world: A digital strategy for Scotland'* was published. While the high-level aims of the 2011 strategy remained appropriate, the vast majority of the actions it described had been delivered. Likewise, the nature of digital, and the understanding of the opportunities it provides, had developed considerably, and the pace of change across the wider economy and society has accelerated. The 2017 strategy set out a vision and a series of actions so that Scotland could fulfil its potential in a digital world.

3. Given the fast paced way in which digital technologies are changing the how people lead their lives, particularly with the impact of the coronavirus pandemic, the Scottish Government and COSLA are keen to deliver a refreshed strategy that reflects these changes, with a vision of modern, digital and collaborative government, designed around people. It is intended this Strategy update will:

- Be big, bold and transformative, and recognise that digital is now at the front and centre of how we live and work.
- Be a shared vision of where Scotland is going that resonates with everyone that reads it, and encourages them to want to be part of it.
- Be a catalyst for bringing together the digital transformation ambitions throughout all sectors in Scotland.
- Reflect the strategic priorities for Scotland as a whole, rather than a list of actions that are appropriate to individual organisations.

4. In September 2020, a consultation was launched to gather views on an updated Digital Strategy for Scotland and to inform the content of the Strategy.

Respondent Profile

5. In total, there were 231 responses to the consultation, of which 165 were from organisations and 66 from individuals.

6. Respondents were assigned to respondent groupings in order to enable analysis of any differences or commonalities across or within the various different types of organisations and individuals that responded.

7. A list of all those organisations that submitted a response to the consultation and agreed to have their name published is included in Appendix 1.

8. As Table 2 shows, the largest organisation sub-groups were third sector, digital technologies, local government, public bodies and wider economy / business.

Table 2: Respondent Groups

	Number
Board /other network	2
Central Government	6
Creative Sector	3
Digital technology	26
Education	12
Local government	16
NHS / Health	5
Professional body	11
Public body	16
Public sector	2
Public / user interest group	5
Representative body	8
Service user	2
Third sector	33
Wider economy / business	16
Other	2
Total organisations	**165**
Individuals	66
Total respondents	**231**

Methodology

9. Responses to the consultation were submitted using the Scottish Government consultation platform Citizen Space, or by email or hard copy.

10. It should be borne in mind that the number responding at each question is not always the same as the number presented in the respondent group table. This is because not all respondents addressed all questions. This report indicates the number of respondents who commented at each question.

11. Some of the consultation questions contained closed, tick-boxes with specific options to choose from. Where respondents did not follow the questions but mentioned clearly within their text that they supported one of the options, these have been included in the relevant counts.

12. The researchers examined all comments made by respondents and noted the range of issues mentioned in responses, including reasons for opinions, specific examples or explanations, alternative suggestions or other comments. Grouping these issues together into similar themes allowed the researchers to identify whether any particular theme was specific to any particular respondent group or groups.

13. When considering group differences however, it must also be recognised that where a specific opinion has been identified in relation to a particular group or groups, this does not indicate that other groups did not share this opinion, but rather that they simply did not comment on that particular point.

14. While the consultation gave all who wished to comment an opportunity to do so, given the self-selecting nature of this type of exercise, any figures quoted here cannot be extrapolated to a wider population outwith the respondent sample.

Opportunities for Collaboration

15. The consultation document noted the importance of collaboration across all key stakeholders and people across Scotland in relation to the new digital strategy for Scotland. It outlined six key strategic intents offering potential for collaboration and these were:

- No One Left Behind.
- Services Working for All.
- Transforming Government.
- A Digital and Data Economy.
- A Vibrant Tech Sector.
- An Ethical Digital Nation.

16. The consultation paper outlined a number of priorities and principles for each of these, along with some case studies of initiatives already undertaken and which have demonstrated the importance of collaboration and the effectiveness collaboration can have when undertaken across a range of stakeholders.

Questions 1 and 2

17. Question 1 asked,

Q1: 'Do you think there are opportunities to realise this collaborative approach?'

18. As shown in table 3, of the respondents who gave a definitive response, almost all agreed there are opportunities to realise this collaborative approach (187 agreed while only 2 disagreed).

Table 3: Q1

	Number		
	Yes	No	Not answered
Board /other network (2)	2	-	-
Central Government (6)	4	-	2
Creative Sector (3)	3	-	-
Digital technology (26)	23	-	3
Education (12)	10	-	2
Local government (16)	14	-	2
NHS / Health (5)	3	-	2
Professional body (11)	7	-	4
Public body (16)	14	-	2
Public sector (2)	2	-	-
Public / user interest group (5)	3	-	2
Representative body (8)	4	-	4
Service user (2)	1	-	1
Third sector (33)	24	-	9
Wider economy / business (16)	12	-	4
Other (2)	2	-	-
Total organisations (165)	**128**	**-**	37
Individuals (66)	59	2	5
Total respondents (231)	**187**	**2**	**42**

19. A total of 193 respondents then opted to provide additional commentary in support of their initial response. To a large extent, comments echoed the issues outlined in the consultation paper. The following paragraphs outline the key themes emerging in response to this question.

20. Many respondents, across all sub-groups, simply noted their agreement with the points raised in the consultation paper. For example, noting that this would improve key digital services in Scotland, agreement with alignment with other cross-sectoral themes, emphasising the importance of open data standards and the normalisation of the cloud, or agreement with the core principles and commitments of Open Government.

21. A significant number of respondents – across all sub-groups – also noted that **the coronavirus pandemic has underlined the need for, and importance of, digital connectivity to the economy**, with many comments that the response to the pandemic has already resulted in increased use of digital technology across a range of different services, as well as demonstrating the willingness of the public sector to collaborate with its customers and partners. Some of these respondents commented that the pandemic has shown that collaborations can be set up quickly and work well to move services forward and create effective working partnerships. A number of examples of effective collaboration were cited by respondents, many of whom referred to Connecting Scotland[1] as a good example of effective collaboration in that it has utilised local agencies to bring about improved services to users. Another example provided by an organisation in the third sector was the collaboration between the Digital Health and Care Institute (the innovation centre for the health and social care sector in Scotland) and public, private and third sectors.

22. A significant number of respondents focused on the importance of **collaboration across a wide range of different sectors** and noted a number of opportunities to extend collaborative approaches across a wide range of organisations and individuals. These included central and local government, the public and private sectors, the third sector, professional organisations, user groups and technical fora, members of the general public, academia, carers and disabled people. There was a general perception of a need for a co-ordinated approach that would include a wide variety of perspectives. As one service user noted,

"It is essential that future responses to digital exclusion and opportunities for the digital economy are approached in a collaborative way, so that we can better target resources for support, develop cohesive strategies for action and promote solutions that work cross-sector."

23. A number of respondents within the third sector felt there needed to be a greater emphasis on their sector as a partner in design, implementation and the evaluation of strategies.

24. While respondents were very supportive of the concept of collaboration, some made qualifying comments in relation to how this could be brought about. There were some comments on the need for adequate **funding and investment**, with references to the need for investment at a local level so as to fully integrate national initiatives. Investment was also seen to be necessary on a co-ordinated and long term basis for ongoing development of the digital infrastructure.

[1] Connecting Scotland is a Scottish Government initiative set up in response to coronavirus. Its aim is to help get every citizen in Scotland online.

25. There was also reference to the need to **invest in training** to ensure the workforce has the relevant digital skills and skillset to take services and the economy forward. There was a perception from some that while the coronavirus pandemic has helped to bring about the introduction of many positive initiatives, it has also highlighted a lack of digital literacy and the problem of digital exclusion for some individuals. Allied to this last point, there were comments on the need to ensure **equal access to digital technology and connectivity so that all of Scotland**, including rural and remote areas, has access to the necessary digital infrastructure and technology.

26. A few organisations highlighted the need for **strong leadership, oversight and co-ordination**, aligned across all sectors, so that investment can be utilised effectively and duplication across sectors removed. Linked to this, there were also comments of a need for robust and regular reviews of initiatives, the setting of goals with measurable outcomes and the importance of accountability.

27. There were a few comments that there are opportunities for **shared data** to help improve services and better target resources which would bring about benefits for the economy, policy makers and service users.

28. There was some support for a **single and secure data portal** as centralised digital identification could help to bring about significant changes in services, although a small number of respondents - mostly individuals but also organisations within the public sector and education - cautioned on the need to communicate information about this in a positive way to bring service users on board.

29. An advantage outlined by a number of respondents was that **collaboration would bring with it a reduction in duplication** across different services and organisations. For example, there are opportunities for health, social care, education and housing to work together and to reduce duplication of effort across these different sectors.

30. A significant number of respondents noted their **support for the findings of the Logan Review**[2] and commented on the importance of implementing its 34 recommendations. This review was perceived as having identified commonalities across different organisations and sectors as well as outlining opportunities for greater collaboration.

31. A small number of respondents within the third sector and local government felt there should be a review of progress against the 2017

[2] Scottish Technology Ecosystem Review – commissioned by the Scottish Government and providing recommendations on how to develop a world-class tech sector

strategy so as to ascertain what has been achieved to date, lessons learned and what priorities should be outlined in the updated digital strategy.

32. Finally, in response to this question, small numbers of respondents outlined issues they felt needed to be included in the new digital strategy. These included:

- Emphasis on adoption of an ethical and human rights-based approach to how services are designed and delivered (public body, board / other network, third sector and public / user interest group).
- A need for further detail on how outcomes will be addressed (wider economy / business and digital technology).
- A need for a clear statement of the overall vision for the Strategy, which also outlines a clear timeline for each of the different strategic intents and their actions (wider economy / business).
- A need to widen the scope of the Strategy to include all types of technologies, including emerging technologies (third sector).

33. In summing up a number of issues raised by respondents, a public sector organisation commented on the importance of collaboration and noted,

"We feel that collaboration is particularly important in creating a holistic Digital Strategy for Scotland, as making Scotland a digital nation requires multiple-partners to deliver on interdependent areas including professional digital skills, digital inclusion, creating a digital identity for citizens, infrastructure and the creation of digital public services. We can also see the importance of collaboration already being key to the success of other government strategies and policy approaches such as the in-development AI strategy, and the implementation of the recommendations in the Mark Logan review of the tech ecosystem.
We think it is important for Government to continue to foster close links with industry and which we feel should include businesses of all sizes, all locations and across all sectors. As highlighted in the Strategy, digital is no longer just for the technology sector. We think this should include government developing closer links with other relevant non-technology industry bodies and non-technology innovation centres who will already be playing a role in driving digital transformation in their sector. Working with these organisations will ensure the Digital Strategy is both developed to meet the needs of each sector and can be successfully implemented across the wider economy and will help ensure the Strategy is relatable to non-technology businesses. And for those businesses in the technology sector, Connecting Scotland and Digital Nation have demonstrated how keen industry is to be part of this wider partnership and engage with cross sector collaborations which support Scotland's digital economy."

34. Question 2 of the consultation paper then asked,

Q2: 'Of the opportunities that you have identified, which do you think are the priority ones?'

35. A total of 188 respondents, across all sub-groups, opted to answer this question. Many of the themes cited at this question echoed those seen in the previous question.

36. Some of these respondents commented that each of the **strategic intents and their actions set out in sections 4 to 9 were interconnected and that a holistic approach to delivering these is necessary**, albeit that it may be easier to deliver some of the actions than others. There were a small number of suggestions from representative bodies and organisations within the wider economy / business sector of a need for a clear plan to assess what priorities would have the biggest and most immediate impact and where there are interdependencies across different actions.

37. Not surprisingly, many comments made by respondents related to more than one of these strategic intents – the need for digital education, skills and training being a prime example. However, where possible we have attributed specific comments to each of the strategic intents and the following sections of the report cover each of these. To illustrate key points being made, many of the respondents provided examples of initiatives, partnerships or collaborations in which they have been involved.

No One Left Behind

38. The **key priority**, cited by many respondents was in relation to 'No One Left Behind', although many of these respondents referred to this as 'digital exclusion'. While some respondents noted the **importance of internet access for all people**, some cited specific types of individual or community which are currently suffering from digital exclusion. These included rural and remote communities, women, people living in disadvantaged areas and disabled people to name a few. There were also a few specific references inferring that **digital inclusion is necessary for all businesses** – particularly small businesses – and that this would allow for business delivery models to change and enable more efficient working practices that fit with a digital age. There were also a number of respondents who noted that **digital inclusion is the most essential element for the effective delivery of a Digital Scotland**. As one third sector organisation commented,

"In embracing the potential for digital innovation to play a greater role in the provision of support and services, it is vital to recognise that there remains significant digital exclusion in our society. Transferring an increasing amount of activity online without addressing this problem risks increasing, rather than addressing, financial and social exclusion. However, we recognise that in areas such as healthcare, flexible working and education there are significant benefits which can be realised through digital innovation with sufficient investment in training

and resources to support those who would otherwise be excluded, including many disabled people."

39. Allied to this strategic intent, some respondents noted the **need for digital connectivity across the whole of Scotland** as this was felt to be central to the growth of the economy and the adoption of digital technology by all people and businesses. There were a number of comments that geography or the current digital infrastructure should not be an impediment but that they currently are. Key necessary elements of the digital infrastructure included a strong technical ecosystem, full fibre coverage, improvements on current levels of connectivity and better speeds, with some requests for either 4G or 5G coverage for the whole of Scotland. This, in turn, would help with strategic decision making and for businesses to build capacity and capability.

40. There were some comments that **changes to working practice created in response to the coronavirus pandemic have shown the capacity for some businesses to respond flexibly to changed circumstances**, but that connectivity across Scotland would support more flexible working options across more businesses. A small number of these respondents within the wider economy / business sector, local government, public bodies and individuals, suggested there is a need for investment in order to build digital capacity. While a few respondents noted their support for the R100 programme, there were some concerns that this will still not provide internet access to all businesses.

41. Many respondents referred to **education, skills and training to be a priority**, with some comments that this **cuts across all the collaborative opportunities** outlined in the consultation paper. For many respondents, the education system was perceived to be the key means by which digital illiteracy could be eradicated and there were some suggestions that there is a need to work with educators and businesses to change the ways in which digital skills are taught. A few respondents referred to the importance of lifelong learning that is delivered by schools in the first instance and also by further and higher education institutions, third sector organisations, community groups and within the workplace. Third sector organisations were perceived to be important in that they deliver education in a non-formalised context and are likely to attract some individuals who might not be prepared to utilise more formal education channels.

42. As well as prioritising education, some respondents also referred to the **current skills shortage and skills gaps** both within the digital technology sector, and among those working with digital technology. A range of audiences were identified as needing new skills or being upskilled; these included individuals, workers, staff who are involved in digital delivery, staff within the education sector and third sector staff who are involved in the delivery of informal education. In order to help businesses build their capacity, there were suggestions advocating e-commerce training as well as

training on how to use digital technology in general. A digital technology organisation noted that the Open University is a good example of an organisation that has adapted well to a digital education system and suggested that others could follow their lead. There was also a perception that, without more training and upskilling, the skills shortage and skills gap will be exacerbated, which will lead to problems in attracting the calibre of staff needed in a digital economy.

Services Working for All

43. Many respondents referred in some way to Services Working for All. A key comment focused on the need for **collaboration and a joined-up approach across sectors**, with some of these respondents referring specifically to health and social care. Collaboration was seen to be important in that it can help to build capacity and allow for expertise and skills to be shared. This, in turn, means that **services will become more cost effective and efficient, help to reduce inequalities and will ensure a person-centred approach**. A small number of respondents who were public bodies, within the wider economy / business sector, third sector organisations or individuals pointed out the need for services to be designed around the need of the customer and not the needs of the organisation responsible for delivering the service.

44. A number of respondents referred to **data sharing**, with suggestions for a 'Once for Scotland' approach whereby data only needs to be provided once by an individual and then can be shared across different organisations; in effect, a single interactive account between government agencies, business and citizens. There was some specific reference to shared data between DWP and Social Security Scotland, between health and social care organisations and between health, social care and third sector organisations. However, an allied concern was how data can be shared securely and ethically by different organisations in order to deliver services that meet needs.

45. Linking in to the issue of cyber security, some respondents noted the **need to build trust between citizens and public services**, and that a culture change will be needed to build trust around data sharing.

46. There were also a few comments about there being a need for a **change in culture within public services to encourage innovation and an agile approach to service provision**, which would in turn allow for services to be developed using more creative and innovative approaches.

47. A few respondents referred specifically to the use of cloud technology, with references to the need for a collaborative approach between organisations and cloud service providers.

Transforming Government

48. A significant minority of respondents referred to the role of Scottish Government in delivery of a new digital strategy for Scotland. Key to respondents was a need for the **Scottish Government to lead the way in developing a robust digital strategy across the public sector in Scotland**. This includes active encouragement for all public sector agencies, considering and communicating the benefits of wider cross-sector initiatives, ensuring collaboration at national and local levels and with organisations within the third sector, and working on integrated solutions. This would help lead to interoperability across the public sector and the building up of national and local partnerships, networks and capabilities.

49. To an extent, the response to the coronavirus pandemic was perceived as a starting point in establishing collaboration and partnership working and there were some suggestions that this needs to be built upon.

50. Some respondents noted the need for **effective leadership from the Scottish Government**. Elements of this were suggested including a governance body, measureable KPIs, accountability and an effective communications strategy. Allied to the need for effective leadership from the Scottish Government, some respondents also highlighted the need for senior buy-in across all public services, businesses, local government, the third sector, communities and citizens.

51. There were also a small number of requests for a **clear plan of action** primarily from organisations within the wider economy / business sector and representative bodies, setting out the vision for Scotland, with timelines for all actions.

A Digital and Data Economy

52. Relatively small numbers of respondents focused on this specific narrative, although some of the actions outlined in the consultation paper were covered by respondents under 'No One Left Behind' and 'Transforming Services for All' strategic intents. These included a need to;

- Provide support for SMEs.
- Increase the digital talent pool and increase diversity in digital roles.
- Bring about improvements to the infrastructure.
- Introduce workplace transformation.

53. A few respondents made specific reference to the benefits that a new Digital Strategy for Scotland could bring about in terms of climate change. These included greener working, a reduction in the use of cars and public transport, higher levels of active travel and sustainability.

A Vibrant Tech Sector

54. Relatively small numbers of respondents commented on this specific narrative, although there were some **references to the Logan Review and**

the need for the recommendations of this Review to be adopted. Some of the actions outlined in the consultation paper have been referred to in earlier sections.

55. Small numbers of respondents within public bodies, businesses within the wider economy / business sector and individuals focused on the need for Scotland to attract national and international investment, the need for cyber resilience and ensuring equality of opportunity for all.

An Ethical Digital Nation

56. Relatively few respondents focused on this aspect of the consultation paper, although some comments made in relation to other aspects were also relevant here. Of those who commented, they tended to focus on the **need for safety, security and privacy** as being important for all, as well as the need for a **human rights-based approach**. One organisation in the Public / user interest group, welcomed the section on open data but felt there should also be a section on Data Rights. Two organisations in the digital technology sub-group commented that open data and data standards should be a priority for an ethical digital nation; another public / user interest group opined that this needs to be driven centrally in order to ensure full adoption.

The Vision

Question 3

57. The next question went onto ask,

Q3: Is the vision that we have set out in the supporting narrative in each of these sections the right one?'

58. As the following table demonstrates, there was widespread agreement that the vision set out in the supporting narrative in each of these sections is the right one; a majority agreed this was the case for each. Only a small minority disagreed.

Table 4: Q3

	Number saying 'yes'					
	No One Left Behind	Services working for us all	Transforming Government	A digital and data driven economy	A vibrant tech sector	An Ethical Digital Nation
Board /other network (2)	2	2	2	2	2	2
Central Government (6)	4	4	3	4	4	4
Creative Sector (3)	3	3	3	3	3	3
Digital technology (26)	18	18	16	17	20	21
Education (12)	5	5	7	7	6	6
Local government (16)	12	14	15	15	15	16
NHS / Health (5)	3	3	3	3	3	3
Professional body (11)	7	8	8	8	8	8
Public body (16)	13	13	12	13	13	13
Public sector (2)	2	2	2	2	2	2
Public / user interest group (5)	2	3	3	3	3	2
Representative body (8)	5	5	5	5	5	4
Service user (2)	1	1	1	1	1	1
Third sector (33)	16	21	19	18	18	18
Wider economy / business (17)	8	9	10	8	8	9
Other (2)	1	1	1	1	1	1
Total organisations (165)	**102**	**112**	**110**	**110**	**112**	**113**
Individuals (66)	54	51	46	52	53	53
Total respondents (231)	**156**	**163**	**156**	**162**	**165**	**166**

59. 125 respondents, consisting of 92 organisations and 33 individuals, chose to make comments at this question. Responses were split fairly evenly between those which made brief points about the overarching vision without specific reference to individual sections, and those which went into much greater detail about all or some of the individual sections. A minority made general points about the vision before also proceeding to discuss the sections.

60. A very large majority of comments were generally favourable towards the vision, as well as the content of the sections; many however, chose to add observations to or reinforce points made during the narrative.

No One Left Behind

61. Respondents (particularly organisations) made notably more comments regarding this section than about other sections. A very large minority of respondents cited **concerns about or extra focus required on digital inclusion**, with worries about groups remaining disenfranchised, **either through connectivity issues or lack of access to digital devices**. Multiple groups were cited in this respect, including the elderly, rural communities, those in poverty, the socially isolated, blind, deaf, those with learning disabilities, the dementia-impaired, carers, prisoners, non-English as a first language speakers, the care sector, GP surgeries and the LGBT community. Issues included an overreliance on public access (e.g. through libraries) and the coronavirus pandemic having a negative effect in widening inequalities. A few respondents (particularly third sector and board / other network organisations) maintained there would still be a need for the provision of non-digital public service options (phone or personal contact for example).

62. Concerns about the **need for greater broadband or mobile coverage or more modern connectivity**, in particular for rural or remote areas, were raised by a large minority of respondents. Solutions to counteract this included using the Emergency Service Network (ESN), expanding the Connecting Scotland programme, and incorporating a strategic objective within the National Islands Plan. A significant minority perceived the need for next generation digital services or other technological advances to help overcome digital divisions; 5G was most frequently mentioned in this respect, with very small numbers also postulating AI, satellites, Big Data, Internet of Things, microwave technologies and high level drones as solutions.

63. An increased focus on **ways to engage people** was deemed necessary by a significant minority of respondents. Ways of helping achieve **better digital engagement** were suggested including building up internet and online skills, better training and support, lifelong learning, building skills among the low-skilled and incorporating more professional standards. Concerns about affordability were however also mentioned, either in terms of customer affordability or the costs of providing data, software, maintenance, support or digital devices.

64. A few respondents wished for an increased focus on school learning, citing a need for device accessibility, consistent delivery, the integration of digital skills into the school curriculum, ensuring teachers have the necessary skills and a requirement for a STEM (Science, Technology, Engineering and Mathematics) strategy.

Services Working for All

65. A significant number of respondents noted that **services need to be designed with users in mind** (e.g. meeting the needs of both communities and staff, and meeting equalities standards). Similar numbers saw **opportunities to build partnerships** and work with the private or third sectors or academia, particularly for the public sector; foreseen benefits included building a rich data picture and adopting common digital standards. Other respondents agreed that **less duplication and replication** was possible within digital services, by way of shared platforms and joined up services (e.g. across all the local authorities); a desire to add value from existing work rather than building new work (e.g. on digital identity services) was also posited. A few respondents perceived areas in which to embed digital services which had been previously ignored (e.g. agriculture, housing, the rural economy and emergency services). A continued focus on innovation was also urged, by digital technology respondents in the main. One third sector organisation gave an example:

"There has been some amazing innovation in the third sector, using digital technology to maintain both individual and group support when face-to-face contact was not possible, in mental health support, addictions, children & families, among others."

66. Furthermore, a digital technology respondent spotted the following opportunities via greater and more innovative use of data:

"From enabling charities to deliver more targeted programmes through greater data exploitation with AI tools, to digitising the construction industry and from driving greater efficiency and sustainable development, to open finance initiatives which foster product innovation, and to act as a weapon in the battle against ever more sophisticated fraudulent activity."

67. Small numbers of respondents required a better definition within the strategy (e.g. NHS systems used by health visitors and nurses to include data science researchers); others wished for the strategy to include an explicit role for the technology sector, without specifying further. One example from a wider economy / business organisations is cited below:

"…we would welcome a reference to infrastructure and the potential to use digital tools and data to deliver better and net zero infrastructure. For example, there is huge potential to embed digital healthcare support in housing, in integrating room sensors in buildings to manage air quality and energy use, of building information modelling in to support the efficient design, delivery and maintenance of new infrastructure and in the predictive maintenance of built assets to reduce the cost and energy to manage them."

68. Remarks (from a few respondents in a wide variety of categories) that progress depended on (still lacking) inclusive connectivity, or scepticism that digitalisation will meet the needs of all people, were the negative issues cited.

Transforming Government

69. Most of the relatively few comments received about transforming governmental bodies to become digital organisations revolved around the actions required to enable this to happen. Significant numbers of respondents said that collaboration was required by government, not only within public bodies but with users, stakeholders, the technology industry and the NHS. **Cultural change** was also recommended to help drive changes, notably in terms of a much more digitally savvy leadership.

70. Further remarks, made by small numbers of mainly digital technology and local government respondents, focused on improving efficiency, particularly being in favour of the sharing or integrating of services to help facilitate a common approach to digitalisation. A requirement for flexibility was however noted, given for example the differing sizes of Scotland's local authorities.

71. A few respondents commented about the pandemic's sudden positive impact on digitalisation and how this was likely to be sustained post-pandemic.

72. A small number of concerns were voiced, mainly by individuals, about funding issues for government digitalisation, in particular regarding the Scottish Digital Academy (SDA) and the cost of its courses.

A Digital and Data Economy

73. The highest number of comments reinforced a perceived **requirement for inclusivity** (i.e. the benefits of digital access should be for all). **Cross-sectoral working** was also branded a necessity in achieving a digital economy, with private, public and third sector involvement.

74. A few respondents focused on the need for a **good data strategy**, also urging for data to have an explicit mention within the vision. The point was made that with increasing data there would be more understanding of what digital work was needed. A national data platform was recommended by small numbers of mainly public, representative and professional bodies, though it was also pointed out that this would require a legal framework to be put in place.

75. Other points made by very small numbers of respondents were as follows:

- Further skills training or 'skilling up' would be required.
- More scale would be needed to achieve an effective digital economy.
- The move to a digital economy would support the transition to a greener, more sustainable economy.

A Vibrant Tech Sector

76. Significant numbers of respondents chose to reinforce the importance of **skills training as an enabler**; in particular, it was recommended that the SDA should be expanded to cover private and third sector training as well as the public sector.

77. **Co-ordination and oversight was considered important**, between organisations including the Scottish Government, small and large companies, the technology sector, other public sector bodies, colleges and universities.

78. Small numbers of respondents across a wide range of organisation types recommended harnessing areas in which Scotland is already perceived to have technological advantages, including AI, gaming, data science, government technology and financial technology.

79. Small numbers of respondents made similar points to those mentioned regarding other sections of the vision, as follows:

- The value of technology's role in sustainability or attaining net zero (e.g. green data centres).
- The need for inclusivity of connectivity or broadband infrastructure in enabling equality of opportunity for all.
- The necessity of sufficient resourcing as an enabler.

80. A very small number of respondents (including an education respondent and a public body) stated that **government procurement** had an important role to play in upscaling the digital sector in Scotland; buying 'Scottish', reducing duplication in procurement, or sharing the procurement function across Scotland's local authorities were put forward as examples.

An Ethical Digital Nation

81. The main thrust of responses, as stated by significant numbers of respondents, was that there **must be public trust in data use**. Facets of data handling to help enable this were suggested including: openness, transparency, accountability, overt protection statements, and clarification regarding citizens' rights regarding their personal data. Health data in particular was pinpointed as an area where there was perceived to be too much secrecy. On a similar theme, a few respondents thought a stronger emphasis was needed for public trust in the delivery of services.

82. Small numbers of respondents saw a need for increased community engagement, in terms of digital literacy, more education about keeping safe online and community involvement in decision-making.

83. Very small numbers of respondents made other points; these included requirements for full stakeholder buy-in and inclusivity, more focus on

sustainability as well as ethical issues, and a willingness to build on existing work or follow successful practices in other countries.

General comments

84. General comments were almost all supportive of the vision, while expanding on suggestions and concerns. A particular focus of a significant minority of respondents concerned **data usage and cybersecurity issues**. Firstly, improvements in the use of data were recommended including devising a strategy for doing so; specific mentions were made about better use being made of data analytics and data needing to be a clearly positioned enabler for digital transformation, as well as the need for greater in-house public sector data expertise. However, secondly, respondents noted **concerns about both personal data usage bearing in mind citizens' data rights, and cybersecurity in terms of governance, policing, user safety and data security**. Respondents bemoaned a lack of user education in this sphere, as well as perceived contradictions between cybersecurity on the one hand and transparency and openness of data on the other.

85. Smaller numbers, from across the entire respondent spectrum, desired **clarification in terms of firmer targets and commitments in the vision**. Examples included the description of broadband as 'patchy' being too vague, firming up the definition of ethical behaviour and the overt identification of benefits.

86. Other comments made by significant numbers of respondents were in similar vein to points made at the individual sections, as follows:

- A need for more digital education (e.g. including for teachers themselves, increased focus on adults and continuous learning, more development of people with data skills and more public sector workforce skills development).
- A more co-ordinated approach between all stakeholders, including more engagement with businesses and industry.
- More stress on economic benefits deliverable by the vision (e.g. increased tax take, investment in smart technology for renewables).

87. Small numbers of respondents raised issues including broadband availability, inclusiveness, the need for continued availability of non-digital options (e.g. for physiotherapy or blood pressure clinics) and the need for proper resourcing of modernised IT infrastructure.

Question 4

88. The next question asked,

Q4: Do you think the potential actions set out in each section will deliver the vision set out in the supporting narrative?'

89. As the following table demonstrates, over half of respondents agreed this was the case. In comparison, around a quarter or less of respondents disagreed the potential actions set out in each section would deliver the vision set out in the supporting narrative.

Table 5: Q4

	Number saying 'yes'					
	No One Left Behind	Services working for us all	Transforming Government	A digital and data driven economy	A vibrant tech sector	An Ethical Digital Nation
Board /other network (2)	2	2	2	2	2	2
Central Government (6)	4	3	4	4	3	4
Creative Sector (3)	3	3	3	3	3	3
Digital technology (26)	14	16	15	13	16	18
Education (12)	8	5	4	7	6	6
Local government (16)	7	11	11	13	15	14
NHS / Health (5)	2	3	3	3	3	3
Professional body (11)	4	5	5	5	5	5
Public body (16)	10	9	9	12	11	11
Public sector (2)	2	2	2	2	2	2
Public / user interest group (5)	3	3	3	3	3	2
Representative body (8)	3	3	4	3	4	3
Service user (2)	-	-	1	-	1	-
Third sector (33)	12	16	15	15	15	14
Wider economy / business (17)	7	7	7	7	7	8
Other (2)	-	1	1	1	1	1
Total organisations (165)	**81**	**89**	**89**	**93**	**97**	**96**
Individuals (66)	42	39	37	41	42	36
Total respondents (231)	**123**	**128**	**126**	**134**	**139**	**132**

90. 151 respondents, consisting of 114 organisations and 37 individuals, chose to make comments at this question. Responses were split fairly evenly between those which made brief points about some of the actions

without specific reference to sections of the vision, and those which gave detailed views about all or some of the actions relating to the individual sections. Significant numbers of respondents chose to reiterate their views expressed at Q3. Amongst those who examined the actions, many different angles were explored, largely through the perspectives and specialisms of the sub-groups to which respondents belonged.

91. A very large majority of comments were generally favourable towards the actions; many, however, saw room for improvement and volunteered suggestions to this end.

No-One Left Behind

92. As at Question 3, a very large minority of respondents cited **concerns about or extra focus required regarding digital inclusion**, with suggestions about how to digitally engage certain groups, either through connectivity issues or lack of access to digital devices. Multiple vulnerable groups were cited in this respect, including the elderly, rural communities, those in poverty, blind, deaf, those with learning disabilities, the dementia-impaired, carers, and non-English as a first language speakers. Perceived issues included an overreliance on public access (e.g. through libraries), difficulties obtaining access to devices and difficulties using devices (e.g. due to usage of non-plain English on websites). A few respondents maintained there would still be a need for the provision of non-digital public service options (e.g. in palliative care settings).

93. Concerns about the need for **greater broadband or mobile coverage or more modern connectivity** (in particular for rural or remote areas where better connectivity was seen as reducing outmigration), were raised by a large minority of respondents. Solutions posited included using the Emergency Service Network (ESN), expanding the Connecting Scotland programme, increasing the prevalence of 4G, supporting community broadband or ensuring all or most new housing had up to date connectivity.

94. However, a significant minority perceived the **need for next generation digital services or other technological advances** to help overcome digital divisions, noting that current 4G interventions were becoming redundant. 5G was most frequently mentioned as a game-changer in this respect, with a few respondents also postulating AI (good for those with disabilities), satellites, Big Data, Internet of Things, telehealth and better remote teaching applications as drivers of digital inclusion.

95. Increasing actions on ways to engage people by **increasing their skill levels** was deemed necessary by a significant minority of respondents. Ways of achieving better digital engagement were suggested including building up internet and online skills, skills training for new job roles, building skills among the low-skilled and upskilling teachers. Routes for training were suggested including instigating apprenticeships and collaborating with schools, universities and industry.

96. **Cost barriers** were cited as a bar on increased digital engagement by a significant minority. A need to prioritise **infrastructure investment** was cited as well as action on affordability issues for the user (e.g. hardware, software, broadband and data expenses).

97. A few respondents wanted the **education system to fully exploit digital tools, equipment and platforms**, to help ensure consistent learning delivery. Recommendations included that devices should be accessible for all (including teachers), digital skills teaching should be integrated into the curriculum, and that computer science teaching should be re-evaluated. Perceived issues with the latter included low uptake, a lack of qualified teachers and relatively high levels of unemployment for computer science graduates.

Services Working for All

98. A large minority of respondents, **while agreeing that less duplication and replication was possible within digital services, also foresaw huge challenges in achieving this**. It was suggested that adding value from existing work rather than building new work up from scratch might be the best solution; for example, one digital technology organisation suggested that owing to the development of mygov.scot there should be no need for a new digital identity service. The concept of a single digital identity service garnered most comments; most respondents saw advantages in principle, by way of shared data sources and joined up services, but many cited potential obstacles to be overcome as follows:

- Difficulties agreeing on system architecture.
- The need for an equitable charging structure.
- Problems incorporating users without ID.
- Potential disruption and upheaval.
- A requirement for clarity about privacy.

99. A significant minority of respondents supported a **collaborative approach** with the private and third sectors and academia by the public sector in its approach to services. This was seen as necessary in adopting common digital and data standards, standardising service definitions and instigating cybersecurity capabilities.

100. A collaborative approach was also recommended with service users in mind in order help ensure services are inclusive, accessible and have an appropriate charging structure.

101. **Problems with the practicalities of data sharing on common services or platforms** were raised; these included security, data misuse and the need for a robust digital infrastructure. Solutions put forward included proper engagement between organisations on data usage and implementing low risk applications early on in the process to test the water.

102. Mentions were also made regarding the requirement for a process to **create value from data**, i.e. data driven innovation. Points were made about the necessity of tackling data quality issues and the advantages of creating a public sector data catalogue.

103. Small numbers of respondents, consisting mainly of local government and professional bodies, desired a better definition within the strategy (e.g. a better description for the 'common platform' concept).

104. Significant numbers of respondents again made comments about the **importance of inclusiveness in terms of broadband connectivity and reaching out to vulnerable groups**. Other comments comprised a need for the right level of support to be given to enable digital transformation, and health and social care being key areas in which to embed digital services.

Transforming Government

105. Most comments about transforming government focused on the size of the task involved, cautioning it would only be **achievable with a great deal of support** owing to its complexity. Problems pinpointed included challenges around legacy systems (with small numbers of comments that previous attempts to replace legacy systems have met with failure). However, as a third sector respondent noted:

"Many of the biggest problems and drawbacks of existing legacy systems relate to their siloed nature - problems and drawbacks that can be addressed, not by replacing existing legacy systems but by creating an additional layer of connecting infrastructure that enables safe, efficient data sharing that leverages what legacy systems do well. This is more a challenge of interoperability, which allows legacy systems to be managed carefully and incrementally over time."

106. Other challenges cited are listed below:

- The expense of adopting common platforms.
- The need for more specification of the technology needed to make government more open.
- Information governance issues.
- Difficulties in getting public sector organisations to share platforms or processes (again, there was some recall of previous failure to achieve this goal).
- Problems through being tied into long contracts.

107. Similar numbers of respondents did however favour the **centralisation or sharing of services**; positive mentions were made about the enablement of a shared pool of digital expertise and general collaboration between organisations, preventing a silo approach.

108. A significant minority of comments were about the **SDA**, with several requesting that the institution be made available to all organisations, as opposed to the public sector only, and that all platform suppliers should be encouraged to work with it. Small numbers of respondents were concerned about finance issues getting in the way of local authority adoption, courses being too focused on management rather than technical skills, and delivery of the full range of courses being beyond the capacity of a sole provider. Slightly larger number of respondents did however agree that skills development needed to be a focus for workers in the public sector, with some indication that technology workers found working in the public sector unattractive in term of career progression compared to other sectors.

109. Similar numbers of respondents desired **more clarity** on several of the actions including the new commercial model, the SDA and digital democracy as well as wishing for a roadmap for the Research Data Scotland service. Specific facets requested included milestones, timescales and targets for success, as well as data governance.

110. Smaller numbers of respondents reiterated remarks previously made at Question 3: the need for cultural change exemplified by having leadership with digital awareness, the need for collaboration with users, stakeholders, the technology industry and the NHS (mainly central government and digital technology organisations), and improving efficiency exemplified by streamlining procurement and having a consistent digital delivery methodology.

A Digital and Data Economy

111. Relatively few comments were received in relation to actions to sustain a digital and data economy. The highest number – a few respondents - referred to **digital skilling-up**. It was suggested that skills teaching should start at early years or primary levels in school, with recent graduates also targeted. Flexible or part time skills courses were recommended, with one wider economy / business organisation suggesting the instigation of dedicated courses in ecommerce at further education institutions, as well as updated SQA qualifications.

112. A few respondents were in favour of each of the following actions:

- Building scale to achieve effectiveness, in terms of infrastructure; edge data centres, libraries' services and big data links were suggested as facilitators.
- Ensuring good use of data, as the application of data underpins all actions.
- Efforts to support sustainability, specifically including more understanding of alignment to net zero, integrating data centres and renewable energy generation, and ensuring data use should not negatively contribute to carbon emissions.

- As stated by professional bodies and local government respondents in particular, a national data platform to be established enabling data linkage across government adhering to national data standards, though as in the previous section challenges were noted.
- Cross-sectoral working and engagement or inclusivity with all digital stakeholders.
- As stated by wider economy or business respondents in particular, support for SMEs including creation of peer-to-peer networks, creation of national standards, support from larger technology firms, and cloud access (to reduce the need for fresh digital building work).

A Vibrant Tech Sector

113. **Skills training and collaboration** were the two topics most discussed by respondents. Areas recommended as priorities for skills training included: data skills, green technology skills, practical skills, coding, improving civil servants' skills and instigating more creativity within computing curriculums.

114. Significant numbers of respondents saw the importance of collaboration in harnessing a vibrant tech sector. Networks, technology hubs, small and large companies, the technology sector as a whole, public service organisations, the Scottish Government, colleges, universities and international partners were all suggested as part of a digital ecosystem, though one digital technology respondent described the list of public partnering bodies as *"impenetrable"* and *"bewildering"*.

115. Albeit from only a few mentions, respondents agreed with the recommendations of the Logan Review.

116. Small numbers of respondents largely reiterated a number of points made previously at Question 3, including the following:

- The value of technology's role in sustainability or attaining net zero (e.g. green data centres, recycling and reuse of old equipment).
- The need for inclusivity of connectivity or broadband infrastructure in enabling equality of opportunity for all.
- The necessity of sufficient resourcing as an enabler, with single respondents noting that £4m funding would not be sufficient or that other countries were investing more.
- The importance of harnessing areas where Scotland is already perceived to have a technological advantage such as data science and government technology.
- The public sector being in a good position to assist in building up the technology sector, through procurement practices or creating entry level jobs (though it was noted that the public sector also needs to work on retaining technology talent).

- How to define success for ‘A Vibrant Tech Sector’.

An Ethical Digital Nation

117. Similarly to Question 3, the bulk of respondents who answered regarding the actions in this section – a significant minority – agreed that there **must be public trust in data use**. Facets of data handling to help enable this were suggested including: openness, transparency, accountability and digital rights. On a similar theme, a very small number of respondents thought a **stronger emphasis was needed for public trust in the delivery of services**.

118. A significant minority of respondents saw a need for **increased community engagement**, in terms of community involvement in decision-making (e.g. focus groups) and contribution to design with a suggestion to show people how emerging technology will be of help to them.

119. Only very small numbers of respondents made other points; these included requirements for inclusivity (with the necessity to make provisions for the protection of children and vulnerable adults noted), and requests for the vision to be more specific (e.g. defining ethical principles and illustrating these with case studies). Cautionary comments were made about being aware of risks to privacy (e.g. needing to work with other countries) and being aware of bias ingrained via social media.

General Comments

120. General comments were mostly supportive of the actions, while often repeating suggestions and concerns mentioned at Question 3 and at the individual sections. Significant numbers of respondents highlighted the following:

- The need to be inclusive, in term of access and affordability.
- The need for more digital education.
- The need for more information on how to align systems and processes (governance arrangements, consistency of delivery).
- The need for better use to be made of data.
- The need to work with businesses and industry (e.g. delivering support for SMEs).
- Concerns about cybersecurity, for example in delivering programmes or projects).
- Concerns about support, maintenance and modernisation of infrastructure.
- The need for a more specific roadmap for achieving the vision, in terms of a clearer mission, clear outcomes and timescales (e.g. identifying benefits, rate of broadband roll out).

- The need to attract enough funding (e.g. from national and international sources).

121. Other comments were made by small numbers of respondents, including taking action about availability of digital options in rural areas and concerns about personal data rights and governance. A very few respondents (all of whom were either individuals or digital technology bodies) made generally negative comments about the vision and actions, ranging from criticism about their limited ambition to declarations that they were unachievable.

Question 5

122. Question 5 then asked,

Q5: 'Are any of the potential actions more important than others?'

123. As shown in table 6, a large number of respondents (141) felt that any of the potential actions were more important than others, compared to only 31 who felt the potential actions were all important.

Table 6: Q5

	Number		
	Yes	No	Not answered
Board /other network (2)	1	1	-
Central Government (6)	3	-	3
Creative Sector(3)	2	-	1
Digital technology (26)	18	4	4
Education (12)	5	2	5
Local government (16)	14	-	2
NHS / Health (5)	3	-	2
Professional body (11)	4	3	4
Public body (16)	7	3	6
Public sector (2)	1	1	-
Public / user interest group (5)	3	-	2
Representative body (8)	3	2	3
Service user (2)	1	-	1
Third sector (33)	16	2	15
Wider economy / business (16)	9	1	6
Other (2)	2	-	-
Total organisations (165)	**92**	**19**	**54**
Individuals (66)	49	12	5
Total respondents (231)	**141**	**31**	**59**

124. A total of 165 respondents, across all sub-groups, opted to provide additional commentary in support of their initial response to this question.

125. The respondents who did not prioritise any of the actions generally noted that there is a need for a **holistic or whole-system approach to the digital strategy as there is a connectedness across all of the proposed actions**.

126. A key theme emerging in response to this question – and cited by respondents across each of the proposed actions – was of a **need for funding and investment to be able to realise the digital strategy**. Investment was perceived to be necessary to help build infrastructure, to

underpin innovation in the sector, to develop services, to improve digital skills, to deliver solutions and ensure take-up.

127. There were also a small number of references to the **need for timescales for all the actions**, together with a shared understanding of what success would look like, so as to match ambitions with outcomes. These comments came primarily from organisations within the digital technology sector, the public sector, public / user interest groups or board / other networks.

128. The following paragraphs examine responses for each of the proposed actions. As at previous questions, some respondents noted that there are elements of each of these actions that are cross-cutting; for example, digital training and education was perceived to be imperative across all these.

No One Left Behind

129. The importance of this theme is highlighted as this attracted the highest number of responses; some respondents simply noted this was the most important action without providing any further comment. However, a number of respondents commented that **this action underpins all others and that other parts of the vision will not be achieved without this**.

130. There were specific references to **digital exclusion and the need to tackle inequalities and promote wellbeing and accessibility for all**. While many comments referred to digital exclusion in general, a few highlighted specific types of individual who need to be included; such as end users or employees.

131. **Access to the digital infrastructure** was perceived to be an important element, with comments on the need for digital connectivity and broadband for all, with a few specific references to rural or remote areas. Without this, respondents noted that economic activity will be restricted and, at a time when there are higher numbers of people working from home due to the coronavirus pandemic, there is a need to ensure that all individuals and businesses can operate anywhere across Scotland.

132. Also sitting under the umbrella of 'No One Left Behind', there were references to the **need for education at all levels and ages that will provide individuals with the necessary digital skills to be able to work in a digital environment and contribute to the digital strategy**. Education was perceived to be broad ranging and included teaching in schools, community groups and at further and higher institutions as well as in the workplace. There was a general perception that the **current range of training available needs to be expanded** in order to provide the necessary skills for businesses, employers and employees; and there were some references to the need to upskill staff. There were a few comments that while many businesses have responded to the issues caused by the coronavirus pandemic, those that do not have a capacity to conduct online

sales have been left behind. There were a small number of suggestions primarily from respondents within the education and digital technology sectors and individuals to set up centres of excellence, that this would need funding. There were also some requests for greater involvement of third sector organisations, given the key role they can play in delivery of training and skills.

133. As noted by one service user,

""Increasing support to the third sector to establish and deliver collaborative responses to digital exclusion is the absolute foundation of digital democratisation. Without embedding the culture of 'digital is for everyone', we will not make major inroads against inequalities, or for an improved digital economy. With increased digital literacy in Scotland, we can begin to look at reducing other societal issues including poverty, access to services, social exclusion and poor wellbeing."

Services Working for All

134. This attracted a relatively high number of comments, across all sub-groups, with some comments that this is a **key building block for the digital strategy** and that this will be **key to the transformation of public services and service improvement**. In turn, this will help to bring about greater accessibility and maximum benefit for service users. There were a few references to specific links between health and social services.

135. Linked to this, there were a few calls for **common digital and data standards** as these would help with joined-up working and higher levels of efficiency across public services. In relation to the need for training, there were a small number of references to the need to **protect and create value from Scotland's data** (mentioned by public / user interest groups, individuals or local government), albeit respondents perceived a need for analytical skills, capacity and funding to bring this about.

136. One element perceived to be a key area was **collaboration across all sectors to achieve maximum efficiency**, with some suggestions for a focus on redesigning public services to stimulate market engagement and growth and to create efficiencies.

Transforming Government

137. Fewer respondents focused on this key action. The key theme emerging in response to this action was of a **need for effective digital leadership** and this was perceived to be a prerequisite for many actions including,

- The pooling and sharing of data.
- Building public trust in data.
- Engagement and communication across sectors and with end users.
- Accountability.

- The adoption and innovation of new digital technologies.

138. Linked to the issue of effective leadership, there were also references to the **need for cultural change within and across organisations**, particularly within the public sector. Respondents perceived this is needed in order to break down barriers to new and innovative ways of working, for collaboration with other organisations and to drive efficiency and release more capacity for the delivery of frontline services. This would help to promote integration rather than having a 'silo' culture which was perceived to exist in many organisations.

139. There were some specific references to a Scottish Digital Academy or a Digital Services Hub as this was seen to help create a central hub of learning which in turn can deliver cost and consumer benefits across the public sector.

A Digital and Data Driven Economy

140. Once again, there were references to a **need for collaboration, partnership working and joined up approaches to the sharing of information**. A key advantage to data sharing was that this would reduce duplication of effort. A few respondents – mainly within local government – noted the need to develop new routes to innovation (e.g. AI, the Internet of Things) and promote innovation. However, some respondents outlined the need to increase the digital talent pool, without which it will be difficult to create a digital and data driven economy; and engaging with industry to tackle short and long term skills shortages across the public and private sectors. Allied to this, a few respondents focused on the need to have increased diversity in digital roles so that there is a broad range of people with the right skills and experience to take forward implementation of the digital strategy. There were a small number of references from local government respondents and an organisation within the 'other' category, to the need for expert support for SMEs to help them develop in an increasingly digital world.

141. A few respondents also referred to the need for **support to businesses** to help them maximise and exploit economic opportunities, to grow their businesses and become digitally enabled. For some respondents, funding and investment would be necessary to achieve this action.

A Vibrant Tech Sector

142. Key themes emerging in response to this action were of a **need to promote, publicise and showcase excellence in order to put Scotland on the international digital map**. One organisation in the digital technology sector noted the need to create centres of excellence to position Scotland as a world leader and attract national and international investment. However, there were a few comments of a need to strengthen Scotland's technology ecosystem by supporting innovation, ensuring skills and digital talent exist and that training is offered across a wide range of sectors.

143. There were a small number of references from respondents within the wider economy / business sector, the public sector and a professional body to the need to implement the recommendations of the Logan Review and align all sections of the digital strategy to these recommendations.

144. There were also a small number of references from businesses within the wider economy / business and education sectors as well as individuals to the need for cyber security and adherence to technical standards to ensure data integrity and cyber resilience.

An Ethical Digital Nation

145. This potential action attracted a relatively high number of comments, with some respondents simply noting that **privacy and digital rights should be at the heart of the Strategy** as it is a key enabler of other potential actions. Allied to this, there were references to the **need for effective communication so that individuals understand data use**.

146. **A need for people to have confidence and trust in the use of data and in their digital identity was a key theme**, with some comments that without this trust, it will not be possible to deliver on transforming public services. To help bring about this trust, some respondents noted the need for **increased communication and engagement on the part of government** and this was seen as fundamental to successful service design. Another strand to building trust was the **usage of data openly and transparently**, and to make more data available as open data.

147. **Introduction of a digital identity was important** to a number of respondents, with some specific comments in relation to the health and social care sectors. The key advantage was that this would put the user at the centre of service delivery and provide access to services, which will in turn encourage increased levels of take up of services.

148. Once again, there were references to a need for community engagement and participation to bring about the necessary level of trust.

The Reality of Delivering Potential Actions

Question 6

149. Question 6 of the consultation asked,

Q6: 'How realistic do you think it will be to deliver these potential actions?'

150. A total of 171 respondents, across all sub-groups, opted to provide an answer to this question and a number of key themes emerged.

151. A large number of comments made by respondents focused on their support for this Strategy, with some comments that it is a realistic opportunity for the actions to be realised, albeit there were some references to the need for a collective approach utilising effective collaborative working and providing sufficient funding. Once again, there were a number of comments that the coronavirus pandemic has demonstrated the public sector can work rapidly and flexibly and that this approach needs to be continued. For some of these respondents, the pandemic has already led to digital transformation in Scotland. However, there were a few comments that organisations will need to demonstrate a willingness to move beyond their own organisational boundaries and that organisations will need to show agility and flexibility in their approach to the digital strategy.

152. Only a small number of respondents – mostly individuals – were not supportive of the Strategy, with the key comment being a perception that this is not realistic or achievable. The reasons for this were primarily financial in that it was felt there would be too much pressure on limited resources to deliver the Strategy, although one individual felt that encouraging start-ups and innovation within a lucrative business sector runs contrary to the goal of equal access to the benefits of digital innovation.

153. While respondents were generally supportive of the Strategy, a number of comments made suggestions for changes or additions they would like to see. These included;

- Details of budgets and resourcing.
- Details of timescales in the short, medium and long term to show what will be achieved and by when.
- Unified implementation plans to reduce duplication and overlap between and across organisations, and to bring about economies of time and scale.
- Greater levels of clarity across the Strategy with clear priorities, inputs, actions, KPIs, outputs and the impacts and benefits that will be realised.
- Targets and review points to assess progress of the Strategy and provide feedback.
- Effective linkage with other government objectives.
- A more specific shared vision in each core area and its impacts.

154. A key theme at this question – and echoing points made earlier – was of a **need for funding and resources** to overcome existing budgetary restraints. There was a perception that funding is needed across a number of different areas including education and the development of skills, training for staff, investment in software and cloud based services as well as funding to service providers. One organisation in the wider economy / business sector suggested that funding should be outcome-based, with clear targets for initiatives and measureable outcomes. Another in the digital technology sector noted that there is a need for investment to allow for scaling up to

meet Scotland's longer term needs. A public body suggested that decisions to allocate resources and prioritise actions should be informed by robust evidence and data-driven decision-making.

155. The issue of **training and skills** was cited by a significant number of respondents, with references to the need to invest in training and education so as to overcome the current skills shortage and predicted future shortage of staff with the skills necessary to implement the digital strategy; across individuals and staff so as to ensure digital literacy nationwide. To an extent, this theme was linked to the need to ensure digital inclusion for all as well as the need to ensure universal connectivity.

156. While many comments related to tangible issues such as funding or connectivity, there were also references to the **need for culture change within the public sector** so that digital is seen as an integral element of delivering change programmes and bringing about a more agile and flexible approach that will be needed to deliver the strategy. This culture change was perceived as key to bringing about the required business transformation and delivering effective services. There was a current perception felt by some respondents of a 'silo' mentality within some public sector organisations and this will need to be changed so as to bring about effective collaboration.

157. Allied to the issue of a culture change, many comments focused on the **need for effective digital leadership that will help to drive change, provide effective management**, ensure that organisations accept their responsibilities, provide co-ordination and ensure the vision spans all relevant policy areas. This leadership will also have a key role in collaboration with industry partners as well as engagement and communication with the broader public so as to ensure positive perceptions of the digital strategy and its benefits. There were a small number of suggestions – primarily from local government and individuals – for digital leadership to be co-ordinated through one organisation to ensure delivery of all the potential actions.

158. Linking into the issues of culture change and effective digital leadership, there were also some comments on the **need for the political will and commitment** across local and central government and the public sector so as to ensure buy-in across all relevant organisations.

159. A few respondents suggested a **need for co-ordination and prioritisation of the actions and the setting of realistic goals**; for example, focusing in the first instance on the actions that will offer the greatest benefit. Alongside this issue, there were some references to the need for planning, monitoring and evaluation so as to ensure effective implementation of the strategy

160. There were also some comments of a **need for effective governance**, with one public body suggesting establishment of a Governance Board made

up of leading industry professionals and trade associations to support digital transformation across the public sector and industry. This would help to ensure that there is accountability and an acceptance of roles and responsibilities accorded to various organisations.

161. **Collaboration, partnership and joined-up working** were also key themes emerging at this question. Various different sectors were cited as needing to be part of this; including central and local government, the third sector, industry, the supplier community, representative groups and academia. Cited benefits of this were many and included the breaking down of barriers, creating the right conditions for investment, ensuring key deliverables are met, having common approaches and effective engagement, reducing duplication of effort and making effective use of new technologies as they emerge.

162. The issue of central and local government **procurement processes** was raised by a relatively small number of respondents across various sectors, who felt that the current procurement system is too lengthy and creates barriers for some suppliers. There were some suggestions that a range of different digital providers should be used so that there is no reliance on one big vendor organisation so that suppliers across Scotland would benefit. One organisation in the wider economy / business sector commented,

"We think the biggest problem which stops the public sector from benefiting from the technologies is the procurement processes which are very old and has not been updated to reflect on how the modern business environment operates. If we want the technology to penetrate into the public sector, we need to remove unnecessary and slow procurement procedures. Instead, the public sector needs to focus on how they define the problem statement and the requirements, how they will measure the ROI when the technology is implemented, and how to improve data collection and analysis to improve the delivery of its services. Being clear on the requirements is something which the public sector overlooks. There are many issues to bear in mind including: safe and secure adoption of tech, explainability, compatibility, expandability, prediction facilities, reporting and interoperability, just to mention the few."

163. There were a significant number of references to the **existing infrastructure and legacy systems** and the need to deploy existing technology where possible, for example, making use of existing initiatives that are delivering positive outcomes. However, some respondents felt that integrating existing systems with new technologies could be problematic and there were also comments on the need for funding to help replace or modify legacy solutions. Allied to this, there were a few comments on the need to review existing systems and networks and rationalise the many digital transformation projects that currently exist across the public sector.

164. It was also noted by a few respondents that EU exit could impact on procurement activities.

165. Some respondents again referred to the need to ensure inclusion of everyone and the prevention of digital exclusion. Allied to this, there were references to the need for universal connectivity.

166. Finally, at this question, some respondents referred to the **need to build trust with the general public over the handling of data**. Trust could be brought about in a number of ways including proactive engagement and communication, having a robust regulatory framework and adoption of a human-rights based approach.

Other issues to be considered

Question 7

167. The final question of the consultation asked,

Q7: 'Is there anything else you wish to comment on that has not been covered elsewhere?'

168. A total of 149 respondents, across all sub-groups, opted to provide a response to this question. A number of these respondents welcomed the opportunity to respond to this consultation, welcomed the consultation, provided background to their organisation to provide context for their response or noted their keenness to be involved in any further developments of the Strategy. Some provided examples of case studies that are relevant to this Strategy or referred to engagement events in which they had been involved. A large number of comments at this question reiterated points made in response to earlier questions and these included reference to a need for;

- Additional funding, investment and resources.
- Digital inclusion for all.
- Universal connectivity.
- Education, training and upskilling.
- A monitoring and performance framework.
- Collaboration / partnership working.
- Engagement and communication.
- Links across a wide range of policy areas.
- A single identifier.
- Data sharing and common data standards.

- Cyber security (across all potential actions).
- Building upon changes introduced in response to the coronavirus pandemic.

169. Most other comments were made by very small numbers of respondents. Those made by two or more respondents included;

- While digitalisation is important, there will be instances where face-to-face approaches will still be needed (third sector).
- Regulation of the sector will be important, comprising a need to review legislative and regulatory requirements and ensure all legislative programmes are digitally competent (education sector, individual).
- A need for a strategic roadmap with timelines (professional body, local government, third sector).
- Prioritisation of actions (professional body, education).
- A need for the Strategy to have a greater focus on climate change and the environment; and a better link to Net Zero (professional body).
- A need for reference to international collaborations and suggestions as to how to recruit from the European talent pool (public sector, wider economy / business).
- To ensure inclusion of all relevant sectors including education and videogames; and to include reference to sensor technology (education, professional body, individual).
- Collaboration between regulators and tax authorities so that businesses do not have to submit the same information to multiple public bodies (local government, digital technology, creative sector).
- A need for impact assessments to be undertaken to support this Strategy (local government, third sector).
- Internet access should be regarded on the same level as essential utilities – this would offer protections to vulnerable consumers (third sector).

APPENDIX 1

Respondent Organisations
ABB
Aberdeen City Health and Social Care Partnership
Aberdeenshire Council
About Dementia, Age Scotland
Advice Direct Scotland
AI augmented EDTECH consultancy
Amazon Web Services EMEA SARL
Angus Council
Argyll & Bute Council
Atos IT Services UK Ltd
BCS
Bòrd na Gàidhlig
BT Group
Capita
Carnegie UK Trust
CCPS – Coalition of Care and Support Providers in Scotland
Ceolas Uibhist
Christians Against Poverty (CAP)
CILIPS
CityFibre Holdings Ltd
CLD Standards Council Scotland
Colleges Scotland
Community Pharmacy Scotland
Connect

Creative Scotland
deafscotland
Digital Health & Care Innovation Centre
Digital Office for Scottish Local Government
Digital Skills Group
Division of Psychiatry, University of Edinburgh
Dumfries & Galloway Council
East Ayrshire Council
East Renfrewshire Council
Edinburgh College
Edinburgh Remakery, Pilmeny Development Project, YMCA Edinburgh, Multi Cultural Family Base, Dr Bells Family Centre, Citadel Youth Centre
Engender
Environment and Economy Leaders' Group (EELG)
Equality and Human Rights Commission
Equality Network
Families Outside
FarrPoint Ltd.
Federation of Small Businesses
Freeth Technical Marketing (currently T/A Tony Freeth Informational)
Fujitsu
Generations Working Together
Glasgow Chamber of Commerce
Glasgow City Council
Global Institute for Structure relevance, Anonymity and Decentralization
Go-centric
Good Things Foundation

GOSS Interactive
Grampian Opportunities (SCIO)
Health and Social Care Alliance Scotland (the ALLIANCE)
Health Board Digital Leads (formerly eHealth Leads)
Highlands and Islands Enterprise
Historic Environment Scotland
Hitachi ABB Power Grids
Idox Software Ltd
Includem
Independent Living Fund Scotland
INDEZ Ltd
Information Commissioner's Office
Interface - The knowledge connection for business
Klik2learn
KTN
Langholm Initiative
Lead Scotland
Learning Link Scotland
Leidos
Liminal Spaces Project
Marie Curie
Match Group
MG ALBA
Microsoft
Mydex Community Interest Company
National Cyber Resilience Advisory Board
National Farmers' Union of Scotland

NatureScot
Nesta in Scotland
Netli Ltd
Neuro ProActive
NHS 24
NHS Lanarkshire, Health Improvement
NHS Scotland Board Chief Executives Group
North East Sensory Services (NESS)
north lanarkshire carers together
Ofcom Advisory Committee for Scotland
Ombudsman Services
Open Rights Group
Openreach
Opportunity North East
Orkney Islands Council
Partners in Advocacy
Paths for All
PDMS
People First (Scotland)
People Know How
PKAVS
Police Scotland
PricewaterhouseCooper
Queensway Park Data Centre
REGISTERS OF SCOTLAND
Revenue Scotland
RiverTrack Ltd

Royal College of Nursing Scotland
Royal National Institute for Blind People (RNIB) Scotland
Royal Pharmaceutical Society
Royal Society of Edinburgh
Royal Town Planning Institute (RTPI) Scotland
SCDI Scottish Council for Development and Industry
Scotland 5G Centre
Scotland Civil Society Open Government Network
ScotlandIS
Scottish Borders Council
Scottish Care
Scottish Computing Education Committee
Scottish Council IT Leaders Forum
Scottish Enterprise
Scottish Fire & Rescue Service
Scottish Funding Council
Scottish Games Network
Scottish Government - Agriculture and Rural Economy Directorate
Scottish Health Literacy Action Plan Implementation Group (SHLAPIG)
Scottish Human Rights Commission
Scottish Islands Federation
Scottish Land & Estates
Scottish Older People's Assembly
Scottish Prison Service
Scottish Public Services Ombudsman
Scottish Science Advisory Council
Scottish Women's Convention

ScottishPower
SCVO
Servelec
SIAA
SICCAR
Sight Scotland
Skills Development Scotland
SLP
Sopra Steria Ltd
South Lanarkshire Council
South of Scotland Enterprise
Stirling Council
Strathclyde Partnership for Transport
techUK
The British Standards Institution
The Improvement Service
The Information Literacy Community of Practice for Scotland http://www.therightinformation.org/
The Institution of Engineering and Technology
The Law Society of Scotland
The Open University in Scotland
The Royal Society
The Scottish Commission for People with Learning Disabilities
The Scottish Road Works Commissioner
The Scottish Social Services Council
The University of Edinburgh
The Wise Group

UistFilm ltd/taigh Chearsabhagh Museum & arts centre
Universities Scotland
Virgin Media
Vodafone
Voluntary Health Scotland
West Lothian Council
West of Scotland HA
Young Scot

How to access background or source data

The data collected for this <statistical bulletin / social research publication>:

☐ are available in more detail through Scottish Neighbourhood Statistics

☐ are available via an alternative route <specify or delete this text>

☐ may be made available on request, subject to consideration of legal and ethical factors. Please contact <email address> for further information.

☐ cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller.