



The AI Of The Possible:
Developing Scotland's Artificial
Intelligence (AI) Strategy

Final Consultation Report

September 2020



Contents

Executive Summary	3
Background	4
Consultation Process	5
Summary of Responses to Consultation Questions	6
Post Covid-19 Survey	16
Next Steps	17
Annex A – Consultation Questions	18
Annex B – List of Organisational Respondents	19
Annex C – Post Covid-19 Survey	21



Executive Summary

Artificial Intelligence (AI) is, broadly speaking, a set of techniques used to allow computers to perform tasks normally requiring human intelligence. AI is already here, and has been for some time: the virtual assistants many people use in their daily lives, and emerging technologies such as self-driving cars, all use AI.

AI has the potential to be developed and used in many different areas, helping to realise economic, social and environmental value for both people in Scotland, and the nation as a whole.

The Scottish Government is committed to developing an AI strategy for Scotland, which is due to be published in spring 2021. January 2020 saw the publication of a scoping document setting out proposals for the strategy.

A consultation on these proposals ran from 17 February to 22 May 2020.

The consultation received a total of 83 responses, from 29 individuals and 52 organisations.

Overall, there was a broad degree of support for the proposals as a starting point. Whilst this was welcome several issues were also highlighted, and suggestions made: these will be considered further as work to develop the strategy progresses.

The top five issues that emerged from the analysis of responses were:

-  The need for an ethical approach – perhaps presented as a code, framework or set of principles – to guide the development, adoption and use of AI in Scotland.
-  The value of making the strategy people-centred and aligned with Scotland's National Performance Framework.
-  The need to provide skills and training so that all people in Scotland can understand, engage with and use AI in a way appropriate to their needs.
-  The value of case studies of AI having been developed and used responsibly to deliver benefit, and for these to be easily explainable.
-  The need for a continuing public dialogue on AI in Scotland to ensure that our approach is and remains fair and inclusive.

Details on the background to the strategy, the consultation process, a summary of responses and the next steps in the development process – which the outputs from the consultation will help to inform – are shared below.



Background

Scotland's Digital Strategy¹, published in 2017, sets out a vision for Scotland as a vibrant, inclusive, open and outward looking digital nation. A great deal has already been achieved in realising this vision, and in using Scotland's data to improve public services and unlock economic value – saving time, money and lives.

This gives us a strong foundation on which to build as we further realise the potential of data innovation – including AI – to deliver real benefits for Scotland and beyond.

The commitment to develop an AI strategy for Scotland was set out in the Scottish Government's Programme for 2019-2020². The strategy will help ensure that Scotland maximises the potential economic, social and environmental benefits of AI, and send a strong signal to the world about our ambition.

The Data Lab³ was tasked with convening the development process, which is overseen by a steering committee chaired by Kate Forbes MSP, Cabinet Secretary for Finance.

Over autumn 2019 the steering committee developed a scoping document setting out proposals for the strategy. This was published on 24 January 2020 and is available at <https://www.scotlandaistrategy.com/s/The-AI-Of-The-Possible-Developing-Scotlands-Artificial-Intelligence-AI-Strategy-Scoping-Document-Jan.pdf>.

An open public consultation on the proposals ran from 17 February to 22 May 2020. The consultation was promoted across a range of channels, including the strategy website, social media and partner and stakeholder networks.

A key part of the process to develop the strategy, the consultation was designed by the Analytical Data Infrastructure team within the Data, Statistics and Digital Identity Division, Scottish Government Digital Directorate⁴, and The Data Lab.

The outputs from the consultation – alongside those from engagement activities and working groups which were conducted over spring and summer 2020 – will be drawn upon as work to develop the strategy progresses.

¹ *Realising Scotland's full potential in a digital world: a digital strategy for Scotland*, March 2017; <https://www.gov.scot/publications/realising-scotlands-full-potential-digital-world-digital-strategy-scotland/>

² *Protecting Scotland's Future: the Government's Programme for Scotland 2019-2020*, September 2019; <https://www.gov.scot/publications/protecting-scotlands-future-governments-programme-scotland-2019-20/>

³ The Data Lab is Scotland's innovation centre for data and AI; <https://www.thedatalab.com/>

⁴ The Scottish Government Digital Directorate works to make Scotland a leading digital nation, and provides leadership on all digital matters affecting the public sector; <https://www.gov.scot/about/how-government-is-run/directorates/digital/>



Consultation Process

The approach taken to the consultation drew from previous consultations by the Scottish Government across a range of policy areas, including digital. Scotland is not alone in developing an AI strategy, in light of which we researched consultations and public engagement used to help shape national AI strategies elsewhere.

The consultation was hosted on the Scottish Government Hub on Citizen Space and opened on 17 February 2020. The consultation homepage and paper can be found at <https://consult.gov.scot/data-innovation/artificial-intelligence-ai-strategy/> and <https://www.scotlandaistrategy.com/s/The-AI-Of-The-Possible-Developing-Scotlands-Artificial-Intelligence-AI-Strategy-Consultation-Paper-S.pdf> respectively.

Originally due to close in late March, the closing date was extended to 22 May in light of the Covid-19 crisis.

Responses were analysed by the Analytical Data Infrastructure team and The Data Lab in order to produce a consultation report. The intent had been to produce one report but, due to the volume and richness of responses, it was decided to produce a short initial report for use by the working groups at their meetings in June and July 2020, and a full final report in due course.

83 responses were received – 63 via Citizen Space, 20 by email – with 29 coming from individuals and 54 from organisations (2 organisations each submitted 2 responses). Responses came from a range of individuals and organisations, including those developing and using AI, or who are interested in the opportunities and challenges that it presents. There was a fair geographic spread amongst responses, with most coming from Scotland but others from elsewhere in the UK, Europe and North America.

Where respondents gave permission for their response to be made public, and after we have checked that they contain no potentially defamatory material, responses will be published on Citizen Space.

Alongside the consultation was a programme of engagement activities to promote and discuss the opportunities and challenges related to AI in Scotland⁵. It is anticipated that a report of the outputs from this will be published on the strategy website in time.

Respondents were broadly supportive of the proposals as a basis from which to build the strategy. Some commented on what else the strategy should address, including building on Scotland's existing strengths, and our ambitions for AI on the global stage.

A summary of responses to each question in the consultation follows.

⁵ <https://www.demsoc.org/2020/07/10/artificial-intelligence-ai-public-engagement-work-in-scotland/>



Summary of Responses to Consultation Questions

Question 1: What do you think of the proposed definition of AI for the purposes of the strategy?

For ease of reference, this was:

'A set of techniques used to allow computers to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, translation between languages and decision-making'.

The majority of respondents agreed with this, with many commenting that it was an appropriate, clear, flexible and reasonable definition for the purposes of the strategy.

A few echoed the observation in the scoping document that there is no commonly agreed definition of AI, but noted that it broadly correlated with many in use.

Several noted that while it provides a good overview, there may be value in reviewing and revising it to better reflect the breadth and diversity of AI, and to provide a degree of future-proofing, more so given the pace at which AI develops.

A number cited the range of sub-fields within AI i.e. 'deep learning', 'machine learning', 'neural networks' and 'natural language processing', and the rate at which new fields and technologies are developed, but none raised an issue with these not being addressed individually within the strategy.

Some also raised the issue of somehow including in the definition how AI relates to and is distinct from human intelligence, and how it can augment or complement this.

Several questioned the comment in the scoping document that although robotics and automation have links to and can make use of AI, they will not be specifically addressed in the strategy. Many highlighted the prospective value of including them, or suggested that it may be worth developing a separate, but complementary, strategy.

Very few respondents clearly disagreed with the definition.



Question 2: Do you agree that the strategy should be people-centred and aligned with Scotland's National Performance Framework?



Figure 1
Scotland's National Performance Framework

The majority of respondents agreed. A few were uncertain, raising issues with what 'people-centred' could be interpreted as, but very few disagreed.

Of those who expanded further in their response, several highlighted the value of making the strategy people (or human) centric, grounded in humanitarian principles, particularly if this could be codified in some way, whilst some noted challenges that would need to be addressed – such as ethical and social questions.

Most respondents were broadly supportive of aligning the strategy with Scotland's National Performance Framework⁶ (NPF), depicted in Figure 1 above, and there were many comments and observations on the benefits of doing so. Many noted that the NPF is established and known, and alignment with it would provide a useful focus.

Others noted that it would help to encourage a broader perspective, in measuring effectiveness and progress, and in understanding how the strategy fits with broader Scottish Government policy – such as on the economy, fair work and skills – and the wider landscape.

⁶ The NPF sets out our Purpose, Values and National Outcomes; <https://nationalperformance.gov.scot/>



Some respondents noted that more detail on how AI can contribute to helping achieve each NPF National Outcome (see Figure 1) would be helpful. Others **cited the potential environmental benefits of AI, and suggested that the strategy should be aligned with both the NPF and the UN Sustainable Development Goals^{7,8} (SDGs).**

A few highlighted that some issues arising from the use of AI – such as safety, security and transparency – are not addressed directly in the NPF, and that these would require further consideration.

Several commented on the degree of alignment, and that doing so could weaken the strategy's focus and risk it having too many outcomes, making measuring progress more challenging. Some suggested that instead of being directly aligned with the NPF, the strategy should only be assessed against it.

It was also noted that it may be challenging to develop Scotland's AI ecosystem (see question 5 on page 9) in such a way as to deliver against all NPF National Outcomes.

Some respondents questioned how the strategy will be applied and implemented in practice. A related issue was the need for investment in certain areas – such as enterprise support, skills and training – to help deliver the strategy's aims.

Question 3: How do you think AI could benefit Scotland's people, and how do we ensure that the benefits are shared and no-one is left behind?

Responses to this question varied considerably. Feedback included ideas and observations on possible options for realising the potential economic, social and environmental benefits of AI in a fair and inclusive way, and highlighted issues and risks that require further consideration.

Echoing question 2, many respondents noted the importance of the strategy's adopting a people-centred approach. Some remarked that the consultation should not be seen just as part of the strategy development process, but as the start of an ongoing dialogue about AI and what it could help to realise for Scotland.

Several respondents cited the value of having examples of where the benefits of AI have been realised and distributed and the approach that was taken to doing so, for communication and engagement purposes.

Feedback cited being able to explain AI and what it can help to achieve – as a tool for betterment in specific sectors, such as health and wellbeing – as a vital part of delivering the strategy. There were some suggestions of AI developed and being used in Scotland – such as in clinical diagnosis – as excellent examples on which to draw.

⁷ <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

⁸ The NPF and the SDGs share the same aims: the NPF is Scotland's way to localise and implement the SDGs, and has a focus on tackling inequalities so that no one in Scotland is left behind as we work together to achieve the SDGs; more information is available on the NPF website.



A recurring issue was the importance of ensuring diversity, equality and inclusion in harnessing AI, with many responses stressing the importance of having ethical and governance frameworks in place to safeguard this and mitigate risks. (This topic was explored in more detail in question 7 – please see page 14)

Another recurring point was the need for openness and transparency around the use of AI and related challenges, as well as the value of developing mechanisms to enable scrutiny and validation of AI over its lifecycle. However, some respondents highlighted the commercial confidentiality of intellectual property such as algorithms, and the challenges that this could pose to doing so.

Several respondents cited the potential of AI to improve efficiency and productivity, particularly in certain industries, but noted the attendant impact that it may have on employment. Whilst many commented that the adoption of AI will both replace and create jobs – many of them high value – some highlighted the potential for it to cause job losses, more so in specific sectors, and the associated economic and social costs.

Much feedback noted the need for the strategy to set out measures on reskilling and upskilling of those in work affected by AI, as well as broader skills and training.

Some respondents suggested that skills and training should not just be for those working in or with AI but for all citizens i.e. a continuum from basic awareness to specialist qualifications. A few cited examples, such as Finland and Luxembourg⁹, of where open and accessible learning resources are being used to help deliver national AI strategies.

Access to broader data and digital skills was cited by many respondents as an important underpinning element for the strategy to address, with several highlighting the need for it to take into account relevant initiatives in progress.

Several respondents also noted that realising the full potential of AI in Scotland will rely on a much broader digital and data infrastructure, including elements such as broadband, other ICT connectivity, power and so on.

The importance of data quality in AI, particularly issues such as biases – that can be built into algorithms depending on the data used to train them – and the implications this has for fairness was also raised.

⁹ There is a link to 'The Elements of AI', a series of free online courses created by Reaktor and the University of Helsinki, on the strategy website; <https://www.scotlandaistrategy.com/resources>



Question 4: What do you think of the proposed overarching vision of the strategy, and the two strategic goals that are proposed to underpin this?

For ease of reference:

The overarching vision of Scotland's AI Strategy will be to use AI to benefit Scotland's people and organisations, and help to achieve the transformational change envisioned in the National Outcomes.

Underpinning this vision will be two strategic goals – that through the adoption of AI:

-  the people of Scotland will flourish
-  Scotland's organisations will thrive and prosper

The majority of respondents indicated that they agreed with this vision and goals, or that they viewed them as reasonable. Several went on to expand how they could be enhanced and strengthened; further comments on this follow below.

A number of respondents commented that the vision and goals were clear, high-level and succinct statements of intent, and welcomed the alignment with the NPF. Many welcomed the people-centred elements within them, and remarked that they were useful and relatable for the purposes of the strategy.

Several respondents noted that it would be helpful if the strategy were to define the goals and terms – such as 'Scotland's organisations' – in more detail, and to reflect that – given the international nature of AI – some participants may be based overseas. On the outward-looking aspect, feedback highlighted that there is scope for the strategy to articulate what Scotland aspires to be in AI at an international level.

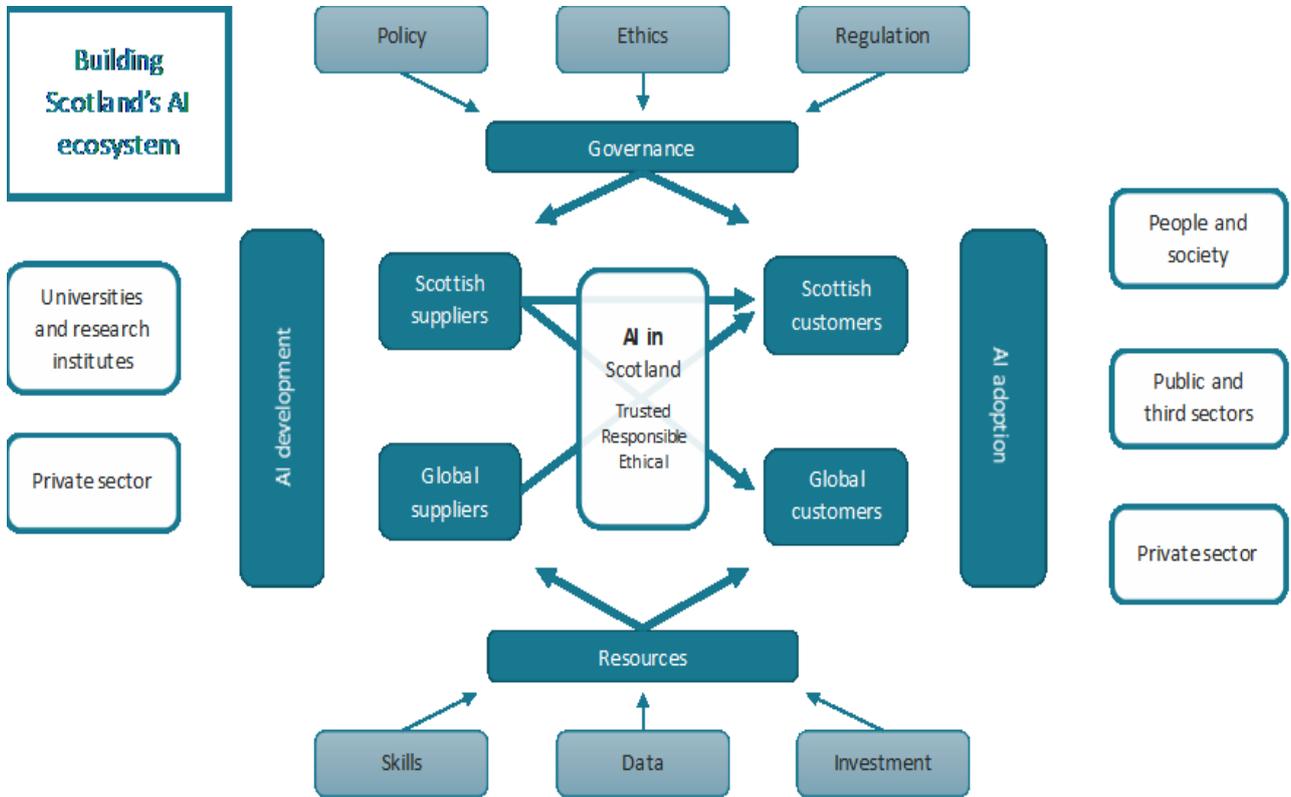
Many respondents suggested adding another goal, perhaps on realising the potential of AI to benefit the environment – more so given that the Scottish Government declared a Climate Emergency in spring 2019. Reflecting the period over which the consultation was open, some later respondents observed that the strategy will need to take into account the context of economic and social recovery from Covid-19.

Some responses contained more critical comments, such as that the vision and goals were so broad that it may be challenging to meaningfully measure progress. Others observed that the vision and goals should better detail the strategic intent for AI in the economy and society, and that there may be merit in setting out how Scotland will build on previous successes in AI in specific sectors.

A recurring theme was that the vision and goals should state the need for fairness, inclusion and a rights-based approach, and the need to identify and address risks and threats. Very few respondents disagreed with the vision and goals, but a few commented that they were somewhat vague.



Question 5: Do you agree with the representation of Scotland's AI ecosystem outlined in the scoping document? Is it missing anything?



concept developed by Anderson Solutions, www.andersonsolutions.co.uk

Figure 2 - Scotland's Proposed AI Ecosystem

The majority of respondents advised that they felt the representation reasonable; some commended its clarity and inclusion of all the key elements in a user-friendly format.

Several observed that the public sector should be added to the left hand side of the diamond, in recognition of its role in developing AI, and potentially the third sector too. Others commented that primary, secondary and further education should be included.

It was highlighted that whilst useful as an overview, it would be helpful if the strategy gave more detail on the elements in the ecosystem, such as the breadth of private and public sector bodies involved with AI.

Others noted that there would be value in including further detail on research and development, given Scotland's strengths and record of accomplishment in this, and to add cybersecurity and resilience to the resources.



Several respondents welcomed the proposal at the core of the ecosystem that AI in Scotland should be 'trusted, responsible and ethical'. Others noted that the construct would help to foster the collaboration and partnerships key to delivering the strategy.

Over a quarter of respondents highlighted the interaction depicted in the ecosystem. Whilst many felt that it captured most interactions well, it was noted that it may not be fully inclusive and that in practice relationships may be more complex and extensive, particularly given the international nature of AI. Some respondents suggested that the strategy could set out measures for a hub, or such like, to help drive progress.

Others noted that the ecosystem's interactions do not depict feedback from the adoption and use of AI to its subsequent development, which it would be helpful to do. Some also highlighted the need to consider the pace at which AI and sub-fields develop, and what this might mean over the timeframe of the strategy.

Several other themes emerged in the responses, including the direction of travel for AI in Scotland and how the ecosystem could be 'future-proofed'. Feedback highlighted the importance of data and digital infrastructure to the ecosystem, that the strategy should better recognise this, and the need for an integrated, joined-up approach to help ensure successful delivery.

Some respondents raised other issues or suggestions on what should be included in the ecosystem. These included a recognition of outside change – both technological and more broadly – and the potential implications of this, the UK AI Sector Deal¹⁰ and other AI-related work by the UK Government, such as that by the UK Centre for Data Ethics and Innovation¹¹ (CDEI).

A few suggested reflecting on the language used and – as highlighted in responses to other questions – having case studies of where AI has helped to address challenges and realise value.

Another recurring point was how the ecosystem could better represent openness and transparency, given how important this will be in securing and sustaining trust in AI.

A few respondents were critical, commenting that the ecosystem was unclear or of limited value in representing the complexity of the AI landscape.

¹⁰ <https://www.gov.uk/government/publications/artificial-intelligence-sector-deal/ai-sector-deal>

¹¹ The CDEI published its *AI Barometer*, a major analysis of the most pressing opportunities, risks, and governance challenges associated with AI and data use in the UK, initially across five sectors, in June 2020; <https://www.gov.uk/government/publications/cdei-ai-barometer>



Question 6: Do you have any comments on the strategic themes that will be explored in detail?

For ease of reference, these are:

-  **Development of AI and AI Enabled Products and Services**
-  **Ethical and Regulatory Frameworks**
-  **Skills and Knowledge**
-  **Data Infrastructure**
-  **Join the Dots**

Responses to this question were very mixed, and some respondents did not comment. However, of those who did, most broadly agreed that the themes were appropriate. Some also suggested further themes, such as strategic investment.

Several responses discussed ethics, governance and regulation, some suggesting that their cross-cutting nature should see the ethics and regulatory frameworks theme explored first so that the outputs from doing so could inform deliberation of the others. A few respondents observed that it would be helpful to clarify the existing regulatory provision around AI, and to what extent this is reserved or devolved.

A small number of respondents stressed the importance of providing definitions for 'trusted, responsible and ethical', given that these sit at the core of the AI ecosystem.

Several respondents highlighted the importance of developing effective data and digital infrastructure, and ensuring quality and standards of data, to help ensure the successful delivery of the strategy, and for this also to reflect aspects unique to Scotland – such as providing for data in Gaelic.

A few noted the 'Join the Dots' theme and the value of this in fostering collaboration, and a coherent, integrated approach to developing and delivering the strategy. Some highlighted the need to consider how progress in delivering the strategy can be meaningfully measured and reported.

Another point that several respondents raised was the need for the strategy to set out ambitions and plans for AI in the longer term, better articulate Scotland's 'offer' in AI for the global stage, and take the international dimension – such as the approach set out in the recent EU AI White Paper^{12,13} and similar initiatives – more into account.

¹² https://ec.europa.eu/info/publications/white-paper-artificial-intelligence-european-approach-excellence-and-trust_en

¹³ The Scottish Government submitted a response to the consultation on this in spring 2020; <https://www.gov.scot/isbn/9781839609862>



Question 7: How can confidence in AI as a trusted, responsible and ethical tool be built?

This question attracted a considerable degree of interest, with most respondents providing comments. As before, several recurring themes emerged across responses.

As with question 6, many respondents cited the need for the strategy itself to provide a definition of 'trusted, responsible and ethical', as the scoping document did not. In addition, around half of responses highlighted the need for continuing engagement and dialogue with the public to raise awareness of AI, consider what people would like from AI, and discuss opportunities and issues associated with its use.

Many respondents commented that positive examples of where AI has been developed, adopted and used responsibly for economic, social and environmental benefit would be helpful in helping to develop public confidence. It was also observed that organisations such as the Scottish Government, wider public sector and large businesses could help by adopting it themselves. This could also help to secure SMEs' interest and buy-in, as would clear and accessible advice.

Feedback also cited the need to ensure that examples clearly explain the approach taken, and how the benefits of using AI were realised and distributed fairly. It was also noted that there is a need to be open and transparent in acknowledging and addressing the challenges associated with AI.

The importance of clear, effective and robust regulation was an issue that many highlighted in their response, along with the challenge of ensuring that regulation keeps pace with innovation. Some feedback highlighted the changes prompted by the adoption of the General Data Protection Regulation¹⁴ in 2018, and the need for further discussion of topics such as data ownership, privacy and use in the context of AI. Some respondents also noted the need to ensure that security and safety is an intrinsic component of AI from the development stage.

Alongside regulation and governance, some feedback noted the need for a set of ethical principles to underpin and complement this. It was also noted that there may be potential to develop mechanisms for the audit and validation of AI, such as impact assessments and quality standards, and have an independent body oversee and review the upholding of these.

Further related points were that there should be robust provisions to identify and address bad or poor AI, along with channels by which individuals can seek redress if they feel that they have adversely affected by AI.

On the development of AI, feedback highlighted the need to ensure that data used to develop algorithms should be reviewed so as to avoid building in or reinforcing bias.

Avoiding discrimination, recognising diversity and inclusiveness were points that arose in several responses, with the Scottish Approach to Service Design¹⁵ mooted as an exemplar, whilst some also cited the prospect of developing 'citizens' juries' as part of a collaborative approach to the development, use and review of AI.

¹⁴ <https://www.gov.uk/government/publications/guide-to-the-general-data-protection-regulation>

¹⁵ <https://www.gov.scot/publications/the-scottish-approach-to-service-design/pages/maturity-assessment-matrix/>



Related to this, and echoing feedback on previous questions, some respondents cited the importance of ensuring that all people in Scotland have an appropriate awareness and understanding of AI so that they can engage with and take part in the debate.

It was also observed that in discussing AI it should be acknowledged that it will both displace and create jobs and opportunities, and to recognise the need to plan for and support people through the changes that the increasing adoption of AI may bring; the wider cultural and societal implications of this will also require consideration.

Some respondents also suggested that Scotland's AI strategy could seek to align with or reflect approaches to AI developed elsewhere, such as by the EU, and take into account the complex networks of bodies and organisations working in the AI space.

Question 8: Please comment on any other aspect of AI that you feel it is important for Scotland's AI Strategy to address.

A snapshot of the very broad range of responses is provided below.

- Incorporate AI teaching into the primary and secondary school curriculum
- Better highlighting the potential economic, social and environmental impact of AI
- Focus strategic efforts on developing and using AI in specific sectors, such as health and wellbeing
- Address counter-productive or 'bad' AI, such as in automated decision making, and malevolent uses of AI
- Related developments in the field should be captured in the strategy, with several respondents noting the overlap of AI with other trends such as Internet of Things (IoT), wider digital transformation, etc.
- A national centre of excellence, hub or institute for AI could be tasked with managing the delivery of the strategy and support collaboration
- AI successes in Scotland should be celebrated and supported, and such examples used in ongoing public engagement and awareness activities
- Consider Scotland's unique 'offer' in AI and how to market this internationally
- The consultation could be seen as the start of a longer conversation on AI in Scotland



Post Covid-19 Survey

When the process to develop the strategy began in summer 2019, it could not have been foreseen how much life would change just over six months later due to Covid-19.

In light of this, it was decided to run a short informal survey to ask people what they thought about the part AI technologies could play a role in a post Covid-19 Scotland.

Instead of the proposals set out in the strategy scoping document, the survey focused on priorities relating to the themes being explored by the working groups; the questions can be found in Annex C on page 21.

Hosted on the strategy website, the survey was open from 25 May – 30 June 2020.

14 complete responses were analysed by the Analytical Data Infrastructure team and The Data Lab. Due to the small number it was decided to include a note of the outputs from the analysis in the final consultation report, rather than a separate document.

On 'Developing AI and AI enabled products and services', many respondents noted the potential to use AI to improve efficiency, decision-making and in supporting people in their day-to-day lives. Some noted the need to secure public buy-in to the use of AI, for AI to be accessible and inclusive, and for appropriate skills and training.

On 'Ethical and Regulatory Frameworks', feedback noted the importance of ethics, governance and privacy, and the need for measures to safeguard these to be as futureproof as possible. Some noted the need to make governance accessible and practical, reflective of culture and diversity, and the importance of removing bias in AI.

On 'Skills and Knowledge', respondents suggested developing a scale of skills and training for AI, ranging from citizens' awareness up to specialist learning. Some raised the need for more engagement to secure trust in AI, better promoting AI's potential to business leaders, collaborative AI development and making international links.

On 'Data Infrastructure', comments noted the need for effective and visible leadership, better understanding of existing data assets and a longer term view when planning. The need to improve data quality and interoperability, to build in and sustain resilience and security, and to further develop the capacity to use data, were also noted.

As to general thoughts on what role AI could play, recurring ones were the potential to use AI as a tool for betterment, and to improve efficiency and productivity. The scope to harness AI to benefit the environment or specific sectors, was noted, as was the potential value of equitable access to AI skills and knowledge for all.

Survey responses will not be published, as respondents' permission to do so was not asked.



Next Steps

Consultation is an essential part of the process to develop policy and strategy. It offers scope to consider opinion and expertise on proposals, with responses analysed and used as part of the process, along with a range of other information and evidence.

Reflecting the aim to develop an approach that will enable people in Scotland to flourish through the adoption of AI, with no one left behind, this consultation was designed to allow respondents to share their thoughts on the proposals set out in the scoping document, as well as what else the strategy should seek to address.

The number of responses exceeded expectations, and all respondents are thanked for their contribution. There were a range of interesting and valuable insights to explore, and the issues identified from the analysis will help inform further thinking, particularly how to foster a fair, inclusive and productive approach to harnessing AI in Scotland.

Beyond the top five issues noted in the Executive Summary several other points were highlighted, such as the need for collaboration and partnerships, both within Scotland and further afield, to help deliver the strategy, the potential to have a centre or hub to drive progress with this, and the need for links to other plans and strategies. The issues that emerged broadly chimed with those raised in the engagement activities and working groups.

Also noted was the need to consider the context of Scotland's economic and social recovery from Covid-19. In May 2020 the Scottish Government asked Mark Logan, former Chief Operating Officer at Skyscanner, to lead a short-life review to make recommendations on how Scotland's thriving tech industry can help with economic recovery; the review report was published in August¹⁶. How taking forward its recommendations is reflected in the AI strategy will be considered in due course.

In August 2020 the steering committee, presented with the outputs from the consultation, engagement programme and working groups, discussed and set the direction for the next phases of work to develop the strategy.

More details on this can be found at www.scotlandaistrategy.com/.

Scotland's AI Strategy is due to be published in spring 2021.

If you require this document in an alternative format, such as large print or a coloured background, please contact The Data Lab by email: info@thedatalab.com or telephone +44 (0)131 651 4905

¹⁶ *Scottish Technology Ecosystem: Review*, Mark Logan, An independent review commissioned by the Scottish Government, August 2020, <https://www.gov.scot/publications/scottish-technology-ecosystem-review/>



Annex A – Consultation Questions

1. What do you think of the proposed definition of AI for the purposes of the strategy?
2. Do you agree that the strategy should be people-centred and aligned with Scotland's National Performance Framework?
3. How do you think AI could benefit Scotland's people, and how do we ensure that the benefits are shared and no-one is left behind?
4. What do you think of the proposed **overarching vision of the strategy, and the two strategic goals that are proposed to underpin this?**
5. **Do you agree with the representation of Scotland's AI ecosystem outlined in the scoping document? Is it missing anything?**
6. Do you have any comments on the strategic themes that will be explored in detail?
7. How can confidence in AI as a trusted, responsible and ethical tool be built?
8. Please comment on any other aspect of AI that you feel it is important for Scotland's AI Strategy to address.



Annex B – List of Organisational Respondents

52 organisations responded to the consultation:

Organisation	Sector
ABB	Private
Aberdeen City Council	Public
Accenture	Private
AI For Her	Third
Atos	Private
Bòrd na Gàidhlig	Public
BSI (British Standards Institution)	Professional/Representative
BT Group	Private
Close the Gap	Third
Codeclan	Private
Codeplay	Private
Colleges Scotland	Academia
Convention of Scottish Local Authorities	Public
Creative Scotland	Professional/Representative
Data & Marketing Association	Professional/Representative
Digital Health & Care Institute	Academia
Edinburgh College	Academia
Federation of Small Businesses in Scotland	Professional/Representative
Glasgow Chamber of Commerce	Professional/Representative
Glasgow City Council	Public
Google	Private
Information Commissioner's Office	Legal/Regulatory
Institute and Faculty of Actuaries (IFoA)	Professional/Representative
Institute of Chartered Accountants of Scotland (ICAS)	Professional/Representative
Interface	Private
Leverhulme Research Centre for Forensic Science, University of Dundee	Academia
LivePerson	Private
medConfidential	Third
Merkle Aquila	Private
Microsoft Limited	Private
Montreal AI Ethics Institute	Third
Mydex CIC	Third
NHS National Services Scotland	Public
North Lanarkshire Council	Public
NVIDIA	Private
Open Government Scotland Civil Society Network	Third
Open Rights Group	Third
Royal Blind and Scottish War Blinded	Third



Organisation	Sector
Royal Society of Edinburgh	Professional/Representative
SAS	Private
ScotlandIS	Professional/Representative
Scottish Fire and Rescue Service	Public
Scottish Government Cyber Resilience Policy Unit	Public
Scottish Informatics and Computer Science Alliance (SICSA)	Academia
Scottish Legal Complaints Commission (SLCC)	Legal/Regulatory
Sentinel Biosensor	Private
Stirling Council	Public
The Alan Turing Institute	Academia
The University of Edinburgh	Academia
UKCRC (UK Computing Research Committee)	Professional/Representative
University of Strathclyde	Academia
Water our World Ltd	Private



Annex C – Post Covid-19 Survey Questions

1. What do you think are the priorities when considering the role AI technologies can play in a future Scotland in terms of the following theme?

- Developing AI and AI enabled products and services

2. What do you think are the priorities when considering the role AI technologies can play in a future Scotland in terms of the following theme?

- Ethical and Regulatory Frameworks

3. What do you think are the priorities when considering the role AI technologies can play in a future Scotland in terms of the following theme?

- Skills and Knowledge

4. What do you think are the priorities when considering the role AI technologies can play in a future Scotland in terms of the following theme?

- Data Infrastructure

5. Any general thoughts on what role AI could play?

Respondents were then invited, but not compelled, to provide some more information about themselves to help understand the range of perspectives being submitted.