ICAEW
REPRESENTATION 62/23

A PRO-INNOVATION APPROACH TO AI REGULATION - CONSULTATION

Issued 21 June 2023

ICAEW welcomes the opportunity to comment on the "A pro-innovation approach to AI Regulation" consultation published by Department for Science Innovation and Technology (DSIT) on 29 March 2023, a copy of which is available from this link.

For questions on this response, please contact our Tech Faculty at representations@icaew.com quoting REP 62/23.

ICAEW is a world-leading professional body established under a Royal Charter to serve the public interest. In pursuit of its vision of a world of strong economies, ICAEW works with governments, regulators and businesses and it leads, connects, supports and regulates more than 166,000 chartered accountant members in over 146 countries. ICAEW members work in all types of private and public organisations, including public practice firms, and are trained to provide clarity and rigour and apply the highest professional, technical and ethical standards.

Since our Royal Charter was granted in 1880, ICAEW has been responsible for maintaining the highest professional standards as well as delivering technical excellence in the public interest.

Our role as a world-leading improvement regulator

We protect the public interest by making sure ICAEW firms, members, students, and affiliates maintain the highest standards of professional competency and conduct.

ICAEW's regulatory and disciplinary roles are separated from ICAEW's other activities so that we can monitor, support, or take steps to ensure change if standards are not met. These roles are carried out by the Professional Standards Department (PSD) and overseen by the independent ICAEW Regulatory Board (IRB).

Our role is to:

- authorise ICAEW firms, members, and affiliates to undertake work regulated by law: audit, local audit, investment business, insolvency, and probate;

- support the highest professional standards in general accountancy practice through our Practice Assurance scheme;

- provide robust anti-money laundering supervision and monitoring.

- monitor ICAEW firms and insolvency practitioners to ensure they operate correctly and to the highest standards;

- investigate complaints and hold ICAEW firms and members to account where they fall short of standards;

- respond and comment on proposed changes to the law and regulation; and

- educate through guidance and advice to help stakeholders comply with laws, regulations, and professional standards.

This response of 21 June 2023 has been prepared by ICAEW Tech. Recognised internationally for its thought leadership, ICAEW Tech is responsible for ICAEW policy on issues relating to technology and the digital economy.

EXECUTIVE SUMMARY

1. Artificial Intelligence (AI) is a powerful and disruptive technology which can provide many benefits including reducing costs and providing better services to consumers. However, it can also introduce risks that result in harm to individuals and society. AI is already widely in use, embedded in everyday products such as smart phones and in activities such as online shopping. The launch of ChatGPT in November 2022 introduced the public to the capabilities of generative AI, increasing appetite for adoption. Recognising the potential, businesses are investing in exploring how AI can be used to help achieve their goals. This rapid adoption of generative AI demonstrates how unpredictable technological advancements can be and it is crucial that the UK implements a regulatory regime that not only addresses current risks, but is forward looking and adaptable to keep up with technological advancements.

2. We support the Department for Science Innovation and Technology's (DSIT) ambitions to develop a flexible regulatory regime for AI, which promotes innovation while minimising AI harms. It is positive to see the introduction of sandboxes to help businesses work with regulators to innovate. It is also positive to see that the approach recognises the need for centralised coordination and oversight of AI regulation to ensure that it is cohesive, and the proposed principles and introduction of central functions can help with this. However, these will need further refinement to fulfil this objective.

3. The principles must include considerations of ethics and responsibility, which are key to ensuring that AI development and use results in human benefit and not harm. Although they mention fairness, other ethical considerations such as integrity, confidentiality, conflict of interest and competence should be considered. These are principles that the Institute Of Chartered Accountants in England and Wales (ICAEW) has incorporated in its code of ethics that its members are required to comply with. Chartered accountants have a long history of providing governance, audit, risk management and assurance services, including in the areas of sustainability and technology. This makes the profession well placed to play a key

role in the risk management function, and to help shape how AI risks are identified and managed, alongside other professional bodies and academia.

4.   As acknowledged in the paper, regulator access to AI and data skills and expertise is a challenge, and they may not have the capacity to regulate AI alongside their other responsibilities. Consequently, the central functions will be integral to the success of this approach. They will need to be suitably funded and resourced to effectively support regulators, and they will need to have the right composition, engagement, and oversight to ensure that they are delivering on their objectives.

5.   Finally, the proposed approach is very high level and does not provide enough detail on how the suggested ideas will work in practice. This makes it difficult for regulators and businesses to determine the impact of the approach. In addition, as the approach does not take a stand on AI regulation requirements there is a lack of clarity for businesses on what will be expected; this lack of clarity may hinder innovation. In addition the approach is significantly different to that taken in jurisdictions such as the European Union (EU), which has definitive requirements, and which businesses such as those developing and placing products in the EU will need to comply with.

ANSWERS TO SPECIFIC QUESTIONS

The revised cross-sectoral AI principles

Question 1

Do you agree that requiring organisations to make it clear when they are using AI would improve transparency?

6.   We strongly agree that requiring organisations to make it clear when they are using AI could improve transparency. However, the effectiveness of such measures will depend on how they are implemented.

7.   For the information to aid transparency and for it to be useful to users, it must go beyond simply stating that AI has been used and should include information on how it is used (e.g. processes it supports and which decisions it is making or influencing), how the model works how it has been trained, and level of human involvement. Standards can help in defining requirements for the information to be provided. This information should be easily accessible, e.g. via statements on web pages and relevant points in contractual documentation such as insurance quotes. This will help affected parties understand how decisions about them have been made and help inform decisions on whether to contest an outcome. Such an approach would not only improve transparency but will also provide proportionate consumer protection and help inject greater levels of public trust in the use of AI.

8.   However, we would emphasise the need to provide proportionate information. Providing information must be balanced against the burden on organisations to provide this information, as well as protecting their intellectual property and therefore commercial advantage. Most organisations are likely to use AI in some form, whether developed in-house, integrated into third party applications or used by their suppliers as part of delivery of a service. Requiring organisations to declare ALL instances where AI is used could result in the development of boiler plate statements that do not provide useful information.

9.   Taking a risk-based approach to the requirements for declaring the use of AI is a prudent way to manage the risk i.e. lower risk uses of AI which do not directly impact users and decisions (e.g. to manage performance of systems) may not need declaration, whereas declarations would be mandatory where AI is used to automatically make decisions.

10.   The level of declaration can also depend on the use case with fully automated decisions that do not include humans in the loop requiring more information to be provided to consumers e.g. where they are happening, how the model works and how it has been trained.

11.   Requiring such explanations would help improve transparency by not only educating and protecting the public, but also helping organisations to consider how their use of AI impacts their customers and encouraging them to better document their models.

Question 2

Are there other measures we could require of organisations to improve AI transparency?

12. Documentation of AI models could help improve visibility and understanding of organisations' use of AI. There should be a legal requirement to maintain model registers which describe models, including their inputs and outputs, how they operate and what the data they have been trained on, as well as their change history, and their evolution. Given the fast pace of change in the AI space, this could be an important control to improve transparency. These records should be available to provide to regulators at their request.

Question 3

Do you agree that current routes to contestability or redress for AI-related harms are adequate?

13. We somewhat agree current routes to contestability and redress can be used to help cover AI-related harms but more would be needed. AI is used as a tool and where it causes harm, impacts such as financial loss, denial of access to services, physical harm, and reputational damage are in most cases similar to those caused where AI is not used. Consequently, existing channels for raising complaints, investigation and communication can be used.

14. However, while the types of impacts may be the same, AI may significantly increase the scale of the impact. An AI tool may be able to improve efficiency by providing advice to a significantly larger number of clients than a human would be able to do; if the tool causes harm, the number of affected parties requiring redress is also likely to increase significantly and regulators may no be adequately resourced to deal with the level of AI-related contestability and redress queries. Although a potential solution to help with the capacity challenge would be to use AI, this may raise concerns, especially given the context that use of such a tool may have brought widespread damage. There would therefore be an expectation that contestability and redress cases when it comes to use of AI would be reviewed and investigated by humans. Recommendations for oversight of regulators use of AI regulation technology (RegTech) were included in ICAEW's response to the previous AI regulation consultation.

15. In addition, investigating and responding to contest and redress queries for AI related harms is likely to be more complex than non-AI cases. Understanding, explaining and interpreting AI models and their outputs can be a challenge, as can determining legal responsibility and accountability for AI-related harms. Existing regulators may not have the necessary resourcing in terms of capacity and skills to perform such investigations.

16. Some AI products may straddle the remits of different regulators and it may be challenging for consumers and businesses to know which regulator to contact when an issue arises.

17. In addition, some AI uses are not regulated and do not fall within the remit of any existing regulator. An example is the provision of accounting advice where we expect to see an increase in tech driven start-ups, who offer accounting advice purely based on use of generative AI and democratisation of knowledge, with no requirement to be regulated. The public may not understand that the title of "accountant" is not protected, and anyone can call themselves an accountant and not be regulated at all, in contrast to the title of "chartered accountant". If something did go wrong, there would be no regulator to contact for redress and even though the central function's aim is to identify such cases and assign to an existing regulator, there would be no existing regulator to allocate such a case to.

Question 4

How could routes to contestability or redress for AI-related harms be improved, if at all?

18. A central contestability and redress scheme could support current routes to contestability and redress relating to AI. The function could receive and triage queries and pass them on to the relevant regulators. It could also provide the technical expertise to help regulators effectively investigate the use of AI and identify appropriate action. We accept that this will require a high level of coordination and standardisation across disparate regulators. However, such an

approach would simplify the process for consumers and businesses, making it easier to gain consumer trust and encourage entrepreneurial innovation, and also make it easier for the risk management and monitoring central functions to obtain data including on incidents and near misses as this data would be centrally available and not completely dependent on regulators providing the information separately. It would also help with monitoring the effectiveness of the approach.

19. For the central contestability and redress function to be effective, adequate transparency is required so that consumers and businesses can identify when a contested decision or impact is caused by AI, and can direct queries to the central AI contest and redress function.

20. Existing regulator channels of contest and redress can support the central function so that if a regulator receives a request they can identify through investigation where AI has been used with or without the consumer's or business's knowledge, in a way that it significantly impacts the outcome. They can then collaborate with the central function to investigate and action such cases.

Question 5

Do you agree that, when implemented effectively, the revised cross-sectoral principles will cover the risks posed by AI technologies?

21. Somewhat agree. The revised cross-sectoral principles will cover some but not all the risks posed by AI technologies (see question 6 below).

Question 6

What, if anything, is missing from the revised principles?

22. The principles do not put adequate emphasis on the ethical and responsible use of AI which is key to effectively regulating AI. AI is a powerful technology and guardrails must be in place to ensure that its development and use considers whether it benefits or harms humanity and whether developing and using it in a specific scenario is the right thing to do. Although the principles mention fairness, this is only one aspect and other ethical considerations such as integrity, competence, confidentiality and conflict of interest should be considered.

23. The principles are intended to build on and reflect commitment to the Organisation for Economic Co-operation and Development (OECD) values-based AI principles, and although they reflect the principles of Transparency and explainability, Robustness, security and safety, Accountability, and Fairness, they do not adequately reflect those relating to Human-centred values such as human rights and democratic values and those relating to inclusive growth, sustainable development and well-being. The principles should be revised to include an additional principle relating to Responsibility and Ethics.

24. Regulators should refer to their Codes of Ethics/Conduct where these exist and consider ethics when overseeing the development, implementation and use of AI within their remits and provide guidance on what use cases would contradict ethical objectives.

A statutory duty to regard

Question 7

Do you agree that introducing a statutory duty on regulators to have due regard to the principles would clarify and strengthen regulators' mandates to implement our principles, while retaining a flexible approach to implementation?

25. We strongly agree that having a statutory duty to regulate AI would help to clarify and strengthen their mandates to implement the principles while retaining a flexible approach to implementation.

26. AI is already being used across society whether explicitly or embedded in products and its adoption and use has increased significantly in the past year, largely fuelled by developments in the field of generative AI. While we agree with introducing the principles on

a non- statutory footing to allow time for stakeholders to get ready to implement the framework, not having a defined timescale for statutory support could mean AI is developed and used in ways not aligned to the defined principles and ethical considerations, resulting in consumer harm. In an environment where most businesses and regulators have limited resources, priority is likely to be given to what is mandatory over what is voluntary. We recommend the government sets a defined time scale for putting in place statutory requirements.

27. While existing regulation covers some of the AI risks it does not address all risks including legal responsibility and accountability. Regulation does not have to hamper innovation, and when designed effectively, it can promote innovation by providing clarity and certainty around requirements for developing, implementing and using AI systems.

Question 8

Is there an alternative statutory intervention that would be more effective?

28. Setting up a central AI regulator with responsibility for AI regulation would be the preferred approach, and would help address some of the challenges around regulator capacity, expertise, coordination, and coverage. As mentioned in the response to section 4 above, some uses of AI are not regulated and do not fall within the remit of any existing regulator. In addition, for some businesses such as those that provide consultancy services, they may use the same AI across various industries and in such cases, the likelihood of duplicated or contradictory requirements would increase. Having a central regulator would help address such challenges. The regulator would not work in isolation but would work with existing regulators and could perform some of the suggested central functions such as risk management and education and training, and also support with contestability and redress claims. Businesses and consumers would still be able to raise queries with existing regulators, who would be able to pass them on to the AI regulator as necessary. The AI regulator would also be able to oversee existing regulator's use of AI, which is an area that is not currently addressed in the regulation approach.

29. However, it is recognised that setting up an independent regulator will result in additional costs for businesses and society, which the proposed approach for existing regulators to regulate the use of AI aims to minimise. The UK Artificial Intelligence Regulation Impact Assessment estimates these costs to be £7,566.7m, significantly higher than the proposed approach which is estimated to cost £387m. With a large proportion of the higher estimated costs for a new regulator being attributed to cost of compliance, and prohibition of high-risk AI services which would be applicable for businesses that are subject to regulatory requirements in other jurisdictions with more stringent requirements anyway, we question whether the cost of setting up a new regulator would be that high. If costs are indeed significantly higher, we would not recommend setting up a new regulator, but to make an informed recommendation we would want to see further analysis of the feasibility of the estimates.

30. If the proposed approach is to be cost effective, existing regulators will need to effectively collaborate on providing guidance and requirements, as well as oversight activities. Duplicated, overlapping or contradictory regulatory requirements may make the proposed approach cumbersome and expensive for businesses and may hinder innovation.

31. The proposed central functions will be crucial to the effectiveness and success of the model in which existing regulators regulate AI. They will need adequate resourcing in terms of skills, capability, funding, and capacity to provide existing regulators with required support.

32. As an additional statutory intervention, introducing the ability for regulators to commission a skilled persons review for misconduct in the development and use of AI would be beneficial in helping regulators to get a deeper understanding during investigations.

New central functions to support the framework

Question 9

Do you agree that the functions outlined in section 3.3.1 would benefit our AI regulation framework if delivered centrally?

33. Yes, we strongly agree that the functions outlined in section 3.3.1 would benefit our AI regulation framework if delivered centrally. Central coordination and oversight are key to ensure that the regulatory environment is coherent and effective.

Question 10

What, if anything, is missing from the central functions?

34. The scope of the cross-sectoral risk function should go beyond central assessment of risks and extend to supporting wider risk management including putting in place structures to help organisations effectively manage AI risks. This includes creating a central risk register with common definition of risks and risk ratings as well as suggested ways in which risks can be mitigated. This will help regulators better understand risks and the sorts of activities they would be expecting regulated entities to have in place to mitigate the risks, which would help them in producing guidance. Suggested risk mitigation measures would not be set in stone and regulated entities would be able to take alternative actions if they effectively mitigate the risks, but having suggestions on risk mitigation measures would help educate both regulators and businesses and help with implementation of the principles.

35. The regulatory framework should be supported by a robust AI certification scheme. An independent body to design and deliver an AI certification scheme should be formed, similar to that for the Payment Card Industry (PCI-DSS) or for basic cyber security with the National Cyber Security Centre's Cyber Essentials certification (delivered by the IASME Consortium). The independent body could set the requirements for compliance aligned to the AI principles and relevant standards and could issue certificates of practice to those performing assessments.

36. The certification scheme should be risk based and organisations could use assessment tools such as questionnaires to determine their level of AI risk e.g. considering the nature of the organisation, type of AI developed and how it is used. Requirements should be aligned to the level of risk, with higher risk uses having more stringent requirements e.g. self-assessment for lower risk uses and independent verification for the highest risk use cases.

37. As mentioned under questions 3 and 4 above, a central "complaints" function to support existing regulator redress routes by receiving and triaging cases and providing technical expertise to investigation and monitoring complaints / cases is needed. With overlaps in regulatory remits, and areas that could fall through the gaps of existing regulators, a central point of contact would make it easier for consumers and businesses to know where to direct queries and to get the action they need. It would also help address regulator capacity and capability challenges and improve efficiency as it would save time spent reviewing and redirecting queries sent to the wrong regulator (see responses to questions 3 and 4 above). This could be set up as a new function, or the function could be performed by the central risk management function which would already be dealing with allocating risks to regulators.

38. The role of the education and awareness function for members of the public needs to go beyond empowering engagement with the ongoing monitoring and iteration of the framework and should include education on AI assurance activities including methods, certification and accreditation and what they mean, so that consumers and the general public can make informed decisions on AI products and use of AI (similar to what we have in other industries such as food industry labels).

Question 11

Do you know of any existing organisations who should deliver one or more of our proposed central functions?

39. Organisations such as the Institute of Chartered Accountants in England and Wales (ICAEW) with extensive experience and expertise in risk management, should play a key role in the central risk management function. Chartered accountants provide services in governance, audit, and risk management and have been working with organisations on designing, implementing, assessing and monitoring risk management frameworks for decades, most recently when it comes to consideration of sustainability-based risk management and assurance, and including existing applications of technology. This makes the profession well placed to help shape how AI risks are identified and managed, alongside other bodies such as the Institute of Risk Management, and technical experts from bodies such as the Alan Turing Institute and the Ada Lovelace Institute.

40. Similarly, ICAEW can be part of the body that designs and oversees AI certification and professionalisation, alongside other professional bodies such as the British Computer Society and academic bodies such as the Alan Turing Institute. As a professional body ICAEW already has experience in ensuring that its members are appropriately qualified to perform their roles, and that they continue to do so competently and ethically. ICAEW members are already performing outcomes-based assessments, and these skills can be readily extended to AI.

41. The Centre for Data Ethics and Innovation (CDEI), which is tasked with making recommendations to government to maximise the benefits of data and AI for the UK society and economy should lead on providing support for innovators. CDEI has already been working with industry to identify and share AI assurance best practice and is in a good position to work with industry and regulators to support innovation including through use of test beds and sandboxes.

42. Capacity allowing, the Ada Lovelace Institute, whose mission is to ensure that data and AI work for people and society should lead the central education and awareness function, and coordinate and oversee supporting education and awareness efforts of regulators, professional bodies, government departments and civil society. It also conducts research with the public on AI, the output of which could be beneficial to businesses developing and implementing AI.

Question 12

Are there additional activities that would help businesses confidently innovate and use AI technologies?

43. Some businesses, especially micro, small and medium-sized businesses may have limited knowledge, skills, and experience in developing and using AI. One of the principal reasons why productivity has stagnated in the UK economy over the past fifteen years is the difficulties such businesses have found in assimilating new technologies into their operations. AI runs the risk of sweeping many businesses away unless they are assisted in incorporating new technologies. The role of the central education and awareness function as presented in the paper is to help businesses navigate the AI regulatory landscape, rather than to develop AI skills and expertise. Emphasis on the latter could assist smaller businesses.

44. Government initiatives such as funding PhDs in artificial intelligence and scholarships for master's degree conversion courses in AI and data science can help to address needs in the long term, but more needs to be done to address skills needs in the short term.

45. Public-private cooperation is key to address the skills challenge and a central body bringing together government departments, organisations, academia, professional bodies and private sector organisations in a coordinating capacity to determine how best to help businesses develop AI skills and experience in both the short and long term is needed.

46. Businesses can struggle to find the money to allocate to exploring AI adoption, and funding and grants aimed at supporting them to research, develop, and implement AI would help alleviate the financial burden associated with innovation in AI technologies.

47. Smaller businesses tend to have less resources to develop AI models internally and are more likely to use AI technologies purchased from third parties. Visibility of controls in place to mitigate AI risks for example through certification schemes would help such businesses have the confidence to use AI in this way.

Question 12.1

If so, should these activities be delivered by government, regulators or a different organisation?

48. The AI Council, an existing independent committee which provides advice to Government and high-level leadership of the Artificial Intelligence (AI) ecosystem identifies increasing skills in AI as one of its three areas of focus and as it has representation across industry, public sector and academia, it is well placed to lead the centralised skills development function to help smaller businesses develop AI skills at pace, including raising awareness of freely available AI certifications and schemes. To do this effectively, it will need adequate resourcing, and oversight from the central functions perhaps by providing data to the monitoring and evaluation function to assess the effectiveness of its activities.

49. A multi-stakeholder approach involving government, regulators, industry associations, academia, and other relevant organisations can create a well-rounded ecosystem that supports businesses in confidently innovating and using AI technologies while ensuring responsible and ethical practices. The specific roles and responsibilities of each stakeholder will depend on their expertise, resources, and mandate within the AI regulatory landscape.

Question 13

Are there additional activities that would help individuals and consumers confidently use AI technologies?

50. An effective and independent AI assurance scheme would help build individual and consumer trust in AI and to encourage the use of AI technologies. For the scheme to work, consumers and businesses must be educated to understand accreditation and certification, and these must be presented in a way that is clear and easy to understand such as through the use of kitemarks on AI organisations and products which communicate that they have been assessed and meet requirements for safety, security and other relevant important criteria. This is a similar model to that used in other industries such as the food industry.

13.1 If so, should these activities be delivered by government, regulators or a different organisation?

51. Oversight of a certification scheme can be provided by the central risk management function, who could commission an independent body to design and deliver a certification scheme for AI (see response to question 10 above).

52. Educating consumers on any AI certification schemes can be done by the proposed central education and awareness function, supported by regulators, civil society and consumer groups.

Question 14

How can we avoid overlapping, duplicative or contradictory guidance on AI issued by different regulators?

53. As mentioned in the response to question 10, creating a central risk register with common definition of risks and risk ratings as well as suggested ways in which risks can be mitigated can help avoid contradictory guidance as regulators will have a common understanding of

risks, ratings and ways in which risks can be mitigated, which they can include in their sector specific guidance.

54. However, as regulators focus on different priorities, contradictory guidance cannot be completely avoided. An example of this was seen in the case of the smart metering installation demands placed by OFGEM on energy companies which required them to contact their customers and offer them smart meters, which conflicted with the ICO requirements on marketing opt out, with the result that an energy company could be fined by OFGEM for complying with ICO or fined by ICO for complying with OFGEM. Similar cases can arise with AI.

55. The central function to support coherent implementation of the principles will have a key role to play in resolving such contradictions and ensuring that regulators consider their regulations in the context of others rather than operating entirely autonomously and therefore produce guidance that avoids overlap, duplication and contradiction.

Question 15

Do you agree with our overall approach to monitoring and evaluation?

56. We neither agree nor disagree with the overall approach to monitoring and evaluation. We agree with the goals of monitoring the effectiveness of the framework at supporting innovation and mitigating risks, using data from a wide range of sources. However, the paper does not provide much information to assess the practicality and effectiveness of the approach e.g. what data will be required, from who, in what format and how often. This detail will help to determine how practical the approach is and how feasible it will be to easily extract and provide data in a format that allows for consolidation, and to fully assess the resourcing implications of the approach. Without this detail it is difficult to agree or disagree with the approach.

57. Any reporting required of regulators and businesses should be designed around information that is necessary, readily available or can be reasonably obtained, and channels to share the information efficiently should be made available. In addition, there should be arrangements to ensure that data already provided to other government departments as part of other reporting requirements can be leveraged to avoid regulators and businesses having to provide information several times.

Question 16

What is the best way to measure the impact of our framework?

See response to question 15 above.

Question 17

Do you agree that our approach strikes the right balance between supporting AI innovation; addressing known, prioritised risks; and future-proofing the AI regulation framework?

58. We somewhat agree that that the approach strikes the right balance between supporting AI innovation; addressing known, prioritised risks; and future-proofing the AI regulation framework.

59. We are strongly supportive of the ambition and general principles on AI regulation and innovation and wish to see the UK become the world's leading centre for AI-powered innovation. However, the paper does not provide enough practical information to determine how well the approach will meet the objectives of supporting innovation, addressing risks and future proofing the framework in practice. Only high-level principles are presented with potential options for implementing them and there is not enough clarity on how implementation will work and therefore what the burden will be on regulators and businesses as well as the impact on society.

60. While we support the need to avoid onerous and restrictive regulation, we believe the current approach is too high level to provide clarity to businesses and regulators on what it would

mean in practice. There is too much of a "wait and see" approach and we believe that, in keeping with the Government's ambitions to ensure first-mover advantage, the UK should take a stand in the use of AI, in line with its innovation priorities and democratic values. Regulatory clarity will provide businesses with the confidence they need to innovate.

Question 18

Do you agree that regulators are best placed to apply the principles and government is best placed to provide oversight and deliver central functions?

61. We agree that existing regulators are well placed to support application of the principles within their remits, as they understand how activities in their areas of responsibility operate and already have relationships with regulated entities. However, we do not believe they should bear the full weight of applying the principles, particularly as they may not have the resourcing capacity and skills to do so.

62. The central functions can be provided by government or private sector and should do more to assist regulators with defining risk management requirements and guidance, e.g. by including suggested risk mitigation measures in the central risk register which regulators can leverage in providing guidance.

Regulator capabilities

Question 19

As a regulator, what support would you need in order to apply the principles in a proportionate and pro-innovation way?

63. The ICAEW Regulatory and Conduct team is an improvement regulator under statute in the areas of audit, insolvency, investment business, anti-money laundering and legal services. As highlighted in the consultation, performing this role effectively will require support in developing and accessing AI skills e.g. technical skills relating to the security of AI models, as well as legal support to determine blame in complex cases.

64. ICAEW supports the suggestion in the paper to facilitate collaborative initiatives between regulators to share skills and expertise, especially where this can be done in a sector specific way.

65. The AI Standards Hub is a positive initiative to help develop an initial understanding of AI and AI Standards and we would like to see more initiatives like this, as well as an increased effort to promote awareness of freely available support for regulators to develop AI knowledge and skills.

66. To apply proportionality, our Regulatory and Conduct team will need visibility into where and how AI is used by those it regulates. This information can be difficult to obtain, as it is not always obvious where AI is in use, particularly when it is embedded in products developed by third parties. A requirement for AI developers, implementers and users to document their use of AI including risk management activities such as any certifications obtained, and to make this documentation available to regulators is key to informing the risk assessments used to identify where to focus our efforts. In addition gathering and maintaining this information will require significant effort and the central functions can help by providing guidance on the types of information required and how it can be collected and recorded, by for example providing templates that can be completed.

67. ICAEW operates as a regulator in areas covered by other regulators such as the Financial Conduct Authority (FCA), Insolvency Service and Legal Services Board. Collaboration with other regulators will be key to clarifying remits and ensuring that any guidance and requirements are consistent, cohesive and supplementary, and the central functions can play a key role in helping to facilitate this collaboration.

Question 20

Do you agree that a pooled team of AI experts would be the most effective way to address capability gaps and help regulators apply the principles?

68.   Partly. We somewhat agree that a pooled team of AI experts would be the most effective way to address capability gaps and help regulators apply the principle. See response to question 19 above.

Tools for trustworthy AI

Question 21

Which non-regulatory tools for trustworthy AI would most help organisations to embed the AI regulation principles into existing business processes?

69.   Publicly available, certified, bias free data sets that organisations could use to train their AI systems would help embed the principles. This data should be comparable to data sets that the model will use e.g. records describing (fictitious) individuals and their CVs could be made available for recruitment system AI model training. Using such certified data sets would help mitigate the risk of bias in AI models which aligns to the Fairness principle.

70.   Voluntary AI Certification as described in the response to question 10 above would help businesses embed the AI regulation principles. The certification requirements could be aligned to the principles, providing businesses with clarity on what they need to do to embed the principles in their business processes. It would also help manage AI risks across the supply chain as it would put the onus on businesses to make sure they protect users of their AI. Where vendors are involved, organisations would in turn put requirements on the vendors providing the solution who in turn would have requirements of those building AI models. Organisations making certification a requirement to work with suppliers would also encourage AI developers to be responsive, transparent, and responsible when building AI solutions.

71.   Gamification can be used as part of certification to test understanding and skills and to encourage embedding and adoption of the principles. Similar techniques have been used in other qualifications such as Prince2 for Project Management. Providing funding for such training would help minimise costs and encourage adoption.

Final thoughts

Question 22

Do you have any other thoughts on our overall approach? Please include any missed opportunities, flaws, and gaps in our framework.

72.   A number of key societal and global challenges including sustainability and compute capability have been excluded from the scope of the proposed regulatory framework. These issues must be considered in defining a regulatory framework. The impact of AI on environment is particularly important. Training Large Language Models (LLMs) requires an incredible amount of data to train on, as well as significant power to run the hardware that stores and analyses the data. Most of this hardware is in large data centres across the world which are responsible for emitting greenhouse gases that contribute to global warming. This is a global challenge recognised in the United Nations Sustainable Development Goals (SDGs). The UK must be a responsible global citizen and demonstrate leadership and collaboration by ensuring that its regulatory framework for AI considers and mitigates the environmental impact of AI.

73.   As highlighted in our response to the previous White Paper, the definition of AI appears to be inconsistent. In the policy paper published in July 2022, and in this consultation, AI is defined as having the characteristics of being adaptable and autonomous. However, the examples of AI provided in Box 1.1 include an example of "farming efficiency" robots which may be

autonomous in how they move in the field but they only provide data for the farmer. They are not actually acting, but simply gathering data and organising it in useful ways for a human.

74. We are concerned about the imbalance of power in the private sector, with big tech companies such as Google and Microsoft having greater access to data and processing power. This is the fuel on which large AI models such as foundation models run and combined with their greater access to AI skills and capabilities, presents a real danger that they will dominate the AI market resulting in little choice and potentially worse outcomes for consumers. It is positive to see that this concern has been identified by the Competition and Markets Authority (CMA) who are conducting a review on the implications of the development of AI foundation models for competition and consumer protection. Regulation should be introduced as necessary to ensure that access to data and processing power is not limited by such companies. Whilst the concern is most acute in relation to big tech companies, it is not limited to this group and guidance should be provided to regulators to remind and encourage them to consider competition dynamics as part of their regulation of AI.

75. In addition, the identification of measures and requirements for trustworthy AI should be led by independent bodies such as a government department with a strong footing in governance and risk management, rather than by the big tech companies themselves. This will help limit ethical questions around objectivity and independence where the tech companies would effectively be defining the marking scheme against which they will be assessed. Whilst we recognise that big tech companies have a wealth of technical knowledge and skills, we see their role as being consulted and engaged rather than leading on defining requirements.

Legal responsibility for AI

Question L1

What challenges might arise when regulators apply the principles across different AI applications and systems? How could we address these challenges through our proposed AI regulatory framework?

No response

Question L2.i.

Do you agree that the implementation of our principles through existing legal frameworks will fairly and effectively allocate legal responsibility for AI across the life cycle?

No response

Question L.2.ii

How could it be improved, if at all?

No response

Question L3

If you are a business that develops, uses, or sells AI, how do you currently manage AI risk including through the wider supply chain? How could government support effective AI-related risk management?

No response

Foundation models and the regulatory framework

Question F1

What specific challenges will foundation models such as large language models (LLMs) or opensource models pose for regulators trying to determine legal responsibility for AI outcomes?

No response

Question F2

Do you agree that measuring compute provides a potential tool that could be considered as part of the governance of foundation models?

76. Measuring compute may not be completely effective for governing foundation models. We are already starting to see Large Language Models (LLMs) that are being trained in more targeted ways on smaller amounts of data as engineers learn how to optimise.

77. In addition, it is easy to avoid triggering compute thresholds by creating nested LLMs, each focussing on a particular specialism that stays inside the threshold, but which has the combined effect of much larger compute training. Anti-avoidance regulation similar to that for HMRC associated companies for corporation tax purposes may help to address this.

78. Quantum computing technology is developing and is likely to have an impact on LLMs. The full impact is yet unknown, but it may affect any governance model based on measuring compute.

Question F3

Are there other approaches to governing foundation models that would be more effective?

No response

AI sandboxes and testbeds

Question S1

Which of the sandbox models described in section 3.3.4 would be most likely to support innovation?

No response

Question S2

What could government do to maximise the benefit of sandboxes to AI innovators?

No response

Question S3

What could government do to facilitate participation in an AI regulatory sandbox?

No response

Question S4

Which industry sectors or classes of product would most benefit from an AI sandbox?

No response