



Digital Regulation: Driving growth and unlocking innovation

BCS Response

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BCS

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Table of Contents

Executive Summary.....	3
1 The Regulatory Sandwich	4
2 Putting Principles into Action	5
3 Embedding Principles with Regulators	7
4 Sustainability	8
5 Annex: Public Trust Survey	9
6 Who we are	11

Executive Summary

This document is the BCS response to the UK government consultation¹ on ‘Digital Regulation: Driving growth and unlocking innovation’.

BCS welcomes the government focus in the Plan for Digital Regulation (the Plan) on stimulating innovation, productivity and growth through digital technologies and the need to foster constructive competition. We also welcome the recognition of the key role that government regulation and regulators have to play in delivering on these objectives. We feel the Plan needs to be more explicit about providing tangible and sustainable benefits to society as well as delivering economic growth and improved productivity.

We therefore have not provided detailed responses to each question in the consultation, and have instead provided a summary of enhancements to the plan that will lead to greater public benefit, and which can be supported by continuous improvements in professional practice that will be needed to deliver the truly ethical innovation that is at the heart of the Plan.

In our view the Plan needs to be clearer and more compelling about the role of digital regulation and of digital regulators in:

- **building public trust** that digital technologies are developed and used to benefit society

The need for public trust has been highlighted in the Plan and also, for example, in the National Data Strategy², the Artificial Intelligence Roadmap³ and the National Innovation Strategy⁴. Public trust is earned when an organisation and the professionals within that organisation demonstrate they are highly competent, exhibit strong ethical behaviour and make themselves accountable for what they do. This means supporting the development of competency, ethics and accountability in the digital sector should be a key objective of future government regulation with regard to building public trust.

In particular then, where the Plan talks about the need for regulation to foster innovation, it should emphasise that:

- Regulation needs to foster **ethical, inclusive, and sustainable** innovation

Where the Plan talks about the need for regulation to encourage competition, it should also emphasise that:

- Regulation has an important role in developing competitive markets so that they favour organisations and professionals that are highly **competent, ethical and accountable**

¹ <https://www.gov.uk/government/publications/digital-regulation-driving-growth-and-unlocking-innovation/digital-regulation-driving-growth-and-unlocking-innovation>

² <https://www.gov.uk/guidance/national-data-strategy>

³

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/949539/AI_Council_AI_Roadmap.pdf

⁴ <https://www.gov.uk/government/publications/uk-innovation-strategy-leading-the-future-by-creating-it>

Finally where the Plan talks about protecting fundamental rights, it also needs to state that:

- Regulation should incentivise stakeholders to **advance digital technologies to solve key societal challenges**, such as concerning climate change, an ageing population, and the digital divide

To implement these principles regulators should establish collaborative partnerships with companies that use digital technologies as well as those that develop them. They should also work collaboratively with organisations such as learned societies, national academies and professional bodies that have expertise in advancing professional practice in technology for the benefit of the public.

1 The Regulatory Sandwich

Figure 1 illustrates the need for regulation that on the one hand fosters public trust in digital innovation, which is based on ensuring competency, ethical behaviour and accountability, and on the other hand that enables knowledge transfer, sustainable deployment and adoption of innovation in real world settings. This includes business strategies that are focused on innovation as a means of maximising productivity and growth of UK PLC.

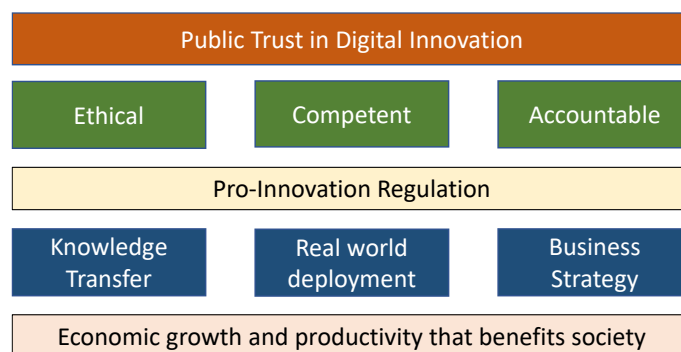


Figure 1: the Regulatory Sandwich

Truly successful innovation that is widely adopted is **underpinned by public trust**. Public trust in the development and application of digital technologies is founded on the knowledge that computing practitioners⁵ are competent, ethical and accountable (these are the three overarching principles of professionalism). That means building public trust requires public policy and regulation of data and digital that supports the continuous development of **professionalism**.

Employers large and small have told BCS during many consultations that innovation requires **diverse interdisciplinary teams** that are highly skilled at **ethically**:

- transferring a deep scientific knowledge of computing into business contexts (**Knowledge Transfer**)
- engineering digital systems that meet business needs (**Real World Deployment**)
- managing the adoption of digital technologies and maximising their value across

⁵ Computing practitioners in this context includes computer scientists, software developers, health informaticians, data scientists, AI practitioners, and all those involved in developing, adopting or managing information technologies.

strategic business units
(Business Strategy)

It should be recognised that in developing digital regulatory frameworks this dual role of regulation, as illustrated in Figure 1, needs to be properly factored into policy formulation and implementation. In particular when promoting innovation policy makers should understand how it flows from a combination of knowledge transfer, real world deployment and transformation of business strategy.

Also it is important to note that employers themselves are supporters of appropriate constructive challenge around ethical practice, competency and accountability when it can be shown to support innovation as outlined in the above regulatory sandwich. All of which shows that regulations that promote and supports the development of professionalism (as outlined above) will help to deliver the key objectives in the government's Digital Regulation Plan.

2 Putting Principles into Action

Government has made clear the importance of qualified professionals in the UK's recovery from Covid and adapting to life outside the EU. For example⁶:

"Qualified professionals work at the forefront of our public services and are crucial to the UK's world-leading services sectors. Consumers value the high-quality services that they receive from these professionals."

Qualified professionals will have responsibility for implementing regulatory frameworks in the workplace, and will need to understand how to incorporate new or changed regulations within their professional practice. It is essential regulators work collaboratively with the professions, including professional bodies, when new regulations are being considered, or when there is expert opinion needed on the most effective mechanisms for achieving desired regulatory outcomes.

Table 1 below shows the key objectives from the Plan explaining how digital regulatory principles will be put into action, together with the BCS expert view on what needs to be added to those objectives to ensure they can be best supported by innovations to professional practice. In addition we have included the following objective which is not currently in the published plan, and which we believe is essential in our post-Covid, post-EU world.

Additional Regulatory Objective: The UK leads the world in leveraging regulation to develop the gold standard in digital professional practice, delivered through proactive cooperative between regulators, employers, professional bodies and citizens.

⁶ <https://www.gov.uk/government/consultations/recognition-of-professional-qualifications-and-regulation-of-professions-call-for-evidence>

Strategic objectives in the Regulatory Plan	BCS recommend version
Policymaking should be coherent and pro-innovation by default	Policymaking should be coherent and pro <i>ethical, sustainable</i> and <i>inclusive</i> innovation by default
New regulations should be designed from the outset with a clear understanding of how they connect into the regulatory ecosystem	New regulations should be designed from the outset with a clear understanding of how they connect into the regulatory ecosystem <i>and the wider ecosystem of professional practice</i> , including relevant professional bodies, learned societies and national academies
New regulatory functions are assigned coherently across the landscape	New regulatory functions are assigned coherently across the landscape, <i>taking into account how they can support innovations in professional practice that will rapidly implement regulatory changes</i>
Review existing duties and objectives to ensure they deliver a proportionate and coherent regime	Review existing duties and objectives to ensure they deliver a proportionate and coherent regime that <i>stimulates enhanced competency, ethical behaviour and accountability</i>
Ensure regulators have the capabilities they need to respond quickly to the latest innovations and developments in digital technologies and markets	Ensure regulators have the <i>capabilities, competencies and capacity</i> they need to respond quickly to the latest innovations and developments in digital technologies and markets
Ensure that digital regulators are able to work effectively together to deliver coherent outcomes for industry and consumers	Ensure that digital regulators and <i>stakeholders responsible for advancing professional practice</i> are able to work effectively together to deliver coherent outcomes for industry and society
Shaping open international order, including regulation, norms and digital technical standards - crucial for areas like the fourth industrial revolution	Shaping open international order, including regulation, norms, digital technical standards, and <i>digital professional practice</i> - crucial for areas like the fourth industrial revolution
UK supports industry-led, inclusive, multi-stakeholder approaches for the development of technical standards	UK supports industry <i>and profession</i> led, inclusive, multi-stakeholder approaches for the development of technical standards
<Additional Objective>	The UK leads the world in leveraging regulation to develop the gold standard in

	digital professional practice, driven through close collaboration with employers, professional bodies and citizens.
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Table 1: BCS expert opinion on putting principles into action

3 Embedding Principles with Regulators

The Plan includes a set of initiatives that are aimed at embedding the overarching principles within regulatory frameworks. Table 2 below shows the key initiatives from the Plan explaining how digital regulatory principles will be embedded with regulators, together with the BCS expert view on what needs to be added to those initiatives to ensure they can be best supported by innovations to professional practice.

Strategic initiatives in the Regulatory Plan	BCS recommend version
Establishing the new Digital Markets Unit to drive competition across digital markets	Establishing the new Digital Markets Unit to drive competition across digital markets <i>so that they favour organisations and professionals that are highly competent, ethical and accountable</i>
Ofcom to oversee the new online harms regime	Ofcom to oversee the new online harms regime, working collaboratively <i>with stakeholders concerned with developing professional practice in this area</i>
The recently-formed Digital Regulation Cooperation Forum, a voluntary forum comprising the CMA, FCA, ICO and Ofcom, where one priority area is service design, algorithmic processing, advertising technology and service encryption	The recently-formed Digital Regulation Cooperation Forum, a voluntary forum comprising the CMA, FCA, ICO and Ofcom, where one priority area is <i>service design and development, algorithmic processing and algorithmic decision making</i> , advertising technology and service encryption, <i>with an emphasis on ensuring they are ethical and inclusive</i>
Exploring whether to establish additional duties for digital regulators to consult and cooperate with each other, to enhance regulatory coordination on digital issues and help ensure it remains an ongoing priority	Exploring whether to establish additional duties for digital regulators to consult and cooperate with each other <i>and other key stakeholders responsible for advancing professional practice</i> , to enhance regulatory coordination on digital issues and help ensure it remains an ongoing priority

Table 2: BCS expert opinion on embedding principles with regulators

4 Sustainability

It is critical that all government policies reference the need for global decarbonisation, and how the policy will support that outcome.

According to The Royal Society's 2020 report⁷, *Digital technology and the planet: Harnessing computing, "to achieve net zero nearly a third of the 50 per cent carbon emissions reductions the UK needs to make by 2030 could be achieved through existing digital technology"*. For that to happen will require globally harmonised digital standards to ensure high quality data and professional practice is established across the globe.

As current Chair of the G7 and host of the COP26 summit, the UK is in a unique position to lead the global efforts towards a green and sustainable future. The UK should work with regulators from all governments participating in both the G7, the G20 and COP26 to seize this unique opportunity for international collaboration to make visible and tangible commitments to Green IT and responsible computing both at home and internationally through appropriate internationally aligned regulatory frameworks. This should be a priority objective in the Digital Regulation Plan.

⁷ <https://royalsociety.org/topics-policy/projects/digital-technology-and-the-planet/>

5 Annex: Public Trust Survey

We commissioned YouGov to conduct two national surveys in 2020 of representative samples of the UK adult population across all devolved nations to find out how badly public trust in information technologies, such as for example AI, had been eroded. We include the results of the surveys in this document to reinforce the need for digital regulation to support building public trust.

The headline results from those surveys were:

- Over half (53%) of UK adults have **no faith** in any organisation to use algorithms when making judgements about them⁸, in issues ranging from education to welfare decisions.
- 63% of UK adults **disagree** with the statement “*Students graduating with a computer science university degree are qualified to write software that makes life decisions about people*”
- 62% of UK adults believe someone who for a living develops computer software that can significantly affect people's lives should be qualified as a government-approved **Chartered professional**

The following lists the detailed questions and responses from those surveys.

Question: Which, if any, of the following organisations do you trust to use algorithms to make decisions about you personally:

Base: All UK adults	2076
The Government	10%
Social media companies (e.g. Facebook, Instagram etc.)	8%
'Big Tech' companies (e.g. Apple, Google etc.)	11%
Financial services (e.g. banks, insurance companies etc.)	16%
Health and social care (e.g. the NHS, private health care, the council etc.)	17%
Armed Forces	7%
The education sector	7%
The police	11%
Social Services	7%
National Security and Intelligence services	12%
Housing associations	6%
Other	1%
Don't know	16%
I do not trust any organisations to use algorithms to make decisions about me	53%

⁸ <https://www.bcs.org/more/about-us/press-office/press-releases/the-public-dont-trust-computer-algorithms-to-make-decisions-about-them-survey-finds/>

Question: Who, if anyone, do you think should be responsible for ensuring that digital technology is used to solve ethical issues?

Base: All UK adults	2063
Politicians	22%
Universities	18%
Technology companies (e.g. Apple, Google etc.)	23%
An independent regulating body	59%
The individual computer programmer	13%
Other	3%
Don't know	13%
I do not think anyone should have responsibility for this	14%

Question: To what extent do you agree or disagree with the following statement?
 "Students graduating with a computer science university degree are qualified to write software that makes life decisions about people"

Base: All UK adults	2063
Strongly agree	2%
Tend to agree	16%
Tend to disagree	32%
Strongly disagree	31%
Don't know	19%
Net: Agree	18%
Net: Disagree	63%

Question: To what extent do you agree or disagree with the following statement:
 "Someone who develops computer software for a living that can significantly affect people's lives, should be qualified as a government-approved Chartered professional"

Base: All UK adults	2063
Strongly agree	22%
Tend to agree	40%
Tend to disagree	11%
Strongly disagree	6%
Don't know	21%
Net: Agree	62%
Net: Disagree	17%

6 Who we are

BCS is the UK's Chartered Institute for IT. The purpose of BCS as defined by its Royal Charter is to promote and advance the education and practice of computing for the benefit of the public.

We bring together industry, academics, practitioners and government to share knowledge, promote new thinking, inform the design of new curricula, shape public policy and inform the public.

As the professional membership and accreditation body for IT, we serve over 55,000 members including practitioners, businesses, academics and students, in the UK and internationally.

We also accredit the computing degree courses in over ninety universities around the UK. As a leading IT qualification body, we offer a range of widely recognised professional and end-user qualifications.