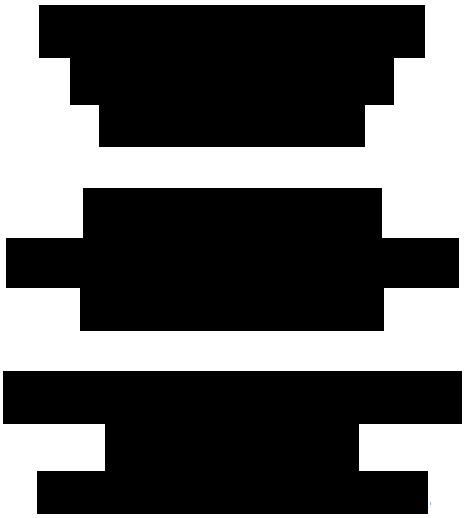
Dublin City University
Institute for Future Media, Democracy, and Society

Submission to the Public Consultation on the Inaugural Research and Innovation Strategy Department of the Environment, Climate and Communication (DECC)

July 2023



Dublin City University Institute for Future Media, Democracy, and Society (DCU FuJo) is a multidisciplinary research centre focused on the digital transformation of media, democracy, and society. DCU FuJo researchers investigate how to counter digital problems including disinformation and digital hate; how to enhance public participation through democratic innovations; and how to secure the future of high-quality media and information.

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Introduction

The DCU Institute for Future Media, Democracy and Society (FuJo) welcomes the opportunity to contribute to the Department's inaugural Research and Innovation Strategy. Our research expertise in democratic innovations, online harms (including mis/disinformation), and digital media have a direct bearing on many of the Department's programme areas. In particular, we note that a successful transition to a green and digital economy will require a firm foundation on democratic legitimacy, citizen empowerment, and trustworthy information. As such, our recommendations do not focus on research gaps in the Department's areas of responsibility - such as climate, cybersecurity, and energy - as others are better placed to address fundamental research needs in these areas. Instead, we present overarching recommendations that we believe are necessary to underpin the Department's objectives and to ensure that any investment in research and innovation works towards those objectives.

The fundamental changes in the natural and built environment brought about by climate change and the accelerating pace of digital technologies are not trivial issues. These are complex and evolving issues that require ongoing research and the cooperation and collaboration of multiple sectors. Ultimately, we believe research evidence needs to inform policy and that policy needs to be implemented for the benefit of citizens and Irish society. Regarding the green economy, we note that Ireland has a particular obligation to act on evidence and develop robust policy given the ongoing failure to meet climate targets. Meanwhile, regarding the digital economy, given the large number of technology companies based here there is an obligation to ensure that citizens and businesses are able to thrive in a secure, sustainable, and ethical digital society.

In this context, we present our recommendations below, which are discussed in greater detail under the appropriate headings. We hope the Department finds these views and recommendations helpful and we will be glad to discuss them further.

Key recommendations

1. Adopt good communication practices around research and innovation to anticipate and pre-empt potential misunderstandings and disinformation campaigns.
2. Ensure research evidence is available for citizens in accessible and actionable ways.
3. Ensure a cohesive strategy by overcoming fragmentation in policy areas and remits.

1. What gaps do you see in the Department's current research and innovation activities? How should we address those gaps in the Department Research and Innovation Strategy?

The Department has set out a vision of a" climate-neutral, sustainable, and digitally connected Ireland". The focus is on ambitious cross-governmental climate and environment action as well as a shift to sustainable resource use and an energy system transformation, as well as connectivity and cyber security. While all of these are essential for 21st-century Ireland, it is essential that they are brought together into an interconnected and integrated whole with a focus on avoiding silos given the cross-cutting nature of many of the issues. For example, cybersecurity is connected to internet safety, digital skills, digital literacy, and media literacy, among other areas. Research on these topics is often tied to work in the Department of Education (and associated bodies including the National Council for Curriculum and Assessment) and the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (and associated bodies including Coimisiún na Meán). Given these overlaps, there is considerable potential for fragmentation and silos.

Moreover, we suggest that mis/disinformation is a foundational challenge that cuts across the Department's areas. In the area of climate, for example, research and policy is subject to considerable misunderstanding as well as disinformation campaigns aimed at delaying climate action. To combat this, it is necessary to ensure that governments and public bodies develop clear communication strategies to both anticipate and respond to disinformation. Research can help define the disinformation threats in Ireland and the effectiveness of different responses such as de-bunking and pre-punking.

There is also a need for more responsive and flexible research to reflect changing needs and priorities such as, for example, national and global events such as the Covid-19 pandemic, or the Oireachtas declaration of a global climate emergency. In order to conduct such research an interdisciplinary understanding of problems is essential as is a community outreach or citizen participation focus in order to ensure the Irish population is not misled about the remit or objectives of the unit.

Thus, the research programme must be dynamic and capable of adapting to a changing and evolving policy and informational landscape, capable of directing funding to support new priorities while avoiding unnecessary disruption to the capacity and expertise in the aligned research organisations.

2. What actions can the department take to identify future trends in the areas under our remit?

1. Establish a dedicated research unit staffed by qualified (multi-disciplinary) researchers within the Department to monitor and analyse emerging trends in climate, environment, sustainability, and digital technologies. It should be

capable of overseeing a diverse research agenda and multiple centres and institutions and identifying potential future challenges and opportunities. The unit would facilitate knowledge-exchange, interdisciplinary research projects, and collaborative problem-solving.

2. Leverage data analytics and big data to analyse patterns and trends related to environmental and climate changes, providing valuable insights for future planning. The research unit should be overseen by a Strategic Advisory Board to oversee the research function. A useful model would be the Strategic Advisory Board (SAB) for science funded by the Rural and Environment Science and Analytical Services Division (RESAS) of the Scottish Government.
3. Ensure there is coordination between different departments and bodies in terms of commissioning or accessing research. An effective strategy will require a significant capacity for the coordination of knowledge sharing and enabling of collaboration.

3. Are there specific thematic areas relevant to the Department's remit which you would like to see more research and innovation activity in? How can this be achieved?

As noted in the introduction, domain experts are better positioned to make research recommendations on relevant thematic areas including climate change mitigation and adaptation; renewable energy technologies; circular economy and sustainable resource management; and digital transformation for environmental monitoring. However, we note that democratic legitimacy, citizen empowerment, and trustworthy information are cross-cutting concerns for each of these areas:

- Democratic legitimacy concerns the extent to which the public supports expert-led policymaking. As democratic governments increasingly rely on experts for complex subjects such as energy, there is a danger of becoming distant from citizens. As such, there is a need to research how to reduce the gulf between citizens and experts.
- Citizen empowerment concerns the capacity of citizens to develop the knowledge and skills required of the 21st Century media world including access to reliable information and communication infrastructures.
- Trustworthy information is a two-fold concern about (i) the threats posed by media manipulation and disinformation and (ii) public access to and trust in reliable information sources.

We suggest that these issues be included in any dedicated funding across the research topics.

4. Have you views on the impact of disruptive technologies such as AI, Quantum and 6G as part of the digital transformation agenda and the implications of these technologies for the Department?

The dedicated research suggested above could play a key role in horizon-scanning future developments and their potential implications. We note that digital technologies are always evolving and are likely to play a disruptive role into the future. In terms of digital transformation, it is vital that citizens are not left behind or left vulnerable to manipulative and vested interests. The Department needs to proactively develop policies to govern the ethical use of AI and related technologies. In terms of citizen empowerment, there is a tendency to perceive empowerment narrowly in terms of 'how-to' skills rather than broadly in terms of digital knowledge, skills, and confidence. In addition, there is a tendency to focus on formal education rather than the lifecourse. We suggest that research on disruptive technologies include a focus on how to ensure citizens are informed, secure, and empowered in the digital sphere.

5. How can the Department better communicate its research and innovation needs?

6. How can the Department work more effectively to source evidence from the national research and innovation community to support its work in policy development, policy implementation, and the uptake of new technologies?

7. How can the Department engage more effectively with all stakeholders in the national research and innovation system? If you are responding on behalf of an organisation, please state how the Department could more effectively engage with your organisation.

Given the scope of the Department's remit, it needs to be able to communicate and exchange information with a wide-range of researchers who are working across multiple sectors (academic, government, NGO, industry) and across multiple disciplines in the sciences, social sciences, humanities, and business. This is challenging because the needs and practices of these research communities vary considerably. There is no one-size-fits-all approach in this scenario. We suggest the Department needs to adopt a broad communication and engagement strategy that makes use of multiple channels. The Department may consider establishing a dedicated platform or website to communicate the Department's research and innovation priorities, funding opportunities, and ongoing projects. This may be supplemented by more tailored sector/discipline specific events for knowledge sharing and regular stakeholder consultations. A research and innovation advisory committee comprising representatives from diverse stakeholders would be beneficial to guide these efforts.

8. Should the Department seek to grow its capacity to carry out in-house research? If yes, how can this be achieved?

Yes, in line with question three above, we suggest the Department establish a dedicated research unit. This would require hiring qualified researchers from multiple disciplines. This expertise is necessary to understand, commission, and manage research. However, for more detailed or specialised research it may be more beneficial to collaborate with researchers from other sectors.

9. Are there examples internationally of Government strategies on research and innovation in climate, communications / digital, circular economy, cyber security, energy or environment that we should examine? If so, can you provide details?

We would point in particular to the Scottish government's 2022 to 2027 Environment, Natural Resources and Agriculture Strategic Research Programme (SRP) which involves collaboration, coordination and networking across multiple disciplines, led by an in-house research unit, overseen by a Research Portfolio Board which oversees the whole portfolio of research funded by the programme including the Centres of Expertise. Its members will represent the users of research in the Scottish Government and external stakeholders, as well as research providers. The Portfolio Board is supported by three subgroups covering scientific, operational and institutional issues including a Strategic Advisory Board as well as a Scientific Advisory Board, which works in partnership with a number of academic and other research institutes in both the social and environmental sciences (https://www.gov.scot/publications/strategy-environment-natural-resources-agriculture-research-2022-2027/). A principal strategic focus of the Scottish example is to avoid silos and barriers between the different funding mechanisms used.

10. Are there any other matters you wish to raise in relation to the development of the research and innovation strategy?

One of our recommendations is to ensure research evidence is available for citizens in accessible and actionable ways. We suggest the Department and any research funded by the Department follow best practices in science communication and aim to enhance the public communication of science. This is a necessary step to help reduce the gap between experts and citizens and to mitigate against potential mis/disinformation that may undermine the Department's objectives.