Enabling an equitable digital society

Opportunity status:	Open
Funders:	Engineering and Physical Sciences Research Council (EPSRC)
Funding type:	Grant
Total fund:	£5,000,000
Award range:	£625,000 - £1,250,000
Publication date:	22 June 2021
Opening date:	22 June 2021
Closing date:	14 September 2021 16:00 UK time

Last updated: 10 August 2021

Timeline

22 June 2021
Opening date

14 September 2021
Closing date

February 2022
Prioritisation panel

End of March 2022
Funding decision

Call Purpose

Apply for funding to explore and develop **human-centred digital technologies** and **services** that enable an **equitable society**.

Proposal Team requirements

- researchers from at least two disciplines across the EPSRC, ESRC and AHRC portfolio
- at least one early-career researcher at lecturer level as principal or co-investigator
- at least one researcher co-investigator at postdoctoral level.

Size of call

Max. award: £625,000 – £1,250,000 (of total fund of £5 million) at 80% Fec

Equitable Digital Society

Digital technologies are having a profound effect on the organisation of societies and the practices of everyday life. However, the benefits of the digital economy are not equally distributed, for example between different age groups and socioeconomic backgrounds. In some cases, digital technologies are creating new challenges of social division and inequality.

The Equitable Digital Society priority focuses on addressing these issues by challenging the assumption that technology alone is sufficient, and instead promotes the co-creation and design of appropriate digital technologies and services that will support a fairer, more inclusive society. Crucially, this will require academia, industry, the third sector, government and other relevant organisations to work together to identify and prioritise citizens' needs to define a shared vision for an Equitable Digital Society and how it can be achieved. The aim is to reach greater social, political and economic inclusion, and to support social cohesion, whilst minimising the emergence of new spheres of exclusion. This may enable greater creativity, productivity and enhanced wellbeing of all citizens.

Examples of high-level research questions include: How can the potential for technology and whole system/service design be realised to make socioeconomic life fairer? Can decentralisation play a part in empowering citizens through control and access of their data? In a future world where artificial intelligence may become pervasive, how will automated decision-making by algorithmic classification be governed? How can we ensure that data-driven decision-making does not result in prejudice and discrimination, and that citizens are equipped to challenge algorithmic decisions? How can negative consequences due to online harms be predicted and prevented? How can digital technologies address the challenges of adoption and use of technology across societies, for example in addressing the issues faced by those who are unwillingly not in the Banking system? What are the changes required to achieve an Equitable Digital Society that can be addressed by sociotechnical, applied research?

An ambitious outcome would be the judicious use of digital technologies and services across all societies which supports inclusion, equality, participation and social justice.

To align with this priority, research should commit to a co-creation approach with a wide range of citizens, including both socioeconomically advantaged and disadvantaged communities, and ensuring a range of cultural perspectives. Processes for these citizens' engagement, consultation and representation in the design and use of digital technologies, platforms and services should be incorporated into the research. An Equitable Digital Society should aim to realise digital benefits for all, empower the disempowered, and create technologies that will reduce inequalities and shape inclusive societies to help reach the best version of our increasingly digitalised world.

Initial analysis of fit

- An interdisciplinary area that maps onto our existing disparate activities in Digital Education, because of the role that digital education has in creating an equitable society (e.g. for Low,Middle-Income Countries) –
- but perhaps this is not what the call-writers were anticipating.
- The call covers things we probably want to do anyway (e.g. Tim D, Joe with remote labs and interactives, Tim F/Jen social justice/fairness elements)
- The call provides an opportunity to coalesce and formalise our activities across Colleges.
- This could map nicely onto a longer term activity/relationship at EU, rather than just being a one-shot deal for a single call (but predicting the future is hard)

Do we jump this year?

- There are four weeks left
- Many of use heavily committed on operational matters over the last 18 months, with ongoing matters to attend to
- What theme might it be next year, if there is one?

Last year’s call

- **Digital Economy: Sustainable Digital Society**
- “This call focuses on **environmental sustainability**. It is recognised that social and economic sustainability are interconnected with environmental sustainability, therefore exploration of these aspects of sustainability is acceptable and welcomed, provided environmental sustainability is the primary focus.” (Closed 1 October 2020)

Possible themes for next year?

Digital Economy Theme Research Priority Areas

We are working in partnership with users and the academic community in five key cross-disciplinary priority areas.

The five Digital Economy (DE) Theme priority areas have been developed through engagement with the research active community and reflect the Theme's long-term strategic goals. These priorities are at the heart of Digital Economy Theme research.

The example research questions provided are not exhaustive. We welcome research proposals which can address these priorities within a range of contexts, includin major societal issues such as the COVID-19 pandemic and the net-zero agenda.

Select a priority area to learn more:

1. **Trust, Identity, Privacy and Security** 2015
2. **Beyond a Data Driven Economy**
3. **Sustainable Digital Society** 2020
4. **Equitable Digital Society** 2021
5. **Content Creation and Consumption** 2016

https://epsrc.ukri.org/files/funding/calls/2015/tipsintentstosubmit/
https://epsrc.ukri.org/files/funding/calls/2016/content-creation-and-consumption-in-the-digital-economy/

Content Creation and Consumption

Creating and consuming digital media, games, and interactive software can be diversified and made more accessible. In content creation, there is significant potential to support wider application of digital creativity techniques and technologies across many domains.

Creative content methodologies have already been deployed with impact in education and community campaigning, and there is likely to be significant scope for further impact not only in the creative industries, but in sectors such as manufacturing and healthcare. For content consumption, the diversification of the set of devices and platforms through which content is accessed offers exciting research challenges. As people increasingly use heterogenous combinations of devices, including within smart environments, there is scope for research in richer, more responsive user experiences.

Tackling this research priority will require fundamental changes to how we view creativity and digital expression. Key to this is the investigation of intelligent tools, processes and platforms, which make it easier for expert and non-expert users to generate, disseminate, understand, customise and retrieve digital content. At the same time, we must ensure content authenticity, provenance, and intellectual property rights, while investigating new approaches to human-algorithmic interaction and the rationale behind data-driven or automated decision-making.

Examples of high-level research questions include: What are the application domains and novel tools and methods that will support contextually broadened content creation and consumption? What prototypes and other interventions will enable, motivate and illuminate the overcoming of specific challenges in new domains? How can we realise the full impact potential of existing digital creativity techniques across video and games? What are the content creation and consumption opportunities for using mixed reality, generative AI and responsive media, for research in the creative economy and more widely? And how can the unengaged community be engaged and how can resistance to accepting research ideas be overcome by using creative techniques, for example, through the provision of demonstrators, evidence frameworks and technology enablers?

The creative industries' landscape can be revolutionised by amplifying the knowledge that is exchanged and shared between researchers with different levels of expertise and background, particularly across sectors which are not traditionally associated with one another, and where experience-centred approaches and design thinking could potentially enhance value. This could mean the integration and convergence of technologies and taking account of the varying perspectives of different types of user behaviours, backgrounds and cultures to create tools for new immersive experiences and digital personalisation of products.

Advances are needed in AI, human-computer interaction, software engineering and sociotechnical understanding to underpin this, and research should be undertaken in collaboration with artists, designers, social scientists, entrepreneurs and psychologists, and others.

Beyond a Data Driven Economy

The dramatic explosion of data over the last decade has changed the way society operates. The emergence of the data-driven economy has created new opportunities for businesses and stimulated research and innovation to harness the power of the ever-expanding volume of data.

Digital platforms underpinned by this data are driving de-centralisation of the digital economy, enabling a dynamic gig economy, in which everyone has the potential to become a producer and consumer. Data can be considered as an enabler to create new businesses models to help address key challenges across the economy and society through the democratisation of information; for example, in healthcare, the supply chain (e.g., food, manufacturing), sustainability, transport, crime and the creative economy. But the fast pace of these transformations means many of these changes are poorly understood, with siloing of data creating concentrations of socio-economic power with limited stakeholder governance.

The 'Beyond a Data-Driven Economy' priority focuses on addressing these issues by considering both the impacts and opportunities that the data-driven economy will have on individuals, businesses and governments. The key focus of this thematic area is the range of challenges and opportunities for business; however, it will also need to address the commensurate challenges of governance and government.

Examples of high-level research questions include: How do/will the emerging technologies underpinned by data enable new products or services and change the way they are delivered? How does the proliferation of data impact the individual, the world of work, and the breadth of the private sector? How can data analytics be implemented to aid business strategies? What's the potential of using decentralised platforms underpinned by trusted data for transport, supply chains or the creative industries? How can the security implications of the sharing economy be addressed? Will decentralisation lead to citizens being empowered to better manage personal data through selling or leasing their data, education, digital literacy or policy? What are the ethical considerations of data commodification and data sharing for AI? In addition, advances are needed around distributed ledgers, data analytics, AI, ethics and policy, decentralisation of data control/access, security in the sharing economy and cryptocurrencies.

A significant outcome would be for this priority to address how markets can harness and learn from data, including how new technology can enable businesses to create and adopt new business models, and how these changing models of value may affect the way we work, and change the way we interact with individuals, businesses and government. This should include good governance of data-driven platforms, and issues of fairness and equality around new models of value emerging in the data-driven economy.

A holistic, people-centred systems approach should be taken; the needs, attitudes and behaviours of individuals who interact with the digital systems for businesses being considered at the heart of any research proposal. Research is needed to understand how society and businesses want to operate in the human-driven data economy and how to harness the opportunities that will arise. The collection, buying, selling and leasing of data are emerging issues in this area, so it is important that researchers consider Responsible Research and Innovation and ethics, good governance and societal impact when developing new business models or platforms. Hence, proposals should focus on the 'how' rather than the 'what' in terms of products and services and aim to facilitate adoption through the integration of the consideration of societal attitudes, technical challenges, law and regulatory matters.