Department for
Digital, Culture,
Media & Sport

DCMS Areas of Research Interest

2018

Department for Digital, Culture, Media and Sport

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Introduction

The Department for Digital, Culture, Media and Sport has substantial responsibilities and achieves significant social and economic impact. Our sectors make up more than 14% of the UK economy and our efforts enrich the lives of people across the UK; from providing access to superfast broadband, to boosting social action and building participation in culture, the arts and sport. From its earliest origins as the Department of National Heritage, DCMS has grown to the department it is today. A department that focuses on the UK's future as a digital, global leader with innovation, technology and creativity at its economic heart - together with the heritage, sporting and cultural assets that make it a great place to live, work, visit and invest.

To ensure our policies are as informed as possible we work with a wide range of stakeholders to further our understanding of our sectors and generate a strong evidence base. This Areas of Research Interest (ARI) document has been created to provide a high level, strategic view of the type of research we will need in the coming years to help develop and deliver those policies. It brings together our main evidence priorities covering our five strategic objectives as set out in our Single Departmental Plan (SDP):

1. Global: promote global Britain, demonstrating that the UK is a great place to live, work, visit and invest
2. Growth: grow an economy that is creative, innovative and works for everyone
3. Digital: make the UK the best digital economy in the world and drive its digital transformation
4. Participation: maximise cultural and sporting participation, volunteering and social action
5. Society: support our media, a free press and a shared society

Section A sets out our high level strategic research themes that cut across our policy areas and help deliver our objectives. Section B sets out the more detailed nearer term (2 - 4 years) research questions that will help us address the more immediate policy challenges facing the department. We intend to work further to articulate our objectives here and welcome discussions and engagement on this.

The ARI is informed by the policy needs of DCMS officials but researchers might also wish to note the work of our Arms Length Bodies, many of whom conduct research of their own.

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The ARI can be used by anyone working in a relevant field of study who wishes to know more about DCMS's research and evidence needs. It is designed to encourage researchers and academics to explore those topics that could be of benefit to DCMS and our sectors and act as a starting point for future collaboration. It is necessarily only a summary of research interests.

The ARI is a live document that we intend to keep updated as new evidence needs arise as we develop our policies. We welcome discussions with researchers to exchange further detail on our objectives in these areas.

DCMS has recently appointed a Chief Scientific Adviser function as a result of its growing policy mandate. One of the key functions of the new Chief Scientific Adviser will be to increase engagement with UKRI, the research councils and academic institutions around the department's objectives. To contact the department and discuss the ARI, or collaborating on research more generally, please contact the Chief Scientific Adviser's office at csa@culture.gov.uk

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SECTION A

DCMS Strategic Research Themes

Our strategic research themes are designed to bring together the high level, cross cutting research areas that are relevant to multiple policy areas. The themes are aligned with the department's Single Departmental Plan and ministerial priorities and research in these areas will help the department deliver its five strategic objectives.

Digital

The internet is a powerful force for good. It serves humanity, spreads ideas and enhances freedom and opportunity across the world. Combined with new technologies such as artificial intelligence and with access to data on a never seen before scale, it is set to change society perhaps more than any previous technological revolution – growing the economy, making us more productive, and raising living standards.

Alongside these new opportunities come new challenges and risks – at a societal as well as individual level. The internet can be used to spread terrorist material; it can be a tool for abuse and bullying; and it can be used to undermine civil discourse, objective news and intellectual property. We need to ensure as far as possible the internet works to the benefit of humanity, not to its detriment.

To position the UK as a world leader in this space it is critical we have a coherent programme of applied multidisciplinary research to enable informed, robust, forward looking policy and decision making; spanning: technology capability and evolution, social and economic impacts and opportunities, shifts in behavioural and societal norms, the impact on our culture, values, and considerations for laws and regulation.

Connectivity and Productivity

World leading telecoms infrastructure is a priority for the government and its availability underpins DCMS' objective to make the UK the best digital economy in the world and drive digital transformation. Investment in these new technologies has the potential to increase productivity across a wide range of sectors of the economy.

High quality telecoms networks can drive productivity improvements in a number of ways; through facilitating new ways of working and reducing the costs of doing

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business, increasing the size of markets by making it easier for firms and consumers to interact - in turn driving economies of scale and improving competition. In addition the benefits from investment in network infrastructure are often non-linear, meaning that there can can be large benefits from completing a network, rather than a constant return to each incremental investment.

Research that that enables us to estimating the size of these benefits, as well as the their distribution, is vital for policy making - both in understanding the case for government intervention and designing policy interventions so that we can effectively target key problems.

5G promises radically different capabilities and services, in particular to new industries beyond people based voice and mobile connectivity. However the business model for 5G is not clear - based on mobile broadband alone, the investment case may not stack up; but equally it is not obvious how MNOs can use existing models to monetise these wider uses of 5G. We need to develop new models for 5G value chains, and develop an understanding of the opportunities and factors governing the likely investment in 5G and its take-up.

It is also critical to ensure a digitally secure future infrastructure for the UK, in particular in the context of rapid uptake of the Internet of Things. As we enter the age of connecting everything we move to a world never before seen; one where there is a huge opportunity for value creation, productivity and new services, but with security and privacy vulnerabilities as the IoT underpins our daily lives at an individual level, our household and business security, and our critical infrastructure at a national level.

The UK is recognised as having a leading and globally influential position in this area, for example through our Secure by Default programme. But the picture for the future is one of radical difference to today - we should build on and develop our globally leading position, through a substantial programme of fundamental research addressing the future developments and threats.

Enabling People to Thrive

Enabling people to live healthy, fulfilling lives is at the heart of what we do. Being physically active, experiencing art, culture, heritage and finding meaningful engagement with local communities through volunteering and other social interactions all play a huge part in determining a person's quality of life. Our digital experiences are also key to our health and wellbeing. Digital technology has enabled

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a huge rise in the consumption of culture be it streaming films and music, playing video games or joining online communities.

These activities can all help to improve individual lives and they also help tackle some of the great challenges facing the UK as a whole, from childhood obesity to loneliness and the implications of an ageing population.

We need research to help us understand what the factors are that underlie some of our biggest challenges e.g. loneliness in young people, and identify where government can effectively intervene. To drive positive, active, engagement in our sectors we need to understand why people choose to participate in certain activities at different stages of their lives. Greater use of longitudinal data over longer term time frames will help us map how people behave over their lifetime and improve our ability to demonstrate and quantify the impact of government policies.

Place

In recent years it has become apparent that many people feel disempowered or neglected and strong divides within and between communities have become increasingly evident, whether that's between old and young, rural and urban populations, rich and poor areas, or London and the rest of the country.

Focusing on place offers a means of reconnecting with people and creating more sensitive and appropriate policy making, as well as better outcomes in terms of sustainable growth and enriching lives. Place focused initiatives can be used to help supercharge growth in a particular sector of the economy e.g.the development of 'Creative Clusters' are seen as an important factor for driving productivity and regional growth.

For place focused policy making to have long term impact we need research that enables us to accurately measure and demonstrate the impact of place-based initiatives in the short, medium and long term. Including both the social and economic impacts and the connections between them. We need to understand how best to design government investment and engagement to get the most effective results and be clear about how the place agenda fits with other long term challenges for government including housing, regional growth, and social cohesion.

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SECTION B

Research Questions by Policy Area

Individual policy teams have research questions for their specific policy areas. The questions listed below provide detail on the type of research that will help our teams deliver their nearer term objectives. These more focused questions enable us to identify areas of common interest between policy areas which informs the cross cutting strategic research themes set out above.

The questions below are not an exhaustive list but should give researchers an idea as to the type of research DCMS is interested in.

Internet Safety, Cyber Security and Data Protection

- Greater evidence on the rate of exposure for adults to hate content online and the harm caused. Further research into the prevalence of hate content and its impact on individuals would address these evidence gaps.
- Further research to better understand the impacts of online abuse, the motivations behind such behaviour and how we can best challenge it.
- Further research to develop an understanding of cyberbullying among UK children, in particular:
  - hate speech and identity-based cyberbullying
  - perpetrator motivations and characteristics
  - bullying through gaming platforms
  - the intersection of sexting, sexual harassment and bullying
  - efficacy of interventions for preventing and responding to this behaviour.
- Further research to develop greater understanding of the prevalence, experiences and consequences of sexting and sexual harassment among young people in the UK:
  - variations in prevalence by age and gender
  - gendered perceptions, dynamics and impacts
  - relationship contexts of sexual content production and sharing, both positive and negative.
  - prevalence, dynamics and impacts of online sexual harassment in different groups of children and young people (e.g., age, gender and gender identity, sexual orientation)
  - the relationship between online (and offline) sexual harassment, physical violence and sexual exploitation by peers and adults

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- ○ effective educational resources for all stakeholders to challenge this behaviour and its perceived normalisation in the online environment.
- Further examination of the messages that girls take from pornography, and how they may be being influenced within potential or actual sexual relationships.
- More research is needed that looks more directly at the effects of young people's viewing of pornography on their development and relationships and on the impact of violent pornography on young people's behaviour.

- Research to help measure the importance to organisations, sectors and the economy in the UK of personal data protection, and public trust in the use of personal data.
- Analysis on measuring the economic value (to organisations, by sector and overall) to the UK and other nations of cross-border personal and non-personal data flows, and forecasting future trends.
- Research into how best to achieve the right balance between protecting privacy rights and enabling technological innovation.
- Evaluation of what drives organisations' cyber security practices. This includes how to influence organisations to take action to protect themselves, identifying which actors to drive behaviour change, how decisions are made, and what information organisations would find useful in assessing risks and taking investment decisions.
- Evaluating the effectiveness of government support aimed at improving cyber security in organisations. Interventions include advice and guidance, communications campaigns, certification schemes such as cyber essentials and regulation.
- Developing methods and metrics to measure cyber security in companies to help them evaluate their spending.
- Enhancing our understanding of the cyber security sector, the barriers to growth and innovation (whether and how these differ from other sectors), whether it is meeting the needs of the UK economy and its resilience to economic shocks.
- Research on uptake of cyber security skills including how to make a career in cyber security attractive to the UK's diverse population.
- Research on what messaging for IoT security would encourage consumers to consider security when purchasing consumer IoT products.
- Analysis of whether the security concerns linked to the use of digital technology including consumer IoT products are a significant barrier to the uptake of these devices.
- Further research into the approaches taken by international governments on

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cyber security, including IoT security, skills and cyber insurance.

Telecoms and Broadband Delivery

- Further research into the future demand/need and benefits of faster/better broadband (fixed and mobile) connectivity. This would include business and residential premises, particularly the costs and benefits to SME's of adopting gigabit speeds over current superfast speeds.
- Greater understanding of other countries approaches to market provision for SME's on digital support and whether international best practice could be adopted in the UK.
- Research into residential take up of gigabit speeds and whether it has an impact on digital inclusion.
- Research looking at the gap between superfast fixed broadband coverage and take up, and the consumer expectations of the speed and performance of these services.
- Horizon scanning on what 'good telecoms security & resilience' looks like in the next 5/10 years.
- Research into when cost recovery payment mechanisms to industry should be used to ensure measures are implemented by Communication Service Providers (including cyber).
- What are the productivity benefits of high capacity fixed and wireless networks. Are there tippling points in the benefits from reaching a certain level of network deployment?
- What is the distribution of the the productivity benefits of telecoms infrastructure investment? For example to what extent can telecoms investment reduce the difference in productivity between areas of the UK? What will the impact be on the differences in productivity between firms with sectors (e.g. will it help address the issue of 'long-tail' of low productivity firms?)
- What is the willingness to pay for access to high capacity telecoms networks? Is there a difference between willingness to pay (WTP) and the benefits? (i.e. is WTA lower than the benefits?) Are there behavioural reasons for consumers (business and residential) for not taking up new services and what policy interventions might address these?
- Placemaking and regeneration of deprived areas (eg the Salford Quays/Croydon effect; new communities). Social welfare benefits of improved connectivity. Is there evidence that connectivity enhances welfare outcomes, improves health/reduces NHS visits and usage, or not?

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Digital and Technology

- Assessment of the impact of adoption of specific digital technologies on different aspects of the digital sector and wider economy e.g. supply chains, markets, sub-sectors, UK-owned companies, comparative advantages.
- Further research into emerging technologies and industries, in particular: comparing the current UK and international position; evidence on the case for government intervention; and identifying sources of UK comparative advantage.
- Review of evidence on whether/how R&D and innovation activity in "digital" (e.g. with data science, "digital" technologies and/or reliant on digital infrastructure) varies from innovation more generally.

- Further research to help answer key issues associated with a growing digital society:
    - When must we ensure AI based decisions can be explained?
    - What is social media's impact on political discourse and elections?
    - What are the issues in relation to liability when AI is used for decision-making?
    - How should media plurality and diversity be defined in an age of information abundance?
    - How can data ownership evolve in the future and what are the risks and opportunities?
    - How can we measure trust in the digital economy?

- Further research into digital skills to help address key questions including:
    - How do individuals from different social groups, demographics, educational background etc. make decisions about careers and skills development?
    - What are the influences on employment choices of careers information (from parents, employers, career advisers), incentives, peer group, employers, schools and jobcentres?
    - What are the long-term economic and social consequences of digital exclusion?
    - How does disability affect individuals' access to online information and services?

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Society and Community Engagement

- Research into the impact of social and community action, on communities, places, people (both volunteers and beneficiaries) and when alongside public services. Outcomes include:
    - Levels of participation
    - Wellbeing
    - Civic and community engagement
    - Community coherence and sense of belonging
    - Personal and individual development (skills)
    - Economic development and positive impact on public service delivery.

- Research on the impact of 'youth provision' (non-formal and informal learning activities outside school, including youth social action; and youth work based approaches to supporting young people). Outcomes include:
    - Personal and social development
    - Education and employment outcomes
    - Mental health and wellbeing
    - Involvement in crime and gangs
    - Civic and community engagement
    - Social integration and community cohesion

- Research into the impact of government initiatives to support resilience and/or capacity building in the voluntary, community and social enterprise sector over the last 15 years. Primary outcome to understand the success factors and weaknesses in the design and delivery of programmes, which can be used to inform future work.
- Research into the comparative productivity of different forms of public service delivery (in-house, contracted out, public service mutual...)
- Helping to answer key research questions on **Loneliness** including:
    - How do we **define** loneliness, both in terms of devising an appropriate measure and for designing policies?
    - What are the **causes** of loneliness? What are the **risk factors** and/or trigger points associated with loneliness?
    - What is the **impact** of loneliness on the individual, local communities and public services? How is this impact translated into costs?
    - Which **interventions** have been proven to be effective at reducing loneliness? And how does an improvement in loneliness scores relate to other outcomes, such as health?

- ○ Is loneliness more **prevalent** in society today? If so, what is it about the nature of modern society that has caused this? And what predictions can we make about the future nature of loneliness within society?

Broadcasting, Media, Creative Industries,

- Understanding the value chain in creative businesses affected by the shift to digital - especially advertising, publishing and music
- Best-in-class policies/ benchmarking around the globe to promote growth, productivity and employment in the creative industries.
- Diversity in the creative industries - including recruitment, pay, progression and the barriers.
- Understanding the current (and forecasting the future) skill supply and demand for the Creative Industries.
- Better data on the CIs including definitions and exports

Gambling and Lotteries

The Responsible Gambling Strategy Board, which advises the Gambling Commission on research, education and treatment for problem gamblers, has identified priorities for research on reducing gambling related harm in its [Research Programme](#) 2017-19. These include research on the following areas:

- Understanding and measuring harm
- Consolidating a culture of evaluation
- Increased understanding of the effect of product characteristics and environment
- Improving methods of identifying harmful play
- Piloting interventions
- Education to prevent gambling-related harm
- Building the quality and capacity of treatment
- Research on the benefits of Lottery funding on communities and public assets
- Research on the cost to society of gambling and on aspects of lotteries (for example motivation to play lottery games, and the impact on harm of scratchcards and instant win games) is also of interest to the Department.

Culture, Heritage, Tourism, Sport

- Research into the impact of sport and physical activity (through playing,

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volunteering, watching, elite success and major event hosting) across five key outcomes:
  - physical wellbeing;
  - mental wellbeing;
  - individual development;
  - social and community development; and
  - economic development.

- Evidence on tourism sector employee workforce and skills (such as information on the split of EU/non-EU workers, employment broken down by skill, sector, type of job, full time/part time etc.)

- Research on the economic and social impacts of heritage on local surroundings e.g. on house prices/businesses, increasing mutual understanding and cohesion etc.
- Evidence to help understand the impact heritage can have on an individual e.g. the role of heritage in daily life and the relationship between heritage and identity, health and well-being.

- Further analysis into the diversity of the museums sector (employees and volunteers), particularly at senior levels and visitors (by age, socio-economic background, disability, ethnicity, gender, sexuality).
- Greater evidence of the wider impacts of museums (e.g. on physical and mental wellbeing, house prices, community cohesion).
- Further research into the drivers of cultural engagement and participation, in particular by age, socio-economic background, disability, ethnicity, gender, and sexuality.
- Research into evolving preferences and supply of culture due to technological innovations, in particular the role digital culture can play in reaching new and existing audiences.
- Research into the impact of digital culture and levels of digital maturity and skills gaps.
- Research into the impact of cultural investment in terms of:
  - Cultural, economic and social impacts on communities through place making and clustering.
  - Educational outcomes, career progression, and future skills gaps.

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- ○ Wellbeing and other individual impacts e.g. health, emotional development, inspiration, and self confidence etc.
  - ○ Wider social impacts of cultural such as trust, community cohesion and criminal justice.
  - ○ Soft power/cultural diplomacy, international tourism and understanding opportunities for overseas marketing opportunities.
- Research into the diversity of those working within the cultural sector and barriers to entry.
- Further research into philanthropy and sustainable business models.

- Evaluation and analysis of the commemorations of the Centenary of the First World War. Particular metrics include:
  - ○ Education
  - ○ Engagement
  - ○ Remembrance

- Evidence that contributes to demonstrating the impact of library services (based around the 7 Outcomes set out in [Libraries Deliver: Ambition](#)) and support the delivery and operation of library services. Key questions include:
  - ○ What factors contribute to social regeneration and how can libraries support those?
  - ○ How does placemaking contribute to stronger, more resilient communities and what role can libraries play?
  - ○ How can skills and employment levels be increased through activity in libraries?
  - ○ How can we reduce digital exclusion and what is the role of library services in supporting this?
  - ○ What works in driving increased visits / usage of library services?
  - ○ What is the long-term sustainability of different delivery models?What is the impact of closures and/or reduced opening hours of libraries on communities?
  - ○ What is the impact and effectiveness of library service co-location with different services?

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