Building our Connected Society

Findings from the 2017 Thought Leadership programme
Foreword

Our connected society

Impacts of digital technologies in all areas of society have been at the forefront of news and political agendas in 2017: from ‘fake news’ and online extremism through to global cyber-attacks and Artificial Intelligence.

As digital technologies rapidly transform every aspect of our lives, the impact they have on individuals will not be felt equally across society. If we do not address the digital skills gap at all levels, existing inequalities will increase. If we do not plan for the social as well as the economic impact of disruption, many will be excluded from the potential benefits. If we do not anticipate the risks around data use and ethics, public trust will be undermined. And if we do not prioritise empathy and social norms in the online world, civic engagement and democracy may suffer.

These issues dominated our 2017 Thought Leadership programme. Delivered in partnership between the Corsham Institute (Ci), RAND Europe and St George’s House, our programme brought together senior figures from academia, industry, government and not-for-profit organisations to debate four topics:

**Digital Learning**
**Open Science**
**Digital Currency**
**Civic Engagement**

We publish the full reports of these discussions and the thought provoking background papers developed to stimulate our discussions.¹ This report summarises the key themes that emerged across the four sessions, many of which built on those identified in our 2016 Thought Leadership programme.² It also includes suggested recommendations.

---

¹ See https://www.corshaminstitute.org/research
² See https://www.corshaminstitute.org/research
Building our Connected Society

The year ahead

In June 2017, when our Thought Leadership programme was concluding, the Queen’s Speech confirmed that the UK government would develop a Digital Charter ‘to ensure that the United Kingdom is the safest place in the world to be online’. We welcome this commitment, as well as the direction of travel set out in the Minister for Digital’s speech in September 2017, which expanded further on the government’s priorities for data protection, data ethics and trust, cybersecurity and internet governance. We share these priorities. Indeed, they sit at the heart of CI’s vision: to build a fair, inclusive, prosperous and creative society, built on trust and security.

The overriding message from our 2017 Thought Leadership programme is that we cannot wait a moment longer to address the challenges ahead of us.

Digital adoption and disruption are increasingly led by younger generations, who are adapting their behaviours, habits and social norms accordingly. This report highlights some of the positives from this, particularly in education, which as a society we should embrace. But across our economy and society, the pace of technological change is now too fast for our regulatory, legal and ethical codes to keep up. Its impact on us as citizens is unequal. This has serious consequences. An erosion of public trust will undermine the significant benefits that digital transformation and innovation can bring to all our lives. Mishandling of data, or its misuse in algorithmic decision making, will affect not just individuals but also the potential for economic growth and improved public services. A lack of digital skills and digital understanding, as so clearly argued recently by Baroness Martha Lane Fox, will further entrench divisions and inequalities in our society.

These issues are too important to all our futures. We need leaders from government, industry and the public and not-for-profit sectors to work in partnership, just as they have come together in our Thought Leadership discussions, and to engage citizens directly in shaping the solutions to these challenges. We look forward to being part of that in the year ahead.

Rachel Neaman,
Chief Executive Officer, Corsham Institute

Hans Pung,
President, RAND Europe

---


Corsham Institute and RAND Europe would like to thank everyone who participated in the 2017 Thought Leadership programme for contributing to the stimulating and wide-ranging discussions. It is through their enthusiastic participation and willingness to challenge the status quo that we have been able to generate new insight and ideas to tackle the challenges we face as digital technology transforms every aspect of our daily life.

We would also like to extend our thanks to St George’s House for hosting the consultative events, and to the RAND Europe research teams who were responsible for drafting the briefing papers as stimuli for our debates and for writing up the individual reports. As the 2017 Thought Leadership programme draws to a close, we would also like to acknowledge the significant contribution which Brian Parry has made in steering the programme and leading our discussions at St George’s House over the past two years.

Further details on our 2018 Thought Leadership programme and other events and activities will be published on the Ci website later this year. For more information or to get involved in Ci’s work, please contact:

Maeve Walsh
Director of Policy and Advocacy
mwalsh@corshaminstitute.org
Our 2017 Thought Leadership themes

In this summary report, we draw out the emerging findings from the four 2017 Thought Leadership sessions and the implications for policymakers and researchers.

The report outlines the focus and context of our four Thought Leadership discussions. For a full perspective on the issues and the underlying evidence, this report should be read in conjunction with the individual topic reports, which were written up by RAND Europe researchers following the individual sessions,6 and the associated briefing papers7 which were circulated in advance to inform and stimulate the debate.

Digital learning: Education and skills in the digital age

Digital technologies are increasingly delivering education, knowledge and skills in new and innovative ways. This can make education more efficient and accessible, providing opportunities to increase outreach to more isolated groups of people of all ages, ensure equal access and quality of education, and reduce the digital skills gap in employment.

While the use of digital technologies comes naturally to some, this is not the case for all. Government, education providers, industry and the so-called ‘Generation Z’ (those who have grown up using technology) need to work together to support not only education for all, but also lifelong skills development. We concluded that education, training and knowledge transfer (whether peer-to-peer, young-to-old, community-to-community) will therefore play an increasingly important role in the future adoption and development of digital technologies in society.

Open science: The citizen’s role in research

‘Open science’ is a term that captures exciting changes in the way research is conducted: for scientists, it means increased use of open-access scientific publishing and open data; for the

6 See https://www.corshaminstitute.org/research
7 See https://www.corshaminstitute.org/research
public, it means greater understanding of and participation in scientific activity. Open science can support greater transparency, collaboration and research integrity in the short term and improve scientific quality in the long term. ‘Citizen science’ is an important part of this growing movement, taking research outside scientific circles and bringing non-specialists much closer to the centre of the research process.

Citizen science has for many years involved volunteers helping academic researchers with data collection and analysis. However, emerging examples across the research life cycle go beyond data collection and analysis, for example in research planning and design; crowdfunding for research; and disseminating and using the research findings.

Citizen scientists use digital technologies to conduct collaborative and ambitious research to address real-world concerns. Digital technologies are also being used to raise awareness of citizen science projects and make the concept accessible to those outside of academic circles who are not familiar with it.

**Digital currency and the future of transactions**

New platforms and media of currency and transaction are emerging that could fundamentally change the way individuals and organisations purchase goods and services. Distributed ledger technology (DLT, also known as ‘block chain’) underpins new crypto-currencies, such as Bitcoin, and other data transaction services. Alternative currencies and different means of exchanging value (whether monetary or in some other form) are emerging in some parts of society as preferential currencies.

As their popularity and use grows, there will be wider implications for governments, regulators, industry, communities and individuals. All those with a role in the financial system will need to consider the potential impact of these changes on wider society, and how new forms of digital currency and transactions can be harnessed to provide the greatest societal benefits.

**Civic engagement: How can digital technologies underpin citizen-powered democracy?**

Digital technologies are transforming the ways in which people interact and relate to others, and how they access and consume information. This, in turn, offers greater opportunities for citizens to participate more directly in civil society and democratic processes.

Progress towards a more effective ‘citizen-powered democracy’ is not straightforward. The increasing prominence of ‘fake news’ and extremist views online signals a shift towards a ‘post-truth’ era where the value of robust evidence is diminished. Moreover, the increasing personalisation of people’s individual online experiences leads to ‘echo chambers’ and ‘filter bubbles’, entrenching rather than challenging their pre-existing views and opinions.
Emerging findings and implications for policy and research

Many of the findings of our Thought Leadership programme have profound and urgent implications for the future of our connected society.

Tech-driven change is outpacing our society’s ability to manage its impacts

A recurring theme in all the discussions was the challenge posed to policymakers, regulators and governments by the pace of technological and disruptive change across all sectors and parts of society.

In the private sector, businesses that do not keep pace with digital transformation will fall behind; for example, they may find themselves at a competitive disadvantage if they do not adopt new financial processes or digital transaction methods that can reduce their operating costs and provide greater customer accessibility.

From a public policy perspective, new concepts and applications of digital technology, such as citizen science or crypto-currencies, may have to develop further before they are adopted by the public at scale. But this does not justify a ‘wait and see’ approach when considering their impact.

For example, block chain is a transformative technology that has the potential to disrupt the established means of financial transaction and other exchanges of value to the benefit of individuals. At a macro level, the ‘unbundling’ of financial systems will reduce the complexity of financial systems and provide an easier route for new entrants into the market. But it may have unforeseen negative consequences for the provision of various services. The regulatory landscape cannot afford to catch up once this has happened, so regulators and lawmakers need to be prepared for the impact.

Moreover, block chain has already become associated, through Bitcoin, with the ‘dark web’ and illegal activity. As a result, all digital currencies and their underpinning
technology may come to be distrusted by many people, limiting their adoption and the realisation of many potential benefits. In this eventuality, we are likely to see the evolution of a mixed-currency model within our society, involving new, innovative methods of value exchange as well as more traditional currencies. Some individuals may choose to opt out completely of using one or another model of value exchange, with legal as well as financial and social inclusion consequences. These wider impacts need to be urgently considered by government in tandem with the technical and regulatory challenges of the technology itself.

**Recommendations emerging from the discussions**

- Facilitate the coming together of leaders from all sectors, including technologists, academics, industry figures and policymakers, to identify and anticipate the challenges posed by digital technologies. Where appropriate, this should include consideration of proportionate legal or regulatory responses to protect citizens while continuing to promote and stimulate the wider economic benefits of digital transformation.
- Develop a ‘roadmap’ for the adoption of new digital currencies and modes of transaction, incorporating evidence on the public’s attitudes and awareness as well as the technology’s potential contribution to social and economic challenges.

**Lack of trust in technology has far-reaching consequences**

In our 2016 Thought Leadership discussion on data, trust and ethics, our participants expressed concerns over the public’s lack of trust in the organisations and institutions which handle our personal data, whether technology companies or governments, and the risks of exploitation of that data. Despite the increasing adoption and prevalence of digital technologies, our 2017 discussions suggest that this lack of trust remains an important and growing concern, as stories about cybersecurity breaches, data misuse and fake news become more common in daily life.

This is not just a risk for economic growth and innovative business development. In the public and not-for-profit sectors, new means of transferring knowledge and value have the potential to increase community and individual participation and access, whether in education, health, voluntary and community services or civic engagement. But these new service models will be built upon the transfer and analysis of ever-larger amounts of citizen data.

Organisations across all sectors need to keep, transfer and use securely and safely the data they hold. The UK regulatory environment is being reformed through the adoption of the General Data Protection Regulation (GDPR) in May 2018. But, in
tandem, more work is needed to improve the public’s understanding of the value of their data and the need to provide active consent for it to be used, particularly where it is collected in return for better or more personalised services.

If public mistrust becomes entrenched, we risk creating a two-tier society with widening social and economic inequalities. If a section of society opts out of engagement in the digital world, or withholds personal or other data from collection where there may be personal or wider societal benefit, this could have two consequences. For example, where health data is collected from individuals, a decision to withhold it would potentially harm health outcomes for that individual; but it may also be to the detriment of health research for the wider social good. Such a trend will impede the creation of comprehensive datasets for innovative economic advances, with unquantifiable impacts beyond that of the individuals’ decisions to opt out.

Our discussions on the exciting and empowering concept of a ‘citizen-powered democracy’ also covered concerns about the impact of a lack of trust on greater civic and community online engagement. For example, progress on e-voting, which offers significant potential for strengthening citizen-powered democracy, will be impeded as long as there is a lack of confidence in the security of the technology which underpins it. Governments and other civic organisations will need to put in place active mechanisms to overcome public cynicism and lack of trust if citizens are to believe that they have the power to drive political change through digital technologies.

Recommendations emerging from the discussions

- Improve general awareness among the public of their responsibilities regarding the protection and use of their personal data, as well as its use by third parties.
- Stimulate and improve the public’s understanding and use of data to improve their engagement in both local and national decision making: for example, undertaking pilots to test new approaches to synthesise, analyse and present public datasets in a user-friendly and engaging way.
- Build public buy-in for new technologies through small pilots or demonstrations: for example, demonstrating potential public-service delivery improvements and working to increase familiarity and confidence in new technologies.

Greater planning for adverse social and economic effects is needed

Disruption and innovation may provide a healthy economic tension and shake up vested interests in all sectors; but, as set out previously, this cannot happen without a parallel consideration of the regulatory, legislative and ethical impacts across society. Throughout our discussions, we heard how the potential of digital technologies to provide multiple societal and economic benefits is huge. But, where it has the power to magnify the benefits in some parts of society, they also have the potential to amplify negative social and economic effects in some areas of society, whether through lack of connectivity, lower levels of skills or reduced confidence and motivation.
We know that young people are more likely to drive the adoption of new tech-enabled services and systems. The use of digital currency and transaction services is likely to become more widespread as younger groups move away from physical cash towards making payments by smartphone. But the rate by which this adoption reduces use of a physical currency will happen earlier in some sections of society than others. The impact of this, and the need to ensure that older or non-digitally engaged groups are not disadvantaged, warrants urgent consideration.

Those in society who already feel left behind could be left feeling even more isolated: this theme ran throughout our 2016 Thought Leadership programme as well as the 2017 discussions. For example, there is currently a high correlation between high levels of normal literacy and confidence in using technology, and between lower levels of literacy and exclusion from education and employment. Educating the public about digital technologies is about much more than teaching them the mechanical skills to use such technologies. Learning how to live, communicate and interact in the digital world, in all its forms, is vital to the future of our society and economy.

Recommendations emerging from the discussions

- Encourage the development of digital education programmes to target those most at risk of being left behind in the ‘digital divide’.
- Introduce a ‘Digital Equality Impact Assessment’ to ensure that all policy development explicitly considers how to use digital technology to benefit everyone in society and that its opportunities are evenly distributed. The Impact Assessment should consider the social and economic impact of digitally driven policies and programmes to avoid further widening the digital divide. This was originally proposed in our summary of the 2016 Thought Leadership programme and remains relevant today to anyone developing and rolling out digital products and services.

The role of education and educators has been disrupted

Young people often adopt, use and understand technology much better and much faster than their parents, grandparents, teachers or employers. The popularity of various apps, games and social media platforms shifts as young people rapidly adopt them and then move on again. However, this technical ability to get to grips with new digital products and services does not always equate to an understanding of how to use them responsibly, or of the consequences of digital interactions.
In education, we are witnessing young people helping older people, including their teachers, to use various digital technologies. Where teachers are not familiar or comfortable with new technologies, this reverse exchange of learning may sometimes be welcome. But it is no substitute for a flexible and agile teaching curriculum that keeps pace with technological changes so that the benefits of innovative technology in transforming education, in and out of classrooms and lecture halls, can be rapidly realised.

The role of the educator is changing and we need to support teaching staff to recognise the benefits of using digital technology both as a source of information and as a teaching aid. At the same time, educators need to adapt as their role changes from that of the more traditional knowledge provider towards that of the lifelong-learning coach and curator of knowledge. For many educators, this can be a difficult transition; it requires an acceptance that one may not have all the answers, and that knowledge can be sought and found jointly with one’s students. Implementing such change needs to start with the training of our educators, but also with stronger programmes of support for existing education professionals.

The existence of the digital skills gap has been widely documented in relation to employment, as technological advances change the nature of jobs and the workplace itself. Education, training and knowledge transfer need to keep pace with the changing nature of skills needed both for future employment and everyday engagement in the connected society. Government, educational establishments, training providers and industry need to work closely together to establish the infrastructure required to map the digital skills gap, articulate the skills that are needed within the UK and develop opportunities for everyone to develop those skills. The creation of the new Digital Skills Partnership\(^8\) by the Department for Digital, Culture, Media and Sport is a promising start.

However, a lack of digital skills and engagement also means that individuals may be excluded from new financial models and services, greater civic and democratic engagement and other

---

forms of digitally enabled services and communities. Successfully addressing this, and ensuring the continued renewal of individuals’ digital literacy and understanding, goes beyond the reach of traditional digital or ICT educational models.

Recommendations emerging from our discussions

- Revise the teacher training curriculum to reflect the evolution of the role of the educator to one which now includes aspects of lifelong learning.
- Better define, through employers and industry groups, the skills required for current and future roles, such that skills and training providers can ensure the digital skills curriculum is fit for purpose and regularly refreshed.
- Implement a coordinated, cross-sector programme to help isolated learners obtain the digital skills needed in employment.
- Pilot new approaches to bridge the digital divide between young and old, particularly to help early adopters to educate their educators and reach out to digitally excluded groups.

A successful connected society needs not only digital skills but shared norms and behaviours

In our connected society, we need to ensure everyone can use digital technologies appropriately. Their adoption must be underpinned by the development of shared societal norms and standards, and by education and capacity-building initiatives to empower citizens to be active users of technology, not passive consumers.

Digital technologies will only be effective with good citizenship. Our discussions frequently returned to the identification of empathy and critical thinking as crucial skills. Empathy is fundamental to positive social interactions and relationships online, while critical-thinking skills are necessary to identify and respond appropriately to misinformation, propaganda and extreme views in the digital sphere.

One of the main recommendations from our 2016 Thought Leadership programme was the adoption of a Charter of Digital Rights and Responsibilities, setting out the roles required to create a more prosperous, inclusive and safe digital society. Our 2017 discussions further emphasised the relevance of this recommendation, so the announcement that the government will establish a Digital Charter is therefore a welcome step forward.
Recommendations emerging from the discussions

- Extensive engagement should underpin the development of the Digital Charter and:
  - Include all sectors in defining the roles and responsibilities needed to deliver a successful connected society.
  - Involve public and civil-society groups in cross-sector discussions to agree the norms and behaviours for effective and responsible use of digital technologies.
  - Increase the focus on empathy and critical-thinking skills to foster more informed interactions in the online world.

It is easier than ever to have a voice – but is the public being heard?

Digital technologies have made it significantly easier for individuals to communicate their views and opinions in the public sphere. For example, social media platforms allow the public to directly communicate with politicians and state institutions, as well as offering policymakers new channels to engage directly with the wider electorate. But our participants questioned whether voicing and broadcasting opinions was the same as being heard, particularly when direct feedback from decision makers, or evidence of action taken as a result of citizen engagement, is limited.

Aside from engagement with government and politicians, digital technologies can help more direct participation in democratic decision making and mobilise greater participation from people who traditionally have been less engaged in politics. Numerous grassroots political campaigns in the UK and elsewhere have been very successful at using digital technologies to mobilise support for their cause and engage with new audiences, with both positive and negative societal and political outcomes. Any programmes to counter negative, harmful or extremist campaigns, and to harness civic engagement for wider societal and democratic gains, need therefore to be delivered through the channels and platforms that already exist.

Recommendations emerging from the discussions

- Politicians, parliamentarians and policymakers should:
  - Improve public trust, civic engagement and democratic accountability by responding to citizens’ constructive feedback via online channels in a timely and considered way.
  - Use existing digital and social media platforms and apps in innovative and focused ways to encourage greater civic engagement and counter negative or destructive campaigns.
Conclusions

The UK government’s commitment to the development of a Digital Charter and to a consideration of the future framework for data ethics and governance provides the mechanism to address many of the issues and challenges identified in our 2017 Thought Leadership programme, particularly in setting the roles and responsibilities for all sectors in our connected society and debating the regulatory and ethical frameworks needed to protect them. These commitments also provide an important opportunity to engage the public in the pressing debate on the impact of digital technologies on all aspects of their lives, and to involve them in shaping a future society in which they have trust and are fully engaged. CI and RAND Europe look forward to playing an active part in the development of the Digital Charter and the data ethics framework.

But the UK government cannot – and should not – be solely responsible for building a connected society that works for all. This requires cooperation across the public, private and not-for-profit sectors, and between UK and international governments, scientists and technologists and tech companies. Our discussions point towards the need for a new forum in which this cooperation can happen, where vested economic or political interests are left to one side and where challenges and risks, particularly those of a social and ethical nature, can be flagged and debated at an early stage.

We encourage politicians, lawmakers and regulators to ensure that their decisions are based on policymaking that has, at its heart, a constant, unrelenting and clear-eyed focus on the impact of digital technologies on citizens and on the good of society. Ultimately, it is not the digital technologies themselves that will shape our future, but the ethical, social and political decisions taken about them and their use. These are decisions taken by citizens, for citizens, and should be for the benefit of all within our connected society.
Corsham Institute
www.corshaminstitute.org
Corsham Institute (CI) is a not-for-profit organisation that is working for a fair, inclusive, prosperous and creative society based on trust and security.

Our focus is on education and research, going beyond traditional ideas of knowledge to promote lifelong learning in the digital age. We aim to empower citizens to develop the critical thinking and creative problem-solving skills they need to make the most of the opportunities that our increasingly networked, connected and data-rich society provides.

The Thought Leadership Programme provides an opportunity to explore the potential and impact of digital technology within society today, focusing on shaping a future where citizens are empowered with the knowledge and skills they require to live their lives socially, economically and even politically.

Our wider programme of work encompasses Research, Learning and Enterprise, placing the citizen in control of the creation, acquisition and exploitation of their knowledge.

RAND Europe
www.randeurope.org
RAND Europe is a not-for-profit organisation whose mission is to help improve policy and decision making through research and analysis. As part of the RAND Corporation, we were founded in 1992 in Europe to provide quality research and rigorous, fact-based analysis to serve policy needs in EU institutions, governments, charities, foundations, universities and the private sector, where impartial research is required.

Our work lies on the spectrum between that of universities and consultancies, combining academic rigour with a professional, impact-oriented approach. In other words, we operate as a research-focused business, using a professional services model, within the context of a public good mission.

We combine deep subject knowledge across many policy areas – including health, science, innovation, defence and security, transport, infrastructure, criminal justice, education, employment and social policy – with proven methodological expertise in evaluation, impact measurement and choice modelling. Our clients include European governments and institutions, charities, foundations, universities and private sector firms.

St George’s House, Windsor Castle
www.stgeorgeshouse.org
St George’s House was founded in 1966 by HRH The Duke of Edinburgh and the then Dean of Windsor, Robin Woods as a place where people of influence and responsibility can gather to grapple with significant issues facing contemporary society.

The House offers a safe physical and intellectual space set in the narrative of history but focused firmly on the future. You will find here an environment receptive to new ideas, conducive to taking intellectual risks and to thinking through challenging topics in imaginative ways. The House is a sanctuary, removed from the pressures of everyday life, where the topic to hand takes precedence. It is this focus that encourages creative thinking, informed debate and sustained engagement. The emphasis throughout our carefully crafted Consultations is on dialogue and discussion. Participants are in a place where a real contribution to society can be made, where personal enrichment and social progress are mutually compatible, a place where Wisdom is nurtured.

In order to offer a safe and secure intellectual space our Consultations are run on the understanding that all debate and conversation takes place under the House Protocol.