



The **Bathwick** Group

Response to the EIF report 'The Digital World in 2025'

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Introduction

This document is a response to the European Internet Foundation’s report ‘The Digital World in 2025’. Input was garnered from the ThinkAgain network¹, by extracting key propositions in the report and presenting them for blind feedback – references to the European regional nature and the source of the report were excluded, in order to ensure non-biased input. Quotations used throughout this document are from network members.

We have grouped the many detailed points made by respondents into seven key topics. We have not by any means included every point that we received, or that is important; we have focussed on the critical questions from the EIF report that our respondents felt need to be addressed in planning a coherent European strategy for the Digital World in 2025.

We have excluded comments on the many technical notes and predictions in the report, a subject which would require an additional response document on its own, save to note that many of the technologies and techniques we will use in 2025 are not something we can imagine today, and much of today’s will be obsolete, which makes the utility of such commentary questionable. Despite that, the core issues we have highlighted will all pertain regardless of the actual technologies in place in 2025.

The European Internet Foundation : www.EIFonline.org

The report is available for download at : <http://www.eifonline.org/en/articles/digital-world-in-2025.cfm>

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¹ The ThinkAgain Partnership LLP, part of The Bathwick Group, is a global collaborative research network which brings together academics, writers, business and political leaders to generate insights into business productivity and performance, the development of digital society, and geo-political and environmental issues.

Executive Summary

Overall, the respondents felt that the ‘Digital World in 2025’ report was a very good summary of many of the key issues relating to the challenges of an increasingly digitised world. Many of our respondents applauded the caveat² that “Steel will still be steel, and humankind will still need to eat”. It should not be forgotten that much of Europe’s activity, production, income, and employment will not depend on a high level of digital content. However:

- A significantly higher proportion³ of the value created in businesses and economies *will* be driven from the deployment and application of digital technologies and techniques;
- If that value is not properly realised, there will be a markedly detrimental effect on the health of economies, and particularly the highly developed and service-oriented economies;
- Some of the social problems we face today will be exacerbated by the development of more highly digitised societies, and there will surely be new challenges faced by governments which *must* be addressed to ensure the smooth functioning of society.

A number of respondents felt that the definition of mass collaboration would only be true for a certain section of the population and the ‘digerati’; the overall situation would be considerably more complex, with a range of adoption maturities across the spectrum of European citizens. The ‘mode’ of the population is more likely to be one of mass interaction; multiple channels and nearly continuous communication with commercial and public entities around the world, and with each other in multiple fragmented (and changing) social groups based around common views or interests. Collaboration, as defined in the report⁴, will be a worthy goal for those interested and capable enough, and involved in work or interests that lend themselves to such digital structures.

Many respondents also sounded a warning note in relation to public policy and planning, pointing out that thinking for the long term and positioning digital thinking at the centre of policy-making is important to ensure effective results. Some described this as an Eastern approach to planning⁵. An approach which considers the range of digital issues – from communications and transport infrastructure through to innovation, employment, education and societal impact – as add-ons to, rather than a pillar of, policy-making will most likely fail to achieve the desired outcomes.

We do not intend to establish an order of importance for the points outlined in this response, but we have noted here those points that our respondents marked out as the most critical issues:

- The structure of funding for a renewed digital communications infrastructure
- Ensuring long-term digital economy considerations are at the heart of all European policy planning
- Reinforcing education and inclusion policies to ensure maximum participation in a knowledge economy
- The protection and management of both privacy and identity and the construction of new trust frameworks
- The creation of an innovation-friendly business and employment and intellectual property environment throughout the EU

² Page 19, paragraph 3

³ Higher in relation to 2009

⁴ Page 5, paragraph 4

⁵ Typified in this regard particularly by Japan and Korea

The ThinkAgain network’s responses to ‘The Digital World in 2025’

Infrastructure

Without an effective, scalable, flexible and high capacity infrastructure, countries will struggle to compete in a global digital economy. Provision of that infrastructure is therefore the sine qua non of all the other issues in the report and this response document. The key questions in regard to physical infrastructure include:

- Who should (or can afford to) pay for sufficiently upgraded national digital communications infrastructures?
- What form should that infrastructure take? What mix of fixed, cellular, radio, and satellite elements?
- What capacities should be planned for, and how can relatively simple capacity scalability be designed in? The explosive growth of rich communication forms (such as video) and the likely growth of host-based processing will require ever-increasing amounts of network bandwidth and almost limitless Internet addressing capacity
- Is it of such national importance (and is access to it considered a universal right) that national governments must underwrite development?

However one approaches the multiple issues of infrastructure renewal, it would seem that some form of public-private partnership is essential to ensure effective and timely funding and creation.

How should such public-private partnerships be constructed? Respondents felt that current models and templates are not yet sufficient.

“It all starts with infrastructure. If we don’t have high-bandwidth universal access, we have a two-speed society.”

Many respondents pointed out that the Internet will not ‘become... the world’s dominant, converged infrastructure for the transmission of digital communications services’⁶, because it *already is*. As the critical global infrastructure on which the digital economy is based, the question of who is going to control and regulate the Internet to ensure its integrity and independence for the benefit of all must also be clarified and planned for many years to come.

With regard to the report’s comment on software⁷, our respondents didn’t think that the production of software is an issue. Most of the development techniques required for any model of technology are already known, but in any case it seems economically likely that SaaS⁸ will be the dominant model, and open development and innovation from multiple sources will produce answers to future questions of capability (assuming a benign software patenting regime).

“SaaS will result in data residing all over the world. Whose data protection legislation will apply? Where will the SaaS provider pay tax and employ people?”

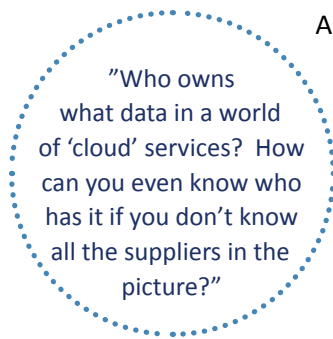
⁶ Page 7, paragraph 1

⁷ Page 15, paragraph 3

⁸ Software as a Service, where applications are executed in a central hosted location, rather than on a user’s own PC, with only the presentation element (user screen) running on the user device

Information

Many respondents noted the difficulties associated with organising and accessing unimaginably large amounts of data/information, both structured and unstructured. Whether or not the semantic web is or will be a reality⁹ is not an issue for legislators, but will certainly become relevant to governments themselves in dealing with their own data.



A highly relevant issue however is that of data governance – the ownership and control of personal and non-personal information. Respondents felt that the report underemphasised the situation with regard to digitisation of individual experience¹⁰. All our digital actions are captured in some form already; well before 2025 we will be able to integrate and correlate them, and include an increasingly wide variety of other digitised and even analogue sources (CCTV for example). Who owns such information? Taking the example of location-based data, is it owned by the individual whose location is reported? The agency or firm that captured it? The communications network that carries it? Or the application or

data provider which stores it?

And for any system using hosted applications (that respondents believe will represent the majority by 2025), where will the content and data physically reside? The issue of non-local processing, both through SaaS and the report's noting of the current industry interest in 'cloud'¹¹ (in which scenario, data processing and information services are delivered over the Internet, regardless of actual location) raises many questions. How will such activity be domiciled from a taxation point of view? Who will be responsible for its security and governance? How can we regulate, on a global basis, the privacy and protection issues that result?

Privacy/Identity

Which brings us to one of the core challenges of the digital age, and one which, while it was clearly noted, many respondents felt was perhaps given insufficient weight in the report. Privacy protection and the control of identity in a world where everything is digitised and stored, and where personal information will be the gatekeeper to much of the activity of our lives, is central to the successful realisation of a digital world.

Respondents were not convinced that it would be simple, or indeed possible outside specific situations such as medical records, to create systems that would allow individuals to control and maintain all their personal data. Thousands of pieces of data about each of us is stored today in various government and commercial databases, and coordinating the control of even just public sector data would require significant changes to legislation, and potentially very large integration projects.

⁹ More than one respondent pointed out how many other technological answers to vexatious questions, particularly artificial intelligence, have been 'almost ready for use' for 20 years or more!

¹⁰ Page 6, last paragraph

¹¹ Page 14, paragraph 3

The ability to combine and correlate data relating to individuals will be a defining feature of the digital world, and respondents are concerned that it will be all but impossible to ensure that all such data is properly and securely handled. Although today we see millions of people willingly handing over large quantities of personal and behavioural information to companies such as Google and Facebook, it is highly unlikely that many have

“If three government departments and a certain four private companies got together, they would understand my life completely. That should make us all worried.”

thought the consequences through. Some respondents fear a potential backlash when the value and utility of such information becomes clearer, or worse, when such data is misused. Governments need to be ready to address such a situation, particularly in relation to the data they hold on their citizens.

As the report rightly points out¹², solutions relating to identity and security will have to be coordinated on a global basis. It is relatively easy today to hide criminal activities across national boundaries; in the digital world, the ease of creation of geographically-independent illegal activities, or indeed the waging of cyber-warfare, means that for the purposes of digital identity and personal data security at least, national boundaries must become as transparent for the forces of law and order as they already are for transgressors.

A further related question that concerned respondents however was whether future legal and regulatory systems would prove any better at targeting problems than they are today, when the burden and costs of everyday proof so often falls on the law-abiding while having little effect on criminal activity.

Digital society

It is not clear how any of us (individuals or organisations) will be able to cope with the exponentially increasing flows of data and information with which we must contend, because despite the growth in the breadth and variety of information presentation, human bandwidth has not changed at all. Hence the recent research observation that young people time-slice astoundingly quickly, are likely to have 5-7 channels of communication open at any one time, and have little patience for in-depth consideration of almost any subject. What does that mean for traditional education, or indeed how society works at all?

“I have a real concern that without serious investment in education the digital divide will grow rather than shrink over the next 15 years.”

Although the report rightly makes reference to the potential effect on social cohesion of an online world, respondents noted that potentially dramatic effects could easily be underestimated. For example, the normal human urge to create communities or ‘tribe’ around common interests, backgrounds, experiences, or any other indicator of personal experience is highly accelerated by the ability in a digital, borderless world, leading to the possibility of reinforced prejudices and accentuated differences.

Some of our respondents noted also that it is *at least* as likely that the 2025 scenario will be one of highly fragmented societies that have little regard for traditional boundaries – geographic, political, or social – than one of increased cohesion. There is therefore a danger that supra-national tribes will be more relevant to

¹² Page 28, paragraph 2

individuals, making it difficult for national governments to engage and influence some sections of society that see such traditional constructs as unnecessary or at least inapplicable to them.

Respondents noted that the dangers this potential represents could be partially addressed through improved social integration and education policies. In fact, respondents were almost unanimous in their responses regarding education¹³, and in their view that current education policies in many countries are wholly inadequate, bemoaning not only the lack of relevant ICT skills, but also basic literacy and communication skills, without which ICT skills are unlikely to be useful.

One area on which many respondents were in disagreement with the report was about the ‘web 2.0’¹⁴ production of digital content¹⁵. There is little evidence that individual production of information – whether on social media tools like Twitter, or in blogs, or from our activities and applications, or any other publishing medium – or indeed the digital distribution of information is any better or more

“My children relate to online gamers and interest groups around the world as they do to their local soccer club. What does a national identity mean to them?”

valuable than current channels. In fact there is significant evidence that it can be considerably worse because so much content is biased, factually dubious, and unsubstantiated.

The key issue is one of trust, as the report does indeed note¹⁶. Trust is represented today largely through recognisable media brands, but will it be in the future? Respondents are not, of course, saying that crowd-sourced content and non-traditional publishing is of little value – many bloggers for example have created a significant global following by establishing the required trust through continual high-quality publishing and peer recommendation.

Respondents were largely in agreement on this issue with the report’s assertion that “professional journalism could be more alive than ever in 2025, although the output may be published in different ways”¹⁷. The tsunami of unfiltered opinion and unchecked self-publishing has focused many people on the value of traditional media, which is possibly why News Corporation felt confident enough to recently announce a move to paid-for news and content across its online properties.

Politics

Respondents noted that the potential threat to democracy represented by an over-concentration of media ownership by a small number of people today is likely to be replicated online, and in some cases it already is. The emergence of ‘info barons’ capable of filtering and presenting information and news with a selected spin is something against which societies may need to be defended.

¹³ Page 21, paragraph 2

¹⁴ Leaving aside the numerous comments we received criticising the conflation of a large number of quite different issues under a single banner of ‘web 2.0’

¹⁵ Page 25, paragraph 5, and page 30, paragraphs 1-3

¹⁶ Page 30, paragraphs 1-3

¹⁷ Page 30, paragraph 2

A second danger to representative democracy is the assertion that ‘mobilized citizens’ could ‘decisively influence policy priorities and legislative outcomes’¹⁸. There are existing examples of citizen-driven democracy, such as the policy-by-proposition situation in California, where special interest groups spending deeply on advertising ahead of citizen referenda can influence relatively uninformed groups of voters into poorly thought-through decisions. Some of our respondents, (particularly those in California), were highly critical of this ‘policy motivated by self-interest’ approach to government, noting the tendency of people to vote for things they want but veto any tax-raising attempts, which perhaps explains why California was in such a poor financial state even before the recession.

A number of respondents were also concerned about the danger of assuming that individuals will be as well-informed as governments¹⁹. In fact, one rather hopes they won’t be, particularly on matters like national security. Again, the move away from the core feature and value of representational democracy – that we entrust our representatives to take sometimes unpopular but informed and necessary decisions – could indeed be very dangerous. Respondents thought it unrealistic that a ‘mediated platform’ could balance a vast array of views and self-interested approaches. Some noted that it was more likely to lead to intractable policy arguments and governmental paralysis.

“I can’t imagine anything worse than an open policy-making platform. It will reward those with the loudest voices or the fattest wallets.”

Finally, and on a more positive note, respondents noted that people will need to believe that the inevitable move to a digital society is a good one; it will be the role of governments to persuade them that it is. This point is not only important to the general public’s perception of a digital society and in educating those that lack digital skills, but also to school-age children in learning how they will need to work and live in a digital world.

Economics/Business

We received many responses relating to economics and the business world. Many of our respondents took the opposite view of one of the report’s points²⁰ – that “the continued development and operation of such smart infrastructure will itself also remain a driver of new growth and employment”. There may well be some new jobs created in infrastructure deployment and maintenance, but as with so many other instances of the application of technology, smart systems will continue to squeeze costs (and most likely, jobs) out of the value chain.

“A steadily digitising world will continue the shrinkage of many traditional employment types. Are we doing enough to grow the skills we need for future jobs?”

Enhanced information analytics and tracking technologies have allowed ‘traditional’ industries to collapse supply chain costs through more efficient transport, just-in-time approaches, and automated stores; and the streamlining of business processes across organisations has enabled great advances to be made in general productivity.

¹⁸ Page 27, paragraph 4

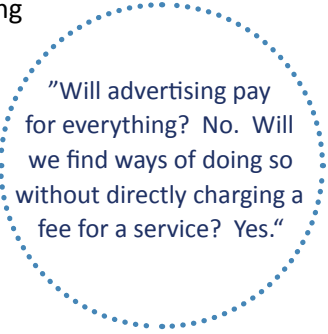
¹⁹ Page 27, last paragraph

²⁰ Page 6, paragraph 3

This technological outcome, which we might refer to as ‘e-commerce 1.0’ has largely been about **destroying** much of what was traditionally considered value-added (by correctly identifying it as cost rather than value). For example, Amazon has not only created a simple and enhanced shopping experience, but also greatly reduced the consumer cost of thousands of items (particularly the most popular such as newly-published books retailing at 45% of cover price). The company has achieved its success partly through traditional economies of scale (procurement) but also through removing the cost of maintaining retail premises, and simplifying and streamlining supply chains to their barest minimum.

Where will the value be created to replace the profits that have been lost through such efficiencies? We might refer to business in the digital society – the creation of value from the digital world – as ‘e-commerce 2.0’. We must learn how to create value from information we can store and handle and how to nurture the applications and innovation that it will enable. Facebook for example continues to collate an enormous quantity of information about individuals – not just personal data, but their networks of contacts, professional and social activities, their likes and dislikes and who influences whom. How the company monetises that information (other than the simple model of advertising) may provide some pointers to how the concentration of information in a myriad of other databases might be valued.

We really have no idea what incremental models for the creation and trading of value may appear, but it is more than likely than advertising in its current sense will only be one of them. Not least because research into social media is showing us that such tools are rapidly increasing the fragmentation of traditional segmentation models. Not because they aren’t valid any more, but because there are at least two further layers of complexity based on the TYPE of social media used, and the multiple different consumption profiles of users. It is more than likely that new business models will be required to address such situations.



“Will advertising pay for everything? No. Will we find ways of doing so without directly charging a fee for a service? Yes.”

These ideas and opportunities – the negative of potential pressure on employment, and the positive of new ways of creating value – also highlight a key issue for the European Union. How will the region create and foster the business environment that will allow innovation and the application of these technologies and techniques to flourish? That will be a key to European economic success. And particularly for the SMEs that will (even more than today) be the driving force of the economy and employment? What changes might be required to social and employment models and to regulatory and tax regimes?

And finally in this section, a comment about the ‘Virtual Enterprise’ (VE) section in the report²¹. VEs are organisations in just the same way as today’s organisations – the same legal entities will require the same licences to operate as today’s companies. Although they can theoretically be created and destroyed with considerable ease, there is (from a jurisdictional point of view) little difference between such activity and today’s MNCs, which deploy themselves globally to (among other objectives) minimise the burden of less friendly tax regimes.

²¹ Page 20, paragraph 3

Intellectual property

Finally, the issue of intellectual property rights (IPR). In talking about the digital economy, and the innovation or exploitation of digital systems and information, the issue of IPR is central.

The issue has generated significant media coverage over the past few years. Although complex in practice, IP legal frameworks are based on a simple premise – the protection of a commercial or artistic invention or creation of the mind for the benefit of its creator. Patents create a legal time-limited monopoly to exploit the property involved. In return, the creator must disclose the invention or creation in full, for the benefit of society (increasing the world’s knowledge and creating a platform for further invention). Similarly, copyrights provide protection for (mostly artistic) IP.

The argument for IP protection is that it encourages innovation in that inventors know that their work will be economically rewarded. The argument against is that larger organisations that have the requisite resources can use poorly-applied legislation to strangle competition and, by extension, slow down innovation. In many cases, the increasingly complex webs of overlaying and cross-referenced patents make it nearly impossible for smaller companies or individuals to even know if they are infringing a patent. It is clear that many patents exist only to protect the ability of a company to continue to exploit its central IP and products without competition.

“The digital world is about lightning-fast innovation. Exploit it and move on. If you spend your time trying to protect what you did, someone else will have invented something better.”

Ironically, development of the digital world – the very technologies driving the need for this report – is based largely on open (non-protected) ideas and technologies. It is the openness itself that has driven so much rapid innovation. Open standards and commons licences have meant that hundreds of thousands of investors and developers have created a huge array of new ideas and applications, in contrast to many areas of protected technology, in which innovation has been slow and inefficient.

Some non-European respondents in particular argued that it is perhaps only those organisations and/or countries that fail to innovate that really need traditional IP protection. Whether or not such an argument has weight, it is quite possible that commons-based approaches will in fact dominate economic growth in 2025.

Whichever outcome pertains in 2025, many respondents felt that a comprehensive review of how intellectual property is handled, what in fact is patentable, and the complexity (and therefore cost) of protection must be undertaken if we are to allow the maximum innovation and exploitation of the highly digitised world of 2025.

About The Bathwick Group

The Bathwick Group researches how businesses actually buy and apply IT to their business, how they innovate using technology, and how IT is supporting changes in market and organisational models. Specific areas of focus include dynamic infrastructure, IT services, smart information, collaboration and sustainability.

Much of Bathwick's insight is based on extensive up-to-the-minute data from end users, which results from online benchmarking and IT assessment activities. All such activity is based on Bathwick's own componentised applications and hosted web services, and provides an ever-growing feed of customer data from most leading countries around the world. We combine that data and primary research activity with economic and contextual analysis in enterprise, mid-market and small business sectors to give us unique insights into how an ICT-enabled world is developing.

We offer ICT vendor clients a range of products including research models, sales-enablement tools, market analysis, and strategic planning consultancy, and works with clients in both private and public sectors that are planning for technology-driven change.

The Bathwick Group also includes:

- **Bathwick Press LLP**, which publishes books designed to help business leaders gain insight into how IT can help to change and drive value in their organisations
- **The ThinkAgain Partnership LLP**, global collaborative research network, which brings together academics, writers, business and political leaders to generate insights into business productivity and performance, the development of digital society, and geo-political and environmental issues.



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