

GOVERNMENT GAZETTE

A CALL TO ACTION FOR FINTECH

CRYPTOCURRENCY & CASHLESSNESS

BLOCKCHAIN LANDSCAPE



TECH
EDITION

ICPS TECH & SOCIETY ROUNDTABLE

GOVERNMENT GAZETTE



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ABOUT

The International Centre for Parliamentary Studies (ICPS) invites you to read our latest published edition of the Government Gazette; a quarterly magazine which provides quality analytical and politically neutral coverage of the leading institutions and policymakers in the European Union.

ICPS exists to promote effective policymaking and good governance through enhanced interaction between Parliaments, governments and other stakeholders in society. We value the Government Gazette as an instrument that connects policy making at different levels, whether they be international, regional or local to ensure that our readers have the complete picture of European affairs.

The Editor of Government Gazette is Sir Graham Watson, a former MEP who held positions on the European Parliament's Foreign Affairs Committee including Chairman of its delegation for relations with India. Sir Graham Watson is also the former leader of the European Parliament's Liberal Democrat group.

Government Gazette has a strong print readership within the European Union, and is distributed across the major European political institutions. It is read by senior decision makers and academics in major technology and data research institutions, technology societies, forums and businesses across Europe.

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IN THIS ISSUE

05 ICPS EU TECH & SOCIETY ROUNDTABLE

Sir Graham Watson forms a summary of the ICPS Roundtable

06 THE 3 C'S

Cryptocurrency, Cashlessness & COVID-19: A European Perspective

08 THE ROLE OF SMALLER JURISDICTIONS IN THE BLOCKCHAIN LANDSCAPE

How can smaller nations contribute to the legal and regulatory frameworks?

A close-up, slightly angled view of the European Union flag, showing the blue field with twelve yellow stars arranged in a circle. The flag is draped and waving, with folds and creases visible. The background is a light, hazy blue.

CONTINUED.

10 A CALL FOR ACTION ON BLOCKCHAIN INNOVATION

BCG Plantinon explore the vital need for cooperation to foster innovation and build a framework for sustainable growth in Europe.

12 A FUTURIST'S THOUGHTS

Visiting ICPS Scholar and Futurist Alex Lightman signs off with his thoughts on Big Tech and trends for 2020.

ICPS EU TECH & SOCIETY ROUNDTABLE

Sir Graham Watson

The summit provided a fascinating insight into the issues facing policymakers in the interface of technology and society. Understanding rapidly advancing technology as an external observer is always a challenge; the impact on citizens is significant and often without their knowledge or consent. As such, it is critical that policymakers take up this challenge to enact the most comprehensive frameworks possible in protecting the citizens under their care.

This can only be based on precise, agreed definitions of the technology. The beneficiaries of data need to be more clearly defined. Finally, citizens must be allowed to make clear & informed choices as to who (including themselves) benefits from this data.

The regulation of blockchain must be proactive rather than reactionary, taking into account the strengths and weaknesses of distributed ledgers. It must provide for common standards of security in



"CRITICALLY THE INCREDIBLY VALUABLE DATA THAT IS ROUTINELY TAKEN FROM THESE APPS ATTACHED TO THE 'KEY LAYER' CAN POSSIBLY BE OF MORE DIRECT BENEFIT TO THE PEOPLE IT IS HARVESTED FROM"

What was perhaps the most surprising concept (and certainly new to me and many other participants) was the idea of a 'key layer'.

This is that apps, whether they are phone, contact list or even app store are not hard baked into the OS of a phone and can indeed be targeted by policy and regulation to enforce a more level playing field for EU app creators. Critically the incredibly valuable data that is routinely taken from these apps attached to the 'key layer' can possibly be of more direct benefit to the people it is harvested from.

The numerous excellent roundtables span out key themes across the week, these were:

There is an urgent need for a continent-wide regulatory framework for the 'key layer' in Europe, including the countries of the continental shelf.

distributed ledger systems rather than allowing proprietary standards for proprietary systems.

Public education is essential to prevent the emergence of a digital 'wild west' and to promote trust, especially in digital purchase transactions. Citizen education must prioritise the need for digitally open-minded and critical thinking.

Crypto currencies must be backed by states, not companies. The potential of crypto-currencies in the precision-targeting of economic development should be recognised.

A study should be made of the use of blockchain in the fight against the coronavirus outbreak to show the power of blockchain in promoting digital human trust.

THE 3 C'S

Cryptocurrency, Cashlessness & COVID-19
A European Perspective



Contactless payments and the move toward cashless economies - whilst they must be considered with acknowledgement of wider externalities and issues around unbanked members of society - tend to facilitate additional convenience and indeed additional consumption in an economy.

This technology, the contactless card in your wallet or payment via your smartphone or watch, is simply the face of a longer term trend in society's disassociation with money as a tangible (and finance) commodity. We argue (in Brown & Whittle 2020) that the uptake, acceptance and adoption of cryptocurrency relies first on society's willingness to accept electronic cash substitutes and payment methods. In short, to foster an innovation in money and payment, one must first disassociate the individual's idea of 'what money is'.

If people's fixed view of money is simply notes and coin, then any innovation must be around speeding up the movement of cash. As a societal view of money evolved to include electronic payment, the innovative possibilities exploded. Money is now an elusive concept; previous generations when asked to describe money, may have spoken about notes, coins, or even gold. The idea of money now is digital, people it seems are more than ever prepared to trust in the digital transfer from their bank account to retailer via a myriad of apps and technologies -

a trend which is being further expanded by the implementation of PSD2 and the rise of challenger banks. Cash is moribund, even plastic contactless cards seem old-fashioned, current consumption is moving further away from traditional spending patterns with app based spending and purchases increasing in volume. Indeed payment for and consumption of goods are being further divorced. Your coffee app with pre-order means the sorry business of paying in store is gone, you preload your app days or weeks before your purchase. Indeed, Starbucks presently has circa US\$ 1.6 billion of customer liabilities on its balance sheet in the form of pre-paid coffee cards. A value of deposits that exceeds some small to mid-tier banks but is still somewhat short of Europe's largest bank, HSBC, who have some US\$ 470 billion of such assets under management (AUM), as at the year ending 2018.

**“DIGITAL MONEY” CAN
ARGUABLY DELIVER DIRECT
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MORE ABLY THAN
TRADITIONAL MONEY.**

This changing psychology of money is both a result of and an enabler of further Fintech innovation. Even initial figures demonstrating increases in online shopping and activity during the COVID-19 isolation and quarantine may well result in changes amongst population demographics, where they are traditionally more cash orientated, becoming willing to forego the need for cash to facilitate their spending. We would expect considerable further financial innovation to develop, both as a facilitator of longer term social distancing and as a response to further societal change.

Moreover, paramount in such innovation is the vision of European central bank digital currencies (CBDC's) from the likes of the ECB and the Bank of England, etc. Such institutionalised versions of the forerunner decentralised versions of money like Bitcoin are increasingly touted as the future of money.

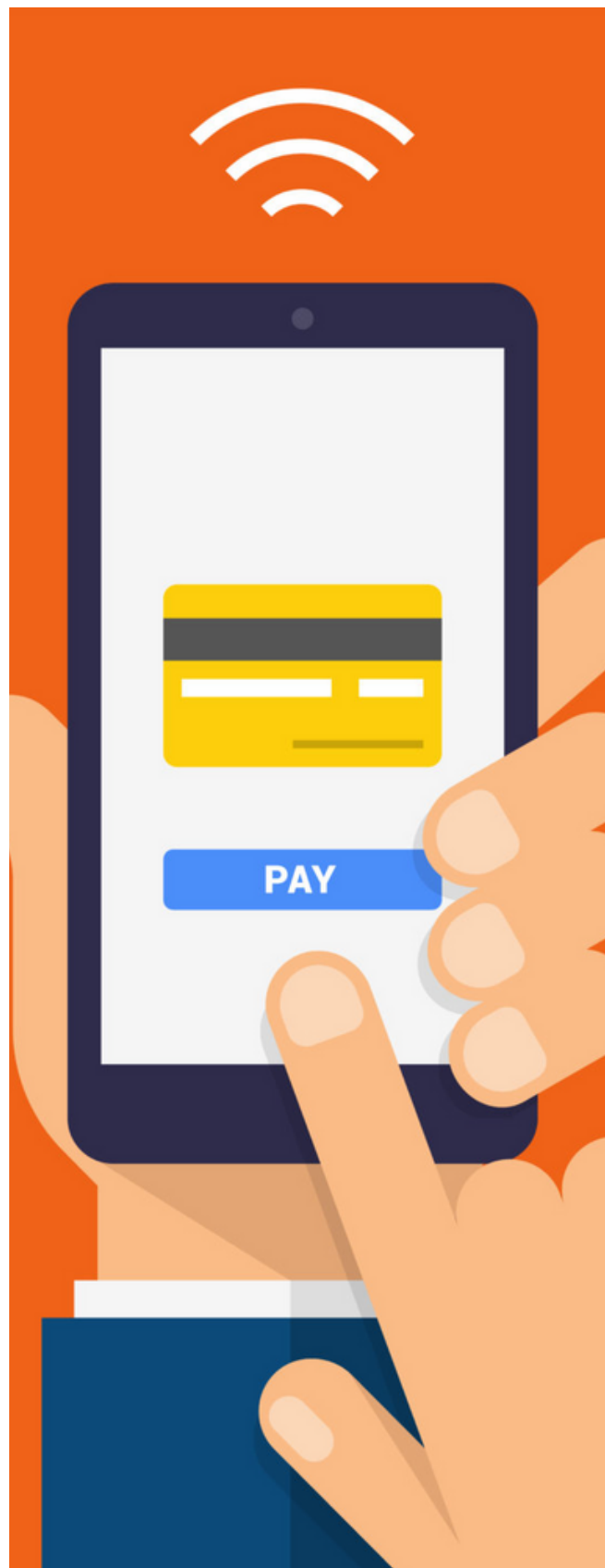
The Bank of International Settlements (BIS), (who are the central bank of central banks), conducted a global survey in early 2020, concluding that, "70% of banks are engaged in or about to start CBDC work". This has been followed up with the creation of a knowledge sharing group on CBDC's in January 2020 by The ECB, BIS and the central banks of Canada, England and the Sveriges Riksbank and the Swiss National Bank. A clear demonstration of the potential value of such CBDC's, not least in this COVID-19 environment where such "digital money" can arguably deliver direct stimulus to the retail populous and institutions more ably than traditional money.

Of course, as we move further towards a cashless society there may be unexpected or unexplored consequences. In particular, individual indebtedness may increase, a change in perception of what money is, from tangible to intangible, may well prompt a greater acceptance of credit. Excellent previous research has demonstrated that people are willing to pay more for goods that they pay for via credit rather than with money they earn, thus indicating the ability of an individual to value different types of money heterogeneously depending upon from where it has been sourced. A societal shift prompted by self isolation toward a greater acceptance of cash alternatives may have a similar effect. Particularly when coupled with the stresses of lockdown.

Governments must be aware and seek to mitigate the ongoing potential for debt issues arising from the change in perception of 'what money is'. The potential for this to be magnified due to the ongoing COVID-19 situation is considerable. How people value their money is context dependent: current fear, worry, and stress, may well prevent longer term financial consideration and wellbeing.

Gavin Brown & Richard Whittle

Manchester Metropolitan University



THE ROLE OF SMALLER JURISDICTIONS IN THE BLOCKCHAIN LANDSCAPE



How can a small nation state outside of the borders of the European Union contribute to the development of the legal and regulatory frameworks within which blockchain can be acceptable?

In late 2018, with the establishment by the Isle of Man Government of specific business development Agencies, focussed on key areas of digital and financial services businesses, a blockchain initiative was formed. Its aim: to ensure that the Isle had the right legal and regulatory environment to be attractive to and encourage new businesses working with or developing distributed ledger technology solutions.

The first mover advantage is not always as defined or as large as first perceived, whether that's in the realms of product development or in terms of establishing legislation and setting the regulatory parameters. The concept of moving quickly behind others that have forged the initial path, overcome the initial challenges and put aside the first round of criticisms can bring with it several advantages, especially for a small jurisdiction.

In 2019, Blockchain Isle of Man was created. A team was brought together to ensure that the Isle of Man maintained a position of 'fast follower', to support both businesses and the Financial

Services and Gaming regulators. This allowed the Isle of Man to adapt and develop their regulatory frameworks for emerging technologies; to assist new businesses to understand the potential regulatory challenges they faced.

The National Blockchain Strategy sets out the aspirations of the Isle of Man in this regard with the desire to be a 'fast follower', recognising that with little international harmonisation of legislation and regulation in blockchain and crypto-assets, it made sense for the Isle of Man to assess what major jurisdictions had pronounced. In doing so, we can maintain a watching brief over the major developments, react to the changing landscape, and, due to the close working relationship between the Blockchain team and the Regulators, agree a way forward with amended or new legislation.

Our unique position between business and regulator allows us to canvas opinion and experiences from new and established businesses, as well as their professional advisers, in the way the current Isle of Man regulations either act as a barrier to business or indicate there is a gap in the framework that requires clarification or amendment. Over the last year since inception, we have been meeting regularly with industry representatives, lawyers, and other interested parties to take their concerns to the regulators.

Despite a wide variety of starting positions from the major digital economies across Europe, Asia and America, there has recently been a tendency for legislation and regulation to come together across a number of principles: namely anti-money laundering, crypto asset recognition and regulation, market integrity, custody, and technological integrity. The Isle of Man is following each of these elements closely, with varying degrees of alignment with our own current legislative and regulatory framework, always with the overriding objective to quickly assess key developments, analyse our local needs and work with the regulators to issue guidance and amendments where necessary.

At the end of the recent ICPS-convened Roundtable, the delegates concluded that:

- a programme of digital finance awareness and education was needed as part of a wider up-skilling initiative;
- digital programmable money could be implemented in a coordinated fashion to deliver international, national and regional targeted financial stimuli;
- the use cases of blockchain should be regulated, not the underlying distributed technology and that the supra-national regulators should coordinate to work quicker to harmonise a current fragmented regulatory landscape;
- minimum security standards for distributed ledger technology could be considered alongside potential assurance or certification testing to engender greater trust by the end users.

Interestingly, with the deepening impact of COVID-19 across Europe, the concept of digital programmable currencies has risen higher up the agenda of 'blockchain' projects to consider in the near future. Within Blockchain Isle of Man we'll be researching and looking into the other Roundtable conclusions ourselves, as well as carrying a watching brief over EU developments to react as quickly as possible where we see benefits for our local economy and ecosystem.

The day's agenda was a reminder for me of the interconnectivity of the key building blocks for a digital economy and society, of their complexities and the importance for the Island to do the same.

As we continue in 2020 and look at refreshing the strategic objectives of Blockchain Isle of Man, maintaining connections with our nearest neighbours as a source of direction in our regulatory roadmap is a robust, sure-fired way to continue to be a 'fast follower'. While the current Single Digital Market initiatives of the EU, encompassing emerging technologies, is a key element of our jurisdictional comparison to allow the Isle of Man to maintain its relevance and importance as a jurisdiction of choice for blockchain-enabled businesses in the future.

Steve Billingham

Regulatory Lead

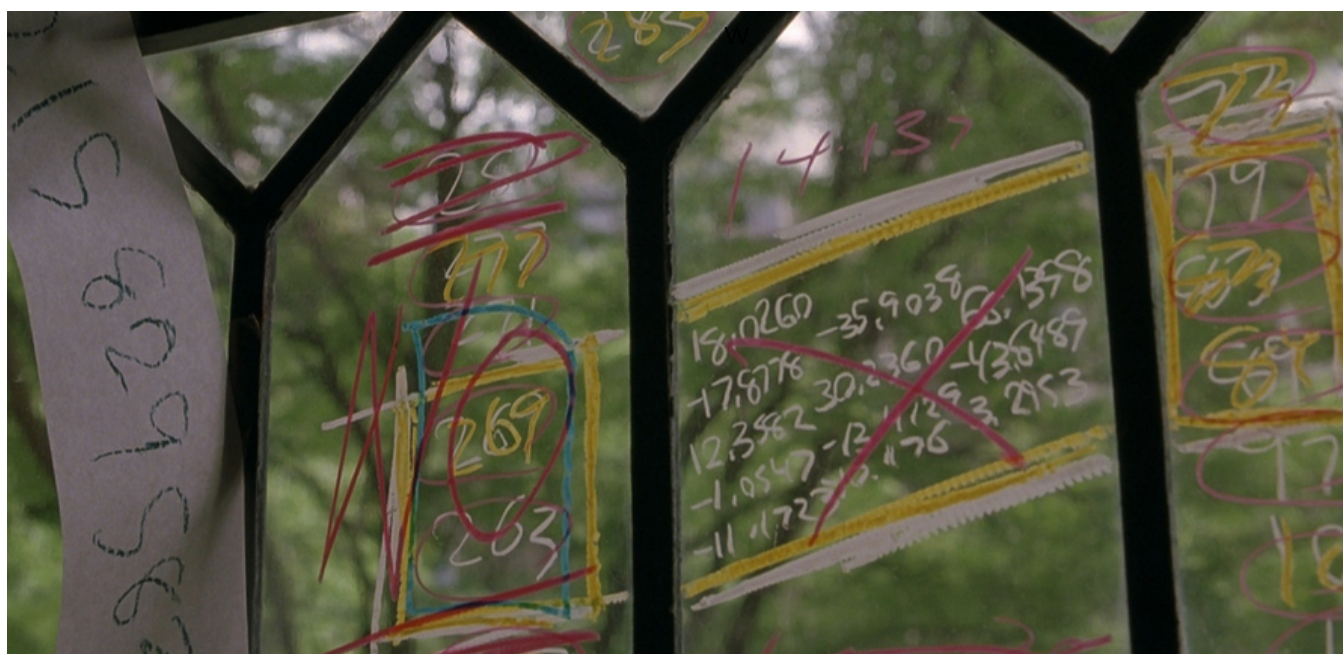
Blockchain Isle of Man

A CALL FOR ACTION ON BLOCKCHAIN INNOVATION

In the International Data Corporation's Blockchain Guide it was predicted that growth in blockchain spending across Europe would rise from over \$800 million in 2019 to \$4.9 billion in 2023. It's no wonder that the European Commission and European Investment Fund (EIF) launched a dedicated investment scheme to make an initial €100m available to investors that can support AI and blockchain-based products and services in Europe. The European Commission is also adopting a holistic approach to blockchain, launching initiatives that encourage cooperation between industry stakeholders.

Credit Suisse Asset Management, Clearstream, Natixis Investment Managers, and Fundsquare all confirmed they successfully raised capital for a platform built on Ethereum blockchain.

The other major advantage is how blockchain as a technology promotes the set-up without a central middleman, but instead creates trust between all the participants, even in a cooperative environment. As a consequence, it is a technology that allows organisations to reach an agreement and execute transactions transparently without the need for a central authority.



This plays perfectly into the concept of blockchain, and all its digital assets, which are rooted in collaborative multi-party ecosystems. Meaning that the more parties build and develop on a platform, the higher its value becomes for participants.

Even competitors are collaborating by sharing data and working towards a common goal. Only a week after I was part of the EU's roundtable on the subject, several financial institutions in Europe announced a partnership to launch a blockchain-based investment platform.

Whilst such capabilities will give rise to a network of distributed blockchain nodes across Europe, it will not be without challenges, particularly in finance where it is likely to come under increased scrutiny from regulators because they are multi-party databases.

As a relatively new technology any forthcoming regulation would therefore need to reduce the risk to financial stability but not to the detriment of stifling innovation. For regulators to make any judgement call, they need to understand the technology beyond the hype.

This is difficult because blockchain and DLT is complex and combines several technical components (such as cryptography or decentralised computation) as well as game theoretical elements.

The issue is compounded when DLT impacts many different industries which are regulated and supervised by different organisations in different countries. So, aligning perspectives soon become cumbersome. An example is that in 2019 several supervising authorities were trying to conclude on how to handle digital assets in all facets even if they were not created in the US. Unfortunately, these perspectives were not aligned and were sometimes contradictory. It highlights how use cases for the technology are global and not defined by borders. But, without a strong regional or global platform for authorities to define a common understanding of DLT, regulation can cause confusion across continents.

Furthermore, a country's appetite to explore the potential for the technology will also dictate their bias towards regulation. This is true amongst European countries who have individual regulations that makes it hard for companies to comply.

Conversely, start-up companies are always searching for a regulatory environment that matches their ambition, so those countries that have more agile regulation also have the possibility to create tech hubs that focus on blockchain and DLT. The Gibraltar Financial Commission, for example, granted a licence to provide distributed ledger technology, making its stock exchange the first to own a national, regulated exchange for cryptocurrencies and digital assets. The watch-out for any emerging market that encourages disruptive ideas and innovations is to ensure that they will ultimately add to the economy and provide a benefit for society as a whole.

In order to improve the situation for DLT companies in Europe, especially those operating in digital assets or currencies, there are five requirements:

- 1** Relevant supervising bodies need to understand DLT technology and its characteristics, especially for financial markets. These include central banks, market authorities, tax regulators, data privacy authorities and consumer rights protection authorities. Whilst working groups are often established as a first step, they are not always connected between each other and / or across Europe which leads to problems later down the line.
- 2** Relevant supervising bodies also need to understand different types of blockchain and digital assets. How they function, the level of security existing (or not), the level of decentralisation and the level of financial stability and risk.
- 3** Based on this understanding the authorities should define, on a principle level, the guardrails on how to supervise digital assets. These need to be broad enough to be universally applicable - even in situations where the technology has evolved. They should also ensure two key aspects; that further innovation is encouraged and protection is ensured for those who need it.
- 4** This set-up of supervising bodies and guardrails should be aligned on a European level in order to support the scale of a common market.
- 5** Additionally, societies should receive a basic understanding of new technologies (including blockchain) so that a better judgement of the technology and its implication can be made by each individual.

With these five actions Europe can deliver on its predicted growth, foster innovation and build a framework for sustainable growth, whilst mitigating many of the challenges other countries now face having pressed ahead prematurely with without proper cooperation.

Kaj Burchardi

Managing Director

BCG Plantinon



BIG TECH

Big Tech companies have strong market dominance in the fields of search engines, messenger, social media, advertising and Big Data. However, the European Union is concerned about unfair competition, and the monopolisation of key tech sectors.

The union recently slapped a record €4.34 billion fine on Google for using its Android mobile device software to stifle competition. EU antitrust regulators ruled that the company, whose Android software powers more than 80% of the world's smartphones, pushed consumers to its own search engine, which declared not fair, rival search providers and app makers can't compete.

Apps automatically transmit data to Facebook and share this data together with a unique identifier - Google advertising ID (AAID). Data from different apps can build an intimate profile of people's behaviours, routines, health status and religion. Culturally, for Europeans this can be considered very intrusive. Sweden and Spain have the strongest privacy laws.

A key area of concern is 'bundling', where people do not have control of the key layer of their smartphones.

The original Open Systems Interconnection (OSI) network model consists of seven layers, from the physical layer right up to the application layer. In addition to the traditional, seven layer OSI model, we define an eighth layer, the key layer, which connects both computer and mobile systems with the users.

The key layer on mobiles must be free for competition and cannot be bundled with the vast armada of default applications from the mobile OS duopoly (Apple and Google). Examples of applications that cannot be exclusively bundled with the mobile OS are:

- Voice
- Browser
- Maps
- Voting and related identity
- Finance, payments, and related identity
- Shopping applications
- Keyboard

There is now a strong need to protect the key layer by keeping it free from coercive bundling, we can do this with the use of ubiquitous AI avatars and an enabling environment for competitors.

Here are the key takeaways from the event that discussed Big Data, the key layer challenge, blockchain and education:

- 1 There is an urgent need for a continent-wide regulatory framework for blockchain in Europe, including the countries of the continental shelf. This can only be based on precise, agreed definitions of the technology. The regulation of blockchain must be proactive rather than reactionary, noting the strengths and weaknesses of distributed ledgers. It must provide for common standards of security rather than allowing proprietary standards for proprietary systems.
- 2 Public education is essential to prevent the emergence of a digital 'wild west' and to promote trust, especially in digital purchase transactions. Citizen education must prioritise the need for digitally open-minded and critical thinking.
- 3 Crypto currencies must be backed by states, not companies. The potential of crypto-currencies in the precision-targeting of economic development should be recognised as we move to a cashless society.
- 4 A study should be compiled underscoring the use of blockchain in the fight against the coronavirus outbreak in promoting digital human trust, which is urgently needed for the procurement of medical supplies, pharma and PPE.
- 5 Warnings to be prominently displayed before each act of accessing any service involved in activities that might include data transfer and selling to third parties.
- 6 Obligatory listing of multiple alternative services with clear labelling explaining whether any of the alternatives are involved in data transfer and selling to third parties.

- 7 Taxation of these data transfers.
- 8 Free access to the key layer for third parties by the mobile OS duopoly (Google and Apple) and communication platforms (dominated by Facebook) to ensure that the market is not locked by currently dominant players, this allows for healthy competition. An open key layer on mobile devices ensures digital diversity.
- 9 Bundling prohibition. Failing to do so will enable Big Tech companies to issue their own digital currency such as Facebook's Libra token, this would lead to most transactions on mobile devices, competing with government-issued money.

The new EU regulations stem from well-thought through considerations meshed together by society, think tanks and University research.

Alex Lightman

Author, Entrepreneur & Futurist

**"DATA FROM DIFFERENT APPS
CAN BUILD AN INTIMATE
PROFILE OF PEOPLE'S
BEHAVIOURS, ROUTINES,
HEALTH STATUS AND
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