STUDY
Requested by the ITRE committee

Brexit and ICT Policy

Workshop proceedings

Policy Department for Economic, Scientific and Quality of Life Policies
Author: J Scott MARCUS, Alexander ROTH, Gaurav SANDHAR
Directorate-General for Internal Policies
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Abstract
This report summarises the presentations given and subsequent discussion at the “Brexit and ICT Policy” workshop which was held on 19 June 2018. A range of views on the potential impact of Brexit on research, innovation, and regulation of Information and Communications Technologies (ICT) within the EU27 was presented, taking into account the different forms of Brexit that are possible. This document was prepared by Policy Department A at the request of the Committee on Industry, Research and Energy (ITRE).
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**AUTHORS**
J Scott MARCUS, Bruegel
Alexander ROTH, Bruegel
Gaurav SANDHAR, Bruegel

**ADMINISTRATOR RESPONSIBLE**
Frédéric GOUARDÈRES

**EDITORIAL ASSISTANT**
Irene VERNACOTOLA

**LINGUISTIC VERSIONS**
Original: EN

**ABOUT THE EDITOR**
Policy departments provide in-house and external expertise to support EP committees and other parliamentary bodies in shaping legislation and exercising democratic scrutiny over EU internal policies.

To contact the Policy Department or to subscribe for updates, please write to:
Policy Department for Economic, Scientific and Quality of Life Policies
European Parliament
B-1047 Brussels
Email: Poldep-Economy-Science@ep.europa.eu

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LIST OF ABBREVIATIONS

5G  The 5th generation of mobile telecommunications standards
AI   Artificial Intelligence
BEREC  Body of European Regulators for Electronic Communications
COCOM  Communications Committee
ECJ   European Court of Justice
EEA   European Economic Area
EFTA  European Free Trade Agreement
EU27  European Union Countries after Brexit
FTA   Free Trade Agreement
GDPR  General Data Protection Regulation
H2020 Horizon 2020
HPC   High Performance Computing
ICT   Information and Communications Technology
ITRE  Industry, Research and Energy Committee
MNO   Mobile Network Operators
MVNO  Mobile Virtual Network Operators
NRA   National Regularity Authority
R&D   Research and Development
RLAH  Roam like at home
RSPG  Radio Spectrum Policy Group
EXECUTIVE SUMMARY

On Tuesday 19 June 2018, the Policy Department for Economic, Scientific and Quality of Life Policies of the European Parliament delivered a workshop on “Brexit and ICT Policy” at the request of the Committee on Industry, Research and Energy (ITRE). The think tank Bruegel assisted with the organisation of the workshop.

The workshop, chaired by Mr. Seán Kelly, sought to explore the impact that Brexit might have on research, innovation and regulation of Information and Communications Technologies (ICTs) within the EU27. Four well qualified experts provided ten-minute presentations on possible implications, taking into account the different forms of Brexit that are possible. Topics addressed included ICT policy and regulation, digital innovation, research policy and cooperation, and the deployment of new 5G mobile services.

The workshop was designed to provide background on each of these together with a succinct analysis of possible concerns, with a focus on the EU27 rather than the UK. The presentations were followed by a question and answer session.

The first speaker was J. Scott Marcus, Senior Fellow at Bruegel, who outlined the different forms of Brexit possible, and how each of these might interact with regulatory cooperation, research cooperation, and ICTs innovation. Many forms are possible, such as EEA membership, bilateral arrangements similar to those of Switzerland, or a relationship limited to a Free Trade Agreement (FTA). From the EU27 perspective, EEA membership should be preferred, but it does not seem very likely just now.

All other forms of the future relationship run the risk of regulatory and policy divergence over time, and of loss of synergies in terms of research and regulatory coordination. The transfer of personal data constitutes one area where there is clear risk of divergence; international mobile roaming is another.

Cooperation or at least dialogue at a regulatory level might still be possible through for instance an observer status in BEREC. Cooperation and coordination through the Horizon 2020 programme could be possible if appropriate by means of an associated status, even in the event of a hard Brexit. In almost all scenarios, continued H2020 participation benefits both the EU27 and the UK.

The second speaker, Bas Kotterink, Senior Scientist at TNO, discussed the effect that Brexit might potentially have on digital innovation in the EU27. Three key issues for the EU27 (1) the start-up ecosystem, (2) ICT R&D spending, and (3) e-commerce.

London is a hotbed of digital innovation, with a strong start-up ecosystem. London is the third ranked technology hub, behind only Silicon Valley and San Francisco. London has good research and development capabilities, strong access to finance, skilled labour, and access to international markets. The city serves as a gateway to the United States for the rest of Europe as it is the city that is most similar to the USA in terms of language and business culture, especially when it comes to venture capital and technology innovation.

The UK leads the EU in AI research. Investments in R&D in robotics and high performance computing (HPC) are also substantial. The UK is also the European leader in e-commerce, with a fraction of purchases made online that exceeds even that of the United States.

The EU is likely to feel the impact of Brexit if there is a loss of access to the vibrant UK digital start-up ecosystem, with its access to markets, finance, talent, and its unique link to the US. These impacts might be accentuated if the UK uses its new regulatory flexibility to further strengthen further its
attractiveness to digital platforms, thus leaving other EU digital hubs in the dust. Impacts are most likely to be visible in terms of AI and of e-commerce.

In response, it may be necessary for the EU27 to boost its start-up ecosystem to compensate for the loss of synergy with the UK. Access to funding, access to markets, links with the US and with Asia (including e-commerce links), a good data sharing regime between the EU27 and the UK, strategic R&D partnerships with the UK in areas such as AI, and labour mobility measures might be in order.

Domagoj Jurjevic, Independent Consultant focused his presentation on the implications of Brexit on the EU27 in regards to ICT policymaking and regulation. Mr. Jurjevic analysed different Brexit scenarios (EEA, bilateral agreements, and the FTA) and their implications for future European ICT regulation and policymaking under present rules, with a focus on possible UK possible involvement in three critical activities where National Regulatory Authorities (NRAs) participate in EU level policymaking and regulation: BEREC, the Council of the EU, and COCOM.

If the UK were to become an EEA member, the UK would be able to continue working within BEREC as an observer but would lose its ability to vote. If the UK were to obtain an observer status in COCOM, the situation would be much the same. As regards the Council of the EU, no UK involvement would be possible as the UK would no longer be a Member State of the European Union.

If Brexit were to take the form of a series of bilateral agreements to those of Switzerland, we might expect that the UK would be able to participate in BEREC as an observer without having the right to vote, as is the case with Switzerland. Involvement in the Council of the EU and in COCOM would presumably no longer be possible.

If the post-Brexit relationship were limited to a Free Trade Agreement (FTA) with the EU27, Mr. Jurjevic expects that the UK would lose access to all three mentioned regulatory bodies, unless some additional agreement were to be concluded. That would mean that the UK’s considerable regulatory expertise would no longer be shared between the EU27 and the UK.

The fourth and final speaker, Prof. Gérard Pogorel, ParisTech discussed the implications of Brexit for 5G networks and services. 5G services are expected to play an important role in the near future in the digitisation and modernisation of European industry and society. Achieving rapid deployment of 5G has consequently featured prominently in EU economic and industrial policy in recent years. Prof. Pogorel discussed how Brexit might impact the EU’s 5G endeavours in terms of (1) R&D, (2) standards (including spectrum management), (3) actors and their geography, and (4) connectivity.

Little impact should be expected on standardisation or on spectrum management allocations, both of which are mainly dealt with at regional and global level. In terms of research, however, the UK is an important player. The loss of synergies and scale is a huge issue for industry. How UK firms and institutions will react is not entirely clear. If Vodafone for instance shifts its operations on a large scale to the EU27, other firms may follow suit.

Will the post-Brexit EU focus on taking back control of the UK’s destiny, or on the view prevalent in industry and in the research and development community that recognises the value of collaboration? Prof. Pogorel emphasises that the Brexit negotiators must understand the likely impact of their decisions.

Once the individual presentations had concluded, Mr. Kelly opened the question and answer session to the floor. Mr. Kelly posed a range of questions, including: Who is likely to lose more from Brexit, the UK or the EU27? Should the EU27 seek an arrangement similar to Privacy Shield with the UK? Should the UK’s participation in H2020 be automatic? What EU Member States of cities could help to replace the UK’s role as a gateway to the US?
Each speaker had the opportunity to answer the questions posed by Mr. Kelly. The audience did not raise any questions.
1. WORKSHOP PROCEEDINGS

1.1. Opening Remarks

The workshop was chaired by Mr. Seán Kelly, member of the Committee on Industry, Research and Energy. He began by welcoming the presenters to the “Brexit and ICT Policy” workshop. He laid out the structure of the workshop, with each speaker having ten minutes to speak, followed by a question and answer session at the end of all presentations. Ninety minutes were allocated for the workshop.

1.2. The Potential Impact of Brexit on ICT Policy, and Possible Ways Forward for the EU27

J. Scott Marcus, Senior Fellow at Bruegel

Mr. Marcus presented the potential impacts of Brexit on the remaining 27 Member States of the EU with respect to information and communications technology (ICT) topics, noting that different forms of association post-Brexit would strongly influence these impacts. In his presentation, Mr. Marcus set the background, provided context for the following speakers, and elaborated especially on three points:

- Possibly reduced contact between researchers and innovators in the UK and EU27;
- Possibly reduced interactions between regulators and policymakers;
- Loss of scale economies.

Mr. Marcus stressed that the impact of Brexit on EU27’s ICT sector will be highly dependent on the future EU27-UK relationship. There appears to be at present only a very slim chance that the UK may end up remaining in the EU, but that is the most attractive alternative from the perspective of the EU27. The remaining options include the UK becoming an EEA member, the UK having bilateral arrangements with the EU27 similar to those of Switzerland, the UK having a relationship limited to a free trade agreement (FTA), or in the worst case a “hard Brexit” with no explicit agreement. Each of these options carries positives and negatives, but Mr. Marcus emphasised that engaging in the EEA would be the best option with respect from the perspective of the EU27 in order to maintain the synergies and scale economies that we enjoy today, and to minimise long term divergence from the EU acquis.

Mr. Marcus noted two specific areas that are very likely to be impacted by Brexit: (1) roaming and (2) the transfer of personal data.

While the UK government and large MNOs have claimed that the “roam like at home” (RLAH) arrangements will continue after Brexit with no change, Marcus argues that the actual results are uncertain. The UK can control its domestic arrangement with its own MNOs, but cannot put a cap on wholesale payments to network operators in the EU27 where British customers will be roaming (and vice versa). This is likely to pose problems for network operators if their cost exceeds the price that they can charge. This is unlikely to be a problem for a large UK MNOs such as Vodafone, because Vodafone will be able to internalise its costs since it operates in many countries. Other MNOs will be less able to do so, and virtual MVNOs will not be able to internalise costs at all. This is less likely to be an issue for most EU27 MNOs, because most will enjoy strong bargaining power relative to their UK counterparts – more UK mobile subscribers vacation in Spain and Italy than the other way around. Most EU27 MNOs are likely to be able to obtain better wholesale rates in consequence of their more favourable bargaining position, which will enable them to continue to offer RLAH retail prices to EU27 subscribers who travel to the UK.
With respect to data transfers, Mr. Marcus observed that the EU’s General Data Protection Regulation (GDPR) allows data transfers with great freedom within the EU and EEA Member States. Third countries are subject to a different article within the GDPR, but can enjoy roughly the same freedom if the EU puts an Adequacy Decision in place. The past EU-US Safe Harbour arrangement, which fulfilled the same function as an Adequacy Decision for data transfers between the EU and the US, was overturned by the ECJ in 2015. Safe Harbour has since been replaced by an Adequacy Decision based on the Privacy Shield framework (the effectiveness of which has still to be proven). Even if an Adequacy Decision comes into force for the UK post-Brexit, a court challenge similar to the Schrems case should be expected, probably leading to an outcome similar to that of the Schrems case inasmuch as UK surveillance appears to be no less sweeping than that of the US. One can therefore expect that the EU27 and the UK will be obliged to reach an accord similar to Privacy Shield (but hopefully more robust) if they wish to maintain data transfers of personal data with few restrictions.

Mr. Marcus also noted the risk of loss of regulatory expertise. UK expertise played a large role in the creation of the current EU/EEA Regulatory Framework for Electronic Communications (RFEC), and has been a noteworthy regulatory innovator. The UK has been an important contributor to the work of the Body of European Regulators for Electronic Communications (BEREC) and the Radio Spectrum Policy Group (RSPG). It is not a foregone conclusion that this expertise will disappear. If the UK were to become an EEA member, for instance, it would automatically be entitled to observer status within BEREC. Even without EEA membership, the UK might be still involved after Brexit, since BEREC itself can grant observer status to third countries, as it has done with Switzerland.

The UK has been an important engine of research and innovation in the EU. Under all but the most extreme Brexit scenarios, it is likely to be in the interest both of the EU27 and of the UK to maintain links. The Horizon 2020 programme represents the main vehicle for research coordination and cooperation with the EU. H2020 participation is available to all, but not funding. Rules for participation for EU Member States and for EEA members are clear, but many other countries participate in H2020. For example, Switzerland and Israel participate by means of an associated status, even though they are neither EU nor EEA members. An associated status for the UK could be possible for the UK, even in the event of a hard Brexit, and in nearly all scenarios is desirable.

In conclusion, Mr. Marcus again stressed that the form of exit that the UK takes will have a large effect on the impact of Brexit on the EU27. Very little would change if the UK were to join the EEA, but all other options would lead to varying degrees of regulatory divergence and loss of research and innovation synergies. Even in the absence of EEA membership, regulatory and research coordination could be provided if desired through BEREC and through the H2020 programme.

1.3. Implications of Brexit for Digital Innovation in the EU27

Bas Kotterink, Senior Scientist at Netherlands Organisation for Applied Scientific Research (TNO)

In his presentation, Mr. Bas Kotterink highlighted in particular three specific drivers of EU27 digital innovation that might be adversely affected by Brexit: (1) the start-up ecosystem, (2) ICT R&D spending, and (3) e-commerce.

Mr. Kotterink began by noting that London is a hotbed of digital innovation, with a strong start-up ecosystem. London is the third ranked technology hub, behind only Silicon Valley and San Francisco. London has good research and development capabilities, strong access to finance, skilled labour, and access to international markets. The city is home to a strong and creative financial sector which interplays with the technological sector. London serves as a gateway to the United States for the rest of Europe as it is the city that is most similar to the USA in terms of language and business culture, especially when it comes to venture capital and technology innovation. For tech start-ups, London is the undisputed number one city in Europe in terms of market access.
Other European cities, such as Berlin, Paris, Amsterdam and Stockholm are also able to attract skilled labour. Brexit might affect exchange of skilled labour between London and these cities.

UK investment in R&D in key ICT areas such as artificial intelligence (AI), robotics and high performance computing (HPC) is substantial. The UK leads the EU in AI research. The UK has a strong record in that field with a high research output, well-positioned research facilities such as the Turing Institute, and successful companies. This strength in AI was enhanced when Google acquired the British AI company DeepMind in 2014. Currently, it is US and UK companies leading in the field of AI.

The EU27 is already falling behind in these key ICT areas, and without the access to the UK, the gap might even widen. The five big internet companies (Microsoft, Google, Facebook, Apple, Amazon) are investing strongly in these strategic digital areas, and the strongest European competitor in these areas is currently the UK. These big five firms collectively spend as much each year on strategic research areas such as AI, robotics, and HPC (70 billion euro in 2017) as the entire H2020 budget. Thus, US investment level is substantially greater than that of the EU, and is still growing very fast.

The strength of e-commerce in the UK market was the final topic touched on by Mr. Kotterink. The UK leads Europe in the percent of retail sales made online, and even exceeds the US by this measure. The UK plays an important role for Europe as US and Asian e-commerce platforms enter the EU.

Overall, the EU is likely to feel the impact of Brexit if there is a loss of access to the vibrant UK digital start-up ecosystem, with its access to markets, finance, talent, and its unique link to the US. These impacts might be accentuated if the UK uses its new regulatory flexibility to further strengthen its attractiveness to digital platforms, thus leaving other EU digital hubs in the dust. Impacts are most likely to be visible in terms of AI and of e-commerce.

In response, it may be necessary for the EU27 to boost its start-up ecosystem to compensate for the loss of synergy with the UK. Access to funding, access to markets, links with the US and with Asia (including e-commerce links), a good data sharing regime between the EU27 and the UK, strategic R&D partnerships with the UK in areas such as AI, and labour mobility measures might be in order.

1.4. Implications of Brexit for EU27 ICT Policymaking and Regulation

Domagoj Jurjevic, Independent Consultant (former vice chair of BEREC)

Mr. Domagoj Jurjevic focused his presentation on the implications of Brexit on the EU27 in regards to ICT policymaking and regulation. Mr. Jurjevic introduced the most important bodies where EU Member States participate in EU policymaking and regulation:

- BEREC, important for regulatory harmonisation in the EU,
- the Council of the EU (and its preparatory bodies), key in the ordinary legislative procedure in the EU, and
- the Communications Committee (COCOM), which serves as an advisory body to the European Commission.

Staff of the National Regulatory Authorities (NRA) of the EU Member States participate in BEREC. As a BEREC member, the UK has been able to contribute broad regulatory experience and expertise to the EU. The UK has been deeply involved in BEREC expert level working groups. Mr. Jurjevic stressed that the UK had provided considerable added value to the documents drafted by these groups.

In the Council of the EU (and its preparatory bodies), all Member States are involved, and it crucial to have regulatory expertise for drafting legislation. The UK was able to bring their specialised knowledge
to the appraisal of legislation under discussion. The Council of the EU will have to find a way to replicate and recreate the expertise and experience which was provided by the UK.

COMCOM has importance when it comes to contributing to the draft legislative measures that the European Commission intends to adopt. This is a field in which the NRAs, including UK NRA, work closely together, and where continued quality work is needed.

Mr. Jurjevic analysed different Brexit scenarios (EEA, bilateral agreements, and the FTA) and their implications for future European ICT regulation and policymaking under present rules, with a focus on possible UK possible involvement in BEREC, the Council of the EU, and COCOM.

If the UK were to become an EEA member, the UK would be able to continue working within BEREC as an observer but would lose its ability to vote. The UK would be able to provide insight and knowledge, but would not have a say in final decisions. If the UK were to obtain an observer status in COCOM, the situation would be much the same. As regards the Council of the EU, no UK involvement would be possible as the UK would no longer be a Member State of the European Union.

If Brexit were to take the form of a series of bilateral agreements to those of Switzerland, we might expect that the UK would be able to participate in BEREC as an observer without having the right to vote, as is the case with Switzerland. Involvement in the Council of the EU and in COCOM would presumably no longer be possible.

If the post-Brexit relationship were limited to a Free Trade Agreement (FTA) with the EU27, Mr. Jurjevic expects that the UK would lose access to all three mentioned regulatory bodies, unless some additional agreement were to be concluded. That would mean that the UK’s considerable regulatory expertise would no longer be shared between the EU27 and the UK.

Mr. Jurjevic concluded that the EU27 and UK should recognise the consequences that are likely to follow from the chosen association agreement. Future cooperation will still be possible with certain agreements, especially bilaterally between UK NRA and EU NRAs, but there is also the potential for regulatory divergence. The UK could still have the opportunity to be an observer in BEREC under many scenarios, and this would be crucial and beneficial in order to maintain a degree of regulatory harmonisation between EU27 and the UK. An example of collaboration could be roaming regulations where harmonised standards have benefited end consumers strongly in the last eleven years. Mr. Jurjevic left the listeners with the question whether “the expertise from the UK [which] was [of a] high level, […] can be compensated by the work of other countries or institutions?”

1.5. Implications of Brexit for EU27 Innovation and Deployment of 5G

Prof. Gérard Pogorel, Professor of Economics-Emeritus at ParisTech, CNRS Interdisciplinary Innovation Institute I3

Prof. Gérard Pogorel’s presentation discussed the implications of Brexit for 5G networks and services. 5G services are expected to play an important role in the near future in the digitisation and modernisation of European industry and society. Achieving rapid deployment of 5G has consequently featured prominently in EU economic and industrial policy in recent years.

Pogorel discussed how Brexit might impact the EU’s 5G endeavours in terms of (1) R&D, (2) standards (including spectrum management), (3) actors and their geography, and (4) connectivity.

As regards standards in general and spectrum management, the UK’s departure in whatever form is unlikely to have much effect. Standards are primarily international or global (3GPP, ETSI), and spectrum management is also largely international or global (ITU and CEPT).
The UK is heavily involved in 5G R&D, with much of this involvement channelled through the H2020 programme. Prominent in UK participation are universities (Surrey, Bristol, ICL), firms (BT, BBC, Vodafone, O2), and research centres (NEC, Samsung, Interdigital). An open question is whether cooperation and involvement will be maintained post-Brexit.

How these arrangements will play out is unclear. Vodafone for example is the largest network operator in Europe. Will Vodafone shift its centre of gravity to the EU, or will it remain mainly in the UK? He believes that that once a company such as Vodafone makes a decision to move more to the EU, then other companies may follow Vodafone’s lead.

Prof. Pogorel also touched upon vertical industry actors which are firms operating logistics and value chains across borders. Production of these firms might be strongly affected by Brexit in certain scenarios. For instance, the production chains of some manufacturing companies cross the future UK-EU27 border dozens of times. Thus, the importance of maintaining the value chains and logistics has to be brought to the attention of negotiators.

Pogorel elaborated on the need to create of “European champions” within European industry. Europe’s future potential champions will rely on the new 5G mobile technology as it will facilitate their business. 5G will make it easier to create of new companies as it will lower the barrier of entry into certain industries. Overall, the bigger the seamless network, the value chains and markets, and the data pool, the bigger the efficiency gains can be. If Brexit sacrifices these scale economies, it risks being a lose-lose situation for both the EU27 and the UK.

Prof. Pogorel concluded his presentation by discussing the potential issues that Brexit may raise for the EU27. There are conflicting views in the UK regarding collaboration: there is on the one hand the popular notion taking back control of the UK’s destiny, versus the view prevalent in industry and in the research and development community that recognises the value of collaboration. There are also questions of regulatory cooperation and coordination. The Galileo dilemma is an example of the tensions and stresses that can be expected. Prof. Pogorel emphasises that the Brexit negotiators must understand the likely impact of their decisions.
2. QUESTIONS AND ANSWERS SESSION

The four presentations summarised in Section 1 were followed by questions posed by the Committee Chair, Seán Kelly. The audience did not raise any questions.

Question 1 by Mr. Seán Kelly: The concept of a lose-lose situation was brought up, but who would lose the most if there is no coordination between the two actors?

Response by Mr. J. Scott Marcus, Bruegel: Mr. Marcus addresses this question with a clear and concise answer. The UK will end up worse than the EU in almost every scenario. The fraction of UK trade conducted with the EU27 is far greater than the fraction of EU27 trade conducted with the UK. This impact is likely to be especially visible for UK financial services, which represent a substantial portion of UK GDP. The passporting that enables the UK to offer financial services into the EU27 is unlikely to remain in place after Brexit. Many UK-based financial institutions are already creating subsidiaries in other Member States as an alternative to London. Paris, Frankfurt, Amsterdam and Dublin are likely to benefit.

Question 2 by Mr. Seán Kelly: Who would lose out the most if the UK wanted to go their own way and not abide by the EU decisions regarding roaming?

Response by Mr. J. Scott Marcus, Bruegel: The UK would lose more due to the number of UK customers who travel to the EU27 instead of EU27 citizens travel to the UK. The UK wants to maintain the roaming packages as they are popular among its citizens.

Response by Mr. Domagoj Jurjevic, Individual Consultant: The end users in the EU and UK could both be losers depending on market principals. It all depends on the relationship between the MNOs and MVNOs between a specific EU country and the UK. Using Croatia as an example, and how the large amount of English tourists would not be able to use their services in the RLAH setting. It would inconvenience and overcharge the consumer.

Question 3 by Mr. Seán Kelly: Where do the EEA and FTA models for the UK fit in regarding H2020? Would UK automatically get acceptance as an observer?

Response by Mr. J. Scott Marcus, Bruegel: The UK would not get an automatic entry into H2020. If the UK were to become an EEA member, its ability to opt-in through the EEA regulation is clear. Under all other scenarios, the EU27 would need to look at the situation, and to consider whether the relationship will be primarily cooperative or competitive. While the preferred and by far the most likely scenarios are for a cooperative relationship between the EU27 and the UK, a super-hard Brexit where the relationship is primarily competitive cannot be excluded. If the UK were to attempt to position itself as a low-cost low tax competitor to the EU27, for instance, would the EU27 want to provide H2020 funding and assistance to the UK?

Question 4 by Mr. Seán Kelly: Cherry picking here would be ideal for the EU and the UK, but how does it fit into relations with maintaining the European Union as a unit and that members outside of it wouldn’t have the same privileges within it?

Response by Mr. Gerard Pogorel, ParisTech: Whether we want to allow cherry picking in research is up to the government, but we in the research industry would like to continue working with our UK colleagues. Maybe it is a gift to the UK government, and the EU will not want to make that. It is in the hands of enlightened negotiations and has very difficult trade-offs. An example of a dilemma is Galileo and how the system will have tough decisions to make whether we want the UK to contribute to the program.
Question 5 by Seán Kelly: Should something like the Privacy Shield be worked out with the UK?

Response by Mr. J. Scott Marcus, Bruegel: Cross-border transfers of personal data will continue to be vital for the functioning of firms that operate both in the EU27 and the UK, and especially vital for e-commerce. They should definitely be maintained.

As a Third Country, the UK will be subject to different GDPR provisions than those to which it is subject today. An Adequacy Decision between the UK and the EU27 is the obvious way to do this, but as I have already noted, a court challenge is sure to follow. The Schrems decision in 2015 was not about commercial privacy – it was about surveillance for purposes of national security. The UK’s surveillance practice are probably no less intrusive than those of the US. If the ECJ is asked the same question as in 2015, and under similar circumstances, it is likely to provide the same answer.

For the US, data transfers of personal data continue today pursuant to Privacy Shield. The effectiveness of Privacy Shield going forward is uncertain. It is a weak framework. It might have worked well enough with good faith on both sides, but the commitment of the present administration is uncertain. The solution between the EU27 and UK will probably be along the lines of Privacy Shield, but hopefully will be built on a firmer foundation.

Question 6 by Seán Kelly: Can the UK be replaced in its role as a gateway to the USA?

Response by Mr. J. Scott Marcus, Bruegel: There are several countries that could play a role. English is a native language in both Ireland and Malta, the use of English is widespread in the EU27. There are plenty of people in countries such as Germany and the Netherlands who speak excellent English.

Portions of the UK’s role as a bridge to the US are likely to be picked up by Dublin, Paris, Frankfurt, and Amsterdam, among others.

Response by Mr. Bas Kotterink, TNO: A “hard Brexit” will make it very hard for London to remain as a gateway. The UK has the start-up funding but it relies on the EU for supply of skilled labour. That might be endangered in case of an “hard Brexit”.

Question 7 by Seán Kelly: Is the UK going to be as formidable in the AI realm even without the UK?

Response by Mr. Bas Kotterink, TNO: They will be able to remain formidable, but they will now be competing for talent with the EU27. They still possess the finances to remain formidable. Research and development will be the easiest to arrange for AI due to mutual interest.

Question 8 by Seán Kelly: Would everything be lost, as you said? Surely not? (Directed at Mr. Jurjevic)

Response by Mr. Domagoj Jurjevic, Individual Consultant: He was referring to the expertise given to regulatory bodies. Both sides can stand to be losers depending on the exit plan and perspective. He uses the analogy of a divorce where neither side communicates with one another, and the divorcing parties do not share information. Everything could be lost with no cooperation.

Question 9 by Seán Kelly: Will companies such as Vodafone and O2 stay in the UK? Post-Brexit, will they change?

Response by Mr. Gerard Pogorel, ParisTech: Scale is of the essence. Losing 12% of the EU market is not good for the EU27, but it is even worse for the UK. Once again, geographies play in the direction of a significant shift from the UK to the EU27. It is hard to see the UK as a leader in 5G or network devices as they do not have a company on the scale of Apple or Samsung.
3. ANNEX

ANNEX 1 AGENDA

Workshop on
Brexit and ICT Policy

Organised by Policy Department for Economic, Scientific and Quality of Life Policies at the request of the Committee on Industry, Research and Energy (ITRE)

European Parliament, Brussels
19 June 2018, 15.30 - 17.00
Room József Antall (JAN) 2Q2

Final programme

Introduction by Seán KELLY, ITRE Member

Presentation 1 | Overview of the potential impact of Brexit on ICT policy, and possible ways forward for the EU27
J. Scott MARCUS, Senior Fellow, Bruegel (Belgium)

Presentation 2 | Implications of Brexit for digital innovation in the EU27
Bas KOTTERINK, Senior Scientist ICT Policy, TNO (Netherlands)

Presentation 3 | Implications of Brexit for EU27 ICT policymaking and regulation
Domagoj JURJEVIĆ, consultant; former Vice Chair BEREC; former Deputy Director, HAKOM (Croatia)

Presentation 4 | Implications of Brexit for EU27 innovation and deployment of 5G
Gérard POGOREL, Prof. of Economics – emeritus, Télécom ParisTech (France)

Questions and Answers with Members

Closing remarks by Seán KELLY, ITRE Member
ANNEX 2  SPEAKER BIOGRAPHIES

J. Scott Marcus, Senior Fellow at Bruegel

J. Scott Marcus is a Senior Fellow at Bruegel, a Brussels-based economics think tank, and also works as an independent consultant dealing with policy and regulatory policy regarding electronic communications. He work is interdisciplinary and entails economics, political science / public administration, policy analysis, and engineering.

From 2005 to 2015, he served as a Director for WIK-Consult GmbH (the consulting arm of the WIK, a German research institute in regulatory economics for network industries). From 2001 to 2005, he served as Senior Advisor for Internet Technology for the United States Federal Communications Commission (FCC), as a peer to the Chief Economist and Chief Technologist. In 2004, the FCC seconded Mr. Marcus to the European Commission (to what was then DG INFSO) under a grant from the German Marshall Fund of the United States. Prior to working for the FCC, he was the Chief Technology Officer (CTO) of Genuity, Inc. (GTE Internetworking), one of the world’s largest backbone internet service providers.

Mr. Marcus is a member of the Scientific Committee of the Communications and Media program at the Florence School of Regulation (FSR), a unit of the European University Institute (EUI). He is also a Fellow of GLOCOM (the Center for Global Communications, a research institute of the International University of Japan). He is a Senior Member of the IEEE; has served as co-editor for public policy and regulation for IEEE Communications Magazine; served on the Meetings and Conference Board of the IEEE Communications Society from 2001 through 2005; and was Vice Chair and then Acting Chair of IEEE CNOM. He served on the board of the American Registry of Internet Numbers (ARIN) from 2000 to 2002.

Marcus is the author of numerous papers, a book on data network design. He led and/or served as first author for numerous studies for the European Parliament, the European Commission, and national governments and regulatory authorities around the world.

Marcus holds a B.A. in Political Science (Public Administration) from the City College of New York (CCNY), and an M.S. from the School of Engineering, Columbia University.

Bas Kotterink, Senior Scientist ICT Policy at TNO

Bas Kotterink is senior scientist ICT Policy at TNO, the second largest Research and Technology Organization in Europe.

Bas’s expertise and interests are on self organisation, open innovation, and ICT startup ecosystems.

In daily life he is also a swimming coach and chairman of elite swimming club Albion in the Hague. His professional interests and coaching experience come together in SBC’s mentor programme.
Domagoj Jurjević, consultant; former Vice Chair BEREC; former Deputy Director, HAKOM

After having been appointed by the Croatian Parliament in 2013, Domagoj Jurjevic served for 5 years term as the Deputy President of the Council of Croatian Regulatory Authority for Network Industries (HAKOM). During the 2014 he served as the Vice-Chair of Body of European Regulators for Electronic Communications (BEREC). Since 23 February 2018 he has worked as an independent consultant.

During his ten years of service at HAKOM and prior to having been appointed as Deputy President, he held the position of Head of the Market Analysis Department and Deputy Director of HAKOM. During all those years he has gained extensive experience in the area of electronic communications market regulation and policymaking. He was involved in the preparation of HAKOM for the EU membership of the Republic of Croatia in terms of the changes that the membership brought to the procedure of the market regulation. On behalf of HAKOM and BEREC I have been involved in the process of preparing the roaming regulation in the EU as well as in all the processes of the changes of the telecom regulatory framework on EU level. He has a long experience in the international activities with EU institutions and European National Regulatory Authorities from telecom sector as HAKOM’s representative in the BEREC.

He earned his university degree in Finances from the University of Zagreb, Faculty of Economics and Master’s degree in Electronic Communications Market Regulation from the University of Zagreb, Faculty of Electrical Engineering and Computing. He is fluent in English, Spanish and Italian and has a fair knowledge of French.

Gérard Pogorel, Prof. of Economics – emeritus, Télécom ParisTech

Gérard POGOREL is Professor of Economics and Management-Emeritus, Telecom ParisTech, France, and an independent international expert in telecommunications and the digital economy. Telecom ParisTech is a first-tier European Research and higher education institution. It encompasses all discipline areas, sciences, technologies, social sciences, of relevance to information and telecommunications technologies and the media. Gérard POGOREL published in 2017 a widely circulated and influential position paper Spectrum 5.0 Improving assignment procedures to meet economic and social policy goals. He co-authored in 2014 a report to the Prime Minister of Italy assessing the investments by operators in NGAN networks in the EU Digital Agenda perspective. He was an independent member of the Organo di Vigilanza, of Telecom Italia Open Access (2008-2012) monitoring access to the incumbent’s network. He co-founded and acted as Chair/Rapporteur of the European Spectrum Management Conferences since its creation in 2006. He was previously Chair of the European Union Framework Research & Technology Development Programme Monitoring Panel, and Chair of the Monitoring Committee of the EU Information Society and Technologies Research Programme. He participates in numerous Government-level and regulation Authorities Committees and Scientific Committees on telecom and media policy and regulation in Europe, the USA and Asia. He published numerous articles, books, and reports including: “Spectrum 5.0: improving assignment procedures to meet economic and social policy goals”, “Valuation and pricing of licensed shared access: next generation pricing for next generation spectrum access”, “The
Presentation 1 | Overview of the potential impact of Brexit on ICT policy, and possible ways forward for the EU27

The potential impact of Brexit on ICT policy, and possible ways forward for the EU27

J. Scott MARCUS
Senior Fellow, Bruegel

- The expected departure of the UK from the EU on 29 March 2019 can be expected to have a substantial impact on the UK, and a smaller but still significant impact on the EU27.

- Relative to ICTs innovation and policy, impacts might flow from:
  - Reduced interactions with UK-based ICTs researchers and innovators.
  - Reduced interactions with UK-based policymakers and regulators.
  - Loss of regulatory and policy harmonisation in areas such as data protection and mobile roaming.
  - Loss of economies of scale and scope.
The form of exit taken matters

- The range of choices is wider than “Norway versus Canada”.
  - The UK reconsiders and chooses not to exit (perhaps unlikely).
  - The UK becomes a member of the European Economic Area (EEA), as is Norway.
  - The UK and EU27 implement bilateral agreements as with Switzerland.
  - The UK and EU27 implement a comprehensive FTA as with Canada.
  - The UK “crashes out” with no agreement at all.
- Coordination of research under Horizon 2020 is a separate dimension – as associated countries, Norway (EEA), Switzerland (bilateral agreements), and Israel enjoy largely the same rights as an EU Member State under H2020.

The form of exit taken matters

- If the UK were to become an EEA member state, not much would change compared to the current situation.
- Under bilateral arrangements, an FTA, or a “crashing out” scenario, regulatory harmonisation will suffer in areas including:
  - Mobile roaming
  - EU27-UK transfers of personal data
- Coordination of regulatory policy (e.g. via BEREC) could suffer.
EU27-UK mobile roaming

- The UK Government and major UK mobile network operators (MNOs) contend that roaming with the EU27 will be unchanged.
- Can this really hold up?
  - If the UK is no longer EU/EEA, wholesale prices for UK/EU27 are no longer governed by regulation unless this is separately agreed.
  - UK MVNOs and some MNOs are squeezed between cost and price.
  - EU27 MNOs that can offer wholesale EU27 roaming to UK customers will therefore enjoy very strong bargaining position against UK MNOs.
- Brexit will probably cause few problems for EU27 customers roaming in the UK beyond those already inherent in RLAH.

EU27-UK data transfers

- Transfers of personal data conforming to the GDPR are generally permitted among EU/EEA Member States.
- Transfers to third countries are subject to different GDPR rules.
- Transfers to the US under “safe harbour” provisions were blocked by the CJEU Schrems decision in 2015 due to unbridled surveillance for purposes of national security.
- If the UK exits EU and EEA, a similar suit should be expected, probably leading to a similar outcome.
- For transfers to the US, Privacy Shield arrangements were needed, but their effectiveness going forward is still uncertain.
Loss of access to UK regulatory expertise

- UK regulatory experts have made very important contributions to the evolution of European regulation of digital services.
- For electronic communications, this is especially visible in their participation in BEREC and in the RSPG (radio spectrum).
- EEA members such as Norway have observer status in BEREC.
- BEREC itself granted observer status to Switzerland, even though regulation is not harmonised with Switzerland.
- Continued EU27-UK regulatory dialogue is possible.

Reduced access to UK researchers and innovators

- In many aspects of ICTs, the UK is a leading source of innovation.
- A complete break would have negative impact on the EU27 in areas such as AI, and should be avoided (unless the break with the UK is extreme, which presumably will not be the case).
- H2020 already provides mechanisms that could be used – Israel, for instance, enjoys associated country status even though it is neither and EU nor an EEA member state.
- It is in the interest of EU27 and UK to maintain these links.
Summary

• The form that Brexit takes will influence the impact it will have.
• Under Norway-style EEA membership, little would change.
• Under most other scenarios, regulatory disconnects in specific areas should be expected.
• Continued ICTs regulatory and policy dialogue is desirable, and is feasible under current rules e.g. via BEREC.
• Continued ICTs research cooperation is desirable, and is feasible under existing H2020 rules even in the event of a hard Brexit.
Presentation by Bas KOTTERINK

Presentation 2 | Implications of Brexit for digital innovation in the EU27

CONTENTS

1. UK Digital Innovation
2. The Startup Ecosystem
3. ICT R&D
4. Ecommerce & Platforms
5. Impact on the DSM
6. Discussion
UK DIGITAL INNOVATION

London is the No. 3 Tech hub after Silicon Valley and New York

- Access to Finance, Markets, Talent & R&D
- Strong Creative & Fintech Sectors
- Gateway to the US
ICT RESEARCH FOR DIGITAL INNOVATION

• **Key areas**: AI, Robotics and HPC
• UK Leads EU on AI Research output, strong record on AI
• Internet ‘Big Five’ are investing massively areas in **machine learning** and some of it is happening in the UK;
• Big Five spend an entire H2020 budget (80+B) on strategic research like AI/HPC/Robotics, …each year !
• Leading AI Institutes and companies, and access to Big Five could make UK a formidable player in AI

ECOMMERCE AND INTERNET PLATFORMS

• UK leads EU (and US) in % online sales
• US and Asian Ecommerce platforms are coming to Europe*
• Amazon UK Presence leads the way
**EFFECT ON EU DIGITAL SINGLE MARKET**

- The EU may lose (access to) its most vital startup ecosystem; its markets, the finance, the talent and the link to the US
- With more **flexible regulation**, UK may strengthen its incentives, possibly leaving other EU Tech hubs behind
- It will however face competition from the EU27, in particular on **access to talent**;
- With more **flexible regulation**, UK may strengthen its global position, leaving other EU Tech hubs further behind
- Risk of falling behind on **AI R&D**, in spite of recent EU Pledges
- DSM to loose strong, globally connected **Ecommerce** player

**FOR DISCUSSION**

- There may be a need to intensify measures to boost the EU27 Startup Ecosystem, in particular access to finance & markets and links with US/Asia
- It will be vital for EU27 startups and scale-ups to have a strong EU-UK data sharing regime and mobility programme (Visas!)
- Strategic R&D partnerships with the UK critical to maintain EU27 position in AI
- EU27 to foster Ecommerce partnerships with US/Asian based platforms
Presentation by Domagoj JURJEVIĆ

Presentation 3 | Implications of Brexit for EU27 ICT policymaking and regulation
Institutions involved in policymaking and regulation where Member States are represented

- BEREC
- Council of the EU-Council preparatory bodies
- The Communications Committee (COCOM)

Involvement of the UK as the Member State

**BEREC**
- direct cooperation with European NRAs
- strong commitment to the work of BEREC (on both, strategic and operational level)
- added value to the quality of the documents
- transfer of the broad regulatory experience and expertise from the UK market

**Council of the EU-Council preparatory bodies**
- strategic and operational contribution to the quality of legislative proposals
- transfer of the broad regulatory experience and expertise from the UK market

**The Communications Committee (COCOM)**
- important contributions on the draft measures that the Commission intends to adopt
## Ways of the involvement of the UK as the Member State

### BEREC
- Cooperation with NRAs
- Work in the working groups – expert level
- Production of the documents
- Discussions on the Contact network level
- Discussions on the Board of Regulators level
- Decision making process

### Council of the EU-Council preparatory bodies
- Cooperation with the representatives of the other Member States
- Work on the different legislative proposals
- Discussions on the Council preparatory bodies meetings
- Decision making process

### The Communications Committee (COCOM)
- Cooperation with the representatives of the other Member States
- Work on the different proposals of draft measures
- Discussions on the COCOM meetings
- Decision making process

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## Future impact as the status of UK changes

### EEA scenario

### BEREC
- Cooperation with NRAs
- Work in the working groups – expert level
- Production of the documents
- Discussions on the Contact network level
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### Future impact as the status of UK changes

#### Bilateral agreement scenario

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### Future impact as the status of UK changes

#### FTA scenario

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Recognized impacts of BREXIT on EU27 ICT policymaking and regulation
The level and the type of each impact highly depends on the association agreement chosen

- impact on cooperation between UK NRA and European NRAs
- impact on the involvement of the UK NRA in the work of BEREC and quality of the work of BEREC
- impact on the quality of the discussion and analysis performed in the legislative procedure of the Council decision making process
- impact on the quality of work of COCOM
- impact on the harmonization process of the electronic communications policy and regulation (e.g. roaming and net neutrality regulation and execution of the Digital Single Market)

Thank you for your attention!
Implications of Brexit for EU27 innovation and deployment of 5G

Gérard POGOREL
Professor of Economics-Emeritus, Telecom ParisTech,
CNRS Interdisciplinary Innovation Institute I3
gerard.pogorel@telecom-paristech.fr
5G for Europe Action Plan (Sept 2016)

Technology, business, and EU 27/UK geography intersect

- 5G new generation of network technologies: R&D & Standards?
- Prospects for new digital economic and business models: Actors?
- Industrial transformations: Geography?
- New types of applications connecting devices and objects (the Internet of Things): Connectivity?

5G Standards: High level decision-making bodies outside the EU: No change for EU27

- ITU World Radio communication conferences
- Implementation of EU regulations on spectrum frequency bands and applications handled by European Conference of Postal and Telecommunications Administration (CEPT) and European Telecommunications Standards Institute (ETSI)
- ITU´s IMT-2020 requirements anticipated with completion of 3GPP Release 16 in 2019
5G R&D: Mostly H2020 Research plan

- UK participants *(quick qualitative survey)*
  - Universities (Surrey, Bristol, ICL, ...)
  - BT, BBC
  - Vodafone, O2
  - UK based Industry research centers: NEC, Samsung, Interdigital

- Involvement of UK companies, operators and suppliers could be maintained?

5G Industry Actors

- 5G Operators: Largely transborder
  - Roaming issue
- Industry Geography: automotive FGAA continent wide and beyond
5G Vertical industries Actors

- Innovative business models across multiple sectors (e.g. transport, health, manufacturing, logistics, energy, media and entertainment):
- Differentiated market and customs impacts as each industry has an EU27/UK specific value chain geography

➤ 5G Game changer Actors

Connectivity

- Opportunity for new entrants: The European champions of tomorrow will rely on IoT data and IA
- New actors in logistics, smart cities, industry, retail, etc. will:
  - Collect massive data
  - Analyse realtime
  - Provide immediate management, logistics, maintenance, etc. Feedback
- The bigger the seamless network, value chains and markets, the data pool, the bigger the efficiency gains

Risk of lose-lose situation for EU27 and UK
Issues

- EU 27 Vision for 5G: Worldwide leadership
- Conflicting views in the UK:
  - « Take back control » mantra v. Industry and R&D community vision
- Regulation EECC, BEREC/RSPG

Thank you!

gerard.pogorel@telecom-paristech.fr
This report summarises the presentations and discussion of the “ICT Policy” workshop which occurred on 19 June 2018. The impact of Brexit on the Information and Communications Technology (ICT) within the EU27 was discussed. The implications of Brexit on research and development was also brought up by the presenters. This document was prepared by Policy Department A at the request of the Committee on Industry, Research and Energy (ITRE).