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Introduction to Forum

Wilhelm Eschweiler, BEREC Chair, welcomed participants to the meeting, noting that the number of participants would facilitate a fruitful exchange of views and thanking them for their engagement - past, present and future. He said that the forum would concentrate on two main topics – the BEREC Work Programme for 2017 and connectivity, including both the connectivity challenge and the opportunities for innovation in times of a fast-changing digital environment. He thought that both discussions were very timely in the context of the Commission's review proposals, which aimed to shape the digital future of Europe and its citizens. BEREC is committed to play an active, open-minded and constructive part in these discussions and provide input to the debate and to the co-legislators. He handed over the discussion to **Sebastien Soriano, BEREC Vice-Chair and Chair for 2017.**

Introduction to BEREC Work Programme 2017

Mr Soriano began by noting that 20 years of regulation throughout Europe has produced competition. He could confidently claim that, for the most part, the opening of the telecoms market had been a great success. The co-operation of national experts through BEREC was a key contributor to this success, increasing effectiveness of regulation through sharing of best practices and definition of common approaches on major issues. Although there are now new challenges, he was sure that national regulators and BEREC would help Europe to deal with these successfully.

The draft BEREC 2017 Work Programme envisaged BEREC engagement with the top priorities identified by the European institutions. The first priority is connectivity. He noted that a number of excuses were frequently heard for poor connectivity – for example, over-tough net neutrality rules, bad merger control policy. But he believed that if solutions were desired, they would be found.

Mr Soriano thought that BEREC should help to create a pro-investment climate. It was already doing that for fixed connectivity. The BEREC Report assessing the state of NGA and investigating the main challenges to and drivers for roll-out showed its commitment. Further, in 2017, BEREC planned comprehensive assessments of the need to review common positions in the wholesale markets 3, 3A and 4 relevant to broadband and next generation access.

On the mobile side, connectivity had a much greater importance than in the past because of the common need to be able to access the internet at all times. Mobile network coverage is now a key issue. It is not news that BEREC believed that competition is the main driver of network investment. Regulators can help to promote understanding that competition does not only lead to reduced prices but also better quality and greater coverage. In 2017, BEREC plans to publish a Common Position on monitoring mobile network coverage, both for regulatory purposes and to empower consumers to choose their provider on the basis of their connectivity needs.

Competition cannot be expected to deliver universal coverage. So-called “challenge areas”, for example in rural areas or within buildings, will remain a problem. Next year, BEREC plans to publish its opinion on how to facilitate network connectivity in these areas. There will certainly need to be collaboration with colleagues in RSPG on this.

The second challenge is the creation of an open environment in the digital world. This is important because it empowers new entrants and stimulates innovation from all. BEREC worked very hard in 2016 on net neutrality with the ultimate aim that the internet is a common good and not under the control of a minority. Next year, it plans to monitor the implementation of the rules and guidelines and promote the sharing of best practices and development of effective supervisory tools and methods. The ability of all players to innovate needs to be guaranteed. This is the intention of the net neutrality rules and BEREC also needs to ensure the same principles apply at network level.

The Internet of Things (IoT) has the potential to give rise to a rapid industrial and societal revolution. Regulators need to preserve an open environment for all connectivity solutions. Next year, BEREC will hold a workshop at the end of January to discuss its regulatory implications. It plans a second workshop, hopefully in collaboration with RSPG, on the spectrum needs to support the revolution.

Even when an open environment is fully secured at network level, there is a risk that bottlenecks will appear at other levels of the value chain. This is outside BEREC's core responsibilities but BEREC nevertheless has a contribution to make. It plans to adopt a report in 2017 which will give a clear idea of where there is a risk of new bottlenecks in the digital environment.

Turning from substance to process, Mr Soriano emphasised the importance of BEREC's relationship with stakeholders. The annual Forum reflected this but BEREC was conscious of the need to continuously raise the level of its engagement. In that context, BEREC would be trialling a new tool which it hoped would strengthen its consultation processes. He also mentioned the review of its mid-term strategy for the years 2018-20.

Mr Soriano closed by emphasising that BEREC expected to be an important part of the process for identification of solutions to problems and would be unsympathetic to those who offered only excuses for inaction. He then handed over to **Sharon White, CEO of Ofcom (UK)** to moderate the round-table discussion on connectivity.

Session I: "The Connectivity Challenge – everywhere, on every terminal, for every service"

Sharon White underlined that the discussion would be about how to ensure availability and universal application of fast networks at a time when public expectations may be rising at a level which poses great challenges for investment. She then introduced her panel:

Xavier Niel, CEO of Free, an extremely successful alternative network provider in France
Eelco Blok, CEO of KPN who would be able to talk about the success of NGA roll-out in the Netherlands
Sam Crawford, founder of SamKnows, a UK organisation specialising in accurate measurement of achieved broadband speeds
Pilar del Castillo, a Spanish MEP who has taken a leading role in discussions on regulatory issues over a number of years

Xavier Niel briefly introduced his company. Starting as a fixed-line ISP in France, its scope and size had expanded considerably and, thanks to European regulation, it would soon become an Mobile network operator in Italy. On a personal basis, Mr Niel is also an investor in a number of countries

outside the EU, including Switzerland, Monaco, Afghanistan and Singapore, some with competitive markets, others less so. Free's mission as a new entrant to a market is to greatly increase competition - which required access to NGA networks. Reviewing his 13 years experience in the business., he thought that the state of play in Europe compared very well with that of other continents in terms of openness of markets, the advanced level of digital culture, broadband and mobile penetration, levels of innovation and investment and network quality and coverage. Nevertheless, further improvements are necessary and achievable.

Free was sure that competition and investment in connectivity were not in conflict. Competitive markets are a major European asset. It would be a terrible mistake to reduce regulatory pressure on incumbents who do not invest sufficiently unless they face effective competition. Consumers then suffer bad product quality and high prices. In France, consumer prices would have been two or three times higher in the absence of competition from Free. Regulation needs to continue to guarantee a level playing field to maximise investment by incumbents and entrants. Regulators also need to bear in mind that traditional operators find it easier to deal with local authorities and landlords and such difficulties can give rise to obstacles to competition, if not dealt with effectively.

At a high level, Free is generally positive about the Commission's review proposals, given the continuing emphasis on competition. Nevertheless, it had various concerns. Regulators must retain the tools to impose regulation in advance and not wait for failure of commercial negotiation or for co-investment to be established. That would lead to a suppression of competition and of market development. National regulators must have the power to impose network-sharing where multiple networks would not be economically efficient, including for FTTH and mobile network provision in rural areas. Free could not have succeeded without passive access to the incumbent network.

Spectrum is another major concern. In France, no new spectrum is expected to be available over the next few years. Competitive access to spectrum is crucial for investment by the smaller players and for the successful development of competition. National regulators need the power to set conditions relating to spectrum caps and licence renewal; the temptation to make spectrum awards which maximise government revenue at the expense of promoting effective competition need to be avoided. Regulation needs to be nationally-driven, so that national specificities are taken into account and that an effective dialogue between authorities and stakeholders is maintained. Nevertheless, co-operation between national regulators is essential, so as to promote consistency and adoption of best practices.

Eelco Blok briefly introduced KPN, the current state of Dutch digital society and KPN's role in its development. He noted that there was a positive attitude to change in the Netherlands. Dutch consumers are ready to embrace innovation and use the latest technologies. NGA, through fibre and 4G, already covers almost the whole country. KPN is proud of its part in this achievement. It believed that its investment is ahead of the curve in Europe.

30% of Dutch households are already connected to FTTH. By the end of 2016, fibre would be available in almost every neighbourhood in the Netherlands. Almost 75% of KPN customers already have access to services which deliver at least 100 Mb/s. Using its spectrum entitlements, KPN has been able to roll out 4G to virtually all of the Dutch population and territory, anticipating high growth in demand for mobile data services. Customers perceive KPN as best in class in network and service provision in the Netherlands. Over the next few years, KPN will concentrate its investment in FTTC. The next technology roll-out will lead to available download speeds of 400 Mb/s and a simple customer upgrade process, permitting a rapid and efficient response to customer needs for increased speed. While FTTH has dominated the headlines over the last few years, KPN believed

that FTTC was currently more significant in giving customers high speed connectivity quickly and cost-effectively. KPN looks for support from the regulator in allowing it to deliver the gigabit society. KPN operates in a very competitive market, both horizontally and vertically. Supportive regulation should concentrate on three key areas – a level playing field, access to and harmonisation of frequency allocation and application of the same rules to the same services.

Sam Crawford noted that his small London-based company provides accurate, robust and reliable end-to-end broadband service measurements to regulators and service providers around the world, both in the fixed and mobile worlds. It had gained a lot of experience of differing technical and regulatory arrangements worldwide. Mr Crawford grew up in a positive environment where competition was entrenched but his company works in many other jurisdictions where there is much less competition. In the US, for example, many customers have a choice of only one or two providers.

He stressed that speed is not the only important measurement. Many other characteristics, such as latency and packet loss, are also important. Generally, there is increased regulatory attention on these areas throughout the world, in some cases with heavy penalties for non-compliance with the metrics imposed. Not all these approaches had a positive effect on market development. There is a risk that headline measures at the network level are not fully relevant to customer needs and interests. Service providers and regulators are increasingly interested in performance of individual players. Network performance is important but only one of the factors affecting customer experience.

Pilar del Castillo began by noting that parliamentary discussions on the Commission's review had not yet started so her views were inevitably preliminary. She proposed to limit herself to market regulation and would not cover other aspects of the package, including reform of BEREC. She noted that the environment has changed dramatically since the current package was adopted in 2009. At that stage, there were very clear boundaries between telecoms and other economic sectors whereas today we are rapidly developing into a networked society. The digital single market would be one of the foundations for the positive development of the EU, both economically and politically. In this context, the achievement of high levels of connectivity, everywhere and for everyone, is crucial. The Commission should be congratulated on elevating very high capacity connectivity to a core objective. Nevertheless, the need to safeguard competition and consumer rights should not be sidelined.

The Commission idea that access regulation should not be imposed where there was no evident consumer detriment is positive, in her view, as is the presumption that access to passive infrastructure should be preferred to active access remedies, provided they would be effective. This was not a revolutionary change but rather a subtle shift in the emphasis to promote network investment.

She mentioned three areas of the forthcoming debate, which would be very important, starting with the most effective regulatory approach to promotion of investment. The level playing field is iconic but needs to be protected. In addition, the principle of “same services, same regulation” was a sound one while keeping in mind technical realities. It was sometimes forgotten that the best regulatory option is deregulation and she would emphasise this in debates. She regretted the fact that national political considerations hampered effective co-ordination of spectrum issues in Europe, which undermined the wider political objectives of market and societal development through increased connectivity.

Mrs del Castillo noted that a number of the Commission's proposals were familiar with the original version of the Digital Single Market Regulation which had in the end been severely restricted in scope, Europe now had the opportunity and need to address these issues effectively.

The session moved to questions to the panel.

Commission attempts to take control of spectrum harmonisation in Europe

Kane Mumford, representing the spectrum management newsletter **PolicyTracker** asked for a reaction to Commission attempts to take control of spectrum harmonisation in Europe. **Ms White** responded that Ofcom was relaxed on the issue. There would clearly be a debate about how much European co-ordination is necessary but Ofcom is keen for that debate to take place.

Proposal to convert BEREC into an EU Agency

Kane Mumford also asked for views on the proposal to convert BEREC into a European agency from a more informal grouping. **Mrs del Castillo** responded that there had been another meeting that morning at which this had been discussed. Her impression was that there was a general view amongst stakeholders that BEREC played a positive and useful role in regulatory discussions and development and its independent status was crucial. Nevertheless, the landscape had changed over the last 6 years and it was now right to consider whether evolution of BEREC is appropriate.

Should policy move away from technology neutrality?

Ms White, referring to a question submitted electronically, asked the panel to consider whether policy should move away from technology neutrality, which was a view heard reasonably frequently these days, or whether it should remain up to each operator to choose its own technology. **Mr Niel** was sure that fibre was the endgame and would be relevant for the next 50 years, both for fixed access and to provide the backbone for mobile networks. An operator which could not get access to fibre would not have a business. Since most of the usable ducts were controlled by incumbents, effective regulation would continue to be needed throughout Europe. **Mr Crawford** agreed that fibre needs to be at the heart of every operator's strategy and it will need to be deployed much nearer to the edge of the network, towards the home. Ultimately, it would get to the home. **Mr Blok** thought it more productive to discuss the most efficient way to get high speed broadband to the customer. Obviously, fibre plays a very important role in that but decisions should be based on analysis of customer needs. **Mrs del Castillo** broadly agreed. Mr Blok noted that the pace and direction of technological advance was sometimes very surprising. Today, KPN can offer 400 MB/s via FTTC, using the existing copper line for the last 500 metres. That would have seemed fantasy even a few years ago. Whereas, from a current perspective, further improvements are more or less inevitable. **Ms White** commented that there could be a very interesting debate about whether decision-makers should be entirely technology-agnostic, when considering reliability and quality of service as well as speed.

Commission proposals on access regulation – evolution or revolution?

Moving on, **Ms White** referred to another question submitted electronically about whether the Commission's proposals on access regulation are an evolution putting more emphasis on investment or a revolution. **Mr Blok** said that they key issues were customer demand and the return on investment which was achievable. If the environment permitted companies a reasonable opportunity of a reasonable investment return, they would certainly invest. He was confident that customer demand did exist. When pressed, he could not say whether the proposals would allow a reasonable return to be made or not – it would depend on the details which are not currently available. **Mr Niel** thought that the new proposals are certainly more investment-focused, especially about investment-

sharing which he thought is very important. Sharing of passive infrastructure was preferable to active access. He believes that the proposals were well-considered but emphasised the need to empower national regulators because relatively small national specificities, which could be of some significance for investment and competition, would not be apparent from a Brussels perspective. **Mr Crawford** supported the point about national (and sub-national) specificities which he had also observed in his work outside Europe. He mentioned the example of the US, where such arguments were made by state regulators. While admitting he could be perceived to be biased, he emphasised the importance of measurement of actual performance, whatever the regulatory philosophy in force.

Concrete results from the Commission proposals on spectrum

Nathalie Steiwer, a journalist representing **Contexte** (France) asked for the view of the operators on the panel which concrete changes would result from the Commission proposals on spectrum. **Mr Niel** responded using Italy as an example. The Italian authorities do not plan to release spectrum in the 700 Mhz band before the mid 2020s. That was a problem for a new entrant. Free had been hoping that the revised Framework would result in spectrum being released earlier but this may not be the case. He reiterated his earlier comments concerning the tendency of incumbents to control the largest share of spectrum, to have the deepest pockets and not to welcome competition. That led to very high prices for spectrum which was always welcome to politicians. This was also a big problem. **Mr Blok** thought that the high level principles concerning spectrum were fine but the details were not available and they were critical. There was still very considerable uncertainty.

Ofcom relationship with BEREC after BREXIT

Ms Steiwer also asked what would be Ofcom's relationship with BEREC after BREXIT. **Ms White** said that co-operation with European regulators would continue to be crucial after BREXIT, not least because of the involvement of European companies in the UK market and vice versa. Regardless of the legal status of BEREC – agency or not – Ofcom would wish to be as closely involved as possible.

Communities left behind by technological advance

Ms White then raised an issue, which had not so far come up in discussion concerning communities which get left behind by technological advance. While the Netherlands, with its helpful geography, might not recognise the problem, in other member states there was still a significant portion of the population where the challenge was not about 400 Mb/s but about provision of any reasonable kind of high bandwidth service. **Mrs del Castillo** thought that the issue was an important one to debate both across Europe and within individual states. There certainly needed to be co-ordinated approaches across Europe. But there also needed to be scope for national authorities to integrate their policies in this area with other national policies, for example on skills. **Mr Blok** emphasised the local nature of the problem. The differences are so big that it would be impossible to design a single set of rules to fulfil the needs of customers in all rural areas. On the other hand, he foresaw that technological developments would help deliver much faster speeds to rural areas within just a few years. Even so, there would still be a set of rural communities – albeit a smaller set than now – which would justify special treatment because provision of high speed connectivity would still not be commercially viable. He thought the only way to meet the needs of those customers would be through government financial support. **Mr Niel** agreed. There needed to be universal coverage. In some areas, this could be achieved through network competition. That was ideal. Where this was not commercially viable, network-sharing, reducing the costs of provision for all operators, could be an excellent solution. But where that makes no commercial sense, state aid would be necessary. He emphasised that provision should be via competition if at all possible as universal service

provision could be expected to be inefficient. He underlined that point by noting that when Free entered the French mobile market, its prices were only 20% of the corresponding universal service price. **Mr Crawford** echoed that technological advance would reduce the scale of the connectivity problem. He noted also the improvements in latency of satellite services and thought they would have a role to play.

Do competition and investment go hand-in-hand or are they in conflict with one another?

Ms White asked the panel about another question submitted electronically. Did the panel consider that competition, investment and regulation go hand-in hand or were they in conflict with one another? **Mr Blok** thought that there was no universal answer. In the Netherlands consumer market, the three do go hand in hand. But this had not been the case in the business market where regulation had inhibited investment for a period. KPN had at one point stopped investing in provision of fibre to business parks because an inappropriate combination of wholesale and retail regulation made it uneconomic for the time being to do so. The regulation was subsequently revised and KPN had resumed investment. **Mr Niel** emphasised the need for regulation to promote competition. Without that, investment would be inadequate.

Significance of the Broadband Cost Reduction Directive

Magnus Franklin of Mlex asked how significant the Broadband Cost Reduction Directive was to the investment plans of operators and whether the late implementation of this Directive was a problem. **Ms White** noted that the Directive promoted access to infrastructure, including the infrastructure of utilities. The clear aim was to reduce the costs of new investments. Neither **Mr Niel** nor **Mr Blok** was familiar with the Directive but, based on the explanation, both thought that it seemed positive. **Ms White** noted that the fact that a piece of regulation intended to facilitate investment was not well known to the market players provided an instructive lesson to public authorities.

How to avoid stalling of negotiations over the Commission proposals

The next question discussed, again submitted electronically, asked how it can be ensured that the negotiation over the Commission's proposals on spectrum do not stall without material progress. **Mrs del Castillo** observed that it would be a disaster if the debate on better co-ordination of spectrum issues, for example, trading, sharing and licensing, were to be approached with the same mindset as in previous sets of negotiations. She thought that the debate should be widened to include not only the Parliament, the Commission, the national regulators and the usual stakeholders but also market players in other sectors undergoing digitalisation which would benefit from stronger spectrum co-ordination. She gave several examples – vehicles, energy, health research and education. A consistent opinion from these stakeholders might help to unlock the debate.

Opinions on voluntary separation proposals and the likelihood that separation would stimulate investment-focused

From the international banking world**, Stephen Howard** of **HSBC** asked panellists' opinions of the voluntary separation proposals in the draft Directive and whether separation – either voluntary or enforced – would be likely to stimulate investment. **Ms White** asked panellists to address this alongside a related question, submitted electronically, of whether a technologically neutral viewpoint tended to favour the incumbent. **Mr Niel** reiterated his view that the future would inevitably be FTTH. He thought technological neutrality was a mirage. The more interesting question to him was whether it was efficient to have multiple competing FTTH infrastructures. For example, he thought that much

of the investment needed to construct four FTTH networks in Paris would have been better spent taking FTTH to the regions at an earlier stage. He supported network separation because he believed the incumbent derived a significant advantage from control of its network but believed that incumbents would resist it strongly for the same reason. **Mr Blok**, on the other hand, felt that voluntary separation would make no difference to investment. **Mr Crawford** noted that there were dangers in abandonment of technological neutrality. If new services become feasible which have special requirements not supported by the favoured technology, for example, extremely high bandwidth or very low latency, an even greater digital divide than at present would be created. His philosophy was to be pragmatic. While recognising that FTTH was the likely destination, a number of technologies would continue to be used for the immediate future.

Ms White closed the session by thanking panellists for their insightful contributions and other participants for their interesting questions and simply for their presence at the debate. She noted that the debate would continue for some months and this would be a very important period for all.

Session II. A fast-changing digital environment: new services, new challenges, new opportunities for innovation?

The session, which used the same format as the previous one, was chaired by **Johannes Gungl**, Head of the Austrian regulator RTR. He started by noting that regulators are finding the current environment with its multiple overlapping layers and large numbers of new entrants a challenge. He thought that telecoms operators are also challenged to work out their best role. Many different approaches could be observed – some adopted co-operative models, some reduced the scope of their business model to the provision of best-in-class connectivity, some provide infrastructure and support to new players, creating "internet campuses" while others open their networks via application programming interfaces to encourage use by new players. This session would be devoted to examining some of the many possibilities.

He introduced his panel:

Annina Koskiola, co-founder and CEO of **Proximi**, a Finnish start-up offering access to multiple indoor positioning technologies and standards
Gavin Patterson, CEO of BT, the fixed-line incumbent in the UK
Winston Maxwell from the law firm **Hogan Lovells**
Martin Kaiser from **Hager Group**

Opening remarks by panellists

Annina Koskiola explained that her company offered an indoor positioning platform which offers to developers and app owners the possibility to access multiple indoor positioning technologies and standards via a single API and use them in combination in their projects. She gave the examples of an app to create a museum tour on a mobile phone or a social networking app to identify which members of the network are in the same room. Her role in the session was to represent start-ups and how they could collaborate with telcos. She would be able to give her own experience and that of a number of other start-ups which are co-located in the same premises. She had noticed that the models of collaboration in the western world are very different from those typical in the developing world. GSMA had produced a very useful summary which showed that in Asia and Africa a number of telcos have opened their APIs, for example for SMS, UUID, location and billing. This model works well because smartphone penetration is still very low and mobile internet access reaches only 30%

of the population. Potential end users of a new app therefore have to be reached by means other than online communication. 80% of start-ups report that messaging APIs are most important for them. For the telcos, the model allows them to add value to their customer offers for low cost and effort. In Europe, this model is much less relevant, partly because there are usually better options than SMS and there are already options to reach multiple telcos; for example, Twilio offers such a service. Ms Koskiola's view is that a more practical model for Europe is "innovation partnership", a form of deeper collaboration. In this model, telcos and start-ups would work together to develop new services, marketing and building distribution channels jointly and sharing risk via a capital investment by the telco. Although there are various initiatives taking place in Europe (for example ***Hubraum*** in Germany, Telefonica's ***Zuera*** programme in Spain and Vodafone's ***xone*** in the UK) not so many end products had emerged. One collaboration between the Finnish start-up **Oura** and the telco **Elisa** had now led to an Oura wellbeing product being marketed in Elisa shops. Such partnerships could benefit both parties. The start-ups benefit from the credibility of their established partner and access to their customer base. The telcos benefit from early experience at low cost of the impact of new technologies.

Gavin Patterson briefly traced the evolution of BT from incumbent, through selling its mobile business and re-entering the mobile market later. It is now active throughout the value chain and has a global business serving multinationals outside the UK. Its UK business is focused on delivering sustainable profitable growth, currently running at a very satisfactory 2% per year. Since 2009, it has rolled out fibre and has now passed almost 26 (out of 30) million UK homes at speeds up to 100 Mb/s. BT has a plan to achieve 95% coverage by the end of 2017. The service is offered on an 'Equivalence of Input' basis to other providers, although not price-regulated, prices are amongst the lowest on Europe. Take up is at 26% overall and continuing to grow, even in the areas which have been served longest. BT is now at the stage of planning to address the challenge of serving the last 4 or 5% of households and has a proposal under consideration by the UK Government. This would be a common theme across Europe in the coming years. The other challenge concerns how to push forward and achieve the Gigabit Society. BT has put forward a vision for the first 12 million homes and premises by 2020, at speeds between 500 Mb/s and 1Gb/s. Wider roll-out will follow.

After selling its mobile business in the 1990s, BT was largely a fixed player for the next 15 years. It is now the biggest mobile provider in the UK through its purchase of Everything Everywhere in 2015 and is now engaged in creating a converged network. BT's retail market share is about one third in both broadband and wireless, illustrating the healthy state of competition in the UK. Convergence is largely driven by the explosion in data usage across both fixed and wireless. BT believes that the key to customer satisfaction is by combining the best of both types of network.

BT is also investing heavily in applications which sit on the network. For example, BT has a major international security business, providing security solutions over its network to corporates and governments. Over the last few years, BT has also invested heavily in sport, in order to differentiate its broadband offering and provide an alternative in the broadcasting market in the UK which had previously had a dominant player in premium sports broadcasting. It was a challenging decision to enter this market but has been successful in differentiating BT from its competitors. It is an example of the other form of market convergence taking place between networks and applications.

Digital technologies currently provide a huge potential for transforming industry. This is not the first time this has happened; the process has been ongoing since the first computers. But the unique feature of the current transformation is that it is based on digital communications. All parts of industrial processes can be connected through digital networks so that the time, location and status of objects can be monitored and controlled in real time and end-to-end. The analysis of how to

accelerate this transformation has three components – the supply side, the demand side and the implications of each on the policy framework. On the demand side, BT thinks the focus should be on the fastest-moving sectors so that their experience can be used to identify barriers to progress elsewhere. The automotive sector is a good example. The experience of the lead innovators should be used to develop new techniques for applying communications technologies to business processes and customer in-life use. By tracking objects through the entire logistic supply chain and the in-life use by customers, it is possible to identify policy barriers. In this case, the key barriers are data ownership and privacy on the one hand and the question of liability for autonomous systems on the other. Data ownership in particular needs a global agreement, not just a national or European solution. This example is illustrative but ultimately, business processes will be connected in all parts of the economy. On the supply side, attention needs to be given to three levels of the supply chain – connectivity, data platform and vertical applications. 5G has the potential to be the mass industry wireless connectivity solution, given its advantages in terms of low power, wide coverage for object sensors, very low latency for autonomous vehicles and systems and very large data capacity for broadcasting. Whether it achieves its potential depends on standardisation discussions. Data platforms do not have major technology issues but there is a general policy issue to be addressed concerning who has the right to use what data in what circumstances. A well-functioning market depends on a set of well-defined property rights, rights to digital data being key in this context. BT thinks the EU Digital Single Market process needs to broaden its scope to deal more quickly with industry transformation issues, For vertical applications, the policy issue is one of co-ordination of the demand side industries with the supply side communication sector. The Commission and Governments can play a useful role in identifying the barriers to an effective dialogue between the two sides.

Progress will be inhibited, however, unless the policy environment favours innovation and investment. If the main regulatory concern is to reduce returns to the level of the cost of capital, investment and innovation will be markedly hindered, not only for incumbents but potentially for competing network providers and potentially service providers. It is an urgent priority for the Commission and NRAs to shift focus from price to quality and breadth of provision.

Martin Kaiser said that starting from its origins in the 1950s, the **Hager Group** trades today in 95 countries. It is mainly directed from Germany and France and generates €2 bn of revenue worldwide. It has 22 industrial sites inside and outside Europe. Until the 1990s, the business was focused mainly on supply of electrical distribution boards and then diversified into a wide range of other electrical control and switching equipment used in domestic and small commercial premises. This equipment is supplied to intermediaries so that Hager Group does not know who are the end users. This is significant for the future. More than half company turnover originates outside Germany and France and the company is still growing strongly, mainly through acquisitions.

Hager Group has realised that its current business model has been disrupted, especially in the distribution area, because the industry is becoming connected. Google nests, connected thermostats and smoke detectors are examples of this. Moreover, they are not being distributed only via electricians and wholesalers but also via direct sales to consumers, including by e-commerce. This is quite new to Hager Group and its traditional competitors. They are faced with new requirements such as provision of smartphone apps and consumer support. Groups such as Hager need to build service networks. The change is also disruptive for Hager Group's traditional distribution partners. Societal change arising from connectivity is becoming more apparent. For example, it is now becoming popular to rent cars on the basis of usage fees, rather than traditional purchase or leasing arrangements. The same kind of evolution is spreading to the home electrical systems. For an industrial company which has not traditionally dealt with end users, setting up an effective service

organisation is a big step.

Traditional life cycles in the domestic electrical supply business tend to be long (up to 30-40 years for a distribution board, for example). Regulation enforces the design of durable products. Developments in the new connected world are much faster-paced. Hager Group is overwhelmed with ideas from the suppliers of connectivity technologies and cannot use them without understanding how this would impact on product life. Another problem is that the extent of telecoms coverage, especially indoors, is very unclear. That poses a real problem for sensitive electrical equipment, especially where there are safety considerations. There are many promises but no independent assessment of such promises. On the other hand, ensuring such information is reliable will incur costs; and if the costs are too high, then the end products will priced at a level beyond most consumers' interests.

As a consequence of providing connected products to consumers, manufacturers such as Hager Group will acquire significant volumes of data on consumer habits. Some of this is sensitive and industrial companies are not used to securing sensitive customer data. These issues require discussions between industry and regulators so that appropriate principles can be articulated and put into practice. Hager looks forward to playing its part in a close relationship with the regulators to address this kind of issue.

Winston Maxwell said that his remarks would concentrate on the compatibility between new commercial practices of ISPs such as zero rating and the net neutrality rules. He noted that FCC and BEREC had developed very similar guidelines. Commercial practices are permitted which do not unduly undermine the end user's right to access any content, application or service of his choice. But it is not easy to define the boundary between what is acceptable and what is not. Zero-rating, for example, could be pro- or anti-competitive, depending on the circumstances.

It is recognised that there is no “one size fits all” solution. To address the problem, BEREC and FCC have developed similar multi-factor tests of acceptability of a commercial practice. The similarity permits comparison and experimentation on both sides of the Atlantic. The first part of the test – a traditional competition analysis of market power – is well understood and is within the traditional competence of an NRA or competition authority. But the difficulties grow when applying the second set of criteria, intended to evaluate the societal aspects of the open internet, for example whether freedom of expression is harmed, whether the internet ecosystem or innovation are harmed in a broad societal sense, whether other fundamental rights are affected, whether there is diversity in content. This is new territory for most NRAs.

There is general agreement that the openness of the internet is crucial. But that agreement does not immediately lead to tools which can be used to analyse individual cases. A recent WIK study for BEREC delivered interesting results on the value of an open internet for end users, including numerical estimates. However, the much more difficult question the NRAs need to address is the value of an open internet to society and how to measure it. The solution to these problems remain work in progress. A 2016 OECD paper attempts to construct a methodology for analysing such fuzzy factors. The OECD methodology covers technical aspects of internet openness (for example, open protocols, end-to-end architecture, addressing system), familiar economic aspects (for example, innovation without permission, barriers to entry, cross-border provision of data) and societal aspects (including fundamental rights, freedom of expression, freedom of expression, internet as enabler of education) and proposes a scoring system which allows individual cases to be evaluated. The OECD methodology is designed primarily to assess the impact of government policies. But, in Mr Maxwell's view, it would be worth the attempt to adapt it for use by individual NRAs in assessing the

impact of commercial developments. While government actions can produce impacts of a significance which is unlikely as a consequence of individual commercial developments, an innovation which was widely copied across the industry might have an impact on the openness of the internet as great as a government policy.

Mr Maxwell thought that FCC and BEREC were correct to observe and gather information, avoiding the temptation to rush to premature judgements about the impact of commercial practices. But it is likely that judgements will have to be made on individual cases, sooner or later. Given the relative lack of experience of NRAs in assessing societal impacts, it would be worthwhile for NRAs to learn lessons from elsewhere. For example, there could be a productive dialogue with content regulators, well used to dealing with content diversity, protection of minors and social values. Study of the case law of the courts could yield invaluable insights about protection of fundamental rights. Environmental protection agencies may be able to pass on wisdom and techniques about protection of ecosystems. This whole area seems to be a good candidate for inclusion in a future BEREC work programme.

Reacting to Mr Maxwell's remarks, **Mr Gungl** thought it important to have a broader look at net neutrality and the experiences of other regulators because a strongly harmonised approach by regulators was essential, definitely within Europe and possibly worldwide.

Effect of state of connectivity and net neutrality rules on innovation

Moving on to questions for the panel, **Mr Gungl** asked panellists to address a question submitted electronically, namely whether the current state of connectivity is inhibiting innovation alongside the related issue of whether the net neutrality rules are inhibiting or fostering innovation.

Mr Patterson thought that there could be factors inhibiting innovation at present. The scale of investment needed to realise the Gigabit Society across Europe is huge. The payback period is also very long – even 20 years. It is difficult for shareholders to support that kind of investment in the absence of a sufficient degree of certainty about the regulation in place. So there is a need to provide the investment community with more certainty on the regulatory environment. Returns made by telcos over the last 10 years have disappointed investors which affects the appetite to make further investment. The revisions to the Framework proposed by the Commission are encouraging. The pro-investment stance is positive. Technology neutrality ought to be emphasised because the market does work well in this context. The increase in standard time-frames for market reviews, from 3 years to 5, is also positive to promote certainty and avoid perpetual review. BT does not see the net neutrality rules as a threat. Blocking has no role to play in the service offer. There should be transparency about what the customer gets, to enable them to make considered choices. Any shaping technologies used should be transparent to the customer. There should be room for innovation between content owner, applications provider and network owner. BT's experience is that commercial discussion will generate solutions which provide good outcomes for customers. He gave the example of BT's commercial relationship with Netflix and Google which had led to technical and other arrangements which led to good customer experience and allowed BT and its commercial partners to work together to drive adoption of fibre services. Responding to a supplementary question from Mr Gungl, **Mr Patterson** emphasised that BT had not been and was not in favour of BREXIT. The Single Market was a positive feature of Europe and BT still hoped it would be possible to continue to have access to it over the long term.

Ms Koskiola said that net neutrality helped start-ups to innovate. Any initiative which promoted a level playing field increased the prospects of getting services into end-user devices or offering

services in collaboration with bigger players. She thought that start-ups may not be too concerned about connectivity problems when they start to innovate. But when a service is market-ready, the state of connectivity becomes highly relevant. So a relative lack of connectivity may not inhibit innovation but may inhibit the bringing of an innovative service to market. There are some obvious areas where improved connectivity would facilitate the marketing of innovative services. These include better Wifi underground, free Wifi at airports, more affordable mobile connections and IoT networks.

Mr Kaiser said that net neutrality is unlikely to be relevant to most industrial companies. The same products need to be usable everywhere on all networks; variants for individual states or networks were not practical. Ubiquitous connectivity, both within states and across borders, would however be highly valuable. Today, this is not present on 2G, 3G and IoT networks and this definitely inhibits innovation because of uncertainty about future network development.

Mr Maxwell thought that all agreed that net neutrality is key to the success of the internet and to innovation in general. Blatant violations of net neutrality are now relatively rare because operators understand that customers want an open internet. The biggest threat to net neutrality comes from government action, for example in Russia and China where this a wish to impose data localisation rules and tighter controls.

Delay to emergency service network contract for the UK Home Office

Kane Mumford of **PolicyTracker** asked whether the delay announced to the Everything Everywhere emergency service network contract for the Home Office is due to connectivity issues or for other reasons. **Mr Patterson** explained that this was the first time in the world that a “blue light” service was being delivered via a commercial network. It would be provided by a consortium, including Motorola, Nokia, Huawei and BT. The BT part of the process is progressing according to plan. There had been some delays in other parts of the process which are nothing to do with coverage issues. He was confident these would be solved, the network would cover over 90% of the population and would save the UK government over GBP 1m per day. He thought it was an interesting development which could be applied elsewhere.

Implications of diversification of telcos into content for their network investment

Sebastien Soriano, following up the opening remarks of **Mr Patterson**, asked whether BT still had a strong incentive to invest in its network, given its strategy of diversification into content. **Mr Patterson** confirmed that was the case. His point had been that all the market boundaries were blurring – between networks and content, fixed and wireless and so on; those whose traditional focus had been in one market were diversifying across the boundaries and that this was happening in all directions. His point had been that regulators needed to focus on a single marketplace because that is where the market is going. Regulation needed to provide a level playing field for all, irrespective of the origins of the different players. In BT's case, its investment in content had made its consumer business more profitable than before so it could not be argued that the content investment had detracted from its investment in networks.

Is collaboration between start-ups and telcos really possible, given past frictions about encroachment of new services into traditional markets

James Pearce from Capacity Media (UK) noted that there had traditionally been friction between OTT players and network providers as it had been perceived that the OTT players were taking a

share of the retail business and profits of the network providers. He wondered whether collaboration was really possible and was concerned about tougher regulation being applied to the provision of voice and messaging than to content. (This led to various follow-up questions from **Mr Gungl**.) **Ms Koskiola** thought it wrong to describe the situation as one where the start-ups were trying to steal the telcos' business. The more appropriate view was that collaboration would expand the entire market and promote diversification for telcos. While telcos might be concerned about loss of their traditional business, they need to keep up with technological developments to remain competitive. If they are not able to fully exploit new technologies by themselves, it is better to collaborate than to watch start-ups steal their business. She mentioned WhatsApp as an example of the latter. She observed that there was no lack of innovation in the large telcos. They had innovation departments and incubator units and it was easy to gain an introduction for discussion. It was however much more difficult to meet the business decision-makers in telcos in order to make a firm collaboration. She thought that if big corporations really wanted to innovate, it would be more effective for them to integrate innovation into their core business. **Mr Kaiser** agreed that innovations did tend to expand the market rather than simply cannibalise existing services. He also agreed with her remarks about integration but noted that it was a difficult subject. **Mr Patterson** also agreed with Ms Koskiola. There is no point in being in denial about innovation. It cannot be stopped; nor can one company do everything. Telcos and service providers need to provide the right environment to bring the best of the internet to their customers. Where telcos are not at the forefront of innovation, they need to adapt their business model. The best telcos operate an open innovation strategy which seeks partnerships around the world. He noted that at the main BT research facility, over 70 companies were co-located on the site and a number of successful start-ups had emerged, over the years. Some had received investment from BT but this had not always been necessary. BT also operated a scouting system to seek out the most promising start-ups, notably in Silicon Valley but also in Korea, Japan, India and Israel, for the purposes of collaboration. He also recognised the problem which small companies face in getting decision makers in big companies to engage with their proposals. This was an area where big companies could definitely do better.

Tensions between long-term focus on FTTP and shorter-term improvements based on other technologies

Stephen Howard from **HSBC** returned to the question of technological neutrality. His perception was that the latest proposals represented a move away from neutrality towards the apparent favouring of FTTP. He wondered whether too much focus on technologies which might be better in the long term but still years away from implementation might detract from maximising innovation and delivering better services in the shorter term. **Mr Kaiser** said that in his industry, there needed to be proof that new technologies would actually work in practice before they were rolled out, including real life trials with customers. But he did not perceive any tendency to wait for the ideal technology to arrive, at least in the smart home market. **Mr Patterson** said that there was little debate about whether FTTP would be the endgame; the discussion was about timing. He agreed with the questioner that regulators ought to define the outcomes to be achieved and leave to the market the best means of achieving them. In the shorter term, there would be more FTTP but it would be a relatively slow roll-out for practical reasons. If BT had chosen only to roll out FTTP, only about 10-15% of the UK would have been covered so far and the present discussion would be very different. BT had taken the view that it was better to offer a significant improvement in speed for everyone than to get the highest possible speeds to a much smaller number of premises. Further universal improvements will come progressively through technological developments. He noted that G.Fast was already delivering 5Gb/s under laboratory conditions so BT could already see potential for much faster speeds over the current network. He thought that the new 5G standards are also important here as wireless technologies would be needed in some areas.

Ideal network for IoT services

Mr Gungl asked what would the ideal network for IoT services look like. **Mr Kaiser** noted that in the connected home, deep indoor coverage is a real issue. Sensors are sometimes deep indoors, for example in the basement. Measurement of deep indoor coverage is a subject which needs further development. Suppliers of devices needed confidence that their systems would remain viable over a number of years and that changes in technology, ecosystem or regulation would not make them obsolete in a shorter period. **Ms Koskiola** agreed that in-house and underground connectivity is a real issue and added that a combination of technologies could be used to secure connectivity. It was also important to look for a transnational, preferably a global approach. **Mr Gungl** recalled that in the last Austrian multiband spectrum auction, an obligation had been imposed that 2 Mb/s should be available indoors. It had been found extremely difficult to measure this and to assess whether or not there was compliance with the obligation.

Attempts by telcos to take control of and monetise end users' data?

Mr Gungl then raised another question submitted electronically and arising from Mr Patterson's remarks – whether telcos are trying to make end users' data their own and to monetise that data. **Mr Patterson** emphasised that was not the case. He had made the point that privacy regulation was stable and well-understood in relation to people. It was now important to develop an approach which dealt successfully with the privacy of information derived from sensors, in particular who owns it and who is entitled to use it. The answer is not necessarily the same as for personal data but there needs to be a debate and, ultimately, some regulation. **Mr Maxwell** added this subject is addressed extensively in the Digital Single Market package. It is a complex issue; in any IoT application, it is likely there will be a number of organisations with some interest in the data – for example, the car manufacturer, the device manufacturer, the interface provider, the telco. He agreed there were currently no clear rules and that the problem was not exactly the same as for personal data protection.

Telco fears of disintermediation and commoditisation

A further question submitted electronically, asked whether telcos feared being “uberised”, disintermediated or commoditised. **Mr Patterson** thought that all companies risk disintermediation if they do not stay in touch with evolving customerneeds and develop their business accordingly. It was not a new situation. Where companies are open to innovation and consistently provide products which customers value, they will be able to adapt as tastes and needs change. Looking back over 170 years of BT history, it has been at its most successful when it has adapted to changing environments which it has managed to do most of the time but not always. Identifying the technology and platform transitions and working out the implications for the business model are key to success. Ultimately, companies have to be prepared to cannibalise themselves. No company is safe and, in a dynamic environment, it is not sufficient to have the right intentions. But nine-tenths of a solution is the recognition that there is a problem to address.

Closing key messages of panellists

Mr Gungl then asked each panellist to summarise their key messages for regulators. **Mr Kaiser** emphasised convergence and the need for regulators to move beyond the scope of their traditional areas of competence, in order to address market issues successfully. They also need to be agile and cost-effective because industry no longer has big margins to cover unnecessary costs. Industry

also needed regulatory certainty, covering long product life-cycles. Finally, there needed to be strong trans-national co-ordination by regulators as products do not stay in one country. **Mr Maxwell** emphasised the need to gather evidence on net neutrality issues and to compare experiences, for example with FCC, in order to avoid the risk of ill-conceived rules. **Ms Koskiola** hoped for regulation to be balanced and well-targeted. Regulation was important to start-ups in guaranteeing a level playing field. On the other hand, too much regulation suppressed innovation as small companies cannot afford the overhead of large legal departments to ensure compliance with onerous rules. **Mr Patterson** stressed that it would be vital over the next few years for regulators to strike the right balance between promotion of competition and facilitation of investment. The great bulk of investment would need to come from the private sector which, at the moment, is not observing the kind of returns which make investment attractive. Regulators also need to recognise the pace of market convergence and ensure that regulation is not tilted towards one historical sector and against another. He also reiterated that the question of privacy of data obtained from sensors is one which needs strong leadership to achieve a global approach which maximises the potential of an open internet.

Mr Gungl thanked the panel and contributors and closed the session by reminding participants of the BEREC consultation on its work programme and asking for their active engagement in this process.

Closing remarks by Commissioner Oettinger

Mr Soriano introduced the Commissioner for the closing keynote address. **Commissioner Oettinger** said that the main difference from the past lies in the impact of the quality of telecoms services on all other sectors of the economy and society. In the past it was mainly concerned with one-to-one communications. Fot the future, the industry has to organise quality, capacity and speed of data transport, at acceptably low latency for a range of IoT services and digitised industries, from e-health to autonomous driving. BEREC and the NRAs are at the centre of this development, to ensure the market works effectively and to facilitate necessary investment through smart regulation and deregulation. The sector must be fit for the purpose of delivery of the Gigabit Society. Without a strong telecoms sector able to make best use of cutting edge technologies such as 5G, cloud computing, data analytics, robotics and IoT, many potentially valuable applications, for example in m-health or smart buildings, will not be viable.

The Commission proposals adopted on 14 September set out conditions for a strong telecoms sector able to deliver investment in high capacity networks with a clear political orientation towards a gigabit society by 2025 as the basis for rapid and focused action. Stakeholder reaction had so far been overwhelmingly positive. The next step is to proceed with all possible speed to achieve political agreement between the co-legislators on the new electronic communications code by the end of 2017. Any delay would lead to a loss of credibility which would undermine the political objective.

The Commission has also delivered a revised proposal for fair use and sustainability in roaming. The new fair use policy avoids time limits and relies on the concept of a frequent and substantial presence on the territory of a member state, through residence or otherwise. Any user satisfying that test in a Member State will be able to “roam like at home” on the basis of the services of an operator from that State. The Commission services are now considering the BEREC Opinion on the matter. The Commission planned to work closely with BEREC to deliver by the end of 2016 the best outcome for consumers and an acceptable outcome for providers.

Turning to connectivity, the Commissioner mentioned new milestones for ubiquitous connectivity in the Gigabit Society by 2025. While there are some delays, the existing targets for 2020 are on track in a number of Member States and some even have intermediate national targets. But there were previously no targets beyond that. The new milestones deal with quality and coverage, necessary to maximise the potential of innovation, as well as speed and ensure the benefits are available for all and not only the privileged few. Reliable, ubiquitous very high capacity and low latency will all be necessary in connectivity across Europe if the estimate of 50 billion connected cars, watches, machines and other devices worldwide, most connected wirelessly, is to be achieved. The Commission's strategic connectivity objectives focus on gigabit connectivity for high schools, digitally intensive companies and other places, which drive socio-economic development. They include 5G coverage for all urban areas, major roads and railways with commercial deployment in at least one Member State by 2020. They also include access for all European households to internet connectivity of at least 100 Mb/s through networks which can be upgraded later to gigabit speeds.

The Commission also wanted large and small local authorities to provide free wi-fi in the centres of their communities. This initiative has the potential to deliver connectivity to thousands of public spaces, much more if Member States contribute national funds. The initiative will be delivered efficiently and non-bureaucratically through a 100% online process.

Deployment of 5G by 2020 is vital for the development of European industry. South Korea's planned roll-out in 2018 puts Europe under great pressure. There is no good reason why it should be ahead of Europe. Roll-out should be coherent across Europe. The EU Action Plan could be extended to partners outside the EU. It is equally relevant to all European countries as a consequence of daily trade across the EU boundary. Once South Korea has deployed 5G, Europe can afford no further delay. This strategic initiative to make 5G a reality in Europe by 2020 is relevant to all public and private stakeholders throughout all Member States. To implement it, roadmaps and priorities for co-ordinated 5G deployment across all Member States must be aligned. Suitable spectrum bands must be made available ahead of the World Radiocommunications Conference in 2019, with additional bands as soon as possible. A co-ordinated and coherent European approach to the Conference is vital and there is little time to achieve it. A national position, even of a large Member State, has no relevance if it is different from other national positions. A single European voice, on the basis of a common technological and economic approach is required and the Commission has the ambition to take on that responsibility. Industry, with the support of Member States, should promote a common vision and shared priorities in 5G standardisation activities. It is also important to achieve early deployment in major urban areas and across major transport links. Pan-European multi-stakeholder trials are necessary to achieve practical commercial solutions. The Commissioner plans to meet several national Ministers so as to organise and co-ordinate a pan-European test field for connected vehicles, to move on from the existing national test fields; mobility is pan-European. There should be a constructive partnership between industry, telecoms providers and regulators in several member states to develop a coherent strategy for platooning across borders, in the interests of the European automotive industries and transport sector.

The new European Communications Code will strengthen competition, especially competition to invest. It will simplify regulation and strengthen consumer rights, the latter being a pre-requisite for high consumer confidence. The proposed code is adaptive to market and technological advances and ensures that equivalent services are treated in an equivalent manner. As the centrepiece of a modernised approach to universal service, vulnerable end-users are guaranteed an affordable connectivity contract to avoid exclusion from basic connectivity.

To facilitate deployment of very high capacity networks, consumers who agree to certain instalment

payments for deployment of a physical connection will not need to commit to an initial period of service of 24 months. Contract conditions should not be allowed to create a barrier to switching provider.

The new “retail first” principle for access regulation will lead to less need for regulatory intervention. Market regulation which does not solve a real retail competition problem must be avoided, in order to provide the legal certainty and predictability necessary for the facilitation of network investments. Co-investment projects will be largely exempted from regulation. A set of harmonised termination rates at EU level will simplify regulation, as will the lengthening of typical review periods from 3 years to 5 but with the flexibility to review earlier if market developments make it necessary.

Although spectrum is a politically sensitive issue, co-ordination is necessary for 5G if the gigabit ambition is to be achieved. The Commission therefore proposes principles for spectrum assignment conditions, in particular assignment deadlines and licence periods and a consistent approach to coverage obligations, small cell deployment and network-sharing. Investment and rural connectivity will be stimulated. The proposals are based on RSPG advice and specify rules only on key issues. NRAs will be involved through BEREC in the process of appeals, in order to ensure consistent assignment practices on matters related to market structure and regulation.

All these proposals will enhance regulatory consistency and predictability for operators, thereby fostering innovation and investment. There is also need to ensure efficiency of the institutional arrangements. BEREC's role should remain rooted in the expertise of national regulators. Its area of responsibility should be augmented to include issues with a cross-border dimension where BEREC can assist its members in the performance of new tasks. The Commission proposal envisages conversion of BEREC into an EU Agency, with BEREC and NRAs having common objectives of enhancing end-user access to and take-up of very high capacity connectivity, promotion of a competitive internal market and safeguarding of end-users legitimate interests.

The Commission agrees with BEREC that NRAs need a firm foundation of common competences, exercised in full independence from economic and political influence. There is a European interest in consistent exercise of those common competences and a reformed BEREC could be the best guarantee of that. The institutional proposal conforms to the general principles agreed between co-legislators and Commission. That is the appropriate starting point for discussion but the final governance structure should reflect the specific characteristics of the telecoms sector. This is essential for efficient functioning and timely implementation of the package throughout the EU.

The Commissioner reiterated that the telecoms sector is the enabler for all other socio-economic sectors. The new package is necessary to provide the right climate for the very high network investments necessary to achieve the Gigabit Society. The Commission has therefore called for Member States to endorse the Commission targets for 2025 in their own national plans and on Council and Parliament to adopt the WiFi for Europe Initiative by fast track so that a start can already be made in 2017. The discussions on a modernised Electronic Communications Code need to proceed swiftly towards a political agreement by the end of 2017 so that companies can benefit well before 2020.

All parties represented at the workshop are able to contribute to achievement of this ambition. A strong European dimension to digital issues is popular with almost all stakeholders and consumers. The Commissioner sought commitment by all to work together for a strong telecoms sector to give Europe another success story. He closed by thanking BEREC for the opportunity to speak today and looked forward to its continuing helpful advice until the end of 2017 to facilitate a smart and coherent

discussion which avoided delay.

Mr Soriano thanked the Commissioner for his remarks. He closed the meeting by thanking all participants, with special thanks for his colleagues from ARCEP and the staff of the BEREC Office in Riga for their organisation and support.