Transcript

14th BEREC Stakeholder Forum

31 March 2026 Maison de la Poste, Brussels

Jennifer Baker: A warm welcome to you all this afternoon. And in particular, those of you who joined the meet and greet sessions with the BEREC experts earlier on, I hope you had some fruitful discussions and are ready for our afternoon agenda.

Now, as you all know, BEREC is committed to promoting consistent dialogue and cooperation with the stakeholders throughout Europe. And of course, I know that many of you are joining online from across Europe and perhaps even further afield. Today is a big part of that discussion. It's really supposed to be a forum, an engaging platform and a place where the key discussions that shape digital's future can happen.

As you just heard, I'm Jennifer Baker. I'm a tech policy journalist and presenter based here in Brussels. I'm going to be your MC this afternoon, guiding you through what is a very packed agenda. Now you can find that programme on your badges if you want to see what's happening. So do check it out.

As I mentioned, we're online. So, we're live streaming on the BEREC website, but also on the LinkedIn and YouTube channels. So, a very warm welcome again. And we want to engage with everyone, both those here in the room, as well as online. It will be recorded today. So, if you miss anything, you can go back and check out both the recording and the transcripts. Those will be available on the BEREC page.

If you're in the room, of course, we have traditional microphones. You can raise a hand, and during our panel discussions, we absolutely encourage you to do that and we'll get a microphone to you. If you are going to ask a question, please wait for that mic. Otherwise, the people online won't be able to hear what you're saying, and the captions won't be generated either.

If you're online or perhaps you're just very shy and don't want to raise your hand, you can use the Slido tool for digital engagement. You can go to slido.com, or you can scan the QR code that you should be able to see here behind me. If you go directly to Slido, just put in BEREC Forum. If you're joining online, there's a Q&A chat box right next to the video stream. So all very straightforward. If you're submitting a question during those panels, do please indicate who the question is for. We've got lots of great experts and lots of great speakers, but not as much time as we would maybe like. So we want to try to answer the questions with the most effective person. So name who your question is going to. We'll try to gather all those and get as many as possible answered this afternoon.

So, well, as you can see, we're testing the ice with an icebreaker question. So, how did you get here today? What was your main mode of transport? I guess if you're online and you're working from home, perhaps not so relevant, but as you can see, that's a multiple-choice question. Flight with most people; car sharing, very, very few; by bike or by foot; lots of people came by train. And a staggering number of you seem to have come today by horse, which is entirely unrealistic. So, thank you for that. I will be asking to see jodhpurs and hard hats later on.

Finally, there is another QR code that you can follow. That should lead you to our text on tap. Now you may be able to find that on your badge, or we should be able to see it. The text on tap is an application that will allow you to follow the discussion in written form. And for those of you joining online, you should already be able to see the captions being generated. So, I think we will allow you to scan that, so you can keep your devices handy. Do keep them handy as well for those discussions that will be happening later on. But do please also set them to silent 'cause we're going to turn now to the formal part of our programme.

Quite enough housekeeping for me. We're going to hear now about shaping BEREC's 2027 work programme. (audience clapping) And to present that, we have, of course, our BEREC Chair for 2027, Alejandra de Iturriaga. So, thank you, the floor is yours.

Alejandra de Iturriaga: Thank you, Jennifer. Good afternoon, everyone here in the room and those who are following us online. Thank you all for being here, and welcome to the BEREC Stakeholder Forum in the 14th edition.

The building where we are gathered today, Le Maison de La Poste, is part of a historic Brussels complex known as Tour & Taxis. At the beginning of the century, it was one of Europe's many logistic and communication hubs. From here, goods, messages and ideas travel all around the world, the continent and beyond, through postal, telegraph and telephone networks. It was a place designed to connect Brussels, Europe and the world.

And today we gather here with the same purpose, to connect, to exchange views and to reflect together at the decisive moment of our digital future. Because the world is changing, technology is evolving, markets are transforming, and all of us play a role in this change and share the common objective of shaping and contributing to Europe's digital success and the welfare of our citizens. That's why we are here today.

So, the Stakeholder Forum is more than an event. For 14 years, it has been a space for genuine dialogue. It was a place to exchange ideas and perspectives. This morning's meet and greet sessions already reflected these insights, this spirit. They allow stakeholders to engage directly with our co-chairs of the working groups, the core and the foundation of our work. You had the opportunity to learn how we work and what we do, and also equally important, the co-chairs have the possibility to listen to you, to gather your ideas, your priorities and concerns.

So today we take a look into the future. This, only one month ago, this afternoon, sorry, this afternoon in the first session, our European representatives will share with us the insights of the future regulation. And what is the future regulation? Only two months ago, the Commission launched the Digital Network Act, the DNA. The initiative aims to shape Europe's digital infrastructure and services landscape for the years to come.

BEREC shares the DNA ambition to strengthen the internal market and to deliver resilient, secure and sustainable connectivity in Europe. We have prepared a general analysis of the DNA, and we are still working on a more in-depth report that will be published very soon. So, in any case, BEREC stands ready to work throughout the discussion processes and the forthcoming progressive and legislative processes.

Later today, in the afternoon, industry representatives will share their perspectives on technologies that have already arisen and that will be developed by 2030. Setting the stage for the industry panel, Erzsebet Fitori, Executive Director for Smart Network Services Joint Undertaking, will provide a high-level overview of emerging technologies and the anticipated impact on the electronic communications sector.

The future is promising. A new generation of technologies is set to redefine the landscape. Artificial intelligence is enhancing network performance and network capabilities. And the integration of networks with caching and data processing is enabling the delivery of cutting-edge services. But also, the convergence between terrestrial and satellite systems will strengthen resilience and expand coverage and flexible

networks. So, this development offered significant opportunities but also raised some concerns regarding investment issues and regarding the value creation.

After this important session, Executive Vice President Ms Virkkunen will join us to give the Commission's insights on the perspective of the DNA. We thank her very much for joining us and for being here today with us. Policy choices and technological evolution are intertwined, and this is the most important. All the discussions on the DNA and on the new perspectives and technologies are important now that we are creating and elaborating our work programme for 2027.

What about our work programme 2027? On February 27th, we launch a call for input that will remain available until April 15th. We genuinely want to hear your views, what challenges matter to you most, what topics deserve priority, and especially what BEREC can best contribute to developing the sector. Your contributions will help us to prepare the work programme that will be subject to public consultation in October and will then definitely be approved in December.

What are our strategic priorities in this work programme 2027? Of course, BEREC's work is guided by a European framework. BEREC's activities are built around the policy strategies established in the code, in the European Electronic Communications Code. These objectives have been developed in our last BEREC Strategy 2026–2030, which was published last December. And this BEREC Strategy 2026–2023 includes promoting full connectivity and the Digital Single Market, empowering users, supporting competition-driven and open digital ecosystems, contributing to environmental, sustainable, and secure, resilient infrastructures, and most of them continue strengthening BEREC capabilities and BEREC transparency, and we will remain fit for the purpose and the challenges ahead. So, part of our work.

What is the content of our work? Part of our work will consist of mandatory tasks that are stemming from the code, stemming from the European Electronic Communications Code. That is the case of the International Roaming Report. In addition, BEREC will have recurring work, as is always happening in all the work programmes, as in the case of the Annual Accounting Report.

BEREC's programme also follows a multi-annual approach. That is why we reserve, for 2027, some projects that have already been initiated in 2026. Equally important for us, for BEREC, in our work programme is the cooperation with other European institutions, infrastructure bodies, international bodies, and competent authorities of third countries. For example, BEREC is a member of the High-Level Group, established in the DNA, and also cooperates with sectoral bodies, such as RSPG and the NIS Cooperation Group.

Furthermore, BEREC carries out very cooperative work with international sectoral bodies, such as EMERG, REGULATEL and EaPeReg, and we will continue to strengthen our international cooperation. Preparing our work in advance will help us to be ready and to prepare the work programme with transparency, with collaboration, and provide especially predictability for all of you, for the stakeholders.

Yet, we must remain flexible. We must remain flexible to new tasks that may arise around this year and the following. And this is especially relevant in 2027 when discussions around the DNA may raise some tasks that BEREC is prepared to do and to address. Our challenge is clear: to prioritize what matters most while keeping the capacity to respond to emerging needs. In this context, all the proposals that you will share with us in this call for input will be assessed against our main goals, our main objectives, whether they advance connectivity, single market, foster competitive markets and open digital ecosystem, empower European end users, strengthen environmental sustainability and resilience connectivity, or improve various capacities and capabilities.

Before moving to our discussion with BEREC Chair 2026 Marco Mismas, let me once again encourage you to participate in this call for input. It is open until April 15th. Your ideas, your experience, and your priorities are essential for us to make your work and to shape our future work. Thank you very much. (audience applauding)

Jennifer Baker: Thank you very much, Alejandra. And of course, you're going to stay with us for some questions, so I'll get you to take a seat center stage and remind everyone that those in the room can raise their hands for a microphone and those online can type their questions in the question box. But in order to manage all those questions and feel them and corral them into shape, I'm very pleased to welcome to the stage a man no stranger to the BEREC community, Philippe Defraigne, who is Founding Director of Cullen International, and of course, BEREC Chair Marco Mismas. Gentlemen, grab the seats.

(audience applauding)

Philippe Defraigne: Good afternoon. Good afternoon. Good afternoon, everyone. Welcome to this Q&A with BEREC chairs. I'm sure you had a great time with the co-chair this morning, but you kept your best question for this afternoon. So, without further ado, who wants to-

We're opening the floor for questions. Please keep them short. That way, we'll be able to handle a maximum in the next 20 minutes, okay? So, let's start with the consumers there. Srikar from the Bureau of the European Consumer Organisation, or Bureau Européen des Unions de Consommateurs, as it used to be known. The floor is yours.

Srikar Govindaraju: Thank you for the opportunity to ask a question. Srikar Govindaraju from BEUC, the European Consumer Organisation. My question to the chairs is, with the introduction of specialized services and network slicing coming in the future, how will BEREC and the regulators work to ensure principles of the open internet and also net neutrality? Thank you.

Marko Mismas: Thank you, Srikar, for this question. Actually, the specialized services were always part of the open internet regulation, already introduced in the regulation. But BEREC is helping here with the guidelines—how to actually implement them, not to harm the open internet rules. And also, this year, we have a plan to update these guidelines based on the 5G implementation, and we have a plan to, let's say, put the guidelines into the public consultation and finalize this project by the end of this year, in the fourth quarter of this year.

Philippe Defraigne: Thank you, thank you, Marco. Egle from Novi, please, at the front here. Thank you, thank you, Egle, go ahead.

Egle: Thank you, I would like to--

Philippe Defraigne: Short question like Shikar, okay.

Egle: Yes, of course. Question on copper switch-off. So I would like to ask how copper switch-offs should be managed so that we don't leave vulnerable consumers behind, but also incentivize fiber rollout. Thank you.

Marko Mismas: I think this is a question for Alejandra because Spain is really successful in this copper switch-off project, so I think Alejandra can master that and answer the question.

Alejandra de Iturriaga: Thank you so much for the question. Yes, there is no single solution for the switch-off. Different countries have different needs, different perspectives and different technical advances. So, the idea is to take into account what NRAs think about their markets and what all the process has to take into account, what the needs are for them.

And that was the case, for example, in Spain, as Marco was saying. Yes, in Spain, it was a case of success. It was the first member state that had the switch-off closed last year. And that was because we addressed the bottlenecks for fiber deployment, and those were access to DAC samples for the SMP operator and also in building networks. And those were the bottlenecks.

So, in this case, we elaborated a process that was led by operators, monitored by us, but at the same time, we had the possibility to take into account all the necessities of our market. So, in the end, the switch-off processes have to have the possibility of a margin for NRAs to adapt to all the national necessities all around the member states.

Philippe Defraigne: Thank you, thank you, Alejandra. Who do we have here? Here at the front, Anton from Deutsche Telekom. I have to go one left, one right, you know?

Anton Horshkov: Thank you. Anton Horshkov, DT. In the first place, big, big thanks, Alejandra, Marco, for having us here because this event really is unmatched, how it gives us all possibly the sense of importance of what we do, although we may have slightly different perspectives, but I think we are united in that. Now comes my question.

2027 is the year when, hopefully, if things go well, we will see the DNA in its final, or nearly final, shape, and the DNA will likely stay with us for 15 years or so, meaning that it will become the first-ever European telecom law for a full fiber or virtually full fiber environment. Which features should an ideal law for a full fiber environment have in your view?

Marko Mismas: I can answer this. Thank you very much for the question. Actually, historically, we saw the move from the monopolistic market to the, let's say, oligopolistic market. So, we have now, more or less, in the majority of the European countries, no longer a monopolistic market, but an oligopolistic one.

So, what we are expecting, let's say, from the law, is that we see that old-fashioned SMP regulation is not very effective. It loses effectiveness in an oligopolistic market. So, we are expecting to get, let's say, a sufficient, effective tool set to be able to regulate, also where and when needed, the oligopolistic market. So, we see the transition more towards symmetrical regulation, but effective symmetrical regulation.

Philippe Defraigne: Thank you. Thank you, Marko. Do you want to go to Quentin? Can I have a mic now for Quentin? Thank you.

Quentin: Thank you. Quentin from MVNO Europe. Our members and MVNOs have concerns about the proposed commission veto power under the DNA Article 31 and unlimited spectrum licenses. So, in this context and in order to preserve competition, don't you think that member states should be further encouraged to take pro-competitive measures at all levels? Thank you.

Alejandra de Iturriaga: Yes, thank you. The Commission’s approach regarding the spectrum policies is a little concerning, especially the consideration of spectrum as a common resource, the indefinite duration of the licenses, the consideration of the fees as a common issue or topic for all the European countries, and also the authorization, the single authorization from satellite.

This is a remarkable shift from the current situation. And this is one thing that concerns us very much, which may be a kind of centralization taking into account the matters that are at the national level, competences are then shipped to Europe at the European level. So, we are also concerned about the remedies, which may not take into account all the concerns of the European commission because it may raise the question, how do we address all the remedies in the spectrum?

And it is also possible that we have to address different topics regarding spectrum licenses. It's also concerning, for example, as you mentioned, the idea that it may have a better proposition for the holders of spectrum now that the current holders of spectrum are weakening the position of alternative operators to access spectrum. And that raises a concern for us. So, in this case, we will have to ask for more clarity from a better perspective and get more clarification on decentralization.

And of course, given more possibilities under member states or competent authorities to address the national issues on spectrum. In other cases, not to be negative about the Commission, we also want to welcome the marking shaping scope of the Commission that has given us a very important role for BEREC, and they may help to address all the balances in spectrum that arise in our market.

Philippe Defraigne: So, you would agree that after MVNO Europe, I have to give the floor to GSMA. La parole est à la défense. (laughing)

Elsa Sependa: Yes, Elsa Sependa from the GSMA. A more general question, actually. On reading the early assessment of the DNA yesterday, I was interested to see that BEREC supports the single market ambitions of the DNA, but at the same time has some reservations on how certain of the proposals would work in practice. And I was wondering if you could share some insights on how BEREC thinks we should thread that needle. Thank you.

Marko Mismas: Okay, thank you for the question. Yes, yesterday we published our first high-level assessment. Actually, we already did a deep dive into the DNA. We also had the workshop with the Commission to exchange not only one, but actually five questions, to put a lot of questions on the table, four on the technical level and one, let's say, on the high level.

And yes, we are both with the Commission in line with a single market perspective. But there are, let's say, differences between us because we are coming from markets where things need to be done. And we would like to understand very deeply how to implement, for instance, the single passport mechanisms in life. What effect will this have when it is applied in one state, and what effect will this have when the operator operates in another state, and so on? So, there are a lot of questions that need to be clarified.

Philippe Defraigne: Thank you, thank you, Marco. Yes, Chris from Mobile, yes, that's right, Chris.

Nick Rossman: Nick Rossman from Mobile Ecosystem Forum. So, I'm gonna do a little bit of a pivot. My question's around fraud. So, our members are increasingly combating sophisticated fraud. And at the same time, there's a challenge around NRAs implementing different sets of rules in different markets, so it feels very fragmented. And I was wondering what BEREC is doing around the harmonization of these overall sets of rules in terms of regulatory.

Alejandra de Iturriaga: Yes, thank you for this excellent question. It's very important because it's an issue that concerns BEREC a lot. All the things related to fraud, like smishing and this kind of fraud, have affected not only two operators, but also two end users. So, even though the DNA is still a draft, BEREC is working on this topic. We have been making our best effort to continue working on it.

Indeed, on May 21st, we will hold a workshop on this topic. We will invite all the stakeholders from all around the globe in order to address this topic, all the problems that they have seen, all the measures that I have put in force, and that in the end, we will have a report in BEREC regarding these fraud systems, these fraud mechanisms, and all the solutions that may be important for us.

Again, I may address the Spanish case because we have done exactly the same. Just last week, we set up a registry for alia, or a name registry, where all the companies, like a bank, for example, may register their name, and then if it is not registered, their name, this ALIAS, as we call it, will be blocked when it wants access to a user. So access operators will block the alias, the name, that is not registered under our registry.

In any case, with this solution for smishing, or any other solutions, we think that the fraud problems concern us that may be solved in collaboration between public authorities, public institutions, and private companies as well.

Philippe Defraigne: Thank you. Yes, Ben from Connect Europe.

Ben: Hello, thank you very much. My question relates to investment incentives and the DNA. I was wondering how you believe the DNA proposal could be improved to facilitate further investments, in particular, for fixed-line networks?

Marko Mismas: Thank you very much for the question. Typically, in legislation, you have a set of tools. So, it's the task of the regulator to use it smartly, to push the access seeker to invest more to come closer to the end, you know? There are many ways to do it. Many ways. And how to apply it depends on the national market. And the NRA is always one that knows the national specifics very well, and uses these tools to incentivize the investments from other access seekers.

Philippe Defraigne: Yeah, yeah. So Mieke from Amazon, or LEO, I should say. There are many Amazon.

Mieke: Thank you very much, and congratulations on this fantastic event. It's a great annual tradition.

Philippe Defraigne: No niceties, Mieke. Go to your question. You're no longer with BIPT.

Mieke: Digital Decade Targets. We read with great interest BEREC's input on the call for evidence on the Digital Decade Targets, stating that the target should be demand-driven and technology-neutral. So, following the upcoming revision of the targets by the Commission, we were wondering if BEREC is also reflecting on updating the guidelines on very high-capacity networks to reflect the technologies on LEO broadband satellites' connectivity, to reflect the capabilities and performance indicators that are evolving. Thank you.

Marko Mismas: Thank you, Mieke, for the question. Actually, in the DNA, we can see the move from the very high-speed capacity networks to the gigabit networks. And yes, the satellites are able and capable, LEO satellites are able and capable to deliver, let's say, this speed, gigabit speed. The only consideration is regarding the round-trip delay.

And yes, the whole network will not be in one country. We will not have 100% of FTTH gigabit connectivity because it's simply, from an investment point of view, impossible to invest so much money in, let's say, in one percentage of the, let's say, connections.

We did a simulation, for instance, in Slovenia, and there is one percentage where there is no aim to invest such big money in that. And that needs to be covered with the different technologies.

And yes, the rules and guidelines could be adopted, and we adopted them last time. I think it was for the fixed network in 2023. In 2025, we added the case of 5G. And I think you could also apply for the work programme, that task, for the work programme 2027.

Philippe Defraigne: Thank you, thank you, Marko. One more question. Because BEREC is technology-neutral, we'll go to Wi-Fi, showing that we are open to all sorts of connectivity.

Teresa Calvano: This is Teresa Calvano from the Wi-Fi Alliance. So, 80% of mobile traffic is offloaded already in Europe into Wi-Fi. So, it seems evident that mobile network performance depends on Wi-Fi to work. My question is, what concrete steps will BEREC take to ensure that Wi-Fi functionality is preserved to ensure this transition to 6G? And, mindful of the RSPG final opinion in November on the 6Ghz band, which prioritizes mobile, how will you engage with RSG and RSPB under the DNA to safeguard Wi-Fi's role for the heterogeneous 6G?

Philippe Defraigne: Maybe a longer answer at the coffee break?

Marko Mismas: Actually, BEREC supports the technology-neutral approach. But yes, as you said, Wi-Fi is also an important part, especially indoors, and it doesn't offload indoors. But it also depends, from a back-calling capacity perspective, on how efficient this part is. But it's important that BEREC doesn't push, for instance, the mobile guidelines for coverage, also indoor coverage, on mobile. But it could evaluate, elaborate, maybe more on the coexistence of those two technologies. And this could also be, let's say, one of the tasks for the work programme 2027.

Philippe Defraigne: Thank you, Marko. We're handing back to Jennifer now. Our time is up. Thank you so much for your questions.

(audience applauds)

Jennifer Baker: Thank you very much indeed. And Philippe did mention the coffee break, so of course, you can grab the chairs during that to ask them further questions. We're going to move on to the first panel discussion of our afternoon, and it's entitled, Crafting Europe's Next Digital Framework.

(upbeat music)

So, it will come as absolutely no surprise to anyone here that this panel is going to focus on the DNA and how the future legislative framework for digital networks can really respond to market conditions and to the technological challenges that we see are posed by the growing, expanding digital ecosystem. And to moderate that, guiding the speakers through all your questions, please welcome Giacomo Lasorella, BEREC Vice Chair 2026 and President of AGCOM, the Italian regulator.

(audience applauds)

Giacomo Lasorella: Thank you very much.

Jennifer Baker: Giacomo, I'll give a sort of a brief introduction. Tell us what you're expecting to hear in more detail on this.

Giacomo Lasorella: Well, we already started to get into the DNA. And this is the theme of the day, and we'll try to get deeper into it with the opinion of many important stakeholders, starting from the Commission.

Jennifer Baker: Great, I will leave you to introduce your speakers, and I remind everyone, get your hands up for questions. And if you're asking questions online, make sure to indicate which speaker you're directing them to so that Giacomo can get the most out of his panel.

Giacomo Lasorella: Thank you. Thank you very much. Thank you very much. So, as I said, we're getting more into the discussion on the DNA. We will do it with top-level speakers involved in the debate that will tackle the issue from different angles. And so it is my honor, my pleasure, first, to ask to the stage our distinguished

guests. And first of all, Renate Nikolay, Deputy Director General at DG CNECT, with whom we regulators have always had a constant and fruitful dialogue, and thank you for that. So, Renate, please.

(audience applauds)

Hello. Now we will have Frank Gallagher, Counsellor of the Permanent Representation of Ireland to the EU. He will tell us about the position of the councils or the perspective from the point of view of the incoming presiding country. Frank.

(audience applauds)

And then we have Michel Van Bellinghen. As you will know, he is the host of this space because he is the Chairman of the Council of the Belgian Institute for Postal Services and Telecommunication. Michel is serving, like me, as BEREC Vice Chair for 2026, having served as BEREC Chair in 2021. Michel.

(audience applauds)

And finally, we will have the opportunity to have the viewpoint of Peter Alexiadis, Visiting Professor at King's College and Research Fellow at CERRE, one of the most renowned experts on regulation, competition and policies in network sectors. (audience applauds) So, we changed the organization a little, but it's okay. Let me abuse a little bit of my role as a nonprofessional moderator, of which I excuse myself, but also as BEREC Vice President, for just two minutes to add a few introductory words ahead of our discussion.

So, to quote a very prominent commission official, who happens to be present here: 'The train of the DNA has started, and it is the responsibility of all European institutions to accompany it to its destination.'

We all agree that the aim of the DNA is to develop a legislative framework for electronic communication that addresses current and future challenges. There are at least two objectives to provide an adjournment of the present regulation train and to provide a policy boost to meet even more ambitious tasks that will come in the field of digital networks.

So, the proposed DNA touches on a series of regulations that have been in place for more than 20 years and have worked well. I'm thinking first about network resilience and global competitiveness for EU industry. And then it sets new standards that are network resilience, global competitiveness and environmental sustainability.

What is crucial in my view is to understand how and to what extent the existing regulatory tools and objectives have an impact, considering that many of them have served very well and remain up to date. I'm thinking of long-term infrastructure, competitive dynamics, as well as the promotion of innovation and investment and the adequate protection of end users and consumers.

One of the keywords is simplification. But what does simplification mean? This is a crucial objective; this is a shared objective for all of us. Nevertheless, it may be interesting to investigate whether all the simplification tools that are provided in the DNA respond to the objective to preserve the stability of the regulatory framework, which is also key for the same investment and innovation that simplification pursues.

Then the challenge is to strike the right balance between what must be modernized and what should be preserved. And also the right balance between the single market objective and the reality of the present situation of national markets.

So, these are the viewpoints that may guide us in analyzing the different topics of the key areas, such as spectrum, wholesale access regulation, general authorization and government.

So, let me start with the first question, which is basically the same for all of you, though from your institutional angles. The DNA is presented as a major effort to simplify, to ensure a true single market, to boost competitiveness, to promote innovation, to protect the end users or consumers and to pursue many other aims. In your view, from your perspective, how will DNA pursue the goals it aims to achieve? I will start with Renate. But before, let me remind all of you to stay within three minutes for each answer. So, Renate, the floor is yours.

Renate Nikolay: Thank you, Giacomo, and great to be here. I think the DNA is a mix of, on the one hand, a real new deal for connectivity, a deal that brings connectivity in today's reality, which is a reality where we of course want to build on the big success of telecom liberalization of the last 25 years with the choice that it brought to consumers, with the price reduction it brought to consumers, with the competition it enhanced.

But on the other hand, it is a deal that really kind of brings the connectivity closer to the challenges of today so that we are fit for the future. And these challenges are plentiful. We are in a certain geopolitical context where technology means power, where we really have to advance the technological advancements that are possible, and the connectivity sector is of strategic importance in that regard.

We will not have an AI revolution and AI continent in the European Union if we don't have a very modern connectivity that carries out with us. We will also not be less vulnerable to whatever act of sabotage, whatever kind of challenge we might face if we do not embed resilience into our thinking on connectivity. We will also need to deal with the fragmentation that we are still seeing in the telecom single market that does not yet exist. We have very strong regulators; they are present here.

We have a strong BEREC, but we could do better and actually bring more of a single market dimension into this because it is good news, especially for those who are planning to move into business models where pan-European activities will be important.

And then we really need to boost investment and innovation. We need to kind of deal with our legacy networks, we need to get rid of copper, we need to finally live up to the expectations and the commitments that we took in the Digital Decade policy programme to move to modern gigabit connectivity. We have very different situations in member states, and that's why the copper switch-off, a transition from copper to fibre, is one of the key objectives that will lead us into a more modern connectivity world. That has to be accompanied, accompanied with quality of service for consumers, with a national plan that really brings everything together, including the rights, of course, of those who own the copper networks. That has to be thought through in a very specific way, but it's important.

We also need to give a very strong signal for innovation that the connectivity sector goes for that innovation path, to be part of the future competitiveness. That's where the specialized services come in, the network slicing, the move to 6G, the new applications that we all want. And then we need to kind of give signals to the market that it's worth investing in the connectivity sector. And for that, we need more predictability.

And that's where our approach to satellites and spectrum comes in, where a longer duration for a spectrum, with safeguards to ensure that there will always be competition, comes into play. We have seen in recent years that this has been the practice in many member states anyway, so why not be clearer in the law about it? Why not be clearer in the law about, you know, the need to share spectrum when it's needed? And it's because it's a very scarce resource that we should use in a strategic way.

And finally, on satellites, this is really the new kind of big debate out there. There's a race about who leads on LEO. Is it China? Is it the US? Will the EU have any role in that? Satellites are by nature not national. And that's why in a single market orientation, of course, we wanted to make a plea for a more kind of, you know, harmonized EU satellite authorization system. The single market is the fil rouge that really runs through the DNA, with a good intention to really keep specificities in the national markets that will always exist, but to bring a new deal for the DNA, and also a new DNA in all the actors in the connectivity sector. The single market is, by default, the reasoning that should guide us. And this also goes for BEREC.

And that's why in the access rules, where we are not revolutionizing, we are bringing in a little bit of an approach to, you know, have a stronger kind of discipline on what time we're taking for market reviews, what hierarchy of remedies we see, how we deal with symmetric versus asymmetric kind of rules. All that together, you know, building on the results of the good work of the last 25 years, will bring us into that future connectivity.

Giacomo Lasorella: Thank you very much. Frank Gallagher, this is a very big picture. What is the first reflection seen by the Council?

Frank Gallagher: OK, so first, I suppose I do have to emphasize that I'm not speaking for the Council. We're not even at the halfway point yet for the Cyprus presidency, so I obviously want to respect that. Also, however, as the next presidency, of course, we're going to have to act as an honest broker. So, I'll be somewhat neutral in my remarks.

So, that's what the first thing is. A huge amount of work has gone into bringing forward this DNA proposal. And I know that there's been a significant amount of work done on the Commission, and there are large teams that have come in and they've briefed us. And indeed, we've now had a number of workshops as well, which I'm sure many people here may have had the opportunity to tune into as national regulators and also people working in the jurisdictions in the capitals.

The DNA itself. Look, we're at an early stage, yes, in the deliberations in the working party. And it does cover a lot of topics. However, let's say for starters, the fact that its proposal is going to be a regulation. And of course, that's something that would have to be agreed upon. However, that's obviously potential to create a lot more consistency across the single market that you have as a specified code, you know, a clear set of rules so that industries know exactly where they are in terms of working across borders. There are obviously a number of topics there that are going to have to be kind of ironed out.

The whole issue of the transition from copper to fiber. I think there was a recognition there that it's not the same situation in every member state. So, there has to be an approach there that is cognizant of that. And I think we certainly have something to work with there. I think there's been a general acceptance of, you know, the benefits of greater coordination and cooperation in relation to areas in relation to spectrum and the need for greater, let's say, certainty in relation to licenses so that people can actually invest in infrastructure.

On the other hand, of course, there's the whole issue of national competencies. Where is it best that some of these decisions are made? Also, of course, to ensure that we are encouraging competition and innovation. At the same time, obviously, it's important that there is greater certainty there. There are a number of other interesting initiatives there in relation to single passporting.

So, look, there's clearly going to be a fairly significant discussion within the working party and, of course, as well with the co-legislators in the European Parliament. And I suppose just speaking from an Irish perspective, at the end of the day, I suppose we just want to ensure that, you know, there is innovation there. We maintain good competition and, you know, ultimately, the end users' rights certainly benefit from all of this.

Giacomo Lasorella: Thank you very much. Italians make a lot of gestures, so I'm going like this, trying to synthesize. Professor Alexiadis, what's your impression of this general picture?

Peter Alexiadis: First of all, thank you for having me on board. I would be remiss for me to criticize the DNA too much, if only because the working group that I was on for CERRE, the Center for European Regulation, proposed many of the changes that have been taken up.

Where I depart, however, is on two issues. One is a very boring legal issue, and that is if your mantra is simplification and you come up with a document of hundreds of pages, with hundreds of recitals, with hundreds of articles, you might think that most people think that's a somewhat ironic use of the word simplification. That's the first thing.

Second, the legal instrument you use is a regulation. Those of you who are lawyers in the room and who are old enough to know what a regulation used to look like, will know that a regulation doesn't, A, occupy so much space, B, doesn't require so much to be delegated in legislation, and C, doesn't require so much discretion within the context of the instrument itself. OK, that's the boring bit.

Has the Commission put forward a set of good proposals? A lot of what is in the DNA is very good, I believe. Where I feel the Commission is letting itself down is that because it's such a long, big sprawling instrument, which is trying to take into account so many things, policy A does not necessarily match policy B and policy F in different parts of the document.

So, one needs to understand that if you have a series of policy choices, one is going to have an impact on the other. If you change governance, it will have an impact on how you're implementing access. If you change the nature of access, it'll change how much market entry you perceive, et cetera, et cetera. And that's where I think the DNA still needs a lot of work between now and its implementation.

The second point is, what does the DNA want to do? Does it want a better set of harmonized conditions of operation across 27 member states, or does it want to pursue the very much more ambitious goal of creating a true internal market? If it's scenario A, it might be very successful. If it's scenario B, it can't succeed. It can't succeed because networks are national. There are no economies of scale based on being broader than national. Services are pan-European, international, et cetera, et cetera, as is recognized by the recitals themselves that say, look at the experiment in digital services and how much scale there is and pan-Europeanism there is.

OK, so there is a disconnect. Networks are different to services, and that difference is becoming more and more glaring over the course of time. And I don't think this is taking it on board. Tony Shortall is in the audience, and I proposed at one point that we should really think about, in the mobile sector, having a chunk of spectrum available for pan-European services, the way we've done in energy trading. And energy trading is all about the creation of an internal market. And on that point, before the chairman brings his fist together like that, I will stop.

Giacomo Lasorella: Very well. Sorry, but unfortunately, we have limited time that imposes a certain pace. Michel, we have talked a lot about the DNA, but what is the position already anticipated by our programme, by our chair and our next chair? But to go a little bit more in depth, what is the position of BEREC?

Michel Van Bellinghen: Thank you very much, Giacomo and hello, everyone. Well, although BEREC welcomes the simplification and harmonization goals, we observe in the DNA unnecessary layers of complexity and centralization trends.

So, if you look at the objectives, there is a proliferation of objectives that create regulatory complexity, imposing on regulators to strike the right balance among all those objectives, with less discretion at the national level and at the EU level. We also regret that promoting competition has been downgraded from an objective to a means, with a new objective and competitiveness, which can be best ensured thanks to competition and regulatory predictability as the main drivers for investment and innovation.

When you look at access regulation, we welcome this provision as the recognition and the acknowledgement that these are the key pillars of the existing regulatory framework. Nevertheless, the surrounding conditions are so tightened that it leads to a kind of deregulation with no mandatory recommendation or relevant market with hierarchy in the remedies. And last but not least, a veto right for the Commission on remedies as proposed 10 years ago.

When it comes to the effectiveness of some proposals to achieve this goal, and I'll start with a consumer protection, of course, we welcome sector-specific rules in the field of consumer protection, but by the choice of the regulation in order to harmonize as much as possible, this could weaken the level of consumer protection in different countries, having implemented the codes so far and making it possible for member states to address specific situations because of the maximum harmonization principle.

Another example, in single sporting, is also in line with the idea of simplification and harmonization. But we fear that the coordination costs between authorities and another layer of bureaucracy will outweigh the potential benefit of such a measure. In addition to that, there is a risk of forum shopping when it comes to enforcement and asymmetry in the supervision. We think that local issues need to be dealt with by the local national authority where the company operates less, but not least, very briefly, on spectrum.

And then we see again these centralization trends that could jeopardize the competition aspects and where it favours the situation of the existing rights holders. I'll stop there.

Giacomo Lasorella: Thank you very much. Now, before giving the floor to our public, our very qualified public, let's make one last tour of the table on the topic of resilience and preparedness that is so relevant in the current geopolitical context. Renate already hinted at that, but that is also the new task, so it is very important to tackle it. Let's start with Peter.

Peter Alexiadis: Oh, resilience. If you're not married and you're not a mother, you still believe in the sanctity of mother's milk. So, how could I possibly say something against resilience? OK, you can't.

What is being proposed by the Commission is welcome. It's more than a sign of the times and so forth. However, I will say the following. When you're looking at resilience, you've got to make a couple of choices, which are not necessarily purely to do with the sanctity of a network.

I was in Ghana last week, and I saw the importance of resilience because that country would have shut down completely had it not been for the fact that the smallest operator had one transatlantic cable, which was taking a circuitous route to Ghana because it couldn't afford the more direct routes that the other three had. The other three transatlantic cables were all cut, and the country would have been down had it not been for this small operator who had this cheaper option, which kept Ghana in communications for a week. Your point about the importance of competition. We mustn't forget that competition can actually help resilience.

Second, if we want to make the legislation simpler, why don't we stick the resilience discussion in the NIS2 and the cybersecurity directives? Why don't we hive that off from economic regulation and not let it pollute the discussion? As with digital platforms, we all know, the defense is, please no interoperability because it upsets data protection and privacy. The same thing will happen in telecoms. Please don't subject me to access regulation because it will upset resilience.

Giacomo Lasorella: Thank you. Renate.

Renate Nikolay: I disagree because if we really want to get out of our vulnerabilities in the EU and kind of leave the end of naivety that we have been in for far too long, in light of the acts that we see on our critical infrastructures, on our security at large, security and resilience need to be mainstreamed in whatever sectoral kind of area.

It cannot only be a NIS directive or a cyber kind of peace. It has to be embedded in whatever we're doing. We saw, and we learned it the hard way during COVID times. Since then, we have been in the middle of experiencing a total geopolitical change, and we all have to get ready for that. And at the moment, we don't have any plans. We don't have any kind of work, and BEREC has itself highlighted in the last couple of years what an important role security has gained.

So, it's quite logical for a revised modern deal on connectivity to come with a chapter on resilience. This is not overburdening. This doesn't cut through the simplification idea. And if I may add, we make out of four regulations one. That in itself is a simplified approach. Nevertheless, I think it is important to have a kind of plan, to have a real programme on resilience. And that's the hard way that we all learned that we need to have a crisis protocol, so when a crisis hits us, we know who to call. We know what the 24/7 rules of procedure are that we must follow. And that cannot all be in a centralized NIS. This has to be in every sector.

So, I think this is something that we have not made up ourselves. This has been the result of the work of BEREC, it has been the result of the work of the council that made very important council conclusions on the area of resilience and security, and it's the thing to do in today's time.

Giacomo Lasorella: But it is also a challenge of coordination. Michel.

Michel Van Bellinghen: Yes, thank you, Giacomo. Peter rightly remembers that the NIS2 directive extracted provisions on network security from the code. And in this existing regulatory framework, NIS2 and CERRE directives, the emphasis is put on the national level to design the plan and to implement it, with a clear focus on the entity in terms of risk assessment.

Now, with the DNA proposal, it's more about the open angle, with the focus on a more collective approach, not only entities. It's really sectoral, which is at least a complement to the existing regime. And with, you mentioned the coordination, Giacomo, the need to work in a close relationship so that the ODN will prepare the plan. BEREC will adopt it and also gather data. The national authorities will implement it. Of course, the ODN will need to rely on the national authorities, having the expertise, and also on the implementation. So, to make a long story short, NIS2 and CERRE are more of a micro approach, whereas the DNA is a macro approach.

Giacomo Lasorella: Thank you very much. Frank.

Frank Gallagher: Yeah, look, Ireland is obviously very supportive. I think that improves resilience, I suppose, at a more local level. We have a relatively moderate climate, but we've had the experience of storms that have taken out systems in rural areas for prolonged periods of time. But I suppose on a broader level, we would also welcome measures that improve resilience when it comes to vital infrastructure like submarine cables and things like that and obviously investment in that. So, look, I think we can perhaps make the best use of existing structures that are in place, and all of these sorts of systems work together harmoniously and efficiently.

Giacomo Lasorella: Thank you very much. Now we have 15 minutes more or less for the questions. So, please say your names because I do not have the knowledge and expertise of Philippe. Please.

Matthew Howett: Thank you. Matthew Howett, Analyst with Assembly Research. I guess maybe a bit of a reflection that becomes a question. Given the issue evaluation of the DNA by BEREC and Deutsche Telekom's Tim Hutgers at MWC saying he'd rather have no DNA than this DNA, does that suggest that maybe we've kind of, you know, landed in the right place, given we haven't really pleased either of those sides? And that, with a bit of work, we could probably turn it into what it was originally intended to be?

I suppose my question is, do you think that's possible? And how long do you think that would take? Because I remember at the start of this, there was so much concern about this needing to be a quick thing to happen, for Europe to keep its competitiveness in check with everyone else. So, whether or not you think it can be fixed and how quickly you think you can fix it. Thank you.

Giacomo Lasorella: Who wants to answer?

Renate Nikolay: Well, I think it can be fixed. And I think, indeed, as you said, nobody trashed it. Also, not at the CEO and follow-up meetings that we had at the MWC. So, there's criticism because whenever you are touching the connectivity field, there are very different starting positions.

I think it remains an ambitious new deal, but also with balance and taking into account interest, whether it's consumers, whether it's kind of regulators, whether it's incumbents, whether it's access seekers, or the general public. And I hope that the ongoing work from the three institutions to come up with a plan for one market, one Europe, will highlight in that list of actions the need to be advanced rapidly, as well as the DNA. So, I remain positive that we will have that ready by the end of next year.

Giacomo Lasorella: Let's try to gather some questions because there are many of them. Now, we have two questions coming from the screen for Renate. How is the Commission going to ensure that the DNA does not result in overlapping obligations on fraud, resilience and cybersecurity with the existing EU and national legislation?

And another question, always for Renate. Everyone obviously wants to know something from you. The first question was from Jose Manuel Garcia Margallo, Telefónica. And the second question is anonymous.

So, for Renate, could you please explain in short how the EC intends to implement the idea of a single market, and would that impact the national markets? That would require another session of 45 minutes. But Renate is very capable of synthesis.

Renate Nikolay: On the first question, I think, very much picking up what Paul said, the idea is not to reinvent the wheel, but to bring the different actors together in a better coordinated approach. So, you know, a resilience chapter in the DNA does not put into question what we have said in the NIS directive. But I think it has to bring these different fora into harmony so that everybody needs to act. When we have hyper threats in the future, we will all need to play our roles. And I think that's where, with the DNA, we make a contribution that we take resilience more seriously.

Overall, in everything that the Commission is doing lies the idea of simplification and the need for coherence. So, that will also guide us in the further deliberations on the DNA.

The single market, as I said, is the fil rouge through the idea. It is not in contradiction with leaving space for national regulators to deal with national specificities. That's very clear in our access chapter. We are going even deeper. And this is the result of the Article 32 notification that we are living every week, that, very often,

it's not even national. It's going even to the local level or to the regional level. And we are making that much clearer.

The single market DNA that I mean is that, yes, we are bringing in a more harmonized approach to spectrum. Yes, we are making a bold move on EU satellite authorization because, honestly, there is no reason why we should do that at a national level, because it is not a national border. And it's geostrategically very important that we place ourselves well.

And there is single passporting, which is an option if you are in the area of pan-European service, but not everybody might do that. But do we know what kind of business models we're talking about in the future when we are all moving telecom operators into cloud operators, data center operators, and you name it, that might be opening up a totally different landscape of business models?

If you add to that the technology that will come in with edge cloud computing, then it might make sense to have a single passporting system instead of always having 27 notifications and the classical way of the fixed connectivity of the old days.

Giacomo Lasorella: Other question from the floor? We have a second anonymous question, which is a little bit provocative. The DNA promises simplification but brings much more complexity. Should we expect a DNA omnibus in a few years? That is obviously for Renate.

Renate Nikolay: To the author of that anonymous question, I dare say that I am Mrs. Simplification in DG CNECT. And I hold that role dearly. I am also in charge of the two omnibuses that we have rolled out, where the AI omnibus is already in tri-log, and the digital omnibus we will also advance. And I'm also in charge of the digital fitness check that we are conducting at the moment. So, by no means will we create with the DNA an omnibus of the future.

Simplification goes two ways: to deal with the complexity of the past and bring into coherence systems that are not coherent, and an upstream, whether that's DNA or whether that's the future digital fairness act, or you name it, where we have built-in coherence. So, please, in the continuous discussion about the DNA, bring me examples where we actually bring in complexity, and then we can discuss the matter in detail.

Giacomo Lasorella: Thank you very much. Professor Alexiadis.

Peter Alexiadis: The second question was about national markets and pan-European markets.

Giacomo Lasorella: Yes.

Peter Alexiadis: Again, I reiterate the point I made earlier. It's the difference between networks and services. I don't think, with the exception of satellite, satellite is the big bear in the room. If satellite takes off, if satellite is pan-European, it might drag other services along so that operators will think, it pays for me to be pan-European.

But currently, I don't think there is momentum for pan-Europeanism for the simple reason that we have a specification of an EU fixed-access service requirement. There's no demand, there's no market failure. That's a big question mark. We have nothing for mobile, and the powers of the member states have been taken away from mobile in the authorization front and on the spectrum front.

Let's not forget, NRAs do a lot of modeling themselves by managing the remedies. And last but not least, what they're managing is the complexity of the access remedies to suit their national markets.

By having a very, very bifurcated set of rules, such as this is what you do for access, this is when you can go to Plan B, this is when you can go to Part C, this is when you go to Plan D, it makes it very regimented. As I said, that's harmonization. It doesn't necessarily mean that you're solving Belgium's problem or Portugal's problem, but you're solving all problems in the same way. Is that what we really want?

Giacomo Lasorella: Renate, unfortunately, the anonymous person seems to be a very active poser of questions. So, what are the Commission's plans regarding the reviews of the recommendations of relevant markets? Will the review be left until after the DNA discussions are finalized? Is the EC planning to keep the broadband markets on the list?

Renate Nikolay: For the time being, the recommendation is in place. In the DNA, we have made a conscious choice not to oblige ourselves anymore to come up with a recommendation. The rest is the future.

Giacomo Lasorella: Michel, do you want to comment on this question?

Michel Van Bellinghen: I'm glad to hear that, but it's only temporary. So, I hope that when reviewing the recommendation in the future, there will be some space to do so. Because for us, regulators, it's very important for legal certainty to have this. When implementing a market analysis, it's always better and more robust if you can rely on such a recommendation than only on the so-called three-criterion test.

Giacomo Lasorella: Thank you very much. Jennifer, I think that we're done. If there are no other questions on the floor. I will hand you the...

Jennifer Baker: You can give me the power again.

Giacomo Lasorella: Yes, I will give you the power.

Jennifer Baker: Thank you, Giacomo, well-managed. Lots of questions as we see coming in online, anonymous, because you can be. But for the next panel, I am going to urge people, if you have the courage, as some people in the audience do, to put your name, then we'd love to hear who you are. And maybe let's spread them a little bit more evenly across the panel.

Though, Renate, once we've got the Commission on stage, we know questions get directed to you. But once again, thank you all to our speakers. Can we have a big round of applause, please?

In the first half of this afternoon, we talked a lot about DNA. In the second half, we're going to get even smarter. We're going to kick off with a keynote speech that will set the tone for our panel discussion to follow.

And I know discussions are exactly what everyone is still having, but we do urge you to grab a seat, please. We're going to get started with the formal part of the agenda.

I will remind those of you both here in the room and online that your questions are going to be put to the panel. So, you can scan the QR code and put your questions remotely, digitally, or in the box beside our video stream. Those of you in the room, raise your hands, be brave, don't be shy. Ask the questions directly.

Now, to set the stage for our second panel discussion of today, please pay attention and give all your focus to our keynote speaker, who will really whet the appetite and set the scene. Please welcome Erzsebet Fitori, Executive Director of Smart Networks and Services Joint Undertaking.

Erzsebet Fitori: Good afternoon, ladies and gentlemen. I am in the very lucky position to be after the coffee break. So, I hope everyone is caffeinated and has had the necessary sugar dose for the afternoon.

First of all, thank you very much for inviting me and for having the Smart Networks and Services Joint Undertaking at the BEREC Stakeholder Forum with a very inspiring topic, the future of connectivity, defining the next era of connectivity. Indeed, the future and the next era of connectivity will be different, quite fundamentally, from how we know it today.

First of all, let me introduce the Smart Networks and Services Joint Undertaking to those of you who might not be familiar with us. We are the flagship research programme of the European Union, looking into smart networks and services, in particular, the next 6G technology.

It's a public-private partnership between the European Commission and the 6G Industry Association. We are managing €900 million in Horizon Europe funds, which are matched in kind by private investments. The programme is unique because it brings together academia, industrial researchers, sectors that are end-users of connectivity technologies, and policymakers.

I have already mentioned the European Commission as our public member. We also associate very strongly with governments in the state's representative group, which are providing us with strategic advice. Our programme really underpins the development of the next generation of communications technologies. Just to illustrate this complicated slide on the scale of our programme.

I have mentioned that we are managing €900 million, and that approximately €630 million is currently invested in 100 ongoing projects. These projects are actually developing today and testing and piloting entirely new technology capabilities, which might cause a headache and open new questions for your community, regulators and policymakers.

First of all, I would like to start with the bigger picture. The European Commission has adopted a communication on critical technologies for economic security. Advanced connectivity is one of these areas. However, I think it is very important to recognize that 6G cuts across several of these critical technologies: quantum, semiconductors, AI, sensing, and space. They all intersect with 6G. As I said at the beginning, 6G will be quite fundamentally different. Not only a faster 5G, but it will bring about new technology capabilities, which will lead to quite significant differences with regard to communications networks and connectivity as we know them today.

We are moving from a paradigm of connectivity towards programmable platforms, towards multi-domain orchestration. First of all, what we are seeing is that 6G is likely to be standalone from day one. So, not as many flavors as we saw and were challenged by in the 5G era.

Second, it will connect space and Earth. Ubiquitous coverage, connecting non-terrestrial networks with terrestrial networks. And by that, I don't only mean satellite, but also HAPS and unmanned aerial vehicles, providing a connectivity that does not see borders, that covers seas, ports and airspace.

AI will not be only an add-on. This is the first technology that will have AI embedded at its core, a native AI network. Also, sustainability, energy efficiency by design. And so will be resilience, security, and trustworthiness by design. Also, it will be a fully softwareized network with open APIs, ensuring network exposure. And very importantly, orchestration. It is really a network that will orchestrate not only communications, but also sensing and computing capacities. If you think about it, it does sound a little bit like science fiction.

So, I will dive into three of the key changes. First of all, NTN-TN integration and some of the regulatory questions that you might be faced with in the future. 6G will natively integrate satellites, HAPS and UAVs as nodes. So, there will be a seamless handover across borders.

What does it mean that we are looking today at networks that are fundamentally national, territorial? Towards connectivity, communication systems, and NTNs, which are crossing borders continuously? We have connectivity as a national infrastructure, and suddenly, connectivity with a global reach. Currently, satellite and terrestrial networks coexist. In 6G, they will be integrated and united into a seamless architecture. So, it does ask questions about how we look at spectrum as national today, but also about sovereignty and security questions, given that, for example, intercepts usually happen on a national basis.

The second technology area that I would really like to dive into is ISAC, integrated sensing. ISAC will use 6G signals for communication and sensing the same waveforms for two functions. And it really blurs telecom and surveillance technologies or surveillance capabilities. So, we are moving from a paradigm where we have single role connectivity as we know it today towards a dual role where there is perception and context awareness, plus connectivity.

Today, we are in a context-blind paradigm. We use cameras, radar, or other technologies. But in the future, the networks will be context-aware, and they will also be able to autonomously adapt to the context that they are seeing. Today's business model is transporting bits. The future is intelligence as a service. So, it does raise questions about data ownership or indeed the risk associated with the surveillance capabilities of, for example, crowds, but also atmospheric observation. Who will own the data? Who will be liable and who will have jurisdiction in this future?

And the third technology area that I would like to dive into a little bit is 6G and AI. As I said, 6G embeds AI and machine learning directly into the network, and the network will self-optimize in real time. Today, we use AI, our networks use AI, but they are AI-assisted. AI is an add-on. 6G will be AI native. It will be built in by design. Today, we have traditional control and traditional user planes. We will have a new AI plane alongside traditional planes in the future. Today, optimization is predominantly human-driven. In the future, possibly closed-loop AI agents will be driving automation. Today, AI is a possibility. It's an option. In the future, it will be pervasive, and it will be a necessity that cannot be avoided.

So, we are really moving into a new paradigm of how AI will use the network and how AI will be used by the network. The level of automation and autonomous decision-making will possibly raise questions about who will be accountable. What will the governance for such autonomous decision-making networks be?

So, against the technology background, I wanted to share with you where we are today. This is the timeline from the start of the research and innovation activities and projects of SNS JU towards 2030, which is when we will have a full 6G system, and standardization will be completed. Why did I want to share with you the timeline? Because sometimes I hear that it's the future; it is far away.

The reality is that global standardization and 3GPP started in 2025. We are just a few years away from having the first 6G release. So, the time is really now, and standardization is strategically key to ensuring European leadership in 6G.

And I wanted to leave this really with you. Leadership is not only a technological challenge. Of course, the technology will have new capabilities. But the main question is, how will the European players actually harness, exploit and leverage these new technology capabilities? How will it lead to socioeconomic progress? I believe that, in the short term, what will be key is European participation and real European influence in the global standardization procedure. Also, spectrum policies will be key for the fate of 6G. Then, we will move on to deployments where, of course, regulation and policy will be key for the network deployers.

And finally, the key challenge will be to actually provide commercial services that are monetizable by European players. That value is actually created in Europe and not elsewhere, based on European academic and technological excellence.

Given that I have the privilege of speaking just before a panel, and there will be a network reception afterwards where you can have a discussion, I wanted to leave some easy questions with you.

How do we ensure, and what does the industry need, or what do regulators need, in order to ensure that the future digital infrastructure and infrastructure-based services are innovative, and European players can make profits, revenues and monetizable services based on this digital infrastructure early on? What do we need to do to ensure that European players remain and become even more competitive in this ever increasingly complex environment against their global peers?

And finally, what do we need to do in order to ensure that we keep control of European critical infrastructure? So, how do we ensure that the infrastructure powering our digital society and economy remains innovative, competitive and sovereign? Easy questions, dear panelists, for you to ponder on.

And before I close, I would like to just highlight two items for you. One is that our call for proposals for new projects is open until the 29th of April. And the second one is that we are very much open to ideas and your reflections on the easy questions that I have asked. We are actually looking for the establishment of our stakeholder group. The call for expression of interest is also open until the end of April. So, you're very welcome to have a look and apply to be part of the 6G community.

Thank you very much for your attention. And I wish a very good discussion to the panel as well as for the networking reception. Thank you.

Jennifer Baker: Thank you very much, Erzsebet. Always a pleasure to hear your presentations. And they might be simple questions. How do we stay innovative, competitive and sovereign? That doesn't mean there are any easy answers. And that is a challenge because our next panel discussion is entitled When Networks Sense, Connect and Transcend.

At the risk of reiterating a lot of what you heard there in the keynote, of course, the networks of the future will not simply transport data. They're going to be able to perceive, interpret and respond to their environment powered by those AI solutions. And as I mentioned, that may be for sustainability or for resilience. So, a lot of good reasons to look at it. We're also going to possibly see the development of so-called coopetition, i.e., cooperation and competition between big tech and telecoms operators.

And of course, in the middle of all of this, we have the regulators, the policymakers and the business case, and the key developments that are going to happen during this transformation are something that our panel will explore in depth.

Our moderator for that panel is Klaus Steinmaurer, BEREC Vice Chair and Executive Director of the Austrian National Regulator, RTR. Klaus. So, I am going to ask you the question I asked Giacomo as well, which is what are you anticipating from the panel? What do you think, before we even start, the big key points will be?

Klaus Steinmaurer: Hello, Jennifer. Hello, everybody. In the first panel, we heard much about the future challenges from the legislators and the regulators' point of view. Regarding this panel, it was asked by Ms Fitori, who had already set the scene with her question, so I think that's what we are expecting. And I'm happy and think we have a good panel to discuss these questions.

Jennifer Baker: A reminder, if you're asking questions, do indicate to which speaker you're addressing them. Use the QR code, use the mics in the room, and Klaus, let's hear from your speakers.

Klaus Steinmaurer: Thank you. Good afternoon, ladies and gentlemen. It's a pleasure for me to be here as a moderator of the second panel. When networks sense, connect and transcend. It's a very visionary question we think about. I don't know what you have already thought about. It's very visionary. And it gives an indication of what we can expect in the future, how the infrastructure we have been talking about for the last three decades will develop from poor infrastructure up to, I would say, a global neural system, which has a big impact on our daily lives and our daily businesses.

Therefore, I'm happy to discuss with a very distinguished panel all these questions and perhaps more. Let me welcome the panel. I'm very happy to welcome to the stage Elsa Sependa from GSMA, then Mr Alberto P. Marti, Vice President of OpenNebula, then Mikael Back from Ericsson, and Mr Yohann Benard from Amazon. Please come up to the panel.

Thank you. Thank you for coming. Just to make a short introduction for this panel, I will start with you. Elsa Sependa is Head of Public Policy at GSMA Europe. She focuses on establishing regulatory positions and developing the positions of the industry for policy and for stakeholder outreach. Therefore, that's your main focus. You're very, very young in the GSMA. As you see, you started in 2025. Before Elsa joined the GSMA, she served as Senior Legal Counsel to AT&T. Before that, she worked in two major law offices in London and Brussels. So, well-experienced in this regulatory and lobbying system.

Our next guest, Alberto Marti, is Vice President of Open Source Innovation for OpenNebula Systems. Alberto spent most of his career in Spain and the United Kingdom, both in tech and higher education. So, Alberto is now Vice President of Open Source Innovation at OpenNebula Systems. He deals with strategic collaborations in cloud and edge providers, and other open source initiatives in vendor contracts. He's one of the promoters of the sovereign age. We already heard about sovereign entities, so we will also talk about this. And he's also actively sharing relevant European industry initiatives in the cloud sector.

Our third panelist, whom I'm happy to welcome, is Mikael Back. Mikael Back joined Ericsson in 1990, and then he worked in multiple managerial positions. I also joined the industry at this time. So, Mikael, you're not the oldest in this place. Prior to his current role, Mikael served as Vice President of Global Strategy and Portfolio Development. Currently, he acts as a corporate officer for the Ericsson Group. As a member of the technology strategy, he has much experience and insight into the upcoming developments in the industry, in his company, and what's planned. He also works for the part of Europe, the APAC region and the Middle East. So, I think Mikael is a really highly experienced industry expert. So, he could tell us what's going on with 5G, its use cases and perhaps the upcoming 6G.

And with our last but not least guest panelist, we are reaching out to outer space, perhaps also to the deep sea and to the platform business. It's Yohann Benard. He is the Amazon Public Policy Director for Digital in the European Union. He joined Amazon in 2018 after senior leadership roles in the industry, in the telecom industry. So, he knows our industry already very much. And he was also Director General of Alcatel Submarine Networks. Early in his career, he also served in French government positions and as an advisor to the Prime Minister, so you know both sides of the part, which will be very interesting. He is now on the board of the French-American Foundation and a member of the Advisory Committee on Digital Affairs of the Paris Peace Forum.

So, they are our guests. Thank you for being here. Thank you for coming, and just for warming up, I have a short first question for all of you. As Giacomo already said, just three minutes, as we have to look closely to keep our time frame.

So the question is, what new opportunities are arising in the next three years for the industry in terms of value-added services, efficiency or business models to explore? Elsa, what do you think?

Elsa Sependa: Thank you, Klaus. Thank you for inviting me. I think it's a great first question, which allows us to zoom out a little and think about why connectivity matters so much. There's a lot of expertise on this panel. As GSMA, a global mobile organization, perhaps I can just give a little scene setting, some of the things we see globally, and where Europe sits within that.

If we look around the world, we see that China, the US, and the Gulf States already have ports, factories and hospitals that run on 5G. We saw pictures on the previous slides showing that in parts of China, parcels and groceries are regularly delivered by robots. Self-driving taxis are becoming commonplace in parts of America. And these are not just proofs of concept or pilots. They're real-life operations, and they're services that are in commercial use.

We see, too, that telcos have an important role to play as a foundational layer of the artificial intelligence stack. Telecom networks are, I would say, the bedrock on which other industries can explore the full potential of AI. And in markets such as China, again, we're seeing how quickly things are taking off there through the availability of best-in-class connectivity.

I think it's important to note, though, that many of these amazing leaps forward that we're already seeing are happening in regions other than Europe. I can come back later. There are still some structural reasons that might be behind that. But for now, I think let's just think about how completing Europe's 5G journey could get us to turning some of these science fiction dreams into European realities.

As we move from 4G and basic 5G to 5G standalone and 5G advanced, we're going to see these new use cases coming on stream and enabling significant new forms of economic growth. And that's before we even start thinking seriously about 6G.

But then I just wanted to mention another less visible element in the progress that we are definitely seeing in Europe and elsewhere, and that's the so-called "appification" of networks. And that's a way of opening up the rich functionality of mobile networks to developers.

The GSMA Open Gateway, if you're familiar with that, is a great example of this. If you're not, you can think of it like a universal travel adapter for apps. It allows app developers to kind of plug and play their digital services into multiple mobile networks, over 700 networks globally. And previously, you would need to be compatible with each of those individually. But the Open Gateway short-circuits that and provides standardized APIs across all participating networks, and that's a win-win for mobile operators and app developers. They benefit financially and at pace from investment.

I think we're now at about 80 per cent of mobile connections worldwide, and it's supported by some of the world's leading technology companies, including Ericsson, thank you, Mikael, and Google, Microsoft and Nokia. And we think that that's going to be the basis of billions of dollars of value creation globally within the decade. So, many opportunities out there. We just need to work out how to support those from concept through to delivery.

Klaus Steinmaurer: Many opportunities out there. So, I think the previous words you said, I think you opened the floor also for Alberto. Which role will edge and cloud play in the future telco industry and in the digital industry?

Alberto Marti: Thank you for the question. Thank you for the invitation as well. I mean, from our perspective, we are a European open source technology provider, so we build open source technology for cloud and

computing. This is a technology that users in public administrations or companies can leverage to create their own cloud or their own hybrid environment.

What we need from the telco industry that's been lacking for a while is a clear positioning at the edge in terms of providing the infrastructure that customers need for them to deploy their applications closer to the users and customers. So, what we see as the best opportunity now to recover with this concept of edge computing is that, obviously, most of you will remember the objective of the 10,000 edge nodes to be deployed in Europe by the end of the decade.

So, we see another opportunity now to actually make that happen if the telco industry gets into providing the AI infrastructure resources that we need at the edge, because what customers are asking for, aside from the AI factories and the giga factories, is inference.

And telcos are in this unique position to offer these resources very, very close to the end users. We need them to become AI factories in practical terms. A different concept of an AI factory. We don't need them to be centralized. We don't need them to be dependent on, at this specific point, any specific hardware provider. We need them to be much more open, to be able to later on incorporate new hardware manufacturers in Europe. We need them to develop the common technologies they will use to federate these resources among themselves and offer them to the customers.

But we need these AI resources, these GPUs, at the edge of their networks. And that's a big challenge. But I think we see that as a big opportunity to get this concept of edge computing finally taking off.

Klaus Steinmaurer: It's great, great, Alberto. You said that telco operators also have to look to become something like AI factories. That's very interesting. From my experience, I know telco operators are very good at building masts and deploying fiber and copper. But the next challenge is really a hat off. That's one of the most important things. Mikael, how is Ericsson doing and helping to add value to the telco operators?

Mikael Back: I think we do a lot. We do a lot that touches on what we heard from GSMA about, getting these APIs to life. I think we do a lot when it comes to distributed cloud and making sure that this new− Take physical AI, for example. Most of the things that will execute AI will be out there somewhere, not connected to a cable and so on. And to make sure that you have the right performance for any kind of connected glasses, robots or whatever. That's a real challenge.

So, I think what we have been doing is similar to the way we were testing mobile phones 20 years ago; we were really trying to work with anyone bringing these kinds of new AI devices to life. And that can be 6G, but it can also be ahead of that when it comes to the aspects that are needed to bring the performance. If you want to have the Apple device performance without the size, you have to get the computer away from the device, down to the cloud somewhere and so on. Then you need a very secure, highly capable, short-latency connection and so on.

So, in my book, what we see happen with both AI development and the development of the technology is really perfect for making sure that the mobile networks can be this digital platform that will actually serve this overall change.

I really see a great opportunity for the whole industry to bring to life some of the things that people would feel have not yet happened with 5G. It is actually starting to happen now.

And I think that also means that the role of being a regulator is trickier than ever. It's always been tricky. Now, I think it's even trickier because a number of areas that have been regulated separately, called defense and telecom networks and so on, are getting together, and I think that is a big challenge for both governments

and regulators and so on, for them to act swiftly in this world that is crossing borders so much more quickly than we are used to. So, I think it's a key role.

Klaus Steinmaurer: Yeah, Mikael, you might be really right. It's also challenging for regulators. So, I can say it from my visits to the MWC. It's all the time. It's each year visiting all the vendors like your company. What's very interesting, perhaps, for those who have been to the MWC this year, just keep in mind that the last few years, we always said we're talking about AI, but this year, we're not talking about AI because we're talking about products AI was in. Therefore, AI was not the hot topic. It was there, anything there. And that's, I think, an important issue.

Mikael Back: In France, it's the big thing, not only training.

Klaus Steinmaurer: Yeah, yeah, that's it. Just to broaden the scope in this case. Yohann, what are the value-added developments you see in the future, especially in the satellite service you're jumping into now? That's what I think is interesting for us and our audience.

Yohann Benard: Well, you said it. AI is one of them, of course. It's materializing, but it's still early. But I will comment on something else today, which is that I think the big opportunity that we have ahead of us is really in the combination of earth-based and space-based networks. And this is really our belief that there is complementarity there. There is not just competition. And I heard the term, you know, coopetition earlier as an introduction to the panel. I think it's an interesting idea.

We are developing Leo at Amazon, which is a constellation of low-earth-orbiting satellites. The first phase will have thirty-two hundred satellites. We are already at over two hundred. And we're very proud to rely on European technology to launch these satellites. We had our inaugural flight with Ariane 6 just a month ago. And the next one is coming soon. It will be in April, actually. So, just four weeks from now. And it makes a big difference. It makes a big difference against the previous technology, which was geostationary.

First, in terms of broadband and speed, we have downlink speeds of four hundred megabits for the smaller terminals and up to one gig for the enterprise terminal. It also makes a big difference in terms of latency. We expect 50 milliseconds. It makes a big difference in terms of resilience because, of course, those satellites are multiple. There will be hundreds, even thousands of them. And therefore, in the case of any issue, you can rely on another one.

Why is it important for Europe and for European citizens? And what kind of perspectives does it open? Well, first, it opens a perspective for the tens of millions of European households, which are still either underserved or unserved. And that's really important. More than 30 per cent, almost a third, of the global population is offline today. And that's going to make a big difference to almost a third of the people.

It also makes a big difference in terms of use cases, especially for mobility use cases. Think about aircraft, think about the maritime industry. But it will also make a big difference for the telecom industry itself because satellite networks can serve for back-holding purposes for remote populations, rural areas, et cetera. And we have announced just at Mobile World Congress, you were discussing this partnership with Vodafone in that domain.

And finally, it makes a big difference for governments and for regulators, and I know that this is a key question today. Why is it the case? Well, first of all, it makes a difference in terms of the resilience of the networks because you are adding one more independent network. And therefore, if anything happens to earth-based networks, well, you have the possibility to shift. And that increases the resilience of telecommunications in Europe. And that also increases the capabilities of regulators and policymakers to allocate funds because we

have asked Analysys Mason to tell us how much savings in terms of subsidies could be achieved if we were to add satellite connectivity to the broadband plans of European countries, and the answer is 37 per cent.

So, you know that, of course, connecting people is not incremental. It's actually increasing a lot, you know, if you go towards the last per cent, and this is where we are right now in Europe. So, if we integrate satellite connectivity into those broadband plans, we can save a lot of subsidies that can be reallocated elsewhere.

So, I think it's very important, and that will be my last word, really, to integrate satellite constellations into our broadband plans. I was pleased to see that this is what BEREC said in their response to consultation by the European Commission on the revision of the Digital Decade, saying that we should aim towards net neutrality, including satellite.

Klaus Steinmaurer: Yeah, great. As you see, there's a lot of transition going on out there. We heard from Erzsebet that there are three questions to be answered. One question to three topics to be answered. How will that have an impact on competitiveness? How will that impact our innovation? Will that also impact our sovereignty on these issues? Very important issues.

We are talking about networks, different networks for us all. I think you could also imagine that when we are talking about connectivity, we are talking about mobile connectivity, not about the technology behind it. Yes, starting with mobile technology, pure mobile technology. How are operators preparing for the transition we are expecting, and what incentives are needed to drive investment? Are we witnessing an innovation push in the head of real market demand?

Elsa Sependa: Thanks, Klaus. Again, highly topical. I think for me, the key to all of this is the investment question. And in one word, the answer would be for me: regulation. But I'll take a little bit longer to unpack that.

We've obviously seen that there's an awful lot of innovative spirit. It's alive and well in the sector. But what I want to focus on is how we can turn that into delivering a leading and innovative connectivity framework here in Europe. And the key thing to do this is to acknowledge that running, maintaining and upgrading networks is expensive. Innovation is expensive. AI in particular, and edge telco, as you said, requires reliable and cutting-edge mobile networks. And again, that's all very expensive.

But in Europe, the investment climate that we have holds the sector back. And for me, a lot of that is to do with the regulatory environment in which we operate. My sense is that Europe's digital needs have not been sufficiently prioritized by policymakers in recent years, and as a result, we have gone from being global connectivity leaders to being far behind today.

We had a lot of discussion about the Digital Networks Act in the previous panel. But as a mobile industry representative, I will take up your time a little bit longer to cover some of those points. As an industry, we are concerned that the current proposals don't do enough to support Europe's telecom needs and to prioritize our networks of the future. We agree that there's good stuff in there. Moving from a directive to a regulation is absolutely essential for the single market. We support the proposals on spectrum policy. Moving towards indefinite licenses would do a lot to free up capital for investment in networks.

But in other ways, we do find that many of the proposals could still do with some more work to get to the fix that we were discussing earlier. Instead of the promised cutting of red tape, we see new rules being added and duplicative sector-specific rules being maintained. We're cutting and pasting historic text into what's meant to be a manual for the future, and we're not even picking some of the more low-hanging fruit, like quickly clarifying rules on specialized services and slicing.

And all the while, we see that the playing field remains tilted in favour of alternative connectivity providers that offer users similar services, but are not subject to the same rules. But enough on the Digital Networks Act.

I think it's also important to bear in mind what else is going on in the regulatory sphere under the revised Cybersecurity Act. We're looking at stripping out existing infrastructure from European networks to a globally unprecedented extent and on a globally unprecedented timeframe, without a real discussion on the cost and the disruption that will bring.

We also still have a merger framework that doesn't allow European companies to achieve the scale that they have managed in Asia and the Americas, the scale that has enabled them to deliver these best-in-class networks. So, just to conclude, I would say a new deal that we've heard will be very welcome. But my call would be that we work together across industry, regulators, policymakers and industry, and across all policy fields to deliver a coherent environment that can incentivize innovation and the investment that we need.

Klaus Steinmaurer: Thank you for that, Elsa. It's interesting. Just as a regulator, I can tell you regulators would also be sometimes surprised if new initiatives come from the industry, which we then can think about and perhaps say, OK, it's a good idea. I think they are going well with the framework. So, what I want to say, it's also the industry coming to the regulators. It's not only waiting for the right regulation. So, we also need you to explain that. I think many regulators are really open to supporting good ideas. So, that's what I only wanted to add on that.

But what has already been said, there are also some questions about the technologies available, which leads me back to you, Mikael, and the future business of Ericsson. Which technologies are likely to be most disruptive, and which are the closest to market readiness? Will new sources of value come from the networks themselves? Programmability, data sensing or mainly from the applications built on top of it? Who are the game changers? Also, from your perspective in this case, what do you think?

Mikael Back: I think that it's likely to be a mix. I think we have this feeling in many of us that we lost the race a little bit to make the networks relevant in the 4G and the smartphone era. But when you look at all these new things that are coming out now, I just mentioned a few now with physical AI, and one thing they have in common is that in order to perform well, they really need the network.

So, I think many of the things we see in front of us, in the same way as we've seen industry transformation from AI and so on, really will put the networks back in play. And I think there will be a huge monetization opportunity. To me, I think also this is not only one technology, but it's also this merger of when you and I were young, the telecom industry was isolated. Now, it's really merged with the cloud industry.

After that, it's now integrating more and more with the AI industry, with the satellites, with the sea cables. So, I think that the number of opportunities, not only for Europe to drive innovation from this platform, is one of the few technology areas where we have the global technology leaders that can support anything from startups to traditional industries that are digitalizing and so on. So, I think this is a great opportunity we have in front of us.

And then as Erzsebet was mentioning, we have completely new things coming out like sensing and so on that fit super well into this new, or not so new anymore, but the whole trend of utilizing civil technology for also public safety first, but then defense purposes, partly driven by the R&D investment that goes into our industry, if you take networks and devices, is so much bigger than you had in any traditional police radius or whatever. So, that will continue to drive these networks making an impact in more and more areas.

Now, we talked about satellites, we talked about public safety, we talk about defense. So, I think that whole trend will also be a great thing for people in this business. Done exactly how it will play out, it's going to be a different game. We talked about investments. I think here it's also around governments deciding what role you take when it comes to these networks that are no longer on the civilian, but also building out in areas of a country where I don't have a business case for civilian users and so on. I think it's a great future too for the next years ahead of us.

Klaus Steinmaurer: I'm completely with you, and you also spoke about the defense issues, and there will be some really important issues, and I think also at the MWC, you proposed some examples regarding this. Now, I'm coming to outer space. Amazon is extending its business to outer space. So, Yohann, what do you think? What are the main issues you envision that may arise in the development of new satellite services?

And what are the business areas where you envisage that there will be more demand and sources of revenue? And let me add on, as I said in my introduction, what do you think is also the importance of sea cables in this context? So, outer space, satellite, sea cables, connecting people out of your experience. Just give us a short three-minute insight.

Yohann Benard: Yeah, yeah, indeed, I think they go together. Deep sea and outer space are definitely complementary. And I will say that the main issue I see for now is really in regulation. We have to make sure that regulation fosters innovation, fosters investment and also fosters adoption. And I think that's critical.

So, with the DNA, I know that there's been a lot about the DNA earlier, but I would like to say that we share the goal. The goal is to extend and strengthen the single market. And the single market is definitely a jewel of Europe. We should build it also in the telecom domain.

Now, the risk I see is that by trying to simplify, we actually complexify, and we also extend the scope of telecom legislation inadvertently. And let me explain in just a couple of words.

If we create centralized authorizations, centralized licensing, but we don't change national rules, which are inherently very local, because if you look at the legal intercept, if you look at what we have to do for gateways, for example, it can be national or even very, very local. If we do that, then we don't simplify because we will still have 27 sets of legislation. And what we do is we add one more layer. So instead of having 27, we have 28. And instead of also being able to launch a service in one country, where we comply with the legislation of one country, we have to wait for the slowest until we comply with 27 before we can do anything.

So, I think good intentions have to translate into good legislation. And I think there is a point of caution on this one. And the other point of caution that I would mention is, do we really want to extend the scope of telecom legislation, or do we want to create a single market of telecom?

Because if I read the text and particularly Article 9.2 today, it seems that any network that could convey information could fall into the scope of the act. And that would mean private networks, which would also mean CDNs. And if we do that, we'll capture into the scope of telecom legislation a lot of technology that has nothing to do with it and really no reason to fall into the scope of telecom. And we will make it even more complex for them, and we will capture financial, we will capture health networks, etc.

So, I think we have to be cautious not to do that without a good reason because these sectors are already regulated, especially by the NIS2 directive about cybersecurity, about resilience. Therefore, if we add legislation to legislation, I'm not sure we will simplify. I'm not sure we will foster innovation.

Klaus Steinmaurer: That's what we have to discuss for sure. Alberto, how are telecommunications operators positioning themselves in the area of edge computing, and how do you see the market in Europe for the

development of the use of cloud-based services in telecommunications infrastructure and services? And just a hint on sovereignty, I think that would be interesting.

Alberto Marti: Well, I mentioned before, I mean, I'm really sorry to say that there are positions themselves very late, very slow, and in many cases, they are using American technologies, so that's a shame. I think the main problem with sovereignty is that everyone talks about sovereignty, right?

But I think I've been sharing the industry facilitation group of the IPCEI cloud for the last couple of years, and I've seen all kinds of reactions when we open up this discussion among European companies.

It's very difficult to reconcile the different nature of sovereignty because, on the one hand, it could be a continental policy, and it is a continental policy. But, on the other hand, at the other side of the spectrum, there is a very personal feeling as well of things that are not really right, and you feel are wrong in the way we interact with technology and how our communities interact with technology over our governments. So, it is very difficult for people to reconcile these two dimensions of this continuum of what sovereignty means and bring that in practical terms to do things in practical terms.

Within the industry, for instance, at the European level, we are having these endless discussions nowadays about whether you can really have a sovereign cloud based on a technological stack controlled by an American company. You don't need a lawyer to tell you that's completely absurd, but we need to move beyond these kinds of discussions and really start assuming that we need to create our own technological stack.

You cannot have sovereignty in cloud or other technologies or other areas if you don't control these components. We have some hope, for instance, that the upcoming Cloud and AI Development Act will bring some sanity to this debate, with a clear definition of what a sovereign cloud is, including the technological stack and the software stack.

And after that, we hope people in the market and telecom operators will gradually move away from the agreements that they've developed during these years with hyperscalers and big tech and will really start to invest in their own capabilities for developing technologies, the great European open source technologies we have in Europe, and building this European sovereign stack for AI, but also for the rest of the services in cloud, and it's common sense. When we regulate against common sense, personally, I think we undermine people's faith in institutions and in democracy.

Klaus Steinmaurer: So, it sounds really great, ladies and gentlemen, from the industry. Let's stop. Just keep the words in mind. I think it's time to ask some questions. We are very short on time. So really two or three questions I can take. Your name, please.

Dean Bubley: Hi, Dean Bubley from Disruptive Analysis, and I'm going to pick up on that last comment because I disagree quite strongly. We've had Edgewash for the last 10 years, and AI doesn't really change it. Why don't we focus on edge interconnect and having more peering, more interconnection points and actually a dense grid?

Because AI, particularly inferencing, energetic reasoning models, everything needs access to everywhere else on the Internet. I've never met a developer who wants their AI workload running on a cell site on a bus station roof. We'd much rather have larger data centers. And it's not obvious, interesting, the GSMA may be on this and Ericsson, that telcos are the best way of trying to create a quasi hyperscaler with thousands of data centers. Is there any evidence of that? Thank you.

Klaus Steinmaurer: This is the only question you get from the audience.

Mikael Back: If I just start. One thing I've seen, and not only from us, but also from the way we do with some of these leading manufacturers of AI devices and so on, is kind of the evidence of this. I think for them, it's very obvious that you want to be able to run inference where it matters most. So, in some cases, you want to do it as close as possible to the glasses with the implications that might have on power consumption and so on. In some cases, you want to be able to run it on a device on your body. In some cases, you want to be running it on the more classical kind of edge nodes, and in some cases, absolutely in super big data centers.

But I think you really want to create freedom because there are pros and cons to all these points in the network. So, I think we have the technical capability to really execute where it makes sense, closer to the end user, much more power efficient and so on, all the way back to the big data center. So, I think the answer is that you would like to have this freedom, including the edge, but not only.

Alberto Marti: OK, yeah. What we don't have yet is the European open source technology to do that, to manage that. The good news is that we have the new IPCEI on AI. Hopefully, one of the main topics is precisely that.

I mean, to build that kind of technology, we need to manage not just the continuum from the HPC, AI factories or giga factories to the public cloud providers and edge, but also this continuum between the different needs a company or user might have between the training and the fine-tuning and the inference in different locations and depending on the requirements. But I mean, that technology, we're actively building it as we speak.

Klaus Steinmaurer: One comment.

Yohann Benard: Just one comment to say that I see a virtuous circle where basically innovation creates new, great use cases. Legislation and regulation foster adoption, which, in turn, fosters the business model of telecom because it creates a need for broadband, and therefore it fosters investment in better telecom networks. And then you go back and start again. And I think that a virtuous network like this is really achievable. This is the one we should try to foster.

Klaus Steinmaurer: Great. Thank you very much for this great detail. Sorry for not having as many, many more questions, but I think there will be a possibility outside of the panel. I only want to finish now with one short question. Three words from each of you at the end. There are so many regulators in this room. So, what can regulators do to make the industry happy? Three words. Yohann, may you start?

Yohann Benard: I'll start with what I just said, actually. I think fostering that virtuous circle instead of trying to impair the development of some technologies is the way to really create a healthy environment.

Klaus Steinmaurer: Thank you. Mikael.

Mikael Back: I think investment-friendly predictability makes people want to invest. Some of the challenges we have are not super high tech, but it's basically the build-out, the redundancy, and so on. So, I think that would help a lot.

Klaus Steinmaurer: I'll bet.

Alberto Marti: I want to say two words, public procurement, but I would also go for state aid mechanisms. I still hope that the IPCEI is a good mechanism for mobilizing co-investment from public administrations and industry. I think it works to create this kind of resilient ecosystem; we have to simplify the process even more.

Klaus Steinmaurer: And as the mobile industry is always so unhappy, what can we do for you?

Elsa Sependa: No, I think this has been a great discussion, but it's all about driving investment incentives and getting the regulatory framework right to do that.

Klaus Steinmaurer: Yes, but it's a common ambition we all have. It's not just the regulators or the legislators or the industry. It's a common ambition. So, thank you very much.

I think our next speaker is already waiting. So, I'm very, very pleased that we have had this great panel here, this great discussion. Thank you very much for coming and all the best. Thank you.

Jennifer Baker: Thank you very much indeed, Klaus, for leading that discussion. Quite an in-depth look at what we can expect in the future from those networks. And of course, thank you to all of the panelists and to Klaus for moderating that discussion ably.

So, we've reached the end of our panel discussions, but we have got one final treat for you. We are very pleased to welcome as a keynote speaker here today, emphasizing, I think, how important our discussions here are at the 14th BEREC Stakeholder Forum. We're pleased to welcome to the stage Executive Vice President of the European Commission Henna Virkkunen. Thank you.

Henna Virkkunen: Thank you. Good afternoon, everybody. The chairs and vice chairs of BEREC, the representatives of national regulators, distinguished participants, and their guests. It's a great pleasure to be here today with you. I know that you have had a very full-packed day of discussions here. And now you will have two more speeches here. So, I would like to start with a very clear message for you.

Europe's digital future needs a very bold action now. So, we cannot do business as usual anymore. We need to take the right steps now with the choices we will make together over the next few months. Accelerating Europe's digital transformation is not an option. It's really a necessity for us. We need to boost our competitiveness, strengthen the single market, and reinforce our security and resilience. Europe's future depends on it.

At the same time, I'm also very confident that we have everything that is needed to be competitive, strong and secure. Europe also has a very strong regulatory framework and world-class research. But we are facing three very structural challenges. And I think many of them were already mentioned in this previous panel.

So, the first one is about fragmentation. Our single market for connectivity is still incomplete. We know that our operators face 27 different rules, which limit gain, slow investments, and weaken competitiveness. So, it's very clear that we have to put our single market and its whole potential to full use.

The second structural challenge we're facing is investment. The deployment of next-generation infrastructure, 5G, fiber, and cloud is lagging behind global competitors, and the investment needs are significant. At the same time, we know that we have a lot of capital in Europe, but we haven't been able to mobilize it for these innovations.

Under that structural challenge is our vulnerability. Digital infrastructures are not only a matter of competitiveness, but they are now a matter of security and defense. We see that networks are targets. Supply chains can introduce risks, and dependencies can be exploited. So, bold and fast action is the only way forward. And the Commission is now moving in this direction.

First, by completing the single market for digital networks, and then by strengthening Europe's competitiveness and embedding security and defense at the core of our digital strategy through resilience and preparedness.

The Digital Networks Act is the response to those challenges. Ambitious yet balanced to improve competitiveness and develop the digital single market. We are reshaping Europe's regulatory framework with future-proof and investment-friendly rules.

First, when we are looking at simplification and further harmonization, we want to enable the digital single market. And that means that we have to remove fragmentation and bring further harmonization to the regulatory framework. Therefore, the DNA is a proposal for a regulation that will avoid lengthy transpositions and further diversions. And we'll also introduce more harmonization across the single market.

Second, as you know, this proposal consolidates various legislative acts. So, the European Electronic Communication Code, BEREC regulation, radio spectrum program, core parts of the open internet regulation, and parts of the e-privacy directive are brought together into one single rulebook to strengthen the consistency. The simplification effort is very evident here. From today's almost 3000 articles, as a result of 27 member states having transposed the European Electronic Communications Code in different ways, to the proposed 210 articles of DNA. We are also reducing existing reporting applications, refocusing universal service while maintaining a safety net, and streamlining end-user rules here.

And third, the DNA also proposes more harmonized rules to enable European companies to scale up and to provide cross-border services. The single passport authorization system based on fully harmonized conditions will remove cross-border barriers.

Moreover, the integration of security and resilience addresses the fact that connectivity is a part of critical infrastructure, and we must align telecom policy with broader European security objectives.

In addition, the DNA proposes to harmonize rules for spectrum and a single European authorization for accessing satellite spectrum. A more coordinated European approach to spectrum will enable, in particular, emerging technologies such as 6G and cross-border services like satellite communications.

The role of BEREC will be very crucial in this domain. And then when we are looking at the investments, large-scale deployments of the fiber networks, 5G and beyond are still needed to achieve connectivity targets.

It's crucial to accelerate the transition to fiber, a process already ongoing in many of our member states. We know that the benefits for our society from fiber transition are estimated as a GDP impact of 327 billion euros by 2030 through productivity gains. So, these investments are really needed.

The copper switch-off should begin by 2030, and until 2035, it will be subject to conditions related to the coverage of fiber networks and the affordability of the connectivity services. The transition must be gradual and predictable.

Operators need regulatory certainty and clear roadmaps to adapt without disruption. We have adapted and updated the access to the regulatory framework to ensure that it also supports and facilitates the transition to fiber.

Now, let me turn to you, the national regulatory authorities, to the key role that you will play in delivering on the Digital Networks Act objectives. In order to support the harmonized regulatory framework, the governance needs to evolve. This is very crucial if we want to create the framework that enables European startups to scale globally, to foresee that the rural community can access high-speed connectivity, and to assure our societies that they remain secure in an increasingly digital world.

BEREC is not the only key player in this endeavor. You are, in fact, in the driver's seat here. Your expertise, your coordination, and your leadership are essential. The role of the radio spectrum policy group should grow alongside that of BEREC. Both have to engage actively and lead in shaping and implementing the Digital Networks Act.

The future of Europe's connectivity will not be written by chance. It has to be written by choice. So, dear participants, I very much count on BEREC and our national regulators to deliver on the choice of competitiveness, the choice of growth, and the choice of leadership. Thank you very much.

Jennifer Baker: Thank you very much indeed for your words here today. I think you're sending everyone away at the end of our event with a really clear thought. But we're not quite over because I'm going to invite back to the stage—she opened for us this morning, but please do welcome back to make some closing remarks—BEREC Chair for 2027, Alejandra de Iturriaga.

Alejandra de Iturriaga: Dear colleagues, our BEREC Stakeholder Forum is coming to an end. Thank you for joining us and sharing your ideas and our ideas.

Special thanks to our keynote speakers for being with us in all these sessions. To the Executive Vice President, Ms Virkkunen, for joining us and having us, giving us your insights on the DNA. Thank you very much. To Erzsebet Fitori, who helped us to understand the upcoming technology changes.

Of course, the moderators and panelists have been great. And I think they have been exceptional in this necessary debate. Last but not least, our co-chairs, the backbone and the lifeblood of our work, with whom you may have had the opportunity to engage and to share ideas and concerns. And special thanks to the BEREC office for their outstanding work to prepare this amazing event. And that is really a success.

Today, we talked about the present and the future of our sector. Connectivity is not abstract. It's what people depend on daily at work and at home. So, what we are discussing today will fit our work and will fill our work programme for next year.

Of course, your collaboration continues in the next workshops, in the next targeted discussions. We hope that we will continue our engagement with you. So, that's all from me. Now, let's continue the exchanges in the network reception where we had lunch before. Thank you very much.

Jennifer Baker: Thank you very much, Alejandra. As you said, very fitting for a conference on connectivity that the red thread through it all was about collaboration, cooperation, and working together to rise to the challenges of the future.

Thank you once again to all of you who joined us online. You will all receive a link to a survey. We do want you to fill that out, so we can get your thoughts and suggestions for next year. The video recordings will be available on the BEREC website very, very soon.

So, please do as you've been told—enjoy the rest of your evening. All those networking opportunities. The reception will take place outside in the front courtyard. That's it for now. Have a very good evening.

[MUSIC PLAYING]