



11th BEREC Stakeholder Forum

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**Transcription
of the event**

**#empowering
EUconnectivity**

Welcome to BEREC's 11th Annual Stakeholder Forum

Philippe Defraigne: Good afternoon, everyone. Please people, in the entrance, take a seat there are still some seats available if you prefer. Thank you, thank you very much. We will make a start in just a few minutes. But before that, by the way, I'm Philippe Defraigne, I'll be your Master of Ceremony for this afternoon. And before we get started more formally, I need to take you through a few housekeeping matters. I want you to reach out for your handset.

Take your phone, and on your badge, there is a QR code. Let me see. I want me to open your camera and scan your QR code. Very important. Very important.

Now, this is silly question, but later on in the day, there will be more fundamental questions asked. Pay attention. So, the silly question is "where do you come from?". That gives us an idea of who's here. So let's see that. Germany, Sweden and Greece. Many Greeks here in the front. Good students, you know. Belgium, that is to be expected. I guess a number of locals. Belgium still winning. And in football it was the same the other night. Belgium and Germany, I don't know if you noticed... not to be mentioned, okay. Croatia, yeah, of course. Tonko has come with a large group of supporters. That is great. Thank you. North Macedonia, Argentina. I can see one. Columbia is represented as well. I know I do not see it yet. But anyway, you get the idea. This tool, Slido, will also enable you, if you sit at home, for those not in the room, to ask questions. Questions will reach my colleagues and they will pass it on to me and I'll do my best to relay your question. In the room, you can also use that to ask anonymous questions, but be courageous, ask for the mic and ask your question.

An important announcement: Marina – you don't see her because she sits at the back of the mezzanine – she is our stenographer. So if you wish not just to listen to what we say, but you need to read it, you can do it by watching the screen at home. It will appear automatically. If you want to see it on your computer or phone, you can simply scan the QR code that says "code to read live captions". And through our great stenographer Marina, you will be able to read what we say.

Final, crucial point for me, these beautiful boxes on your table, courtesy of BEREC. If you open them when you're back home, they include delicious food inspired by the country of the Incoming Chair, Croatia. So if you cannot fit them in your bag, there will be bags in the cloakroom. So you can pick it up when you pick up your coat. That is all for me now. And I'll hand over to the BEREC Incoming Chair 2024, Tonko Obuljen. Tonko, over to you.

(applause)

Tonko Obuljen: Thank you Philippe. It's Obuljen (specifying the pronunciation), actually, but I do not expect everyone to know that yet. Okay. Dear stakeholders, dear guests, dear speakers, dear colleagues, welcome to the 11th BEREC Stakeholder Forum here in Brussels. I'm glad that we gathered in such a large number, but I also want to greet our participants who are following us remotely. I hope you had an opportunity to Meet & Greet our Co Chairs in the morning. They are our driving force of BEREC and I hope you spent some good time with them and had productive and useful discussions. So, BEREC Stakeholder Forum is a meeting place with stakeholders. A place where we present our Work Programme for the next year. But also, a place where we openly discuss our views on the market developments and our views on the regulation, how it is and how it should be.

Well, this is of particular importance in these challenging times when we at the same time have the rapid development of new technologies but also, threats to our economy and security caused by the war in Ukraine. As we move forward into 2024, the work of BEREC will continue to be essential in ensuring a stable and effective regulatory framework for the electronic communications networks and services in Europe. It is important that we all stay up to date with the latest developments and work together to address the challenges and the opportunities that may arise. So, this afternoon we will be discussing the Work Programme for 2024, and this Work Programme will set the priorities and goals for our work in the coming year. I'm looking forward to engaging with all of you and to hear all of your valuable insights and feedback on this topic.

So, our Working Programme is of course based on four objectives from EECC, and those are promoting connectivity and access to very high-capacity networks, promoting competition and efficient investment, contributing to the development of the internal market, and of course, promoting the interests of the citizens of the Union. BEREC also identified our own three level high priorities in our midterm strategy for the period 2021-20225 and those are promoting full connectivity, supporting sustainable and open digital markets, and empowering end-users. Which also corresponds to the objectives from the Code.

We are running out of time, so, I highlighted some of the activities planned for 2024. First group of activities is actually the activities in which we support the Commission. Sorry ... I have lost the slide here.

Okay. Thank you. Sorry. So the first one is BEREC Report on national experiences in the implementation of the EECC. And I know that there was an interest from the stakeholders for this process, so I can promise you will be involved. We will have two stages of workshops on this topic. So the first one will be our internal BEREC workshop, but the second one will be the workshop with the stakeholders.

Then, we have two items which we periodically do. So,, those are two reviews of our guidelines on co-investment criteria and symmetric access obligation. And the fourth item is the universal service review, which the Commission should do before the end of 2025. So we plan to assist the Commission in this process by providing all necessary information, collect relevant information, data from Member States and also, to provide an Opinion on this report we will do.

We will also further engage on DMA and DSA data and the Data Governance Act and Artificial Intelligence Act. Why? Simply because we think that it can affect what we do, and also some of our NRAs are going to be on the national level in charge for some of these files. We have to redo our Opinion on end-users' rights which was published in 2021. And we will further engage on sustainability issues. We find particularly important our report on empowering end-users through environmental transparency on digital products and services. This will be a kind of interesting process for us as well, as we have to learn a lot. Then, we want to share what we learned between (unintelligible) and then, we want to also communicate what we learned to the end-users to really empower them to use the electronic communications networks and services in a manner which can contribute to our sustainability goals. And of course, we will further work on the cybersecurity issues. We already exchanged information and best practices but we will continue to build our knowledge on the topic and our cooperation with the stakeholders.

I already mentioned BEREC's midterm strategy. We have two additional strategies on the institutions, the relations with other institutions, and also on the international cooperations and all these strategies expire in 2025. So, we plan to start our work on all three documents during 2024.

Where are we now? We are in the middle of our call for input from you. After we did that – and you have two more weeks, by the way, to send us your contributions – we will take everything into account. Both your contributions but also contributions from our NRAs and we will make a draft Work Programme, have it on our Plenary 3, and publish it for the public consultation after that. So, there will be a public consultation from 6th of October to 6th of November this year, and we plan to adopt the final document on the 7th of December this year.

So, what we really expect from you: we want to hear from you. So, tell us what we do well, and also what we can improve. Criticise us if necessary. Tell us how you see the market development and share with us your vision. What regulatory actions do you expect and what do you consider

as BEREC priorities. Like I said, we will take everything into account when drawing up the final draft of Work Programme for 2024.

So, thank you in advance for all of your contributions, thanks for coming here, and I hope that we will have some good and productive discussions throughout the afternoon and I would like to invite Philippe back to the stage. Thanks.

(applause)

Philippe Defraigne: Thank you, Tonko. And I would like to invite Kostas Masselos, the standing Berc Chair, to join us on stage for the Q&A. Kostas? (applause)

Philippe Defraigne: This is your moment, this afternoon you'll be able to ask questions throughout the afternoon, but this is particularly the session where you can ask questions about anything. Okay? So perhaps to break the ice, I know some of you are a bit shy, I'll ask the first question and I will ask a tough question, just to show that these two can take just about anything, if necessary, as you said. One conversation that has been going on in town, gentlemen, in the last few months is the lack of transparency of BEREC. And this, they prove the opposite this is the most transparent organisation – you can ask these guys anything that you want. But the story goes, a few months ago, BEREC released a famous preliminary assessment – I do not need to continue, you know what I'm talking about – and some people in this room and outside this room would like to know who within BEREC was in favour of releasing this damned report, and who was against? And we are going to find out. For example, if you look at your American colleagues, there are only five, I know, and we are 27. It makes matters a bit simpler, but you can see on every decision who is voting and who has a dissenting opinion. So why don't you do that?

You want to be the first?

No problem.

Kostas Masselos: Well, the easy way to respond to this one would be to discuss the formal part. So, we follow BEREC regulation, we follow procedures based on BEREC regulation and according to this, we don't need to disclose voting information. So that is it. But, maybe in the next round of updating BEREC regulation, co-legislators can consider this one. This is a formality. This is not important. In my personal view what is important is the content and not the process. So it's the decision itself. It's the assessment itself that is really interesting. This is the substance of the work. We developed policy and regulatory frameworks and proposals: this is the really interesting part. So, in my opinion, I would not care much. And to be honest, there might be also other bodies in Europe that do not disclose similar information. BEREC is a big body. 38 members, some with voting rights and some without voting rights. And of course, in

such a big body there will be different opinions, different views in certain cases. And this is why BEREC discussions are quite constructive and interesting. We don't expect everything to be approved unanimously or with a huge majority, but it's for me important that a BEREC decision is a decision with the same strength and respected by everybody, whether it's received unanimously or with a majority vote.

Philippe Defraigne: Thank you. Now, I would like to open the floor, questions from the floor. Yes, I see Luc and I see Lotte. Ladies first. Lotte, a colleague from GSMA. Could we have a mic here? The time, we have started ten minutes late, so we need to adjust the time clock here, we are not going to cut into the Q&A, we started 13 minutes late. Okay?

Thank you. Lotte Abildgaard from the GSMA. A question about transparency, perhaps. We understand that BEREC is planning a study trip to South Korea next week. Can you she had more light on who you are going to meet during your study trip and what you expect to get back, what you plan to explore out there?

Philippe Defraigne: We love K Pop but that is between us. I do not like it to be known.

Kostas Masselos: Actually, I'm flying on Saturday to South Korea. So, the BEREC study trip takes place every year. It's not a kind of tradition, in my opinion, it's part of the real work of BEREC, so it's part of the core of our Work Programme. What we want to do and what is the objective of the BEREC study trip every year is to visit a country outside of the EU of course. We want to explore technology developments, we want to explore regulatory practices and good ideas in policy and regulation, we want to explore other markets, in other areas of the world and also, deployments in electronic communications networks and platforms, digital platforms and systems. Why? We want to do this because we need this, we need to have a global view in order to be ready to come up with regulatory proposals and policy proposals in a timely manner and quite efficiently. So this is very useful for BEREC, and the exchange that we have is also very important. Mainly, we target three groups of stakeholders when we go on a study trip visit. So, we have governments and regulators. We have industry and markets, mainly electronic communications and digital systems, and innovation ecosystems. Because through innovation ecosystems, we can identify the technology trends. What new technologies are coming, so we can get prepared and better understand where our future regulatory actions should be focused. So this is the story about BEREC. Of course, this year we go to South Korea. Actually South Korea would have been the destination of the BEREC study trip in 2021. In 2021, we didn't go for a study trip because of COVID, it was the only year that we missed the study trip. And so we go this year in South Korea and of course, I can understand that everybody thinks that BEREC goes to South Korea to discuss the fair contribution and the "sending-party-network-pays" legislation and actually, it's not a single Act, but a series of legislative procedures started in 2016. But this is a coincidence. Of course, we will take advantage of the opportunity and discuss with South Korean colleagues

on the government and regulator, side but also with the industry, the impact of such regulation. I mean, it's a very good opportunity to have a direct exchange on things. We have been discussing quite a lot about this South Korean legislation, the sending party network pays, et cetera. Normally, every time we go on a study trip, we publish a report afterwards with details on the stakeholders that we have met and main conclusions from our mission. This is what we will do also this year.

Philippe Defraigne: Thank you, Kostas. We go to Luc now. Who wants to go next? Thank you, Luc.

Thank you very much, I'm Luc Hindryckx, the Director General of ECTA. I would like to ask BEREC what you could do to improve the discussion room, and certainly when there are workshops or events organised with the stakeholders, and to create room for substantive debate? If we compare, we are now discussing the recommendation where we are at the end of a process of two years, and there has never been a descent discussion with the stakeholders, but stakeholders can oppose their arguments improve the decision making process. I understand that COVID has made it difficult but COVID has passed and I believe we would gain in having a space where the substance can be discussed.

Philippe Defraigne: Thank you, Luc. Can we have afterwards the time is running out. Quick questions and quick answers, if it's possible, okay?

Kostas Masselos: I will be very brief. Engaging with stakeholders is a priority for us, we want to be open. I don't think we can come up with efficient proposals for policy and regulation without interacting with stakeholders. BEREC Stakeholder Forum is our main event every. Of course, it is once per year but let me remind you that we have recently extended it to include the Meet & Greet session, which has been very successful. Of course, we run a number of workshops every year, again to come in touch with our stakeholders and to exchange with them. But, of course, the number of workshops that we can have depends on the resources that we can allocate. So it's a trade-off. But it's not only workshops organised by BEREC that give an opportunity for exchange between BEREC and stakeholders. We try to be present in all major events of our sector. We have been traveling quite a lot. Frankly speaking, I get a lot of criticism back in my office for traveling a lot. I mean, participating to other events is also an opportunity for exchange.

Philippe Defraigne: Thank you, Kostas. Yes, Ben from MVNO Europe.

Ben: Well, thank you, I am Benjamin from MVNO Europe, which is an association of individual mobile network operators. I have two questions a bit related. The first question is on mobile wholesale access study that you are doing: do you have any idea what you will do with the findings of the study? And the second thing is related to a current case that was just published

on the Czech Republic: for us, it seems quite clear that the market is not working quite well and we have real trouble to get into the market. Can you tell us a bit more why you justified the Commission's decision to not allow the Czech Republic to introduce regulation on this.

Kostas Masselos: I'll start with the second question. Indeed, we examined, as foreseen in the regulation and framework, the case of the proposal of CTU, for regulating mobile wholesale market in Czech Republic. Of course, we want to promote competition, of course, we want to promote innovation, we follow the guidelines and our expert group came to the conclusion that, at this point, it might be disproportionate to introduce ex ante SMP regulation for the market. But maybe we should look at this problem on the competition side. The competition law side. Of course, I'm concerned if I see prices, I follow prices in different markets in Czech Republic. I can tell they are high. I got the same criticism in Greece recently, but maybe the ex ante SMP is not the only way to go to solve this issue. But in any case, BEREC experts came to this conclusion and it was BEREC's Opinion in the process. With regards to our study, the one started last year, it will, it is ready. It will be approved very soon and published by mid-April.

Philippe Defraigne: Thank you, Kostas. Claudio from BEUC, the organisation of consumers in Europe.

Hello, good afternoon, thank you very much Philippe for the word. Yes, Claudio Teixeira from BEUC, the European consumer organisation, and my question is very short, as requested. It concerns the Gigabit Recommendation, which is now on BEREC's desk. This is something that we are very concerned about, given in fact that we do see this, some criticism floating about, as kind of a license for incumbents to move away from cost-based wholesale access, which is for us the success story of telecommunications during the two decades, so my questions is: We know there's a BEREC Opinion coming out in April and so I'm wondering if there is any thoughts that you can share with us at this moment in time, any preliminary thoughts and any particular developments that you might have on that, thank you.

Kostas Masselos: Well, indeed, the Gigabit Recommendation is very important and gigabit infrastructure as well, and they are both part of the connectivity package, also related to the exploratory regulatory consultation with respect to the future of networks. Gigabit Recommendation and gigabit infrastructure are very important because they will allow or should allow reducing civil engineering costs, and simplify administrative procedures with regard to network deployment. So it's very relevant to the discussion about investments in networks, et cetera. At this stage, we work on preparing BEREC's Opinion for Gigabit Recommendation. We need to respect the time frame of the process, so we need to be ready by mid-May latest and submit our Opinion. I'm afraid that at this stage, I can't disclose any specific conclusions or any information from the Opinion. It's not finalised yet or approved. But we will come out with our Opinion in first half of May.

Philippe Defraigne: I do not see ... please don't be shy, oh, thank you so much. Yeah, Joanna.

Yes, thank you. So I have a question about the BEREC Work Programme for 2023 24. We see more work items related to future market and technological trends and I would like to know a bit what you are looking at here and what will be the impact on the regulatory... on your work actually?

Yes ...

Kostas Masselos: Well, in our Work Programme, we look at the traditional electronic communications networks and services part, but also see the future. So, we are becoming more and more related to digital platforms and digital regulations. So our Work Programme in 23 24 needs to be balanced and cover both. So, we cannot leave out the trends that we see today. Conversion of software and networks and electronic communication and digital platforms becoming more and more dependent, so this should be in our Work Programmes. The second thing we want to do with our Work Programmes 2023 and 2024, we want to look to the world, look to the the future, identify the trends, market trends and technology trends because, otherwise, we cannot work on the efficient policy and regulatory proposals. So, that is what we did in Work Programme 23. We had 51 different projects, but 13 new projects looking at current trends and we want to address this. So for example, wholesale only operators like fibre companies, tower companies, low earth orbit satellites, migration to high-capacity networks, cloudification of networks, et cetera, and this is what we want to continue in 2024. So we need to keep up with the trends.

Philippe Defraigne: Yes, this is the final question, because our time is up. Thank you.

Just a quick question, I am (unintelligible), I'm from (unintelligible), a Portuguese law firm. So, end-users... My question is: it seems that, we have heard from the Meet & Greet sessions, that there is a concern with end-users' rights and we have seen also from the Programme that BEREC is going to focus on these issues. It seems, though, that these issues are going to be relegated for a later moment in time. Is this correct? Because we see that a lot of Member States are concerned with these issues and we are seeing regulators concerned. So when can we expect more rigorous action or some Opinion coming out on this issue from BEREC?

Tonko Obuljen: I guess we have an item in our Work Programme for 2024. But if you think that there is something else, what you can do is propose that as well. Because like I said, we are really open to suggestions. But we know that there are many aspects of the end users' rights to address. In fact, that is the reason why we have our first panel today as well. So, we will really like to hear from you.

Philippe Defraigne: And final question coming from online for one of you. It's from Spotify asking what will be the role of BEREC in the DMA. Will it focus solely on messaging services or will it have a broader role?

Kostas Masselos: Well, we have recently seen the decision for setting up the DMA High-level Group. BEREC will be there with six delegates. We expect to have the first meeting soon of this High level Group. I don't know the details of the agenda on this. Of course, the messaging interoperability issue is very important and included in our Work Programme for sure. But I think more will come on this from BEREC.

Philippe Defraigne: Oh, so it was a good question. More on this later. Tonko and Kostas, thank you very much for addressing those questions. We will now move to the next panel. Thank you. Thank you very much.

(applause)

I would now like to welcome on stage the panellist for our panel on accessibility.

Welcome. Welcome... So, I'm delighted to have here on this panel Lise Fuhr, the Director General of ETNO, that probably many of you know already. Donal Fitzpatrick, who is the Senior ICT Design Advisor at the National Disability Authority in Ireland, and Wouter Bolier, who's representing the European Disability Forum but works as a Policy Officer at Ieder(In) in the Netherlands. Thank you all three for joining us and Ramon for your help here on stage (sign language).

I'll say a few words to set the scene for this panel. In this room, you have all read the Code many times from the beginning to the end and back to the beginning. You know that these issues of users with disabilities, we were discussing it with Tonko yesterday. Provisions on users with disabilities have been in EU telecom law since the mid 90's. I see William nodding and confirming I have a good memory. And when you look at the Code it starts with Article one. When you look at the scope and the aim of the Code, the aim of this Directive is to ensure good quality, affordable services, including for those with disabilities. And then you move to the second Article, which sets the mission letter for NRAs, BEREC, the Commission, Member States, to have a high level of protection for end user's, in particular end-users with disabilities. And then, as you read through the Directive, whether it's about consultation, helplines, about information requirements, transparency, quality of measurement, there is always some provisions on users with disabilities. Next to that, there is another piece of EU law that is one year younger than the Code 2019, which is the European Accessibility Act. There is – we will discuss it with Wouter a bit later – there is a bit of overlap between the Code and the European Accessibility Act. In the sense that the EAA covers in its Code. The Act is very much about conditions for placing on the

market products and services suitable for users with disabilities, but it covers telephony services and related equipment in addition to a broader scope of services, including computers, ATM, but also smartphones and telephone equipment.

So, in terms of transposition, we will discuss a bit later. The Code, last time I checked the Member States didn't do too well, there were a couple of laggards. But otherwise everybody had transposed the Code. When it comes to the European Accessibility Act, the picture is not as nice, but we will discuss it later. Without further ado, I suggest we go to you, Lise. To take stock of what some telecom operators have done in that space, and then we will move onto Donal and Wouter.

Lise Fuhr: Thank you, and thank you for inviting ETNO to speak on this distinguished panel. And I often have the honour and privilege to speak about the promise and the potential of digital transformation, and it's extremely fascinating to see how our members are rolling out next generations' connectivity all over Europe. But it's also extremely good to see how digital technologies have played a major role in sustainability, the impact on climate change and transforming Europe into a sustainable economy. But, one thing that makes me even more proud, is that in EU and also in our member companies of ETNO, we put citizens at the forefront of what we do. So if we look at privacy, data protection and child protection, but also when it comes to providing quality services for end user's with disabilities. And, if you look at the numbers in the UN, they estimate 50% of the world's population have some sort of disability. That is almost one billion. And the European Commission estimate 87 million people in the EU have a form of disability. So of course, it's a key that we have access to the digital society also for people with disabilities. And as you were saying, there are several rules regulating this and one is the UN Convention on the Rights of Persons with Disabilities. But, I also wanted to take your attention to the global digital compact which, is now in the making which, is also important for me. Because I work on the idea of a leadership panel, and we are looking into this. This is a topic that we should have also as a priority for digital policy making.

So, if we look at you talked about the European Digital Accessibility Act – they set out a number of features and I'll go through some of them very quickly and then I'll go over to my members. But we have real time text and high fidelity audio, you have video where the resolution should be high enough so that you can enable sign language communication. You should ensure wireless coupling to hearing technologies and also, of course, capacity to avoid any interference with assistive devices. And as you were saying, you have the Codes that are coming this. So we think that it's important that you have this robust set of rules, but what is even more important is of course, how we implement it, how we innovate it. And also the technological solutions for all of this. So, there, I look forward to experts coming up with your views on how this is working. So, if I take it from the ETNO members, we are trying now to have accessibility by design as a key

principle. Which is, to me, important to me because you take it as a baseline instead of an add on to the products. So, we have some of our members who are providing tailored services for people with disabilities, such as: information in large print and Braille and accessible electronic formats. We also try to ensure that end users have the necessary digital skills to use crucial communications technology, and not only in order to have their communications and entertainment needs met, but also to be fully integrated into the job market. If I'm to bring a few examples, you have Telefonica, which offers subtitles and audio descriptions on its TV offers – that's more on the entertainment side – but we also have BT allowing to register specific needs and tailor specific offers to suggest technology and gadgets to help end users on a daily basis. With that said, I think it's great that our services are tailored to the end users' with disabilities, I also think it's important to look at the physical part, so access to stores, customer service, et cetera. We cannot have it only in our services, we also need to live it in a fully-fledged way. So let me end by saying that I know many of our members are very keen on diversity and have it high on their priority so to give people equal access to work in their companies is also high on the agenda.

Philippe Defraigne: Thank you very much, Lise. Let's move to you Donal. And before diving into the conversation on the regulatory part itself, could you tell us a few words of the misadventure that you encountered with your PowerPoint, to bring a bit of reality into this conversation?

Donal J. Fitzpatrick: Thank you very much. Indeed, It's wonderful to be here and it's great to be back here in person in such a lovely room. My goodness, the acoustics in here are wonderful!

The misadventure, or adventure we will call it, was interesting. Because as many of you – those of you who can see will realise – I have a small device on my knee, and I'm holding it up, and it's a Braille device, so I have some notes here in Braille that I'm able to read as we proceed. This is an assistive technology and my laptop is equipped with assistive technology called a screen reader, so anything that I type is spoken to me and anything that comes up to me is spoken, et cetera. And when I was discussing with the organisers the possibility of using that instead of the provided laptop in the venue, we were not sure that it was going to work, and I do want to commend the organisers for their offers to do whatever it took to get that to work. It was very much appreciated. When I made the decision not to take a chance – and my basic logic was, well, if I can't hear the PowerPoint, they are not going to do see it. So, that is what we decided to do, which was just to turn this into a conversation. Which, is really important when it comes to matters such as this. But for yourselves, at a moment, it's important to realise that when people with disabilities are included in events, that to make accommodations available to enable us to use the devices and the technologies that we need to use, as I said, the organisers here were perfectly happy to go the extra kilometre to make sure that was possible, but we chose not to trust the technology.

Philippe Defraigne: Thank you, Donal, for your testimony. Let's move into the heart of the matter, starting with the organisation, your employer, the National Disability Authority. Later we will go to Wouter, who works for an NGO, but you work for an authority and you are a regulator. Explain that to us, is it common to have a disability authority in Europe?

I have to correct. We are not a regulator. We were established following the Disability Act in Ireland and our function is to offer advice and guidance to government and other public sector organisations in respect of disability. We also fulfil the function of monitoring various aspects of the Irish Disability Act, for example, one of the requirements is that public sector organisations aim for a minimum of 3% of all employees to be persons with disabilities, and this is moving to 6% in 2024. And so we monitor that and now, we monitor the recently adopted Web Accessibility Directive. We also have the Centre for Excellence in Universal Design, which promotes the adoption of universal design. And for those of you not familiar with that particular term, universal design, we define as the design and composition of an environment such that it can be used to the greatest extent possible by everybody irrespective of age, size, ability or disability. It very much ties in with what we are talking about here today. In the context of communications, universally designed and universally available communications really does make the window on the world very wide open for people with disabilities and we will get onto some more of that in a few moments.

Philippe Defraigne: Thank you, Donal. You are not a regulator but you issue some soft regulation, let's settle with that. A question which I would really like to discuss with you: Ireland is a telecom operator like any other country and a home to many large ICT companies. What can you say about the dialogue that your organisation is having with let's put it the ICT slash telecom community? Is this a very structured dialogue where you meet every month and go through the outstanding problems or do you meet at the invitation of the Irish government? How does it take place? Maybe you meet in Brussels?

We love meeting in Brussels, it's a lovely city. We tend to engage with people like the Irish Communications Regulator, COMREG, and as I said, our remit is very much through public sector organisations. I think the question of structured dialogue is really, really interesting. Universal design promotes and is based on several principles, one of which is equity of use. So, it's really important from the perspective of an NGO working with disability, that equity of use is built into everything that is done in the communications space. That guarantees, for example, I was struck last night as I was walking through Brussels, by the fact that, you know, changes in regulation: as I landed in the plane, I got a text from my home provider saying you can use your data allowance as you would if you were at home. And this is wonderful because, for persons with disabilities, a lot of technology that we use, mainstream technology for sure let's give you a hypothetical: I can't look at street signs as a blind person, so when I want to navigate from

point A to B, I use one of the navigation apps on the phone produced by one of the major providers, you all know who they are. That relies on data, and before this happened, you were thinking I can only use this navigation app for a certain length of time, for short journeys. What is it going to cost me if I go over my data allowance? There is a freedom now where one can actually do this and- really engage. You can use video communications if you need to ring somebody and say "Can you see where I am?" I have also done this. But to facilitate this, it requires a lot of dialogue to make sure that that equity of use carries on and continues into the future. We are talking about the future here. I should explain that I have only recently, in the last year and a half, joined the Centre for Excellence in Universal Design, so I'm not as aware of structured dialogue or a form of structured dialogue. I do know that in some of the standards bodies, CEN/CENELEC et cetera, and the preparation of standards, for example EN 301549 comes to mind, there is conversation between some of the people with disabilities around that and some of the major companies, et cetera. But, I think with the arrival of European Accessibility Act, which has been referenced several times, we have a situation where, that – as we are going to find out – creates a very accessible market for products and services. And to ensure that equity of use is going to require significant consultation and dialogue in very formal, semi-formal and indeed informal settings. And I'll just qualify a reference to the UNCRPD, the Convention on the Rights of Persons with Disabilities, that the previous speaker made, which very much mandates the consultation with and inclusion of people with disabilities from the earliest opportunity possible in the design of products and services and so that dialogue is very, very important and will become even more so as new legislation promulgates over the next number of years.

Philippe Defraigne: Thank you. Before moving forward, Donal, as a blind person, if you had a magic wand and you could make any of the existing technologies – I'm not talking about science fiction, I'm talking about stuff that exists in labs and so on – and you would want to make it available for the blind community, what would it be?

Donal Fitzpatrick: Thank you for that one! Well, the technology has really moved on over the last number of years. I mean, we don't always want to talk back to the COVID time, when we were all in lockdowns and everything else, but that really has jumped things forward: video communication platforms are now very much in evidence, we are using one for online participants today. For me, what is very important is that the technology is – I'll give you four words: perceivable, operable, useable and robust. And they very much follow the principles. You see them regularly in the web content accessibility guidelines. So whatever happens, those four words have to be at the forefront. Perceivable, operable, useable and robust. So that if the latest technology comes down, possibly powered by artificial intelligence, that those four words are the guiding principles that enable everybody, including persons with disabilities, to actually use it.

Philippe Defraigne: Let's move to you, Wouter. But with you we have agreed to ask you a question, so please take your phone, reach out for your phone. The Slido is hopefully still working, otherwise you rescan your badge. Can you see the question? The question is simple. In my short words of introduction, I alluded to two legislations: the Code and the European Accessibility Act – both somewhat overlapping. Wouter is qualified to answer that in a minute. So the question with Wouter that we are asking you is: do you think that community of persons with disabilities is better served by two legislations somewhat overlapping or, would we live in a better world if we had a single legislation addressing, in a holistic way, all of the problems to address the needs of the community of persons with disabilities. I'm talking and I see the results are already there...

So Wouter, do you want to comment? What do we see there on the graph? Who is winning?

Wouter Bolier: It's very interesting to see that "provisions gathered in a single Act" have about 67% and "provisions in both the EEC and the European Accessibility Act" 33%. So it's one third against two thirds...

Philippe Defraigne: Now you are going to explain why they are wrong.

Wouter Bolier: I understand this number. It's not necessarily wrong, I can understand it. The way that I see it, the Accessibility Act and the Electronic Communications Code don't necessarily overlap each other, but complement each other. So the Accessibility Act focuses on accessibility of products and services, and the Electronic Communications Code focuses on the network infrastructure and universal services and the accessibility of the emergency number 112. And together, combined they say that along the whole telecommunications chain, everyone there has a responsibility for accessibility. So for example, the manufacturers of smartphones, to meet the accessibility requirements of the Accessibility Act, they need to be able to run, for instance, real time text and total conversation. It was already mentioned by Lise. These are two interoperable international standards and the smartphone has to be able to run it, and the services need to carry it. And the infrastructure, the network infrastructure, has to be able to support it. And so combined, it's the whole telecommunication chain. Everyone in this chain has to do their part in accessibility, and that is why we believe they are both stronger together.

Philippe Defraigne: Thank you, Wouter. Perhaps that will change some people's mind by now, we will take another vote to see whether Wouter's plea was successful. So Wouter, talking about the European Accessibility Act... I said in my introduction that on the code, Members say that they have done a good job on implementing, but when you look at the Accessibility Act, the picture is less perfect. Can you give us an idea of where things stand? This is an Act from 2018, which should have been transposed by last summer.

Wouter Bolier: Well, there are several Member States that haven't finished the transposition of the Act yet. In Netherlands, we are not ready yet. We should have been ready a year ago in June 2022. We are now in the end of the legislation process, so the proposals to implement and transpose the Accessibility Act in Dutch legislation will be discussed in the House of Representatives in May this year, and then the General Auditing Councils will follow soon after that, and then probably in summer, the Senate will have a final decision about it. So, we are facing, let's say well, after summer, later this year, that we will be ready with the transposition. And that is just an example from the Netherlands, there are several Member States that are not ready yet. So, the deadline of 2025 still stands strong. So the Member States that are not finished yet have to hurry up.

Philippe Defraigne: So 2022 was the deadline for transposition into law, and 2025 is the deadline for actually putting into application those rules. And do we have some visibility already on what the pictures look like for what really matters at the end, which is the practical implementation of the rules?

Wouter Bolier: Well, Lise was telling what ETNA members are doing and I think they are very good points you mentioned. But what I miss, however, is the mention of what you are doing to make the networks ready to carry for instance, real time text and total conversation. These are two accessibility requirements from the Accessibility Act and the Electronic Communications Code. And so the network infrastructure has to be ready by 2025 as well. It is not only the services, but the network infrastructure too. That was my question to Lise: are you working on that already? Because it has to be there in 2025. So if you have not started yet, you should start now.

Philippe Defraigne: There is, in the long list of articles in the Code touching about users with disabilities, there is one that you told me is particularly important, Article 85 on real time text, or to use the vocabulary of the Code, it's the "total conversation services". And when you read the Article, it's pretty... it is subsidiary pushed to the extreme. If national circumstances allow – as if human beings were different from one country to another... Anyway, what do you think of this Article on total conversation services and can we really progress there?

Wouter Bolier: It's all in the legislation, so it has to be done, but for instance, for the emergency number 112 in Europe, we have agreed that it should be accessible for everyone. So a deaf person needs to be able to contact 112 emergency services in sign language and to do so, you would need a standard like total conversation. Or a person who cannot speak, because they have a speech impairment or because you are in a situation where you are under a terrorist attack and you have to contact emergency services quietly, you would want to use text communication and that is real-time text. And so the emergency number 112 needs to be accessible with total conversation and real time text for everyone, and it also could be beneficial for you when you are

in a situation where you have to contact 112 quietly. The way that it's going, well it depends on what country, what Member State you are asking, but for instance in the Netherlands, we have a 112 app since last year and it supports real time text. We are very happy with that. Also, mobile applications for 112 we consider as an interim solution for accessible 112, but what we want is that total conversation, real time text becomes the mainstream way of contacting 112, just like we use for instance, voice telephony.

Lise Fuhr: Just on my side because you asked if my members were ready.

The true answer is, I have no overview, but I got inspired to do a small survey on this internally, so we will look into how ready we are for this. I also get very inspired by Donal saying universal design instead of accessibility by design. I actually think that it should be universal and I think, this is the baseline I get from this conversation: whenever we deliver services, we should do it as universal as possible for everyone. And so, it's not only a disability and ability, but also ageing and other things. And I know that we are working on many of these things but, it's interesting to get feedback.

Philippe Defraigne: Donal, on this crucial issue of access to 112, what does the picture look like in Ireland.

Donal J. Fitzpatrick: The picture in Ireland is again very similar to the rest of Europe, in the sense that we are working on transposition activities across the board. 112 at the moment is, to the best of my knowledge, I don't think we have text-based services but we are working closely with government colleagues to ensure, as close to 2025 as possible, that these things are available.

Wouter Bolier: I'm very happy with your suggestion to ask the members if they are ready or not. It might be of interest for all of you that in the United States, they are already there with what concerns real time text, so the devices, android or iPhone, that are delivered on the market in the United States are already ready for real time text, it's built into the smartphones and also the network and infrastructure already support it. So in the United States, you can contact 911 with real time text, (the 112 of United States). So we are behind them and we have to hurry up to catch up with the Americans to get with total conversation too. But it's interesting to have a talk with the FCC, the Federal Communication Commission in the United States, to see how they are doing that work.

Philippe Defraigne: Yes. That is an interesting point. So on the latest iPhone, you said?

Wouter Bolier: Yeah, in 2019...

Philippe Defraigne: So, the person wishing to contact emergency can do it...

Wouter Bolier: Yep, with real time text since 2019.

Philippe Defraigne: And what – I'm , I'm going to display my full ignorance – what does it require at network level?

Wouter Bolier: I'm not a technical person, I'm a policy officer, but the networks should be ready and they are supported by the Americans so we should ask them.

Philippe Defraigne: We should be able do it. No doubt about that.

Lise Fuhr: Well, on the 911 and the 112, it's also a matter of if the emergency services are able to receive it. It's a two parts that need to talk. On the real time text and the networks, that is a different thing, but exactly the 112 has little hook too it that it needs to be received on the other end.

Philippe Defraigne: Yes, at the level of the calling centres receiving the calls. It's not the Telcos is what you are saying, Lise.

Lise Fuhr: No, I'm saying it's one with many parts that need to work together, because a lot of 112 calls have a service where they can see where you are, so it's a location service that needs to work together with this.

Philippe Defraigne: I'm looking at the room to see if there are people who want to pitch in with a compliment of information, if you are an expert on this matter, or has naive questions like mine... Don't see anyone... And Wouter, on this question that we discussed with Lise and Donal already, for the Netherlands, is there a structured debate between leder(in), your organisation and other similar organisation representing users with disabilities and the ICT players? Telecom operators and other members of the ICT sector.

Wouter Bolier: We just started some informal talks with one of the regular telecom companies in the Netherlands and they are aware of the deadlines and accessibility requirements of the Accessibility Act. They are thinking about how to implement this together with other telecom companies in the Netherlands, but these are the informal first talks we had just recently, not on a formal level. But I would like to invite ETNO on behalf of the European Disability Forum, to have a chat, as well for my colleagues from EDF, with you on how we can work together on this matter. Because we have to work on this together. We all have the same goal to make the telecommunications and 112 accessible. So that is my invitation to you.

Lise Fuhr: And I'll accept it, thank you.

Philippe Defraigne: Donal was alluding earlier to the importance of bringing users with disabilities in early in the design of products and services. Irrespective of this 112 issue, in the Netherlands as far you know is there some sort of a structured dialogue, a forum, places where you guys talk to each other or is it more on a haphazard basis?

Wouter Bolier: We have structural meetings with the Ministry of Economic Affairs. We are in good contact. The transposition of the Accessibility Act has to be finished first before we can really talk about implementation of it. We are preparing for that with the coordinating Ministry of Healthcare. We are in talks with the government for the implementation part. But we are not that far because we have to wait until it is finished for the legislation part. And then, we are ready to talk and we know each other and can find each other and we have good contacts, so I trust that in the Netherlands this will happen. Not sure in other Member States, but in Netherlands we are ready for that, to meet with everyone involved, including the telecom companies.

Philippe Defraigne: Changing completely the conversation now, and looking at the business side. You know, you guys are also an attractive market, I realise. I was reading some information published by the European Commission on the European Accessibility Act and addressing a market of 18 million customers. This is roughly the population of the Netherlands. So that is quite a nice number. Do you believe there is enough awareness in the ICT business community? That there is the equivalent of a medium-sized European country to be conquered there or not?

Wouter Bolier: Well, it is improving. The awareness is improving. And that is mainly because of legislature that is already here. So we have the Accessibility Directive, for instance, for accessibility of websites and apps, and the new Accessibility Act that is coming in 2025. What I see happening here, but also in the Netherlands, is that companies, bigger and smaller ones, are getting aware of "Oh! The deadline is coming, we have to be prepared. What does that mean for our production lines? What does it mean for the way we operate and conduct business?" So, I see that it's growing. I'm not sure if everyone is ready on time, but, I see that it's very much growing rapidly since we are getting very close to the deadline. In the Netherlands, the Ministry of Economic Affairs also will do something of information tool for the companies, the big ones and smaller ones, to inform them what the accessibility requirements will be for them. And there will also be something of a portal or a website where businesses can check, okay this is my kind of product or service – what kind of accessibility requirements do I have to abide by? And that is what we are working on right now as we speak, or the government is working on.

Philippe Defraigne: Thank you, Wouter. Donal, on this question, is business sufficiently aware of the business opportunity, I guess?

Donal J. Fitzpatrick: I think it's an interesting one because for many years in the US, things like the Americans with Disability Acts which mandates that anything used in the Federal context has to be accessible, has played a huge part in things like procurement. I think procurement is going to play a really important part going forward on all of this. Because of the fact that our technology, large-scale technology manufacturers, come from that and there is an awareness there of the needs – both from a business sense and from a large-scale procurement factor – but equally then, I think we have seen it... Mainstreaming of disability is happening. It would be very interesting – and we should possibly have done this – to see how many people in this room have smart home devices, smart speakers, how many people use voice recognition or other forms of technology which, started off as assistive technologies for persons with disabilities. So I think there is an awareness of the fact that designing from the start of the process to include persons with disabilities will bring a business case and business bonus. I'm not sure that it's there yet in smaller enterprises. I think that is where we need to focus our effort, to highlight the benefits and the increased market that is available to persons and businesses if they engage with and ensure that their products are actually accessible.

Philippe Defraigne: Thank you Donal. Lise?

Lise Fuhr: Well, on the business case, we sometimes have an issue with that: the problem might be global, but the solution is local. And when it comes to networks, every Member State has their own specificities, et cetera, and of course there are global standards. But if we can have some standards on much of this, I think it would be perfect. Because that is what we need to actually unfold it in the European Union.

Philippe Defraigne: We perhaps have time for one question... No volunteer? Then I was thinking, Wouter, I could perhaps put you on the spot as I did unfairly with Donal earlier, and ask if he had a magic wand to make available something that already exists in the labs or small industry or production, as a representative of the deaf and hard of hearing community, what would you say?

Wouter Bolier: Well, yeah, it's quite simple. To make it personal, I'm a father of two deaf children and I want them to be able to contact 112 24/7 in sign language, and that is not possible yet, for instance in the Netherlands, we have sign relay service that is only open between 7:00 a.m. and 8:00 p.m, so deaf people in the Netherlands, please plan your emergencies during the day. But that is my dream. If I can see the 112 number accessible in sign language, and not only in the Netherlands, but in all Member States, that would be very nice.

Philippe Defraigne: Yeah, thank you Wouter, that is a very good one. On this, I would like to thank our panellists.

(applause)

Philippe Defraigne: And now for something completely different. The Data Act. I would like to invite on stage Yvo Volman and Annemarie Sipkes. These people hardly need an introduction. Annemarie used to be BEREC Chair last two years ago...

Annemarie Sipkes: Last year!

Philippe Defraigne: Last year? Yeah, that is because of these Stakeholder Forum, where you organised it the year before you were Chair. And you, Yvo, have been forever one of the pioneers fighting for this initiative on data sharing. When was it that you started? A very long time ago. So it's wonderful for you to see that after a long carrier pushing for that, you now have this piece of legislation. And congratulations to BEREC, because – Tonko you said the date. What was it, six months ago? And BAM, we've got a common position from the Council last Friday and Pilar was two weeks ago, so BEREC they have got something. So you all know... so why don't we, because I'm sure there will be plenty of questions on that one, so let's not lose time on a long introduction and give you the floor, Yvo, for whatever you want to share on your beautiful baby at this stage? It's on the fast track for adoption, it looks.

Yvo Volman: Thank you for sure, I'm happy to be in this relatively Dutch panel. Now, data. Yes, we have been working on this for a long time, but now it's really high on the political agenda. You cannot look at European Council conclusions like last week, for example. I mean, our data is there. And there is a good reason for that. Data will help us to live longer and healthier lives, get around town more easily, it will help us to save energy, and of course, it is massively important for our economy.

For new services, for the coming decades, new services and products, a lot of them will be based on data. Now, that is why we have the European Data Strategy. We came with that in 2020. Very strongly advocated by our Commissioner, Thierry Breton, and this data strategy is about ensuring that Europe is benefiting from the data that we generate. Right? Now there is a vision behind the strategy – actually there are four important things. We would like data to actually flow across Member States, across borders and sectors also. And secondly, we want ample of data to be available for use. Thirdly, data use should be done in line with European values and legislation, not in the least privacy legislation. And fourth, we would like there to be clear rules on who can access and use data.

Now, we are talking about legislation today, but what we do in the strategy, actually, is divisive plan. A plan for legislation but also for implementation. And the two go hand in hand. It's important to see that what we do with our programmes and what we do in terms of building a common European data space, it goes together with the legislation. Now, these common European data spaces, just one word about that. What are they? Well, actually, they are areas for

data sharing that are organised around specific sectors of high interest. It can be public sector ideas or private sector areas. Okay, the legislative agenda.

We have got the Data Governance Act in place, it was the first big act on data from the strategy. That is about trust and voluntary data sharing. That one is finalised and it will be applicable from September onwards. Then, open government data. That has been a long story and I started a long time ago working on that. So last year, perhaps some of you missed that in December 2022, we adopted an implementing act on on high-value data sets, and it's the most valuable data that public sector bodies produce and all that will be freely available for use by economic operators or NGOs and it will be available very easily. So, have a look at that if you have not noticed that one. The high value data sets.

Now, just a word on the Digital Markets Act. It's not strictly about data, it's about market power, it's about market power of gatekeepers. But of course, data plays a very important role in this market power and that is why there are aspects related to data in the Digital Markets Act. And now, I come to the Data Act. What is the Data Act basically about? It's about fairness. Fairness of who gets the value of data. The problem is that everyone would like to get the full value of the data. But if you don't find some kind of distribution, no one is going to get the value. And that is the problem that we are trying to solve.

Philippe Defraigne: You are familiar with the business of sharing the value recently ... sorry

Yvo Volman: You are right, but I do not want to go there. So the big blocks of the Data Act. IoT data. The principle that if you buy an object that generates data, and you cogenerate data, that you also get some of the value. My object, my data. At the same time, making sure that investments in data technologies and in data, done by, for example, manufacturers, are rewarded – that's the balance that we try to find on IoT data.

Philippe Defraigne: May I stop you there for one second?

Yvo Volman: Yes.

Philippe Defraigne: In your original proposal, you try to say data on this device included, on the other device excluded.... I remember a few days after you showed your proposal, I bumped into a friend who works for a car manufacturer, who said "Philippe, cars are excluded, we're not an IoT." Whatever, I'm not going to drag you into whether cars are included or not, but would you say that the co-legislators attempts to change the perspective are helping for that, for my friend working for Volvo in this case? Do you know if he is caught or not?

Yvo Volman: Let's be perfectly clear: cars are fully covered in the Data Act.

What you see in the text both by the Council and the Parliament, certain things are broadened. What? Well actually, in the original Commission proposal, mobile phones, iPads were out. In the Council text, they are in. Although content that goes into these devices are out, so actually, it's a bit broader. In the Parliament text, the related services, the context has been broadened, so actually, Parliament and Council go further than what the Commission put on the table which, is not always the case.

Philippe Defraigne: Thank you, very much Yvo, sorry.

Yvo Volman: It's fine, we had the discussion already. So then, there is a chapter tackling unfair contractual clauses for situations where, in relation to data sharing, SMEs get clauses imposed on them that are not fair, and also there you see that both Parliament and Council go beyond what the Commission put on the table and it's not only SMEs at the short end of this equation where the Data Act would kick in, but also in relations between larger companies where these manifestly unfair clauses would be banned. And then something that has, well, got some emotions going in the telecoms community is the business-to-government sharing. We talked about open data, open government data, and the principle that these things have been paid for by the public purse, so should be openly available. This is the other way around. For example in emergency situations like COVID. Can there be situations where governments can ask, for example, telecom communications operators to give certain data? Of course, we are talking about fully aggregated, mostly anonymised data here. And the reply of the Data Act is "yes". There can be situations. Now, there, we see how important this kind of data is. We have seen that in the context of the COVID crisis. We also see that the co-legislators are relatively cautious. They go a bit narrower than what we put in the proposal. Okay then of course, there is a whole a chapter on measures that make it easier to switch between cloud providers.

Philippe Defraigne: Of great interest to this audience.

Yvo Volman: Yes, and it's not my specialty so let's see if I have all the replies there at hand. And then, last but not least, there is a series of provisions that make interoperability of data easier through standardisation. But also, it introduces interoperability of smart contracts. Smart contracts are going to be one of the means to implement these data spaces. So where do we stand in the process? Well, you said already it's a very good moment to talk about it. The European Parliament voted its report on the 14th of March. Council adopted this position last Friday. And yesterday, we had the first trilogue bringing the three Institutions together.

Philippe Defraigne: Wasting no time.

Yvo Volman: No, we can't waste any time and there is many technical meetings planned in view of the coming trilogues. As Commission, we will play our role as honest broker. But we see that

there is conversions on the big themes. Normally when the Commission makes a proposal, you lose bits and pieces here and there and that is not the case on the Data Act. So all of the big blocks have been endorsed. There will be changes and technical discussions and we are going to help European Parliament and Council to come to a very solid and clear text. Because there were some criticisms, well some definitions were not clear, and in the Commission proposal a lot of work has been done, both in the context of the Council and also the Parliament has done a lot of work, but we will make sure that does not end up in a fudge, that we have very clear definitions. There will also be some fine tuning in this balance that I mentioned earlier on, between data access on the one hand and actually, well, ensuring that investments in data technology pay off. And there is fear about trade secrets. What happens if too much data goes out, can it lead to the erosion of trade secrets? And I think that's going to be an interesting part of the discussion. I think also, the exact scope of business-to-government data sharing will be an interesting point of discussion. And yeah, that is a chapter where I heard concerns from the Telcos at the earlier stages. The Cloud chapters will no doubt lead to very technical discussions but still, also there, the co legislators go in the same direction.

Philippe Defraigne: On the Cloud chapter – I'm an economist, so this is very hard for me to understand – so I talked to our ITT, trying to make sense, you know. I'll not reveal on which Cloud we are. But I said, "what if we moved to another one? What would it entail?" And what I grasped, is that it's easy. We can move from this one to that one. It's easy even for database that has been standardised for decades. And then he talked about something about a lot of Java developments by us, where then, we would lose a lot. So I didn't fully grasp the whole explanation, but what I grasped from it is that the switching for an organisation from one Cloud provider to another – I'm talking essentially about data processing and storage infrastructure, so pretty straightforward – it's very easy for some applications for companies, and extremely complex for others. And in your text, do you do justice to this diversity of dialogue, or of situations, of cases? Or not? Or is it like one single solution covering different realities?

Yvo Volman: No, there are differences. Infrastructure as a service is treated differently from software as a service, for example. And the distinctions are being further refined in the Council and Parliament. But, the problem, the basic problem, is not so much the technical issues. The basic problem is switching from one provider to another has been made very difficult because you get penalty clauses. There is small print that makes it very difficult. So, obviously there is an interest by providers in not having people switch, and we want to stop that. Now, in the free flow of data Regulation, there was room for a code of conduct. Yes. It didn't work out as we had expected. So, that was really too vague and that is why we decided, in the Data Act, to move towards legislation. Let me make one important point on implementation of the Data Act. Because we want this to be an instrument that works on the ground. And in the Data Act, there is a number of supervision tasks that are assigned to "competent authorities". As in many cases,

we leave it to the Member States to choose which competent authorities are going to be in charge, because the different structures in Member States can be different. What are these tasks? Well, it's about handling complaints and conducting investigations, imposing penalties, that kind of issues, monitoring developments. So, this can build on existing bodies and structures. Of course, we are going to respect the competencies of the data protection authorities and also of sectoral authorities over certain data. For the Cloud switching, in the Commission proposal, we talk about authorities with expertise in the field of data and electronic communications services.

And would anyone in the room recognise that kind of competence? Okay so, I think we have a natural candidate for...

Philippe Defraigne: The text also, for other chapters of your baby, is referring to an authority with expertise and dispute resolution, and in setting prices. Anyone in the room?

Yvo Volman: So apart from jokes, telecoms regulators could be a very good candidate for one or more of the tasks assigned in the Data Act. And of course, you should never sell the skin until you've caught the bear, the Data Act is not there. And I think now it's time to start thinking and have an in depth reflection on this last point.

Philippe Defraigne: What a great transition to hand over to Annemarie. It really is, I mean, Yvo is downplaying it, but it seems that BEREC members have more work sent their way – certainly by the Council text. Which, as I just said, it's not just the chapter on Cloud switching, but also the chapter on data sharing and business-to-government data. Which, potentially, could be...

Yvo Volman: Sorry, on the Parliament text they have actually taken out this competence on the Cloud. But in a way, they create a new figure of a super-competent authority that would be responsible for all of it, or at least would coordinate it. Let's see how that works out.

Philippe Defraigne: Over to you, Annemarie. Are you celebrating at BEREC?

Annemarie Sipkes: Well, the first thing is, I am celebrating the Data Act. When we think of data and regulation, for too long we only thought about privacy, and privacy is very important and a fundamental right, but one of the key issues of the Data Act is recognising that data is of economic value. That is one. So, it can be of economic value if it's put to use. If it's put to good use. That is something that resonates to me, coming from market regulation. The second is the very conscious choice to want to create a market. A proper functioning market that has both incentives for production, for storage and for maintenance of data, their integrity and also, enough incentives for innovation and make it a contestable market. And here, I think that most of us will start recognising that image of a working market being good for production, rewarding the initial producer, making a contestable market, using competition to make sure that you have

innovation and protecting end-user rights. Familiar anyone? And this is a market which, it's the third part that is really important in the Data Act, is that it's actually really forward looking. Because we do not have that data market at the moment. We have glimpses, we know where to look, I mean if UVO starts talking to you about I'm not in or I am in, I mean, there is things going on here and this is really timely in creating it. So, looking as a telecom regulator and also from an ACM perspective having studied the Cloud, it resonates. The desire and actually the need to create a European open data market. So you need the proper regulation. And you need proper conditions to get that working. And I think some of the things, as you said, are things that we are familiar with, and that we will be studying this year and next year. The first is reasonable compensation. What compensation to choose to make sure that the initial producers of the data get a proper reward for their work and they get a proper margin. That is no problem. But any access seekers, add ons, new firms should be able to innovate on that data and compete with the original producer. Sounds familiar, right? Because we know with data, and especially Cloud analysis, economies of scope and scale, they are valuable. We don't want to throw them away, but we also want the force of new entrants and of innovation and you have to create the sense of openness. Again, familiar territory. So you have to get your (unintelligible), and that is very difficult. So on who is competent, I don't think we have done this as regulators or that anyone has ever done this before, but the balance is very familiar. The other one, you did mention it, is dispute resolution. These things are not dealt with because you settled it in the law. You have to work it and people will disagree, parties will disagree and that's all part of the game. You have dispute resolutions and we, I think, have a long standing tradition of being a settlement body for these disputes and one of the things that the Data Act misses so far, is that if we come to a decision on dispute resolution, it should be transparent. And everybody should be made aware, to make sure that you create a body of knowledge on how and when these dilemmas occur, how this is solved to make sure that this is consistently implemented and ruled upon throughout the whole European Union. Other two things are switching, portability, switching from one to another, but also interoperability. What if you want to have all of your information in one system and you do not want to leave your Cloud, but there is one application from someone else, from another cloud provider, and that wants to work with you: do you have to you move all your data away? Your IT guys will be very unhappy, but you also want this special app to be able to interact. And for that, you need interoperability. And I think that chapter has been added on, very late in the process, and we're very happy about that.

Philippe Defraigne: You mentioned interoperability and – old man story – in the very first Telecom Directive in 1990, there was a big fight on the French – Emmanuel – who brought Interoperability as an essential requirement. And there is this question of interoperability. Interoperability sounds good. We all want it. But the price to pay for interoperability is that we agree on a common standard. Otherwise we cannot be interoperable. And so if we impose a common standard for the sake of interoperability, which bring its own benefits, it means that

somewhere we surrender some innovation. Because you cannot come up with something completely different. Better perhaps. So how do we see – again , I'm asking this, in this field, but it's of course, a broader debate – how do you strike this balance between delivering interoperability, which brings the possibility of switching, portability and so on, and constrained innovation?

Annemarie Sipkes: "Interoperability" is a very nice word and has a good ring to it. But in IT it can mean so many things and so many layers, and I think that the paper issued by BEREC two years ago on interoperability was very helpful in that respect. And you can have standardisation, which at SQL example is pretty much developed. But sometimes it's on the service level, OTT, much higher up in the stack, and then it makes more sense to do it via API, for example, or upon a reasonable request. So there's all of these different takes and this is something that all of us, if you want to put the Data Act to work, this is what you have to get your head around and understand. Do you have everything open and just put it out there? But then the incentives to produce and keep will disappear. Do you open it selectively? And what about non discrimination? These are all the difficult questions that come...

Philippe Defraigne: So, if I may? In telecom, if you need standards, in mobile you go 3GPP, and then it goes through ETSI in Europe and then the Commission adopts some technical regulation based on that. What would be the normal path in that space?

Yvo Volman: Different elements to what you asked. So, how can we make sure that innovation is still there? So, that is why we have to combine the practical experience of the data spaces with the legislative route of the standardisation. And the normal route is the standardisation bodies. But, for the Clouds, there is an alternative route that is foreseen in the Data Act, which is industry driven. Right? And what comes out of that can then be endorsed by the Commission, and published in the Official Journal and actually, that can bring the standardisation forward.

Philippe Defraigne: Thank you. Are there any questions in the room? While you think of a question, Annemarie and I, we decided to ask you a question. Pick up your phone. It's going to be fun. I promise. Pick up your phone. You see the question appearing? It's easy: yes, no.

Quentin, is the question been launched? Okay, excellent. No, that is not this one. That is an equally interesting one. Wow. It's catching up now, it's catching up.

Unravelling under your eyes. George, what did you vote? "Yes"! You are a believer, I like that.

Yvo Volman: I would like to hear a "No" and why they voted "No".

Philippe Defraigne: Yes, who voted no? Yves? Yves from T-REGS.

Yves: Yep, I voted no.

Yvo Volman: And why?

Yves: I voted no because the receiving, the customer connecting the new operator, the receiving party of a portability had been shown as a good practice in a few Member States and took 15 plus years to be introduced in all of the Member States. So, I think the regulatory community was rather slow in achieving number portability that was working good and well for the consumer without administrative obstacles. And also the one-day number portability took a bit of time before we got there, and so this was after I spent two hundred meetings to try to get the initial portability to work, et cetera. So learn the lesson, to be very clear. Learn the lesson, but also reflect on how painful and slow this has been.

Philippe Defraigne: It's a fair critique. But that's the past. The organisers are telling me that we should probably bring this session to a close. Any final questions yes? Mr. Sickinger.

Audience Member: Thank you. A bit of a Dutch debate, yeah. It's more of a remark, a call to Yvo. As we all know, there are still some, lots, of uncertainties and unclarities in the present Data Act with regards to the scope of trade secrets, functional equivalents, as well as the complicating factor that for each chapter of the Data Act, a different set of data is applicable. And also the distinction between data generated by the user or product would be very helpful to, in some extent, to have more examples. And I know that the Commission is reluctant to introduce examples, but that would be very helpful. And I encourage you to bring these elements in the trilogue to create as much clarity as possible for the industry. Second point, then we come to supervision. Contrary to the DMA and the DSA, there is no role for the Commission itself. The role will be with the national regulators. But there is always a risk of scattered implementation. There is, I think there is, the challenge for the Commission to come up with strong secondary legislation, and there are many implementing acts and hooks for you to do that. You already mentioned interoperability.

So, once you come up with the implementation acts, I would call upon you to make it as transparent as possible and where possible, to involve the industry to create a maximum basis for a harmonised approach across the EU, thank you.

Yvo Volman: Very quick answer on the second point. We will set up under the Data Governance Act the Data Innovation Board. It will also get a role most probably under the Data Act and it will look after avoiding that there is actually a scattered implementation. And I could talk for hours on the other point...

Philippe Defraigne: But you do it during the 20 minute coffee break that is starting now. Please join me in thanking our panellists. So be back here at 4:20 p.m. for the panel on the Future of Regulation.

(20-minute break)

Returning at 4:30 p.m. CET

Philippe Defraigne: Welcome back. There will be time to speak at the cocktail, please take a seat. Thank you. Thank you very much. Thank you. Thank you. Thank you very much, welcome back. It was great so far. What do you think? We are going to continue. So this is the final leg of our great day. In a minute, a panel on The Future of Regulation. But before, I would like to welcome Renate Nikolay, who is Deputy Director General at DG CNECT. She is a relatively newcomer in telecom but a veteran of Brussels with a very impressive CV and career at the Commission. Renate, the floor is yours.

(applause)

Renate Nikolay: Thank you very much, ladies and gentlemen. I think I'm keeping you from a cocktail, this is not a good place to be in. I only want to set the stage for what is hopefully going to be a very animated panel discussion later on. And in order to discuss the future of digital regulation, I want to give you a little bit of my philosophy and the Commission's philosophy on how we are regulating the information space. Because the truth is that Europe is setting the stage on regulating the information space. We have said that this is a digital decade, that we need to fully use for the benefits of our businesses and for our innovation in Europe. We had the European Council last week underlining the importance of the digital transition, and we are doing this in our European way, which is putting the human being at the centre of it. This is what we have already started, when I look at the regulation of the digital space, with the data protection reform in the last couple of years, to make it innovation friendly, future proof and modern. And it has set a trend for the world. More than a hundred countries in the world are modernising their privacy laws and in doing so, they take reference from the GDPR, from our data protection rules. This is an important Brussels effect that we shouldn't ignore when setting the stage on a regulatory framework for the information space. In a situation where, in the geopolitics of today, we are dealing with systemic rivalry. And I'm saying this today, when the President has given an important speech on China. But we have built on these modern privacy rules in this mandate by moving forward and what we have done – and I want to underline this in particular to this audience – is we brought fairness into the platform economy. With the Digital

Services Act and Digital Markets Act we have really, for another time, set a standard here. They will end the “Wild West” which led to problems such as online radicalisation, online hatred, locked in walled garden structures and disinformation spreading without any limits. The Digital Services Act will be a boost to shake up the current business models, and how you monetise data in advertising structures, how you build non-transparent, opaque algorithmic systems, and how you leave illegal content on the platform. It will also improve the rights of the users by giving clear access to timely information on the actions taken, by giving access to internal and out of court dispute resolution systems. And for the very large online platforms which frankly have become the public spaces of today, we are giving even higher duties and responsibilities. With risk assessments, regular auditing to look at systemic risks for society and the fundamental rights in our society. These obligations for the very large online platforms will be enforced by the Commission. And we are working on that. And it will be also subject to, of course, public scrutiny, with many broadly available reports and access to data for data researchers. So really a new chapter on the platform economy. We don't want to create ministries of truth or harm the openness of the internet but we want a system of checks and balances that lifts up more to democratic oversight and respect for fundamental rights. And with the Digital Markets Act, we put back fairness in the system where today, in many instances, in operating systems we see monopolistic structures. We prohibit certain kinds of unfair practices for large gatekeepers that have proven harmful. This digital rulebook shows EU as a rule maker not as a rule taker. And I think we can be proud of that. But it's good to make rules, but we also have to show that they actually have an impact on the ground. So effective enforcement of these rules will be an important challenge for all of us. And I'm saying all of us because the Commission is in the lead for the very large online platforms, but of course, some of the telecom authorities here will become the digital service coordinators nationally, so it will be your task to help us to enforce these as well. That would not complete the information space rulebook. We also need the untapped potential of the data economy. And this is why we have, in our data strategy, clearly said the next generation of data, generated by IoT and by the technological disruptive kind of situation that we observe in businesses and in our economies, we want to untap that potential of the data in the EU and benefit from it. For innovation, for start ups, for SMEs and for having champions in the EU. At the moment our analysis has shown – and you have just discussed the Data Act – that 80% of the data is not used in the EU. With the Data Governance Act, we are going to change that. This is probably the most important piece in that set to really kind of pave the way for the future. Because it will apply to all sectors. Of course, we have to get the balance right between bringing the user the control of the data, so that she can share it, and invite innovation but also respect trade secrets. But I am sure we are getting this done under the Swedish Presidency in the next three months. But to complete the picture of this kind of information space to be regulated, telecoms have to come into play and have to be on the radar. Because what we need for all of that is modern connectivity, because what we are seeing

already is that the real world and virtual world are converging on the basis of simulation models and 3D models. We see it in many sectors: medicine, manufacturing, Smart Cities, to name just a few. But of course, with the real transition ahead of us, the web 4.0, we will have everything seamlessly interconnected and this will require very high quality networks with low latency and affordability for all.

We need superconnectivity, we need supercomputing capacity. We're working on that, but, I think it's fair to say that the networks of today are not equipped for that, nor are the platforms or telco operators. What we are also seeing and it was very visible in Barcelona at the Mobile Congress, is a change in the business models already. We see telcos moving beyond providing infrastructure networks, presenting concepts such as network as a service, we see hyperscalers offering data compressing technologies or content delivery networks. And we need to see change in connectivity to meet our 2030 targets to roll out 5G in all populated areas, because that is what we have set in Digital Decade Programme and we will report on that in June in our Digital Decade Report and it will not be a happy message. That is why we presented in February the Connectivity Package with the Gigabit Infrastructure Act, the Gigabit Recommendation and the public consultation on the future of connectivity. A couple of words on those: the Gigabit Infrastructure Act is really a means that should be easy to achieve to accelerate the 5G roll out. It's the logical thing to do to cut administrative burden and red tape, cut costs, offer permitting that is faster digitalised and coordinated with civil works and gives access to public buildings and brings into the game the independent tower comps, that brings into the game the renovation wave that we create with the green transition. So all that should be a no brainer and we should hopefully achieve quickly a deal on this. It's highly awaited, it's necessary to do, and can help us to go faster. With the Gigabit Recommendation, we want to untap the potential of the Code that we have worked on in the past. Because by providing this draft recommendation that BEREC is working on and will provide an Opinion on, we want to actually provide and incentivise access to the networks of those operators with significant market power. So our objective is sustainable competition, but our objective is also to set incentives to switch off legacy technology and to use the promises from the Code to go sometimes, when possible, beyond the classical price regulation. And to kind of look at other ways, co investment, commercial agreements and all of the things that we together decided on in the new Code. And finally, the public consultation on the future of connectivity. This is really because we need a holistic debate on the issues for the future: the investment gap, the business models, the commercial arrangements, the interest of the consumers, the market barriers that exist or harmonisations for a single market and the consolidation of the markets. All this is in the public consultation and we really want a lot of details and input from all of you, to gather the views to come to a better set of the facts and figures and the dilemma, and probably the need for a paradigm shift for the future. We need to design together a secure high-quality connectivity. A connectivity that includes satellite, terrestrial, undersea cables, that is continual and that will allow us to move into the virtual

worlds and the Web 4.0. This is not business as usual. This requires businesses to adapt, regulators to adapt, and maybe our regulation to adapt, I don't know. We will see at the end of the public consultation and our assessment of it. But what I like is that we launched the debate that is highly necessary, because without it we will not make the leap ahead to the digital transition that we all want and need, to play our role in the tech race, not only as regulating the information space but designing it with innovation and with business opportunities. Thank you, very much.

(applause)

Philippe Defraigne: May I please ask the panellists to join me on stage? Maarit Palovirta, Senior Director at ETNO, Christian Borggreen, who's heading the Brussels office of CCIA. Luc has disappeared.

Luc: I'm here, I have a technical problem ...

Philippe Defraigne: Chris Fonteijn, who hardly needs any introduction in this audience. Chris used to be the Chair of OCTA, of ACM, of BEREC, and he is now with Flint Global and soon, we will have Luc Hindryckx, Director General of ECTA. He wants to be sure that you notice him, so that is why he is coming up a bit late. And for that, he will speak first.

Luc Hindryckx: I have no secrets from you.

Philippe Defraigne: I hand it over to you since you want to be noticed

Luc Hindryckx: Allow me to first drink some water.

Philippe Defraigne: It's on your speaking time, Luc, so drink as much as you want.

Luc Hindryckx: Okay. Thank you very much. I would like to particularly thank BEREC and Tonko for the invitation today to participate in the panel of future of recognition in the digital era. What could be the future of regulation and do we need regulation? And why are we all together today? Here are some thoughts that I would like to share with you. Let's take a moment to reflect where we are. We are in the temple of electronic communications regulation. At the BEREC Stakeholder, temple of Electronic Communication, BEREC. BEREC, an acronym as there are thousands, but it's not. The name says it all. The Body of European Regulators for Electronic Communications. It might never have existed and might not be here today. Remember the initial plans of the European Commission were to create a European agency. But, the co legislator remained faithful to the motto of the European Union, "United in diversity", and found it important for the European Union to continue to take into account national circumstances and the European diversity. And to whom else could they have entrusted this mission other than the

national regulators united within BEREC? BEREC was born. and long life to BEREC. Let's look around. We are all here together in the temple of electronic communications. We might have thought this morning "will I go? It's just an event like any other." Well it's not. Is there any other meeting with stakeholders where we can meet more expertise and experience in ex ante regulation of electronic communications market? Probably not. So let's look now at the draft Gigabit Recommendation. Where does this lead us? As we are remaining faithful to the motto of the European Union, united in diversity, with a strong role devoted to the national regulators, or are we virtually handling as a European agency? But what is at stake? Let's look at the digital targets. Of course, they are important connectivity targets and 5G targets, And from a recent report prepared by (unintelligible), commissioned by ETNO, the cumulative per capita investment in FTTH networks in Europe by alternative operators is higher than the incumbent operators. If we look at 5G, let me take the French example. Iliad is the leader, covering 85% of the population, but this is not the most important. There are other important targets related to the digital transformation of businesses.

All of the other sectors of the economy need to digitalise and improve productivity and remain competitive at global scale. The more innovative those sectors will, be the better for the welfare. All of this is supported by telecom networks. Telecom networks are the foundation and they are not a commodity. And cannot be compared to water or electricity for several reasons. Because of the value of the contents they transport. Because of the software and application layer and the cybersecurity requirements, and because of the need of resilience of the physical layer. And let's make no mistake. This innovation potential will only maximise if there is a diversity of offers of electronic communication products and services provided by the diversity of players, large and small. History demonstrated that it's extremely difficult for well-vested companies to innovate, because of the risk of cannibalisation. The big texts, that are so often subjecting (unintelligible) and debates, come all from nowhere. None are issues for well-vested companies. And for those that want to know the stories, I recommend the book "Accidental Empires," that explains how Microsoft and Apple was born... [indistinguishable; everybody is talking at the same time].

LSO, let's one more come back to the Gigabit Connectivity Recommendation. Is what is on the table favouring this need for diversity, or on the contrary are we pushing towards more concentration? Tonko Obuljen mentioned it at the last BEREC debriefing and today again when he introduced the 2024 Work Programme and re mentioned the four objectives. Let's not forgot they are four. And then let's look at the values. The definition of the European values on the European Commission website states "the EU values are common to the EU countries in a society in which inclusion, tolerance, justice, solidarity and non discrimination prevail." Those values are an integral part of our European way of life. Human dignity, freedom, democracy, equality, rule of law and human rights. Are the four objectives of the European Electronic Communications Code not genuinely reflecting those European values? Are those objectives

obsolete? I don't think so. The four objectives remain the essence of the European model that are underpinned by the European values. The new objective added in the Code didn't forget the inclusion value when he mentioned the dimension of take-up. And does the promotion of the internal market not require that each player, in each Member State, small or big, receives a fair chance to play a leading role? Or is this reserved to some happy few players and Member States where the smaller at best would be confined in the role as a subcontractor for the biggest one or are small condemned to be eaten by the biggest ones? Again, it's the proposed Gigabit Connectivity Recommendation bringing closer to the European values and supporting the European model? Or, on the contrary, is it taking us away from it? When prices go up and feed inflation, are we favouring inclusion or increasing the digital divide? Is it contributing to the realisation of the four objectives or simply ignoring most of them? And what about the rule of law? Is the Code in spirit and the will of the co legislator respected? And what about the respect of the democracy? Is the excessive usage of soft law such as recommendation not handling as a cheese grater, little by little, and when you realise the cheese is gone it's too late? It's said that when the frog is placed in a pan of hot water and heated degree by degree, it boils without reacting. Why do we need regulation? Regulation is a tool to achieve objectives of the framework and the framework is working quite well. Of course, there are some implementations issues in some Member States. The world changed and the situation today is not anymore what it was at the last century. But, are things so different that the basic principal of competition law that underpins ex ante regulation should be reviewed? Would companies with significant market power suddenly become so conscious of their social responsibility that they never would abuse their position? Why do we see what we see in the bank sector or even worse in the energy sector? Why are so many consumers and businesses having trouble? Is there any technology in the pipeline that would make that suddenly the spectrum would not be a scarce resource anymore and plenty of players can use it? Is there any other evolution that I ignored that suddenly would make the deployment of electronic communications networks easy to duplicate? And is the number of relevant market KPI? Of course not. And what about new issues that have emerged? What about defining pan-European markets with remedies at national level for the business model of players like (unintelligible) or Transatel, that are genuinely operating in the internal market? Thank you very much.

Philippe Defraigne: Thank you very much for this very pictorial speech with frogs and cheese. I would not know how to put these words into a speech on telecom, but thank you. Thank you very much, Luc. Over to you Maarit. I hope you do as good as ECTA.

Maarit Palovirta: Thank you to BEREC for bringing us here again to the Stakeholder Forum here today and thank you for organising the discussion on the future of regulation in the digital age – I'm happy to be part of it. So, I'll start with the digital era. I mean, what does it mean for the telecommunication sector? I think Renate captured it quite well, talking about the "modern

connectivity". We need modern connectivity to have wider impact in our economy and society. But before looking forward, I'll take two steps back. So, the telecoms sector and telecoms markets at large have evolved enormously in the last ten years, and if you think what it was like ten years ago, we were primarily running on legacy networks and launching auctions on 4G. In policy terms, we talked about aiming for 30 megabits per second, and this was just ten years ago. So today, we talk about gigabit speeds. We have 55% fibre coverage in Europe and about 75% coverage of 5G. There has been a huge leap in technology and also the role of technology and connectivity in our lives. When we start to look forward, we believe operators will undergo a major transformation in the next ten years, and this will be based on new technological developments, such as network virtualisation, cloudification and disaggregated network architectures. And connectivity as a service, as Renate mentioned, is part of this vision. So, there will be a clear transition away from the traditional legacy networks towards software-defined and highly programmable networks.

In parallel, what we will see of course, is a continued increase in data volumes and hence the expansion of data-driven technologies such as AI. And this against implies evolving requirements for connectivity in terms of speed and reliability and security. So, when we look at the opportunities and challenges, there are certainly both of them. And in terms of opportunities, I can only mention faster innovation, scalability, cost and energy efficiency and supply diversification. We also see that the new architecture will give opportunities to open the ecosystem and facilitate market entry for smaller players and specialised vertical players, for example. We expect very well that there will be room for new partnerships and new types of business models. On the challenges side, though, we do see that all of this transformation will require a massive investment. And this will come through, of course, the need to increase capacity in the networks, but also the need to invest in innovation and very importantly, skills to make the innovation happen. And we are not just innovating for the sake of innovation, but in order to have better connectivity and better connectivity services for the end users and for the consumer. So, another challenge is that we see already that competition in this connectivity space is intensifying, so hyperscalers and also these specialised vertical players are entering the traditional telco value chain, and with the market fragmentation that we have in Europe and hence the lack of scale, this is limiting the operators' ability to effectively compete. So we see financial stability of the telecom ecosystem is still challenged, and the role of regulation, and especially sectoral regulation, and also regulatory asymmetries, will need to be reassessed in order to ensure balanced conditions in the connectivity value chain.

So, let's talk about regulation, what does this mean? I will just very briefly touch on the three main points of the Connectivity Package, this is of course a very important one for our sector, for ETNO. So, all in all, we welcome the Connectivity Package. I think that it's high time that we reassess some of these existing policies, but also put new ideas out there. First of all, the

Gigabit Infrastructure Act. So, we believe it's essential to cut costs and streamline procedures related to both 5G and fibre deployment. We strongly welcome the proposal from the European Commission. Although I am sure we will find some little fine tuning here and there, and we will certainly propose that. We do hope for a smooth process to finalise and implement this new Act at the Member State level.

On the Gigabit Recommendation that Luc already mentioned. So, I would like to return here back to the legacy, so the previous recommendations, they date back to 2010 and 2013 and very much reflect the market dynamics from another age. And for this reason, we believe it's high time for reform. And we very much agree on the objective of the European Commission and the fact that we need to really focus on promoting gigabit investment, but we are still rather concerned with the current draft as we don't believe that it recognises sufficiently the dynamics and transformation in the telecom markets.

Philippe Defraigne: Neither ECTA nor ETNO is happy with the Gigabit Recommendation, Renate...

Renate Nikolay: it's perfect!

Philippe Defraigne: Sorry, Maarit.

Maarit Palovirta: No, it's okay, I can see it's an easy one. Nevertheless there is still more room to have clearer actions and also to provide more flexibility – regulatory flexibility for NRAs, especially when it comes to very high capacity networks, so we need to make sure that we really see the difference between what was the legacy and what was the legacy networks and the infrastructure, and what is today and will be the future. So there should be a clear difference there. And then, final word on the consultation. So, we are very happy with this broad view that the Commission has taken on our future. There are many important things in this consultation: spectrum is key, we've mentioned it, and we look forward to discussing a potential new RSPP, radio spectrum policy programme, but of course, there is also this much debated question on the fair and proportionate contribution to the digital ecosystem of all actors. And I don't think it's a secret to say that we at ETNO have been supporting this all along and see it as something that will be contributing towards this private investment gap that we see and we see it also being very relevant as we go forward. This investment gap is both on coverage and capacity, as I already mentioned. I'll not go into detail as this has been an issue that has been much debated in the Brussels circles lately, but we do see also that there is still some regulatory asymmetry, so our sector is subject to a highly regulated framework, and including pricing competition, open internet regulation, whereas some of these large content generators we do not see are still free to invest and innovate. And at the same time, we see them entering, as I said, into the same markets where telecom operators are operating, and also to the adjacent markets. And as a

result of all of this, we do see that the current internet ecosystem is unbalanced. So, there is one party who's heavily investing in CAPS, and then there is another party who's able to use these networks and create extraordinary value out of these networks based on other parallel business models. And this is a situation typically, and also in our opinion ideally, that should be solved at the commercial negotiations level. But this, in the current market situation, from our point of view, is not yielding the results that we would wish and desire for our sector. So we still see this as a key pillar for the future of telecom, but certainly not the only pillar. So, just to be concluding here. Telecom sector is going through a transformation. I think that we need also the regulatory transformation and transitioning into a new regulatory world in Europe. We still want to lead in regulation – this is not to say we cannot do that – but we need to make sure that we have it right for the sake also of connectivity across the continent.

Philippe Defraigne: Thank you, Maarit, and thank you for one of your final remarks, which provides a perfect transition for handing over to Christian.

Christian, perhaps a quick word on CCIA, which perhaps in this audience is not yet as famous as ECTA and ETNO. A quick word, no advertising, just who you are.

Christian Borggreen: I do not want to take too much bandwidth, so I'll be very quick. That was a telco joke. So, the Computer Communications Industry Association, we are representing a wide variety of players, European companies, international companies, and we have been around since 1972 when I was minus eight, and so happy to contribute to this debate. Thank you so much to BEREC for hosting this very important day, it's been great so far. And thank you also to the Commission for launching its exploratory consultation, which we are happy to see. We are happy to see that you picked the tool of an exploratory consultation, which of course, we all had to look in the BEREC regulation toolbox to see what that actually means. But when you look at page 465 and 466, you will see that this is the tool that the Commission picks when they have to determine if any problem exists. And I'm happy to see that the Commission still hasn't decided if there is a problem yet, because we haven't seen it yet, but it seems like Maarit has seen it, but I'm happy to see that we are still at the very early stage in the process. And of course, according to the BEREC regulation toolbox, if there is a problem, if this exploratory consultation shows there is a problem, well then the Commission has to do the studies, and it has to launch a proper public consultation where everyone can fully take part. But we are happy that there is this initial consultation. There have been many comments on it, it's taken up a lot of bandwidth, so to say.

Some of the comments have looked at some of the terms that are now being used by the European Commission. And one of those terms is "large traffic generators", which is not a very telco-friendly term or framing of the discussion, but it unfortunately ignores what the Commission have said in the past, and what BEREC has said many many times in the past, but also in the recent past back in October, which is of course that the request for data stems not

from CAPS, but from the telcos' own customers that are requesting data, that are pulling data, that are generating data. So, for instance, if you look at the Cloud – I believe you mentioned CDNs, right? – I mean, they don't generate data, they are part of the solutions. Because they collaborate with telcos and they help telcos by bringing data as close to the end consumer as possible. Two other quick points on the consultation. Many of the questions can only be answered by, frankly, large Telcos or large tech companies – so be it. And then finally, many many different types of stakeholders have pointed out that this, of course, would have impact on net neutrality, and yet there is not a single question on neutrality in the consultation, which is a little bit odd. And Maarit mentioned the point about who's making investments. Of course, if you are a telco, you are investing in your own networks. If you are a CAPS, a content and applications provider, you are making enormous investments in exciting content, we give it for free to Maarit's members, and they pass it on and give access to their end consumers and they are paid for that. So there could even have been a question in the consultation on who's making the fair contribution to the demand for all of these exciting services. I mean, that maybe be sort of on our side of the ping-pong table. So, I think I'm going to leave it here. Also, I've just got to say even CAPS are making rather big investments in infrastructure in Europe: we've seen this number is increasing – it's in (unintelligible) cables, it's in datacentres, it's in CDNs and we are investing, our members and sector, to the tune of 22 Bn€ per year and this number is increasing and, of course, it's leading to savings for the telcos. So we are certainly making massive investments in content application, exciting, and also in infrastructure. So, thanks to the Commission for launching this exploratory consultation, thanks to BEREC for your work. You have been very clear and the timelines were transparent, and we look forward to seeing your work as well. This is a fundamental debate. It's about how the internet works, and making sure it continues to work and I hope that all stakeholders will not only speak up, but that they will also be heard by lawmakers.

Philippe Defraigne: Thank you Christian. Chris Fonteijn, a bit later, has kindly agreed to do the concluding remarks. In case you think I'm forgetting Chris, I'm not. We have raised very different topics. What would you do if you were me here? Would you go and talk with Christian about fair share or with Luc and talking about recommendation? Let's try to do both. So, a nasty question for you to Luc and one for Maarit. Maarit, ETNO has been praying for more than ten years to be able to raise the price of copper. At that time, you had managed to convince the Commissioner, and now, you hate it, why do you complain? And you, Luc, you said earlier that ECTA members in some countries have more fibre than the incumbents. So why do you still need copper? Who goes first?

Maarit Palovirta: I was not here ten years ago, but in terms of pricing, we do still have pricing regulation as you know, so it's not like here in Europe we are free- to price the connectivity service as we like. We of course very much want to promote the affordability of services. It's a

political choice very much, we hear it from the high level, from the policymakers, that services need to be accessible for all in all different ways. But, if we look at the business case for fibre deployment, for 5G deployment, at the moment, the CAPEX required is simply so enormous that the business case is not there. So there is an issue with the financial sustainability in the ecosystem, we have quite a tight regulatory framework. I mean, not only the pricing you mentioned, but we said competition policy, fragmented market, open internet obligations – which very much obliges operators, for very good reasons from end users' perspective, to deliver all traffic to the end-users. But this creates some dynamics in the ecosystem that are not working for the benefit of the business case.

Philippe Defraigne: On the absence of business case for fibre, Luc?

Luc Hindryckx: You asked me two questions. Allow me a couple of minutes to answer that. Xavier Niel, the founder of Iliad, was invited to the French Senate to explain why he could maintain his prices so low. His offers on mobile have not changed for ten years and they have committed not to change it for ten years. Iliad is what they say, it's innovation, it's investment. And they commit to not increase their prices for the two mobile offers and to the critics they say "we are offering buying power to the population in times of high inflation", and as I said, is it the time and is it wise for the European Commission to go in a direction that will contradict all of the efforts of the European Central Bank to contain inflation? On the copper price: remember what Commissioner Breton said many times. The incumbents receive the copper for free, they receive it as an asset for free. It was depreciated, so let's start it from there. And so let's remember what the initial plans of 2012 were from the European Commission. So in 2012, the Commission before they changed totally their mind because they had spoken to banks, HSBC and so on – that between brackets are also responsible for the bank crisis, and I'm not neutral in this debate – they changed their mind. But the initial plan was to have a (unintelligible) cost of copper at 1 or 2 euro. Not 10 euro or above, like what came out after they changed totally their jacket, in an opportunistic way. If you look at the cost model, and the way that we look at copper, cost models have been built to artificially raise the copper price, as you would perpetuate the infrastructure forever. And you have to compare that with a pension plan. You say you contribute to the pension plan as copper, and then when you go to retire, you want to have the benefit of your pension plan when you come to fibre. So in fact, all of this financing that the alternative operators provide to the incumbents are a kind of co-financing model or co investment model avant la lettre within the Code. And now, copper will retire and it's time for the alternative operators to receive the return of their pension plan. And now we say okay, we will incentivise the copper-to-fibre transition by giving an additional extra rent to the incumbent operator – that they already received, they have big pockets with the copper assets – and because we believe that with that, the transition will go quicker. If you receive more money in your pocket without doing anything, why the hell would you switch off your copper?

Philippe Defraigne: It's my duty to provide a counterargument which everybody knows: the take-up of fibre in Europe. If you look at fibre take-up, there is a big demand gap. If we start driving retail prices of copper-based products down, I don't think that

Luc Hindryckx: But Philippe, that is not...

Philippe Defraigne: That is the argument that you hear... Let's go over to the room.

Luc Hindryckx: But before let me clarify on that, because we don't ask to have the copper price going down. What we say now in the transition, is to keep the copper price stable, and we are for a quick transition from copper to fibre. That is what we are demanding, but under the right conditions. That is what we ask. Giving more money to the one that owns an infrastructure that they received for free and has already been evaluated for 20 years, is not the right way to incentivise copper to fibre transition.

Audience member: Just to make an observation and also, taking into consideration what you said earlier. United we stand in diversity. So, there are some countries where the incumbent operator did not receive the copper network for free. For example, in Portugal the incumbent operator bought the copper network from the government and made heavy investments in the fibre network. So, how do you solve this problem? And ten years ago, for example, Portugal had already a fibre network that allowed for 100 megabytes of transmission speeds. So, how do you solve the problem? You do have to give some discretion to the regulator to be able to compensate for those investments. So, when you buy the copper network and then you are obligated to provide access to your network one year after you buy the network, where is the compensation? So, not all circumstances are equal. So we have to be... We have to tread very carefully when we talking about...

Luc Hindryckx: Yeah, but if I can, let me answer that, let's kill this duct, as we say in French. I don't think there is any operator that has made any losses on the regulated product. Because when you have access on cost-oriented, you have the WACC and the WACC includes the appropriate return on capital, and even the overestimated return on capital, because we all know that fibre projects are lower risk and take into account the WACC of the companies and the WACC of the companies is overestimated because the includes the WACC of the retail activities. And if you look, I want to see the first operator that would say they lost money on a regulated product. That just does not exist.

Philippe Defraigne: Maybe you can solve that debate later. Is there any question from the room that I can see, no? Then I'll continue. I've got a question here coming online: do we see an evidence of a lack of public funding for telecom infrastructures in Europe? So in other words,

you alluded to the investment gap and so someone is saying “where is the evidence that there is plenty of public money going into telecom?” Christian?

Christian Borggreen: Well I'm happy to respond. I don't think that's the problem, right? It's not what the telcos are asking for. They want money in their pocket. They don't want too many obstacles or requirements in terms of how to spend this money. They want more money in their pocket, and they have already been paid once by their consumers, who are requesting data. They want to be paid twice for the same work.

Philippe Defraigne: So there is no shortage of funding for infrastructure is what you are saying, Christian? Luc, what do you say on this shortage of funding?

Luc Hindryckx: I think you are mixing too much things. Funding, there is a lot of European Funding. And I remember always Harald Gruber from the ECB that said: the money is not the problem, it's the good projects. Funding is one thing. And the return on capital employed is something else. So, is there a problem with funding? I would say, I haven't heard it.

Philippe Defraigne: Is there a problem with profitable projects?

Maarit Palovirta: If I may also chip in? So, it was a nice interpretation, Christian, but... So, is there a lack of public funding? No, we don't see a lack of public funding. We have a lot of public funds available and specifically in connectivity, we have the resilience funds going to digitalisation at large. I think that they serve a good purpose especially in the market failure areas that are often problematic. But public funding cannot and should not replace private investment. Private investment should be there and should stay the main means to invest in network infrastructure. And, as I was saying before, is that what we do have is an investment challenge in the private investment, and this is going back to the business case and the return-on-investment scenario that I was trying to describe before.

Luc Hindryckx: I think the biggest issue is where the European Commission has not provided an answer and has not held a kind of debate on the substance. It's that the stock markets don't want long term investment and whatever you do, certainly in fibre or 5G as well – but the 5G is less capital intensive than the fibre network – is that if you are on the stock market and you announce that you will make long term investments in fibre or 5G, your share price will automatically drop. Because of the time value of money, that's a theory of corporate finance.

Philippe Defraigne: Look at Cellnex in Spain, they've bought for 25 million of towers over the past few years and the stock market has rewarded them.

Luc Hindryckx: Yes, but you have to look at which stock the investor looked at. Overall, you will see... Look at Iliad, they announced they would continue to invest and they invested 25 billion in

fibre and so on, and the stock market collapsed. That is why they said they would leave the company and took the company out of the stock. When 1&1 in Germany announced that they would participate to the 5G auction in Germany, their stock prices collapsed. And all operators, they are there, it's just mathematical. And we don't have an answer to that with the Recommendation. And that is where the Recommendation is really bad. Because we think that it will increase the investment of the incumbents by reducing the competitive pressure. But without competitive pressure, there is no investment, because there is only one reason that the CEO of a quoted company can explain to his shareholders on the stock market that he needs to invest to protect his existing cash flows. And if you take away this threat for an operator of losing his existing customers and cash flows, then is he says I'll invest in fibre or 5G, the stock price will collapse and the CEO will be fired. So he will never do it.

Philippe Defraigne: Thank you, Luc. I would like to change the topic a bit before handing over to Chris and say something on fair share. What can you find to say on fair share? Maybe I'll hide behind the blood shoulders of Vittorio Colao, he needs no introduction. And when he was in his last days as Minister of Telecom in Italy, he spoke at one of many conferences where fair share was discussed – there was the CEO of Orange and a big shot from Google and so on – and his advice was: look guys, you'd better talk to each other and sort it out because if you leave it to politicians to sort it out, it's going to be super emotional and you don't know what is going to happen. And so now, I'm turning to these two communities, ETNO, ECTA and Christian: is there no way that you can hammer out some kind of understanding or deal or do you want to leave it? I'm quoting the great Vittorio Colao here. Do you want to run the risk of letting the legislator sort it out?

Christian Borggreen: Yes, there's a lot of paradoxes here. One is to hear ETNO now calling for more regulation, including for their own sector. You don't hear that very often. The second part is on affordability for Europeans. If they have to pay twice for connectivity, for the delivery of the same data, for more expensive streaming services and Cloud, of course, that will have a cost. So I don't think that will be beneficial, that kind of public intervention. Thirdly, this portrayal that there is only two camps is incorrect. First of all, it's actually very, you know... What we see in the marketplace is there is a lot of collaboration between players. Telcos are becoming CAPS and CAPS are becoming telcos, and so it's much more diverse than what this debate has portrayed earlier on. And so we have to be careful.

Philippe Defraigne: So you don't see much room for hammering an agreement on that at this stage?

Christian Borggreen: There's agreements all the time. Ninety five percent of agreements in this space is done on a handshake, so there is plenty of collaboration and agreement done in the marketplace.

Maarit Palovirta: I think in Europe and even on the digital principles that were recently agreed, they talk about “fair and proportionate contribution”. It's true there are commercial agreements for interconnection between the large content generators and operators. However, the commercial negotiations as I said, are not symmetric. There is too much of a market asymmetry, differences between size and power of the different parties. So there is no level playing field in the commercial negotiations and to the extent that, in some cases, they are never happening. And I'm also just wondering that, if ETNO operators – who tend to be the largest telecom operators – do not manage to have a meeting to discuss the commercial details, what is the case then with smaller operators? And really, what we are here, going back to Christian's point on the regulation. So, we have been talking all the time about a very targeted solution, we don't want to have an ex ante regulation for large content providers. We are talking about a targeted solution that would facilitate these negotiations and this kind of mechanism would perhaps naturally incentivise.

Philippe Defraigne: I'm conscious of the time, thank you. Let's move to you, Chris, for your thoughts on the future of regulation. You have seen it all from the early days.

Chris Fonteijn: I've seen it all. It's great to be here and see how BEREC has developed. I'm here as a former Chair on behalf of nobody else but myself. It's a long time ago, but still, just to remind you how long ago: when I chaired, I had a young Vice Chair called Roberto Viola – an ambitious young man and maybe he's still ambitious but no longer young – and of course, Luc was there as well. When I received the invitation to speak, I asked Annemarie Sipkes, my successor, and I said “what is going on? This is the panel that I chaired ten years ago, maybe there is a understanding?” And she said no, no, she took it seriously and said this is still very important. And I'm sure it is, but the question is: what has changed and what hasn't? And I would like to take a step back from the present debate and talk about systems, sound systems and behaviour. There have been massive developments and a lot stays the same. This is not all of these familiar faces. I must say, the previous three panellist were very eloquent, but also slightly predictable and that is also not new. Not new either is that Luc takes his time to give you an answer and so some things never change. And the more things change, the more they stay the same. So, we are here to talk about the future of regulation and not the past. Still, it's worth reminding that when we – and Luc was there at the time, as well and Roberto – we thought that regulation would fade away to the benefit of ex post competition. That was the overriding thought at the time. Less regulation instead of more. Time stopped regulation. So what happened? And I think we built the ACM on that thought, when we brought together the telecom regulator OPTA with the competition authority and the consumer agent. We thought that would develop into something that was simply one thing. Now, clearly, I don't think that people should debate any longer that ex post regulation – which I thought as the Chair of a competition authority at the time will work. Simply, if you went through it – I don't know whether anyone of you have been

through it – it takes an enormous amount of time, an enormous amount of data to do that and so I understand fully that it is an ex ante system, and my former belief has been overtaken by time. Again, I'm an optimist but still, perhaps things have been worse than I expected those years ago. The question of how this will develop in the coming years. Three important things: one, the side of the authorities. How will the Commission and competent authorities apply and enforce regulation? Because that will create counteractivities in the market as well. So that is one. Secondly, the side of the industry. How will they comply or ensure compliance and regulation? And secondly, one thing that I find one of the most important things, how will the interplay between the companies and regulatory authorities be? First, the role of the regulator. They, of course, have a key role to play. I still remember that at the time, one of my colleagues wrote a book about good principles of regulation, and she coined the acronym "L-I-T-E-R". Legality: it should be firmly based on the law. Don't go outside your premise as a regulator. Independence: extremely important. You don't read so much about it anymore. But there is so much political pressure that pressing independence is extremely important. T for "transparency": you have heard it before. Regulators are not inclined to be transparent. I know this is all very nice, with Meet & Greet and everything, but I know very well that this does not come naturally. So we have to force, pull it, push it on transparency. E is "effectiveness". Always realise as an authority that what you're doing should make sense or should lead somewhere. Not just because the law says something or you did tick the box – it should lead somewhere. And the R for "responsibility". You have a responsibility to make things work. So remember, LITER. Those are principles and an empirical basis. The cost of intervention, impact of intervention, legal protection. And I have been thinking about two adjacent worlds where regulation plays an enormous role. The banking world. I think it has ended up, after the scandals, with an enormous amount of regulation, an enormous burden on the banks. I don't believe personally that society has fared well with that. An enormous amount of supervisory authorities under a central bank, so I would hope that the legislators are able to resist the call for even more regulation. So, proportionality to me is an important thing. I serve – on behalf of the Netherlands government – to revise the audit professions. We had scandals all across Europe. Politicians and legislators are crying out for interventions and rules - this was a couple of years ago and I was appointed to implement those rules – and this morning, there was a parliamentary debate in The Hague where the MPs were crying that there was an overload of regulation and we should leave the accountants free to do what they wanted because it's a commercial profession. So, try to find a balance and not simply argue for the black or for the white.

Now, the importance of cooperation and coordination. I can't stress that enough. It's been going on in the telecom and it should go further. I was very happy that in the Netherlands, at least at the time already, we were more or less ahead merging the three authorities – competition, regulatory, also energy and competition – but of course, there is the media authority, there's privacy, there's spectrum. I think that integration should go much further. We were seen across

Europe and also in our country as revolutionaries when we brought ex post intervention and ex ante together. And the consumer didn't play a role at the time at all. And still, I'm absolutely certain that it worked. Although this was with success, and I'm one of the many fathers. So, I think that needs to happen. My successor, Martijn Snoep, yesterday gave an interview in the Netherlands financial newspaper where he said also that this is absolutely necessary. Okay, I thought, well, that was to be thought of ten years ago as well. So, international coordination is extremely important, so you can draw on each other's experience. I had the benefit of being in BEREC, but also on the ACM and ICN boards, and I always benefited to a great extent. The debates on whether the Commission or national authority should do things. I have been part of that and I have been arguing with the Commission that we should be doing things that the Commission wanted to do. I have been very sort of militant about that and after the fact, I know that when you have joint teams – as we had, for example, in the merger world – you will simply work together as authorities and it doesn't really matter in the end who has the final say. It's important for the Commission to take the experience from the local and national authorities on board and for the national authorities to accept there is a coordinating mechanism. And of course, this whole thing goes across the continents, there are discussions in G7, the ICN plays a much more important role these days. And I encourage that.

Now, the role of the regulated companies. I've been talking about the role of authorities, but there is a very important role on the other side of the fence. If I maybe a bit blunt, I would say you get the oversight that you deserve. Certainly that is the case in the audit profession and in banking as well perhaps. Clear rules, innovation, and talk with the regulators. So, I think it's very important how you behave towards the regulator. How will you, in the ex ante world, build an effective relationship? My successor Snoep gave a surprising analogy yesterday, saying we have to get used to the sector being completely regulated, like the banks, and it will be a sort of a dance. A dance between the industry and the regulators. I don't know whether this analogy is appropriate, I could only think that it takes two to tango. There is a distinct responsibility at the side of the industry, not just to fight the regulators, but to engage and talk. And I know, of course, the formal sense of the Regulatory Dialogue, with a capital R and D. It's all very nice, but I believe in a proper dialogue, not something where you go with a protocol and minutes, and you have meetings, but engage and exchange thoughts and ideas and get it out of the formal dialogue.

Now, in a real dialogue, that is. Now in conclusion, there is a joint responsibility. It's not about institutions. It's not about companies. It's about consumers, it's about end users and societal interest. And I sometimes think that the debate which gets very heated in this Brussels bubble, this takes the interest away from what it actually is about. So I do hope that perhaps that culture changes a little bit. It might help, when I see all of the familiar faces, with due respect, that people change career from time to time. So you understand what is happening on the other side

of fence. And finally, just to pre-empt your question you put to most of the panellists, “if you had a magic wand, what would you do?”, I would say give me stable, predictable regulation so we don't need seminars with this title any longer.

Philippe Defraigne: Thank you, Chris. We are really finishing the day on a high note. I like your principle-based future. That is great. On that, I think our time is up and I would ask to you please join me in thanking all of the panellists, not just Chris.

I'm now asking you to grab your phone. We're almost at the cocktails. One or two more things. Can you just reach out for your phone, you know how it works now, and tell us how the day went?

This is when BEREC gets nervous ... this is a very transparent organisation, you know? Do you do that in your companies, ask customers what they believe and put it? ... Excellent. Excellent.

Yeah, anyway, I'm now delighted to welcome on stage Tonko Obuljen, Incoming BEREC Chair. Tonko, over to you.

Tonko Obuljen: Yes, I know that networking reception is just to begin, so you didn't have to be so polite with these results, but thank you anyway. And thank you for coming here and I hope that we will see everybody next year too. Just to remind you that there will be presentations, a video from the conference and transcripts from the conference. It will not be published immediately after the conference, but in due time. So thank you one more time, and please, you are invited to the networking receptions outside.

Thank you.

[applause].