SPECIAL COMMITTEE ON ARTIFICIAL INTELLIGENCE IN A DIGITAL AGE (AIDA)

Exchange of views with Thierry Breton,

Commissioner for Internal Market

MONDAY 26 OCTOBER 2020

1-002-0000

IN THE CHAIR: DRAGOŞ TUDORACHE

Chair of the Special Committee on Artificial Intelligence in a Digital Age

(The hearing opened at 13.50)

1-003-0000

Chair. – It gives me a lot of pleasure to open this very first formal regular meeting of the Committee on Artificial Intelligence in a Digital Age (AIDA). I would like to express my gratitude to Commissioner Breton for making himself available for this meeting. Commissioner, the floor is yours for an opening remark of 10 minutes.

1-004-0000

Thierry Breton, *Member of the Commission***.** – Chair, Mr Tudorache, ladies and gentlemen, thank you for organising this meeting today. I am happy to talk to all of you Members who are particularly interested in this very important subject and to exchange views with you in your new Special Committee on Artificial Intelligence, AIDA.

This is obviously an opportunity to continue the constructive dialogue we had already begun on an issue that is absolutely crucial for our citizens, for our businesses and for the European Parliament. I know that all of you have spent a great deal of time working on this. I have already had the chance to talk to some of you and I am extremely happy to be able to talk to you now in this slightly more structured or formal exchange.

I would like to begin with a point regarding our current situation. I have said it before and I repeat it often: Europe is an industrial continent. It is the most industrial continent and we therefore have to seize this opportunity and this potential to position Europe as the leader in this area. Because of course, and we will discuss this extensively, artificial intelligence is all about data - the quantity of data, the quality of data - and we know that, in addition to personal data, of course, the major wave coming towards is a wave of industrial data. As I have already said: there can be no artificial intelligence without data. So we need to prepare for this enormous wave of industrial data, which is coming and, indeed, which is already here to some extent in much greater volumes than the wave of personal data.

My goal here is two-fold: first of all, we need to focus on the uses of artificial intelligence. I am not one of those who believes that we can or even that we should regulate a specific technology, especially in its infancy, but you know, because I say it all the time, that we have to concentrate on how it is used, which is hugely important, and on the conditions for training algorithms. That is obviously essential in terms of mitigating - as you have stated implicitly - any excesses or risks, which we will discuss in detail. After that, we need to establish a genuine single market for data. This is absolutely vital if we once again want to better harness, oversee but also develop a real artificial intelligence industry on our continent, and this especially applies, as I've said, to industrial data, among other things.

I would like to make a few points about the regulation of artificial intelligence. As you know, and as you have pointed out, we are preparing a legislative proposal for the start of next year aimed at providing a framework for the uses of artificial intelligence. As you can imagine, it is not a straightforward exercise because we firstly have to establish trust: as I've said, our job is to encourage entrepreneurs and to encourage new applications, and we certainly do not want to stifle innovation. But in spite of that, we also have to be able to stand the test of time in responding to the technological developments that we can anticipate in some areas, but not all. We're not going to adopt new regulations on artificial intelligence every couple of years so we need to ensure that at this stage we integrate what the technological developments, especially quantum computing and accelerated quantum algorithms, are going to offer and allow. So I

really encourage you not to focus on a specific aspect, or the emotional side of this issue, which is undoubtedly very important, but to set your sights on the future and the technologies that are going to support the training of these algorithms, this intelligent software, which are going to interact continuously with their environment, exchanging relevant data as they gradually develop over time and their uses are better defined.

In this regard, I would just point out that we have set out our approach in a White Paper on Artificial Intelligence on the basis of two building blocks: the first is the creation of an ecosystem of excellence to help our companies to innovate and to invest in technologies, and the second is the creation of an ecosystem of trust, laying down clear rules for the development and use of artificial intelligence.

In terms of technological development, as indicated in the White Paper, we are planning measures focusing on research, collaboration between Member States, and investment in the development of artificial intelligence and digital skills. I would remind you of our objective - because many actions are going to be developed - and it is to attract each year, over the next decade, more than EUR 20 billion in total investment in the European Union. As you no doubt know, I've fought hard to ensure that the national recovery plans allocate 20% to the digital sector, and I hope, and I'm sure you do too, that part of it will be used for artificial intelligence.

In terms of the regulatory approach we are preparing, I should say that we want it to be proportionate. Again, we need to ensure that it is not overly prescriptive. The aim is to support European innovation in this area and to use the new regulatory measures to provide a framework for the risks associated with the specific uses of the technology by integrating elements that we see as essential, such as fundamental rights, but also, of course, security requirements.

As you will have seen, the proposals in the White Paper were broadly welcomed. Nevertheless, we received many contributions, including more than 1 200 replies to the public consultation, with around 20% coming from outside Europe, which clearly shows that there is a great deal of interest in our continent's approach in terms of what is happening here. Once again, we are the first to hold such a broad consultation.

On this basis, and in close collaboration with all of the stakeholders, we will therefore present our legislative proposal at the start of next year, focusing on five or six principles that I will mention here briefly.

Firstly, a definition of artificial intelligence that is broad and functional and, I repeat, that will stand the test of time and be neutral from a technological point of view. That is very important.

Secondly, a risk-based approach with a general legal framework that applies to all artificial intelligence, but with restrictions limited to specific uses that are of particular concern. We will need to think about the definition of what is to be considered high risk, and that is very important. There are some applications that are high risk, that are very sensitive and that must therefore be authorised under very specific obligation frameworks.

When it comes to the well-known exceptionally high-risk uses, we might automatically think of health, anything to do with autonomous vehicles or recruitment - some applications are deemed high risk by their very nature - and in those cases essential requirements will be necessary, for example as regards the quality of training and test datasets or their robustness and accuracy. As I've said from the beginning, and you have heard me say it time and time again, it is the quality of the data that determines the quality of the artificial intelligence applications, which is in turn linked to the algorithms and training phases. That is absolutely vital.

Fourthly, compliance with the requirements could be verified ex ante, before an artificial intelligence system is sold, by means of a conformity assessment, for example, in addition to ex post market surveillance and risk management, given the self-learning nature, which I just mentioned, and evolving nature of many of these applications.

Fifthly, we will also pay particular attention to the use of biometric identification for remote surveillance in public spaces, for example in airports, stadiums, streets, etc. These systems will always have to be treated as high risk and their conformity verified ex ante, or they may have to meet additional requirements and conditions.

Finally, for certain lower-risk systems, such as chatbots, we should ensure that users have clear information. Our citizens should know if they are talking to a machine or a human; it is common sense but it still needs to be pointed out.

Of course, the new rules will apply to all artificial intelligence systems sold and used in Europe, whether they come from Europe or third countries. I repeat, because we have to be clear here and we have to continue to say this: our aim is not to exclude anyone, but simply to define clearly our European rules. We must ensure clarity for all actors so that this industry can develop. This applies, of course, to our European businesses but also to those with attractive technologies who would like to offer them to our citizens and our companies. Let us be clear: artificial intelligence is a technology that is too important and has too much structural significance to allow us here in Europe to depend on companies and algorithms from outside the EU. So we also have to see to it that we have a choice or offer a choice to our businesses and citizens, and allow European alternatives to emerge, and it is in that context that the single market for data plays an absolutely crucial role.

As far as data is concerned, we are working on both the technological and the regulatory aspects. From a technological perspective, as stated by the German Chancellor on behalf of the German Presidency, we have to ensure our digital sovereignty - those are her words - so that a genuine data economy can emerge in Europe.

As you've heard me say on many occasions, although Europe may have missed out on the first wave of data, i.e. personal data, we will not and cannot miss the second, even more important, wave, i.e. industrial data. That is why our joint initiative is entirely suitable and appropriate today, because this is happening now. We need to ensure that we have the means of achieving technological sovereignty, which is crucial for data storage, movement and processing, and, of course, an entire body of law that governs all of these applications, and that, in my view, should certainly be European.

Therefore, our objective is absolutely clear: in the context that I have just mentioned, European data, and the extremely important industrial data in particular, must be stored and processed in Europe and, above all, in accordance with European rules and standards, not those of a third country that could, somehow, apply instead, often, or sometimes, without users even being aware of the fact. This is an absolutely crucial element for the development of artificial intelligence in Europe and it is why we are preparing a four-pillar technological strategy. I will try to describe each of them here briefly.

The first is the development of secure European clouds for industrial data. We cannot accept a situation where our data could be subjected to any kind of extraterritorial jurisdiction. I repeat, because it really has to be said and in this regard I very much welcome the Joint Declaration by the Member States at the last Council meeting, chaired by Peter Altmaier: my objective is to launch by the end of this year, with the relevant European industrial stakeholders, a European Cloud Alliance.

The second is artificial intelligence, which also means computing power and data processing, and in this area I would remind you that we are investing EUR 8 billion along with the Member States to develop European supercomputers that are in the top five globally. This is extremely important because training capacities require a great deal of computing power. Then we also need to look towards the computers of the future, towards quantum computers, with the first quantum accelerators, before we have fully quantum computers that will allow us to accelerate particular algorithms. We need to pay close attention to this.

Finally, we want to be able to develop and produce in Europe the most powerful processors in the world. No processors, no machine learning, no supercomputers. No machine learning, no supercomputers, no artificial intelligence. Of course, we have to have the means to do this. We have the capacities and we have the expertise, which is why I am currently working on the launch of a European processor alliance. We will talk about that at a later stage.

Finally, from a regulatory perspective, I want to establish with you a single market for data that is, of course, open to the world yet sovereign, and that is aligned with our European rules and values.

As you know, on 11 November we will present the Data Governance Act, which will allow us to do five things.

The first is to unblock the reuse of sensitive public data, such as the health data of public hospitals, by establishing strict reuse criteria and a framework to ensure that these data are subject only to European rules, as I have said. This is particularly relevant for artificial intelligence as it could cover, for example, image scanners in public hospitals, which are obviously very important in training algorithms to support medical diagnoses.

The second is to establish a framework to support the emergence of new data players, new platforms that differ from the current B2C platforms, insofar as they would replace the users, i.e. individuals or companies, controlling their data and sharing conditions. These platforms would allow for the development of individual data spaces, a sort of ‘digital twin’.

The third is to establish clear rules for ‘data altruism’, in other words the collection of data for the public interest and the donation of these data for the public interest.

The fourth, over and above this Data Governance Act, is our work to make more public data available, including geospatial statistics and data, given, in particular, their potential for European SMEs and start-ups. To that end, we are preparing an implementing act on high-value datasets. This will be a very important element for artificial intelligence, allowing access to a much larger volume of data. More relevant data obviously means more associated algorithms and useful applications in the field of artificial intelligence.

There is one final point I want to mention very briefly: in the first half of 2021, we will present a Data Act in order to make the data economy fairer by clarifying data use rights for B2B and B2G. We also intend to enhance data portability rights by reviewing the regulations on intellectual property rights.

And that, Chair, ladies and gentlemen, is what I wanted to say to you by way of introduction. I am now happy to answer your questions.

1-005-0000

Chair. – Thank you very much, Commissioner, for that excellent opening.

1-006-0000

Chair. – Unfortunately, I'm told that we still have a technical problem with one of the three translation booths for each of the languages, which means that if we want to continue and not be at some point interrupted altogether from translation, we have to take a two-minute reboot break. Please, do not discontinue your connections. So I would kindly ask that all members remain connected. The same for the Commissioner. So you don't have to do anything but we need this two minute break so that the colleagues reboot the system for the translation, and then, in two minutes, I will start with the list of speakers. So again, do not touch anything; just take a break of two minutes.

(The meeting was suspended for two minutes)

(The meeting resumed at 14.20)

1-007-0000

Chair. – Colleagues, Commissioner, thank you very much for waiting. Again, apologies for these technical difficulties, but we all know that it's not easy to work in these conditions. Thanks a lot to the colleagues and interpreters for their patience and for having sorted this out.

1-008-0000

Eva Maydell (PPE). – I am very happy to be able to have this first exchange of views with you. My question is in line with what you said in the very beginning. You said data is very precious as regards its quality and availability and, I would say, so is the quality of AI based on that data. So my question is, could you please shed more light? How are you going to make sure the data sharing is encouraged? Will it only be through voluntary schemes or will there be mandatory schemes? What kind of incentives are considered in either situation?

1-009-0000
Thierry Breton, *Member of the Commission***.** – Chair, Eva, thank you for your question.

Yes, we certainly need access to data; we need an abundance of data. There are two main types of data that we are working on. And that is precisely the subject of the Data Act, so we are really trying to plan carefully, from a governance perspective, this data sharing that you mention.

Firstly, public data: to some extent these are a common asset. So we have an entire section on the way in which we will actually encourage the sharing of public data. We tend to say that these data have been paid for, when generated, by the taxpayers. They clearly belong to Europeans and it is important to ensure that in the appropriate forms - some can be exchanged raw, some have to be anonymised - these data can be shared, in particular when it comes to innovation and start-ups. There are many more potential applications in this field.
Then there is the data from economic activity, from company activities. In that area, I should say that we are currently working sector by sector. If I take the automotive sector as an example, there are data there that are obviously extremely valuable: manufacturing, for example, research and development of a specific engine, a specific, significant propulsion element, a specific digital application. Those data are obviously the property of the companies, and they certainly won't want to share them.

You then have data in a type of patent pooling situation. I often cite this example because I think it's quite a good illustration. It applies to situations where it is important to share the data: maintenance data, monitoring data on driving in certain circumstances, etc. And in these cases it is truly in the interests of industries to share them because it will enable them to develop their applications in a collaborative manner.

As far as health data are concerned, there are some data that can be shared, and really should be shared, but subject to criteria that are obviously very restrictive, for reasons that I'm sure you understand. But there are other data that can be shared as anonymised data and, I firmly believe, must be shared because they will allow us to make progress in science and medicine, subject, of course, to specific constraints that will be clearly defined, once again, in the Data Act.

To answer your question in two minutes:

Firstly, Eva, we really need a single market for data, with greater movement of data and data sharing that is organised with the public sector, on the one hand, and the private sector, on the other. So data must be shared, but on the clear understanding that we need to establish the relevant conditions, and for me it is crucial, first and foremost, to ensure that these data remain under European jurisdiction.

Secondly, these data must be passed on with the appropriate consent, which is very important, in order to ensure that they cannot be misused or stolen, and that everything happens in an organised, and thus voluntary, manner.

That is my very brief response. I would of course have been happy to talk to you in more detail, Eva, about how we intend to proceed, sector by sector.

1-010-0000
Eva Maydell (PPE). – Commissioner, thank you for your answer. In my conversation with stakeholders, among the issues that need more clarification is data donation and its protection against illegal or illegitimate use. How do you envisage control of donated data, be it from a business perspective or from a citizens' perspective?

1-011-0000
Thierry Breton, *Member of the Commission***.** – Chair, that is a much-studied case. It's what we call in our jargon 'data altruism', and in this regard we are going to draw up a very precise framework that will, of course, cover in detail the aspects that Eva has just mentioned. So it is a sub-section of the Act that will allow us to promote 'data altruism' but also to prevent any abuses and the fears that she has raised. We will thus have a specific instrument to deal with this important aspect.

1-012-0000
Brando Benifei (S&D). – Chair, ladies and gentlemen, Commissioner, I want to ask the following question. As we know, data is essential for the development and adoption of artificial intelligence systems and one of the most urgent matters to be addressed in relation to data, which you have already mentioned, is the significant degree of concentration of the market, which leaves most of the data in the hands of large players and businesses. This has an impact on SMEs and start-ups, as you mentioned, but also on public activities.

So how does the Commission intend to avoid any conflict between current copyright legislation and the Database Directive and the need to ensure greater access for SMEs, start-ups and public entities to sufficiently large non-personal datasets?

Specifically, and given that it has been announced in the Commission's work programme, I'd like to have some details on the revision of the Database Directive. How exactly will this revision be of help to smaller entities?

1-013-0000
Thierry Breton, *Member of the Commission***.** – Thank you, Chair. Thank you, Mr Benifei, for this important two-fold question.

First of all, and I stated this clearly in my opening comments, we are of course an open continent. But our goal, and my goal, is undoubtedly to ensure that, in this specific area, we help to promote innovation in this emerging field.

It's true that public data, which is what you mention specifically, is a truly exceptional area. So yes, we are going to offer special access, with particularly attractive conditions, to high-value public data for SMEs and start-ups. That is laid down in our proposal and I think that you will support it. It is very important because, once again, and as I've seen myself, an extraordinary number of innovations and young people with ideas are coming to us. So we have to organise this influx to make it more available. All of this will be covered in the Data Governance Act.

As regards the second part of your question, the Payment Services Directive is due to be revised in 2021 in order to make high-value data more accessible, this time more generally, especially for SMEs. So these are two positive responses to your important question about access for SMEs and, following on from them, start-ups.

1-014-0000
Brando Benifei (S&D). – I would like to ask the following question. One of the most urgent issues regarding data, in addition to what has been said up to this point, is interoperability. We've seen this in the area of health area with regard to contact tracing apps.

Thanks to the EU's interoperability gateway, in recent days the Italian, German and Irish applications have been linked, with more to follow. These standards are part of the eHealth 2012-2020 Action Plan and the eIDAS initiative.

My question is: can this type of interoperability standard be replicated in other sectors at EU level, for example in public administration and research, but also in the private sector, over and

above what has been done to date, and what implementation issues would we need to overcome to achieve this?

1-015-0000
Thierry Breton, *Member of the Commission***.** – Chair, Mr Benifei, I am going to be very clear: you are entirely right to say that we need interoperability.

We are in the process of creating a single market for data. I am the Commissioner for the Internal Market. I am also responsible for digital policies and I want to see an internal market that is completely open and fluid, and, if necessary, a data market that is open and fluid. So interoperability is absolutely crucial.

You are right, in fact, to point out what is happening with the apps, the tracing apps, being used for the COVID pandemic. We have fought, and are continuing to fight, precisely to ensure that they are interoperable, because it is vital. It is a small example, of course, but the answer is therefore yes. It's absolutely essential in the internal market and we will not accept anything that is proposed to us that has a locking effect. In that regard, we are indeed going to ensure that in our future actions we have the means to ban to some extent any locking that would artificially erect barriers in the internal market.

1-016-0000
Svenja Hahn (Renew). – Thank you very much, Commissioner Breton, for joining our very first AIDA meeting. As you know, the AIDA Committee will be very busy with streamlining the understanding and positions within the European Parliament on artificial intelligence and the data strategy.

For my Group, Renew Europe, there are some key points that we want to ensure when it comes to AI and data regulation and putting the EU at the forefront of innovation. That is, of course, a framework that provides for legal certainty in order to foster scientific and economic innovation and, of course, we have to ensure not to put additional bureaucratic burdens on European start-ups and SMEs, but to empower them in their competition with big tech giants and also, of course, keeping high standards when it comes to consumer protection in Europe.

All these goals we will only achieve if we manage to have European standards for the whole single market. Fragmented national legislation on AI and data can certainly not be an option. For me, of course, it's very important to ensure fundamental rights and data protection. Neither AI regulation nor the data strategy should in any way undermine the rights of our citizens.

Concerning the EU data strategy, therefore, I would like to ask you, Commissioner Breton, how is the Commission going to ensure that the highest standards of data protection for our citizens are not only going to be applied in theory but also in practice and, more concretely, how is the enforcement of data protection against violators from inside and outside the single market going to work? Also, in your opinion, with which measures can we ensure an enhanced level of cybersecurity to protect our citizens and industries? What are the current key problems for our cybersecurity in Europe?

1-017-0000
Thierry Breton, *Member of the Commission***.** – Svenja, first of all, you will certainly not be surprised to hear that I completely agree with your desire to see the European Union become a leader in this field - which is, of course, what we are working towards and is very important - and, obviously, your request that there not be too many bureaucratic constraints for our companies. Above all, you are right to point out that we need to avoid any fragmented regulation that would artificially curb the development of this technology, which, I repeat, is just emerging and whose full potential is as yet unknown.

So how do we actually ensure that there is no abuse, that our companies are protected from unfair competition? First of all, and I am going to say this again, when products are going to be rolled out it is very important to work on the uses, too. Therefore, when products incorporate artificial intelligence applications, we obviously have to be aware of that, we have to know what they involve, we have to know, too, what datasets have been used. We have to be able to verify properly whether they comply with our own regulations so that we do not allow onto the market products - I say products but this can also apply to services - incorporating artificial intelligence applications that do not meet our requirements or reflect our values, as you mentioned. So there will also be important work to be done to ensure that the applications align with our values, for some in particular.

Therefore, it is really ex ante control that we are going to carry out as soon as we are very clear on all of our directives and constraints. I am talking, of course, about conformity assessment in these cases, and, as I've said, if a product isn't compliant, it won't be allowed on the internal market. We know how to do it, and we are obviously going to apply it to these new applications and new uses, which, once again, are highly integrated into specific uses and products. This certainly applies to the abuses you mentioned, the first being anything relating to privacy and, of course, generally, anything that is very important for our values - in this regard, the Chair just mentioned gender equality and the elements that are absolutely essential and fundamental for us - and this applies to cyber risks, too. So there will be some constraints to be respected, and if they are not respected then obviously the product won't be allowed on the market.

Thank you for this question, Svenja, because it is very important; it is a very important topic on which we are working. As I've said, we don't want to erect artificial borders; we simply want to ensure that everyone is aware of our rules and our values, and to ensure that those who want to trade on the single market respect them, and thank goodness. So if they don't respect them, they won't be approved. And the same goes for us, too, here in Europe. So we are working on this every day, and we will, of course, complete our work as quickly as possible.

1-018-0000

Christine Anderson (ID). – Thank you, Chair. In the past, the EU has made frequent efforts to shape the future with its overly ambitious projects. However, it must be said that the list of failures is a long one.

We have the euro, which does not sit well with the differences in economic performance among the Member States. As a consequence, it has been kept on life support for more than 10 years, meaning that in practice it has failed. Then there is the issue of immigration, where the EU is split. When it comes to protecting external borders – insofar as this happens at all – the Member States make their own arrangements, in the case of Hungary often taking a considerable beating in the process. Skilled workers and high achievers are migrating out of the EU while we import terrorists, criminals and benefit claimants, hundreds of thousands of them every year. And now the EU's aspiration is to become even 'greener', but instead it is simply becoming a brighter shade of red, in other words, more socialist. The EU's failure recently culminated in Brexit. The message about the loss of trust could hardly be clearer.

As for the issue of AI, this is another area where the EU has reacted much too late in the day. The current situation is as follows: the US and China have a major head start in this area, while our starting position is lamentable.

So my question to you is this: what lessons – if any – is the Commission learning from past failures, and what might a new approach look like if, for once, the failure seen so often in the past is not to be repeated?

1-019-0000
Chair. – Commissioner, I would certainly not expect you to answer on migration or Brexit, but if you could be so kind as to reply on the artificial intelligence points.

1-020-0000
Thierry Breton, *Member of the Commission***.** – Ms Anderson, I will leave to one side the first part of your comments and move on to the second part, which concerns the AIDA Committee, as the Chair pointed out. I must tell you that I don't agree with your analysis. I don't agree with it as a Commissioner, but also, and forgive me for saying this, as a specialist in this field, because I worked in this sector for many, many years, as you know. So I cannot agree with what you say. I respect what you say but I cannot agree with it.

We are not experiencing any delay in relation to artificial intelligence for industrial applications, and those are undoubtedly going to become the most important applications. As I've said time and time again, industrial data are going to be the most important data. We are the leading industrial continent in the world; we are the industrial continent that is most innovative in these processes, in the digitisation of its factories, in the integration precisely of more automated, more powerful systems, including those based on artificial intelligence. And one of the aims of our work at present is to ensure that Europe stays one step ahead in the area of industrial data and uses the advances allowed by artificial intelligence to go even further.

As regards personal data, which have been discussed at length, I agree but I firmly believe that the regulations that we are proposing allow us to regulate the situation effectively, including respect for the processes and, in some cases, the application of our vital European values, including when designing algorithms for data training. Data are not innocuous: data that come from one part of the planet, if trained, would not automatically give the same results if they came from another part of the planet.

That's why, as I've said from the outset, I believe that, in a number of specific cases that are both significant and sensitive for us, we need to ensure that these data are used in Europe, and that the algorithms that incorporate them and the machine learning that trains them do so in Europe on the basis of datasets that are European or that have been fully validated in terms of complying with our standards and falling under jurisdiction that is - and I am repeating this because it is very important - exclusively and solely European.

1-021-0000
Kim Van Sparrentak (Verts/ALE). – Artificial intelligence and the availability of data is crucial in the EU's energy transition towards renewables. We need AI and data to accurately match offer and demand for renewable energy sources. At the same time, we see that artificial intelligence, but also our increasing data flows in data centres, guzzle up energy. An estimate by the University of Massachusetts shows that the AI training of a digital home system costs 300 tonnes of CO_2. In my own country, the Netherlands, we recently opened our largest wind energy farm. The energy produced by this wind farm, however, is being used for the increasing energy demand of data centres, rather than actually contributing to lower CO_2 emissions. If we choose a sustainable future that is fit for the digital age we need clear rules to ensure our two EU priorities – digitalisation and sustainability are not mutually exclusive. We are in a climate crisis right now. We have no time to rely on voluntary actions by private companies, nor do we have the time to get this wrong. Mr Commissioner, is the Commission planning to take the environmental impact of AI into account in assessing AI applications and infrastructure, and will you consider binding energy standards for these technologies?

1-022-0000
Thierry Breton, *Member of the Commission***.** – Thank you, Ms Van Sparrentak. I must tell you sincerely that this is an issue that I have been thinking about for many years, including, I should say, even before I became Commissioner. You are indeed right to say that we have often talked about the digital sector as being, quite rightly, a technology that was changing our working

habits, that was contributing a great deal to our communities, to the way in which we live together. But I am in a good position to tell you, and you are completely right, that where there is data there is storage, where there is storage there is a server, where there is a server there is electricity, where there is electricity there is air conditioning, where there is air conditioning there is energy consumption, and so we come full circle. So I am one of those - and you mentioned MIT - who said a number of years ago: 'hold on, data processing is generating more CO_2 than all air transport around the globe'. But no one believed us back then.

I therefore agree with you 100%, and that is why the measures we have planned include locating data centres in areas where there is a lot of energy available or where refrigeration, if we can call it that, is less costly. And one of the main elements in this regard are new processors because, as you know, processors use huge amounts of energy, especially during the cooling phase, which is one of the most energy-hungry elements, although not the only one. The applications we are talking about will obviously help to improve our lives and improve humanity, but just as we increase our data use, we need to reduce our energy use. So we need to ensure parallel investment. This is crucial and includes, as I've said, investment in processors to ensure that we have green processors that use much less energy and provide cooling.

We now have technologies, European technologies, with which I am very familiar, that can cool these enormous processors with water: they are immersed in liquid because that prevents us from having to cool the entire room in which they are installed. I mention this example to emphasise the fact that in the recovery plans we are currently working on, I fought hard to have 20% of the resources earmarked for the digital sector but I also said, and I speak to all the Member States, that we are going to develop green technologies and that it is absolutely essential to ensure that the two are linked if we want, for example, this dimension to be integrated when we develop new digital applications.
I believe that this is a very special European characteristic and I believe that we are currently the only continent to take this approach. I am convinced that this is a crucial investment for the future of our fellow citizens, it is in line with the European Green Deal, but it is also an important investment for our businesses and competitiveness because we are going to excel on the global stage, we are the first to do this and we are going to invest significant resources. So before we lay down any rules, we are really in the phase of building the technologies. I also believe that we are seeing more and more self-regulation in businesses, particularly in their annual reports, under the CSA, in which they are now required to indicate their development and deployment of digital technologies, which are going to use more or less energy, and to indicate how much CO_2 they generate: a digital enterprise generates a great deal of CO_2 so it has to do the same as a more traditional industry.

Believe me, I will be at your side in this crucial fight. I am nevertheless relatively optimistic and confident about our capacity to try to keep up with this evolution that is going in two different directions: on the one hand, there is the increase in the volume of data being processed, and on the other hand there is the reduction in the energy it requires.

1-023-0000
Kim Van Sparrentak (Verts/ALE). – In building up this greener technology sector, and seeing the importance of AI and data availability for the energy transition, does the Commission actually see added value in obligatory data sharing in the energy and environmental sectors to speed up our energy and climate transition?

1-024-0000
Thierry Breton, *Member of the Commission***.** – I would start by saying that what we are talking about are the budgets. I would remind you that the Commission has proposed that 37% of the recovery plans be used to accelerate this transition, Kim. That is no small amount. It is 37% of EUR 750 billion and, alongside that, 20% for digital policies. So when the Member States ask me what they can do in the digital sphere, I tell them to include green technologies that are

going to use digital systems and require less energy. That's how I try to link the two and, at the same time, pool the envelopes.

So the answer is: we have set ourselves a real target. We are not naive, Kim. We know all too well that when we talk about artificial intelligence and machine learning, as you said yourself, training algorithms and creating artificial intelligence means training the algorithms for months and months, which requires energy. Therefore, all of this has to be examined in parallel, in perspective. I am extremely happy that you asked me that question because it is undoubtedly a key aspect in the development of standards for green artificial intelligence, such as a, probably voluntary, label for green artificial intelligence, which I very much support. We also need to ensure that eco-friendly artificial intelligence solutions are purchased by us, by the Member States in tender procedures, etc. This is, therefore, a key aspect and thank you for having asked the question because we don't talk about it enough given how crucial it is.

1-025-0000

Geert Bourgeois (ECR). – Commissioner, I listened with great interest to your promising vision of artificial intelligence. With regard to regulation, I'd like to ask you to make sure that we do not impede the development of AI. Regulation must be proportionate. We need to look at what is high risk and what is not, where there are already sector-specific regulations and where there are not.

But I'd now like to touch on our deficit in the area of data. In the EU we are very much lagging behind when it comes to access to digital data. None of the world's 15 biggest digital companies are European. We are seeing a brain drain of scientists and students towards the US, as there they have access to open data of major players. I share your view that we are a global leader in the area of industry 4.0, but we need to ensure access to data.

I'd therefore like to return to an issue that has already been raised: how do you plan to resolve this problem? Do you want, above all, to stimulate our companies? If so, what stimuli do you have in mind to encourage data sharing? Or do you want to work with obligations? And, secondly, how will you improve the flow of talent from universities and research into our companies? The Anglo-Saxon model is superior in this regard, with universities and companies having an almost symbiotic relationship in some cases. How do you plan to stimulate this process?

1-026-0000

Thierry Breton, *Member of the Commission***.** – Your question is clearly the question of an entrepreneur because that is essentially the topic we are discussing. In my view, we have to find the right balance between regulation and incentives.

This is an industry that consists of the repetitive, intelligent use over time of a dataset using intelligent software, which is what we are discussing, that incorporates anticipated outcomes that have been pre-calculated, pre-examined and pre-programmed. This makes it possible, at that stage, to predict outcomes in situations that are more or less identical, or nearly identical, to a specific situation that could be encountered. Of course, it is an emerging sphere - it is known as artificial intelligence, but we could have called it something else - and this is the process that we need to examine. To that end, as you and I have both said, we need to begin by looking at the issue of high risks. We have not talked about them enough here today but I'm sure we will in the future. I am going to talk about them as you have raised this point specifically.

Above all, you want to know, of course, how we can stimulate our businesses. The first thing we have to do is to allow them to access these data and, in particular, as I previously told them, we have tonnes and tonnes of public data that are going to be increasingly public and industrial. The data themselves bring with them extraordinary innovations and, indeed, significant

amounts of these data have never before been available on the market. As you said, given Europe's industrial position, which allows it to generate the largest volume of so-called datasets, these sets of relevant data, we are working to ensure that all European innovators can access them as a priority, including universities, university-generated start-ups and university labs. Like you, I am a strong believer in cooperation between laboratories, researchers, teacher-researchers, who can teach and carry out research at the same time, and being able to make these data available to them.

So when we talk about availability for start-ups and SMEs, I am also thinking about universities, of course, because they play a key role in innovation and they are also an incentive in keeping our young people here: we train a lot of engineers, we train a lot of doctors, and many of them say that, in the end, they want to stay in Europe because that is where they will find the greatest volume of interesting data and data that will allow them to develop innovations.

Be aware, however, that that is not necessarily a given and, to give you a bit more detail, there are technological building blocks that have been used in particular by major platforms in California, which you mentioned, such as TensorFlow, and these building blocks have subsequently allowed algorithm bases to be developed. We should establish these building blocks in Europe. To my mind, that would be a great help in terms of building specific algorithms, so we need to be aware of it.

There's no doubt that we have been slow on the uptake in relation to personal data. We don't need to go over it again, nor do we need to spend our time berating ourselves. It's a reality, we're aware of it and the measures have since been taken, and now we want to ensure that we're in a position to use the industrial data to build our future. We have everything we need to achieve that, including, as I've said and I truly believe, our young people. If we establish a good university-business relationship, which you want to see and I support 100%, then a good future awaits those who want to undertake a doctorate in the academic sphere, but also work part-time in a company. It's our job to mobilise them and I am also working closely with my colleague Mariya Gabriel on this issue.

1-027-0000

Pernando Barrena Arza (GUE/NGL). – Many thanks, Commissioner Breton, for your intervention. In the impact assessment on artificial intelligence conducted this summer, the Commission proposed binding criteria to be respected on high-risk artificial intelligence applications. Meanwhile, several national and local authorities have recommended a ban on facial recognition in public spaces, or emitted strong concerns.

In the face of these recent elements, what's the evolving view of the European Commission on how to regulate some extremely high-risk artificial intelligence applications such as facial recognition, and predictive policing on the strength of facial recognition?

Considering the uncertain results of such applications and their impact on fundamental rights, what are the policy options that you are considering, and what is your current assessment of such options?

1-028-0000

Thierry Breton, *Member of the Commission***.** – No, Mr Barenna, it's an important and sensitive subject, and I just want to say that when we talk about artificial intelligence, we often mean facial recognition or biometric identification. Often, that aspect alone has been highlighted when talking about artificial intelligence applications. Our excellent discussion here today is proof that artificial intelligence extends far beyond that.

Having said that, you are right: it is a topic that is very sensitive, and rightly so. Nowadays in our stadiums and in our cities we have installed, for security purposes - naturally under the

control of the local authorities and, often, the judicial authorities or the police - cameras that allow us to better monitor the flows of individuals, with, here in Europe, one crucial element: respect for personal data. In fact, these data cannot be used for purposes that do not comply with our rule of law.

So I fully understand your question and I would just reiterate once again that everything that is going to be done in the area of biometric identification, including accelerated biometric identification, amplified by artificial intelligence algorithms, will ensure respect for our rules on the protection of personal data, particularly when it comes to the unique identification of individuals, except, as I've said, in specific conditions laid down in legislative acts that are, themselves, specific.

I would make one point to clarify what I mean: you will no doubt have seen in the White Paper that we underlined the specific fundamental rights risks associated with the use of biometric technologies. I am thinking, in particular, of facial recognition because it is the best known aspect, and rightly so. We also began discussions to look at whether the existing rules were sufficient to protect citizens' rights or whether additional common guarantees were needed. I would remind you that these discussions are ongoing. For example, one option could be not to ban public or private use, but to introduce an authorisation requirement.

This point is very important: such uses cannot be allowed unless people are informed of them. Some uses may not cause any harm, especially if everyone is aware of them. For example, as I said, in order to monitor flows of people, gates may be installed in stadiums or, as is already the case, in airports. The interested parties are thus fully informed and know what is going on. These uses are well known. Strict monitoring via the range of regulatory instruments could also be a practical option.

In conclusion, we are indeed extremely aware of the importance of respect for the rule of law. I should reiterate, more generally, that this is undoubtedly a high-risk application, which must be regulated as such. Artificial intelligence is much more than that, however. This is just one example that must be examined very carefully, and for which we have to define clearly the potential high-risk uses and monitor them rigorously.

1-029-0000

Chair. – We've burned through more than half of our session, so I will have to make an executive decision to change the approach. From now on, for the second and the third cycle, we will not have a follow-up question. I would kindly ask you to pack your questions into the two minutes that you have and also, Commissioner, I would kindly ask if you could also be more compact in replying, so that we are able to release you by the time that we promised that we would release you.

1-030-0000

Axel Voss (PPE). – Thank you very much, Commissioner Breton, for being available today. At the present moment, in times like these, we can of course see the digital headway we are making, as well as the need for digital services in response to the pandemic. On the other hand, we also see how dependent we are, particularly on non-European services. And that is something we should not let happen when it comes to AI because, ultimately, this is a strategically relevant factor. We have the potential in Europe, but in my view, it is not enough simply to establish a framework: we must also find appropriate answers to competition and the question of competition, and pool European energies in this area as well.

And that brings me to my questions. How can we achieve this pooling approach so that the Member States work together towards a European goal, just as we have started to do – with GAIA-X, for example – and how do we achieve the knowledge transfer from research and development or science towards practical application in AI itself, but without divulging the

results to our competitors or enabling them to profit from the successes of those who have developed something, while also ensuring that whatever has been developed is not immediately sold to the US or China? How do we do that? It would be nice if we could manage that together in Europe as well.

1-031-0000

Thierry Breton, *Member of the Commission***.** – Chair, I will try to shorten my answers but the topic is so fascinating, and fascinates me so much, that I find it hard to restrain myself. I will try to stick to the time limit you have set, even if this question alone would warrant hours of response as it is at the very heart of our discussions. Mr Voss, the Chancellor, Angela Merkel, summarises your question by the fact that she says, quite rightly, that we now have to establish digital sovereignty on the continent of Europe. That's exactly what we have to do. It's important to be aware of what we need to ensure that everything that we're building is actually built in Europe, and that means the architecture that we're going to build to allow these industrial data to be used, as a priority, for innovation, competitiveness, modernisation and new services for our businesses, especially our industrial businesses but others, too. To that end, we need a number of elements, which we have already set out. You are no doubt aware of them, but allow me to summarise them here briefly.

Firstly, you mentioned GAIA-X, which is an initiative launched by my friend Peter Altmaier and by France, which subsequently got involved. Today, GAIA-X now extends throughout all of Europe. It is on the basis of this work that we decided to launch a European Cloud Alliance and, in particular, an industrial cloud alliance, to allow industrial clouds with very specific characteristics to be set up. This is much more complicated than setting up a cloud for personal data because very precise latency is needed. Responses are needed within a millisecond, sometimes even less. Moreover, industrial data also need to have extremely rigorous cybersecurity and protection criteria in comparison to those applied to personal data. No one really does this anywhere in the world today. We will be the first, as soon as we have the corresponding resources. That is the aim of the alliance, which may produce a PCI acquis, which would then receive public funding from both the Commission and the Member States. I am very committed to this topic because it allows us, precisely, to respond to one of the aspects of your question.

Secondly, as I've said, there can be no autonomy or digital sovereignty if we do not in some way harness high-performance processors that are entirely controlled by us, without suspecting them of I don't know what, by I don't know who or I don't know how. Clearly, that requires digital sovereignty and, therefore, the corresponding capacity. We have scientists, engineers, the university world and the business sector, but we also need political will and resources, resources that will also develop in Europe a processor industry that is more autonomous and more competitive. I have no doubt that those are the important data for which an alliance would be welcome. We have discussed it with the Chancellor and I know that she, too, is committed to this issue.

The third aspect is that of connectivity and ensuring that both individuals and businesses have broadband access no matter where they are based in the European continent. A constellation of low earth orbit satellites would solve this, including with transmission security criteria permitted by quantum technologies. The resources are as follows: funding (RFF, recovery plan, EU budget, Member State contributions), but also industrial and technological commitments, which I have just mentioned, as well as a regulatory framework, which is what we are currently preparing, with the Data Act, the DSA and the DMA. These will enable us to provide a framework for this activity, for us here in Europe of course, but also for those who come here in the future. Our continent is not closed but we want those coming into it and those we welcome, as we should, to respect our rules. All the more reason to ensure that our rules are

clear! We are working on this and we will present these proposals to you on 2 December, as you know.

1-032-0000
Miapetra Kumpula-Natri (S&D). – Thank you, Commissioner, for sharing your ideas and time with us. We will mainly be working here on the documents already provided by the Commission, also on the data strategy.

We want to have more data flows in Europe, but can I continue from the previous question and ask whether you can elaborate more on the fact that we also have European industries that have a global service sector, and they need to take up flows also internationally. We do not want Europe to be the continent of forest data storage here, but we want to create an ecosystem. So if you want, you now have time to elaborate more on how you see this part.

Also, for more data to be shared from government to business – business answered yes, good idea, but from business to government they are hesitant – when I talk to stakeholders, they are different sizes and they always laugh that the smaller one is in the worse situation. So do you want to elaborate on the ways that there are rights for data access when it is cogenerated, so that the tractor owner can also know about their own driving and possibilities to improve their usage and so on?

I must take my second question now here, as last weekend in Finland there happened a hacking in the system of a psychological centre, and it might affect 40 000 patients. The people who used the therapies are now outraged at being blackmailed and made to pay Bitcoins or their data will be published. I'm very happy that the response was that we do accept people searching for help for their mental needs, but then at the same time we don't know how seriously their personal log-ins, emails, data, social codes are then a threat.

So do you, Mr Breton, think that the GDPR is enough or is there something more we should do – not only the threat of the 4% fine of global turn-out, but should there be more rules to prevent?

1-033-0000
Thierry Breton, *Member of the Commission***.** – Thank you, Ms Kumpula-Natri, for your question. I will start at the end of your comments. No, the GDPR is certainly not enough to protect our data from attacks and cyber-attacks. There is no doubt that cyber-attacks are carried out every day: you just referred to an absolutely tragic and shocking case involving personal and intimate data and blackmail.

I have in the past seen numerous situations like this, stemming from the fertile imagination of the gangsters operating in this area. That's why we are working on a European cyber shield, which we will present to you. This act will complement what we are discussing and should provide a great deal more protection for the Union, with European SOCs, or Security Operation Centres. These will be spread out across Europe and will be centres where all weak signals will be analysed, even before an attack takes place, with a view to preventing it. I will talk to you about this on another occasion because it's a subject on which we are working very closely in parallel. As you can see, we are laying down many foundations at the same time so as to be able to begin organising, structuring and even regulating our information space, within which all of this takes place. Artificial intelligence is just one aspect of the services deployed in that space.

So the answers to your questions lie not in what we are doing in terms of artificial intelligence, but in everything that we are doing to protect our citizens and our businesses in that information space. When I talk about protection, I mean protection from cyber-attacks, which you mentioned, and from predatory behaviour. That is, in particular, where the DMA comes in as it will allow us to reorganise the market in order to prevent the appearance of major actors and

the effects of predatory behaviour on the market, monopolies and bottlenecks, in other words gatekeepers. That is really what the DMA is about.

The DMA will give you more detailed answers to your questions. Moving on to the question you raised before talking about cybersecurity, the Data Act will lay down the framework for the type of sharing you mentioned. It will be presented in 2021. It is obviously a delicate subject, which requires a framework. We won't be able to do everything.

For example, data on mobility in a city, which transport operators could share to improve urban and sustainable mobility, can be used and shared, but not if they reveal the journeys of individuals. We need to be able to use the data but also guarantee anonymisation. That is the very principle of the Data Act. I won't say any more because I'm out of time, but please know that we are working on this with your concerns in mind.

1-034-0000

Susana Solís Pérez (Renew). – Thank you, Commissioner Breton, for attending our meeting today.

Data is the key element in artificial intelligence, and digital innovation depends on the availability of access to large databases in the public and private sectors. Data is also the fuel for start-ups and SMEs because more data means that it is easier for entrepreneurs to test their products, innovate and offer disruptive technologies to the benefit of European consumers. However, for this to happen, technology developers must be able to access high-quality datasets.

As you have said, there are still many obstacles to European leadership of the data economy, mainly the fragmentation of Member States and the lack of interoperability and of a data infrastructure. This is evident in just one figure: currently, only 12% of SMEs use big data analytics, although this figure should have been 50% in 2015.

I would therefore like to ask you for more detail on how we can guarantee that our start-ups, SMEs and entrepreneurs have easy access to data. Do you see any risk in saying that data must be stored and processed within the European Union? Do you think that this could, to some degree, prevent start-ups from growing and scaling up within the European Union?

My second question is on regulatory sandboxes, which are a very valuable tool allowing start-ups and other innovative businesses to reduce the cost of innovation and eliminate market entry barriers. I would like to know what the Commission is doing to promote regulatory sandboxes for start-ups in artificial intelligence.

1-035-0000

Thierry Breton, *Member of the Commission***.** – Thank you, Susana, for these questions, which I'm not surprised to hear from you and which to a large extent relate to SMEs. This is undoubtedly a crucial subject and I have already spoken about it a great deal. You are right about the figures: 12% of SMEs use big data, which is clearly not enough. We have to make progress in this area, and that is precisely the aim of our actions in DG GROW on the deployment of digital technologies for SMEs. I don't want to spend any more time on it now but we will certainly have the opportunity to come back to it. It is obviously a major area of concern, including when I analyse the recovery plans of the Member States with a view to ensuring that a significant proportion of the digital funding goes to SMEs.

I would just like to return to a specific point because it is important: it's the point you made about regulatory sandboxes in the field of artificial intelligence. I would remind you that during the public consultation that I mentioned earlier, many businesses from Member States expressed their support for regulatory sandboxes in that sphere because they are a good way to

create a secure space for innovation, while ensuring regulatory oversight and the development of artificial intelligence, and, above all, reducing the associated risks. So we very much want to go in that direction.

We are working to promote them and hope that the future legislation will be implemented. It will allow us not only to analyse and to propose these specific sandboxes, but also to encourage cooperation between regulators in each sector (you quite rightly mentioned data protection, consumer protection and market surveillance) and to foster cross-border initiatives.

I repeat: there can be no artificial intelligence at European level without the free movement of data within the internal market. I firmly believe that these are some of the elements that will allow us to ensure dynamic development of SME initiatives, because you are right: SMEs, like all economic operators, will have to start digitising their applications and their services, and start using these applications to help them grow.

1-036-0000

Chair. – I am again looking at my watch and I am again pressed to make another turn in the rules. We are starting the last cycle, going through all the groups. Since I know that you only have 20 minutes left, Commissioner, available to be with us, I would propose that we will actually take all the colleagues in the final round with their questions and that you would reply at the end, trying to also sum up in your replies with your final thoughts and remarks. I'm sorry that we have to do it this way, but I don't see how else we can go through the list, and I think it's important that all the colleagues who wanted to speak today get the chance to ask their questions. So with that, I will then go through the remaining seven colleagues and ask them to ask their questions. Commissioner, if you could note down the questions and then give your block answer with your final remarks.

1-037-0000

Thierry Breton, *Member of the Commission***.** – Yes, Chair, I'll do that and I am happy to talk to your committee again if you need more time. So let's agree to continue our discussions at a later date because this is a fascinating topic.

1-038-0000

Sven Mikser (S&D). – Thank you, Commissioner, for being with the Committee. You have spoken at some length already about high-risk areas and high-risk data and applications. I have a question about a particular policy area – that's defence and security.

The Committee on Legal Affairs report on the ethical aspects of artificial intelligence identified defence and security as a whole as a high-risk sector and autonomous military systems as high-risk use, for a high-risk purpose, which would entail risks of breaches of fundamental rights and safety rules.

As the White Paper by the Commission signals, we should have a stricter approach to high-risk areas, and there is a labelling scheme proposed which would distinguish between high-risk and low-risk areas and would offer just a voluntary labelling scheme option for low-risk sectors and areas, but my question is would you consider labelling the whole defence and security area as high risk?

Connected to that, another question. Given the somewhat stricter approach that the European Union has adopted, and the somewhat stricter-view risk-based approach to artificial intelligence in general, how do you mitigate the risks for the competitiveness of industrial sectors, including the defence industries, compared to those countries that adopt a more lax or less strict approach such as China, or possibly the United States?

1-039-0000

Anna-Michelle Asimakopoulou (PPE). – Chair, Commissioner, thank you for being here today.

Having recently had the honour of speaking with you during the launch of the European Raw Materials Alliance, I know that we share the same conviction about the importance of the European Union having broad strategic autonomy. The amount of data generated by human activity doubles every 18 months. Our capacity to produce, collect and process these massive amounts of data will be decisive for the future of artificial intelligence in Europe.

Commissioner, you have stressed on a number of occasions that one of the three pillars of European digital sovereignty involves developing an ambitious European approach to data, which must be processed and stored in Europe, in a sovereign cloud. You have also stated that sovereignty is not about being isolated, but is intended to ensure that anyone investing or operating in Europe observes our rules and values.

As an MEP in the PPE Group, I am clearly in favour of competition and open markets.

As a Greek MEP, I am clearly in favour of any investment in Greece that contributes to our national economy and to the development of our country. Recently, our Prime Minister, Kyriakos Mitsotakis, announced an agreement with Microsoft for the creation of a cloud storage infrastructure with three data centres, an investment of one billion euro and training programmes for 100 000 citizens.

So, Commissioner, my questions are as follows.

How will European digital sovereignty, which supports and invests in initiatives such as GAIA-X, be compatible with a market open to competition?

What will happen to the data centres planned in Greece? Based on the principle that we observe our rules and values, how can this investment in national territories coexist with initiatives such as the cloud and the exchange of European data?

1-040-0000

Jörgen Warborn (PPE). – Thank you, Mr Commissioner, for coming here today. Over the last week, I've spoken to a number of stakeholders and one problem they all have in common is the absence of legal predictability. It is impossible to get a national agency to make a preliminary assessment giving a green light to the use of data in a certain way. Instead, SMEs or businesses have to wait for an afterward inspection, risking heavy fines if they don't use the legal ways correctly.

This, of course, creates massive uncertainty. This gets even worse if you try to migrate data between Member States because then you have different national agencies. Unfortunately, faced with the risk of substantial fines if you do wrong as an SME, you don't dare to follow up on your business idea.

This, of course, has to change. I would like to hear from you, Mr Commissioner, how you would solve this problem. Do you support the idea of creating a guidebook on an EU level on pre-approved procedures for start-ups and SMEs, on how they can handle the data? What is your road map to make sure that SMEs and start-ups can be competent enough to innovate on data?

1-041-0000

Alessandra Basso (ID). – Chair, ladies and gentlemen, Commissioner, I'll try to be as brief as possible. Data analysis using artificial intelligence-based algorithms will profoundly revolutionise many service sectors in ways that are not always easy to predict. Take, for example, the insurance sector. Sharing and distribution of data collected from smart devices, such as those in cars, but also in the home, from kitchen appliances to fitness equipment, will allow almost perfect profiling of an individual citizen's insurance risk.

This means that we would have motor insurance polices that might change depending on the daily journeys we take, or health insurance based on the quantity and quality of exercise we take and what we eat, our dietary habits.

These trends might seem quite appealing to the big insurers, as they would remove a considerable amount of the uncertainty involved in their work, but they might also lead to significant disparities in a number of basic services that are increasingly in demand, such as life and health insurance.

So what would be left of individual freedom if every life choice could be priced and evaluated, potentially affecting an individual's access to a given type of insurance that might be essential for obtaining effective healthcare?

Perhaps legislative limits would need to be introduced on such pricing systems, setting upper and lower limits on the degree to which prices can vary based on the data analysed.

I would therefore like to ask the Commissioner whether there are plans to avoid excessive personalisation based on artificial intelligence in any future legislation on insurance systems or other similar services.

1-042-0000

Marcel Kolaja (Verts/ALE). – Thank you Commissioner for coming, as well as for your introductory speech. I have three questions on behalf of my political group.

First, the high-risk, low-risk approach to artificial intelligence is of great concern for our political group. We don't find the two categories sufficient to address the whole range of risks and would like to understand how the Commission wants to ensure sufficient flexibility in the European approach to artificial intelligence in order to protect citizens from potential abuses in the use of artificial intelligence?

Second, in the public consultation on artificial intelligence that you spoke about, citizens expressed their concerns regarding deployment of facial recognition and other remote biometric identification systems in public spaces and called for legislative action in that matter. How will this finding be reflected in the Commission's further work?

Third, based on the Commission's work programme for 2021, the only foreseen initiative specifically relating to artificial intelligence is the data act. To what extent do you intend to use the upcoming data act to introduce rules on training data sets for development of AI algorithms and to facilitate access for start-ups, SMEs and researchers to training data, which may often be collected and held by dominant market entities?

1-043-0000

Kosma Złotowski (ECR). – Good afternoon, ladies and gentlemen, good afternoon, Commissioner. I have two very quick questions. Firstly, if technology is a race, Europe is right at the back of the pack. China and the United States are at the other extreme, and there's no way for us to catch up with them. The issue is partly to do with investment levels and partly, to put it bluntly, to do with significant liberties as regards privacy and data processing. Against that background, are there any niches in the wide range of sectors the Commission is focusing on where we do have a technological and business advantage? Many European companies are global leaders in manufacturing drones or public transport systems, for example. Does the Commission have any ideas for maintaining our edge in those sectors through appropriate investments in the new financial perspective? That is my first question. My second is this. We're all living through a pandemic. Many countries have rolled out the ProteGO Safe app, but it is only effective when used en masse. At the moment, I get a notification telling me that the app may not work in other Member States whenever I leave Poland. Is there already a plan to

bring all these apps and the data from these apps together in a single app that would work across the EU rather than only in certain Member States, with each Member State adopting a different solution?

1-044-0000
Andrus Ansip (Renew). – My question is about edge computing. It is noted in the Commission's Communication that 80% of the processing of data takes place in the cloud and 20% in smart connected objects. It was also mentioned by yourself, Commissioner, that the share of edge computing will increase rapidly, and that it will be 80% by 2025. Analytics in the cloud is becoming a complement to analytics on the edge. However it seems to me that this Communication is more focused on the crucial share of traditional cloud and less on the rapidly increasing share of edge computing, which is mainly mentioned when talking about investments.

Thus to my questions. Do you think we have to pay more attention to the rules on how we can move our questions to the edge, where data is generated, and what exactly is the Commission planning to do to foster better processing and analysing of data on the edge?

1-045-0000
Emmanuel Maurel (GUE/NGL). – Chair, this is indeed a strategic debate, and I personally very much appreciate Mr Breton's optimism and proactive approach. However, I feel that we still have a long way to go to achieve digital sovereignty, because what I primarily see is a large degree of dependence and subordination.

There is one aspect that we have not discussed enough today: Europe's attitude to GAFA and their superpowers. They are already technologically and infrastructurally advanced and are in a dominant position. In the United States, the House of Representatives is currently discussing the possible dismantling of these structures. I wonder when we will do the same in Europe and, although we must do this, how we will do it. Are we going to choose a functional basis or a territorial basis? These are questions that seem absolutely vital to me.

I would go back to the question of ethics, because we have adopted an important text on the ethical framework of artificial intelligence. However, this framework is supposed to be applied as a priority within each Member State, with the European level being content to coordinate the national authorities. And therein lies the problem. Without uniform application throughout the EU, what is there to prevent a Member State from carrying out what can be termed 'digital dumping', by certifying, in accordance with European ethics, artificial intelligence that infringes our fundamental principles?

Under the guise of tackling bureaucracy, we have allowed this risk to be taken. I feel that this is a problem and I would like to hear your opinion on the question of the European authority responsible for artificial intelligence and on the extent of its regulatory powers. This is an issue that I feel is important, although I know that ethical issues often take second place in our debates, behind economic and industrial issues.

1-046-0000
Chair. – Commissioner, we have finalised the list of questions. There are many topics in the final round, which I would kindly ask you to wrap up and then to connect with your final remarks, understanding, of course, that we will use further occasions to invite you to our committee and go a bit deeper and in more focus on some of the points that were discussed today.

1-047-0000
Thierry Breton, *Member of the Commission***.** – Chair, I will try to be brief.

Firstly, I want the situation to be very clear, Ms Asimakopoulou: we are of course open to all investments, if they comply with our rules.

You referred to a large company that is going to set up in Greece. We are pleased about this, but it must comply with the rules and guarantee to European businesses that it will comply with the European rules on data processing, and – let me tell you something – only the European rules: no other rules and no other legislation. I know this is feasible and possible, and that companies can do this, provided that we remind them. So they will be welcome.

The situation is therefore very clear: we are not closed, we are open, but we have rules and we ask that, when it comes to protecting, safeguarding and securing the data of European businesses, and even European governments, or health data, that this data does not leave the European territory without its owner's knowledge. Once again, this is possible.

As regards high-risk defence and security applications, clearly the most important point is the general ban, as you know, on anything to do with killer robots and artificial intelligence applications used for that purpose.

I would say, once again, that what we are doing does not involve defence. However, despite that, I would like to give you some examples of where artificial intelligence applications in the defence area are very important.

We were talking just now about cybersecurity and the use of extremely powerful artificial intelligence algorithms to detect weak signals. Did you know that between the time when a logic bomb – or ransomware or similar – is installed within a piece of software and the time of its detection takes something over 200 days? You can therefore imagine the damage that it can cause.

We need algorithms. These already exist in the area of artificial intelligence, particularly in SOCs that are able to identify the locations of weak signals and that can now detect the signals themselves, precisely due to artificial intelligence, in just a few hours, or one or two days at most. You see the difference. The same is true for everything that can protect our airspace, and so on. We must therefore, once again, make a distinction. We are not talking about this now, of course, but I just wanted to make this short digression.

As regards the legal uncertainty for SMEs, which does exist, I am obviously in favour of drawing up a guide so that SMEs can find a way through and get support. The SME Envoy will be available to them, together with all the digital SME hubs, which will help them on the ground. This is an issue on which we are working. In particular, we are working with DG GROW and DG CONNECT so that we can assist SMEs.

As regards insurance, which you mentioned, Ms Basso, the example you gave is precisely a high-risk application that must – you are right – be fully controlled. Data on health personnel, careers, etc. is personal data, which, incidentally, is already covered by the GDPR. So we already have various levels of protection. However, if such data ever had to be used for other purposes and without our knowledge, that would be a high-risk application and would be qualified as such.

Since we are talking about high-risk applications, Mr Kolaja, let's look at one particular point with regard to these applications, because this was an important part of your question.

Firstly, there are certain uses of AI that we will ban, because we don't want to see them in Europe. I am talking about manipulative, addictive and misleading applications, which also aim to establish a social base that we clearly regard as contrary to our European values. I have already talked about this and I will say once again: such practices are harmful and will be

banned *ex ante* for any producer, or non-producer for that matter, in the area of artificial intelligence.

However, in those instances where high-risk artificial intelligence is used, we will not ban that use, but will just impose – and I would reiterate this – certain requirements with which the artificial intelligence system must comply, as well as obligations for the supplier and user of the system, in order to mitigate those risks. We regard as high risk, for example, any artificial intelligence system that is a component of the security or performance of the product and device. Such a system will be subject – as I said just now – to a conformity assessment by a third party. This is particularly the case with cars, machinery, etc.

As for other artificial intelligence systems, we will list their limited instances of use in an annex, with the possibility, of course, of amending that list dynamically – given that it must evolve over time – using delegated acts so that technological progress can be taken into account. For example, killing or physically injuring someone, damaging property, etc. are aspects that could be taken into account, as you can well imagine.

I thus wanted to say on this subject that, based on the evidence gathered, the initial list of high-risk uses could include uses such as – and these have already been mentioned – the biometric identification of individuals, artificial intelligence systems that independently manage supplies of water, gas, electricity or any other fluid of that nature, the emergency dispatch of first-response services, recruitment, assessment of decisions on credit applications, allocation of social benefits, everything to do with health as a whole, applications of the law, legal systems, etc.

This will therefore be an extremely important aspect of the work in 2021. I just want to make a small correction to your comment. The work programme for 2021 does include a legislative act on artificial intelligence. Given that this was already in the work programme for 2020, it does not explicitly appear for 2021, but it is there, which should reassure you.

Next, with regard to the technological benefits, Mr Złotowski, yes, we will see technological benefits, and yes, we will have the means to finance them: EUR 150 billion, i.e. 20% of EUR 750 billion, will be earmarked for digital technology. We will ensure that this investment is used to increase both competitiveness and investment for all those involved in the digital field.
With regard to the COVID-19 applications to which you referred, in the Commission we have developed a gateway that now allows these applications to be harmonised across the various European countries. So far, 19 countries have already accepted this gateway, which means that in 19 European countries, when you have an application from your country of origin and you cross a border, the data remains accessible and you know exactly what can happen with regard to any contacts that the application detects and the associated information. Other countries will come on board; this is already planned for three countries in particular.

So I believe that we are doing is what you are calling for and I am pleased to have been able to share this information with you.

Mr Ansip, you are absolutely right: edge computing is a revolution in that information is increasingly being processed locally, wherever it is created. It is about switching from a cloud or centralised data centres to on-site management of an increasing amount of information. This information must therefore be processed using decentralised artificial intelligence applications on what you rightly call ‘edge computers’. There must be decentralised clouds or mini-clouds for that purpose. This is precisely what we want to do with the industrial cloud alliance. They are not huge centralised clouds. There is a correspondence or relationship between the centralised clouds, which will update every day or every hour, and the extremely specific mini-

clouds, which are located close to the data creation, reception and intervention sites, with specific KPIs, decentralised computing power (edge computing) and artificial intelligence algorithms that will have been created for specific applications. This is precisely what you said will happen and this is what we are preparing for, particularly through the industrial cloud alliance.

Lastly, Mr Maurel, as you had the kindness to speak in French, like myself – just this once as I don't normally do it – perhaps you are an attentive reader of the French press? If so, it will not have escaped your notice that, last week, I talked very specifically on the subject that you mentioned in *Le Monde*, where I explained what we are going to do, particularly for large platforms and particularly in the context of the DSA and the DMA. If you read the article carefully, you will know that I don't believe that our hand is shaking. Once again we must – as is normal – organise, structure and regulate our information space. This is the precise aim of the DSA and the DMA with regard to abuses of dominant positions.

Lastly, ethics are indeed part of the rules and values that comply with our rule of law. As a result, the conditions of compliance will be harmonised by limiting the risks of forum shopping, i.e. the practice of driving to the bottom: on the contrary, in the case of the DSA, we will harmonise our way of working together.

Chair, thank you very much for the time that you have allowed us. Clearly we could have gone on for much longer as there are many things to say. However, I have really appreciated this exchange because you are all very well-versed in these issues. I can only repeat what I have already said: if you would like us to continue this exchange, I would be happy to do so.

And I will say once again: our rules will be proportionate and will control high-risk uses. I have given you some examples of this. We will do everything we can to avoid fragmentation.

I would be happy to continue these exchanges with members of your committee. Once again, I really appreciate the work and time that you have given to this extremely important subject and the interest that you have shown and that I share, as you will have no doubt noticed.

1-048-0000

Chair. –Thank you very much, Commissioner. You spoke with passion earlier when giving your replies. I think you have noted already that we share that passion here in the committee and that's what, I think for all of us, drove us in joining this committee and joining this work on artificial intelligence. Thank you again for your replies, for your patience. We will, of course, invite you for the next occasion where we will go a bit more into focus on some of the items that we've discussed today.

Knowing that also the interpreters have to leave, we'll have to stop here. We will resume tomorrow with a second discussion that we have with Ms Margrethe Vestager, Executive Vice-President of the Commission, for one hour, and then one hour with the OECD's Director for Science, Technology and Innovation, Mr Andrew Wyckoff.

I would like to thank the technical team for helping us deal with all the difficulties of today, and the interpreters, of course, for staying with us, for bearing with us, and the Secretariat-General for preparing this meeting. We will adjourn until tomorrow.

(The meeting closed at 17.57)

SPECIAL COMMITTEE ON ARTIFICIAL INTELLIGENCE IN A DIGITAL AGE (AIDA)

Exchange of views with Margrethe Vestager,

European Commission Executive Vice-President

* * *

Exchange of views with Andrew W. Wyckoff,

OECD Director for Science, Technology and Innovation

TUESDAY 27 OCTOBER 2020

1-002-0000

IN THE CHAIR: DRAGOŞ TUDORACHE

Chair of the Special Committee on Artificial Intelligence in a Digital Age

(The hearing opened at 13.46)

1-003-0000

Chair. – Good afternoon colleagues and good afternoon also to Executive Vice-President Vestager. This is the second formal meeting of our committee after the one yesterday where we had a very intensive two-hour exchange with Commissioner Breton. We went through a lot of the issues which are not only dominating our political agenda but also pretty much part of the concerns that we have as Members of this Parliament when it comes to the development of artificial intelligence and the context in which this development, this evolution is taking place.

Today's agenda has two items, each with a one-hour slot. As we also did yesterday we will try to maintain as good discipline as we can to be able to fit into these slots. The first slot of one hour is reserved for the exchange with Executive Vice-President Margrethe Vestager and the second slot is for the discussion with the OECD.

So I will start by submitting the agenda for your approval. If I don't hear any reactions from any of you I would consider that we have this agenda adopted and we will move straight to the first item on the agenda, which is the exchange of views with the Executive Vice-President.

I will very quickly go through the rules for this exchange, with a slight deviation based on the lessons learned yesterday. I will not allow follow-up questions for the simple reason that we will not be able to go through the list of ten speakers that we have listed for today and still fit within the hour. So I would kindly ask that you concentrate the questions that you want to ask Executive Vice-President Vestager within the two-minute slot that is allocated to each speaker, and then Ms Vestager will have two minutes to reply to the question. We will start with an opening address by Ms Vestager, which will take ten minutes, and that should then leave us enough time for some closing remarks as well.

So with that I welcome and give the floor to Ms Vestager for her first appearance in front of this special committee. Margrethe, you have the challenging task of setting the strategic course for the European Union's very ambitious digital agenda during this political mandate. I would like to think that you regard us as a partner for this very challenging course that you are setting, particularly for the strategic elements which are the focus of your work, because this is how we regard our input as well – slotting ourselves in complementary to what the other standing committees are doing in his House and trying to connect the dots. This is what we are aiming to do in this committee and part of the exchange that we will have today, I would like to think, is very much about connecting the various topics which come under the broad umbrella of artificial intelligence in the digital age. So without further ado, Executive Vice-President, dear Margrethe, the floor is yours.

1-004-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – Thank you very much for this warm welcome and for inviting me. I'm very much looking forward to the cooperation with your special committee. I indeed view you as a partner.

I think as policymakers we agree on the importance of artificial intelligence for Europe's not only future economic prosperity but also for how our society can flourish – how we can make sure that citizens feel that they get services and that our society has the functionality that it

should have. This is because artificial intelligence can be a very precious ally in solving very pressing issues.
The obvious thing, of course, is the pandemic that we're in right now. AI can be used for the quest for vaccines. It can be detecting disease patterns in medical imaging. It can be calculating probabilities of infections or in emergency response with robots, replacing humans in very high-exposure environments in hospitals.

But obviously the benefits can be much, much broader. A recent nature article found that AI can help us accomplish 134 targets across all sustainability-developing goals, including improving health and the quality and access to education and making our cities safer and greener. On top of that, artificial intelligence also has the potential to accelerate Europe's economic growth, a McKenzie study back from 2018 estimated that AI could deliver about 16% higher cumulative GDP by 2030, or about 1.2% additional GDP per year. That is actually a lot. I think the spread of IT in the year 2000, that gave 0.6% per year. So this is actually double, the effect of artificial intelligence. Many businesses are already now seizing the opportunity to integrate AI, covering the full spectrum of the economy from transport, self-driving cars, electrical grids, AI to detect fraud – it can detect fraudulent manoeuvers. When it comes to agriculture, you can integrate it better to improve the way that you manage your soil, the use of fertilizers and pesticides. So there's a lot of potential, and I think it's very, very important not only to keep that in mind but also to act upon it, that we make sure that we have sufficient funding, that we get the projects out there where we can see them, that we have the research and development and deployment willingness in order to do this because, obviously, what will be on the top of the minds of people like me and you as legislators will be to address the costs, because for all these positive ideas there is another side of the coin. There is the risk of cost.

Here, it's not only people and businesses that could be adversely affected, but it could also be the planet in itself because of the carbon footprint of training or deep-learning models. A recent study found that the carbon footprint for the training and deep-learning market for a car can be five times worse for the planet than the lifetime emissions of a car. So it's very important that we call for a sustainable way of building the technology with renewable energy resources, such as computing and innovative sort of 'small data' machine-learning techniques and dispel this idea that big data is always, always the way forward. That may actually not be the case.

We have a couple of closely-interlinked initiatives to deal with this. We have the EU data strategy aimed at creating a real single market for data. We have the White Paper on AI aimed at creating an ecosystem of excellence and an ecosystem of trust. The two things I think will work very well together, but of course there is some balancing to do here and the point of that is of course to make sure that we develop and use human-centric artificial intelligence that is rooted in the way European societies work, in the values that we have built on societies on.

Let me say just a few words about the ecosystem of excellence. This is already factored into the coordination action plan on AI and should enhance our research capacities, with excellence centres linking this to businesses, which should benefit from increased investment – we should push for over 20 billion per year over the next decade – and dedicated support, of course, from digital innovation hubs. Reskilling and building new talent from basic to advanced levels across all sectors and, of course, building the necessary infrastructure from major improvements in connectivity and interoperability, to investment in super computing and in building the necessary testing and experimentation facilities. Of course, the discretion of data is completely integrated here. I know you had a very intense exchange with my colleague, Thierry Breton, exactly focusing a lot on the data issue.

But the second thing about the ecosystem of trust is to say that all this potential will not be unleashed if we cannot trust the technology. No business will adopt it if they fear legal uncertainty, liability risks, lack of control over it, if they think that it's unpredictable or there is

the famous black box problem. This is why we have this idea of an ecosystem of trust with clear, predictable rules for the development and the use of AI that is at high risk of threatening fundamental things when it comes to safety or fundamental rights, while of course still enabling cross-border responsible innovation within our single market.

As you know we consulted on this in the White Paper. More than 1 200 contributions came in, and I am also very thankful to the European Parliament itself for the own legislative report on AI – and be sure that the recommendations will be carefully considered in preparation of the proposal that we will submit in the beginning of next year. But still, not all problems can or should be solved by legislation only. We also need a long-term vision for 2030 and beyond, and I think that is one of the things that makes the mandate of this Special Committee so important, to set the right long-term priorities and the numerous sectoral policies of the EU that should simultaneously be adapted.

I look very much forward to the cooperation in the months ahead and I think indeed that we can together make a very valuable contribution to the development of our societies by not only using indexes to see what we have achieved, but also to set the goals as to where we want to go. So I'm very much looking forward to this exchange. Thank you very much for this invitation.

1-005-0000

Chair. – Thank you very much, Executive Vice-President. That was a very good scene-setter for the conversation that we're going to have. I will start with the coordinators. First, I would remind you of the rules: two minutes for your question; two minutes for the answer. Please try to respect that so that we can go through the list of ten interveners that we have today and can finish within the time allocated. We will start with the EPP – Eva Maydell, coordinator for the EPP, the floor is yours.

1-006-0000

Eva Maydell (PPE). – Good afternoon, Executive Vice-President. Very happy to have you with us. I'll jump straight to the question as time is very limited. In the White Paper you discussed a lot about creating the ecosystem of excellence, which you also mentioned today, and the ecosystem of trustworthiness. In our group we very much believe namely in the ecosystem of trustworthy AI that will set Europe apart from the rest of the world and make sure we are, so to say, the trend-setters in this domain.

Bearing in mind the shrinking economies in Europe, specifically now during the pandemic, and the very tight budgets that universities and private companies are already experiencing and will have, has the Commission re-evaluated its plans on how precisely to make sure the diffusion of knowledge and innovation will help society and economies to try out, and in this respect manage to create, this ecosystem of AI excellence?

1-007-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – Right now it is kind of tricky exactly to evaluate, assess the effects of the pandemic. The thing is that so far we still think that in the economic response to the pandemic, to deliver on that, on the ground, it would be an enormous help.

Just the fact that the European Central Bank has been very active from the very beginning of the pandemic, the fact that we got the leaders to decide on our NextGenerationEU, that Parliament is now intensively discussing with the Council to agree both on the long-term budget and on the Recovery and Resilience Facility, that in itself I think brings a lot of comfort into our economy that we have the means to invest.

Also, we still have quite a lot of liquidity that is looking for investment opportunities. If you see how the stock market is still exploding, you'd see that looking for investment, well there's

a lot of capital that does that. This, of course, is a great motivation to find ways for when we do public support to crowd in private investment, because only in that respect can we reach the goal of investing 20 billion per year in artificial intelligence.

I definitely don't think that we should give up that target right now because we really need to increase it if we want to do as we agree on for Europe to be a leader when it comes to enabling trustworthy AI.

1-008-0000

Ibán García Del Blanco (S&D). – I would like to thank the Executive Vice-President for being here today, and I also want to particularly thank her for her comments in the last plenary session on our proposal on artificial intelligence.

Parliament has already been working for some time – and not just in the Committee on Legal Affairs, which has been working, and will continue to work, on this subject – on a range of aspects connected with artificial intelligence. Against that background, and given that we will need to look in detail at how the rules are developed, we would like the Commission to present a regulation that ensures public confidence and security and, at the same time, of course, encourages the innovation and investment in this sector that it needs.

Yesterday, Commissioner Breton also attended our committee meeting and made reference to the data governance proposal, which has been termed the 'Data Act'. In this respect, I would like to ask the Executive Vice-President if she, too, considers that all ethical principles and rules must apply to the entire phenomenon associated with the digital strategy, in other words, to data, algorithms and software. Does she consider that all artificial intelligence technologies that need to be used here in the European Union, depending on the risks and harm, should be subject to these minimum ethical principles and rules?

My second question, which is very closely related, is this: what does the Commission think it needs to do and what will it do to ensure that citizens gain confidence in the technological development of artificial intelligence and become democratically involved in its development?

1-009-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – One of the things that we learned from the public consultation was a lot of concern, unease with this sort of dual approach, where would we would say that a number of sectors and a number of use cases was sort of the scope of, and what kind of AI would be within, this legislative endeavour.

We took due note of that to say well maybe we should focus on use cases, because it's very important that technology that a lot of people will be exposed to, like technology used when hiring. No matter if you are hiring for a job in a supermarket or you're hiring for a job in the Commission or in a school what you don't want to be faced with is discrimination. So it's important that the use cases where there is a risk of, for instance, discrimination on a fundamental value, to be freed from that, that we address exactly this.

But that also makes sure that there's a lot of applications where we can have a so much lighter touch if any at all, and it also means that we can leave it to a lot of the legislation, for instance on toys and machinery, all different kinds of products, and to solve, in sort of the checking of the AI, in the different procedures that we already have there to make sure that these products are actually safe to use, because I think it is very important to have this rational approach – to say, well if there is no risk then why would we legislate? If the risk is very low, then it should be a very light touch. It should only be where we find that something fundamental is at stake that we would ask for data to be accounted for or the algorithm to be explained, so that people can feel well, actually this is safe, I know what this algorithm is doing and I appreciate how it helps. Otherwise I don't think that that we can create this ecosystem of trust.

For citizens' involvement, obviously when it comes to providing data and the checking of data, I think there is a very important role, but also to say where is it that it would be a good thing to have the help of very advanced technology. I don't see that we necessarily need a class of developers and then the citizens shying away from that. I think that we can have a good interaction between the two in order to get full acceptance of the use of AI in many, many different use cases.

1-010-0000

Svenja Hahn (Renew). – Thank you, Commissioner Vestager, for the exchange and for joining our Committee on Artificial Intelligence in our first week of hearings. I indeed agree with many points of your presentation.

For my group, Renew Europe, it is of utmost importance to regulate artificial intelligence in an unbureaucratic way, a way that fosters innovation and protects European citizens and values at the same time. For me as a liberal, it is of utmost importance to ensure fundamental rights and data protection all over Europe, and I'm certainly against comprehensive surveillance of our citizens in public and online.

You mentioned the importance of civil rights as well regarding high-risk AI applications. I would therefore like to ask you Commissioner, how is the Commission going to make sure that the use of AI systems by governments and authorities in Europe will not lead to abuse?

Second, to what extent will our legislative proposal limit, for example, the use of facial recognition software for surveillance and public spaces?

Third, how do we efficiently prevent European companies from selling AI surveillance technologies to authoritarian states like China to spy on their citizens?

1-011-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – Well, these are indeed, I think, some of the very specific issues that we will have to address.

First, right now, basically as we speak, the rules surrounding dual use are being updated in order to address exactly this issue, or this risk, that technology will be sold off to be used for purposes that we do not approve of. That should actually solve the problem and prevent this.

Second, already now, the GDPR would sort of say that you can only use outdoor, broadly in public space, facial recognition or other sorts of biometric identification if it is necessary, proportionate and you have the necessary legislation in place. That is, of course, in order to minimise the use to the very few cases where it could indeed be legitimate to have that kind of use, because we will not in any way endorse or promote the use of surveillance in general.

I know, and to some degree I understand, why people say 'oh, but isn't it a safer society', but the thing is that it still influences you to know that someone is potentially looking at you all the time. So I think it's very important that we stick to what we have agreed so far, that there is limited access and that access will have to be governed by legislation in the individual Member State, if it is at all to be used, and then still must be proportional and necessary, because these are indeed some of the things that should sort of define us as Europeans in contrast to some countries where you actually do see that facial recognition and other technologies are being used for the large-scale surveillance of citizens.

1-012-0000

Jordan Bardella (ID). – Chair, Commissioner, thank you for allowing us this discussion time.

I read with interest the policy options presented in the European Commission's White Paper on Artificial Intelligence. They are interesting options, particularly on regulation, but I find them much too light on investment and education.

You will have heard the comment made by the Italian head of one of Italy's largest employers' federations, who said: 'when the Chinese develop a technology, the Americans copy it and the Europeans regulate it'.

So a fund of EUR 100 million for all the European Union countries, for the entire European Economic Area, is in my view derisory given the huge amount of work on artificial intelligence that lies ahead of us.

The EUR 20 billion of investment that – I would imagine – could be mobilised by the private sector is only equivalent to the current research and development budget of Amazon, which is clearly one of the main digital technology players at the moment, and it is just half of the research and development budget of the French State.

Artificial intelligence is not just about robotisation. We are standing on the edge of a dizzying circle in which technological progress will, tomorrow, give humans the powers that were originally held by God. This is true with regard to the creation of living beings, this is true with regard to modifications of the genome and this is true, perhaps the day after tomorrow, with regard to euthanasia and death, if we are to believe the big dream of the boss of Google and his company Calico.

We therefore need to be able to respond to all these challenges, while protecting ourselves from a number of abuses. Ms Vestager rightly mentioned the issue of self-driving cars, which will lead to endless, but just as fascinating, legal, ethical and economic debate.

The issues of investment and education are therefore key in my view. Investment must enable us, tomorrow, to be competitive in an industry 4.0 that will use the new technologies, particularly AI, to be competitive in the context of globalisation. There is nothing within this document that tackles reindustrialisation or relocations within European Union countries. I would therefore like to know – and this is my first question – the Commissioner's strategy in this respect.

I will end with the second issue, which is naturally education, because artificial intelligence risks generating considerable inequalities between those who will, tomorrow, master the codes of this knowledge society and those who will not. I would therefore also like to know the position of the Commissioner and the European Union on this second challenge, namely education.

1-013-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – I don't think that these are God-like powers. I think these are powers as if many, many, many, many humans were doing the same thing at the same time at incredible speed. You've probably heard about the test where a contract was made, 100 errors were put into it and then you asked 10 normal lawyers, 10 super lawyers and artificial intelligence to find these errors. The normal lawyers would find quite a big number of the errors, but not all of them, in a couple of hours. The super lawyers would find most errors in a short timeframe, but the artificial intelligence would find all the errors in actually no time at all or very little time. That is just to suggest that what you have when you have artificial intelligence is that you have sort of the greatest of expertise next to you that has been able to go through everything and to compare everything, which is not humanly possible within that timeframe. I think it is very important that we insist that this is

about humans, it is done by humans, there are humans to be responsible as to what it is that we're dealing with.

This is also why it's so obvious that we should educate ourselves. We should also allow and enable upskilling and re-skilling throughout the generations, and not only focus on young people, but on everyone who has the slightest interest. One of the things that we suggested in the digital education action plan was indeed to promote sort of a certificate, like the one we have when it comes to language proficiency, so that you can see that you are progressing in understanding what this technology is and how you actually deal with it. The education point is exactly key in general, not only in AI but there are hundreds of thousands of empty positions also right now when it comes to professionals within these areas.

I do agree with you on investment. We need much more investment. The 20 billion per year is a target, this is not something that we have right now. Of course we need to push, we need to make the best possible use of the limited public funds in order for private funds to be invested. I don't think that we should, be content with regulating technology that is created somewhere else because it's very difficult to regulate something that you don't produce yourself, that you don't understand yourself, where you are not yourself the object of that regulation. This is why it is so important that artificial intelligence is also developed within the European Union.

I think we have a lot going for ourselves, because we have an industrial culture, we have expertise within entrepreneurship, engineering, developing things, innovation, and I think that is what has to be put to use right now because this is also where we see that the next wave of digitisation is going; it is indeed when it comes to industrial.

So in these days, of course, one should be careful not to be optimistic, but at least I think that if we want to, and if we work together on things, then we have a lot going for ourselves in exactly these areas.

1-014-0000

Sergey Lagodinsky (Verts/ALE). – Commissioner, it's great to see you again. I don't think we share the doomsday scenarios of our ID colleagues; I think that fascism is much more of a danger for Europe today than AI is. But still, of course, we have concerns and I would like to share mine and ask you questions in three areas: regarding freedoms; regarding risk; and regarding anti-monopoly policies.

Regarding civil freedoms, and the issue of anonymity, we hear that there are proposals or attempts to abolish anonymity in social networks. My question to you is, what are the thresholds for the Commission that you would like to see and to take if you want to abolish anonymity? Do you think that such a decision would be in agreement with European law, the Schrems Judgment, which provides for the right to privacy on platforms?

Number two, facial recognition. We hear that facial recognition, also in our reports, is being discussed again. Are you still a supporter of the moratorium on facial recognition – the temporary moratorium that we have in the European Union. Again here, the question is what are the preconditions for abolishing this moratorium, from your perspective?

Regarding risks. Do you share the binary high risk, low risk or general risk approach, or do you share the differentiated risk-based approach as proposed, for example, by some German observers and analysts?

Issues regarding monopoly, especially data monopoly: we're expecting your proposals. How are you going to tackle the fact that we need not only a single market but a fair market. Not data

monopoly for the big players but also support for small and medium-sized enterprises and an end to monopolies? What are the tools that you are planning in order to secure that?

1-015-0000

Margrethe Vestager, *Commission Executive Vice-President***.** – When it comes to freedom, let me maybe turn this around to say that maybe it's even more important to be able to identify yourself, because if you really want to create trust, I think it's very important that people know who they're dealing with. If I identify myself and you identify yourself then we know that the two of us actually exist. I think that is actually a more important thing than to say that no one can be anonymous anymore. That is, that those who want to identify themselves, they can do so and they can do so with an identity that has the same quality as a passport, where the state where you are a citizen will give you an identity that you can use in the state, but that you can also use Europe-wide. I think that is the most important thing.

When it comes to the business side of things, I think it is important that platforms know their customers, because otherwise we will never be able to deal with this problem, that businesses, for instance selling dangerous toys, can be closed down but then reappear five minutes later, and that can be the case if customers are not known. That, of course, still leaves space for people to engage in an anonymous way in some social media.

On the second question on the moratorium of facial recognition, this is what we have de facto now because of the rules of the GDPR for the need of national legislation, for the assessment of necessity and proportionality of the use of facial recognition in the public space. Of course, we have a lot of facial recognition when it comes to border control, when we use technology, but exactly when it comes to facial recognition in the public space, I think it's very important that we maintain that this is for very, very limited purposes, because otherwise we change public space and all of a sudden it's not so public anymore because it's a space with surveillance.

The tricky thing about the question of binary is that, yes, you can have some sort of graduation, but we also need to have enforceable legislation. I think no matter how this is turned upside down or discussed, obviously there will still be grey zones. There will be use cases where you think obviously there is a high risk of undermining values, or obviously here there is no risk of undermining values and, of course, there will be a grey zone. Our task, our common task, is to make legislation that is enforceable, that creates legal certainty for the businesses involved. In that respect, I think we have to, one way or another, work within some categories because otherwise it's simply not doable and we get a mammoth lot of bureaucracy instead of getting something that will actually create trust and enable us to say, well, in these use cases things are actually checked when it comes to the data, when it comes to the explainability of how the algorithm is working.

Last but not least, when it comes to fair market access we are trying to figure out how to give access, for instance, to sensitive public data – if that is a choice that one will give access to that – and how to make sure that also smaller businesses may have privileged access to get there. I don't know yet if that is doable but it is very important, also because it is more difficult for a smaller business. They may not have the same capabilities, they may not have the same staff to be able to go and get the data, but they may have the same innovative potential and the same or even better ideas as to how to use data. So, trying to figure out how we can manage this so that we do not only think small, first to make sure that things are not too bureaucratic, but also that we think small in terms of how to make sure that we can give access to some of these amazing assets that we have in terms of data. But we don't have any final solutions yet.

1-016-0000

Adam Bielan (ECR). – I support the Commission's plans to make it easier for SMEs and start-ups to access, use and finance AI, in order to adapt their procedures or implement innovations using AI. Of course, a potentially complex regulatory framework will be much

harder to digest for European SMEs, which lack extensive loan departments compared to global players. Therefore, further actions are needed to bridge that gap, and regulatory sandboxes can represent in that regard a positive development as they reduce the cost of innovation and eliminate barriers to market entry. In that regard, what is the European Commission doing to promote regulatory sandboxes for start-ups in AI?

My second question touches upon a risk-based approach mentioned also by my colleague from the Greens. This concept is strongly advocated in the AI White Paper. How do you see risk management being understood and implemented in day-to-day operations? Do you agree that we should avoid regulating in a way that takes unwarranted steps to prohibit developments on the basis of precaution alone, in spite of other approaches that may mitigate risks?

1-017-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – We're still discussing how to deal with regulatory sandboxes. I stand by it as a good idea, but we also need to be able to test how to make this work in real life. I have profound respect for the European Parliament and the Council as legislators, and I think that respect should also translate into legislation that is enforceable, because it is in the results on the ground that citizens see the work that has been done by you as the legislator. The regulatory sandbox is a way to push for that, but I would like to come back when we have more specific plans as to how to deal with it.

On the second question on risk management in the day-to-day setting, this is what we are discussing internally right now. I said that we have this feedback from the public consultation that people are not comfortable with this dual approach in a number of sectors that would be prone to risks, and then a number of use cases in other sectors that were not deemed to be risky. This is why we are more saying well, let's have risk as regards use cases where we would say well, if this is the use, if this is what the technology is to be used for, well then you need to adhere to certain requirements as to what kind of data went into training this algorithm, and how can you explain how this algorithm will actually work, so that it is highly probable that risk, for instance of biases in a situation of a health procedure or a hiring procedure, will not translate into a problem on the ground for the citizen in question. That is what we are discussing right now – how to deal with this and how to make sure that the list can be revised so that if we find more use cases than we saw initially in the legislative procedure, then how to increase that.

For legislation to be enforceable, its very important that it creates legal certainty, because legal certainty is one of the prerequisites also for innovation potential, so that businesses know that 'here, we can go'. I do hope that we can find a way to find the right balances when we do the legislation.

1-018-0000

Sandra Pereira (GUE/NGL). – Executive Vice-President, Chair, despite the economic potential of artificial intelligence technologies, they also often lead to inequalities, particularly for the vast majority of micro-enterprises and SMEs that cannot deal with the brutal competition and disparity of means and resources compared to the large and multinational companies that dominate the market. Reality has shown that this is yet another factor of imbalance, with some businesses currently making unprecedented profits and others struggling just to survive.

I know that you don't yet have a definitive answer, so I would just like to draw your attention to the fact that the European Commission's plan could help micro-enterprises and SMEs to access artificial intelligence technologies and protect themselves from competition from the large and multinational companies that dominate the sector, bearing in mind that this will always be an unequal battle right from the start.

I next have a question about workers. You have said a lot about technological development, the digital economy, artificial intelligence and industry 4.0, but in the end these just result in further

attacks on labour rights and working hours, in job instability, and even in attacks on public services in various areas.

I therefore also want to include in this committee's debate a discussion on the impact of these important scientific and technological advances on the lives of workers, how they will be developed and how labour relations will be shaped, bearing in mind the impact of using these technologies.

My question is therefore as follows: could you clarify the European Commission's position on the impact of using technologies on workers' rights, and what you will do to protect workers and ensure that their working conditions are not harmed?

1-019-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – That's a very tricky question to answer because, as a starting point, obviously it doesn't affect workers' rights as such, but eventually, of course, there can be effects.

I think you have discussions about employers looking into what data their employees create during the day so that they are only in work-related digital. When you see, in a hiring procedure, if employers should be allowed to look into your social media profiles, to see if you are a very festive person, if they are looking for such a person or not. I think it is very important that this aspect of the digitisation of our society is taken on board by unions and employers' organisations, and I think it's a very pertinent example of the fact that the fight for good working conditions in the context of the day and in the context of the near future, that fight will not end. There will indeed be more needed.

I think it's important that we do not just say that this is a central political issue only. I think it's important that we work in a way where we have the decentralised discussion in Member States among unions and employers, and we have the discussion as we have it right now among us, to say for instance, when in the hiring procedure, you can actually trust that there is no bias in the technology used to hire you and that then also is translated into what are your rights and how can your people help you in the union where you are organised.

So I think that here we have a development in front of us. Another place, but that is not directly connected with artificial intelligence, is that right now we are trying to make sure that people who are working on platforms and are de facto workers, as they were only in this new setting, that when they organise they are not seen as potential catalysts so that their organisation is prohibited. Because what we want to do is of course enable people to organise themselves actually to fight for their rights.

The reason why this can be kind of tricky is that we do not want people in a liberal profession, like lawyers or dentist, to organise themselves to set prices. So of course the situation of workers is very important, but I think it's also very important to recognise what unions, in discussion with employers' organisations, do. Otherwise I think we will be too late in order to make sure that we get the right protection for workers.

1-020-0000

Pilar del Castillo Vera (PPE). – *(inaudible passage)* […] is indeed a complex matter and given the diverse range of IT products and services, a one-size-fits-all approach to labelling doesn't seem workable. Indeed the benchmarks for evaluating whether AI is trustworthy will be highly variable and dependent on the system functionality and deployment context. For all these reasons, in my view the future AI installation should specially focus on the implementation and enforcement phase. To do so correctly, stakeholder participation will be paramount. In this regard, my first question would be to inquire if the Commission plans to ensure clear language

for broad stakeholder involvement, and to promote in that sense beneficial interactions between AI developers and AI deployers?

Secondly, we can't look away from the fact that AI will be developed and deployed in an international context. My second question is how will the Commission boost international engagement in order to ensure that the EU approach to AI regulation incorporates international standards and best practices in the UPN work stream to guarantee crucial interoperability with our trading partners?

1-021-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – We are trying to set up different foras, because you are indeed right to say that this is not just a European matter, this is a global matter. We have proposed to the Americans to set up a trade and technology council, and if we can move that forward that would indeed be one of the obvious places to discuss these things.

At the same time we engage vividly in international standards-setting organisations, like the International Telecommunications Union, where we have been fighting proposals to basically to turn the internet upside-down – so instead of being decentralised, to be centralised, with all the negative effects that would come through that. But also when it comes to setting standards for facial recognition, how to do that, we are actively engaged. So both with trading partners but also in multilateral organisations we engage for exactly the reasons that you mentioned.

On clear language, I really appreciate the ambition because there is always a risk that we sort of make a bubble of a language that is very difficult to understand for anyone but those very specifically involved. I hope that you will work with me to make that a common endeavour, that is actually to be understood how to interpret the legislation so that at least a broad group of interested people can have a thorough look at what the legislation would entail.

1-022-0000

Christel Schaldemose (S&D). – Margrethe Vestager, for the second time today I have the opportunity to ask you questions, and I'm happy for that, but I have to say that a lot of areas have already been covered. So let me ask you maybe a little bit different kinds of questions.

First, now you have been working with AI for the last year, in your opinion what is the most interesting use of AI you have heard about so far, but also what is the most worrying use of AI you have seen so far?

Second, we're talking about AI and there are many opportunities, and risks as well. I believe that the EU can keep jobs in the EU with automatisation and the use of AI, but we will also see a loss of jobs. Therefore, what about the taxation of robots, what is your take on that? Maybe you could say some words about that. Thank you very much for this interesting exchange of views.

1-023-0000

Margrethe Vestager, *Commission Executive Vice-President***.** – Yes indeed, very interesting. I was visiting – actually, now we're in a Danish context and thank you for coming back again to that setting – a Danish hospital who are the Danish masters of detecting cancer. They were very enthusiastic because they were using artificial intelligence to improve what they were already doing very, very expertly. They say, when we detect cancer we take a blood test and we test for 23 different things. And these 23 different things they have to be in certain brackets in order for you to be well and with no cancer, and with certain indicators, combinations of these brackets, we will send you on to be examined in a more thorough way. And they say it's very difficult for a doctor to compare all 23 different brackets, to say which combination of these would actually entail that there is a risk that you do have cancer. So, they were in the process of feeding a learning algorithm with tens of thousands of test results, so that the algorithm would tell you

at a glance what the combination of brackets was there and whether that combination has previously been a sign of that type of cancer or another type of cancer. And they would also want to do a robotic taking of the blood sample, and the potential of this – and I'm sure they have progressed a lot since I saw them quite some time ago – was that within the hour they could take the blood sample and actually tell you what would be their assessment of your risk of having cancer. That I find to be amazing, because they work with all their professionalism, while at the same time setting themselves in the place of the person who is afraid of having cancer. That you can alleviate that stress and that situation and you can have a relationship with your health professional because they don't have to be as worked up about whether they would get it right with all those different brackets. That I find to be a very good and strong and down to earth example of how AI can be helpful.

Where I find AI to be more scary is when it's used for surveillance, for social scoring, for keeping tabs of whether you are waiting exactly for the green light when you cross the street. That kind of artificial intelligence really scares me because this is counter in anything that I believe in, in a society and our role as citizens.

I share your view that we can keep jobs in Europe and that new technology develops new jobs. This is exactly as we spoke about before, that upskilling and reskilling skills, as such, are of crucial importance. This is not talk. This is not something where we say 'we will get to that'. No, it's a core of what we should do now. It is to make sure that people can have the right skills to deal with this. I still think that it may not be the robots that we should tax but the profits coming from robots, because there is still a person somewhere who owns this, there's still a business making a profit. If we could we get to a situation where Europe is a tax haven in that respect, but that every business pays the taxes that they should, well, then I think we would have moved forward a lot.

1-024-0000

Stéphane Séjourné (Renew). – Chair, Executive Vice-President, thank you very much for this overview, which is important to us. Many questions have already been asked, so I will perhaps go into greater detail.

I would firstly like to ask you a question about the uniform implementation of AI rules and how you view this subject. We have had discussions in the JURI Committee about the relationships and the mechanism, and between an agency or a European coordinator. Does the Commission have a position on this issue and do you favour an agency or a somewhat different European coordinator? That is my first question.

My second question concerned facial recognition, but you have already given a full answer on that, from which I gather that there will be no moratorium. I have read some articles in the European press pointing to a moratorium, and others that have stated the opposite. So I believe that the wording of your answer also allows this question to be answered.

My last point, perhaps, is on the use of AI. I will attempt a question that usually relates more to the DSA: do you have an opinion on the use of artificial intelligence? Does the Commission have an opinion on the moderation of online content and the use of artificial intelligence, and in particular on filters? This is an issue that will be headline news in the coming weeks.

1-025-0000

Chair. – Executive Vice-President, I suggest that since we are just about running out of time that you link in the answers to Stephane's question to your concluding remarks. There's been a whole range of issues that were raised today. No surprise there. I guess it shows also the different backgrounds that we all have in this committee, coming from our respective standing committees, with the different angles and takes that we have on AI. I think that's what makes

this debate in this committee so much more enriching – and what can make it so also in the future.

With that, dear Margrethe, I give you the floor for answering the last question, and also for closing remarks.

1-026-0000

Margrethe Vestager, *Executive Vice-President of the Commission***.** – Thank you very much, Dragoș. First on the last questions. We have not finalised our ideas as to how to enforce the AI regulation. Obviously we have a number of different possibilities on our working desk, but no decision has been taken so far. What is important for us is enforceability, that people can see that something is actually happening on ground, that the things that they will meet, the technology that they will meet in situations where there is a risk, that the AI is actually being checked, so that they have this knowledge and from that knowledge that they can build trust.

On facial recognition, I'd say that what we have today is a de facto moratorium because the access to use AI for surveillance in public spaces is so restricted, coming from the GDPR and saying that you need a national legal basis to be able to do it. When you have a national legal basis you still need it to be proportional, you need it to be necessary in order to actually be used.

I would caution very, very much on the use of facial recognition in public spaces unless its absolutely necessary, because I think it changes our society. When we have that kind of technology, that someone basically can follow every step you take, every move you make, because it changes our behaviour and because of that it will also change our society. I think it is very important to say that we don't want to be such a society, because this is not what we connect with freedom and the freedom of movement and what public spaces are there for.

Last but not least, when it comes to monitoring online content, my guess is that already now there's a lot of machine learning, there's a lot of artificial intelligence in use as to how online content is being put there. I know for a given that when it comes to uploading a product on platforms where people sell for instance used things, you find a lot of artificial intelligence there to help people out – actually to suggest the price, to make sure that the description is there, some of the things that sometimes prevent people actually from doing their selling as they say 'oh, I have to figure out what to ask for this, I have to figure out how to write the description'. So I think that that you'll find that AI out there already.

If it's AI or not AI, the important thing is how platforms, when it is content, fulfil the responsibility for actually knowing what is ongoing, that they know when to take down illegal content when they know how and when to moderate, and that of course is for the Digital Services Act to do. I think here you'd find a lot of artificial intelligence being put to work in order to be able to lift that responsibility that we would want digital service providers actually to have.

Just to close – but this will not be a goodbye, this will be *auf wiedersehen* – I really appreciate the work that you do, all the members of this committee and Dragoș, of course, you in particular. I think your leadership is very important because there is a very horizontal interest in Parliament, as there should be, in artificial intelligence. Making the different views meet in the AIDA Committee I think is of the essence.

I would really appreciate if you would also take some time to discuss where we would want to be in 2030. If we make the best use of technology, how can we see that we do that, what would be the things that we should aim for, because I find that very inspiring and that is definitely not just a technical manoeuvre, it's about what kind of society we want to be when we are fully digital and where we make the best use of artificial intelligence, while at the same time being

in control of artificial intelligence that poses risks to the fundamentals that we believe in. Thank you very much for your time and for the invitation to be with you today.

1-027-0000
Chair. – Thank you very much. You have actually anticipated a theme that I would really want to actually look into, and hopefully you will be there for that debate as well.

With that we move on to the second point on the agenda, which is the exchange of views with Andrew Wyckoff, OECD Director for Science, Technology and Innovation and his colleague, Deputy-Director Dirk Pilat. I'm hoping that they are online and they can come in to start with their presentations.

Right after their 10 minute presentation, we have a list of ten, again, colleagues who will intervene and we will follow the same rules – the four-minute slots so that we can fit you into the time that we have left.

1-028-0000
Andrew W. Wyckoff, *OECD Director for Science, Technology and Innovation***.** – Thank you. I'm joined by Deputy-Director, Dirk Pilat, who can not only provide substantive help but also technical help. If we go to the first slide, it provides a quick overview of the work we have underway at the OECD, which consists of two big parts. The first is our going digital project and the second is specifically our work on AI.

If we go to the next slide, the OECD's going digital horizontal project. Our work on digital policy issues dates back to 1980. Actually, we've had a pretty *(inaudible passage)* […] at the subject since 1982.

Starting in 2017, we started a series of what we call horizontal projects on going digital, which at the OECD means it involves a wide range of policy committees. In the first instance, from 2017 to 2018, 14 different policy committees interacted to provide a whole government view of the digital transformation. The reviews were to see if policies were fit for purpose in the digital age. That led to a second stage, which is underway now, which continues this coordination but also looks in depth at two technologies that will have significant implications for policy. First of which is blockchain and the second, in the focus of today, is AI.

My directorate has led on artificial intelligence, which I'll describe in a minute. I should just mention to you that we're now in the midst of planning a third phase, which will focus on data and data governance, and we would welcome to talk to you about that at a future date.

In the next slide you'll see that a key deliverable of the going digital project is a going digital toolkit, which Dirk is going to briefly point out because it may be of use to you and your colleagues. It can be accessed through three entry points. The first is on the left, the colourful wheel, seven policy dimensions that we use as the integrating policy framework – everything from access to trust and market openness.

The next on the right is nine fields, on the previous slide, that cut across the seven dimensions. Then finally, in the middle of the previous slide with country pages, which show country performance. The idea of the toolkit is to allow countries to benchmark each other.

Referring to this slide, which now moves to our work on artificial intelligence. This started in 2016. I'll briefly describe each of these circles, starting with possibly the one that's most pertinent to this group, which is the OECD's Artificial Intelligence Global Parliamentary Network, which is co-managed by my part of the OECD and another part of the OECD, Public Affairs and Communications. It has met once already, in fact, and plans to meet again in December.

On the next slide you can see at the centre of our work are the AI principles. These principles, which were developed starting in 2017 and were approved by our council at ministerial level in May of 2019, are the first intergovernmental standard for responsible stewardship of trustworthy AI. Currently there's 37 OECD member countries. In addition, seven other countries are joining us, making 44 countries so far.

After they were adopted in May 2019, we went to the G20 meeting under the Presidency of Japan in June of 2019, where an additional five additional members signed on to these principles, making a total of 50 across the globe. In the next slide you can see that this covers a huge amount of the world, particularly the AI producing countries, but still important gaps remain, particularly in Africa.

Quickly just describing the next slide, the principles consist of five principles for responsible stewardship of trustworthy AI systems and five priority recommendations for national policies.

Now, we recognise this is a very fast-moving technology and we need to take an approach that hopefully will stand the test of time. In this sense, our principles are very human-centric. But I should say we strive for principles and they're not specific regulations. In a sense, they are more like lines on the road seeking to ensure safety and reduce risk, but do not prescribe how many wheels the vehicle needs to have, which may be premature at this time.

I want to point to three of the principles which I think may be particularly relevant to your work in Parliament.

First, is 1.3 on transparency, which includes the notion of disclosure; 1.5 on accountability; and 2.3 on an enabling environment that focuses on use – some of the discussion you've just had with the Executive Vice-President was on sandboxes.

On the next slide, we have two initiatives that are intended to implement in bringing the principles to life. The first is, on the left hand side, what we call the AI Observatory, which was launched earlier this year and provides an online platform for multidisciplinary evidence-based policy analysis for AI. It facilitates our multi-stakeholder approach to this work.

Let's move forward to the four pillars that are outlined above. Information about the principles and their implementation, policy analysis across 20 different policy areas like employment, taxation. The latest data on AI that we are able to compile and a database of national stakeholder AI policies. We've also created a multi-stakeholder network of experts on AI. Its on the right hand side, ONE AI.

We held the first digital meeting in February. We have three active working groups. The first is classification of AI systems to help policy makers understand the different types of policy considerations, such as different types of AI systems, very close to the conversation we are just having. A second is implementing trustworthy AI, using different process-related technical and educational approaches, and the last is the sharing of these national policy experiences. We can learn from each other.

I'm just going to go through this very quickly. Some of the other aspects of the observatory. The next slide shows that we're aggregating information for each of the principles, including publications, live news and policy initiatives. On the next slide, it gives you a sense of all the different areas where we're now beginning to get policy analysis about AI, everything from education to agriculture, and we can learn from one area to another. And then on the next slide is our work on developing a database, and that begins to inform policy here. It takes away some of the hype and some of the Hollywood to lead to more evidence-based decision-making.

Here you see the evolution of the EU's research publications on AI since 1982, using the blue here.

In the next slide, we have this living repository of national AI policies and strategies. This is a joint database we've developed with European countries, with the European Commission, to monitor the policy situation in countries. We have more than 60 countries covered and more than 300 different policy initiatives.

Now quickly I just want to zoom in a bit on the work of ONE AI which is shown in the next slide, which has the three working groups, which I think could be of use to you as you develop legislation.

The first is a working group on classification. It is to develop a user-friendly framework to classify AI systems, for example by context in sector. AI systems in health care may raise specific privacy issues, while systems supporting critical infrastructure may raise issues of digital security. *(inaudible passage)* […] the AI bi-neural networks have different accuracy and explainability challenges compared to those using symbolic methods.

Another working group on trustworthy AI is working on how to implement trustworthy AI. Things like documentation requirements, and this involves technical approaches like standards. And lastly, an education and awareness-building tool. In the working group on policies for AI we are developing practical guidance on national AI policies.

Just to end with the next slide. The last circle in the Venn diagram I showed you was the formation of GPAI. This was officially launched in June 2020 and stands for the Global Partnership on AI. Its mission is to encourage and guide the responsible development of AI and it uses the OECD AI principles as the foundation for achieving this. It set the objective of building bridges between theory and practice. It was initiated by the Canadian and French Presidencies of the G7. GPAI now has 15 founding members, as well as the EU.

With that let me close here. I'm sorry if I went a little bit long. Dirk Pilat and I welcome any comments or questions you and your colleagues may have. Thank you for your attention.

1-029-0000
Chair. – Thank you very much, Director Wyckoff, for your introductory remarks. We will move straight to the list of speakers on our side. We will start with Maria Carvalho of the EPP. The floor is yours. Please try to stay within the two minutes.

1-030-0000
Maria da Graça Carvalho (PPE). – Good afternoon, thanks Chair, dear Director Wyckoff, thank you very much for your presentation. Artificial intelligence is a general-purpose technology with a high transformative power for our society and our lives. The work that the OECD is doing is very important to bring values and principles into the global standards for AI development and also to provide evidence-based and science-based policy-making to the countries that are part of the OECD and in general, with all the public reports.

In my opinion, it will be of the utmost importance to build a strong and effective AI ecosystem in Europe. For that, we need — as you have said in your presentation — a strong research and innovation and technology development system in AI; education to strengthen education and skills and reskilling at specialist level and at the level of the general population; infrastructure; computer power; high-performance computing; a system for funding; business interest in the subject; and an ethical framework in terms of public acceptance.

We are very advanced in Europe concerning the ethical framework, the values and the principles for some of these items, while in other topics we are still lagging behind in comparison with our global competitors, such as in the case of high-performance computing.

It is important to monitor all of these areas and here the OECD work is fundamental. So I would like to ask for your recommendations on how to strengthen our artificial intelligence ecosystem in Europe. How can we have a strong ecosystem that will allow us to encompass the development of other global leaders in these areas? Thank you very much.

1-031-0000

Andrew W. Wyckoff, *OECD Director for Science, Technology and Innovation***.** – Thank you for your question. Europe has incredible strengths in AI; you can see that from some of the data I just exhibited, particularly in the academic sphere and in the public sector. Where further improvements could be made is more on the private sector side. This is common not only in tech firms but in those that are in more mature sectors, such as automobiles, agriculture and so forth, which can all benefit from improving and implementing AI as in health sectors and in other special sectors. I think Europe has some special advantages it can take better advantage of and those include some of the data repositories that you benefit from, including those held by the public sector, such as those in areas like health and radiology, which are also covered by the previous section.

I think a more joined-up policy is important — a scale, in particular, is important — and that is where the completion of the Digital Services Act is very important. I think one of things we look at the OECD is that the two world leaders currently are China and the US and they both enjoy huge advantages of scale. And so, in this regard, this would be my top recommendation for Europe.

1-032-0000

Susana Solís Pérez (Renew). – In such a hyperconnected world as ours, international cooperation on artificial intelligence is vital, not just to guarantee the protection of fundamental rights, but also to guarantee cybersecurity, which is nowadays a key part of countries' security strategy.

In this respect, we can see how artificial intelligence is acquiring an increasingly geopolitical aspect and that it may have an impact on the balance of international power. As a result, we keep talking about the race for artificial intelligence, as we once talked about the space race.

Europe has a great opportunity to lead the way, by positioning itself as a leader in laying down international ethical rules. However, we are lagging well behind our competitors on patents, investment and data. And it is on this subject that I would like to hear your opinion. Do you believe that artificial intelligence is redefining the balance of global power? What should we do in the European Union to become leaders in artificial intelligence? In particular, how can we ensure a balance between international cooperation and digital sovereignty in such an interdependent world? Finally, what steps can the Member States take to prepare for the possible security threats posed by artificial intelligence?

1-033-0000

Chair. – Thank you very much Susana. Director Wyckoff, at the OECD I'm sure you have a very interesting vantage point when it comes to this particular issue of the so-called race. You sit there with all of the competitors — or almost all of the competitors — around the table, each with their own particular views on how this race is progressing and what the competitive advantages are of one over the other. So from that particular vantage point that you have, how do you see this issue?

1-034-0000

Andrew W. Wyckoff, *OECD Director for Science, Technology and Innovation***.** – Thank you Chair and thank you to your colleagues for the question. Yes, the OECD does provide an

interesting perspective on this *(inaudible passage)* — not global, by any means, with 37 member countries, but we do connect the three continents of Europe, North America and Asia.

I'm actually more of an optimist here than some and I think our principles and the fact that they were endorsed by a multilateral organisation just last year points to the fact that there are more areas for cooperation than sometimes seen in the headlines.

AI is so vast — it is a general purpose technology that will affect every technology and every country. In a call last week to the United States, where the leader of that group said that this is not something any one country can or should develop, we're much stronger while being partnered and involved in cooperation. This is particularly important given the current manifestation of AI, which is machine learning, which is very dependent on having diverse data. If it's just data from one country or from one ethno-centric group, it won't have the power or the capability to do what it is definitely needed for.

So I think that there are opportunities. Europe is very good at international cooperation. I would encourage you to continue to engage in it. There's a lot of instant bilateral deals being struck between countries. These are not as good as multilateral deals, but are a step in the right direction.

Lastly, I would point to this gold partnership with AI. As I said, there are 15 founding members, and there are another 15 waiting to come in. To me that also bodes well as a means for enhancing cooperation.

Now, on the issue of sovereignty, I just want to say that I'm not the biggest fan of this, particularly in this area. I think that why it's important, as the Executive Vice-President just said, is that you can't really regulate without developing. Every country should have its own capacity and contributions here, but again I think it is much stronger if you're building on many different initiatives and working for interoperability between them rather than trying to go it alone. I find that dangerous, and not in keeping with the political systems that we have built up since World War II. But this is yet to be played out, and again I'm hopeful that the groups at the G20 and in the G7 can help to bridge some of these differences.

1-035-0000

Eva Kaili (S&D). – I want to thank you, Chair, for organising this very interesting event. Since we are trying to work on so many levels on artificial intelligence, I think it's very useful to collaborate with the ones that have a bigger approach than the European Union. So, one of my questions would be: what is the rule for collaboration in a different perspective besides and beyond the EU? I think it would be very important once we are drafting legislation this year and next to get it right in a way that will make it easy to collaborate, also beyond the EU with other countries. And if you can identify challenges that you have faced with countries that are democratic in a way that we would not consider to be so in Europe — if you could identify what the main challenges to be resolved are in order to expand our collaboration on artificial intelligence more widely. I think one of the issues that we saw with COVID was the need to collect, to similar standards, health data and to make sure that they are protected and useful for scientists. And also if you are knowledgeable and in collaboration at the level of G20 because I realise that there is a governmental level where they are trying to take a similar initiative. They have started already, so I was wondering if we could collaborate and not duplicate and keep all the good work that has been done and try to respond to the controversies and try to resolve and overcome all the problems and the challenges that we see in terms of standards again.

And maybe a second part...

1-036-0000

Andrew W. Wyckoff, *OECD Director for Science, Technology and Innovation***.** – I'd like to apologise for my lack of video which I gather prevented any type of interpretation of my earlier remarks. To answer the question about potential barriers to cooperation, I'd say that they are, as you have just identified, certainly the exchange of data with a high identification characteristic to it, on the one hand. This, as you know, is a challenge, particularly across borders beyond the EU at the moment. It is an issue we're working on at the OECD and again I am cautiously optimistic that it is one that can be resolved.

But a lot of AI goes beyond personal data, too. I just want people to appreciate that there are many different types of data and some of those other types of data, *(inaudible)*, can be very important for training AI so that we can better learn about harvesting techniques. *(Inaudible)* So it's not just about personal data.

I think the G20 is in a very important spot. The OECD provides input into the last four presidencies and we look forward to working with the incoming Presidency under *(inaudible)* which would be headed by India. Italy and India are both incredibly important countries in this realm, under the G7 presidency of Italy. The work on AI really started in the G7.

I think that these groups can help. I think that it's most important to try to get consensus where we can find it immediately. I think the EU itself can play a very important role here. Building on that, working with the OECD member countries to create a common perspective — across what are really rather like-minded countries that have been working on these issues together at the world level for a long time — is another useful avenue for enhancing cooperation.

There are challenges along the *(inaudible)*. One is certainly national competitiveness. Many people see mastering AI as a way of making their companies and their countries more competitive. So, to address this, I think what we really need to do is to get more upstream into the R&D phase, the pre-commercial phase where this competitiveness is less pronounced. And again, the EU brings incredible resources here — not just the EU, but other countries that maybe don't always come to mind that are still AI powerhouses, such as Canada.

1-037-0000

Maximilian Krah (ID). – I am very impressed by the efforts the OECD made in finding a platform for artificial intelligence. But I have a more practical question. When I look on the current technologies, I feel and I see a lot of problems because one nation — in this case the US — is trying to intervene whenever other nations put Chinese companies in their basket as suppliers. And now, from your experience and from your insight, can we be sure or is there a probability that we won't see comparable things when it comes to artificial intelligence? I share your idea that we need international cooperation in that field, and we will see international cooperation because the companies are usually multinational. But the risk is that we come back in such a conflict that, when we implement the technology of one company in our future artificial intelligence infrastructure, we then face diplomatic problems. So, from your experience, is it possible — is it likely — that we will have the same trouble as we see now with 5G, or are you optimistic that we can create an international atmosphere of cooperation in which we can indeed globally cooperate in the progress of artificial intelligence?

1-038-0000

Andrew W. Wyckoff, *OECD Director for Science, Technology and Innovation***.** – Thank you for that question. I would return to the OECD AI principles, in particular one here on trustworthiness in transparency. To me this is at the heart of a possible solution to the problem that you pose. We need to establish some good transparency standards and guidelines. We're working on that in the ONE AI Group and this would look at issues like what does the input data look like, what is the process used to process that data and what is the output associated with those processes. It may require some type of disclosure or reporting, just as we have

disclosure on this process — the ingredients in processed food — we could have disclosure on AI. I think this would help us get around the issue which is confronting the 5G work and hopefully make it less pronounced in AI.

The other thing I would add and I want to be sure as it is one of the other questions *(inaudible)*, we're working on this classification scene. I think these transparent requirements would have to be different for different types of AI. One size doesn't fit all in this area and the transparency requirements you want for radiology would be different from where natural language processing is targeted.

1-039-0000

Alexandra Geese (Verts/ALE). – Hello Director Wyckoff, good to see you here. In the first part of my question, I would like to go back to international cooperation. You mentioned the G20, both your own process and the UN process. I think a problem we do have is that, especially in Europe, we want AI based on fundamental rights and fundamental values and we know that at least one country — China — is using AI for mass surveillance of its own population, which is what Commissioner Vice-President Vestager mentioned in the previous part of our meeting as the worst example of the use of this technology. So I don't really see that much common ground there. So my question to you would be: do you see the possibility and the opportunity for democratic countries to come to some kind of semi-global agreement on fundamental rights and values and principles for artificial intelligence?

And my second question: in your principles, the OECD principles and especially principle 1, you say, and I quote, 'this principle also recognises that AI systems could perpetuate existing biases and have a disparate impact on vulnerable and under-represented populations such as ethnic minorities, women, children, the elderly and the less educated or low skilled'. I think that is a very important acknowledgment and this is also important for us and for our Vice-President, so my question to you is which measures would you recommend to us in Europe in order to operationalise this principle to make sure that exactly those groups of the population will not be disadvantaged by artificial intelligence tools? And maybe if we manage to do that, could Europe be a global standard-setter in these terms?

1-040-0000

Andrew W. Wyckoff, *OECD Director for Science, Technology and Innovation***.** – Thank you for that series of questions. I just want to say I think that, first of all, Europe is already a global standard-setter in this area. The work you are doing both in Parliament and in the Commission is widely read and is recognised as grappling upstream with a very important issue, so my compliments already. GDPR is yet again another facet of this. I want to think that we already have some agreement on this fundamental human-centric approach and that the adoption of the principles by the OECD and the Council recommendations, which is the highest level of our recommendation at the OECD is evidence of that. I think what's important is to look beyond these nice sound principles to their implementation and that's what we're very much engaged in. It is at an early stage; I think it's premature for us to point to any best practice or any report for these rather difficult questions, but you have countries working together to exchange their experiences on how to approach this. You rightly point out to me that, the more we have a perpetuating bias that already exists through hard coding them into AI systems — and this is *(inaudible)*: we've seen it with some applications that we want to avoid — again there is a lot creative innovation on how to resolve this problem and I think that one approach is to continue to fund innovation in AI and address some of these issues, but also then to engage in more thorough testing of AI such as what was just discussed in the previous section on sandboxes. The analogy of clinical trials, which are of course very much in the news now, is another analogy that comes to mind when we release something.

1-041-0000
Chair. – It seems we have lost the connection with Mr Wyckoff. We are trying to reconnect. Before we talk about artificial intelligence we will have to talk about the networks and connectivity!

Is Mr Pilat connected? Thank you very much for standing by. We could carry on with the second part of Ms Geese's question. If you could pick up on that, we would much appreciate it.

1-042-0000
Dirk Pilat, *OECD Deputy Director for Science, Technology and Innovation***.** Well, the issue of bias was raised and how we prevent that and deal with that. I think that it's obviously a very important issue and one which we are looking into. I think AI can both enhance bias and sometimes also reduce bias, and I think we need to find ways of making sure that the data we're using — the applications we're using — basically try to address bias and work in the right way. I think there are interesting examples of AI also being used to improve the way things are done, for instance in terms of hiring people, and have actually been able to reduce bias. So I think we need to look at those types of experiences and learn from them to make sure that we deal with that issue.

I wanted to briefly come back to the previous point as well about common ground. I think the example of the global partnership on artificial intelligence is also something where there is a certain level of common ground. Basically, we see a number of countries coming together, including — interestingly — India, to try and say, well, we are agreeing to a certain set of principles, we are agreeing to a certain way forward, let's work together in this area and move forward. So, hopefully we will see more of that — more collaboration to take us forward on some of those issues. Thank you.

1-043-0000
Chair. – Thank you Mr Pilat for your answers and also for aptly standing in for Mr Wyckoff. We are start to have an issue of timing. We have in theory seven minutes left. My understanding is that the interpreters are kind enough to give us another five, maybe a maximum of ten minutes and, of course, I thank them for that. But we have six more speakers, so my proposal is that we go through the speakers' questions first and if Mr Pilat would take notes and then wrap up the replies for all of the questions in one go, that would be helpful. So, for ECR, Mr Adam Bielan.

1-044-0000
Adam Bielan (ECR). – Thank you, Chair, and good afternoon. Thank you, Mr Pilat, for your presentation, which was very impressive. The impact of US-Chinese rivalry on the emergence of the new digital order is undeniable. The continuation of this bipolar competition has a clear impact on international cooperation and global competitiveness, particularly on technology issues. Nowadays it appears that questions around AI liability, safety and trust are crucial, especially in a globalised context. This is why I would like to raise, as so many of my colleagues have done, some points regarding international cooperation and global consensus.

First, given your horizontal view on this issue, where so far have you seen the major differences in terms of values between European and other OECD countries, such as the US, Japan, Israel or Canada?

And second, to what extent do you see a chance for a common approach at OECD level and what will be the consequences if the US and Europe go their separate ways regarding AI regulation?

1-045-0000
Elena Kountoura (GUE/NGL). – I want to thank Mr Wyckoff for his presentation. New technologies, such as robotics and artificial intelligence, are rapidly changing people's jobs and lives. Artificial intelligence is broadly expected to change the nature of work as it spreads across sectors. It will complement humans in some tasks, replace them in others, generate new types

of work and transform the way people organise and carry out a day's work. The OECD recently released a survey on the future of work, which states that 14% of all jobs across the OECD countries have a high risk of automation, while a further 32% of jobs are likely to experience a significant change in how they are carried out. In this vein, the OECD's artificial intelligence principles highlight the importance of building human capacity and preparing for a fair labour market transformation. Having said that, I would like to ask you what measures does the OECD consider appropriate in order to avoid significant job losses, prepare for a fair labour market transformation and ensure a fair transition for workers as artificial intelligence is deployed?

In addition, I would like to ask specifically about the tourism sector, which represents 10% of European GDP in some countries like Greece. With 20% of the GDP, we are talking about millions of jobs everywhere in Europe, and especially in vulnerable, remote and insular areas. Does the OECD have specific information about automation-related job replacement in the tourism sector? The OECD artificial intelligence policy observatory is following developments in 20 policy areas. However, there is no available information on the opportunities and challenges posed by current and future artificial intelligence developments in the tourism sector. In view of this, would you consider including the tourism sector in the artificial intelligence policy observatory working areas?

1-046-0000
Ivan Štefanec (PPE). – Thank you very much, Chair, and my thanks to the OECD for the presentation. As we have seen, the development of AI is enormous in the OECD countries. However, it looks like the US is developing faster than the EU. So my question is: can you please compare the current situation of artificial intelligence between the EU and the US from the perspective of current usage, from the perspective of research investment and also from a legislative perspective?

And secondly, what legislative changes would you recommend making in the EU in order to improve artificial intelligence implementation in the future? Thank you.

1-047-0000
Adriana Maldonado López (S&D). – First of all, many thanks to the OECD for this extremely interesting report.

I believe that, right now, artificial intelligence is playing a very important role in the mechanisms for recovery from this pandemic, which has proven to be entirely global in nature and which has shown that international multilateralism can play a key role in the recovery of such vital sectors as health, tourism, mobility, the economy and industry.

I would like to begin by asking Director Wyckoff if he considers that some common mechanisms with minimum standards need to be established in relation to artificial intelligence, so that the entire world shares some minimum parameters in the four pillars indicated in his presentation.

Secondly, I would also like to ask him, or, more specifically, ask him to tell us, which common criteria or parameters should be established as a minimum, in the OECD's view, in the various legislative bodies of the various institutions, and, in our specific case, what recommendations should the European Parliament make as an institution.

1-048-0000
Liesje Schreinemacher (Renew). – Thank you Chair, and I would also like to thank Director Wyckoff for joining us today and for his thorough presentation. I'm a supporter of the global partnership on artificial intelligence because I believe that it is in the interest of our citizens and I also believe that it would be in the interest of our businesses if we align our approaches as much as we can to create a true level playing field on a global scale. And, in this respect, Chief

Technology Officer of the United States Michael Kratsios has been very clear that the GPAI will not be a standard... *(inaudible)*

1-049-0000
Chair. – I'm sorry Liseje, but we couldn't make out a good part of the question, as your connection was very bad. Sorry about that, but we'll have to move on to the last question from the room. Ms Leitão Marques, please.

1-050-0000
Maria-Manuel Leitão-Marques (S&D). – Thank you, Chair. Today's discussion with the Vice-President and the OECD is very interesting. There is, of course, AI for good and AI for bad, and it's very important that the OECD shows more instances of AI for bad, such as health predictions, cancer predictions and other sectors and how AI can improve our quality of life and public policy.

My question is about GPAI. I'm wondering how this group may be able to effectively produce results if topics such as digital taxation have repeatedly met obstacles in OECD negotiations. What is the strategy to *(inaudible)* achieving common ethical standards for AI?

1-051-0000
Dirk Pilat, *OECD Deputy Director for Science, Technology and Innovation***.** – Thank you, Chair, and I will try to do my best with something which we are used to at the OECD, so I'll be quick.

On the first question on values, I do think that there is a lot of agreement on some of the values. I think this is why we basically did reach an agreement on those principles in the OECD. So I think that this is something that a lot of countries are agreeing on. Where sometimes differences start to occur is basically then on the way forward, for instance what does that mean for the regulation, for legislation, for policies, and that's where we see more differences in countries at the moment in terms of what do we need to do next. What we're trying to do at the OECD currently is really to try and share these experience across countries, so that basically countries can learn from each other, and I think we're still at an early stage of development of these technologies. There's a lot to learn and in so many cases we are probably not yet quite ready for best practices or even some acts of good practice. We are still learning in this area.
I think the second question on jobs is a very crucial one, and one we've done a lot of work on at the OECD in recent years. I do think you are absolutely right regarding the fact that jobs are being lost. However, jobs are also being created and, at the moment, I think we also see many new jobs being created in this area, which has meant a lot of demand for people who have the skills to work with AI. So, in that sense, there are opportunities there as well. I think that the real challenge is basically to help people who will be losing their jobs to develop new skills, to give them new skills, so skills policies and education policies are absolutely crucial. I also think that the social protection element will be important as well to help people find a new job and make the transition to new jobs.

Tourism: we have a very small group at the OECD working on tourism. They are active. I'll pass your message on to them and if there is work on AI in that area we will obviously also integrate that in the work of the Observatory.

As for the number of questions on the US versus the EU, I think where the US probably leads is really on private investment. There are lots of start-ups and the platforms also play a massive role in terms of investment. And I think that's where the real difference is at the moment. The EU actually leads typically in science, the US has very strong science in this area, but it doesn't translate into the private investment that is needed, which I think will really create opportunities, both economically and socially, to use this technology in the best possible way.

There were a couple of questions on legislative actions. It's not really what we are typically focusing on at the OECD. We are helping countries think and think through the issues to try and understand what may be some of the issues to be looked at and then hopefully inform policy-making and also inform legislation that may come. I think that, at the moment, we don't see broad legislation, a broad regulation on AI happening in countries, but I think there is a trend for perhaps more focused action in certain areas, some of which were also discussed earlier today.

Finally, and apologies if I've missed a few of all the different questions on GPAI. We are basically serving as the secretariat for GPAI. We are not directly driving the agenda for GPAI. I do think it has just started; it basically was agreed upon in June and the work only started last month. So we'll have to see a little bit how it evolves. There's a lot happening at the moment to try and work on a couple of key issues which will hopefully then translate into more action. So we're hopeful. I think it is a sign of the willingness of lots of countries to collaborate, to work together on many different issues. I'm hoping that will help to take us all forward on this agenda and help strengthen international collaboration. That makes exactly four minutes.

1-052-0000

Chair. – Thank you very much. That was impressive, Mr Pilat, and thanks of course to Mr Wyckoff for the presentation for the first part of the exchange. Thank you colleagues as well. As I'm sure you probably saw, we were just informed of the decisions of the President that as of now and until the end of November all meetings will be exclusively online. So this is, for a while at least, the last meeting where we can actually see each other eye to eye, which is sad, but it's the way it is these days.

(The hearing closed at 15.52)