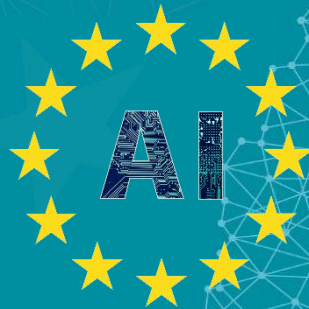




Second European AI Alliance Assembly

9 October 2020



Event Report

European Commission

Directorate General for Communications
Networks, Content and Technology

Contact: CNECT-AI-ALLIANCE@ec.europa.eu

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EVENT REPORT

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1. Introduction

This document is a report of the second European AI Alliance Assembly that, took place online, on the 9th of October 2020. The event focused on the latest achievements and future projections of the European Union's policy in Artificial Intelligence¹ (AI). The Assembly provided the opportunity to reflect on the results of the public consultation AI White Paper² that the Commission had launched earlier that year as well as the work of the High-Level Expert Group on Artificial Intelligence (AI HLEG) and the potential future AI legal framework.

Evolving around the two main pillars of the European initiative on AI, the two plenaries of the Assembly focused on how to build an Ecosystem of Excellence in AI (first plenary) while at the same time making sure that is also an Ecosystem of Trust (second plenary) for all.

While the plenaries provided comments and ideas on the building of these two Ecosystems, workshops focused on **specific aspects of AI Excellence** (as applied in the i. the fight against the COVID-19 pandemic; ii. the uptake of AI in the public sectors and iii. advanced automation) **and Trust** (focusing on i. the requirements that make AI Trustworthy; ii. biometric identification; iii. standards, conformity assessment and high-risk AI applications as well as iv. questions of liability).

The event was followed live from 52 countries³, with an overall number of 1900 online participants and a wide array of backgrounds, including industry, AI experts, civil society representatives, business and academia. Online participants had the possibility to participate in the discussions through online polls, addressed to them during the plenaries and parallel workshops. Moreover, workshops offered the audience with the possibility of a more active participation through opinions and/or questions, directly addressed to the panellist.

1.1. Opening address by Commissioner Thierry Breton

Commissioner Thierry Breton opened the session by commending the enthusiasm with which the European AI Alliance⁴ and other AI stakeholders are participating in the debate on EU policymaking on AI. He highlighted that there is a huge potential in AI and the data economy. The basis are the industrial and public data that people produce. He mentioned that it is very important to encourage European businesses and SMEs to create value for the European people and develop AI applications by accessing this data. The European Union wants to reap the benefit of AI systems for the Europeans, also in the diagnosis, treatment or prevention of COVID-19.

¹ European policy on artificial intelligence: <https://ec.europa.eu/digital-single-market/en/artificial-intelligence>

² The full results from the public consultation on the AI White paper can be found here: https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf

³ The event was attended online by participants from all EU 27 Member States as well as countries such as Argentina, Australia, Bhutan, Brazil, Canada, China, Colombia, Egypt, Honduras, Hong Kong, Iraq, Israel, Japan, Korea, Republic Of Kosovo (under UNSCR 1244/99), Norway, Russian Federation, Serbia, Singapore, South Africa, Switzerland, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States of America

⁴ More information on the European AI Alliance on: <https://ec.europa.eu/digital-single-market/en/european-ai-alliance>

Building an ecosystem of excellence requires both the collaboration of many actors and the right environment to respect European values such as privacy, safety and other fundamental rights. Commissioner Thierry Breton added that the most important aim is not to isolate the European Union but to ensure European alternatives with European values. With AI systems, it is possible to exploit the potential of the data economy and technologies. He also talked about the review of Coordinated Plan on AI in the first quarter of 2021 so they can use synergies to foster excellence all over Europe. Excellence and Trust have to work hand in hand, because if there is no trust, citizens cannot use AI systems without scepticism. The Commissioner claimed that for the future it is very important to be in the forefront of the technology, to respect European values and to take everybody on board. A human-centric approach is needed to build a leading AI industry in Europe.

1.2. Opening address by Dr Ulrich Nußbaum, State Secretary to the Federal Minister for Economic Affairs and Energy in Germany

Ulrich Nußbaum spoke on behalf of the German Council Presidency. He mentioned that digitization is one of the most important elements for a successful European future. To achieve this, it is important that European businesses should have new strength through AI systems. AI is a fundamental technology for the future and is the key to competitiveness and innovation. The future aim is to develop a European approach to AI in which innovation and trust – in a border-free single market for AI – are two sides of the same coin. He highlighted that through Trustworthy AI it is possible to lead this area, inspire others on a global level, shape the development of AI to Europe’s benefit, ensure that AI protects European citizens, fosters innovation and societal progress, and is conform to European rules and values.

2. First plenary session: “An Ecosystem of Excellence – Make it happen!”

2.1. Panel composition

The plenary panel was composed of the following members:

- **Rita Cucchiara** – Professor, Head of Research Center, Università di Modena e Reggio Emilia, Italy
- **Fredrik Heintz** – Associate Professor of Computer Science, Linköping University, Sweden
- **Laure Le Bars** – Vice-President of the Big Data Value Association and Research Project, Research project Director, SAP Research & Innovation, France
- **Marina Bill** – Global Head of Marketing and Sales for ABB’s Robotics and Discrete Automation, Board of Directors of euRobotics Association, partner in the AI, Data and Robotics Public Private Partnership, Switzerland
- **Christel Fiorina** – Senior Project Leader AI, French Ministry of Economy and Finance
- **Yasir Khokhar** – CEO and Founder, Connecterra, Netherlands
- **Giuseppe Casale** – Deputy Director, of the International Training Centre of the International Labour Organization, Turin School of Development, Italy
- **Anya Sitaram** – *Moderator*

The discussion began with the first online poll question directed to the audience: “What challenges could motivate scientists, developers and industry to join forces in AI?”



Image 1 – Word cloud with answers to first online poll question

2.2. Panel discussion

The panellists were asked to express their opinion on why it is necessary to have excellence in AI.

According to **Rita Cucchiara**, there is already European excellence in AI from a scientific point of view and it is important to keep it this way in the future. She added that excellence is needed also from the societal and political point of view. We need to create possibilities for students and European citizens to stay in Europe and not leave. The principle of democracy, ethics and other European values are a major advantage against the US and China. She highlighted that Europe did a lot in the last two years, but still has to do more. She highlighted that we need a strong foundation of AI and work on its application to many different tasks. Cooperation with universities and the possibility to work together is crucial; a unity at the European level is needed not just in Bachelor or Master level studies, but also in PhD programs.

Fredrik Heintz spoke about the education and skills gap, as well as the solution. He said that the biggest challenge is to solve this problem because without talent and skills it is impossible to have innovation or to fill positions by companies to reap commercial success. He urged that everyone needs to understand the basics of AI. According to Frederik Heintz, there is proper AI education in the EU at the Bachelor and Master level, but as the next step, we need to educate people who are experts not just in AI but also in law, economy and medicine; therefore, dual degrees would be necessary. Governments should also support lifelong learning on the job, in universities, in industry and the public sector. He added that the quality of education in Europe is high, but the volume is not enough and everyone should have to know the basics of computer sciences.

Laure Le Bars spoke about fostering private public partnership (PPP) in the AI sector. She mentioned that AI, robotics and data are the core drivers of innovation, productivity and economic growth. The EU has to take the global lead in human-centric and Trustworthy AI, compatible with European values. The aim is to establish an open, collaborative, and

inclusive hub for AI technologies with partners from industry – from large industries, to SMEs and start-ups – from the research and academic world, and all kind of actors such as regulators, investors, national and regional local governments and communities such as users and user association representatives from civil society. She highlighted that the goal is to boost European competitiveness, social wellbeing and environmental aspects. The intention of the Horizon 2020 partnership is to build bridges between the different stakeholders and enable this vision of human-centric and Trustworthy AI to flourish.

Yasir Khokhar explained the difficulties faced by the private sector and start-ups. The challenge of start-ups is the question of talent. He mentioned that it is necessary to figure out the way to get better talent into Europe, especially in those countries where there is a massive shortage. According to him, this is the first area where Europe could do more. The second area that needs to improve is opportunity enablement, because start-ups can easily die if there is a lack of opportunities. Opportunity creation within Europe is crucial for start-ups, but PPPs are valuable for supporting them.

Christel Fiorina explained that the AI national strategy in France runs with an unprecedented public investment for research, innovation, start-ups, business and talents. She argued that this could be a best practice for others. She stressed that the best way to create leading projects in Europe is to cooperate with all the Member States. There European territories are attractive for business, start-ups and talents, but she argued that the market is still fragmented; therefore, it is important to work on the Coordinated Plan on AI. She agreed that it is essential to create an environment that gives more assistance for start-ups within Europe, because it is hard to scale up if there are different languages and different rules.

Guiseppe Casale answered the question on how AI research and innovation could help Europe become a leader with the human-centric approach. Concerning him, there is a constant distraction of jobs and it is crucial to reinvent the old labour paradigm in order to make sure that the jobs created today will stay also in the future. By 2030, there is a need to create at least 300 million new jobs worldwide. AI can do a lot in assisting in the enablement of the environment in order to make sure that new jobs can be created and sustained. He added that it is necessary to invest more in some segments and sectors of the economy and of the society: in people's capabilities, in institutions of work including the legal framework and in decent and sustainable work. The task is to accompany individuals throughout the different transitions of the future economy, including the effects of AI.

Marina Bill agreed that Europe has a good stable base to stand on and stressed that it is necessary to continue to develop this way. She highlighted that Europe has one of the largest robotics factories. She added that separating fiction and facts is important when we talk about acceptance and usage of AI and robotics. Robots are there to support and help people, including in unstructured environments. According to Marina Bill, trends that are pushing AI and robotics have not changed due to the COVID-19; they have instead been accelerated to a large degree. She said that not just the big, but also medium sized and small companies have to push what they can do with the acceptance and the usage of AI.

The speakers discussed risk taking in the EU for start-ups. Their conclusion was that Europe is too risk-averse in some sense. Safety is important, but it is important to do both: taking risks and staying safe. There is a lot of interest in AI, but no one wants to be the first, so the sector needs more leaders who can show that AI systems work. The attitude that the sector needs is to be aware of the risks and fail if needed, but to do something anyways.

Rita Cucchiara reflected on what Europe needs to do in AI. She mentioned that we need to think at a worldwide level and not only for Europe, not only for a nation, for a region or for a city. It is important to think big in projects.

Marina Bill was asked how to prevent brain drain in Europe. According to her, it is necessary to be active as an industry in education and in universities by showing the opportunities available in AI in Europe. The industries have to present very early the possibilities people can have in their country or in their region. Lifelong learning is also an option; there is a necessity to develop all the time and to have the feeling that people do not have to go somewhere else to have their own learning path. Customers have to see how these technologies work in everyday life, not just in research centres.

Guiseppe Casale added that irrespective of the nature of the contract, fundamental workers' rights and social values are very important. The recognition of an adequate leading wage for the young generation is also crucial. Europe has all the necessary qualities to be successful.

In parallel, online attendants could answer a second online poll question on “What challenges could motivate scientists, developers and industry to join forces in AI?”



Image 2 – Word cloud with answers to second online poll question

At the end of the session, **Pekka Ala-Pietila**, Chair of the High-Level Expert Group on AI (AI HLEG) presented the Sectoral Considerations for Trustworthy AI⁵. The document was prepared following the 33 Investment and Policy Recommendations that the group had presented to the European Commission as part of its mandate to advise the implementation of the European AI Strategy⁶. While the Recommendations aim to guide EU policymakers and stakeholders in how to maximise the benefits of AI while minimising the risks, the Sectoral

⁵ The document can be found on: <https://futurium.ec.europa.eu/en/european-ai-alliance/document/ai-hleg-sectoral-considerations-policy-and-investment-recommendations-Trustworthy-ai>

⁶ High-Level Expert Group on AI: <https://ec.europa.eu/digital-single-market/en/high-level-expert-group-artificial-intelligence>

Considerations explore how these Recommendations can be applied in the specific areas of **Public Sector, Healthcare & Manufacturing** and the **Internet of Things**.

These two documents support the implementation of “Trustworthy AI”, a key concept introduced by the group with its first deliverable, the Ethics Guidelines for Trustworthy AI⁷.

2.3. Main outcomes

- Working together with Member States is important to reach all the aims of the EU.
- Big projects at European level for data collection and machine learning approaches are welcomed.
- The European Union is on a good path but it would be important to scale up and speed up.
- We need to support lifelong learning and education, and think about how to educate people on AI.
- People need dare to lead, because if Europe leads, then people will look at Europe and get inspired by what Europe does.
- The key is to stay valuable and sustainable, support training and testing facilities, become quick and curious.
- More regulation on data use and algorithmic accountability would be welcomed.

3. Parallel workshops

The first plenary was followed by three parallel workshops were organised on key items, meriting in depth debate with AI stakeholders. The workshops aimed to explore **specific aspects of AI Excellence**, as applied i. during the fight against the COVID-19 pandemic; ii. in the uptake of AI in the public sectors and iii. in the field of advanced automation.

3.1. AI tools to fight the COVID-pandemic

3.1.1. Panel Composition

The panel was composed of the following members:

- **Cristina Silvano** – Professor of Computer Engineering, Politecnico di Milano
- **Paul Suetens** – Professor of Medical Imaging and Image Processing and the Chairman of the Medical Imaging Research Center, KU Leuven
- **Stefano Stramigioli** – Professor & Leader of Robotics And Mechatronics Lab, University of Twente, Italy

⁷ The document can be found on: <https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai>

- **Juha Heikkilä** – Head of Unit, Robotics and Artificial Intelligence in DG Connect, EC –Moderator

3.1.2. Introductory remarks

AI and technology can help in many ways and may be a useful tool in combating the COVID-19 pandemic. This breakout session aimed to explore both how AI and related technologies successfully helped in the fight against COVID-19 and what other potential can the application of AI has in this respect. By inviting three different, but complementary perspectives to the panel, the intention was to give the audience insight into the various ways how these technologies can help. The audience was asked to submit questions with an online tool and to answer the following question:

- *In two words, what are the main challenges faced in deploying AI and related technologies in health and care?*

The moderator of the session, Juha Heikkilä, posed the following questions for the panellists' opening statements:

- **Prof. Silvano**, can you please describe how your work with AI and supercomputers and explain how it can contribute to faster drug discovery to combat the pandemic?
- **Prof. Stramigioli**, you work in the area of robotics for healthcare. Could you describe the various ways in which the sophisticated robotic technologies with embedded “intelligence” can contribute to combating the pandemic and what potential it has in this regard?
- **Prof. Suetens**, could you explain how AI is used in medical imaging and what benefits it brings in combating the pandemic?

3.1.3. Panel discussion

Cristina Silvano. The common efforts for fighting COVID-19 are assisted by some of the most powerful supercomputers around the world. The panellist brought the example of the Exscalate platform⁸ - an intelligent, in-silico drug discovery platform run on supercomputing architectures, that used a chemical library with 500 billion small molecules to tackle the Covid pandemic. The platform uses an ultra-fast, intelligent virtual screening software with processing power of 2 million small molecules per second. With the help of the platform only a couple of days - instead of weeks or months - are needed to generate results. The Exscalate platform was already used to find potential drug compounds against the Zika virus. The panellist believes that supercomputing and AI cannot be seen as separate domains. The convergence of both is driven by the generation of huge amounts of data. Today, pharmaceutical research relies more and more on supercomputing capacities and AI, i.e. machine learning, deep learning, multi-objective optimization or supervised learning. These methods boost the in-silico drug discovery process.

⁸ Available on: <https://www.exscalate4cov.eu/>

Stefano Stramigioli. The European robotics field is a global leader. Robotics and AI are two sides of the same coin. Without robotics, any attempt to use AI in the physical world would be meaningless. Robotics can help in all tasks where mobility in the physical world is relevant, e.g. disinfection robots, telepresence, rehabilitation, support of medical personnel. The panellist highlighted the Moravec’s Paradox: reasoning requires fewer computations than sensorimotor skills. Hence, robotics is complicated and we are far from how it is portrayed in movies.

Big data facilitates an AI software side and an AI robotics side. The panellist highlighted the need for proper synergistic corporations, like the AI, Data and Robotics public private partnership⁹.

Paul Suetens. In March, this panellist was appointed as the coordinator of a rapid development of an AI chest computed tomography (CT) analysis tool. It was based on a deep learning model trained and validated on more than one hundred 3D scans of COVID-19 confirmed cases. 25 radiologists delineated it. The web-based system analyses new images in a secure cloud system. Installed in 65 hospitals worldwide, it conducted 15.000 analyses. The system can be used at admissions and at follow-up with patients. The project received an EU funding of 3 Million Euro for 2 years and will also work on explainable AI. This means that when the system is applied to diagnose COVID-19 then it is possible to see the process that the system used to arrive in such a conclusion. The advantage of such a system is that no human interaction of radiologist is needed anymore, so the system can be trained of several ten thousands of images instead of one hundred.

The panellist is also co-chairing the “AI and pandemic response subgroup of the global partnership of AI”¹⁰. This partnership built a catalogue of different AI applications to combat COVID-19. The partnership also defined a number of significant hurdles, risk and failures in such processes: issues with privacy protection compliance and liability; issues with data; issues with the use and acceptance of the technology. These issues arose in the COVID-19 emergency, but are also present in normal times.

3.1.4. Discussion with the audience

- *Audience question on whether it is not risky to use AI in healthcare when it is not 100% accurate*

Paul Suetens highlighted that the level of accuracy of AI systems is not 100%, but humans are also not 100% accurate. Even if it can be proven that an AI system can perform better than humans do, the issue of trust arises. This is not only true for COVID AI systems, this is an issue for AI as a discipline.

Cristina Silvano added that in her field a method called “approximate computing” is applied, involving a trade-off between accuracy and computational time. This is important when

⁹ Available on: <https://ai-data-robotics-partnership.eu/>

¹⁰ See OECD Observatory on AI: <https://oecd.ai/wonk/an-introduction-to-the-global-partnership-on-ai-pandemic-response>

supercomputers are used to analyse large amounts of data. There always exists a trade-off between AI accuracy and computational time.

- *Audience question on whether the pandemic effectively created one big sandbox in which the research and innovation took place.*

Stefano Stramigioli answered, due to the crisis, a lot of things were more easily arranged because a fast reaction was needed. There was no sandbox environment, just the timeline changed.

Christina Silvano said that her field was ready for running these kinds of experiments - ready for a pandemic. Supercomputing had been applied to combat the Zika virus outbreak in 2019, and is now applied to address the COVID challenge.

In sum, the AI community did not work in a sandbox environment. The systems were ready to deploy. During COVID, funding became quickly available, some processes were accelerated, and interdisciplinary collaboration was fostered. On the other hand, Paul Suetens stated (see below) that half of the time working on the project was spent to make the system legally compliant.

- *Audience question on AI regulation and policies*

Stefano Stramigioli said a structure – a type of “watch dog” engineering layer – is needed in an autonomous system. Only then, if this engineering tool is established, can AI systems be appropriately validated and regulated.

Paul Suetens added that when deploying AI in the emergency COVID situation, 50% of their time was spent on regulations and approvals. Even without a crisis situation, these issues are always there and of course they were also there during COVID. Data pre-processing is always of great concern. Data may be unreliable, we might have limited access to clinical expertise for supervised AI training, or there may be difficulties of transforming data to user specifications.

- *Audience question on synergies and collaboration during the pandemic*

Cristina Silvano answered that AI Solutions developed for COVID can be used in other areas. For example, the Exscalate platform is useful for precision medicine and robotics can help in all mobility- and work-related tasks. Additionally, the heightened added psychological pressure during the COVID crisis: Pressure to publish results and data fast. The fight against the pandemic was – and is – a global effort. On a positive note, researchers are creating more synergies.

Stefano Stramigiolo stated that innovation shifted to a higher pace during the pandemic. In the long run, this panellist would like to see among others experimental hospitals with ethical committees. Only then can society be more equipped for future crises. The panellist

continued that, as scientists, they work to help the clinicians. In healthcare specifically, everything is driven by problem solving. It is natural that the medical professionals, clinics, and patients are highlighting their problems. It is then the task of us scientists to deliver solutions, e.g. with surgical robots, imaging analysis etc.

Paul Suetens added stakeholders need to sit at the same table. Scientists need to work where clinicians are, at the clinics.

Cristina Silvano concluded that cooperation and interdisciplinary research is key.

- *Audience question on the creation of a centralized EU hub for medical information and data*

Paul Suetens mentioned that when trying to collect data from different countries in Europe, the collaboration between such countries is the biggest problem. The crucial factor is the data. If there is not enough reliable, secure data, a system will have a bad performance. There are several systems running for chest-CT scans in several countries, all trained on their own data. There should be an effort for a joint repository with reliable, secure, and ethical data. This would be the biggest step forward to fight a future pandemic.

3.1.5. Online Survey

At the beginning of the session, the audience was asked to answer in two words what the main challenges faced in deploying AI and related technologies in health and care are. The following topics emerged: **explainability, trust and accuracy, privacy, ethics, predictive accuracy and transparency.**

3.1.6. Main outcomes

- The pandemic accelerated the research and innovation activity. There was a strong pressure to deliver.
- The pandemic has shown how important it is for us as Europeans to collaborate. We can achieve a lot, especially in research, and can be proud of our expertise. However, better coordination and collaboration is necessary. Although cooperation intensified and synergies were sought, things were also done in parallel in different countries without always knowing what was done elsewhere.
- More work remains to be done to ensure trust in AI systems. Ways to validate systems are not always there, but validation is important.
- A centralised hub/data repository for medical data (images, genome data etc.) is needed to make AI systems more reliable. We need to further enable a diverse, but united European AI research base.
- We live in a difficult period, but we have also learned to become resilient amidst these difficulties. We have grown confident and showed great efforts. Despite the hardship, there is cause for optimism.

3.2. Uptake of AI in the public sector

3.2.1. Panel Composition

The panel was composed of the following members:

- **Gianluca Misuraca** – Associate Research Fellow, Danube University Krems, Austria
- **Lucia Velasco** – Head of Cabinet for the Secretary of State for Digitalisation, Spanish Government
- **Gatis Ozols** – Head of Public Services Department at Latvian Ministry of Environmental Protection and Regional Development
- **Marieke van Putten** – Team manager of International Affairs Digital Government, Dutch Ministry of the Interior and Kingdom Relations, Netherlands
- **Anne-Marie Sassen** – Deputy Head of Unit of DG CNECT A2, Technologies and Systems for Digitising Industry – *Moderator*

3.2.2. Introductory remarks

AI can greatly contribute to better public services. It can improve efficiency, decision making, and the interaction between citizens and their government. In this session the panellists talked about how countries are already piloting with AI and tried to answer the challenge of scaling up the positive results of pilots to actual use in an administration. **Anne-Marie Sassen** mentioned that the conclusions of the session will be used by the Commission to develop an “adopt AI” programme, which was mentioned in the White Paper as a means to support public procurement of AI systems and to accelerate the uptake of AI in the public sector.

3.2.3. Panel discussion

The panel discussion started with a presentation from **Gianluca Misuraca**. He presented the results of the “AI Watch report on AI in public services”¹¹ which he co-authored. The report catalogued existing use cases of AI in the public sector, finding that most initiatives so far have been recorded in general public services, health, and economic affairs. Misuraca noted that there has been little disruptive change enabled by AI so far, with most projects focusing on the redesign of individual organisational processes. Functionally, AI is made use of most often in order to support service provision and citizen engagement, followed by regulatory enforcement and internal management. The most common AI applications are chatbots, other intelligent digital assistants as well as predictive analytics and data visualisation.

The report also shows that so far increasing performance of public services and government operations has been the key driver in public sector AI adoption, whereas increasing openness and inclusiveness have only been residual factors. **Gianluca Misuraca** concluded by pointing out that, as all EU member states are exploring the use of AI, it is important to develop

¹¹ Document available on the by the European Commission’s Joint Research Centre website: <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/ai-watch-artificial-intelligence-public-services>

benchmarks as well as methodologies to assess impact and to strengthen the exchange of best practices.

Following the presentation, the panellist were asked for examples of successful public sector uses of AI in their respective countries. **Gatis Ozols** highlighted the importance of multilingualism for Latvia, as Latvian is one of the “small” European languages. Multilingualism is essential to ensure a functioning digital single market in the EU as there are 24 official languages in the EU and 59% of EU internet users only use their native language when writing emails, sending messages, or posting comments on the web. This is why Latvia invested in a national, machine learning-based translation platform, which is free to use for all citizens and businesses. He also noted that text-to-speech and speech recognition features can improve accessibility problems for citizens. Further, Latvia has also developed a chatbot platform as a shared service for public administrations across the country. **Gatis Ozols** further pointed to the potential of AI in increasing road safety and health outcomes, for example in melanoma screening.

Marieke van Putten also noted the value of chatbots for 24/7 citizen contact. Additionally, the Netherlands have used AI in inspection and law enforcement, for maintenance in public spaces, poverty detection and prevention. Like in Latvia and the Netherlands, chatbots were also used in Spain, **Lucia Velasco** explained, in an effort to fight misinformation and disinformation by providing citizens with fast and Trustworthy information. Especially interesting is the Spanish project between the Hospital Clinic of Barcelona and the Barcelona Supercomputing Centre¹², funded by the Secretary of State for Digitalisation and AI. They will develop an AI model that helps doctors predict the evolution of COVID-19 patients. It will be based on information from more than 3 000 clinical reports generated by the Hospital Clínic during the first wave of the pandemic. This project will not only intend to help with treatments but also to better plan the internal organization of the hospitals, including human and other resources, in the event of a new wave of the pandemic.

Panellist were then asked about the key challenges and opportunities with regard to public sector AI adoption, with a special focus on public procurement. **Marieke Van Putten** discussed the importance of pre-commercial procurement. She pointed out that pre-commercial procurement can be used to stimulate innovative SMEs to develop solutions for societal problems. For example, an AI-focused pre-commercial procurement project with the Ministry of Justice and Safety led to a large variety of novel solutions being presented. This led several public organisations to increase their efforts around AI.

One of the key challenges in **Gatis Ozols’** opinion is to build knowledge in procurement and to procurement’s role and importance. To address this challenge, hackathons were organized in Latvia in cooperation with companies and NGOs in order to develop public sector solutions. In addition, following hackathons, municipalities described their data needs, which

¹² Available on: <https://www.clinicbarcelona.org/en/news/the-hospital-clinic-and-bsc-will-use-artificial-intelligence-to-predict-the-evolution-of-patients-with-covid-19>

were subsequently addressed. Another piece to the puzzle is building skills among municipal and procurement staff, **Gatis Ozols** noted.

In the case of Spain, **Lucia Velasco** pointed to the potential of AI to inform public sector decision making and to reduce bureaucracy. However, she also highlighted the risks of using AI in the public sector and the need to generate trust among citizens. For this reason, the public administration needs to ensure certain level of human intervention and transparency of how the AI is used. Also, it needs to be avoided that AI-driven decisions taken by the public sector are discriminatory or biased. This will be possible with an increased access to high quality data and the deployment of infrastructures that support data reuse. To help in this aspect, Spain has set up the National Data Office¹³. She further underlined the need to push for innovation in the public sector by encouraging entrepreneurship around public services and changing the mind-set of public services. For this reason, Spain will set up a Gov-Tech Lab to develop pilot projects that put technology to work for more efficient, transparent and inclusive public services.

With regard to a future Adopt AI programme at the European level, the panellist proposed various ideas. **Lucia Velasco** argued that efforts should be combined instead of pursuing individual initiatives at the national level. Further, she states that guidelines are needed to generate trust. Also in the spirit of cooperation, **Gatis Ozols** asked for cross-border peer learning in the initial stages of AI adoption. In a similar vein, **Marieke van Putten** pointed to the need for networking activities, also across different sectors. She would also like to focus on building tools and capacity for AI impact assessments, innovation procurement, and experimentation. Finally, she argued that data platforms and the exchange of public and private data are crucial enablers.

A poll of the audience showed that, in the eyes of those watching, the areas of the public sector in which AI would bring the most value are those of healthcare, education, transportation and mobility, and public services. In another poll, members of the audience were asked to name the main challenges faced in the public procurement of AI systems. The results showed that the audience's concerns mostly revolved around transparency, trust, liability, and lacking competencies.

Mirroring this snapshot, questions from the audience asked how one can ensure that public sector AI adoption is fully compliant with fundamental rights and free of bias. In response, Velasco urged caution with regard to algorithmic decision making in the public sector. She further highlighted the importance of building the right data infrastructure. **Marieke Van Putten** demanded that the public sector should lead the way in ensuring fundamental rights compliance. In this respect, building the right models and using reliable data is crucial. She also pointed to instruments currently developed in the Netherlands to ensure this, such as AI impact assessments.

¹³ More info here: https://ec.europa.eu/knowledge4policy/ai-watch/spain-ai-strategy-report_en

3.2.4. Main outcomes

- Growing interest on the use of AI in the public sector to redesign internal processes, enhance policy-making mechanisms and improve public services delivery.
- However, transformative potential and the effective adoption and use of AI is not observed yet.
- Developing a baseline for the use of AI in public services is a much needed effort and a methodology to assess impacts of AI in public services in the EU is required.
- While there are high expectations from positive impact of AI these are not matched by clear/straightforward evidence and the ethical and political risks of using - and governing - AI in the public sector are not properly addressed / understood.
- A common approach would be the ‘game changer’ for AI adoption in the public sector.

3.3. Advanced automation through AI?

3.3.1. Panel composition

The panel was composed of the following members:

- **Margareta Chesaru** – Public Affairs Manager, UiPath, Romania
- **Kay Fuerstenberg** – Senior Vice President Research & Development, SICK AG, Germany
- **Guillaume Vendroux** – CEO, DELMIA, France
- **Marco Huber** – Center for Cyber-Cognitive Intelligence (CCI) at the Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany
- **Cécile Huet**, Deputy Head of Unit of DG CNECT A1, Robotics & AI – *Moderator*

3.3.2. Introductory remarks

The benefits of adopting AI are widely recognized. AI-powered automation is expected to greatly contribute to production and services industry competitiveness, but also to the efficiency of public services or the improvement of working conditions by delegating to machines dull, dangerous and dirty tasks. The objective of the session is to benefit from experts’ experiences and the AI Alliance members’ view on how EU policies could help exploit the potential that AI powered automation can offer to our economy and society.

3.3.3. Panel discussion

Margareta Chesaru gave her perspective from a global automation company UiPath that is originated in Bucharest. The software automation technology involves high-volume repetitive tasks that enables automation and prediction in any industry. In all industries and public

services, there are a lot of repetitive tasks, the performance of which can greatly improve with the use of automation. Automation can support employees while delivering work and at the same time reduce the probability of human mistakes, and thus, improve the efficiency of services and processes. AI can also help to improve processes at governmental level. The uptake of AI in the European Union should focus on a stronger Digital Single Market on harmonized approach between Member States. It connects with the funding opportunities that exist at the private and also at the public sector level: the recovery and resilience facilities offers a great chance to reform and to increase the capacities. Finally, **Margareta Chesaru** highlighted that in such a context, the digital skills divide remains still a challenge that needs to be tackled.

Marco Huber said that automation is an old topic to make manufacturing competitive in Europe. Automation is tricky to apply – for ramp-up time as well as keeping or increasing quality, but AI can help reduce ramp-up time, for example through reinforcement learning, while a robot is doing one task, it is possible to train it in the simulation to do another task. AI is helpful in administrative service or business processes and there are more ways to optimize these kind of processes with the help of AI as compared to the manufacturing industry where AI already helps automation at a high level. Research quality in Europe is already great, but there is a lack of transfer to applications, so that SMEs can benefit from this research. Large firms like ATOS and SAP do not have these issues. **Marco Huber** highlighted that more effort could be done to foster tech transfer, by ramping up tech-transfer hubs, supporting core technologies and the human-centric approach of EU. Neural networks whose inputs and operations are not visible to the user or another interested party -“black-box effect”- can limit trust and come to conflict with regulations on safety; in such cases, support to enhance transparency is key. We have to see how to verify technology formally (by using metrics). Companies are hesitant to share data, but this is needed and the European Commission can help. **Marco Huber** also mentioned the Gaia-X¹⁴, a project for the development of an efficient and competitive, secure and Trustworthy data infrastructure for Europe as a good initiative but maybe not sufficient to tackle current needs.

Guillaume Vendroux argued that people are key asset to a company and it is important to provide them with a good working environment; therefore, safety is paramount in manufacturing. Railway industry developed a very precise framework on safety and shows at what concrete levels there is an issue. Harmonization for rules regarding using automation/robotics across EU is needed, but currently, there exists a fragmentation in regards to these regulations.

AI needs to be more transferable. There is a need to have a framework, to create an ontology, to standardize the nature of the data we capture, and the way to inject it into AI systems to make it understandable and acceptable. In regards to AI and trust, it is important to figure out how to build trust between the worker and AI. When there is a difficulty in getting AI in a certain area, the problems may be technical, but what is more difficult is the change for the

¹⁴ More info on GAIA-X: <https://www.data-infrastructure.eu/GAIAX/Navigation/EN/Home/home.html>

team to use these devices and these issues need to be addressed. The panellist emphasised the need to raise awareness and acceptance of AI in shop floors.

Kay Fuerstenberg explained that modern logistics hubs are automated when it comes to AI tasks, e.g. token identification or image recognition and AI is also used in manufacturing production, e.g. in quality control. Distributed AI can be used for production and logistics process. The panellist advocated life-long learning for industrial applications and the benefits of AI in this applications need to be demonstrated. It may be obvious in scientific world, but there is need to move it to the “real world” with use cases. On the topic of safety, the panellist added that run-time verification is important to minimize risk of industrial AI applications.

3.3.4. Concluding remarks

Kay Fuerstenberg believed that to upskill non-technical experts in AI to embrace the AI evaluation, trust is important. Humans should always be in control, AI should not control us. The EU wants to distinguish European AI as trusted AI, but it is unclear how to interpret this approach for industry applications. Interdependency is very important. Europe should be independent from other regions. Working together, gaining trust, sharing trust and excellence but no one can do it alone, we need to join forces at European level.

Guillaume Vendroux argued for the deployment and democratization of AI, acceptance is key. “I would probably put safety at the top of “Trusted AI”. We should build on the framework together on trust”

Margareta Chesaru emphasised that trust and ethics is still an open question. Increasing level of trust would increase uptake. Constant conversation is needed to decide on what the appropriate steps are.

Marco Huber said that trust often means transparency. Any AI should be understandable by humans. “Do not hesitate to deploy AI or others will do it before you.”

3.3.5. Main outcomes

- Building up trust in AI was seen as the overarching challenge for AI to advance automation in Europe.
- Good research exists in Europe and big companies able to deploy it, but often SMEs lag behind. Key for greater uptake.
- The human-centric approach to AI of the Commission was welcomed. There was call for a focus on building up skills, greater harmonisation of the internal market and more funding opportunities.
- An open, inclusive, collaborative conversation across Europe as the best way forward to achieve higher trust.

There is a need to join forces and act fast to develop and deploy trustworthy AI-based solutions.

4. Plenary Session II

The topic of the second plenary session was: *An ecosystem of Trust - Do it right!*

4.1. Opening address by Director-General Roberto Viola

Roberto Viola, Director General of DG CONNECT opened the second plenary session stating that the ecosystem of excellence and the ecosystem of trust cannot exist without each other. There is no AI excellence if people do not trust it. By fostering the idea of human-centric AI, the EU is the first to set up a High-Level Expert Group that worked closely with the community of stakeholders via the European AI Alliance. It is important to keep in mind that we are living in a dynamic environment where regulation is necessary, because this guarantees legal certainty.

He stated that European leaders asked the EU Commission to come up with a definition of high-risk artificial intelligence. The risk-based approach is a welcomed idea and it is crucial to identify areas where there are risks to safety and fundamental rights. The risk-based approach contains: applications without any risk; applications that can incorporate some risks; and at the peak of the pyramid, there are the high-level risk fields.

Roberto Viola indicated that the definition of risk is highly debated, since it is mostly a subjective definition, but there are also some objective criteria to identify it: if the life of people or their fundamental rights are damaged. He highlighted that equal rights in a democracy cannot be jeopardized by the choices of a machine, and humans have to take decisions about fundamental rights such as selecting someone for a school or a job, because we are a human society.

4.2. Presentation of the head of the Algorithm Accountability Lab from the University of Kaiserslautern, Katharina Zweig

Katharina Zweig started her presentation with two big fears that people have concerning AI: first that it will replace people and second that it will judge them. The question is how is it possible to make the judging process Trustworthy? She mentioned that Algorithmic Decision Making systems (ADM system) are able to score people or classify them to some predicted behaviour. There are three ways to create rules of AI systems:

- rules can be implemented by computer scientist,
- rules can come from experts, or
- rules can be learned based on data.

Katharina Zweig disclosed that the last category – rules can be learned based on data – can be problematic and wrong in many ways such as wrong data, incomplete data, the system can wrongly discriminate or it can be trained wrongly for a given application.

She highlighted that ADM systems need to be regulated with respect to the logic, mechanism and quality of their decision making if they contain a learning component; if the system makes decisions that can inflict damage; and independent of whether a human is in the loop or not. According to Katharina Zweig, there are different classes of transparency and

accountability requirements based on the potential damage and the dependency. Katharina Zweig proposed a differentiated approach highlighting that it would be needed to differentiate between ADM systems used by the state and by other organizations. If a government institution uses an ADM system, it needs to be classified according to the risk and the result needs to be transparent. Other usages of ADM systems require the same risk classification and state-of-the-art development to avoid harm but without being mandatory.

4.3. Presentation by the Vice-Chair of the High-Level Expert Group on AI, Barry O’Sullivan

Barry O’Sullivan spoke about another deliverable of the AI HLEG¹⁵. They developed a digital tool – an assessment list – that is useful for companies for assessing their own work. The tool is to help companies to complement the value part of their work. O’Sullivan presented the ALTAI portal¹⁶ where the tool is available for companies and how they can go through it to check whether their AI system is Trustworthy. The Trustworthy AI system is based on seven key requirements:

- 1) Human agency and oversight
- 2) Technical robustness and safety
- 3) Privacy and data governance
- 4) Transparency
- 5) Diversity, non-discrimination and fairness
- 6) Societal and environmental wellbeing
- 7) Accountability

O’Sullivan explained that this tool could be very useful also for SMEs who have not enough resources, because this assessment list helps them to decide whether they are working with a Trustworthy AI system or not. The speaker highlighted that this work is unique, because the key requirements are based on high-level ethical principles and this is the first and only complete approach to Trustworthy AI: from ethical principles to the implementation.

4.4. Questions to the audience

During the plenary session, the audience was involved through interactive questions connected to the main topic of the session. They had the chance to answer the following two questions:

- 1) *Do you think that regulation should be limited to high-risk AI systems?*

Most of the voters agreed on that answer: No.

- 2) *An AI system sorts through written applications and recommendations who should be invited to a job interview. Do you consider this is a high-risk AI system?*

¹⁵ See previous reference to the AI HLEG in paragraph 2.2

¹⁶ The ALTAI portal can be accessed on the European AI Alliance via this link: <https://futurium.ec.europa.eu/en/european-ai-alliance/pages/altai-assessment-list-Trustworthy-artificial-intelligence>

Most of the voters agreed on that answer: Yes.

4.5. Panel composition

The plenary panel was composed of the following members:

- **Iban Garcia del Blanco** – Member of the European Parliament
- **Ursula Pahl** – Deputy Director General BEUC, The European Consumer Organisation
- **Cecilia Bonfeld-Dahl** – Director General DigitalEurope
- **Christiane Wendehorst** – Professor of Law, University of Vienna
- **Eirini Zafeiratou** – EMEA Public Policy Director, Amazon
- **Andrea Renda** – Senior Research Fellow and Head of Global Governance, Regulation, Innovation & Digital Economy CEPS
- **Anya Sitaram** – *Moderator*

4.6. Panel discussion

Iban Garcia del Blanco mentioned that a high-risk AI system needs regulation, because AI can raise serious consequences not just for individuals but for the society as a whole. He spoke about the European Parliament's report on the *Framework on ethical aspects for AI, robotics and related technologies*¹⁷, which focuses on a human-centric approach that safeguards human dignity, autonomy, and safety by respecting fundamental rights and European Union law. He highlighted that the European Parliament defines high risk, based on objective criteria. It includes any technology that can cause injury or harm to individuals or society or that breaches fundamental rights and safety rules as laid down in EU law. To decide whether the AI technology is a high-risk technology or not, it is essential to take into account the sector where the technology is developed, deployed or used; the specific use or purpose; and the severity of the injury or harm that the technology could cause. He also mentioned the example of employment that is considered as a high-risk area that must comply with stricter requirements to ensure safety and transparency. The used data also has to be non-discriminatory.

Ursula Pahl thinks that a much more differentiated approach is needed. She spoke about insurance and biometrics as fields where privacy, solidarity and data protection can undergo some risk due to the use of AI. In the field of consumer protection and digital advertising, there are also potentials for harms based on algorithm-driven recommendations. Individualized prices are unfair, have the potential to cause economic harm and lead to individualized markets.

Cecilia Bonfeld-Dahl agreed that there are some applications that need to be treated with caution, such as facial recognition and it is important to ensure that consumers enjoy the

¹⁷ The document can be found on: https://www.europarl.europa.eu/doceo/document/TA-9-2020-0275_EN.html

benefits of AI and to guarantee transparency. The sector is in the forefront compared to many other sectors in this area, there is already a very good self-regulation system and many companies are very far in e.g. documenting how processes are going on.

Christiane Wendehorst separated AI systems that can cause physical risks from those that can cause social risks. The criteria that have led in the past to classify particular devices as high-risk devices should still be applicable in the AI age. The question of liability is also very important in the age of AI. She agreed that it is necessary to extend the strict liability regime for those digital technologies that are used in public spaces. Physical risks are not a new phenomenon; therefore, it is easier to adapt already existing rules for these fields. She added that social and fundamental rights risks are new phenomena, such as discrimination, total surveillance, manipulation, exploitation caused by inappropriate decisions outsourced to AI. These are the new risks created by AI; therefore, new criteria are essential. She argued that the sector-specific approach is probably not the most effective way to regulate, because high-risk applications should not depend on the sector. Instead, we have to look at the individual applications. HR management, allocation of education places, personal pricing should always be considered as high-risk application irrespective of the sector in which it happens. Any kind of AI application that creates unacceptable risks and fails to mitigate them should be prohibited.

Ursula Pachtl mentioned that people are still afraid of AI systems. They have the fear of being manipulated, of interference with privacy and because authorities cannot control these systems. She explained that an assertive approach with a strong enforcement system could help a lot to address the situation.

For **Mislav Malenica**, Europe should create more space for entrepreneurship and innovation. Entrepreneurs could have the feeling that the cost of innovation is very high in Europe because for them it is not clear what is regulated and what is not, or what criteria entrepreneurs have to comply with. It is very important to pay more attention to entrepreneurship.

Eirini Zafeiratou reflected on the statement by Mislav Malenica. She explained that the most crucial thing is to look at the usage. In the industrial organisation of logistics, there are good examples of how machine learning works and AI is used. AI is unavoidable, but to reduce the negative consequences, guidelines and the assessment list are a great piece of work. She agreed also that instead of focusing on sector-specific regulation of AI, it is more relevant to look into usage and deployment.

Andrea Renda also thinks that the sector-specific approach is very difficult and complex, because it is hard to single out specific sectors. Risks related to the safety can to some extent be controlled and monitored in the lab at the time when the AI system is developed. The social risks cannot be equally anticipated. It is important to be very careful at the beginning and highlight the applications, which clearly generate risks. Afterwards, it is possible to start a social dialogue on how to continue the regulation.

The panellists reflected on the question of the moderator whether overregulation hampers innovation in an international context of competition.

Andrea Renda answered that regulation is not against innovation, if it is well drafted and properly timed. Regulation gives direction to innovation. What is crucial is to have foresight and to be very wary of the moral principles that make us human.

Mislav Malenica argued that it is hard to regulate something if we do not understand what we regulate. Best frameworks are usually formalized based on best practices; therefore, it is essential to create enough space for experiments in controlled environments. Trying, failing and learning from mistakes is also part of innovation.

The speakers had the opportunity to reflect on the importance of the seven requirements for high-risk systems identified in the guidelines by the High-Level Expert Group on AI. The panellist discussed if there are any that they find especially important.

Iban Garcia thinks that all of them are very important and that they have to be seen as a whole.

Christina Wendehorst separated their importance according to the type of the risk. She thinks that if the AI system causes physical and safety risks such as self-driving vehicles or drones, then technical robustness, safety and accountability are the most important requirements out of the seven, the rest will follow automatically. If the focus is on the risks to the fundamental rights, than all the seven requirements are very important.

For **Ursula Pahl** all the seven requirements are equally important, but it depends on the application and what the application is used for.

Cecilia Bonefeld-Dahl agreed that all of them are equally important. She mentioned that most of the components and the legal frameworks exist already: GDPR, privacy, protection of fundamental rights, so fortunately some of them are already well covered.

Andrea Renda mentioned that the seven requirements are all related to one component of Trustworthy AI: their ethical alignment. Human oversight was highlighted by him, because this one represents best the need to reflect on the appropriate level of human machine coexistence and cooperation when AI systems are deployed.

The last topic was enforcement. The speakers were asked who should enforce the requirements: whether self- assessment is enough or a new EU agency, competent authorities or independent third parties have to be responsible.

Some of the panellists agreed that a new body would be required to ensure harmonisation in the Member States in order to avoid fragmentation. Others mentioned that an external body to oversee regulation is not needed at this stage without knowing exactly what to oversee. Some questions could be centralised and others decentralised depending on the need of compliance.

4.7. Main outcomes

- AI is a very sophisticated tool, it is important to raise awareness about what will lead to certain biases.
- It is important to create more space for entrepreneurship and innovation in Europe and

to recognise that start-ups are the key elements of AI innovation. More risk taking and inspiration, as well as creating environments for testing facilities are necessary.

- Europe has the opportunity to set a new tradition on AI.
- Those who are affected by AI have to trust that their integrity and fundamental rights are not put at risk.
- Consumers have high expectations for AI. We need to have a right legal framework, legal certainty, updates and protection.
- Discussions between Member States, NGOs, businesses and governments not just now, but in the future are crucial.

5. Parallel workshops

The second plenary was followed by parallel workshops organised on items meriting in depth debate with AI stakeholders. The workshops aimed to explore the following **four key aspects of AI Trust**: i. biometric identification ii. AI and liability iii. Trustworthy AI iv. conformity assessment, standards and high-risk AI applications.

5.1. Biometric identification: Why? Yes? No? How?

5.1.1. Panel composition

The panel was composed of the following members:

- **Christoph Busch** – Member of the Norwegian University of Science and Technology, Hochschule Darmstadt, Germany and lecturer of Biometric Systems at Denmark's DTU
- **Javier Rodríguez Saeta** – CEO, Herta Security-Hi-tech facial recognition, Spain
- **Ella Jakubowska** – Policy and Campaigns Officer, European Digital Rights, Belgium
- **David Reichel** – Project Manager, Social Research, Research & Data Unit, European Union Agency for Fundamental Rights, Austria
- **Irina Orsich** – Team Leader for Artificial Intelligence DG CNECT A2 on Technologies and Systems for Digitising Industry – *Moderator*

5.1.2. Introductory remarks

When it comes to biometric surveillance, there are controversial and sometimes emotional discussions around *what is ethical*, *what is safe*, and *what is legal*. In this workshop, the panellists discussed different biometric identification applications. They talked about their benefits and risks, both for the individual and for the society and tried to answer how it is possible to mitigate the risks.

5.1.3. Panel discussion

Javier Rodriguez Saeta highlighted the merits and potential of biometric and especially facial recognition technology. In law enforcement, for example, it could be used to quickly scan large volumes of video material to identify terrorists or other criminals. Further, facial recognition technology could also be used for border control, safe cities, access control (crowded events such as concerts and marathons) and serve as an alternative for fingerprint recognition. He pointed to the technology as a valuable tool in fighting the COVID-19 pandemic.

David Reichel pointed to biometrics used for border management purposes, and the use for law enforcement, for example, live facial recognition to match faces with a databases of *wanted people*. Tests of such tools in public spaces took place in the UK, Germany and France. Allegedly, the Austrian police uses facial recognition technology and Czech Republic is testing them. When it comes to private sector use, it is known that for example a football stadium in Denmark and a supermarket in Spain use facial recognition technologies. It is important but difficult to understand the purpose of the use, but one needs to know the purpose, i.e. who is put on a watch list, to assess the compatibility with fundamental rights.

Ella Jakubowska shared research from the EDRi into a high number of intrusive use cases, for example when used to detect loitering in an Italian municipality or for monitoring protest movements in Slovenia, by the police in Sweden or by the police in Greece with live recordings identifying persons involved in police stops. The EU had funded the IBORDERCTRL project¹⁸ to predict whether immigrants are lying despite a lack of scientific basis. There are cases of public and private indiscriminate, or arbitrarily-targeted, surveillance activities in city centres, supermarkets, shopping centres transport hubs, at events and at workplaces. There are also cases of digital advertising, using harmful gender stereotypes and discriminating against minorities and disadvantaged populations. There is a chilling effect, disincentivising people to take part in public life or lawful protests, and a lack of evidence of effectiveness.

Christoph Busch mentioned use cases in the fields of border control, EU citizen card, the Schengen Entry-Exit-System¹⁹ or forensic identification, like in finding terrorists. There is also a deterrent effect on criminals. Future developments could comprise for example the estimation of age.

Panellists then were asked for their opinion on what kind of biometric identification system they would like to see regulated and whether they found that there are systems that should be prohibited at all.

¹⁸ More info on: https://ec.europa.eu/research/infocentre/article_en.cfm?artid=49726

¹⁹ More info on: https://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/smart-borders/ees_en

Ella Jakubowska pointed to the already existing data protection rules and the Charter of Fundamental Rights²⁰, but this has not prevented widespread abuse. There should be a stronger enforcement of data protection rules and on top of that some uses should be prohibited: Regarding some tools, being for example abused in Hong-Kong and used in the US, where people of colour are wrongly identified, and in the examples shared earlier in the EU, the same tools should not be permitted in the EU and should be explicitly prohibited. Here strict red lines are needed. Bias is a very complicated issue: these uses can entrench bias and be used in discriminatory ways. The use of facial recognition in public spaces is criminalizing and privatizing public spaces, and private companies are profiting from this abuse of people's data. Biometric mass surveillance can infringe on almost all fundamental rights and cause chilling effects.

Christoph Busch expressed himself against a prohibition of biometric applications. Instead, one needs to make sure that applications are compliant with existing regulations, which cover for example non-discrimination. Standards can be extremely helpful, and he pointed to ISO/IEC JTC1 SC37 on Biometrics²¹, that is working now on biometric system performance variation across demographic groups. As to bias, he was confident that in the future AI might be less biased than humans. Human oversight is key and ADM should read as "assisted decision making". Testing will be crucial to verify compliance of systems.

David Reichel stated that the current framework aims at protecting individual fundamental rights. But it is difficult to assess proportionality from a fundamental rights perspective. It always depends on the specific application. The situation is complex when it comes to the use of biometric systems for example at demonstrations, resulting in a chilling effect on democracy, freedom of speech and the right to assembly. A recent survey showed that very few people are willing to share their faces for identification purposes. Also non-discrimination needs further attention. It is important that there is an initiative to look into the need for additional regulation; Efforts by the Commission and also by the Council of Europe can help to bring clarity and raise awareness.

Javier Rodriguez Saeta pointed to the existing regulation under GDPR and that there were wide exceptions to the prohibition of processing of biometric data, including for example consent, substantial public interest and public health. He supported regulation along the five key requirements proposed in the White Paper: Training data, Data and record keeping, Information to be provided, robustness, accuracy, and Human oversight. "We shouldn't be afraid of technology. We should improve it."

5.1.4. Audience questions

²⁰ European Charter of Fundamental Rights, available on: https://ec.europa.eu/info/aid-development-cooperation-fundamental-rights/your-rights-eu/eu-charter-fundamental-rights_en

²¹ Available on: <https://www.iso.org/committee/313770.html>

We always talk about surveillance by government. But what about biometric surveillance by private actors?

Javier Rodriguez Saeta: This is not easy under current regulations; with the exception of critical infrastructure.

How is obtaining valid consent for biometric identification in public spaces even possible? Doesn't that mean that any form of remote identification is illegal?

Christoph Busch: There must be an explicit consent or legal basis

Ella Jakubowska: No, it can not be lawful.

Biometric IDs can be compromised with AI deepfake technology. This involves deeper privacy and security risks - what is the way forward for truly secure ID?

Christoph Busch: Deep fake technology is improving impressively; we need to make sure that capturing devices camera can distinguish between natural image and an attack.

5.1.5. Main outcomes

- **David Reichel:** There are many issues, different views, and a lack of knowledge. Go forward with a legal evidence based approach and work together across different stakeholders
- **Javier Rodriguez Saeta:** regulation should strike the right balance privacy and security.
- **Christoph Busch:** Test not ban.
- **Ella Jakubowska:** Private deployment can be as harmful as public deployment; bias cannot be eliminated. We need red lines to prevent any further harm.

5.2. AI and liability

5.2.1. Panel composition

The panel was composed of the following members:

- **Corinna Schulze** – Director, EU Government Affairs SAP and representing DigitalEurope
- **Marco Bona** – PEOPIL The Pan-European Organisation of Personal Injury Lawyers
- **Bernhard Koch** – University Professor - Department of Civil Law University of Innsbruck (Austria)
- **Jean-Sébastien Borghetti** – Professor of Private Law Université Paris II Panthéon-Assas (France)
- **Dirk Staudenmayer** – Head of Unit Contract Law, DG JUST European Commission

- **Hans Ingels** – Head of Unit for Free Movement of Goods, including Product Liability, DG GROW – *Moderator*

5.2.2. Introductory remarks

AI might transform the characteristics of many products and services, this will create new opportunities and benefits for the society. Yet, accidents may nevertheless happen. This is when liability rules intervene. Liability frameworks in the Union rely on the parallel application of the Product Liability Directive 85/374/EEC (PLD)²², which regulates the liability of the producer of defective products, and other non-harmonised national liability regimes in cases where the Directive does not apply. The characteristics of emerging digital technologies like AI challenge aspects of EU and national liability frameworks and could make it more difficult for victims to receive compensation in all cases where this would be justified. In addition, this may cause legal uncertainty as to how existing laws would apply.

5.2.3. Panel discussion

While **Corinna Schulze** argued that the Product Liability Directive has proved to be a stable liability instrument providing for technological neutrality, other panellists stressed that it was not clear whether the concept of product included digital products – as well as embedded software –. The notion of putting into circulation as well as the possibility to rely on the development risk defence appeared problematic in relation to AI, which is intended to be updated and evolve constantly. Determining that AI is defective under the Directive was also considered problematic. **Marco Bona** also argued that liability for AI should not be limited to the producer.

Corinna Schulze stressed that AI should not be seen as a single technology because it is used for a broad range of applications which entail different risks.

Marco Bona pointed out that the PLD only addresses a part of the problem, as it is limited to the liability of the producer and does not regulate the liability of operators or users and does not cover services. He also noted that concerning the PLD, there was no need to re-invent the wheel; the PLD could be amended in order to reflect the challenges of AI for the liability of producers.

At national level, both **Corinna Schulze** and **Marco Bona** believed that existing liability schemes could address damage caused by AI. Lack of uniform rules and the divergent application of the different liability schemes across the EU were however identified as the main problems, as this would lead to different results for damage caused by AI in the different Member States. **Jean-Sébastien Borghetti** argued that the more national liability rules rely on fault as the standard for liability, the more problematic their application to AI would be, as it may be difficult to prove fault in relation to AI.

²² Available here: <https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=CELEX:31985L0374>

The second question to the panel was what changes should be introduced to the Directive or national rules in relation to AI.

Corinna Schulze argued that the Directive would merit some clarification but cautioned against the inclusion of stand-alone software within its scope. She also stressed that a number of legal remedies were already available to protect consumers in case of damage caused by AI.

Concerning the Directive, some panellists believed that it should be amended in a number of elements to adequately address AI. In particular, they stressed that the Directive needs clarification regarding digital products. Also, the 10-year limitation period should be abolished, at least concerning personal injury. **Marco Bona** also argued against the requirement for the victim to prove the defect. **Bernhard Koch** believed that, rather than setting a separate liability framework for AI, the Directive should be expanded to adequately cover AI. He believed the producer remains the best placed to control and address the risks of the product, also in relation to AI. Producers may not need to be the only liable party.

Jean-Sébastien Borghetti argued that the notion of defect should be revised too, and certain presumptions of defect could be included.

Concerning national legal systems, **Marco Bona** advocated a new EU instrument for the strict liability regime of operators and users of AI systems, in particular regarding complex products, which are difficult for victims to understand, and the burden on the consumer to prove the defect would be disproportionate. **Marco Bona** noted that MEP Voss report²³ is very interesting but cautioned against the high/low risk distinction and against limiting compensation to some categories of damage arguing that it would be important to cover immaterial damages.

Bernhard Koch identified the interplay between an EU harmonised regimes and traditional rules which continue to apply to traditional technologies – e.g., it would be difficult if a victim of an autonomous car is protected differently than a victim of a traditional car – as the biggest challenge to address. He stressed that it is important that the producer is not the only liable person but also the person controlling and benefiting from the use of AI.

According to **Corinna Schulze** strict liability could be used only for specific high-risk scenarios. A reversal of the burden of proof could only apply to specific situations, e.g. concerning harm to life or limb and in the public space.

While strict liability for high-risk AI systems may be appropriate, it would require very careful analysis of the existing tort laws in all jurisdictions affected. **Jean-Sébastien Borghetti** did not consider appropriate to develop national regimes only for AI.

Dirk Staudenmayer stressed that the characteristics of AI and in particular opacity and autonomy, challenge the common features of national liability laws. He believed that there

²³ Available here:

[https://www.europarl.europa.eu/RegData/etudes/STUD/2020/621926/IPOL_STU\(2020\)621926_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/621926/IPOL_STU(2020)621926_EN.pdf)

was no need to revise the full set of national liability rules but rather to address those elements that make it difficult to successfully introduce a claim. He explained the challenges of autonomy and opacity of AI and made a reference to the suggestions submitted for consultation by the AI White Paper.

5.2.4. Main outcomes

- The panel considered that the main problems for the liability for AI are the lack of uniform rules in the single market and the divergent application of the different liability schemes across the EU.
- Although the Product Liability Directive is a stable liability instrument providing for technological neutrality, the panel agreed that it is unclear whether the concept of ‘product’ included digital products – as well as embedded software. The panel indicated that there is a strong case for revising the Directive.
- The panel supported strict liability for high-risk AI systems.

5.3. Requirements for Trustworthy AI

5.3.1. Panel composition

The panel was composed of the following members:

- **Hugues Bersini** – Computer Science Professor, Free University of Brussels
- **Francesca Rossi** – IBM fellow and AI Ethics Global Leader
- **Paul Lukowicz** – Head of Research Department, German Research Center for AI
- **Haydn Belfield** – Academic Project Manager, CSER Cambridge University
- **Aimee van Wynsberghe** – Associate Professor in Ethics and Technology at TU Delft
- **Eric Badiqué** – Adviser for Artificial Intelligence in European Commission –
Moderator

5.3.2. Introductory remarks

In this workshop, the panellists discussed the topics such as the risk-based approach, record-keeping, transparency and explainability, training and testing data for high-risk AI systems, robustness and accuracy for high-risk AI systems and human oversight.

5.3.3. Panel discussion

- **Risk-based approach**

Hugues Bersini mentioned the issue of non-alignment between social and individual costs. Users/citizens should be involved in defining objectives and specifying cost functions used by algorithms. Technology is used when tasks become too complex for humans to solve. One given example is the algorithm that determines university access in France.

Aimee van Wynsberghe flagged that democratisation is another element of the co-authorship when developing algorithms. It remains questionable if technology needs to be involved in all processes.

Haydn Belfield added the example of university access in the United Kingdom. New risks demand a new framework that is sufficiently flexible. The AI White Paper targets high-risk AI – ex ante conformity assessment and mandatory requirements are proportionate.

Francesca Rossi reminded that the black box properties of AI need to be addressed. The properties of AI need to be understood. Algorithms need to support human decision-making and not decide themselves.

- **Record-keeping, transparency and explainability**

Francesca Rossi added that we need to understand how an AI system comes to a decision. This understanding is needed when AI works completely autonomously, but also when AI works with humans who need to understand why a system gave a recommendation. Transparency is needed throughout the development of a system (testing measures, definition of fairness). Projects need to document their process, without disclosing trade secrets or property info. Only then can developers be more aware of potential pitfalls.

Paul Lukowicz mentioned that explainable AI (XAI) can be extremely helpful, but it is not always necessary. One example are decision support systems in medicine. Here, AI needs to support decisions. Explainability is not necessary if a system provides the degree of certainty or probability on which a recommendation is made.

Francesca Rossi added that high-risk is very challenging; having more than 3 levels of risks is very difficult to do.

Hugues Bersini mentioned that replicability is very important for transparency. For machine-learning, the panellist asks other panellists whether can we go further than statistics for cross-validation on accuracy, which is currently the practice in the industry.

Francesca Rossi answered -yes, XAI and transparency are attempts to go beyond accuracy, including choosing a definition of what fairness is

According to **Haydn Belfield**, the release of a report on trustworthiness was mentioned. It involves a record-keeping on AI incidents, most often bugs. The panellist also added the high demands of computational resources used to train systems.

- **Training and testing data for high-risk AI systems**

Paul Lukowicz stated that the quality of AI systems and algorithms depends on quality of data. Bias stems from bad quality, i.e. data is representative of existing discriminations. In general, data is cheap, but expert labelled data is not. There also exists a trade-off between privacy and high performing AI. This does not mean we need to do away with our standards. Often, it is an issue of optimization of conflicting criteria. There are smart ways to find an ideal balance, but this needs to be done consciously. Failure in this regard needs to be accepted. In the field on engineering, bridges are built so that the probability of failure is so

low that it is acceptable. The same needs to be done for AI. The panellist raised the question, that in regards to failure rates, are we asking more of AI than of humans?

Francesca Rossi reminded that bias can come from data, but also from decisions made by developing the system. It would be useful for public bodies to make available data for developers to test, train and validate AI.

Hugues Bersini added that AI is more than data-based algorithms. There are a many algorithms that are not machine-learning, included in AI systems such as IBM's Watson.

- **Robustness and accuracy for high-risk AI systems**

Haydn Belfield stated that AI is an engineering discipline, so it should face similar strict requirements as other disciplines. Safety is a distribution of risks. Requirements need to be in place to prohibit unexpected behaviours, outside some predefined ranges.

- **Human oversight**

Aimee van Wynsberghe asked if both AI and humans are doing the same thing, why use AI in the first instance. We should be ready to say some AI systems should not be used as they are not compatible with human autonomy. There is a need to imagine human oversight more widely, e.g. in a socio-technic context. Currently, only known risks are captured, but we are still learning about AI in society. In conclusion, an ethical assessment is needed prior to system deployments.

Hugues Bersini flagged that citizen involvement could address some of those risks

Francesca Rossi mentioned that human oversight is important and has many facets. If well done, it could be a good mitigation of high-risk AI systems.

Paul Lukowicz added that systems are needed that support and enable humans. Human oversight assumes replacement of humans by AI.

Haydn Belfield added that the AI White Paper made a good proposal on the requirements. The AI community now wants to see them implemented.

Francesca Rossi expressed the wish to react to the definition of high-risk in the AI White Paper, which she did not agree with: Sectors should not be used as defining high-risks. There is no sector per se high-risk or low-risk, reality is more nuanced.

5.3.4. Main outcomes

- AI should support humans, not replace them.
- Requirements in the AI White Paper were in general favourably received by the experts.
- Constructive feedback was given on how to implement them in practice and how they interact with each other.
- Experts approved of the risk-based approach in general, but debated whether it was

appropriately defined.

5.4. Conformity assessment, standards and high-risk AI applications

5.4.1. Panel composition

The panel was composed of the following members:

- **Hendrik Schäbe** – Senior Expert for AI, Principal Assessor RAMS, TÜV Rheinland AG
- **Andreas Steinhorst** – Executive Secretary of the European Co-operation for Accreditation
- **Kathrin Watson** – Head of EU Affairs Office, Robert Bosch GmbH
- **Patrick Bezombes** – CEN-CENELEC, Co-President of the Focus Group on AI; AI Standardisation Coordinator, AFNOR, France
- **Clara Neppel** – Senior Director Europe, IEEE Technology Centre GmbH
- **Kilian Gross** – Head of Unit DG CNECT A2 on Technologies and Systems for Digitising Industry – *Moderator*

5.4.2. Introductory remarks

The workshop began with an introduction by **Kilian Gross** who discussed conformity assessment for AI as an issue raised in the White Paper on AI. Conformity assessment is not a new idea; it is a core element in product legislation. Now, it could be used for complex AI systems. He explained the different approaches of sectoral product safety legislation. There is the old approach, the new approach and the area of AI systems, which are not embedded in products. The old approach foresees detailed technical and administrative requirements in the legislation; the new approach is based on essential requirements, which are underpinned with harmonised standards. For AI systems, which are not embedded in products, a new system for conformity assessment would need to be considered. In the White Paper, a conformity assessment procedure is contemplated for high-risk AI systems.

Kilian Gross highlighted that it is crucial to understand how the conformity assessment procedure looks like. There are national competent authorities, which check whether a body is able to do such an assessment. The notified (or certified) bodies carry out the assessment and provide the certification that the system, is in conformity with the requirements. Conformity assessments can also be carried out via self-assessment by the provider of an AI-system.

5.4.3. Panel discussion

After the feedback of the audience, the panellists each gave a short introductory statement.

Hendrik Schäbe explained his opinion about the current state of play concerning the conformity assessment of AI. According to him, the first step is to distinguish whether an

application is a safety or non-safety relevant application in the sense that it can kill or injure people. He also highlighted how important it is to determine whether the AI system is a pure assistance system, meaning there is always a human being who can overrule the decisions of the AI system with full responsibility, or not. In terms of safety, it is crucial that the AI system fulfils its functional safety requirements. Defining the safety integrity level for an AI system is an important step in order to fulfil all the requirements. Running through the entire life cycle of the AI system, validating and verifying the AI system and checking the models of the algorithms are very important. For fundamental rights, we need to look at the context: What harm could the AI system do?

Andreas Steinhorst spoke about coordination at the EU level. The European accreditation system is a well-functioning and reliable system that makes not only the regulators but also the consumers confident about products and services placed on the European market. In the accreditation process, a conformity assessment body demonstrates its competence and ability to test products or processes or services. For this, it is crucial to have clear requirements set out by the regulators. He highlighted the importance of national accreditation bodies that act as a public authority and are appointed by the Member States to the European Commission as the sole national accreditation body in its country. The national accreditation body is controlled through peer evaluations by the European Association of national accreditation bodies. The main intent is to have a robust and reliable accreditation system at the EU level. He mentioned that to reach confidence in products with AI components, the products have to be verified by conformity assessment bodies based on criteria, which are set out by the regulator. Moreover, the conformity assessment bodies should be accredited by its national accreditation body.

Kathrin Watson described Bosch's experiences as a company that would undergo conformity assessment. They have a positive view towards conformity assessments as long as they comply with the new legislative framework, and other EU laws and regulations. The work associated with a conformity assessment depends on its complexity. It does take time and energy, but it also makes technology safe and reliable. Bosch prefers a horizontal approach: laying down the general principles for AI in the form of a horizontal law, because they think that gaps in the legal framework would be created by the vertical approach. She highlighted that a good balance between the opportunities and risks on AI is essential, especially when selecting which AI applications need to undergo conformity assessment.

Patrick Bezombes answered the question whether standardisation organisations are ready to prepare standards for AI. According to him, AI is complex, because AI systems will also interact with each other (for instance AI-based trading systems used by banks), AI raises socio-technological questions related to for instance ethics, human agency, or democracy and AI is going to be everywhere. That means that every standardisation organisation is starting to address AI-related standards. There is a need for greater coordination between horizontal and vertical standardisation organisations, an issue that has not been fully addressed yet. Horizontal standards could start to appear soon. For instance, transforming the Trustworthy

AI assessment list ²⁴into standards could be done quickly. Other standards could take much longer. AI might even lead to a need for new types of conformity assessment, for example based on simulations.

Clara Neppel gave a short presentation about IEEE²⁵'s work in autonomous and intelligent systems. The ecosystem of trust should be based on three pillars that reflect the AI life cycle: design and development; use and potential impact; and governance. This whole framework should be based on agreed principles, such as proposed by the High-Level Expert Group on AI. She stated that everybody agrees that principles such as transparency are very important. However, it can be a challenge to ensure that all parties have the same understanding of these principles and that they are implemented accordingly. Open and consensus-based processes are necessary in order to agree not only on principles, but also on how these principles would be implemented and validated. She spoke about standards, certification and governance.

First, she gave examples of standards, both technical and socio-technical, that are currently being developed by IEEE SA²⁶, such as process frameworks for incorporating principles into innovation and engineering projects. Secondly, in addition to standards, conformity assessment is an important instrument to assure expected and acceptable system behaviour during the entire system lifecycle. With actionable assurance criteria, as developed for instance by IEEE's ECPAIS program²⁷, conformity can be certified through audits performed by independent bodies that can also include methodologies to provide real-time monitoring capabilities in the future.

Such criteria have been developed for now for accountability, transparency and algorithmic bias. Third, the role of governance is inevitable to decide on responsibilities. It is crucial that standards and certification programs should be agile and adaptive. She highlighted that in order to build up the ecosystem of trust, effective and efficient standardization, certification and governance structures are needed. These elements can complement and facilitate the development of responsible regulatory frameworks that guarantee both the uptake of AI and address the risks associated with certain uses of this new technology.

5.4.4. Discussion with the audience

The panel discussion was guided by questions from the audience that came in over an online survey.

How can we ensure that we have enough notified bodies to implement the legislation? Is there a skilled deficit?

²⁴ Available on: <https://ec.europa.eu/digital-single-market/en/news/assessment-list-trustworthy-artificial-intelligence-altai-self-assessment>

²⁵ Institute of Electrical and Electronics Engineers, available on: <https://www.ieee.org>

²⁶ Institute of Electrical and Electronics Engineers Standards Association, available on: <https://standards.ieee.org>

²⁷ Ethics Certification Program for Autonomous and Intelligent Systems (ECPAIS), available on: <https://standards.ieee.org/industry-connections/ecpais.html>

Hendrik Schäbe argued that conformity assessment bodies need to participate in the development of standards and directives. They should follow the development of AI.

Who should do the conformity assessment?

Kathrin Watson says that it depends on what the AI system will be used for. If it is a simple task with low risk, self-assessment (which needs accreditation) is a good situation. High-risk AI systems should go through third-party conformity assessment.

How can standards evolving AI systems?

Patrick Bezombes said that this is an ongoing discussion. A continuous assessment approach might be needed. Continuous learning does not have to be continuous, but can also come in phases or only with controls.

What do you consider a high-risk AI application?

Clara Neppel stated that this is a heated discussion – and this discussion is needed, also with society. When it comes to safety, for example AI systems that are involved in the regulation of power plants, are clearly high-risk. In the domain of fundamental rights, AI in the judicial system can be high-risk. The question is what should be left to self-regulation, such as conformity assessments, and what needs to be treated differently, through legislation. Continuous re-evaluations and impact assessments will be necessary in the future.

Is it not necessary to have both ex-ante and ex-post monitoring or how is the balance between them?

Andreas Steinhorst answered that ex-ante and ex-post monitoring should be complimentary activities. Both elements should be considered depending on the product and its risk.

How long does it take to develop a standard if it is very complicated?

Patrick Bezombes highlighted that the time depends on the maturity of the topic. For instance, the topic of explainability would first need some research before you can start developing a standard. If the topic is not mature, it could need around 5-8 years to develop a standard.

Are we not duplicating obligations, as many products are already being tested?

Hendrik Schäbe explained that functional safety standards already exist. There are already standards for the safety integrity level of products. However, they are not complete in order to be able to carry out the assessment.

What should we do with low-risk products?

According to **Kathrin Watson**, it is important to keep in mind that companies always assure that products are safe. Maybe some frameworks could be extended to also cover AI.

Do SMEs need specific measures? Alternatively, can SMEs act just as well as large companies as long as there are standards?

Patrick Bezombes answered that for SMEs it is difficult, because in the upcoming years, there will be an upcoming AI management system standard. This implies a high cost for all companies. This might be difficult to handle for SMEs. This is one reason why it is important to support SMEs.

How could we check fundamental rights in a conformity assessment process?

Clara Neppel explained that IEEE is currently performing a proof of concept of its ethics certification program which looks very promising. Learning by doing works, especially in the area of public services. We could also see new players who do certification, such as cities who certify their providers.

5.4.5. Main outcomes

- **Andreas Steinhorst** argued that some fundamental rights aspects are already covered by conformity assessment. It is important to use already existing systems of conformity assessment.
- **Hendrik Schäbe** put forward two wishes to the Commission. First, very good and flexible standards on AI should be drawn up by experts. Second, AI should only be used when needed.
- **Patrick Bezombes** stated that we are at the beginning of a long journey. We need to have a long breath and keep a step-by-step approach
- **Kathrin Watson** explained that Bosch would like a horizontal approach and a careful definition of high-risk. AI also offers great opportunities, not only risks (although they are to be taken seriously).
- **Clara Neppel** suggested that a horizontal approach, focusing on expected and acceptable behaviour of AI systems, could permit a rapid tailoring to the needs of a specific sector. The European Commission should concentrate on public services first, because they have special characteristics, since people cannot choose another service.

6. Closing statements

6.1. Concluding remarks by Dragoş Tudorache, Member of the European Parliament chairing the Special Committee of Artificial Intelligence in a Digital Age

Dragoş Tudorache concluded the event by stating that the European Commission is on the right path to regulate AI and AI is one of the keys to the digital transformation that will take place over the next decades. He highlighted that it is crucial to understand the importance and the urgency of the regulation and to create the right framework for industrial data properly. AI is transforming our life and the society; therefore, it is crucial to be careful about the bad use of AI and during regulation of the future of AI, proper boundaries are needed to make sure AI is well controlled and regulated. The European Union has to operate in a global

context; in order to set models, boundaries and develop to the right direction it is important to understand that a strong and consistent AI diplomacy, global cooperation and partners are necessary.

6.2. Closing statements by Deputy Director-General of DG CNECT Khalil Rouhanda

Khalil Rouhanda closed the Second European AI Alliance Assembly by agreeing that European values need to be preserved and implemented into economy and society. AI could bring better public services, better health and environment and boost the economy. It is visible during the COVID-pandemic how huge opportunities are in AI; therefore, these possibilities need to be captured. The Commission budget helps to build up computing capacities, infrastructures, common data sets, ensures the right use of data for testing, experimenting and deploying artificial intelligence. He highlighted that it is crucial to find the way to promote innovation while making sure that AI helps to implement values across Europe.