

PROCEEDINGS OF THE EUROPEAN CONFERENCE
HELD ON 17 MAY 2021

DIGITAL SOVEREIGNTY: WHICH STRATEGY FOR EUROPE?

POLICIES, INSTITUTIONS AND DEMOCRACY
JUNE 2021





FOREWORD

Issues related to digital sovereignty are at the heart of the public debate and have gained an increasing importance in the strategic documents put forward by states, in the reflections of European institutions and, more recently, in the recovery plans envisaged at both the national and European Union (EU) levels. With the awareness resulting from the coronavirus crisis, the issues of dependence of national production chains on non-European companies have taken on an urgent character. The resilience of states in the face of geostrategic risks has become a necessity, calling for the development of a common European digital response. The conflict between China and the United States, particularly in the digital field, crystallises the tensions between two opposing political and economic models. This rivalry is expressed both within international governance bodies, where the two powers clash to maintain control over the definition of international standards, and through frontal trade sanctions. In this context, the member states of the European Union must define their own path.

But what is “digital sovereignty” exactly? What does it mean for Europe to be “digitally sovereign”? Where and at what level is the EU dependent in the digital field? How can it develop sufficient digital capacities in order to guarantee its sovereignty?

To answer these questions, think tank Renaissance Numérique, with the support of the Office of the French Ambassador for Digital Affairs, organised an online European conference, on Monday 17 May 2021. This event aimed to think collectively about the concept of “digital sovereignty” and about a strategy that the European Union could adopt in this regard. To this end, it gathered the public actors, members of civil society, researchers and companies that act and reflect on the issue of digital sovereignty at the European level. These debates took place in the midst of a working group that Renaissance Numérique has launched on the matter.

These written proceedings constitute a report of the discussions that took place during this afternoon of debates, in the most exhaustive way possible. However, this written transcription only commits Renaissance Numérique, not the quoted actors.

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OPENING ADDRESSES



NICOLAS VANBREMEERSCH

Board Member of Renaissance Numérique

On behalf of Renaissance Numérique, I would like to thank French Secretary of State for European Affairs, Monsieur Clément Beaune, who will virtually open today's debates but unfortunately could not be with us live. Secretary of State Clément Beaune has put the issue of digital sovereignty at the heart of the French presidency of the European Union coming in 2022.

I also want to thank Marietje Schaake, who has long been in Brussels in the European Parliament, and now is International Policy Director of the Cyber Policy Center at Stanford University and President of the CyberPeace Institute.

A big thank you to all our speakers today, our high-level moderators Laura Kayali from POLITICO Europe and Julien Nocetti from IFRI and member of Renaissance Numérique, to Henri Verdier, the French Ambassador for Digital Affairs, and his team, who helped set up this conference. And at last, a big thank you to Renaissance Numérique's team, Jennyfer Chrétien, Jessica Galissaire and Pol-Euan Lacombe, who did a tremendous job in setting up such a nice panel of speakers and making this conference happen.

Europe's digital sovereignty is a topic that is at the heart of the work that we do, at Renaissance Numérique, as a think tank. And because we focus on the "citizen" aspect of the digital transformation in all sectors of the economy and of society, we have had the opportunity to touch upon this topic in many of our reflections already.

In 2020, Renaissance Numérique has started a working group on European digital sovereignty, launching vivacious debates on this major issue, that was, just as much as European sovereignty as a whole, put under the spotlight during the Coronavirus pandemic. The conclusions and policy recommendations of this working group should be published in a final report towards the end of 2021.

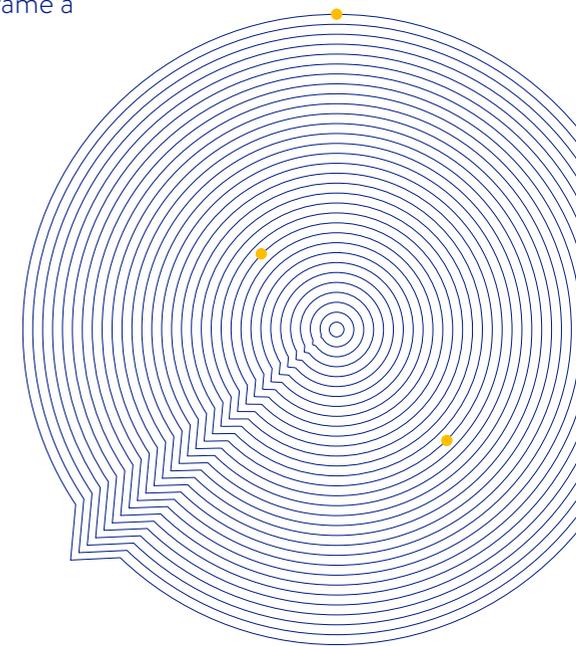
Now, sovereignty is a big word. It is a capacity, a capacity to express power and to decide about one's future. The digital sector is not an easy field, as we all know, and digital sovereignty is a complex issue that touches upon intricate topics of security, finance, skills, governance and regulation, altogether.

There is a general agreement between stakeholders working on this topic, that we should focus on the development of the European Union's digital capacities in order to guarantee its sovereignty. The aim of this conference is to focus on strategy: how could we progress in our digital capacities and enhance the EU's effective sovereignty?

This requires that we express the right diagnosis and identify our levels of dependency. Where are we critically too dependent? Where should we focus? What are the most acute technological layers we should address? This will be the topic of today's first panel discussion.

In the second panel, we will talk about the way we can work together to develop our sovereignty. What is our path? What fields and what paths should we focus on?

In short, this conference aims at getting to the matter, understanding where the key problems are, and identifying the key decisions that should be made. Let us frame a strategy together!





CLÉMENT BEAUNE

French Secretary of State for European Affairs

I am pleased to be here today to talk about European digital sovereignty. The crisis that we have experienced has, in many respects, shown how important the digital world is to us all. It accelerated it and in some respects, has revealed a sort of European dependence when it comes to the technological solutions we have available and to our computer or digital security.

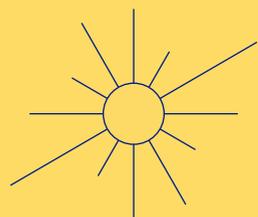
Sovereignty itself, and digital sovereignty in particular, are core issues in post-crisis discussions, even more than they were a year ago. In the first half of 2022, France will hold the Presidency of the European Union, and the sovereignty issues will be central to our Presidency and our action. I believe that we should take this opportunity to move faster to create a real European digital model.

This model must respect our fundamental balance between innovation and regulation. Never one without the other. At times, we have the feeling that Europe's role is to regulate innovations that others have created. Innovation and regulation are rather two things Europeans must promote at the same time.

Innovation comes first. There is no reason for Europe to be seen, or at times actually be, the continent that follows the lead of others - the Chinese or Americans - when it comes to innovation or new technology. We have been very successful, for example, with an ecosystem of start-ups which are scaling up and developing. We should be proud of them and support them. In very concrete terms, we have increased our funds for innovation, and digital technology in particular, in the new European budget. In the coming months, every Member State will allocate at least 20 % - 25 % in the case of France - of their recovery plan to the digital transition, its acceleration and, of course, regulation.

Regulating does not mean following the lead of others or being at the tail end of this digital revolution. Nor does it mean not trusting this progress. On the contrary, it means preserving and inventing a model that suits us. When it comes to data protection, Europe was on the cutting edge with the General Data Protection Regulation, which has become an international standard. We need to do the same thing for taxation, regarding digital giants' responsibility. This is a condition for preserving competition, openness and the growing success of our companies in all of these sectors permeated by digital technology. That is precisely the point of European texts put forward by the Commission - the Digital Services Act and the Digital Markets Act. They aim at ensuring that competition is fair, and that content shared by the platforms is protective in terms of consumer protection, the fight against copyright infringement, hate speech and content of a terrorist nature, for example.

Europe needs to invent a social market economy that is adapted to the digital world. And I know that we can count on you, ahead of the French European Union Presidency, to share ideas, proposals and criticism as well, because Europe has to improve in this area. We can create this unique model that defines us, which fits our identity today and in the future. We will move forward together. You can count on me, and I know we can count on you.



EUROPEAN DIGITAL SOVEREIGNTY: AN INTRODUCTION TO THE CONCEPT



MARIETJE SCHAAKE

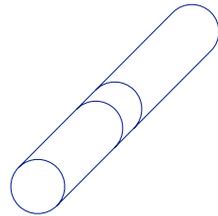
International Policy Director of the Cyber Policy Center at Stanford University and President of the Cyberpeace Institute

The term “sovereignty” has a contested frame around the world. This, however, does not change the legitimacy nor the urgency of our objectives, which is to ensure that the EU is able to take decisions in its own interest, autonomously and independently, based on the values and rights that it wishes to protect for its citizens. As such, it is important to understand what others might hear when they hear the term sovereignty: if it doesn’t mean that the EU wants to move towards a protectionist or nationalist agenda, then what does it mean?

We talk about autonomy, but how far is the EU willing to go with digital taxation, for example? When President Macron hinted at that, there was an immediate and harsh threat in response from the US, and from coun-

tries like the Netherlands, Luxemburg, or Ireland. There are difficult questions to be answered about ending the tax havens within the EU itself. Other critical aspects that need to be discussed include the ability to develop entire supply chains within the EU, or to guarantee access to rare earth materials to produce IT products. Does the EU believe it can absorb a backlash, if we were to protect and close our markets more? I do not think that this closing of markets is the aim of those making the case for Europe's ability to deal with the most pressing challenges. We must also address gaps in the current global governance frameworks when it comes to developing and applying new digital technologies.

First, we can notice several gaps when looking at how digital technologies are governed and who should do that. Of course, the context is the broader erosion of support for multilateralism and a lack of both updates to existing national and international organizations and institutions, and clarity about how to include rules for the digital world or to create new ones where they are needed. In many areas, such as antitrust or competition, it is not clear enough how law should apply. How should consumer harms be measured when products are free? How should the market be scoped? When different strands of a company assemble data, is it a data market? For example, Google has search, email, maps, and navigation products. Are those different markets or a single data market? Similarly, how should trade rules apply to data flows and the reliability of supply chains?



Regarding human rights law, where do digitally enabled surveillance fall domestically and internationally, and what role do we find acceptable for the private sector in that matter? When we look at the digital layer of our lives, economic, strategic, and human rights matters are increasingly intertwined, and separating them is difficult. If we focus on the development of artificial intelligence, for example, it uses data as an important source. How is that data collected is a human rights issue. At the same time, the strength of an artificial intelligence market has big implications for a country's position and competitiveness in the global economic arena. Finally, there are strategic and security aspects of the development of AI, such as when it comes to how to make it secure, or if it should be used in a military context. In other words, it is difficult to separate these issues, which is why a comprehensive strategy is needed to deal with these systemic questions.

On top of that, we see a blurring of the lines between civilian and military uses of digital technologies. It is unfortunate that it took the EU years to come with an updated regulatory framework on those dual-use technologies. At the same time, in the US or China, one single executive order changed the level playing field between these three big global players. We can also think about what is needed to steer the rules that exist for the most difficult circumstances, such as at war, in the digital world. How to avoid escalations of conflicts? The digital layer of our lives is to become a new type of battlefield. How do we ensure there is no arms race, or that criminals or hostile state actors are held accountable for their attacks? Currently, the impunity with which aggressors act, whether they are criminal or geopolitically motivated, undermines trust in and of itself. If people do not see consequences for those who wage cyberattacks, how are they supposed to rely on democratic governments and the international rule-based order? Those attacks, and the hybrid conflicts within which disinformation plays an additional role, are direct attacks on democracy, and need to be urgently addressed.

There is an opportunity in cooperating, reaching out to others as the EU, and looking at attribution of cyberattacks and at the accountability and

sanction process regarding those who wage those attacks. This needs to be a joint effort between like-minded nations that wish to see the rule of law respected, whether in the digital world or not. There are fields where existing regulation is not sufficient or new laws are expected. I am thinking about transparency and accountability, artificial intelligence and its applications, access to information, the regulation of biotech, or data ownership. Those are all covered by the new regulations that are underway from Brussels, from the AI legislation proposal to the Digital Services Act, the Digital Markets Act, the Democracy Action Plan, the Data Governance Act, or the anti-trust laws update. A lot of regulation is on the way, and based on my discussions with people from the private sector all over the world, I think the value-based regulation Europe wants is appreciated. However, it raises several questions, such as how all those different pieces of the regulatory puzzle might fit together, how to avoid that nothing falls between the cracks, or how to make sure that Europe's vision is understood everywhere in the world. When I am in Silicon Valley or in Asia, there are many discussions about technology governance where the EU is not mentioned, and the risk of irrelevance or of a shrinking role for the EU is significant. I say this without any pleasure, as a concerned European. When we think about the EU's priorities to strengthen and promote its model of technology governance and to foster a rules-based international system, we should look further than the sort of pride that we have seen, for example, around the GDPR. The "Brussels effect", which is the idea that rules made in Brussels ripple around the world and have an effect elsewhere, is a powerful one, but I think it applies more to the regulation of goods and services than to data flows in technology. In the future, we must look beyond past successes. There has been a lot of celebration around the GDPR, but there is a risk that it has been oversold, even though there are still many challenges regarding it. We can also mention a lack of growth and a leaking of talent: we lose a lot of people and start-ups to Silicon Valley and other ecosystems, which is not good for the EU's future.

Governing, especially when it comes to technologies, does not only happen through setting rules: it is also about building new technologies and bu-

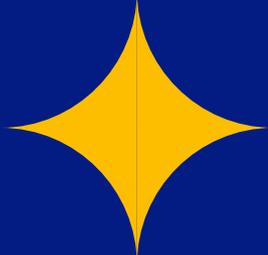
ness models that allow for innovations to thrive, grow, and set their own standards. I believe the EU and the US have a big problem on that matter and have left a lot of room for the private sector to set standards simply by the technologies they develop. To now claim - or reclaim - strength as democratic nations, to push for rules in the international order, they will need to catch up, at a time where democratic nations are unfortunately under increasing pressure from authoritarian ones in international fora. There is no guarantee that democracies will be able to gather a majority around ideas that they would like to see.

There are a few things I think the EU could implement, which should help to make it more secure, powerful, and successful. One area is the gap between the single market in Europe, and the need for considering national security risks. Those two domains are currently at conflict with each other: there is a promise of a digital single market in Europe but there are 27 different authorities to assess whether national security is at stake. This was underlined when they had to look at whether Huawei and other network technologies were safe enough to use in Europe: it was difficult to look at our single market with a national security lens, because every government can make its own decisions. At the same time, in the US, a single White House executive order was signed last week to make the country more resilient. It was very urgent, but it is striking that their pace can make a big difference on the global stage. Who is speaking for Europe: is it the High Representative for Foreign and Security Policy, or is it the Commission's Vice-President Vestager, which is responsible for digital policies? It may help to think of which voice is the most important on that matter, and maybe appoint an envoy for digital affairs who could be a sort of global ambassador for the EU when it comes to anything that is digital-related.¹

1 Connection with Ms Marietje Schaake was unfortunately lost during the event. This is thus a truncated version of the intervention she had planned on delivering.



DEBATE 1 - WHERE AND AT WHAT LEVEL IS THE EUROPEAN UNION DEPENDENT IN THE DIGITAL FIELD?



TOPIC OF THE DEBATE

Here, the digital field is understood as being a strategic dimension, just as the seas or space. Therefore, mastering it is, for the European Union, a necessary condition in order to be sovereign, i.e. being capable of deciding freely of its actions. Subsequently, the concept of digital sovereignty questions Europe's technological capacities and dependence in the field. But the digital field is made up of several technological layers, each and one of them with different levels of strategic importance. This panel aimed at defining which ones are strategic and what is the position of the EU on the matter.

SPEAKERS :

Anne Marie Engtoft Larsen, Denmark's Tech Ambassador

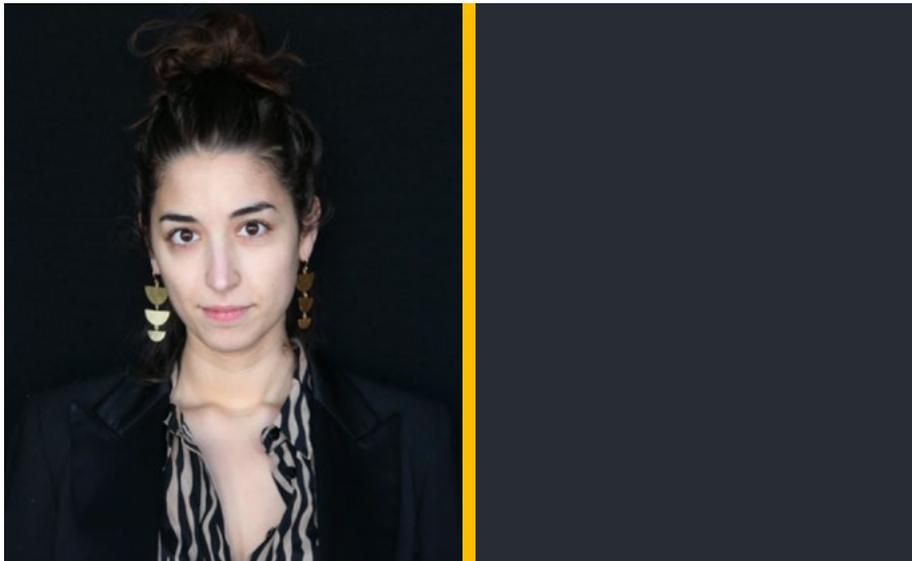
Guillaume Poupard, Director General of ANSSI (the French National Cybersecurity Agency)

Anna-Michelle Asimakopoulou, Member of the European Parliament

Rene Summer, Director of Government and Industry relations at Ericsson

This debate was moderated by **Laura Kayali**, Policy reporter at POLITICO Europe.

INTRODUCTORY STATEMENTS



Laura Kayali

Policy Reporter, POLITICO Europe (moderator)

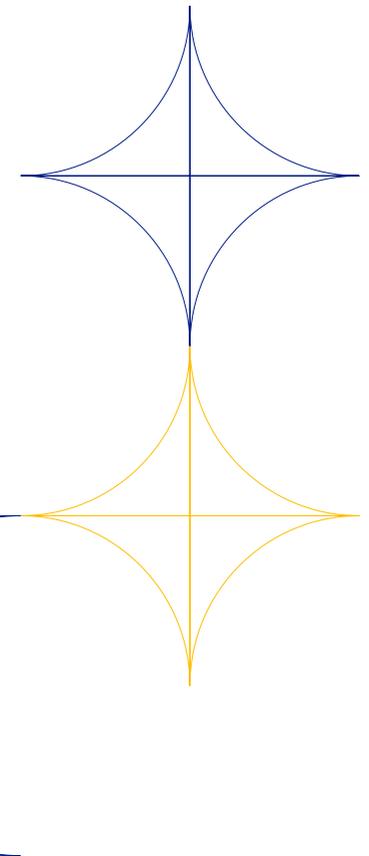
We talk a lot about digital sovereignty and the need to pursue it, but on this panel, we will try to answer a complex but very important question: at what level is the EU concretely dependent in the digital field? The coronavirus pandemic has highlighted the European continent's dependencies. One of the most high-profile examples lately is that of microchips, which impacts electronic devices but also other sectors such as car manufacturing.

In Europe, there is good news and bad news. The picture might not be as grim as we think, but there is a reality that cannot be ignored. According

to the European Commission, the EU is overall less dependent on the US than vice versa, but both have important dependencies *vis-à-vis* China. When it comes to trade, the Commission has identified computer and electronics in the top five extra dependencies for EU production. However, telecommunications and machinery are areas where Europe is the least dependent.

The Commission has recently assessed the performance of the EU in key technologies, considering variables like R&D, companies that perform, or the number of patents filed, among others. It shows that the EU performs better than China, the US and Japan in areas such as advanced manufacturing, the Internet of Things (IoT) and mobility. However, Europe is a clear lagger in other areas such as artificial intelligence (AI), robotics, microelectronics, big data and cloud technology.

In this panel, we will go into the details, when it comes to those different areas.





Anna-Michelle Asimakopoulou

Member of the European Parliament

First, I must go a bit further within the concept of sovereignty. It is a hot topic, in Europe's strategy and the transition into the digital age, which Covid has pressed the fast-forward button on. This is Europe's digital decade: it is about taking our destiny into our hands. It is difficult to give a precise definition of digital sovereignty, but it is crucial because it is about who gets to shape our future and decide what this digital age will look like. Europe has a big stake in this. For the European Commission, it might be about setting standards; for the European Council, it is a requirement of strategic autonomy. Us, in the European Parliament, we have talked about our ability to act independently in the digital world. For me, digital sovereignty is part of the more geopolitical idea of Europe and is ultimately about two things: power and rules. Power and rules, combined, are what create a three-layered definition of digital sovereignty: it is about the power to make our own

rules, to “rule” over the rest of the world by extending our own rules, and to rule out violations of the fundamental human and civil rights of our citizens and our democracy.

The power to make our rules is best expressed by the term “strategic autonomy”. I like the term “autonomy” better. It comes from ancient Greek, and literally means our ability to make our own laws. It is a good definition of the first aspect of digital sovereignty, namely our ability to act and decide autonomously on what the essential digital aspects of our future are, with respect to our economy, society and democracy.

The EU seeks to extend its influence and autonomy to others and persuade them to set similar - if not identical - standards. This is the second aspect of digital sovereignty, also known as the “Brussels effect”. I do not want to overestimate this, but the GDPR is the quintessential example of this in the past. Can we, for example with this AI Act introduced recently, produce our AI gold standard for the world?

The final aspect, which I think is the most crucial of all, is the one that provides democratic justifications for pursuing digital sovereignty as a policy goal. It is ruling out the potentially hazardous consequences of this fourth industrial revolution. It is reasonable to prioritize the protection of citizens from all the negative impacts of the EU having to follow standards which are not consistent with our fundamental values and rights, subjecting us to practices like mass AI surveillance and social scoring. The focus here is on the effects of digital transformation on society, on the economy and modern governance and, basically, on the life of our citizens. This is about digital self-determination, and this power struggle involves state and non-state actors. It is a big challenge.

How is AI related to digital sovereignty? It is kind of the flavor of this digital decade. It has the potential to change the world, from improving medical diagnosis to predicting natural disasters, among others... Because of both its versatility and its impact, it is predicted to generate trillions for the glo-

bal economy, creating new jobs, rendering other jobs obsolete... If Europe successfully overcomes the challenges that were mentioned, finds a coherent strategy, and fully scales up on AI innovation, it is supposed to add 2.7 trillion euros to our output by 2030. AI is also the core of big tech, so the way we regulate AI will have a big impact on the way big tech companies function and make money. In that sense, AI will affect the everyday life of all citizens in just about everything. It is relevant in all three aspects of digital sovereignty that I mentioned before and to all the actors that are involved because of its huge potential to create value and social impact: that is why it is a sovereignty issue for the EU. AI is a tool to help us achieve the EU's goal of digital sovereignty. It is like a digital nuclear power in the race to reign supreme in the digital age.

Now, what is Europe's level of maturity when it comes to AI, in relation to China and the US? Several States across the world are increasing their investments rapidly to establish themselves as leaders in AI development. The US and China have explicitly listed this as one of their top goals. Europe is currently lagging between both: when it comes to the AI global race, China and the US are leading in R&D and host the largest share of high value AI start-ups by far. Chinese companies are ahead of their European counterparts both in terms of AI adoption and their ability to get financial impact from AI which is also important. China is investing billions in AI, 5G, quantum computing, chip manufacturing... This is all part of its overall strategy. I think Europe is currently demonstrating its ambition to take the lead in setting digital and tech standards worldwide and is placing democratic values at the heart of our tech rule book. For example, I am convinced that the recently published Artificial Intelligence Act is a turning point in all our discussions about AI in Europe, and possibly worldwide. History is recording that Europe is taking the lead in proposing the legal rules of the AI game and I hope that this will inspire like-minded partners. So, aside from the internal challenges of putting together a functional approach to AI that also fosters innovation, we should keep looking for this balance where we protect our values and our rights. But beyond this regulatory activism, the EU is lagging in AI development and in investment, which calls our legiti-

macy into question and will do so even more in the future. As a global leader, we need large investments, highly skilled digital professionals, and secure, performant and sustainable digital infrastructures.

Much money has been invested in the Digital Europe program and there is a 20 % digital expenditure target for the Recovery and Resilience Facility. Still, we need more: there is a huge gap between the investments planned by Europe, the US and China.

In closing, I would like to say that we need more cooperation among the Member States, to achieve critical mass at a global level, and with like-minded partners like the United States, to send a clear message to authoritarian surveillance States around the globe. The transatlantic relationship is essential when it comes to AI, so a new rule book proposed by the EU could be an excellent textual starting point for transatlantic discussions. I am pleased that it was greeted by the National Security Advisor, Drake Sullivan, as a good start for a common framework that reflects exactly what we share: values, and the commitment to protecting the rights and dignity of all our citizens.





Anne Marie Engtoft Larsen

Denmark's Tech Ambassador

As Denmark's Tech Ambassador, I represent Danish interests and values to the global tech industry. I have a strong mandate to defend democratic values and I work with like-minded partners in this endeavor. It is about putting democratically elected governments and the citizens they represent back in the driver's seat of where our technological development is heading. My role is also to promote responsible and secure technological developments both with companies and consumers. Moving towards a digitally sovereign Europe can partly help in this context.

I am very happy to see the European leadership emerging on the regulatory side, but you cannot win the game by simply being a referee. This requires Europe to become self-determined and open. It must start to build on the foundations that have made Silicon Valley become a technological

superpower. Europe must be in the driver's seat of artificial intelligence, cloud computing, supercomputing biotechnologies, neurotechnology... We should not only be the ones defining and regulating how these should be used, but much more the ones using them and being able to develop them commercially.

From a Danish perspective, we do not consider digital sovereignty as shielding ourselves, on the contrary. Digital technologies have become critical for our societies for work, education, entertainment, communication, shopping, health services... down to the very question of what it means to be a human being. The last twelve months have shown the massive impact of technologies in the way we live. Thus, we can be sure that if they are not designed with European values in mind, and based on what we think is a democratically secure, safe, and ethical way to use technology, it will be defined by someone else. Most of the technologies we use in Europe are developed in the US, by people living thousands of miles away and might have a different understanding of the world, a different systemic view on how technology should be created. This is an opportunity and a call for action for European developers to be much more focused on how to build the technologies of the future. Looking at where we are, we have a very slow growth when it comes to European IT specialists. There is an absolute abundance of amazing talented people who are here to develop, in the Silicon Valley, but we have too few in Europe. With the current rate of development, we will be far below the projected 20 million experts we will need by 2030 in key areas such as cybersecurity or data analysis. I think many people are willing, not just to create start-ups, but to create scale-ups. We can see that Europe is good at creating start-ups, but their creators then move abroad, or the company gets sold. We need to see scale-ups on the European ground.

The European Commission is also highlighting the EU gap on high-end computer chips, especially in the state-of-the-art fabrication technologies and chip design. This is very important, not least for talking about digital sovereignty and open strategic autonomy in this sense. Finally, we can

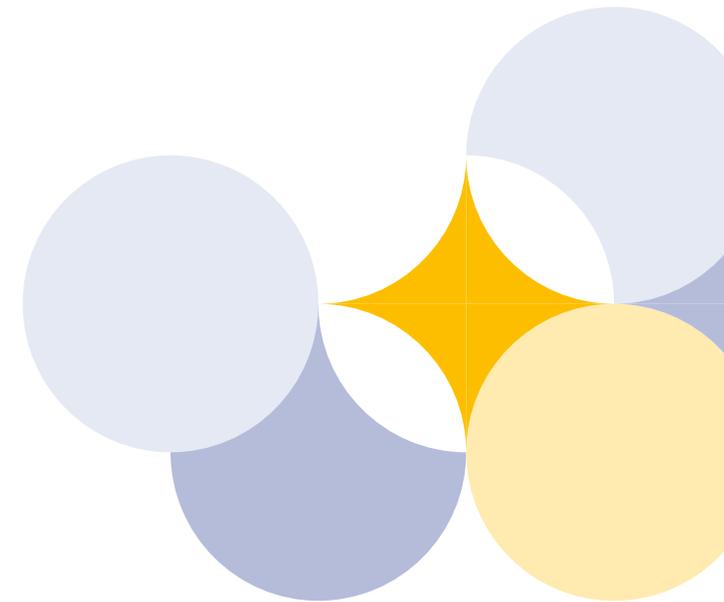
see that the cloud data produced in the EU is often stored and processed outside of Europe, where its value is also extracted. If the data economy is where so much of the current value is created and where businesses have a huge opportunity for generating new value but also seeking new markets, we need to think about how that aligns more with delivering that value within the European Union.

From a Danish perspective, we very much support the ambition of the digital decade. A joint letter, addressed to President von der Leyen by Germany, Finland, Estonia and Denmark, clearly lays out that we support a self-determined but open digital transformation in Europe. This is one of the key points: if Europe is to keep its promises, take the most out of the magnificent wonders that we are seeing from emerging technologies, it will require openness and interoperability. It will require an ability to work with the technologies that are coming from outside of the EU while building strength, building capacity, building talent in Europe, to use it, build upon it and build competitive products. This needs to be the key focus on how we are developing our digital capabilities in Europe.

The last thing I want to say is that, looking at the conversations held here in Silicon Valley about a strong digital Europe, about the Digital Markets Act or the Digital Services Act, this stronger coordinated Europe might not necessarily be. There is an opportunity for Europe to develop a digital foreign policy ambition that supports a coordinated approach to digital standards setting in international bodies. That means taking all the amazing, innovative, bold meshes that are happening within the European single market, and projecting that out into a more global role, in a policy ambition on digital issues that allows Europe not just to stand its ground internally, but also externally. That could materialise as supporting emerging economies in the digital transformation or holding tech giants accountable for behavior in third countries and not just looking at what happens within European borders. Finally, it is about responding more strongly to digital foreign interference and cyberattacks, shaping global governance with European norms and democratic values, listening to the European-founded

tech companies that are European in their core but globally oriented, and putting Europe in the driver's seat of responsible technology development much more globally.

In summary, I think there is a recognition that Europe is doing a lot more, that Europe is focusing on becoming much stronger in this area but as I said at the beginning, the referee does not win the game. It is also about building those digital capabilities and a much stronger Europe, not just in the European single market, but also on a global scale.





Guillaume Poupard

Director General of ANSSI (the French National Cybersecurity Agency)

In 2008, France started thinking about cybersecurity and what we could do, at the national level, to ensure that our digital security is good enough. This was just one year after the Estonian government was attacked by some “Russian patriots”, as they were called at the time. Such a threat was not acceptable to us, and we decided to make cybersecurity a real priority in France: to be sovereign, whatever definition you use, you need to be able to protect your information systems. We soon observed that there are many things to do at the national level, but that the good level for many ideas was the European one. Of course, it is more complex, but it is necessary to deal with some topics at this European level, which is what we have done in the past. We have done many things, and I say it not only to be proud of what we did, but to underline that everything is not negative when it comes to European digital sovereignty.

The first thing we did was the so-called NIS directive, that regulates the security of critical operators in Europe. The idea was to preserve national sovereignty - as some of the critical operators are directly linked with national security -, but also to develop a harmonised set of rules at the European level. It was a very important time, when the EU suggested that security should be developed in all the Member States and at the European level. Trying to find some protection in Europe or outside Europe was not a good solution: all Member States should develop their own capabilities in cybersecurity. We then used it to identify the critical operators and critical systems, and to develop the first level of European cybersecurity. This was an important first step.

We then worked a lot on certification, which one can consider is something very technical but is in practice necessary to build trust and to transfer trust from producers to customers. With the Cybersecurity Act, we now have a framework through which we can develop our European schemes, and what has been done at the national level will soon be done at the European level. It was the second step and, I think, a good win for Europe’s sovereignty. Then, we kept on building some networks. We consider that cybersecurity cannot be harmonised but should work with networks, with actors in the different Member States. We built many networks, technical ones for example with the CSIRTs network: when the EU or a Member State is under cyberattack, this network allows us to share a lot of information, including sensitive information, very quickly, which is necessary.

We also have a NIS group network, which is focused on the NIS directive but is also able to deal with very complex questions like 5G security. Everything can't be done at the European level but thanks to this 5G toolbox, it was possible to publish and share common security analysis, as technical as possible, regarding 5G, and to share the good ideas we can have in the different Member States to make sure that those new 5G networks are secure. It was a success.

Finally, last year, we started to build a real cybersecurity industry in Europe.

We often consider that we do not have enough industry able to do things in Europe, but it is wrong in many domains. The cybersecurity public-private partnership between the European Commission and the European Cyber Security Organization (ECSO) was a good example that there are many good industries in Europe, that can build our cybersecurity but are also able to talk with the extra-European industry.

If we now look at the future, at what we should do during the next few years, we need time to correct things and to be more ambitious. We are already working on the new NIS directive, which I hope will be completed during the French presidency of the EU Council next year. The idea behind this new directive is to take the working foundations of the current one, but to be more ambitious: we want to enlarge the number of critical operators, and to deal with some operators who work directly in the digital field. To give a simple example of the kind of enlargement we would like to put in place, we can consider managed services providers. They are of course very important for digital development and for cybersecurity but are not regulated as of today. This new directive will help Europe be more secure, more sovereign in our domain, and it will be very positive.

My second and last point is about certification, and especially one of the most complex related topics, which is the certification of cloud services. We consider that we need a trusted cloud infrastructure in Europe, and that it cannot be done without the best offer from a technological point of view. The question is: how can we work with technology providers which are not European? Today, most of them are from the US, but tomorrow they will come from China. How can we work with them and how can we trust their results and the services they provide? Thanks to European Union Agency for Cybersecurity (ENISA) and many experts that work on the Cybersecurity Act, we will have a good framework to build upon. Now, we must think of a way to develop a certification scheme that guarantees that, at the highest-level, solutions are secure from a technological, operational but also legal point of view. To that end, we need to be very strong, to decide that, for the highest level of certification, we only want European laws

to apply to those technologies. We want to be able to use non-European technology, but at the same time, we cannot have non-European regulations, such as the Cloud Act, apply to those technologies. This is where we stand as of right now. We announced this morning at the French Ministry of Economy that we are creating a new label for trusted cloud offers, but our ambition is to do it not only in France, but also in Europe. I hope that the Cybersecurity Act will soon allow us to have a certification where for the highest level of trust and confidence, we can say this is European cloud even if it does not only use European technology.





Rene Summer

Director of Government and Industry Relations at Ericsson

My perspective is not the one of a referee, but of a player in the market. I think that we can build from strength to strength. If we start with the infrastructure part, of course, most of us agree that 5G really moves the frontier of digital transformation for both industries and for the public sector. It has the potential to unlock a new wealth of innovation and to substantially contribute to the decarbonisation of Europe's economy. This innovation platform is to be considered as a critical digital infrastructure for the innovation and for the economic activities going forward. To create this innovation platform, we need to make sure that we get high performing nationwide 5G networks in Europe as soon as possible. This is about building a strategic capability: building 5G merely for coverage and fast broadband is not enough. We are really calling out on that, because Europe needs mid-band deployments to achieve this full 5G innovation platform nationwide.

This is what the leading digital nations are doing, and this is where Europe needs to act urgently. If we move into the data discussion, to lead in the future edge cloud technologies where a 5G network will be a prerequisite, it is also important to build a network that is a real computed network that uses widely distributed cloud edge capabilities. It is not possible without a full 5G high performing network.

Looking at the capabilities here, Europe is hosting two world-leading high-tech innovation companies in 5G, and all 5G pioneering countries, including those that are ahead of Europe in terms of 5G rollout, use and deploy European 5G technology. Europe is offering globally cutting-edge 5G technology to the rest of the world. This is a key strength for us, and maybe one of the unique strengths that Europe has. This is the foundation for our strengths. Just to give some examples of that leadership, we can talk about both the Gartner-Magic Quadrant and the Frost assessment, that, this year, put Ericsson on top of all technology suppliers in the 5G infrastructure model market as the leading one.

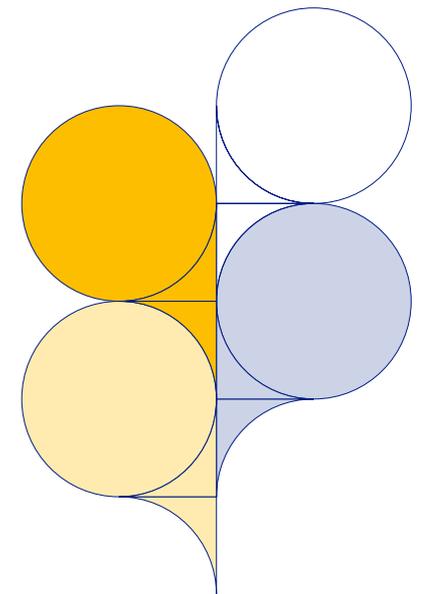
But having cutting-edge technologies is also important to strengthen supply chains. This is my second point coming to the discussion. We do have cutting-edge technology in 5G in Europe, but we also need a robust and strong supply chain, for supplying both Europe but also the rest of the world. Ericsson has chosen a globally distributed supply chain, so we do have presence in terms of R&D and manufacturing in countries like Brazil, India, North America, and others, but we also are significantly present in Europe. 60% of our global R&D staff is in the European Union, and we have two manufacturing sites in two different European countries. We also have one out of four global service centers in another European country, and a high number of R&D sites across the European Union, from Spain to Finland and many more. To give you some examples, we have been present in France since 1909, and recently announced our expansion with a new R&D center that will employ more than 300 people by 2023. We are not only supplying technology of this critical infrastructure to French operators, but also collaborating with important and strategic industries like Air-

bus or ADF to deploy private communication networks for nuclear plants. Another example is Germany, where one of our leading globally leading ICT development centers is located. In 2019, Fraunhofer IPA selected Ericsson to supply the private 5G network, which is Europe's largest industrial 5G research network as of today.

Looking into the future, building from one strength to the next and talking about the next G is going to be an important development. We already see several countries investing early in 6G research and of course, our view is that Europe needs to be at the forefront here. Investing in this future technology is essential to maintain Europe's strength and future leadership. We very much urge European policymakers to make sure that Europe's 6G research is centered on Europe's strength in mobile communication, and particularly in 5G. This is the basis for expanding and growing our future capabilities, innovation, and technology contribution that we can share with the rest of the world. In that context, when we talk about a multilateral regime and an international order, we maintain that 3GPP should be the standard to be used to implement future technologies. 3GPP is also World Trade Organization (WTO) and Technical Barriers to Trade (TBT) compliant: it complies with the WTO rules in terms of openness, transparency, consensus, and industry-led innovation.

Lastly, I would like to ask policymakers across the EU to engage Europe in international 6G research cooperation with countries like the US, Canada, Japan, the UK, or Australia. This is the next phase that we need, to build from strength to next strength. When we look at European technological capabilities in the digital domain, we see strong and globally leading capabilities in areas such as antennas, which are the baseline technologies that are necessary to foster advanced communication systems. Analog semiconductor technologies in optical technologies, signal processing, large scale software development and significant software development that only takes place in 5G will also be required in 6G. We specifically talk about software that is related to mission-critical systems and to infrastructure-related software.

To conclude, we see that Europe needs to strengthen its technical capacity where there are strengths or weaknesses, coming back to the point around digital semiconductor manufacturing, but also very much in the design of these technologies is a very important capacity and capability that should not be forgotten. We also face challenges when it comes to data center processing technology such as Field-Programmable Gate Array (FPGAs), graphic processors and switching and routing processing capacities, AI and to an extent, also end devices for IoT technologies.



OPEN DISCUSSION

Dogmo Itole

Managed Services Consultant, Zendesk

Digital sovereignty needs a strong foundational digital strategy. In France, where I am from, the digital fracture tends to follow socio-economic ones. Tech innovation and digital safety will be increased and improved in Europe if tech education is heavily invested in. Russia, India, and China strategically invest in tech education, which seems to be paying off. Why are we Europeans lagging behind? Where are our free coding camps?

Anne Marie Engtoft Larsen

Denmark's Tech Ambassador

Free coding camps alone will probably not be the answer. I think we must focus on two things.

The first one is education. For too long we overlooked STEM² education. We have way too few girls and women in STEM. As such, we are missing half of the population in Europe to actively participate in tech development. Looking broadly at all STEMs, I think we must invest into all kinds

² STEM stands for science, technology, engineering, and mathematics.

of science and technology educational backgrounds, make them more attractive and easier to get into.

Secondly, there is a question around boldness, ambition. We must find the young talented amazing programmers, people with a good start-up idea, people who are developing technology, and build stronger ecosystems for them. Building new technology and a business is also about having the right ecosystem, access to talent and capital, but also access to this feeling, that is very present in Silicon Valley, that one should believe they can and should build bigger things. We must build on this stronger European ecosystem. We need to find ways to connect it, whether that is in Copenhagen, Brussels, Paris, or Berlin. Of course, the language is not the same across countries, but we should use it as an opportunity. Europe is built on diversity, and this is really what is needed for talent.

To go back to those coding camps, I think this is not a generational conflict. Programmers and talent do not have to be young boys and girls. Looking at whether it is those people who are in their 40s, 50s or 60s, who are sitting at the helm of the SMEs around Europe, we need to build technical capabilities and understanding. We must inspire a technological intuition that is not necessarily making us all programmers, but at least makes us able to understand and appreciate the technology enough to integrate it into our companies and the way that we are working.

Laura Kayali

Policy Reporter, POLITICO Europe (moderator)

Is it more that we do have the good universities, but people are not attracted to them or is it that our universities are not good enough, to put it a bit bluntly?

Anne Marie Engtoft Larsen

Denmark's Tech Ambassador

I have the pleasure of living close to Stanford, and there is no doubt that this is really a miracle for turning out incredible talent. Looking broadly at universities across Europe, we have magnificent universities, but we should thrive for not just being great but being excellent. What has been so strong in Europe is that our best universities are interdisciplinary: you do not only study business, but also ethics, philosophy, anthropology... We understand these nuances and where we weave our European democratic values, all the way back to Ancient Greece and some of the fundamentals that we have been building our society on. But if we are to turn out the best universities and build them as centers of excellence for creating new technology and cutting-edge companies that will become massive unicorns in Europe, we need to make sure they become excellent. That requires that some universities go the extra mile, and to that end, get the related extra funding. It is where we should start looking at.

Laura Kayali

Policy Reporter, POLITICO Europe (moderator)

You mentioned the investment gap between Europe, the US and China. The European recovery plan is trying to fill that gap, with 20 % of the funding that will be invested in digital technologies. Do you think we are making enough efforts?

Anna-Michelle Asimakopoulou

Member of the European Parliament

We are making efforts, but we will need to make more. We talked about 6G, for example. It might feel like it is far away for most of us, but the battle over 6G standards has already begun and 6G is expected to support this unprecedented "Internet of Everything". It comes with extremely diverse and challenging requirements such as data security, user privacy, energy, sustainability... Even though academia and industry are already focusing on research on 6G networks, and despite the fact that 5G is still under deployment, it is a very attractive area for private investment as well. I must mention that last month, the US and Japan paved the way for cooperation on the "beyond 5G" technology, and the list of joint commitments include 2.5 billion dollars from the US and 2 billion dollars from Japan for 6G.

So, on our side, we European are making moves to get hold of 6G chunk technology, but I think that we need to do more. In February, the European Commission adopted a legislative proposal for the next period, setting up 900 million euros to coordinate research and innovation activities on 6G under the Horizon Europe programme. The Commission hopes to leverage a similar amount from the private sector, which would amount to a total investment of 1.8 billion euros. But if we want 6G to be secure, open, and efficient, we have to take action and make sure that it is also based on both European values and the best technology standards available. One of the lessons we learned from the pandemic is that in times of rapid change, growing complexity and uncertainty, times we live in, responsible governance on our part requires that we be prepared for the unexpected, to build greater anticipatory capacity. That is why I think we need to be much more forward-looking and take a long-term approach into our digital and tech policy making. This will not come cheap, as it is very often about leveraging financial resources, and it is something that the EU must pay particular attention to.

Laura Kayali

Policy Reporter, POLITICO Europe (moderator)

What would you say are the must-haves for Europe not to miss the 6G revolution?

Rene Summer

Director of Government and Industry Relations at Ericsson

The first thing is to be there early with a clear signal and ambition, both politically and in terms of public support for R&D that is centered on Europe's strength in 5G. This is one of the few unique ICT capabilities that Europe has to offer to the rest of the world, so we need to use it to build from and to expand into the future. Of course, in this context, we should also collaborate with other countries, such as Japan and the US. In those discussions, we need to center the debate on our strengths. Then, when we move to research activities and subsequent standardisation, the essential role of international standards such as 3GPP, is an absolute prerequisite. We need to safeguard this TBT compliant standard, and Europe's contribution here has always been at the forefront. We need to make sure that we are still there when it comes to 6G.

Laura Kayali

Policy Reporter, POLITICO Europe (moderator)

You mentioned France's cloud strategy and said that the ambition of the announced "trusted cloud" label is to exist at the EU level: how does France plan to push it at the European level? This morning, the French Secretary of State for Digital Affairs, Cédric O, referred to the cloud partnership between OVH and Google as an example of what could look like a secure solution that is still half-American. Do you also look at those partnerships as the cornerstone of secure cloud?

Guillaume Poupard

Director General of ANSSI (the French National Cybersecurity Agency)

I will start with the second question. We need a secure cloud, which means that security must be at the highest level from a technical and operational point of view. In practice, the list of rules we make mandatory for this level is public, and in France, we already have a kind of certification called SecNumCloud, that aims at building trust in the cloud. Today, we are adding a sort of legal security. In practice, it means that we test whether non-European regulations such as the Cloud Act, the Patriot Act and many others apply or not. We consider that we can work with non-European technology providers, but we do not want their legal framework to be used. You mentioned the example of a French company, OVH, working with Google. We will first have to check if the legal framework is good enough, but it is exactly an example of what we want to achieve.

That is what France is aiming at, but we must be able to do it at the European level. We are using the Cybersecurity Act, which develops a classification framework that will be used to certify some products and services. Today, we are working with our different counterparts and ENISA to develop a system to certify some cloud services at different levels. At the highest level, we want to be sure that the solutions will be secure enough from a technological point of view, but also *vis-à-vis* the legal framework.

Laura Kayali

Policy Reporter, POLITICO Europe (moderator)

Anne Marie, you live in Silicon Valley, surrounded by all the venture capitalists. How do Europe's start-ups financing systems fare compared to the US'?

Anne Marie Engtoft Larsen

Denmark's Tech Ambassador

Five years ago, I would have said it did not fare very well, but a lot has been done by the European Commission and private venture capitals. We are starting to see much more available in risk-willing capital in Europe. It is still far from what is being done in the US at the same level. As I was explaining before, the eco-innovation system requires both public and private actors, and I think the European Commission, the European Union and a lot of the Member States did set the ambition in all the different pieces of legislation,

whether we are talking about a digital sovereign Europe or the digital decade. This is the overall ambition for where Europe is headed, and it is my sincere hope that this becomes a call to action for many private actors to try to find their role in this, whether it is as venture capitalists, investors, building accelerators, helping talent create successful start-ups, or using foreign technology but building European capabilities with it.

We are on a positive upward trajectory, but if we are to meet the quite ambitious texts (which, to be honest, are still mainly texts, whether it is legislation intentions or political speeches), it will require public-private collaborations and for us to watch and learn. We will need to copy some of the things that we are seeing in the US in terms of risk-willing capital, and then combine it with our European approach to tech development, which is focusing much more on privacy, security, and integrity for the individual. We should make sure that tech investments in Europe are fostering more sustainable, more secure, more democratic technologies that are not just great but excellent and can compete on a global market. We must show that it is possible to take a different approach to technology development that is competitive and delivers great products both to businesses and to customers.

Laura Kayali

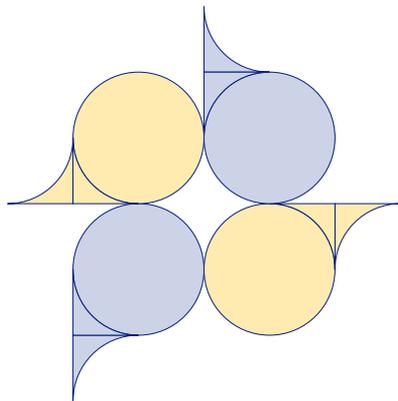
Policy Reporter, POLITICO Europe (moderator)

Aren't we taking this from the wrong perspective? Shouldn't we first start by establishing serious national ministries for digital affairs and invest in the digital transformation of our public institutions? Isn't that step one?

Anna-Michelle Asimakopoulou

Member of the European Parliament

I think that is part of the process, but we are already doing that in Europe, although I agree with the fact that what is done at the national level is very important. It has been mentioned earlier that this culture of investment cannot only be at the EU level and at the private level. It will also be at the national level, and the 20 % of the recovery plan that States will have to invest in digitisation will, in many States, contribute to progress in the way they interact with citizens. I do not think one step should be prioritised over another: we should be taking all these steps together and advancing in all these directions, but it certainly is a big part of the process.



CONCLUDING REMARKS

Rene Summer

Director of Government and Industry Relations at Ericsson

I would like to stress that if we want to build from strength to strength, we need to make sure that we roll out a full and high-performing 5G network across Europe. That will create the foundation for innovation in other sectors, providing the necessary capabilities for other industries to use this technology for innovation and for economic advancement.

Guillaume Poupard

Director General of ANSSI (the French National Cybersecurity Agency)

We have developed cybersecurity in different Member States: this was the first step. The second step was then to develop networks, so that all the capacities can be put together at the technical, operational, and strategic level. It has been done. The next step now is to develop mutual assistance between Member States in Europe. We want to work on this and to push all the relevant stakeholders to work on this too. If, at the end, we can create these mutual systems, we could consider that we have built a real sovereign cybersecurity in Europe.

Anne Marie Engtoft Larsen

Denmark's Tech Ambassador

As a European currently living abroad, seeing what is happening is incredibly heartwarming. It is ambitious, and we are going in the right direction, politically speaking. But we must look beyond Europe: we need to look at how to build a comprehensive asset before digital foreign policy. Standard setters can win the market, and market winners can influence the rest. If we aim at a truly democratic, secure, safe, inclusive and sustainable technological revolution, it will require that a lot of the ways we think, engage, and develop technology become a global standard. We must think about making Europe a safer and more prosperous place, not only by focusing on the internal single market, but by building a stronger European voice politically, on legislation and standards but also for the amazing European companies that are truly defining what is a sustainable, inclusive, and more secure technological future.

Anna-Michelle Asimakopoulou

Member of the European Parliament

I think digital sovereignty and/or open strategic autonomy together are legitimate and very important strategies for Europe to become geopolitically more powerful. As we pursue them with ambition, it is very important for us to cooperate with like-minded partners who share our set of values. This is not just an issue of power, control, and prosperity in the digital age. It is truly an issue of democracy. I think that the EU would greatly benefit from having a tech ambassador that would be involved full-time in pursuing the achievement of these goals.



DEBATE 2 - HOW CAN THE EU DEVELOP SUFFICIENT CAPACITIES IN THE DIGITAL FIELD IN ORDER TO GUARANTEE ITS SOVEREIGNTY?



TOPIC OF THE DEBATE

The aim of this second debate was to define the practical means that will allow the European Union to develop the strategic capacities - identified in the first debate - necessary to its sovereignty. It focused on three questions in particular: how to guarantee the EU's access to strategic infrastructure? Should the EU capitalize on its regulatory power in order to attain its digital sovereignty objectives? How can it foster strategic technological capacities and develop a dynamic ecosystem of European innovators?

SPEAKERS :

Thibaut Kleiner, Director of Policy, Strategy and Outreach at the European Commission's Directorate-General for Communications Networks, Content and Technology (DG CNECT)

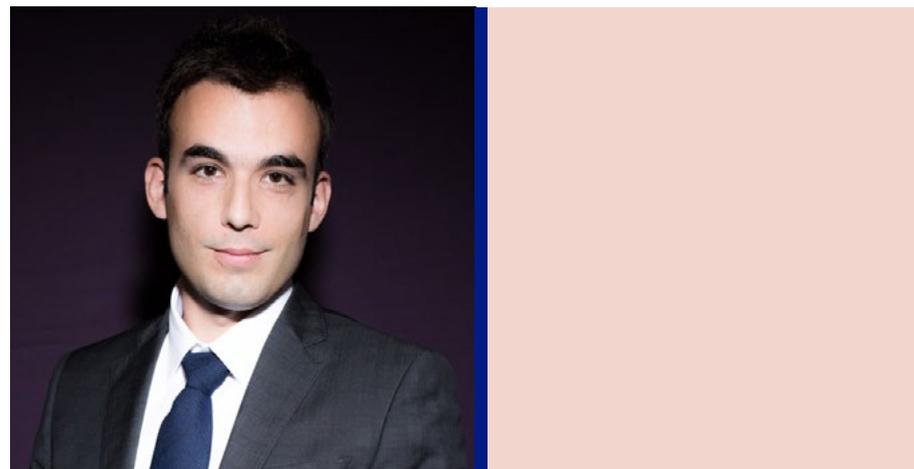
Dragoș Tudorache, Member of the European Parliament

Marie Ekeland, Founder of 2050

Corinna Schulze, Director of EU Government Affairs at SAP

This debate was moderated by **Julien Nocetti**, Senior Associate Fellow at IFRI and Member of Renaissance Numérique.

INTRODUCTORY STATEMENTS



Julien Nocetti

Senior Associate Fellow at IFRI (moderator)

This second panel will seek to tackle the sufficient capacities the European Union could develop to guarantee what it has identified as its sovereignty in the digital field. Over the past few months, the news related to the digital or tech field in the EU have been particularly intense, and these questions remain a hot topic. But is today's digital field about freeing itself from the two-fold supervision of the US and China, at least in some key technologies such as 5G, cybersecurity, or semiconductors? Or is it about being able to choose our own interdependencies, which may prove a way to emphasize the very nature of today's digital based globalisation?



Thibaut Kleiner

Director of Policy, Strategy and Outreach at the European Commission's Directorate-General for Communications Networks, Content and Technology (DG CNECT)

I would like to come back on some of the policy areas the European Commission is putting forward to address this issue of digital sovereignty. It is a very timely discussion: we are currently holding this debate and having a lot of interactions - online, because of the COVID crisis. There is a clear acceleration of the digital transformation, which at the same time highlights that we somehow have some dependencies in this sector. Over the past few months, the automotive and white goods industries' assembly lines had to stop because of a microchips delivery shortage from Asia to Europe. We also are using software and platforms that were not developed in Europe on a daily basis, to conduct our online interactions, and there has been a huge growth of e-commerce recently, which is now much higher than at any Christmas time in the past. But unfortunately, this intensive growth we are experiencing mostly concerns non-European e-commerce platforms. I also want to flag that people are consuming a lot of entertainment

products and culture online, and again not necessarily through European platforms. The current situation highlights the opportunity offered by the digital transformation, and as far as the EU is concerned, we have a very positive understanding of it. We believe it has the potential to bring prosperity, but also inclusion and sustainability. In fact, green and digital very often go hand in hand. We all have this positive vision for the digital transformation of Europe. But at the same time, we must recognise that, when it comes to digital transformation, we are currently dependent on others.

Europe can see itself not only as a market, but also as an economic power that is able to define and to defend some common economic interests. Unfortunately, Brexit has somehow weakened our global weight in the digital sector. But at the same time, the vision of a more integrated Europe is now getting much more realistic. It is not incidental that in the last year or so, many debates occurred between Member States on the issue of sovereignty. It sometimes was a narrow debate, as the term of "sovereignty" is often seen as too loaded, too much associated with nationalism or even protectionism. Many Member States were quite reluctant to use it. But over the past two or three months, a consensus seems to have emerged on the need to defend this notion, which simply means that we are able to defend ourselves and to put forward our interests in a way that is quite natural, just like China, Japan or the US are defending theirs. Europe should do the same: we should not be ashamed of having these debates. We should try to define how we can thrive through this transformation and make sure that we define the rules of the game in a way that suits us and makes us stronger together.

My second point is that it is not enough to just say that we want digital sovereignty. We need to define it more precisely. Very often, as far as the European Commission is concerned, digital sovereignty means trying to find out what are our strengths and weaknesses. Behind this, is a strategy to try and determine where we need to do more as Europe, and when we need to intervene to redress some problematic situations. Regulation is sometimes needed, and that is why the European Commission has put forward propo-

sals such as the Digital Markets Act or the Digital Services Act, that try to open markets on which gatekeepers prevent the emergence of new players or undermine the vivid innovation potential of these markets. That is the reason why Europe is putting forward some analysis, as in the recent industrial strategy, where we try to analyze very precisely - from trade flows - in which areas we are dependent in terms of imports, materials, and technologies. They now will be set up, also following the strategy on the defense in the EU, that will serve to continue identifying these areas. We similarly have a policy on controlling foreign direct investments, to make sure that foreign companies cannot simply acquire our technology jobs without both Member States and the European Union being aware of it.

My third and last main point is that we need them to act in a very focused and efficient manner to address the areas where we are not as strong as we should. This is very much the purpose of a recent strategy we put forward in the Digital Compass Communication. This communication not only tries to look at where we need to act but puts forward the direction of travel. We now have a target for 2030, with eleven objectives that cover four areas, that we call the “four cardinal points” of this digital compass. The first cardinal point is focused on skills: we want, not only that most - if not everybody - people have basic digital skills to embrace the digital transformation, but also to have digital experts, which is very important for our sovereignty. We want 20 millions of such advanced experts in the digital sector by 2030. The second cardinal point we want to achieve is first class infrastructure. Digital infrastructure is really the backbone of our sovereignty, and we have ambitious objectives as regards 5G. We have good technology there, but we need to deploy it faster. We also want to have a production facility for microprocessors and microelectronics in Europe, not only for microchips’ design, but also production facilities, to avoid dependencies. Besides, we want to make sure that we have sufficient capabilities in terms of the data infrastructure, the data of the future in terms of cloud computing. We want to have edge cloud nodes which are closer to the users across the EU by 2030. We believe 10 000 nodes are needed to cover the whole continent. Finally, we are also going to invest sufficiently in quantum computing to be

the first in the race to have a quantum computer. It is a race, and a very important one, which is why the EU as well as Member States are putting funding on the table. The third cardinal point in our compass is to make sure that there is a transformation of business. We are not only targeting digitalisation of all SMEs and companies, we also need to do better at producing scale-ups and unicorns, disrupting innovators that really can scale up to advance with their products, but also make sure that Europe as well has these leaders of tomorrow. The last point in our compass is the transformation of government. We have seen in the recent period an acceleration of how digital services can be used by governments, and we want to make sure that, for e-health for instance, there is a lot more accessible to citizens by 2030. It is the same for digital identity.

We want to deliver on these targets, and I think it is very important that we set the vision. We are putting together not only a program of funding through the EU budget but are also already instituting Member States to devote more than 20 % of their national recovery plans to the digital sector and the digital transformation. This means that more than 140 billion euros are to be spent in the next two or three years within the EU altogether, from various programs at the EU level. We also have significant investments, for instance with the Digital Europe Program, Horizon Europe, Connecting Europe Facility, Invest EU, or the MEDIA Program. So, we have a series of tools that can support these investments. But first and foremost, we want to pursue a vision where Member States join forces. As I mentioned earlier, this vision of Europe as an economic power requires that we do not think “national”, but that we think “European” from day one. That is why we are currently putting forward this challenge that Member States embrace multi-country projects, so that we deliver continental-sized infrastructures, as far as 5G is concerned, but also high-performance computing, quantum or the support for innovation and digital hubs. For SMEs, we believe that we can have a pan-European approach to these investments, therefore creating the scale that is so much required for the digital sector. This is a very strong priority for the European Commission, and one where we want to devote not only regulation but also strong investment support.



Dragoș Tudorache

Member of the European Parliament

This will of reaching digital sovereignty has gained a lot of meaning in the last two years, in the different contexts in which it was raised. I chair a Special Committee on Artificial Intelligence in the European Parliament. I also sit in the Foreign Affairs Committee, in the Security and Defense Committee and in both delegations of Parliament dealing with the US and with China. I say this to give you an indication of the many instances of the European Parliament where the issue of digital sovereignty and the digital place for Europe in the world are being discussed, and how interlinked all these things are.

Sovereignty, or autonomy, is a grand *leitmotiv* for this political cycle. When it comes to digital affairs, it is no longer just a consequence or an afterthought: digitalisation has become one of the core elements of how we achieve sovereignty, and how we need to conduct our business in the world,

both with our like-minded partners around the world, and with those that do not share our values. Digital sovereignty has become one of the key elements in how we now perceive strategic autonomy in general. This is another very generous concept that we have been playing with for the last two years at the European level: how to address our preparedness internally in the EU and in our foreign affairs? I will first say a few words on the internal part, and then move on the external part, as both are linked.

As far as the internal part is concerned, resilience and competitiveness are key internal objectives if we want to stand on our feet when it comes to the digital transformation. What does it mean? I will start with the protection of our citizens, our consumers, our European way of life, and our values and vision of rights. It is not by accident that many of the regulatory instruments that we are producing now at the European level when it comes to digital - including the Artificial Intelligence Act - put the human interest at their very core. In Europe, we believe that we must start from the interests of individuals, and that rights, values and human interests need to be the ones that are driving the direction that we give to the development and the design of these new technologies. The coming regulations are going to be the rulebook of our digital lives tomorrow and in doing so, we must be aware that we are going to set some standards, as I will explain later.

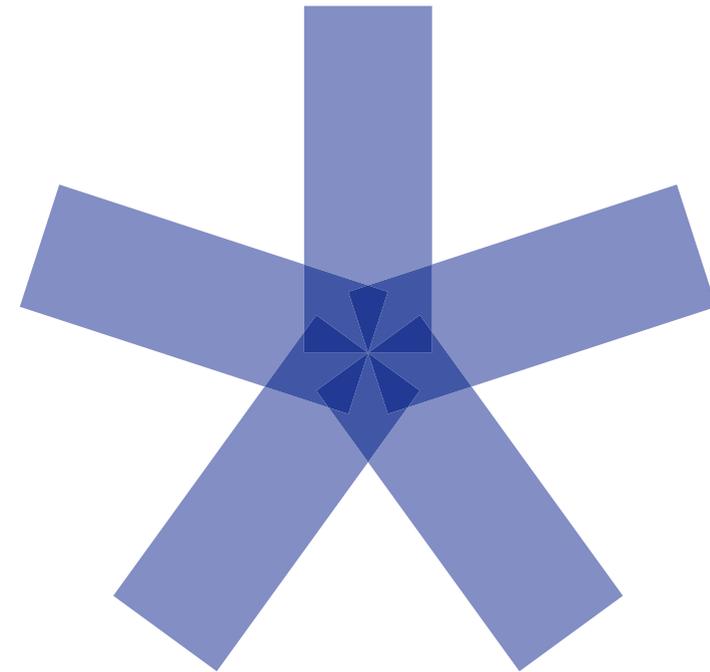
The second element on the internal part is setting the right objectives. Many have already been mentioned, such as maintaining and increasing our competitiveness in this digital world. It starts with facilitating data flows, and all the regulatory instruments that we are going to have for that, like the Digital Compass. It is essential that we have the right objectives if we are to secure the sovereignty that we are seeking. Some issues were also mentioned, related to the reliability of our supply chains. I fully agree that this is an integral part of what we need to do to increase our resilience internally within the EU, and to secure the infrastructure of the future regarding 5G. There also is the issue of undersea infrastructures, which can become a vulnerability from a security point of view, as they are very much supporting the digital infrastructure that we use here on the continent. Finally, we

need to indeed invest even more than what we already have, in innovation, start-ups, research, development and education. It is only by doing so that we can stay competitive.

On the external aspects, I already said that this is the time when we are preparing the rulebook for tomorrow's digital world. But while we assert this sort of normative sovereignty in Europe, we also need to be aware of the need to remain complementary with our allies. This is a strategic perspective that we need to always keep in mind when we discuss sovereignty in this area, because we must aim at ending up with standards and norms which are aligned with our like-minded partners. I am not only referring to the US. It is also valid for how we address Canada, Japan, Australia, New Zealand, South Korea, and all those partners on the global stage, which are understanding democracy and values in the same way as we do. We can instill a new culture of digital diplomacy. When reaching out to the US as part of the new transatlantic dialogue, we proposed the establishment of the Trade and Technology Council, in order to design the rules of tomorrow together. We must do that with the interests of our citizens and businesses in mind, but again - I am repeating myself - with the understanding that we need to be complimentary. It is important because, on the other side, we have another vision of the world. China and Russia have a different understanding of how new technology should be deployed regarding societies and citizens. Their interests are different, and that is why we need to work together with our partners to clear that. We must try, in a multilateral forum, to ensure that our understanding of what these rules should look like is one that will be followed as a model by others later on.

Finally, in these strategic objectives, we need to maintain external policies to retain our claims for sovereignty internally, for our digital purposes and objectives. We also need to design, together with our partners, the rules for the terrorists, and adequate response for hybrid and novel attacks enabled by technology. We must understand that technology can be used for good, but also for bad. If we start from the impact of fake news and misinformation on many of our democratic processes, from elections to campaigning

of whatever nature, and going all the way to full-fledged hybrid attacks using technology to affect our economic interests, there is a new reality. It is a new reality of warfare, which we need to incorporate into our strategic thinking and into the way we address digital sovereignty when we are discussing it on the world stage, either with our partners or with our competitors.





Marie Ekeland

Founder of 2050

The true question is: what do we want technology to be used for and what type of society do we want to build at the European level? What type of values do we want to defend? You were talking about democracy, and we are talking here about sovereignty. Something that we need to keep in mind is that digital sovereignty in itself has a greater goal than just digital transformation. We are thinking about being autonomous, but it is not even that. It does not mean that we live in a society where we all believe it is good to live in. I think it is just an intermediate goal.

I have been investing in the tech field for twenty years now, and what I see is that the same type of dynamics is seen today as what I have seen at the very early days of the tech revolution, but aimed at something different. We are seeing consumers, talents, individual investors, all asking for ano-

ther type of mutation which is around sustainability, more responsibility in business, and environmental sustainability as well. This new mutation goes hand in hand with digitalisation but has a purpose. People are having the same type of behaviors than what I have seen before, except that the usage is different. Consumers are asking for different types of products that are not here yet, for transparency, diversity, inclusion, fairness, and better governance. Shareholders are also putting pressure on companies for the exact same things. This is also driven by young people, entrepreneurs, and researchers, and it has the same type of similarity in the sense that it is touching every business in every society in every sector, all around the world. This movement is by nature international, and really comes from individuals who are pushing institutions, who are pushing corporations to act.

This is interesting as well, because you can see regulation is obsolete in the same way some digital tools were in some areas: it will need to adapt. So, it is providing the same type of disruption and opportunities than what we had in the very early days of the digital transformation. At the same time, it is also adding something different - a purpose -, around the sustainability of the world, of our societies, and this kind of ethics and responsibility. What is incredible is that Europe has been a thought leader on all these topics for a while, so it is legitimate to take the lead on these issues and on this transformation. What I see is that if we want to build that digital sovereignty, we need to think one step forward. We must think about how we can build the digital industry, practices, technologies of tomorrow. These digital technologies standards, practices and governance are those that will be sustainable and responsible. We have proven to the world that we can lead on these topics thanks to the GDPR and how it was applied way broader than just in Europe itself. It is not only about sovereignty, but about building the type of industries and economy that will take this mutation first. We can establish all these role models. And because we can think about the companies and finance them, these companies will be able to be tomorrow's champions because they will have understood that mutation at first. They will have taken the wave and they will have adapted. This is what we think when we, at 2050, invest in "aligned companies", meaning com-

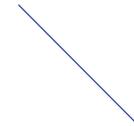
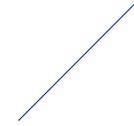
panies that are aligning their business models and their economic interests with those of society and those of the planet. We do so because we believe these companies who can do that at best will be tomorrow's champions. I think this is the trend we are in.

Digital revolution is now completely integrated within this sustainable mutation. As European countries and European companies, we have the skills, talents, and culture to lead that mix of transformation. This will be the way that we can reestablish sovereignty: by building the role models of tomorrow. Through regulations, such as the GDPR, but not only. We do not know yet what it takes to take a company and build these new types of aligned role models. We need to experiment and build these new best practices. A lot can be done for that, such as investing in research, like green coding. I am talking about concrete things. Tesla, for instance, is a great example of how a company understood that you can accelerate the transition of your own sector and use that to become a leader in your field. They did a number of things: for example, in 2013, they gave away all their patents because they considered their competitors were not electric cars but the old car industry. They wanted the industry to use their technology and became the *de facto* leader of this whole sector.

We need to integrate a strategy at the European level, about where we need to invest in research: around recording infrastructure that are consuming this energy and that are having a less environmental footprint. It needs to be open sources and open data, because AI is obviously a very big thing, but we are coming into a place where there are a lot of things that we have never seen before. For example, if you look at agriculture, everything around climate change means we are coming into unknown events in terms of data. How can we build common datasets that are helping us accelerate and understand all these changes, to be able to act more quickly around integrating all changes? We must be able to accelerate the mission and to build resilience for our infrastructures. There are also many things around knowledge. Digital skills are important for the future. I believe that climate change knowledge, for example, is key for all companies to integrate what

is going to happen, and how they can build resilience in their own businesses. It will help them think about how they can act upon their environment at a company level. This is very important.

Then, we need role models. We do have some examples of companies who already have different types of governance, for example shareholder foundations governance in Nordic countries, or companies like OpenClassrooms, a French company that became a leader all over the world in education and has a very different type of model. You need to think about different types of business models that are not going against society or the planet. I believe Europe's chance is to weigh and to leapfrog. It must affirm that it is not going to just follow the classic digital transformation, but aims at going one step forward, to build a sustainable digital sovereignty.





Corinna Schulze

Director of EU Government Affairs at SAP

To give some context for my intervention, SAP is a software company based in Germany, but we are essentially a global player, and it would be great if my remarks can be seen in that perspective. I think one key objective for us, as companies, is to avoid further fragmentation of the market. We must really try to align forces at the EU level, especially around new technologies. We talked about high performance computing, but it also concerns digital infrastructure: it is very important to keep building the European Digital Market to allow for companies to build, and for the smaller companies to grow in our home turf. To mention a couple of business initiatives that are also going in the same direction, you certainly heard about GAIA-X and the data spaces: these are initiatives where businesses are coming together, trying to join forces and, in that context especially, to address the dependencies we currently see in cloud computing for example. There are a lot of initiatives underway to achieve digital growth, sovereignty, and independence, but as we have heard before, we also want to make sure

that this does not come at the expense of our European values. In this context, I wanted to mention one more initiative that, we think, is very important here: regulatory sandboxes. We think that they are a very modern and suitable instrument to establish a dialogue between the different actors in the field, key stakeholders, data protection authorities, academics, and members of civil society. This is a way to really come together, to exchange views in a safe environment, innovate, share perspectives and, as I said, get a measured perspective on European values while ensuring that we have developments in technology and innovative approaches. I wanted to especially mention this need, in order to build the champions and the role models of tomorrow, especially for new technologies.

To come back to artificial intelligence, we think that the proposed AI regulation is certainly a key element of the EU digital market that was missing. We very much welcome the proposal, but having said that, we think it is essential that we also understand what is the regulatory framework that already exists, and that we make sure this really aligns with existing data protection legislation, consumer protection, product liability and all other relevant frameworks that we have already established in the EU. This is crucial to ensure legal certainty for companies.

Skills and digital experts are very important for us. We think it is really a key to also have close collaborations with universities, to ensure we prepare one other aspect I wanted to mention: the fact that many of the developments are international. We are talking about EU digital sovereignty, but we should not forget that we should also thrive to be global players. In that context, we remain in an interconnected world and the free flow of data is important. Having said that, obviously within the limits of European data protection legislation especially, it is really a prerequisite for businesses operating internationally to instill a culture of digital diplomacy in this respect. We really need to keep the global playing field under the radar to remain an economic power and to ensure we also achieve independence and sovereignty in the EU.

OPEN DISCUSSION

Julien Nocetti

Senior Associate Fellow at IFRI (moderator)

How can we concretely move forward in the field of education? What should the EU and the Member States do in this respect to compete with external players and especially, to affirm its own path?

Dragoș Tudorache

Member of the European Parliament

There are two obvious discussions here. The first one is: how do we prepare the education systems of tomorrow for the transformation of economic societies and so forth? This is where we need to start creating partnerships between regulators, policymakers, and the industry, because the first thing to do is to map out the jobs of tomorrow. We must understand how digitalisation and new technologies will influence the change in the labor markets 10 or 15 years from now, what the future jobs will look like and what kind of competencies will be required for that.

But as important as it may sound, it is in fact overpassed by the need to also think and design programs for those that are in the labor market today, which is an equally challenging task. So, apart from thinking on how we are going to train and scale up children that may already be digitally native and

that might find it easier to adapt to this digital transformation, for many of us, adults already, and who are working in different areas of the economy already, the challenge for us is even greater.

Coming to the tools, we must also realise that we have the challenge of not having a lot of competences in the educational area at the EU level. So, we will have to be innovative in how we play the EU scale versus the national competencies, in trying to instill a coherent strategy both for the initial education but also for the ongoing education of our society.

Julien Nocetti

Senior Associate Fellow at IFRI (moderator)

You all mentioned the central dimension of defending European values, stressing some past initiatives in data through the GDPR, which was debated abroad - and far abroad, including in some authoritarian countries like China. You also mentioned recent initiatives in AI at the EU level. How can we reconcile the defense of European values and the rationality of power? How can a possible future EU digital envoy or ambassador intricate these two dimensions: first, these values that we share and that we want to protect and to defend, and on the other hand, the fact that we are living in a very contentious world which external powers like the US and now especially China seek to influence?

Corinna Schulze

Director of EU Government Affairs at SAP

That is the one-million-dollar question. I think that, first, we should realise that we are trying to find this third way of achieving both having growth in innovation and keeping our European values at the same time. As a first step, we should consider that there are some developments that we would simply not accept in Europe, such as social scoring, which is apparently very much discussed in the AI context. It is really key to find the right balance to allow for companies and businesses to innovate, while at the same time being very clear about what are the no-go areas. This is exactly why I mentioned the regulatory sandboxes before. They really are a way of experimenting while drawing the lines of where we say “this is an area where we are not going to go”. But at the same time, we should be looking at the global playing field and have the ambition to continue to thrive for not only European champions, but global champions. I think it should be possible to find a third way for us, where we keep an eye on growth, and do not stifle innovation. This is why it is crucial to have a balanced regulatory framework, which is protecting our values while letting companies innovate and grow. We just really need to work hard to find the right balance here.

Marie Ekeland

Founder of 2050

I think there are different things we need to experiment with. We want to build a new type of performance because we think it is not going to be only about profit: it is also going to be around making the world sustainable, ha-

ving a positive impact on it, and having a fair society. This is part of building our European values.

Then, how do you optimise on these three dimensions when we are used to optimising only one? Through experiment. This means you are ready to take risks that have not been taken before, to build new types of models and to be able to evaluate them. This means looking at what we have in terms of performance in society, what goals we have achieved, where we want to go and what exactly has been done. If we do that, and if we frame not only the role models but also the indicators, we can call it a success and list the best practices that we are building and that are making this a success.

It is also about where we put the money, what type of companies we want to build, how we evaluate them in terms of the impact they have, and how we can build the complete ecosystem. One company in itself is never going to be resilient: you need to build whole ecosystems, common grounds, resources and knowledge. We can be strong from an economic standpoint, not just through regulation, but because we do have power, and because consumers have followed as well.

Julien Nocetti

Senior Associate Fellow at IFRI (moderator)

You mentioned the importance of reaching a sort of partnership, or even a sort of consensus, with the US in relation to the digital field. How can we concretely deal with China on these aspects?

Dragoș Tudorache

Member of the European Parliament

Although the question is certainly complex, I think the answer is rather simple. You cannot build a strong foreign policy without a very strong internal policy. In other words, you cannot claim a moral high ground towards your partners or towards your competitors if you are empty-handed. Before we figure out how to address the issue of digital sovereignty and the strategic play of new technologies on the global stage, we must make sure that we get as strong as we can in our backyard. For that, we need everything we have already mentioned today: we need to innovate, to be creative, to boost our economies, to invest in education, and to invest in research. We need to do all that so that we become competitive and can stand strongly on our feet when it comes to what we and our economies represent in this digital transformation.

While we do that, we can take our normative model, values and principles, and use them as part of the conversation that we have, first with our partners, and then with our competitors. When we address competitors such as China, we cannot have the arrogance - I am sorry to say that very bluntly - of doing it all as Europeans, as great as our normative model might prove to be. We have to play along with our partners, if we want to use it as a standard or as an influential piece of modeling for tomorrow's society and economy. For the likes of China, Russia, or the others, we will leave very little choice and very little room for maneuver, because we are all playing on a global market.

Julien Nocetti

Senior Associate Fellow at IFRI (moderator)

What role should we grant citizens and civil society organisations? How could they and how should they influence the debates about the major digital stakes of our times?

Corinna Schulze

Director of EU Government Affairs at SAP

I think that they already play a key role in the current debate, because without trust that you achieve through society, we cannot thrive. They certainly have a key role to play. I have seen a lot of involvement and activity lately, on all the files I was working on in the digital space, so I think they already have a very considerable seat at the table, which is a great thing. I would encourage all the different stakeholders I mentioned before - and I would certainly also add universities to that equation as well - to be part of the discussion, come to the table and be as active as they have been before, or even more active.

Marie Ekeland

Founder of 2050

I believe in building ecosystems, and I have built my own company with the aim of having an ecosystem governance and having all the stakeholders involved in the board. We need to have everybody around the table. This will build the right type of power that we need to really build sovereignty, in the same way that I do not think you can build an online company in a misaligned system. If we want to build sovereignty, it cannot be done in one particular place: it must be done globally. To me, using this, not as a constraint, but as a strength, is the challenge we have. We will need everybody to be involved and I think it is important to add universities as well, and more broadly, people coming from all these different places.

Dragoş Tudorache

Member of the European Parliament

I think civil society has already played a very important role. If I look at many of the proposals that have been put on the table by the European Commission since last year, many had quite a solid consultation behind them. Civil society, think tanks and academia have certainly influenced the AI regulation proposal a lot. I also think civil society can have a very active ongoing role legislating technology, such as artificial intelligence for example, but also everything else related to digitalisation. It will require very novel normative processes. Sandboxing was mentioned several times in this conversation, but policy prototyping is also something very important. It means that somehow, you have to make sure that your legislative instrument stays alive. How does it stay alive? By staying constantly connected to what hap-

pens around it. This is where civil society can play a very important role, in bringing new input, bringing new ideas. By means of these policy prototyping and sandboxing, you can then adapt legislation and adapt the normative framework as you go along, which I think is a very important piece. I see it as a possibility in the AI regulation, and to me, it is a welcoming approach.

CONCLUDING REMARKS

Dragoş Tudorache

Member of the European Parliament

It is essential that we do not think of sovereignty as an end, as the actual objective. It is not, or at least it should not be. It is a means to an end, which remains the prosperity of our citizens and of our societies. It means the security of our citizens in our societies; it means sustainability of our development, and so forth. Variety can be a means for us to achieve those ends. I think we are on the right path.

Marie Ekeland

Founder of 2050

I couldn't agree more. I have been participating in the digital transformation for twenty years, and I have been suffering from the fact that there was no

destination to that transformation. I think a way out is to really build a north star. What exactly do we want to achieve, and how do we embrace digital technologies and sovereignty as a way of going there? We need to get out of this idea that technology or sovereignty in itself is a goal: it is not. We should not forget that it must be at the service of something greater than this, which is basically the prosperity of our societies and the type of society that we want to reach and build for our children.

Corinna Schulze

Director of EU Government Affairs at SAP

There really is almost nothing to add. I couldn't agree more with what was just said. As we said, digital sovereignty is not the end game: we also should not lose sight, as I said before, of the global dimension. And we should not get lost in navel gazing, but keep the greater perspective in mind.



PROCEEDINGS OF THE EUROPEAN CONFERENCE

Digital Sovereignty: Which strategy for Europe?

ACKNOWLEDGEMENTS

Renaissance Numérique would like to thank the **Office of the French Ambassador for Digital Affairs**, for supporting this conference.

The think tank also thanks all those who participated in this event and agreed to share their views, particularly **Clément Beaune**, French Secretary of State for European Affairs, **Marietje Schaake**, International Policy Director of the Cyber Policy Center at Stanford University and President of the CyberPeace Institute, **Nicolas Vanbremeersch**, CEO of Spintank and Board Member of Renaissance Numérique, **Anna-Michelle Asimakopoulou**, Member of the European Parliament, **Marie Ekeland**, Founder of 2050, **Anne Marie Engtoft Larsen**, Denmark's Tech Ambassador, **Thibaut Kleiner**, Director of Policy, Strategy and Outreach at the European Commission's Directorate-General for Communications Networks, Content and Technology (DG CNECT), **Guillaume Poupard**, Director General of ANSSI (the French National Cybersecurity Agency), **Corinna Schulze**, Director of EU Government Affairs at SAP, **Rene Summer**, Director of Government and Industry Relations at Ericsson, and **Dragoş Tudorache**, Member of the European Parliament.

Finally, thank you to **Laura Kayali**, Policy Reporter at POLITICO Europe, and **Julien Nocetti**, Senior Associate Fellow at IFRI and Member of Renaissance Numérique, for moderating the debates.

The views expressed during this event will also feed into the reflections that Renaissance Numérique will present on the matter towards the end of 2021.



ABOUT RENAISSANCE NUMÉRIQUE

Renaissance Numérique is France's main independent think tank focusing on the challenges of the digital transformation of society. Bringing together universities, associations, corporations, start-ups and schools, it aims to develop workable proposals to help public stakeholders, citizens and businesses build an inclusive e-society.

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JUNE 2021
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