

EU DIGITAL CHALLENGES

POLICY BRIEF

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ARTIFICIAL INTELLIGENCE: BUILDING THE EUROPEAN WAY

Can Europe's success in the global race for artificial intelligence (AI) be safeguarded by the creation of a new "Airbus"?² Although the idea seems quite attractive, it was quickly dismissed during the conference organised on 11 July 2018 by the European think tanks Renaissance Numérique, Das Progressive Zentrum et EuropaNova³. Unlike aviation or space industry, artificial intelligence is a generic technology with numerous applications and implications in virtually all economic sectors. As a consequence, we prefer to speak of artificial intelligence technologies in the plural form in order to capture the various areas of application in a comprehensive way⁴.

Due to their multisectoral and multiple-actors impact, these technologies play a key role in the future vitality of our economies. According to PwC⁵, they are likely to represent 9.9% of the Northern European GDP by 2030,

and 11.5% of the Southern European GDP. They will contribute to improvements in many fields of our society, like healthcare and mobility. Given their use in the information field, just like the algorithms used on Facebook and YouTube, they also have a significant impact on our political system. Thus, what is at stake for Europe is not so much the setting up of an "AI-giant", but the development and implementation of a cross-cutting strategy to better interconnect the various areas affected by AI (infrastructures and equipment, research, development, the transformation of small and big companies, apprenticeship programmes). That seems crucial for a better understanding of the unpredictability of these technologies. However, our experiences from the last

1. Thanks to Elise Bernard, Director of Studies, EuropaNova, and Alban Genty, Project Manager, Das Progressive Zentrum
2. During his trip to Paris last July, German Minister of Finance, Peter Altmaier, supported the idea of an "Airbus for artificial intelligence". Interview in Le Figaro, on 10 July 2018: "We must create, in a close cooperation with the existing actors, in particular the automobile industry, a new actor for artificial intelligence, like we did with Airbus". [translation by the author]
3. This policy brief came from the public conference "Artificial intelligence: how to support the European voice in the global race?", organised by the think tanks Renaissance Numérique, Das Progressive Zentrum and EuropaNova, within the "EU Digital Challenges" conference series. It took place on 11 July 2018, in Paris, and reunited:
 - Laurence Devillers, Lecturer at Paris-Sorbonne IV University,
 - Anke Domscheit-Berg, German Member of Parliament, DIE LINKE,
 - Marc Mossé, Senior Director EU government affairs, Microsoft Europe,
 - Max Neufeind, Political advisor for strategy and digital transformation, German Ministry of Finance,
 - Cédric Villani, French Member of Parliament, LREM.

It freely follows the debates of the conference to carry the point of view of the think tank partners.

4. To learn more about it: "L'éthique dans l'emploi à l'ère de l'intelligence artificielle", Renaissance Numérique, octobre 2017.
5. PwC report, July 2017: <https://www.pwc.fr/fr/espace-presse/communiqués-de-presse/2017/juillet/intelligence-artificielle-un-potentiel-de-15700-milliards-de-dollars.html>.

decade testify to our inability to precisely estimate what their impacts will be, what they will revolutionise and what their challenges are. The same holds true for the field of work, labour and education.

Even if we are to reject the idea of an “Airbus” for artificial intelligence, the metaphor remains relevant in the way it portrays the initiation of dynamic and pan-European collaboration. Given the massive acceleration of competition between world powers due to artificial intelligence, among them China and the United States, the success of the European states will necessarily be tied to the formulation of a well-rounded and robust shared strategy. In this context, could the French-German axis be the primary driver of this dynamic? Already today, there are clear indicators for this development. The recent Meseberg⁶ agreement is expected to pave the way for, among other collaborations, a French-German research centre for artificial intelligence.

The various social, economic, and geopolitical challenges of AI deserve attention: The development of artificial intelligence depends on the frame in which it unfolds as well as the priority it is granted. American and Chinese priorities differ remarkably from those of the European Union (EU). In a recent article⁷, Julien Nocetti mentions “a redefinition of the power and the conflict”, which he explains by resorting to the increasing democratisation and sophistication of these technologies. The research links this impact to the duality of artificial intelligence, the usage of which, like many other technologies, can have both civil or security and military purposes⁸.

Artificial intelligence is widely considered “one of the most strategic technologies of the 21st century”⁹. Will Europe prove able to compete in this global race? Genuine ambitions are out there: The European Commission has officially declared it a high priority.

Europe looks for its way in the global race for artificial intelligence

On 25 April 2018, the European Commission presented its first approach relating to investment in as well as ethical guidelines for the use of artificial intelligence. It highlights a roadmap for the development of these technologies at the European level based on three parts¹⁰: the increase of public and private investments, the adaptation to socio-economic changes and the definition of an ethical and legal framework. This approach aims primarily at the challenges within the field of research as well as at transforming two critical sectors of European politics: transportation and health. Towards the background of global competition, it finally calls for coordination of the Member States’ strategies, notably to spur investments.

Beyond the need to reinforce its capacities regarding research and development, the most significant challenge for Europe is the formulation of a coherent and well-rounded strategy. This results in a double difficulty: How to emerge and consolidate on an already strongly competitive market? How to synthesise a common European way that transcends national, therefore different, cultures and strategies? Neither the United States nor China face these cultural constraints – accompanied by a fragmented internal market – in their formulation of an AI strategy. The starting point for the formulation of this European strategy by the European Commission and several Member States like France and Germany is the usual set of fundamental European values inherent to the founding of the European Union¹¹. Applied to the realm of AI, they point to the promotion of a robust ethical and law-based framework evolving around AI.

Artificial intelligence offers a variety of innovations in fields where its application is likely to conflict with the recognition of human rights. Europe’s policies are still characterised by a lack of appreciation towards this awareness and, as a consequence, most European

6. “Meseberg Declaration - Renew Europe promises regarding safety and prosperity”, 19 June 2018.
7. “La diplomatie face à l’intelligence artificielle”, Julien Nocetti, article published in *Le Monde*, on 26 October 2017. Julien Nocetti is a researcher at IFRI and member of Renaissance Numérique.
8. The United States and China are for example massively investing in autonomous weapons.
9. “Artificial intelligence: Commission outlines a European approach to boost investment and set ethical guidelines”, European Commission, Press release, 25 April 2018.

10. “Artificial intelligence: Commission outlines a European approach to boost investment and set ethical guidelines”, European Commission, Press release, 25 April 2018.

11. These values are enshrined in the Charter of Fundamental Rights of the European Union, proclaimed on 7 December 2007.

governments fail to use the opportunities growing from the field of AI. On the contrary, countries like China make heavy use of new technologies for the institutionalised surveillance of extensive parts of its population. The so-called “social credit” system, for example, monitors all the aspects of social life by gathering, processing and evaluating extensive amounts of data and information. Those allow in a second step for the creation of behavioural profiles that indicate levels of “honesty”, “reliability”, “sincerity” of the individual - and consequently his/her level of contribution or danger to the social fabric of society¹². Already today, China’s public life is continuously monitored by roughly 170 million cameras, of which many are capable of facial recognition. This number is likely to reach 680 million by 2020.

The European Union, on the other hand, advocates for a positive take on AI. It promotes the development and use of AI technologies that are predisposed to the appreciation of European fundamental values, particularly with regards to data protection, transparency and openness. This approach is situated within the framework of the Digital Single Market, which functions as the reference point for the implementation of these principles. The recent entry into force of the General Data Protection Regulation (GDPR) that Europe now uses as a spearhead of its digital policy testifies to this commitment. The perimeter of these ethical principles, however, remains up for discussion. As a consequence, contradictions have emerged within the

European authorities, like the debate between the European Parliament and the Economic and Social Committee relating to the legal status of robots^{13 14}. While members of the European Parliament advocated for it, the members of the Committee rejected it. The formulation and composition of this ethical framework have consequently remained a work in progress that bears witness to the ongoing conflicts between various European stakeholders in the field of AI.

Beyond ethical concerns, questioning the scope of deployment of artificial intelligence may allow the European Union to distinguish itself from the USA and China in this sector, and by extension, to develop a competitive edge. Both in the USA and China, the development of artificial intelligence is built on the “business-to-consumers” model, mostly due to a strong internal market. The European Union can find its distinct path by investing in the deployment of AI in the industrial sector. The digital transformation of every national industry within the European Union – with the French and German industry at the front row – can help put together the conditions that are necessary to make a European AI thrive, and use it as a substantial competitive advantage for the European economy. The digital transformation and the adoption of AI by diverse industrial and business sectors - such as the health, mobility and supply chains sectors - bring new economic growth insights as well as emerging perspectives on artificial intelligence in line with both European interests and values.

THE EUROPEAN CALENDAR ON AI

10 April 2018: Declaration of Cooperation signed by 24 EU Member States and Norway

25 April 2018: Announcement on the European Approach to AI, by the European Commission

May 25, 2018: Entry into force of the General Data Protection Regulation

By the end of 2018: Development by the European Commission and the Member States of a coordinated plan for AI and definition of ethical guidelines for the development of AI

By mid-2019: Publication by the European Commission of guidelines on the interpretation of the Product Liability Directive

12. “Chine, la dictature high tech”, Special feature, *L’Obs*, 12 July 2018.

13. “Artificial intelligence – The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society”, European Economic and Social Committee, own-initiative opinion, 31 May 2017.

14. “L’éthique dans l’emploi à l’ère de l’intelligence artificielle”, Renaissance Numérique, October 2017.

European Union, China and United States strategies on artificial intelligence - comparative approach

| EU ¹⁵ | CHINA ¹⁶ | UNITED STATES ¹⁷ |
|--|--|---|
| Goal <ul style="list-style-type: none"> • Define a third way to emerge in the global competition | <ul style="list-style-type: none"> • Obtain global leadership in the field of AI in 2030 | <ul style="list-style-type: none"> • Maintain global technology leadership |
| Strategy <ul style="list-style-type: none"> • Promoting “ethical” AI • Towards a “business-to-business” strategy? | <ul style="list-style-type: none"> • State-dominated approach: “business/government-to-consumers” strategy • Close link between commercial and military development | <ul style="list-style-type: none"> • Market-dominated approach: “business-to-consumers” strategy • High permeability between scientific and corporate world |
| Means <p>Investment:</p> <ul style="list-style-type: none"> • Increased investment (public and private) in research and innovation in AI by at least € 20 billion by the end of 2020, of which € 1.5 billion by the European Commission Horizon 2020 Research and Innovation Programme Framework • AI support in key sectors (from transportation to health) • Networking and strengthening of AI research centres throughout Europe • Encouragement to experiment • Support for the establishment of an “on-demand AI platform” that will allow all users to access relevant resources in the EU • Mobilization of the European Fund for Strategic Investments, worth more than 500 million euros, to help businesses and start-ups <p>Education:</p> <ul style="list-style-type: none"> • Encouraging Member States to modernise their education and training systems and support labour market transitions • European Commission support for business-education partnerships to attract and retain more talent in Europe • Establishment of specialised training programmes with the financial support of the European Social Fund • Promotion of digital skills and skills related to adaptation to these new technologies <p>Ethical and legal framework :</p> <ul style="list-style-type: none"> • Definition by the European Commission of ethical guidelines • Facilitating access to data through legislation to open more data for reuse and measures to make data exchange easier | <ul style="list-style-type: none"> • Implementation of numerous innovation support programmes initiated by the Ministries of Planning (NDRC), Industry (MIIT) and Science (MOST) | <p>Support of innovation:</p> <ul style="list-style-type: none"> • Focus especially on cyber defence¹⁸ • Diversification of profiles working on algorithm design <p>Investment in training:</p> <ul style="list-style-type: none"> • Launching of an initiative to grant grants to communities and schools to develop computer science related courses and attract socially disadvantaged and/or poorly represented populations to the tech sector (including corporate contributions). <p>Strengthening of social shock absorbers:</p> <ul style="list-style-type: none"> • Social protection, unemployment, etc., to prevent the difficulties of workers in transition, even the establishment of a temporary redistribution policy in the event of significant technological unemployment <p>NB: We note a trend towards more flexible regulation with the Donald Trump government, in line with the broader economic deregulation agenda.</p> |
| Partnerships <ul style="list-style-type: none"> • Coordination between the European Commission and the Member States • European Alliance for AI under the auspices of the European Commission, which brings together all stakeholders | <ul style="list-style-type: none"> • Close synergy between State, party and national digital giants (BATs) • Development at the initiative of the state of many technology investment funds managed in a “public-private” partnership approach | <ul style="list-style-type: none"> • Dynamic R&D centres of major digital players (Google, Amazon, Facebook, Apple, Microsoft, IBM, Intel) and many startups that revolve around this ecosystem¹⁹ • Partnerships between major digital companies and major US universities²⁰ • Development of public-private vocational training programmes |

15. “Artificial intelligence: Commission outlines a European approach to boost investment and set ethical guidelines”, European Commission, Press release, 25 April 2018.

16. “Stratégies nationales en matière d’intelligence artificielle”, French Treasury, February 2017.

17. Most of these axes are from work conducted under the Obama administration and have not been amended since. Due to the changing political context, the country does not currently have a priority plan with resources. To learn more about the roadmap of the Obama administration, read the three reports of the National Council of Science and Technology (NSTC):
https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/preparing_for_the_future_of_ai.pdf ;
https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/national_ai_rd_strategic_plan.pdf ;
<https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/Artificial-Intelligence-Automation-Economy.PDF>

18. The country is one of the most developed regarding the generalisation of AI innovations. Its areas of excellence include: driverless cars, personalised medicine, medical imaging and cybersecurity. It must be noted that the area most advanced in terms of commercial market application is the transport industry. This is partly explained by the facilitation of experimentation in the country, with prototypes of driverless cars already being authorised for testing on roads in several federate states.

19. Large non-NICT companies are also investing massively in AI, such as Ford, which announced an investment of one billion dollars in the startup Argo AI which specialises in driverless cars in February 2017.

20. Example of IBM with the Massachusetts Institute of Technology (MIT).

France & Germany: Parallel strategies?

From this perspective, Member States are preparing and deploying individual strategies at the national level. The most advanced European Member State in this regard is the United Kingdom. Consequently, the EU Member States aim to maintain a privileged relationship with the UK, also post-Brexit²¹. France, which is also widely considered at the forefront of AI strategists, presented its first national strategy in 2018. It is the result of the mission led by the MP Cédric Villani²² and marks the finalisation of the first report published a year earlier, named “France IA”. Multisectoral, this strategy follows an in-depth dialogue with stakeholders.

For its part, Germany has not yet defined its strategy. Many critical voices have been raised that point towards general delays in the formulation and implementation of a strategy, particularly in comparison to its neighbour state²³. In July 2018, however, the German government presented the first outline for a directive that will be further developed into a future strategy²⁴. This will likely be presented at the European digital summit on 3 and 4 December 2018. This endeavour is supported and supervised by the Federal Ministry of Economic Affairs and Energy, the Federal Ministry of Education and Research and the Federal Ministry of Labor and Social Affairs. The upcoming weeks will see the conduction of surveys aiming at determining the intentions and contributions of the different stakeholders involved in the writing of the directive. Moreover, a Commission on artificial intelligence was launched in summer 2018, that provides fora for the coming together of MPs as well as a selection of 19 researchers and lawyers whose expertise will feed into the composition of the directive. Complementary, an Ethics Commission on Data has been set up that will round off the national digital strategy particularly with regards to the field of digitisation.

Even though Germany has yet to publish its national strategy in its entirety, the various partial disclosures allow nevertheless for a preliminary comparison with its French equivalent. Generally, the strategies of the two countries have been mutually inspiring and appear very much in line with the European directive. An example of the loyalty to the European approach is the significant emphasis on research issues and the priority to deploy a “positive” artificial intelligence. It further refers to the favouring and prioritising of initiatives that work towards the general wellbeing of society. Furthermore, both countries are united in their provision of cutting-edge research institutes dedicated to the exploration of AI, for example the German Research Center for Artificial Intelligence (DFKI)²⁵.

The French plan emphasises the interdisciplinary nature of this research. The two states also face similar challenges in this area, including the networking of their centres at the national and international levels²⁶, the funding of research and the prevention of a brain drain. Another issue raised in these strategies is the transfer of artificial intelligence technologies to national industries and the facilitation of experiments. In this regard, the German Ministry of Education and Research believes that university learning currently lacks practical guidance. It also notes a “defensive stance” in this area on the part of SMEs²⁷. The French strategy also focuses on promoting experimentation in the labour market and jobs. In addition, access and sharing of data, including open public data, is an essential part of these strategies, especially for research. Further alignments shared by the two countries are the training and acquiring of skills both in society and in the corporate world as well as the legal and ethical framework in which these technologies will be deployed. They also pay close attention to international cooperation, particularly European cooperation. These international AI relationships are largely based on research exchanges. Finally, France devotes a section of its strategy to the question of infrastructure and equipment (computing,

21. On 5 July 2018, France signed an agreement of intent with the United Kingdom to collaborate in the realm of digitisation, particularly on projects on artificial intelligence.

22. “Donner un sens à l’intelligence artificielle. Pour une stratégie nationale et européenne”, report on the mission of the French MP Cédric Villani, March 2018.

23. “Die verpasste Zukunft”, Spiegel Online, 4 April 2018.

24. “Eckpunkte der Bundesregierung für eine Strategie Künstliche Intelligenz”, Federal Government, 18 July 2018.

25. On this subject, read the report of the French Treasury, “Stratégies nationales en matière d’intelligence artificielle” of February 2017: “In the past five years, the organisation (DFKI) has recorded a revenue of €680 million. The Centre has incidentally directly contributed to the creation of 78 businesses.” [translation by the author]

26. There are already several initiatives in this field, as in the case of the *Confederation of Laboratories for Artificial Intelligence in Europe (CLAIRE)*

27. “Stratégies nationales en matière d’intelligence artificielle”, French Treasury, November 2017.

means of processing and storage, etc.), a field of interest it wishes to see promoted and deepened also on the European level.

France and Germany are therefore committed to close development strategies, with a shared ambition for Europe. This proximity allows us to identify strong areas of cooperation between the two countries, some of which have already been the subject of agreements. What should be noted, however, are continuously low levels of citizen participation and the impression that both strategies rely upon a general lack of public interest in the formulation of the respective directives. Given the all-encompassing and far-reaching nature of the implications flowing from the new technologies, the success of any directive seems crucially tied to its social acceptability²⁸. Towards this background, the mostly passive nature of the European citizenry could potentially turn into a point of concern.

Giving meaning to the Franco-German couple in the construction of a European strategy

Synergies between France and Germany in the field of artificial intelligence are possible. Issues of cooperation are at the heart of both national strategies. In that sense, the neighbouring countries agree on the need for an agile European framework, without sacrificing or threatening national strategies by inadequately high levels of European centralisation. The development of artificial intelligence technologies is indeed dependent on the setting, the culture, the language in which it unfolds and therefore finally the respective country that issues the directive. The European strategy must take this diversity not only into account but, on the contrary, turn it into a strength. The success thereof will determine the EU's capability of keeping up with the advancements in the United States and China, whose directives and regulations are less internally contested due to their monolithic political systems. The challenge for the Member States is, therefore, to ensure that this

bilateral or multilateral cooperation enables Europe to emerge as a competitor in the global race. On 10 April 2018, 24 Member States and Norway reached an agreement on a joint declaration of cooperation on AI. The European Union must support these strategies by providing infrastructures that allow for the competing with other global big players in the field of AI. Crucial for that is the accumulation and provision of data on the European federal level as well as a more profound connecting of European research institutes dedicated to AI as well as the provision of sufficient funds to finance cutting-edge research. Given the history of 70 years of Franco-German cooperation and its significance for the smooth functioning of the European Union, the cooperation between the two countries must assume a foundational role in the formulation of this strategy.

For this reason, an acceleration of the “Industry of the Future” strategy in France and the “Industry 4.0” strategy in Germany, aiming at making industrial platforms dedicated to the digitisation of national industries converge towards a broad and widespread use of digital technologies – and specifically AI –, can serve the development of an entirely European artificial intelligence.

To do so, this cooperation should take as a starting point respective elements that are in need of improvements on the national level, particularly in the fields of research and transfer to the sectors of the traditional economy. In addition to research partnerships between national institutes, it is crucial to encourage collaborations around experiments. Also, rather than considering AI as an end in itself, it appears more promising to make it into a nexus of innovation for national industries and to finally establish a real industrial European strategy²⁹.

Like the remainder of the Member States of the EU, France and Germany share a humanistic vision of AI. The next step is consequently to depart from merely self-oriented discourses surrounding AI and to approach questions beyond the framework of regulation.

29. The report of the French MP Cédric Villani on artificial intelligence has been the subject of criticism for its “deficiencies” in terms of industrial vision. Read about Olivier Ezratty's article, “What the Villani Report reveals,” March 30, 2018: “The Villani Report goes directly to solutions without defining the form of industrial leadership that is sought. (...) In AI, it's mostly wishful thinking as was the project of Quareo's Franco-German search engine of 2005. Engine that did not exist anyway, the Quareo plan being only a patchwork of research grants sprinkled on dozens of public and private entities without coherence or unified product vision”; <https://www.oezratty.net/wordpress/2018/rapport-villani/>

28. “La révolution invisible de l'intelligence artificielle”, Renaissance Numérique, December 2017.

Attention shall be given to a common definition of a morally acceptable AI and a specific investment in the development of applications in response to particular societal challenges (health, environment, democracy). In alignment with the transformation of the economy, the positive AI represents a concrete goal for research and can lead to fruitful cooperation between Member States. The northern and Baltic states of the EU have already initiated this process. This cooperation can also

support so-called “moonshots”, i.e. very ambitious projects with no expectation of short-term profitability, such as the DARPA (Defense Advanced Research Projects Agency) in the USA. Several actions have been launched based on this model at the European level, such as the JEDI (Joint European Disruptive Initiative), and most probably, the future European agency for disruptive innovation, whose scope of action should be detailed before 2019.



RECOMMENDATIONS

- Build a European non-centralised artificial intelligence framework to drive and articulate national strategies
- Develop an industrial approach to artificial intelligence to support its transfer in the different sectors of the European economy
- Boost the deployment of IA in the industrial sector within the platforms dedicated to the digitisation of national industries (Industry of the Future, Industry 4.0)
- Define a common European foundation of digital skills (STEM, humanities)
- Give citizens a meaning to artificial intelligence through the use of AI in response to concrete societal stakes

ABOUT THE EU DIGITAL CHALLENGES CONFERENCE SERIES

More than ever, digitisation and new technologies have found their way onto the European agenda in Brussels. The European Member States, France and Germany all ahead, are trying to influence the roadmap of the European Union through their national regulations. In addition, through the renewal of the Élysée Treaty in January 2018, France and Germany live up to their reputation as the engines of digital regulation in the EU. In order to fuel the debate on

these matters, three Franco-German think tanks, Renaissance Numérique, EuropaNova, and Das Progressive Zentrum, have combined their expertise and launched the *EU Digital Challenges* series. Consisting of three conferences in Paris and Berlin, the series aims to foster an in-depth exchange on the EU digital strategy and debate the roles of Germany and France as potential driving forces. The series is supported by Microsoft France.



FOR FURTHER READING (RESOURCES IN FRENCH LANGUAGE):

- “L'éthique dans l'emploi à l'ère de l'intelligence artificielle”, Renaissance Numérique, October 2017.
- “Stratégies nationales en matière d'intelligence artificielle”, French Treasury, November 2017.
- “La révolution invisible de l'intelligence artificielle”, Renaissance Numérique, December 2017.
- “Donner un sens à l'intelligence artificielle. Pour une stratégie nationale et européenne”, report on the mission of the French MP Cédric Villani, March 2018.



Das Progressive Zentrum, located in Berlin, is an independent and non-profit think tank founded in 2007. Its aim is to bring progressive and innovative policy ideas into the public discourse and onto the public agenda. The think tank wants to foster new networks of progressive actors from different origins and work towards a general acceptance of innovative politics and aiming at economic and social progress. In this respect, *Das Progressive Zentrum* gathers many young thinkers and decision-makers from Germany and Europe in its progressive debates.

www.progressives-zentrum.org

EuropaNova
Action pour une Europe politique

EuropaNova was founded in 2003 on the initiative of Guillaume Klossa and young European workers wishing to accelerate the march towards a democratic, economic and social European public power. The think tank's work aims toward a European Union able to withstand crises and isolationist tendencies, committed to a balanced globalisation respectful of individuals, cultures, and concerned with a sustainable development of the planet. *EuropaNova* is chaired by Denis Simonneau.

www.europanova.eu



Renaissance Numérique was born in 2007 from a strong conviction shared by its founders that there is a need to anticipate the digital transformation of society to ensure that it does not induce new fractures. Ten years later, the think tank continues its mission of supporting the digital transition of public action and its goal of an inclusive, fair, and growth-oriented digital society. It currently has about forty members (entrepreneurs, major internet companies, researchers and academics, representatives of civil society).

www.renaissancenumerique.org

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