Response to the European Commission's Consultation on the White Paper on Artificial Intelligence

INTRODUCTION

On behalf of the Center for Data Innovation (datainnovation.org), we are pleased to submit comments in response to the public consultation on the "White Paper on Artificial Intelligence—A European Approach" (hereinafter: the white paper on AI), published on February 19, 2020 by the European Commission.[1] The Center for Data Innovation is the leading think tank studying the intersection of data, technology, and public policy. With staff in Washington, D.C. and Brussels, the Center formulates and promotes pragmatic public policies designed to maximize the benefits of data-driven innovation in the public and private sectors. It educates policymakers and the public about the opportunities and challenges associated with data, as well as technology trends such as predictive analytics, open data, cloud computing, and the Internet of Things. The Center is a non-profit, non-partisan research institute affiliated with the Information Technology and Innovation Foundation (ITIF).[2]

SUMMARY

The white paper on AI outlines policy options for the EU to promote AI adoption while addressing risks associated with the technology. However, the European Commission sends a contradictory message with its proposed policies. The white paper says the EU should avoid overly prescriptive rules for AI, foster the use of AI to strengthen EU competitiveness, and commit to enabling scientific breakthroughs and innovation, but it goes on to propose measures and a regulatory framework that would slow down AI innovation and adoption in the EU.[3]

The following list highlights the problematic elements and recommendations addressed in this response to the consultation that the Commission should consider when reviewing its white paper on AI:

- **The Commission unwisely embraces the precautionary principle.** While the white paper gives a nod to the potential benefits of AI, its primary focus is on the potential risks from the technology. The white paper echoes the familiar negative narrative about AI and the need for

the precautionary principle, which ultimately will be a drag on innovation and adoption of technology.

- **The Commission imposes unrealistic requirements on AI systems.** The Commission persists in translating ethical principles into new requirements for businesses, such as transparency, explainability, and human oversight, which are unrealistic, inadequate, or irrelevant to many AI systems.

- **The Commission does not emphasize data quality.** The white paper does not do enough to emphasize the importance of data quality and solutions to enhance it, even though a high level of data quality is paramount to successful AI projects and can address concerns such as AI system bias.

- **The Commission focuses too narrowly on trustworthy and ethical AI.** AI will be important to Europe's future, but a narrow focus on ethical approaches to trustworthy AI will limit, rather than enable Europe's global competitiveness. The future global leaders in AI will ultimately shape its direction, and Europe will be left behind if it is not able to keep pace in the development and mastery of the technology itself.

- **The Commission's proposal is based on a race to AI regulation.** The proposal is grounded in the belief that being the first to regulate AI will enable the EU to achieve "digital sovereignty" and emerge as a global AI leader. But the EU is wrong. The global race for AI will be won by the nations that best innovate and adopt AI. Pursuing digital sovereignty risks isolating the EU even more and undermining its competitiveness in the digital economy.

- **The Commission's proposal will increase the burden of liability.** While it seems to commit to take into account the EU's existing (and heavy) legal regime that already covers AI systems, the Commission is considering expanding the liability burden on developers and technology producers, particularly the SMEs the EU aims to prop up. Expanding existing liability rules is unnecessary as these rules are fit for purpose and provide sufficient consumer protections and oversight of digital systems. Expanding liability would discourage firms from pursuing AI.

- **The Commission's proposal to impose conformity control mechanisms to test AI is onerous and counterproductive.**

- The proposal for conformity assessments and certification before the introduction of certain AI systems in the EU market would undermine their development and deployment in the EU. The proposed framework is problematic in that it insufficiently distinguishes between high-risk and low-risk AI applications; it will require a broad set of AI applications to pass evaluations before they can go to market; and it will require a broad set of AI systems to be trained on data sets adhering to European standards.

- In particular, evaluations, or approval requirements, will likely delay or prevent new AI systems from coming to market, and raise the costs of AI development. Higher compliance standards and lengthy, uncertain permitting procedures could raise the costs of production to a point that could impede technological development, dissuade investments of venture capitalists in upgraded technologies, and prevent companies from easily altering, improving, or introducing innovative products.

- Limiting companies to using only European datasets would put consumers at risk because European data is neither representative nor diverse enough to be used to develop systems deployed globally. This would be at odds with Europe's intentions to lead in trustworthy AI.

- Conformity assessments are also problematic in that they will hinder the improvement of useful technologies in Europe such as facial recognition by classifying them as "high-risk." Limiting their use will in turn limit the ability of EU developers to improve the accuracy of these technologies, ceding the market to competitors in other countries.

- What is more, the proposal for this testing regime throws in vague ideas regarding how it would be governed and implemented. This lack of precision and anticipation suggests the EU is badly prepared to fulfill the standards the Commission is lining up. In particular, the Commission fails to clarify who could be the "independent auditors" in charge of enforcing conformity assessments. At worst, the level of expertise and competencies required from these organizations will likely fall short given the EU's IT skills shortage; at best they would vary by member state. Establishing new regulatory bodies or imposing more demands on existing authorities such as data protection authorities (DPAs) furthermore ignores the current struggle stemming from a lack of resources that these authorities are already facing to implement complex EU rules, such as the GDPR. Moreover, conformity assessments by member states' authorities

or jurisdictions may diverge by country, adding more cost, time, and legal uncertainty for companies developing AI.

- **The Commission should develop a proportionate approach based on the innovation principle.** The best approach for AI would be for the Commission to encourage the continued development and testing of AI systems based on voluntary industry best practices, and only consider new regulations in high-risk scenarios where there is clear evidence of consumer harm.

- **The Commission should ensure legal certainty and limit the cost of using AI.**
    - The Commission should avoid heavy-handed rules and impediments to innovation that make it difficult for firms to gain scale, slow adoption of the technology, and raise the costs and legal difficulty for its development and use.[4] Instead, the Commission should propose sector-specific rules, and combine these with soft law instruments, such as codes of conduct, in consultation with stakeholders. It should amend existing regulations such as the GDPR to address shortcomings that impede the digital economy, including the unnecessary restrictions it has created for AI by limiting the collection, use, and processing of data. It should ease existing restrictions on facial recognition technology and hold off on any new regulations targeted exclusively at biometrics, especially without clear evidence of tangible harm.

    - The Commission should deliver on the Digital Single Market. The Commission should prioritize the completion of the digital market and a harmonized, EU-wide approach to AI to enable an environment conducive to the expansion of data-driven business models and target funding to companies that can scale.

- **The Commission should prioritize dialogue with industry.** To ensure its framework is actionable, the Commission should prioritize dialogue with industry and encourage industry-led initiatives in the process of establishing a framework for AI in the EU.

- **The Commission should involve EU partners and democratic allies.** The EU should leverage the growing consensus of the need for global norms and standards for AI that align with democratic values. The EU should seek alliances with like-minded partners and other democracies, if it wants its values and principles to supersede China's in the global AI race. Go-it-alone strategies and knee-jerk regulatory proposals will isolate the EU, and weaken other countries that share its values.

RESPONSE TO THE CONSULTATION

This section provides a detailed analysis of various key aspects of the white paper on AI, which this response aims to raise to the Commission for consideration. The following list is an overview of these elements:

1. In its white paper on AI, the Commission acknowledges the potential benefits of AI, sets out objectives that aim to support AI progress and innovation in the EU, and examines the issues that the community needs to address, including skills and the digitalization of the public sector. The ambitions of the EU to strengthen the competitiveness of its organizations in AI is welcome, as a more technologically advanced Europe will benefit the global digital economy. Unfortunately, the EU continues to advocate for a flawed approach.
2. The strategy is grounded in the precautionary principle, focused on mitigating the risks from AI rather than on capturing its benefits. Too much of the narrative, particularly among the EU punditry and civil society, has been about the risk and harms of AI—even though a careful analysis shows that these concerns are vastly exaggerated.
3. The strategy calls for requirements on AI systems that are impractical or unrealistic, or that defeat the purpose of AI, such as explainability and human oversight.
4. The strategy overlooks the importance of large amounts of high-quality data in building successful AI projects.
5. The strategy continues to assume, with little or no evidence that "trustworthy" and "ethical" AI will give the EU a competitive advantage in AI, and that to gain that advantage, the EU should create more regulation. Even if regulation were to make AI made in the EU more trusted, these same regulations would likely impose so many burdens that they would slow AI progress in the EU.
6. The strategy focuses on achieving “digital sovereignty,” when the goal should be to gain AI advantage among allied, democratic nations as a counterweight to the growing economic and political power of China.
7. The strategy suggests imposing greater liability on the producers and developers of AI, a burden that would discourage firms from venturing into AI development.
8. The strategy proposes mandatory conformity assessments for “high-risk” AI applications before they are introduced on the EU market. Requiring conformity assessments would undermine the development and deployment of AI systems in the EU. The scope of its definition for "high-risk" AI means the framework may cover a broad set of AI applications. In addition, approval requirements could delay or prevent new AI systems from coming to

market. Finally, proper implementation would require considerable expertise and testing capabilities, but the EU has neither of these readily available.

1. The Commission Delivers Important Commitments to Innovation

The Commission discusses the risk of creating excessively prescriptive rules for AI that could place significant regulatory burdens on the private sector or allow member states to create rules that fracture the single market.[5] The white paper indeed specifies: "The new regulatory framework for AI should be effective to achieve its objectives while not being excessively prescriptive so that it could create a disproportionate burden."[6]

The Commission also commits to adopting a future-proof regulatory framework. The white paper states: "Given how fast AI is evolving, the regulatory framework must leave room to cater for further developments."[7] This acknowledgement that regulatory impediments to technological innovation can undermine the goals they are meant to further is welcome. A key challenge is indeed that the understanding of the full use and implications of AI technologies by policymakers is currently in its infancy. Unfortunately, as described later in this response, the Commission's proposal would fail to deliver on these well-meaning commitments if implemented in practice.

The Commission further rightly recognizes that the EU "has a strong position in digitized industry and business-to-business applications, but a relatively weak position in consumer platforms," and highlights the importance of shifting its investment efforts towards quantum computing and high-performance computing infrastructure.[8] The Commission also shares well-advised intentions to build on its strengths such as in industry 4.0, and "solutions that are ideally suited to automating industrial processes … and transport modes."[9]

As talent is one of the main building blocks for AI development, the focus on skills presented in the white paper on AI is critical.[10] The Commission intends to develop "the skills necessary to work in AI" and to upskill the workforce, as a "priority of the revised coordinated plan on AI."[11]

The white paper acknowledges the adoption and deployment of AI by the public sector as a priority.[12] It is indeed by accelerating the digitalization of the public sector in Europe, and by increasing and opening up their troves of data, that EU governments will be able to provide European businesses and research hubs with the ingredients required to develop AI in the EU.[13] With the next update of its coordinated action plan on AI, the EU has an opportunity to consolidate EU member states' national AI strategies, and to take concrete actions towards achieving these goals.[14]

2. The Commission Unwisely Embraces the Precautionary Principle

Similarly to previous EU policy work on AI such as the guidelines of the Commission's High-Level Expert Group on AI, the Commission's white paper on AI unfortunately focuses mainly on the potential risks from AI. Further, it is based on a prevailing negative narrative about AI popular among some pundits, academics, and members of civil society.[15] Indeed, at times, it seems that the white paper suggests the technology has greater potential to cause harm rather than to produce benefits. For instance, the paper states that "a regulatory framework should concentrate on how to minimize the various risks of potential harm" but in doing so overstates these risks and implies that the AI ecosystem itself would not effectively address many of these risks.[16]

If policymakers apply the "precautionary principle" to AI, which says it's better to be safe than sorry, they will limit innovation and discourage adoption—undermining economic growth, competitive advantage, and social progress.[17] Despite outlandish claims by some detractors that AI risks unleashing an unstoppable apocalyptic force on society, the reality is that AI is simply software code and as such, the EU will have plenty of time to address any problems that could occur as they arise.

Policymakers should instead take steps to encourage all innovators (existing and new, big and small, domestic and foreign) to enter markets, such as by establishing regulatory sandboxes—frameworks that enable firms to work with regulators to help discover legal gaps and test their innovative products, services, and business models with real consumers in a controlled environment on a trial basis.[18] Unfortunately, sandboxes go unmentioned in the white paper.

3. The Commission Imposes Unrealistic Requirements on AI Systems

A number of proposals in the white paper do not appear to be based on an accurate and full understanding of how the technology works. In particular, EU policymakers should resist calls to transform ethical guidelines into requirements for the development of AI in Europe. Many of those are impractical or onerous for AI systems, and will slow down many AI innovations, prevent companies from introducing some of them at all, and weaken the EU's ability to catch up in the global AI race.[19]

The Commission intends to "take into account the input obtained during the piloting phase of the Ethics Guidelines prepared by the High-Level Expert Group on AI."[20] Through this phase, over 350 organizations tested the group's "assessment list for practical use" of seven requirements. According to the Commission—cherry-picking evidence—this feedback exposed that in particular, transparency and human oversight "are not specifically covered under current legislation in many economic

sectors."[21] But it bears repeating that such requirements can be a tall order for the developers of AI systems and there is not always a need for human oversight.

Transparency

It is not reasonable to include transparency as a requirement. To ensure transparency, the Commission considers it "important that the information provided is objective, concise and easily understandable."[22] Yet if the Commission examines industry's feedback more closely, it will realize that some organizations mention that the section on transparency of the assessment list is vague, and that guidance on the required level and scope of transparency is unclear—which will make implementation difficult in practice.[23] In addition, the economic impact of asking companies to reveal their source code, which transparency could require, would be significant as it would prevent them from capitalizing on their intellectual property. AI R&D would slow because businesses could simply copy the work of others, thereby decreasing the incentive for future investment. If the goal of transparency is to increase trust by providing sufficient information, this can better be achieved by presenting users with a clear description of the data the algorithm uses and a basic explanation of how it makes decisions.[24]

Explainability

Organizations mentioned that explainability cannot be applied in all AI systems. As AI4Belgium states in its feedback: "Full explainability can be a challenge, both in terms of feasibility and practicality."[25] According to a report from the Developers Alliance, an advocacy group for software companies, "It is impossible to have complete explanations on how the outputs of AI systems are provided."[26]

Initiatives such as DARPA's XAI or IBM's AI Explainability 360, which seek to provide explainable AI, are nascent research projects, and it is unrealistic to expect all deep learning systems to be fully explainable.[27] Moreover, making explainability a requirement for AI systems would hold algorithmic decisions to a standard that does not exist for human decisions.[28] It would also limit the use of some advanced algorithms that offer high levels of accuracy but cannot easily be explained.

A better alternative to explainability is algorithmic accountability—the principle that an algorithmic system should employ a variety of controls to ensure the operator can verify that algorithms work as intended, and to identify and rectify harmful outcomes.[29] The Commission should call for more research in this area and limit requirements for explainable AI to instances where accuracy is not more important.

Human Oversight to Overcome Bias

The Commission raises concerns over the "Risks [that] might result from flaws in the overall design of AI systems (including with regard to human oversight)."[30] According to the proposed framework, companies would have to demonstrate "human oversight" of their AI system in decision making that has "significant" consequences. The Commission considers this feature to be "needed as a safeguard."[31]

Considering human oversight as a sine qua non condition to the performance of AI systems defeats the point of AI, which is to reduce the need for human intervention. It would be akin to mandating that ATMs have "human oversight" by requiring tellers to manually count money before a machine can dispense it to customers. If an AI system does not perform adequately, there will be market forces or other pressures to fix it. But to require human oversight will make these systems less efficient, which in turn would lower EU productivity growth.

Moreover, this requirement ignores the fact that many such systems do not need to work with a "human in the loop" to perform, and that requirements to have humans review certain algorithmic decisions raise the labor costs of using sophisticated AI systems that offer better accuracy—as the reviewer may be biased, may lack expertise, or lack adequate training. Human review also raises issues related to privacy, as data would be exposed to more views.

In addition, recommendations to rely on human decisions to solve AI biases incorrectly portrays AI as inherently biased and humans as not. Human decisions are often less accurate, more arbitrary, and more susceptible to bias than algorithmic decisions. Even where bias in AI systems may occur, in many cases AI systems are indeed still likely to generate less bias than similar human processes, where subconscious or deliberate biases permeate every aspect of society. This is the reason why many organizations choose to adopt AI systems in the first place: They can use AI to more aggressively identify and root out discriminatory practices. For instance, automating the traditionally human-led process of hiring enables the operators of these systems to evaluate their performance in ways they likely never did before and with less effort.[32]

This should be cause for optimism, not techno-pessimism. It is certainly true that AI systems, can be used unethically or irresponsibly, but so can any technology. Historically, governments have not regulated technologies per se. Governments didn't regulate spreadsheets even though mistakes could be costly. Governments didn't regulate computer chips or sensors, even though failures can occur. In the past, governments have largely regulated the applications of technology, in particular

products or industries. Governments regulate financial auditing that uses spreadsheets. Governments regulate auto brake systems that incorporate sensors. It should be no different with AI.

To be sure, combating bias and protecting against harmful outcomes is important. But those who resist AI based on this concern fail to recognize a key point: AI systems are not independent from their developers or the organizations using them. If an organization wants to systematically discriminate against certain groups, it does not need AI to do so. If a company values non-discrimination in employment, it will take steps to ensure it does not rely on algorithms to make hiring decisions.

In addition, many European and multinational firms have not been waiting on the EU to develop their own AI principles and guidelines, which include strong commitments to uphold fundamental human rights such as by not designing or deploying AI to support mass surveillance.[33]

Rather than imposing impractical requirements such as human oversight, a constructive approach would be to recognize that human decision-making is subject to less scrutiny than AI yet operates within "black boxes" of its own; and that greater use of AI could mitigate some human biases.[34] Knowing that bias is virtually inescapable in human decision-making, substituting AI for humans will be an important way of reducing discrimination and creating a fairer society. EU policymakers should not seek to limit these opportunities by conflating those who use AI responsibly with those who do not.[35] As human bias is strongly rooted in human behaviors and attitudes, the EU should encourage the ongoing efforts of member states, civil society organizations, and educational institutions to address the societal causes of discrimination and bias.

The conversation about facial recognition systems is an example of the fundamental misunderstanding of the technology among policymakers—and, as a consequence of this misunderstanding, its use is restricted. The white paper on AI refers to studies claiming that "Certain AI programs for facial analysis display gender and racial bias, demonstrating low errors for determining the gender of lighter-skinned men but high errors in determining gender for darker-skinned women."[36] This reflects often-cited, headline-grabbing accusations that facial recognition systems perform worse on women and certain ethnicities.[37] But claims about inaccuracy in facial recognition, particularly by race, ignore research results suggesting that many of the best systems have virtually no error and outperform humans at the same task.[38]

4. The Commission Does Not Emphasize Data Quality

According to the white paper, "without data, there is no AI," and "without data, the development of AI and other digital applications is not possible."[39] But equally important to access to data, and to the way in which data is used, is data quality, which the white paper hardly mentions. The EU data strategy, another key pillar of the EU digital agenda, also fails to sufficiently address data quality.

Data quality is indeed the biggest bottleneck in successful AI projects. Big data is so often improperly formatted, lacking metadata, or "dirty," meaning incomplete, incorrect, or inconsistent, that data scientists typically spend 80 percent of their time on cleaning and preparing data to make it usable, leaving them with just 20 percent of their time to focus on actually using data for analysis.[40] This means organizations developing and using AI must devote huge amounts of resources to ensuring they have sufficient amounts of high-quality data so that their AI tools are not useless.[41] Data quality matters as well to overcome concerns over bias in AI systems that could negatively impact consumers. Bad training data can introduce bias in AI systems.[42]

As it seeks to increase EU competitiveness in AI, the Commission should emphasize data quality as an important area for the EU to invest and lead in. While the private sector will of course invest in data quality, the Commission should encourage EU governments to increase the amount of high-quality data available; promote the voluntary provision of high-quality data from the private and non-profit sectors; and accelerate efforts to digitize all sectors of the economy to support more comprehensive data collection.[43]

5. The Commission Focuses Too Narrowly on Trustworthy and Ethical AI

The Commission persists in arguing that the only approach for a European regulatory framework is one based on "trustworthy AI" and insists on the promotion of "ethical and human-centric AI" as the enabler of innovation and competitive advantage for the EU.
Unfortunately, the white paper on AI is doubling down on what is a failed strategy.[44]

There is virtually no evidence suggesting that consumers are demanding more ethical AI systems or that such a market would be significant. Instead, price and quality, but also accuracy, safety, reliability, and usability will likely continue to be the most important factors for consumers and businesses as they make purchasing decisions. Most patients, for instance, are more concerned about whether the AI system diagnosing their symptoms is reliable and accurate, not whether it can offer an explanation of how it makes decisions.[45]

In addition, there is little reason to suspect that otherwise highly ethical companies will necessarily produce unethical AI in the absence of new regulations, or that new regulations can force otherwise highly unethical companies to act ethically with regards to AI.[46] Finally, the white paper offers no evidence that the EU has a competitive advantage in building ethical AI systems or that firms in non-European countries are not already designing ethical AI systems.

The Commission also seems to forget that if China becomes the leading AI provider, European values will take a backseat to Chinese ones. The EU should therefore focus on expanding capabilities, improving accuracy, developing and adopting AI technologies by its companies, and lowering costs.[47] One risk of Europe putting too much focus on ethics is that it will do so at the expense of other goals, such as by prioritizing research on explainable algorithms rather than accurate ones. Another risk is that it will be used as a smoke screen to push for more regulation of the technology or for technology import barriers, which would stall development and adoption.

The EU should instead aim to play hardball and focus on putting in place the investment, skills, data, and regulations needed to outcompete China.[48]

6. The Commission's Proposal Is Based on a Race to AI Regulation

The Commission seems to think that the global AI race is a race to regulate. The Commission believes the EU has a first-mover advantage in setting rules and standards. Its plans to build a legal framework for AI falls in line with its past attempt to be a global leader in regulating the data economy with the GDPR. The Commission believes that if the EU replicates the process, this time by creating a regulatory framework for AI, other countries will copy its rules to maintain access to its market.[49]

But attempting to impose its value system on the global marketplace for AI is a counterproductive strategy as it would fracture the global digital marketplace, and undermine the international aspirations of many European businesses. It will also isolate the EU and alienate its allies.

The Commission's approach to AI, similar to the other strategies of the "digital sovereignty" toolbox, aims to increase domestic control over technology, but eventually will make it harder or more expensive to use, harm countries' broader digital agendas, and inflict serious costs on both EU and non-EU companies and consumers.

7. The Commission's Proposal Will Increase the Burden of Liability

The Commission recognizes that the EU has an "extensive body of existing EU product safety and liability legislation"—a system of regulations for various consumer products, such as the product liability directive, which are relevant to AI systems and which all businesses are subjected to and already comply with.[50] There are sector-specific rules that encourage manufacturers to apply certain standards to overcome malfunctions and accidents in products from cars to toasters.

The Commission makes a clear reference to the feedback of organizations that have tested the assessment list of ethical requirements, and commits to take into account that it revealed "a number of the requirements are already reflected in existing legal or regulatory regimes."[51] Yet in the white paper, the Commission considers expanding general EU safety legislation to AI software and services.[52] Doing so is unnecessary, as existing liability rules are fit for purpose and are technology neutral, and many AI systems are already covered by the GDPR. These laws provide sufficient consumer protections and oversight of digital systems to handle any new consumer concerns that might arise from AI.[53] In addition, if they do not have control over what could go wrong, those involved in developing and deploying those systems could be held liable for off-label use, third-party modifications, or sabotage. This will likely discourage many innovators to venture into developing AI systems in the EU.

Finally, the Commission seems to imply that the "involvement of AI systems … may make it difficult for persons having suffered harm to obtain compensation."[54] But this gives much more agency to AI than is warranted. AI does not make decisions; an organization makes a decision using an AI tool. If an organization makes a decision that harms someone—whether using a pen and paper, a spreadsheet, or a deep learning algorithm—the person or organization that is harmed still has recourse under existing rules. There is simply no need to single out AI.

In addition, this premise overlooks the existence of legal frameworks that can already address these situations for many products and services that are currently in the marketplace. Any entity can be held liable through existing frameworks. This premise also wrongly assumes that AI in itself is inherently different from other systems in that it would make it more difficult for consumers to resort to existing legal frameworks.

8. The Commission's Proposal To Impose Conformity Control Mechanisms To Test AI Is Onerous and Counterproductive

Perhaps one of the most glaring problems with the white paper on AI is the Commission's proposal for a tiered approach to AI legislation to match rules to different levels of risk, accompanied by new, mandatory regulatory requirements.

The white paper proposes that before deployment and commercialization in the EU's internal market, "high-risk" technologies in "critical sectors" and those deemed to be of "critical use" should be subjected to conformity assessments, in other words, to rigorous testing for safety, fairness, and privacy. The "identified shortcomings" would be "remedied, for instance by re-training the system in the EU" with different datasets that are judged in conformity with EU values and various requirements.[55] Once retrained on approved and EU-compliant data, these AI systems would be authorized for release on the EU market.

According to the Commission's proposal, conformity assessments would apply to AI systems used in the EU in "high risk" applications that concern "fundamental rights, including personal data and privacy protection and non-discrimination" as well as "risks for safety and the effective functioning of the [EU's] liability regime." In short, "high-risk" AI applications are systems that could endanger people's safety or legal status.[56]

As explained below, the Commission's conformity assessment framework would undermine the development and deployment of AI systems, for six main reasons. First, its scope is too broad and insufficiently distinguishes between high-risk and low-risk AI applications. Second, it will raise compliance costs, lead to delays, and increase security risks for technology developers and vendors by requiring a broad set of AI applications to pass evaluations before they can go to market. Third, it will reduce competition and options for consumers and businesses by requiring a broad set of AI systems to be trained on data sets adhering to European standards. Fourth, it risks capturing useful technologies like facial recognition, which would slow down their implementation in the EU and limit their improvement and accuracy.[57] Fifth, the Commission does not seem to anticipate that the EU lacks the expertise this proposal would require to even be credible. Finally, a number of imprecisions reflect the Commission's lack of clear direction for this framework, and merit clarification.

The Definition of "High-Risk AI" is Overinclusive and Simplistic

First, the Commission should not create a broad definition of high-risk AI applications. Singling out entire sectors as high-risk and covering them with sweeping rules would limit the deployment of AI in

these sectors. The proposal would impose blanket rules and attach strict liability for products falling under an “AI” category.

The Commission does specify that a "proportionate" approach "requires clear criteria to differentiate between" high-risk applications and the others. But the ways it suggests to determine these criteria would involve overinclusive categorizations: "The sectors covered should be specifically and exhaustively listed in the new regulatory framework. For instance, healthcare; transport; energy and parts of the public sector … The public sector could include areas like asylum, migration, border controls and judiciary, social security and employment services."[58]

Yet sectors that have some high-risk AI applications will also have low-risk ones. For example, the public sector uses a variety of AI applications, many of which would be low-risk, such as deploying automated chatbots to answer frequently asked questions from public agencies or using AI-based analytical tools to analyze geospatial datasets. The Commission should keep in mind that while an all-encompassing AI regulatory framework may be politically appealing to some, there is no such thing as one type of AI system or one type of AI technique. Rather than focusing on applying special regulations to "high-risk” AI systems, it should focus on ensuring regulatory or other governmental oversight for “high-risk” processes regardless of the technologies used.

New Requirements Will Lead to More Costs, Legal Uncertainty, and Risks for AI Development in the EU

Second, the Commission should not require a broad set of AI products and services to undergo ex-ante conformity assessments before being allowed on the European market, because doing so would make it more expensive and time-consuming for companies to introduce new AI applications. Delays caused by additional controls should be of particular concern also for consumer protection, which the EU claims as one of its key priorities. During the COVID-19 crisis, the EU postponed the implementation of its medical devices regulation, signaling that this law would not have made it easier for health companies to introduce and market critical devices in the EU while there was a need for increased availability of such vitally important equipment.[59] Indeed, shortages or delays to introduce these devices would have compromised the health security of EU citizens.

The white paper further suggests that EU rules would address conformity of AI systems on a regular basis, both before and after introduction of the product in the market. In particular, the Commission raises the “changing functionality of AI systems” as a risk—which “systems that require frequent software updates or which rely on machine learning” lead to. According to the white paper, this characteristic further creates “new risks that were not present when the system was placed on the

market."[60] To address this, the Commission proposes that "Monitoring of compliance should be part of a continuous market surveillance scheme."[61] Constant reassessment procedures would only create additional burden on technology producers and vendors.

These assessments would also create significant security risks for organizations. To address the difficulty to "verify compliance" with the conformity rules and "the complexity and opacity of many AI systems," the white paper indeed proposes the retention of "in certain justified cases," the retention of "records, documentation and, where relevant, datasets … during a limited, reasonable time period."[62] The reviews would require companies to disclose proprietary data or other intellectual property (IP)—ex-ante, but also ex-post, through "controls" by "third parties such as competent authorities to test [AI] applications."[63] To start with, such documentation would be of little use given the expertise of organizations in charge of assessment, and compliance will likely be limited. In addition, although the Commission specifies that "arrangements should be made to ensure that confidential information, such as trade secrets, is protected," cybersecurity issues are a major threat, and companies may not be willing to place their trust and innovations in the hands of institutions whose infrastructure could lack the necessary protections against hacks and breaches. Finally, the Commission should clarify the timeline and types of situations that apply to mandating these records: Simply referring to "certain justified cases," "where relevant," "limited" and "reasonable" is too vague.

The combination of higher costs, delays, security and IP risks will deter some companies from investing in the EU market and launching AI products and services at all in Europe, and could lead them to relocate to more friendly markets with fewer bureaucratic hurdles.

EU Data Is the Wrong Benchmark

Third, the Commission should not require that a broad set of AI systems be trained on datasets that conform to specific EU rules on traceability and data quality. Requiring that companies use only certain EU-approved datasets for training AI systems would significantly limit the available data that companies operating in the EU could use, making these businesses much less competitive with their global peers. Moreover, if companies had to retrain their AI systems to operate in the EU, this would introduce additional costs that would be passed on to European consumers. This requirement would also likely exclude many foreign companies from the European market, reducing competition and options for consumers and businesses. Finally, assessing AI models' quality using only European datasets would significantly limit AI capabilities and the performance of these systems.[64] In turn, that would put consumers at risk because European data is neither representative nor diverse enough to

be used to develop systems deployed globally and would be at odds with Europe's intentions to lead in trustworthy AI.

Google's DeepMind's research on the coronavirus, for instance, which released important predictions about some of the virus' building blocks, was conducted using open-source data from around the world.[65] Innovations that DeepMind was able to roll out rapidly could be complicated by the EU's AI laws. Such technology would not be as powerful if it were based only on European data. To be able to generate accurate results, many algorithms need to be trained on large amounts of information before they can be put to work. The Commission may be pushing for "requirements ensuring that AI systems are trained on datasets that are sufficiently broad and cover all relevant scenarios needed to avoid dangerous situations," unfortunately European data is not likely to meet this standard in some cases.[66] Broad and representative European datasets may not exist. These datasets may not always be reliable, useful, or available (including for reasons owing to the lack of interoperability among EU databases).[67] And even EU datasets may not be EU-compliant. An absence of useful data would lead to poor performing AI systems and may even exacerbate the potential for bias because of a lack of representative data.[68] What is more, "all relevant scenarios" and "dangerous situations" are too broad in scope, and the Commission should clarify and narrow these references.

Conformity Assessments Will Limit the Adoption of Beneficial AI Applications Such as Facial Recognition Technology

The Commission's approach and broadly defined scope for "high-risk" applications could limit the use and improvement of promising technologies such as facial recognition. Although the Commission did not ban its use, the white paper states: "The use of AI applications for the purposes of remote biometric identification and other intrusive surveillance technologies would always be considered 'high-risk.'"[69] But the barriers to entry that the proposed testing system on "high-risk AI" entails will significantly slow the rollout of applications such as facial technology in the EU, and limit improvements.

Various member states have raised concerns about facial recognition, but policymakers should focus on preventing the use of the technology for clearly inappropriate purposes (such as abuses of government mass surveillance), not stopping organizations from using the technology for legitimate and safe purposes, such as the improvement of consumer welfare, service convenience, time- and cost-efficiency, and security.[70]

Facial recognition technology can prove a powerful tool to support municipal authorities and law enforcement agencies whose budgets are tightening, from monitoring students' attendance to save time for teachers in schools and even helping them prevent entry to sex offenders, to finding missing children and combatting human trafficking.[71] In addition, commercial demand for ways to apply biometric authentication keeps growing. It is a convenient way to secure payments and access to smart buildings, to reduce boarding time in airports, or even to ensure hospitals give patients the right treatment.[72] Governments can also use facial recognition technology as a discreet solution to monitor public areas and protect the public.[73] Finally, curtailing adoption will limit development of better facial recognition technology systems that can allow European firms to compete with those offered by foreign competitors—an outcome that is directly at odds with EU policymakers' goal of being more competitive in AI. By limiting its implementation through stringent conformity assessments rather than testing it in various environments and for various purposes, the use of new technology will not be based on evidence, nor is it likely to improve.[74] AI applications deemed "high risk" would end up not being used, thus hurting EU competitiveness.

Conformity Assessments Lack Credibility and Are Not Backed by Expertise

The proposed governance framework to enforce conformity assessments would demand significant technical expertise, know-how, as well as oversight and administrative capacity from the accreditation and market surveillance bodies. Indeed, these bodies would be in charge of inspecting the robustness, accuracy, and integrity of the data used to train those systems, and ultimately of certifying AI systems. The white paper specifies they would include "national authorities as well as sectorial networks and regulatory authorities, at national and EU level," and "a committee of experts" to assist the Commission.[75] "The carrying out of conformity assessments could be entrusted to notified bodies designated by member states. Testing centers should enable the independent audit and assessment of AI-systems. Independent assessment will increase trust and ensure objectivity. It could also facilitate the work of relevant competent authorities."[76] The document creates further confusion as it also mentions "excellence and testing centers that can combine European, national and private investments, possibly including a new legal instrument," but the white paper nowhere provides further information about this "legal instrument" and these so-called "world reference testing centers," and whether any of those are currently in operation in the EU.[77] This lack of precision could create further confusion as to whether these centers would be related to the existing network of centers of excellence and innovation hubs, or would be those in charge of assessing AI systems' conformity to EU rules.

But this also suggests that aspirations are unlikely to match capabilities. The EU is unlikely to be well-prepared to deliver on the Commission's framework. Such level of expertise and competencies

required from "independent auditors" will vary by member state, and may not be universally available to ensure proper supervision, speedy decision-making, and robust assessments—including because of the EU's IT skills shortage.[78] If the intention of the Commission is to use the GDPR as a blueprint, it is unclear as to whether new authorities will be created, or if the current data protection authorities (DPAs) would be required to perform additional tasks. DPAs are familiar with (personal) data processing activities but their expertise is unlikely to cover all features of AI systems. In addition, with the experience of the GDPR, it is now commonly acknowledged that they are not equipped with the necessary resources to address data protection issues since the privacy law came into force.[79] Imposing more responsibility on them will be counterproductive, and only create more administrative headaches and legal uncertainty. Implementation of effective oversight would take years, making an already rigid framework very quickly obsolete, especially as these bodies would be in charge of overseeing a highly dynamic environment.

As is the case with the GDPR, the various ways in which regulatory frameworks can be administered and interpreted tend to diverge across member states. If permitting processes for certification are not aligned, they would add further uncertainty, cost, and time.[80]

RECOMMENDATIONS

While applying the precautionary principle to AI might reduce the risks from using AI, it raises the risks that the EU will fall behind even further in its development and use—something that it simply cannot afford to do if it has any hope of successfully participating in the so-called "fourth industrial revolution."

As such, the single most important step for to the EU to take for AI is to embrace a proportionate approach based on the innovation principle. To ensure legal certainty and limit the costs of AI development in the EU, the EU should focus on the proper implementation of existing legislation that applies to AI without adding more regulatory impediments to AI development, and avoid any further fragmentation to the digital single market. Finally, to shape global norms and standards for AI efficiently, EU policymakers should work with partners, by prioritizing dialogue with industry, and by creating strategic alliances with like-minded nations.

1. The Commission Should Develop a Proportionate Approach Based on the Innovation Principle

As a general rule, and as it considers policy orientations and responses governing future digital technologies, the EU should operate on the innovation principle, which holds that the vast majority of new innovations are beneficial and pose little risk, and adopt a precocious approach to regulation.

First, the Commission should foster concerted mechanisms that accelerate the transfer of technologies from lab innovations to commercial applications. An innovation-focused, future-proof, and market-proof framework should provide regulatory space for digital experimentation in near to real-world conditions such as with regulatory sandboxes, living labs, testbeds, and pilots, and leave room for new focus on a broad array of emerging technologies—including AI, but also the Internet of Things, blockchain, fintech, and various areas of applications such as smart cities and eHealth.[81]

Second, the Commission should recognize that in most cases, it is not AI systems that should be regulated, but rather specific activities. For example, companies should be obligated to follow fair hiring practices regardless of whether or not they use AI applications as part of their recruitment process.

As such, the Commission should encourage the continued development and testing of AI systems based on voluntary, industry-led best practices and upfront self-assessment.[82]
The Commission should only consider new regulations in high-risk scenarios where there is clear evidence of consumer harm—rather than hypothetical harm. Instead of a sweeping, blanket category of "high-risk AI applications," the Commission should adopt a framework that targets, captures, and evaluates situations based on risks and harms caused by organizations' actions and activities. Regulators could use such a framework when evaluating which infractions should be pursued and what type of penalty should be administered based on a sliding scale of intent and resulting harm. Smaller penalties should result when consumers are not harmed and the company acts unintentionally, while larger penalties should result when consumers are harmed by a company's actions and that company acted with intent.[83]

2. The Commission Should Ensure Legal Certainty and Limit the Cost of Using AI

The Commission Should Resist Stricter Rules and Review Existing Policies
As a general rule, the Commission should identify, analyze, and compare existing policies to identify gaps or overlaps that create unnecessary challenges to Europe's digital transformation in the current regulatory framework. The Commission should uphold its recent commitment to the "one in, one out"

principle when creating new laws or regulatory frameworks, and proceed with creating new rules at a reasonable pace, while also striving to cut unnecessary and outdated regulations.[84]

The Commission should forgo additional layers of discriminatory and bureaucratic rules similar to the GDPR, which are designed to further slow and constrain, rather than accelerate innovation.[85] New regulations such as the proposed ex-ante conformity assessments will specifically impact AI, while involving a broader range of systems that would include personal, but also non-personal data. This would both replicate and go beyond the deficiencies and impediments of the GDPR, making it even more expensive and difficult than it already is for European businesses to use AI systems in many areas of the economy.[86] Establishing additional bodies that will likely be understaffed and lack expertise will make these rules impractical and obstruct implementation.

If EU policymakers want to achieve "better regulation," the Commission should propose sector-specific rules, and combine these with soft law instruments such as codes of conduct, in consultation with digital stakeholders.[87]

EU policymakers should also learn the lessons of one-size-fits-all rules and modify existing regulations such as the GDPR to remediate shortcomings that prevent European businesses from using AI to its full potential and creating economically impactful products. Indeed, concerns over the negative impact of the GDPR are mounting within Europe's business community, particularly among startups.[88] The EU should start by addressing the legal uncertainty caused by the diversity of DPAs across member states and the diverging interpretations of the law across national jurisdictions.[89] It should also lift the unnecessary restrictions the GDPR has created for AI by limiting the collection, use, and processing of data.[90]

The EU should hold off on any new regulations targeted exclusively at biometrics, especially without clear evidence of tangible harm. As long as organizations protect the biometric data the same way they protect other sensitive information, there should be no issue.[91] The EU should also ease existing restrictions on facial recognition technology. The GDPR allows some government uses of facial recognition, but EU policymakers should clarify and relax GDPR's requirements, so that the law no longer exposes organizations testing facial recognition technology to sanctions.[92]

The Commission Should Deliver on the Digital Single Market

To ensure legal certainty and the ability of EU businesses to scale, the Commission's framework should prevent further fragmentation of the block's digital single market.[93] As the Commission rightly specifies, "a common European approach to AI is necessary to reach sufficient scale and avoid the

fragmentation of the single market," which "the introduction of national initiatives" could negatively impact.[94] The white paper on AI also refers to the coordinated plan on AI developed with member states as "a good starting point in building closer cooperation on AI in Europe and in creating synergies to maximize investment in the AI value chain."[95] The priority should be to create those synergies first.

The Commission "plans to further scale up access to finance in AI" for SMEs and scale-ups. The EU should however ensure that funding is directed primarily to those technology enterprises whose business models have a chance to scale. Propping up SMEs without doing away with the regulatory hurdles that prevents them from scaling up would be a waste of public investment.[96]

3. The Commission Should Prioritize Dialogue With Industry

The Commission's proposal demands the operationalization of what remain abstract requirements that may not be applicable or actionable for all AI systems. The proposal should therefore lead to a framework that includes actionable criteria for assessment of AI systems by companies. It also requires a methodology and clear guidance for companies to tailor these requirements to specific applications. In this respect, the idea of "transforming the assessment list of the ethical guidelines into an indicative "curriculum" for developers of AI that will be made available as a resource for training institutions" is welcome, especially to ensure this assessment framework is actionable and applicable in practice.[97]

The Commission should carefully review the feedback from companies participating in the High-Level Expert Group's piloting phase to ensure any rules it creates take into account the specificity and diversity of AI systems, and to address the loopholes that industry's feedback identified.[98]

In revising the assessment list of ethical principles, EU policymakers should pose only necessary questions and contextualize them with sectoral case studies so that they offer developers actionable guidance.

Dialogue with industry—as well as with the general public[99]—should be front and center of the Commission's process, but is not sufficiently emphasized in the white paper. Nowhere in the document does the Commission propose or plan to encourage industry-led impact assessments, which it could use to collect evidence-based practices and investigate various sector-specific applications, situations, and use cases. For instance, the medical sector, which already is subject to strict regulations, is well positioned to offer an overview, best practices, and recommendations regarding the deployment and use of AI.

4. The Commission Should Involve EU Partners and Democratic Allies

The Commission's proposal was adopted before the coronavirus crisis. This raises the risk of an approach that would be outdated in a post-COVID-19 environment, and therefore requires adjustment for this AI framework to be realistic and viable. Indeed, the COVID-19 crisis has exposed the lack of preparedness and readiness of the EU to make full use of AI, including because its stringent data protection rules restrict the collection, use, and sharing of data that could have been useful to support a speedier development of AI solutions by researchers. In addition to the need for more and better-quality data, in light of a looming recession, the implementation of an EU-wide approach in AI will require funding, investments, and the pooling of resources such as research facilities.

This reality check should involve a stronger inclusion of EU geopolitical and trade partners. As the EU finds itself shorn of the United Kingdom—a major tech hub—any go-it-alone strategy would harvest isolation and decline.[100] The gap between the EU and its peers will only widen.

In addition, a cooperative framework with standards set by allied democracies rather than by the EU alone stands a better chance to compete with China on AI, and on the promotion of democratic values and principles that the EU shares with various others.

The Commission does recognize the EU has a role to play in multilateral fora by influencing international discussions and ongoing work on AI, including through UNESCO, the OECD, and the United Nations International Telecommunication Union (ITU). It pledges to "continue to cooperate with like-minded countries."[101] Unfortunately, the EU's objective to assert technological sovereignty, illustrated in the white paper on AI by the proposed conformity assessment certifications, risks excluding non-EU companies from the EU markets. Beyond, the EU's regulatory imperialism also risks excluding allied countries, while multilateral collaboration could help in shaping global standards and norms for AI.

While EU allies have contrasting attitudes toward China and Russia, there is a growing consensus on the need for global norms and standards for technologies like AI that align with democratic values. The EU can be audible if it offers constructive contributions within international fora such as the OECD and ICANN.

If the EU wants its values and principles to make headway while strengthening its technology capabilities and preserving its competitiveness, its priority should be to align with its allies on common values. The EU should not let China fill the void by setting the rules of the game in new

areas of ICT and breaking with past standards. To carry any weight, any talks promoting those values for AI should be focusing on how they differ from those of China and other autocratic countries.[102] The transatlantic relation provides solid foundations on which the EU, the United States, and Canada could build, such as the G7's Global Partnership on AI (GPAI).[103] In particular, commonalities between the EU and the United States remain significantly greater than their divergences.[104] The EU could seek partnership with the U.S. National Institute of Standards and Technology (NIST), which has long-standing experience in assessing the capabilities of algorithms for technologies such as facial recognition. NIST's Face Recognition Vendor Test (FRVT) regularly assesses the capabilities of different face-recognition algorithms. These assessments provide policymakers and users with empirical data, and inform them about the accuracy, usefulness, capabilities, and limitations of the technology.[105] Rather than reinventing the wheel with assessments that will prevent its own competitiveness and the development of AI on its market, the EU could engage with NIST on how to build similar tests for more AI applications.[106]

The lack of concerted, joint reflection on legislative reforms can adversely impact allied jurisdictions. Democracies willing to protect their values should avoid transforming their regulatory regimes in a way that would fragment the digital economy: Inconsistent approaches will fast-forward the prevalence of China's own value system. As any mandates governing AI systems in the EU will have implications on non-EU jurisdictions and weaken foreign companies that heavily invest in Europe, the Commission should take these implications seriously when crafting rules for AI.

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64 Daniel Castro and Eline Chivot, "How the EU Should Revise its AI White Paper Before it is Published" (Center for Data Innovation, February 1, 2020), https://www.datainnovation.org/2020/02/how-the-eu-should-revise-its-ai-white-paper-before-it-is-published/.

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68 "Consultation on the white paper on AI — A European approach: Google's submission" (Google, May 28, 2020), https://www.blog.google/documents/77/Googles_submission_to_EC_AI_consultation_1.pdf, p.34.

69 "White Paper On Artificial Intelligence" (European Commission, February 19, 2020), p.18.

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71 Jyri Rajamaki, Tuomas Turunen, Aki Harju, Miia Heikkila, Maarit Hilakivi, Sami Rusanen, "Face Recognition as an Airport and Seaport Security Tool" (WSEAS Transactions on Information Science and Applications, Volume 6, Issue 7, July 2009), https://pdfs.semanticscholar.org/f173/f494ec97b4591fb75967f6196acf59a7dc38.pdf; BBC, "Facial recognition: School ID checks lead to GDPR fine" (BBC.com, August 27, 2019), https://www.bbc.com/news/technology-49489154; Daniel Castro, "Are Governments Right to Ban Facial Recognition Technology?" (GovTech, April/May 2019), https://www.govtech.com/products/Are-Governments-Right-to-Ban-Facial-Recognition-Technology.html; Associated Press, "Schools using facial recognition tech to boost safety" (New York Post, July 23, 2018), https://nypost.com/2018/07/23/schools-using-facial-recognition-tech-to-boost-safety/; Anthony Cuthbertson, "Indian police trace 3,000 missing children in just four days using facial recognition technology" (Independent, April 24, 2018), https://www.independent.co.uk/life-style/gadgets-and-tech/news/india-police-missing-children-facial-recognition-tech-trace-find-reunite-a8320406.html; Alexandra Ossola, "AI Tool Helps Law Enforcement Find Victims of Human Trafficking" (Futurism, April 16, 2018), https://futurism.com/ai-tool-law-enforcement-stop-human-trafficking. See also: "Congress Should Support, Not Hinder Commercial Use of Facial Recognition Technology, ITIF's Castro Testifies" (ITIF, January 15, 2020), https://itif.org/publications/2020/01/15/congress-should-support-not-hinder-commercial-use-facial-recognition and https://docs.house.gov/meetings/GO/GO00/20200115/110380/HHRG-116-GO00-Wstate-CastroD-20200115.pdf.

[72] Joel Griffin, "Alcatraz AI brings its 'face-only' solution to GSX 2019" (SecurityInfowatch.com September 10, 2019), https://www.securityinfowatch.com/access-identity/biometrics/facial-recognition-solutions/article/21096042/facial-recognition-for-enterprise-access-control.

[73] Angelique Chrisafis, "Dozens feared dead after truck drives into crowd in Nice" (The Guardian, July 14, 2016), www.theguardian.com/world/2016/jul/14/several-killed-after-lorry-drives-into-crowd-in-nice-reports; Marion Simon-Rainaud, "Reconnaissance faciale à Nice : la ville se félicite des résultats, la Cnil n'est pas convaincue" (01net.com, August 29, 2019), https://www.01net.com/actualites/reconnaissance-faciale-a-nice-la-ville-se-felicite-des-resultats-la-cnil-n-est-pas-convaincue-1757577.html.

[74] Eline Chivot and Daniel Castro, "The EU Should Not Stand In The Way Of Facial Recognition Technology" (Center for Data Innovation, October 28, 2019), https://www.datainnovation.org/2019/10/the-eu-should-not-stand-in-the-way-of-facial-recognition-technology/.

[75] "White Paper On Artificial Intelligence" (European Commission, February 19, 2020), p.24.

[76] Ibid., p.25.

[77] Ibid., p.6.

[78] 57 percent of Europe's workforce has basic digital skills, and more than half of EU companies find it hard to hire IT specialists. See Eurostat, "ICT specialists - statistics on hard-to-fill vacancies in enterprises," https://ec.europa.eu/eurostat/statistics-explained/index.php/ICT_specialists_-_statistics_on_hard-tofill_vacancies_in_enterprises. See also Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, "A European Strategy for Data" (European Commission, February 19, 2020), https://ec.europa.eu/info/sites/info/files/communicationeuropean-strategy-data-19feb2020_en.pdf.

[79] Eline Chivot and Nigel Cory, "Response to European Commission Consultation on Transfers of Personal Data to Third Countries and Cooperation Between Data Protection Authorities" (ITIF, April 29, 2020), http://www2.itif.org/2020-gdpr-two-year-review.pdf?_ga=2.250801926.1209301510.1589184304-2069855483.1557148676.

[80] For instance, one scenario in which the ex-ante conformity measures could apply is would involve "the use of AI applications for recruitment processes as well as in situations impacting workers' rights." According to the white paper, these "would always be considered "high-risk"" (See "White Paper On Artificial Intelligence" (European Commission, February 19, 2020), p.18). But member states' national courts and judges may not all evaluate impact on employment equality and workers' rights the same way. The company that develops an AI system for the EU market may therefore have to undergo a process of conformity assessment in each member state prior to introduction on its market. In other words, it may face contradictory feedback from each "testing center" and have to adjust its product accordingly (potentially 27 times), or later on, after introduction on an EU member state's market, may face a particular jurisdiction's interpretation of impact leading to a ban. This will do little to address the EU's concerns for employment inequality: A highly performing app may benefit one EU country and its labor force, but not all.

[81] Sandra Planes-Satorra and Caroline Paunov, OECD Science, Technology and Innovation Policy Papers, No. 71, "The digital innovation policy landscape in 2019" (OECD Publishing, May 2019), https://www.oecd-ilibrary.org/fr/science-and-technology/the-digital-innovation-policy-landscape-in-2019_6171f649-en. Various EU countries have launched such initiatives, to guide companies and reduce regulatory

requirements as they develop AI projects and innovative services. Non-EU countries' DPAs, such as Norway's or the United Kingdom's Information Commissioner's Office (ICO) are also at the forefront: "Norway: Datatilsynet launches sandbox for responsible AI" (One Trust Data Guidance, May 26, 2020), https://www.dataguidance.com/news/norway-datatilsynet-launches-sandbox-responsible-ai; Ian Hulme, "Combining privacy and innovation: ICO Sandbox six months on" (ICO, March 2020), https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2020/03/combining-privacy-and-innovation-ico-sandbox-six-months-on/.

82 Daniel Castro and Eline Chivot, "How the EU Should Revise its AI White Paper Before it is Published" (Center for Data Innovation, February 1, 2020), https://www.datainnovation.org/2020/02/how-the-eu-should-revise-its-ai-white-paper-before-it-is-published/.

83 " First, if a company makes a mistake and something happens that does not result in real consumer harm, then regulators should work to resolve the complaint, but not impose any penalties. Second, if an action is unintentional but results in real harm to consumers, then regulators should again work with the company to fix the problem but levy only a modest penalty against the company to mitigate the damage that resulted from the company's mistake. Third, if a company intentionally commits an infraction that results in no harm, then regulators should not only work to resolve the problem, but also levy a modest penalty against the company to create an incentive against similar future infractions. Finally, if a company acts with intent, including negligence, and its actions harm consumers, then regulators should impose significant penalties." Daniel Castro and Alan McQuinn, "How and When Regulators Should Intervene" (ITIF, February 2, 2015), https://itif.org/publications/2015/02/02/how-and-when-regulators-should-intervene.

84 European Commission, "The von der Leyen Commission: For a Union that strives for more" (European Commission, September 9, 2019), https://europa.eu/rapid/press-release_IP19-5542_en.htm; SITRA, "35 proposals to make the European data strategy work" (May 18, 2020), https://www.sitra.fi/en/publications/35-proposals-to-make-the-european-data-strategy-work/#introduction.

85 Laura Kayali, "Next European Commission takes aim at AI" (Politico, July 18, 2019), https://www.politico.eu/article/ai-data-regulator-rules-next-european-commission-takes-aim/.

86 Daniel Castro and Eline Chivot, "How the EU Should Revise its AI White Paper Before it is Published" (Center for Data Innovation, February 1, 2020), https://www.datainnovation.org/2020/02/how-the-eu-should-revise-its-ai-white-paper-before-it-is-published/.

87 European Commission, "Better regulation: Why and how" (European Commission's website), https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en.

88 Eline Chivot and Daniel Castro, "What the Evidence Shows About the Impact of the GDPR After One Year" (Center for Data Innovation, June 17, 2019), https://www.datainnovation.org/2019/06/what-the-evidence-shows-about-the-impact-of-the-gdpr-after-one-year/; Allied for Startups, "Artificial Intelligence: Why Regulators Need to Understand Startups First" (Medium, January 3, 2018), https://medium.com/swlh/why-governments-need-to-understand-ai-startups-first-dded674d3f8; James E. Bessen, Stephen Impink, Lydia Reichensperger, and Robert Seamans, "GDPR and the Importance of Data to AI Startups" (Boston University School of Law, Law & Economics Series, Paper No. 20-13, April 1, 2020), http://sites.bu.edu/tpri/2020/04/22/gdpr-and-the-importance-of-data-to-ai-startups/.

89 Eline Chivot and Nigel Cory, "Response to European Commission Consultation on Transfers of Personal Data to Third Countries and Cooperation Between Data Protection Authorities" (ITIF, April 29, 2020), http://www2.itif.org/2020-gdpr-two-year-review.pdf?_ga=2.250801926.1209301510.1589184304-2069855483.1557148676.

90 The GDPR negatively affects the amount of data available to organizations to train and use AI systems. Companies can be required to delete data that could better train their algorithms, or prevented from collecting and storing certain types of data which could enhance the performance and accuracy of their algorithms. Eline Chivot and Daniel Castro, "The EU Needs to Reform the GDPR To Remain Competitive in the Algorithmic Economy" (Center for Data Innovation, May 13, 2019), https://www.datainnovation.org/2019/05/the-eu-needs-to-reform-the-gdpr-to-remain-competitive-in-the-algorithmic-economy/; James E. Bessen, Stephen Impink, Lydia Reichensperger, and Robert Seamans, "GDPR and the Importance of Data to AI Startups" (Boston University School of Law, Law & Economics Series, Paper No. 20-13, April 1, 2020), http://sites.bu.edu/tpri/2020/04/22/gdpr-and-the-importance-of-data-to-ai-startups/, p.3, p.16, and p.18.

91 Eline Chivot and Daniel Castro, "The EU Should Not Stand In The Way Of Facial Recognition Technology" (Center for Data Innovation, October 28, 2019), https://www.datainnovation.org/2019/10/the-eu-should-not-stand-in-the-way-of-facial-recognition-technology/.

92 Eline Chivot and Daniel Castro, "The EU Should Not Stand In The Way Of Facial Recognition Technology" (Center for Data Innovation, October 28, 2019), https://www.datainnovation.org/2019/10/the-eu-should-not-stand-in-the-way-of-facial-recognition-technology/.

93 Eline Chivot, "How the Next European Commission Should Tackle AI" (Center for Data Innovation, September 4, 2019), https://www.datainnovation.org/2019/09/how-the-next-european-commission-should-tackle-ai/; Fredrik Erixon and Philipp Lamprecht, "The Next Steps for the Digital Single Market: From Where do We Start?" (ECIPE, October 2018), https://ecipe.org/publications/the-next-steps-for-the-digital-single-market-from-where-do-we-start/.

94 "White Paper On Artificial Intelligence" (European Commission, February 19, 2020), p.2.

95 Ibid., p.4.

96 Ibid., p.7.

97 Ibid., p.6.

98 Eline Chivot, "Initial Lessons Learned From Piloting the EU's AI Ethics Assessment List" (Center for Data Innovation, March 1, 2020), https://www.datainnovation.org/2020/03/initial-lessons-learned-from-piloting-the-eus-ai-ethics-assessment-list/; Daniel Castro and Eline Chivot, "How the EU Should Revise its AI White Paper Before it is Published" (Center for Data Innovation, February 1, 2020), https://www.datainnovation.org/2020/02/how-the-eu-should-revise-its-ai-white-paper-before-it-is-published/.

99 " In order to address possible societal concerns relating to the use of AI for such purposes in public places, and to avoid fragmentation in the internal market, the Commission will launch a broad European debate on the specific circumstances, if any, which might justify such use, and on common safeguards." "White Paper On Artificial Intelligence" (European Commission, February 19, 2020), p.22. The Commission's idea to launch a "broad European debate" on specific uses of AI systems is welcome. But by referring to

"specific circumstances, if any, which might justify [the] use" of remote biometric identification AI systems, the Commission seems to doubt that there may even be areas in which the technology's deployment could be appropriate, and to ignore that various organizations, including the public sector, are already rolling out the technology with successful results. As the Commission suggests a European debate on these "circumstances" to explore "societal concerns," it should specify which stakeholders would be involved, and ensure that these existing experiences are represented.

100 Michael McLaughlin and Daniel Castro, "What Will Brexit Mean for AI in the EU?" (Center for Data Innovation, August 27, 2019), https://www.datainnovation.org/2019/08/what-will-brexit-mean-for-ai-in-the-eu/.

101 "White Paper On Artificial Intelligence" (European Commission, February 19, 2020), p.8.

102 Robert D. Atkinson, "The Case for a National Industrial Strategy to Counter China's Technological Rise" (ITIF, April 13, 2020), https://itif.org/publications/2020/04/13/case-national-industrial-strategy-counter-chinas-technological-rise.

103 Eanna Kelly, "US joins global AI group, citing technology threat from China" (Science|Business, May 29, 2020), https://sciencebusiness.net/international-news/us-joins-global-ai-group-citing-technology-threat-china. Michael Kratsios, "Artificial Intelligence Can Serve Democracy" (The Wall Street Journal, May 27, 2020), https://www.wsj.com/articles/artificial-intelligence-can-serve-democracy-11590618319.

104 A misconception that prevails is that countries other than those in the EU do not care about AI ethics at all. By assuming that ethical AI is where its competitive advantage lies, the EU appears to forget that it is not alone in considering the ethics of AI. Yet many countries have policies to address the ethics of AI. Indeed, Europe's main competitor in AI—the United States—have both made multiple commitments to ensuring AI is ethical. President Trump, for instance, signed an executive order on AI that supports a vision of developing "reliable, robust, and trustworthy systems that use AI technologies" and has launched a plan for developing technical standards for AI, including to support its ethical use. Moreover, US agencies such as the Department of Defense and the Department of Transportation have launched their own initiatives to ensure ethical use of AI within their respective fields. Many non-European countries, including the United States, have signed on to the Organization for Economic Co-operation and Development's (OECD) AI Principles focused on "responsible stewardship of trustworthy AI." Daniel Castro, "Bad News, Europe: Consumers Do Not Want to Buy an "Ethical" Smart Toaster" (Center for Data Innovation, March 27, 2019), https://www.datainnovation.org/2019/03/bad-news-europe-consumers-do-not-want-to-buy-an-ethical-smart-toaster/.

105 U.S. National Institute of Standards and Technology (NIST), "Face Recognition Vendor Test (FRVT)," https://www.nist.gov/programs-projects/face-recognition-vendor-test-frvt.

106 Multi-Association Request for a NIST AI Framework, Letter to Congress, https://www.bsa.org/files/policy-filings/06012020multinistletter.pdf.