June 12, 2020

European Commission
Rue de la Loi 41
1000 Bruxelles, Belgium

Subject: COM (2020) 65 final. White Paper: On Artificial Intelligence – A European approach to excellence and trust.

Dear Sir or Madam:

The Computing Technology Industry Association (CompTIA),[1] the leading association for the global information technology (IT) industry, respectfully submits these comments to the European Commission (Commission) in response to the above-captioned request for comment.[2]

CompTIA and its member companies encompass a wide cross-section of the IT sector, including software, technology services, telecommunications services, and device and infrastructure companies. CompTIA's member companies provide enterprise-ready Artificial Intelligence (AI) services, tooling, applications, and cloud services accelerating advances in AI from IoT device manufacturers to neural networks. CompTIA members are foundational in creating an ICT ecosystem that supports and generates AI.

A set of high-standard principles are needed for the trustworthy development, testing, deployment, and adoption of AI technologies. CompTIA appreciates the efforts of the European Commission to create a framework that supports the research and development of AI necessary to ensure economic recovery from the COVID-19 pandemic.

Necessary AI Principles

Europe is well positioned to play an important role in AI research and application due to the continent's extensive innovative community and world-class universities. The Commission has accurately identified the need to support the investment and deployment of AI, particularly in response to the economic downfall due to the COVID-19 pandemic. In this COVID-19 environment, the high-tech industry plays an integral part in combating the pandemic. For example, technology assists in research centers in the development of vaccines as well as storing data related to testing and tracing of citizens suffering from the coronavirus. CompTIA supports

[1] CompTIA supports policies that enable the information technology industry to thrive in the global marketplace. We work on behalf of our 120-plus member companies to promote investment and innovation, market access, robust cybersecurity solutions, commonsense privacy policies, streamlined procurement, and a skilled IT workforce. Visit www.comptia.org to learn more.

[2] European Commission. COM (2020) 65 final. "White Paper: On Artificial Intelligence – A European approach to excellence and trust." https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf

the Commissions' prioritization to "improve excellence and attract the best researchers and develop the best technology"[3] as well as to ensure the "private sector is fully involved in setting the research and innovation agenda and provides the necessary level of co-investment"[4] to help in the efforts to combat COVID-19.

To this end, CompTIA also urges the Commission to prioritize the following principles:

- Support industry research and innovation by limiting centralization;
- Support education and training in AI development;
- Support education and training for SMEs in AI deployment and adoption;
- Promote public sector adoption of AI; and
- Promote public-private partnership of AI development.

Furthermore, CompTIA is supportive of the Commission's stated intention to "closely monitor the policies of third countries that limit data flows and will address undue restrictions in bilateral trade negotiations"[5] and in the World Trade Organization (WTO). It is important to have international cooperation when developing an AI framework and to hold countries accountable when they fail to uphold our shared values of free data flows, privacy protection, free expression, and human rights.

Likewise, CompTIA also welcomes the Commission's stated intention to "guarantee maximum stakeholders' participation"[6] when implementing and developing the AI framework. It is crucial to have industry input at all levels of developing an AI framework to create a robust regulatory framework for AI.

European Commission AI White Paper Recommendations

Smart governmental approaches to AI-related regulation are critical to encouraging innovation while also instilling public trust in AI technologies. CompTIA applauds the Commission's efforts to establish trustworthy AI development and adoption and encourages the Commission to implement a proportionate and risk-based approach to AI oversight that is not excessively prescriptive. Balancing societal and economic benefits generated from AI innovation with that of any potential harms requires deft policymaking and ongoing input from industry stakeholders. Similar to what is stated in the White Paper, CompTIA also believes in a risk-based approach where comprehensive and substantive consultations with the private sector are necessary to ensure that regulatory intervention does not create a burdensome and ineffective regime, including a thorough examination of the type of requirements and enforcement mechanisms. With that goal in mind, the following recommendations provide feedback to refine

[3] White Paper at 6.
[4] White Paper at 7.
[5] White Paper at 8.
[6] White Paper at 25.

various aspects of the Commission's AI White Paper that, if left unaddressed, could lead to uncertainty and inhibit innovation.

Definition of AI

To provide a foundation for consistent, effective policymaking, we ask the Commission to provide a clear, narrow, and widely understood definition of AI. The White Paper describes the distinct components of AI such as "data and algorithms"[7] and yet, those descriptions also effectively pertain to all software. The AI definition provided in the White Paper is overly broad in scope and as written includes traditional AI programs that operate according to hard coded rules. Instead, the definition should focus on AI systems that are capable of learning on their own. For example, the White Paper refers to AI-based decision-making by autonomous vehicles. However, such decision-making is still established on hard-coded rules followed by the automated driving system. This feature requires a combination of software and hardware, which is comprehensively designed and validated to operate safely and securely. While machine learning may be used to train autonomous vehicles for validation, it cannot operate or make decisions in a way that conflicts with their operational designs. Therefore, CompTIA strongly urges the Commission to create a narrow definition focusing on the subcategory of AI systems to avoid over-regulation.

Problem definition

The White Paper's 'problem definition' section recognizes that "while AI can do much good, including by making products and processes safer, it can also do harm."[8] In doing so, it lays out a negative perception of the technology through identifying a few instances of harms. However, the paper is not clear on the distinction of such harms – be it harms derived by the technology or problematic applications – or the degree to which the Commission has documented the prevalence of these issues across a sufficiently representative number of AI use-cases. Technology companies routinely demonstrate the ability and willingness to adhere to procedures that address public safety and security in their AI systems and in turn, establish and maintain public trust. CompTIA encourages the Commission to refine its definition and include principles of science and technical analysis to determine which harms outlined in the White Paper should be addressed. CompTIA and its members remain committed to protecting data privacy and preserving human rights through our work with the Commission.

Avoiding 'digital sovereignty'

Many observers have raised concerns about recent statements from European officials regarding "digital sovereignty" or "technological sovereignty."[9] Some have highlighted that

[7] White Paper at 16.

[8] White Paper at 10.

[9] The Atlantic Council. "Waving the flag of digital sovereignty". (2019) https://www.atlanticcouncil.org/blogs/new-atlanticist/waving-the-flag-of-digital-sovereignty/

these statements may lead the European Commission, in a number of different regulatory arenas, to protect local champions while diverging from an open transatlantic approach to new innovation.[10] CompTIA strongly encourages the Commission to disavow any approach to AI regulation that would result in market access restrictions on non-European providers of AI technologies and applications, or that would otherwise disadvantage these foreign providers. Below, we provide several examples of AI regulatory frameworks that could result in explicit or de facto barriers on firms seeking access to the European market.

Definition of high-risk

The Commission has accurately identified the need for a well-defined risk-based approach to AI regulation that does not apply a 'one-size fits all' framework across all AI applications. However, the White Paper still relies on an overbroad definition of 'high-risk' that would cause legal uncertainty and discourage the development of AI technologies. CompTIA urges the Commission to:

- ***Consider the opportunity costs of not using AI:*** Risk assessments should take a holistic view by focusing not just on the benefits and risks inherent in the AI application itself, but also on the forgone safety, economic or other social benefits that might be lost if the AI application did not replace the human-based activity. Similarly, it is critical to incorporate assessment of risk substitution into any analysis of benefits and costs.
- ***Affirm the need for proportionality:*** Risk assessments must reflect both the probability of harm caused by a new AI technology as well as the potential severity and scale of that harm. Only by considering all of these factors can regulators properly tailor risk management solutions. It is also important to create a risk assessment framework that operates by factoring in the wider operational context when assessing the risk. For example, an AI application used for one purpose could potentially pose different risks depending on how that AI application is integrated into business operations (e.g., level of human oversight, extent and frequency of monitoring).
- ***Remove legal uncertainty:*** The cumulative criteria stated in the White Paper's text contains language that creates legal uncertainty such as the "exceptional instances"[11] clause. This description is too broad and open-ended. Open criteria like "exceptional circumstances" will leave courts to decide what falls into that category, which will create a patchwork of disparately applied common law. This is problematic for technologies like most AI applications that will not operate distinctly within each legal jurisdiction. It will behoove the Commission to have one standard across the European Union. CompTIA recommends that the Commission provide clarity on this criterion and urges that it not be overly prescriptive.

[10] CSIS. "An Open Alliance for Digital Trade." (2020). https://www.csis.org/analysis/open-alliance-digital-trade

[11] White Paper at 18.

- ***Remove "immaterial damage" in the risk definition:*** The White Paper also contains broad and unclarified language in its definition of risk. The term "immaterial damage"[12] is not a known legal concept and lends itself to broad interpretations, therein causing legal uncertainty and discouraging investment and innovation.
- ***Present reasonable AI performance standards:*** There are inherent risks involved whenever using new and innovative AI systems. While industry strives to reduce and minimize the number of mistakes involved in using AI, no system – human or AI powered – has ever developed without some errors involved – none are perfect. Therefore, it is important for the Commission to not preclude new AI technologies by requiring regulatory standards for AI systems that exceeds those required of non-AI systems. For example, in situations requiring an urgent and immediate response (medical screening in crisis settings), where insufficient human resources are available, a lower level of AI accuracy may be acceptable because inaction would be dire. Instead, the Commission should recognize that one-hundred percent accuracy for AI technologies is unreasonable if the alternative – human accuracy – results in outcomes lower than that. CompTIA urges the Commission to adopt a sensible regulatory standard where the AI system is held to a comparable measure as a qualified person carrying out the same task.

Mandatory requirements for high-risk AI applications

The Commission's White Paper delineates suggested mandatory legal requirements, many of which would impede the development and deployment of beneficial AI applications. CompTIA requests that the Commission work with industry stakeholders to create flexible and workable requirements when developing guidelines. Key issues to address:

- ***Do not mandate dataset retention:*** GDPR provisions require the deletion of personal data and pose challenges for copyrighted datasets authorized for short-term access. Dataset retention would effectively destroy all privacy benefits of on-device processing that GDPR has aimed to protect by forcing data to be collected and centrally stored. Furthermore, this mandate would prevent utilizing off-the-shelf and open-source models. AI developers require access to data to train the new AI systems so without access, newly developed AI systems would be rendered inept.
- ***Place more emphasis on testing output rather than testing data quality:*** The White Paper's proposed obligations for AI developers to "ensure data sets are sufficiently representative"[13] are impractical. Not only do these guidelines directly conflict with GDPR in terms of the type of data developers cannot access (i.e. sensitive attributes like ethnicity), but it is also unclear how to determine what is "sufficient," especially for multipurpose AI system providers. It is possible, however, to create a high-performing model even if using biased, low-quality training data. Rather than imposing requirements

[12] White Paper at 17.

[13] White Paper at 19.

on training data, CompTIA recommends that the Commission focus on the performance of the testing model through benchmark datasets ensuring that outputs are within an acceptable range. Ultimately, model output, not the training dataset, determines the real-world impact of an AI system.

- ***Provide a less stringent definition of "reproducible":*** The Commission's White Paper proposes "requirements ensuring that outcomes are reproducible,"[14] and poses too literal an interpretation of this phrase. It is essentially impossible for AI systems to recreate identical outputs each time they run and operate since many AI systems are built with randomness within the system. Instead, CompTIA recommends a scope for predictability at scale which would not require identical outputs.

Enforcement

The Commission's White Paper recommends ex-ante conformity assessment requirements for AI applications; however, this method falls short of a balanced approach to AI enforcement. Instead, CompTIA urges the Commission to include a combination of ex-ante risk self-assessment and ex-post enforcement for high risk AI applications. This approach would achieve faster, and similar results intended by the Commission as well as prevent unnecessary burdens hindering innovation. Furthermore, this recommended enforcement method would build on existing industry practices, including legal and ethical due diligence practices that guide the responsible and trustworthy development of AI.

Additionally, the Commission should include effective and workable alternatives to upfront conformity assessments. CompTIA recommends that organizations be required to carry out and document risk assessments for AI applications deemed high risk. These risk assessments should be based on articulated principles and would fall within the scope for data protection impact assessments under GDPR.

The current proposed ex-ante conformity assessment in the White Paper raises numerous issues:

- ***Treatment of products already in the market:*** The White Paper calls for existing products already in the market to retroactively undergo conformity assessments. This would create a significant backlog for the newly established testing centers. CompTIA urges the Commission to include a grandfather clause to prevent needless testing.
- ***Treatment of R&D and early-stage products:*** Oftentimes, in the early stages of developing an AI application, the product undergoes a transformation from the original intent of the application to the result. Therefore, it is pertinent that confidential testing and piloting of an AI application be allowed prior to the conformity assessment, within the bounds of existing sectoral regulation. Without confidential testing, organizations would be forced to take unduly precautionary measures when deciding to invest in AI.

[14] White Paper at 20.

This would significantly hinder innovation and is antithetical to the Commission's intention to make Europe a global leader in AI innovation.

- ***Retraining AI on European datasets:*** The Commission's White Paper suggests requiring AI developers to retrain their AI systems using European data or in Europe if they are unable to provide evidence that the original dataset met European standards. This requirement raises significant concerns as there is no evidence that European datasets or AI training in Europe will improve the performance of the AI system. Instead, blocking the use of foundational, non-European, datasets would likely risk the AI system's performance and produce low quality outcomes, while potentially increasing bias in AI systems by prohibiting the use of globally representative datasets. This stringent requirement would also effectively prevent Europe from experiencing socially beneficial AI innovations developed elsewhere such as global AI research for COVID-19 solutions.

Safety and liability frameworks

Safety and liability frameworks are necessary to provide users of AI applications with sufficient protection if AI issues arise. However, the White Paper conflates the notion of health and safety with issues falling outside the scope of product safety (i.e. cybersecurity, privacy, mental health, and ethics). EU safety regulations should solely focus on the health and safety risks that are uniquely associated with that of AI, IoT, or robotics. Furthermore, any AI safety or liability regulation should fall under the EU's Regulation 2019/2144. There is no need for additional safety regulations related to general consumer devices where a security threat does not directly constitute a human safety issue.

CompTIA suggests that Europe's current liability framework remains fit for AI systems as it is both effective and technology neutral. The current European liability law poses no significant problems and is sufficient to cover AI systems without the risk of unintended consequences that an amended law could have. Furthermore, any changes to the current law should be supported by clear evidence and a strong consensus among legal experts that the current framework is inadequate.

The Commission should also be wary of expanding the scope of the existing liability framework because stricter liability frameworks such as the Product Liability Directive are only reserved for abnormally hazardous situations, precluding any consideration of intent or negligence. It is shortsighted to include AI software and services under a framework like the Product Liability Directive because developers of AI would then be held liable for issues they have no awareness of or influence over. This approach could result in AI developers being held accountable if their AI technology is used by others outside its original purpose (i.e. facial recognition for public security devices used for mass surveillance). AI technology, in many ways, improves human decision making through their innovative algorithms. However, no algorithm is perfect and requiring the creator of an AI application to be held accountable for all unforeseen uses or mistakes will deter future AI development. Ethical use of AI technology is a shared responsibility and does not only fall on those developing the algorithm or application. Those who integrate and use the AI algorithms and applications also share in the ethical

responsibility. CompTIA strongly urges the Commission to reconsider the White Paper's liability framework as legal burdens resulting from stringent regulations will hinder innovation, competition, and will disproportionately fall on European SMEs.

Flexible data platforms

CompTIA members would also like to ensure that the EU recognizes the importance of flexible data platforms to support AI, specifically multi-cloud data, when developing AI technologies. The White Paper discusses data and increased computing power but fails to acknowledge that AI decisions hinge on flexible data platforms. Flexible data platforms are critical to AI innovation for storing and managing large datasets (e.g. cloud and multi-cloud) and should not be excluded when developing regulations around AI technologies.

Multilateral efforts in developing global framework

CompTIA and its members support the Commission's initiative to "achieve an ecosystem of excellence along the entire value chain,"[15] but suggests that this effort should extend beyond the EU national and regional level to create a set of global standards. While the White Paper mentions international collaboration on AI ethical guidelines in Section 4H[16], the desire to form a global framework of standards is minimized. The White Paper indicates that Europe will cooperate and monitor AI ethics and acknowledges its role in influencing global norms, however, the White Paper fails to promote the need for a global framework of standards. A global interoperable and coherent framework is essential to preventing a patchwork of different regional and country-specific requirements. CompTIA urges the Commission to work through multilateral efforts to create a global framework for AI technologies.

AI technologies & export control categories

CompTIA urges the Commission to ensure that AI does not take the form of new export control categories. The Commission has recognized that many aspects of the AI framework in the White Paper will rely on existing regulations such as GDPR, consumer protection, etc. CompTIA members urge the Commission to ensure that they treat AI similarly with regard to export controls, including giving due consideration to the Wassenaar Arrangement. The Commission's regulatory review should consider all existing multilateral agreements, not conflict with existing regulations, and retain consistency in global standards. Furthermore, the Commission should not implement export controls on AI that are unique to the Customs Union.[17] Such actions would be unmanageable for the technology industry. Overregulation of AI technologies will inhibit innovation and would be in conflict with the Commission's desire to become a global leader in technology.

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[15] White Paper at 3.

[16] White Paper at 8.

[17] White Paper at 18.

Regulating AI for autonomous vehicles (AV)

CompTIA strongly urges the Commission to avoid overregulation of AI in autonomous vehicles, as this action would conflict with the EU strategy on AVs. In 2018, the EU released its strategy for automated mobility, which provided support for the safety and mobility benefits of autonomous vehicles. The report clearly indicated that there would be a focus on aligning expectations with the EU's general safety regulations. The strategy also confirmed that "current EU support will need to be sustained in the long term as the EU is still some way deploying fully automated and connected vehicles."[18] The 2018 autonomous vehicle safety strategy laid out by the Commission remains necessary today as AV technology is still being developed.

Furthermore, per the 2018 AV strategy, the EU General Safety Directive was updated in November 2019 to include a roadmap for developing EU safety regulations for approving automated vehicles over the next few years, including driverless operation, operation with human drivers (e.g. driver monitoring), data recording, and providing information to other road users. These regulations would be applicable to both hardware and software technologies found within the vehicles, including any new AI software. Many of these regulatory work streams intersect with multinational discussions at the United Nations Economic Commission for Europe (UNECE), which already has several active working groups on AV safety regulations. The work being done at the UNECE on AV safety regulations is intended to create harmonized rules and avoid global conflicts between regulatory approaches. The creation of separate regulations on the AI component of AVs is completely at odds with the current EU strategy and ongoing multinational efforts to align AV safety standards. CompTIA suggests that the Commission focus efforts on AI technologies that are not already subjected to European strategies to avoid overregulation and redundancy. Overregulation in this space will not create public trust in the safety of AVs, but rather cripple European AI innovation for AVs.

Mandatory human oversight

Human oversight should not be mandatory for the development of AI, particularly for driverless vehicles. The Commission's White Paper recommends that AI programs include "monitoring of the AI system while in operation and the ability to intervene in real time and deactivate (e.g. a stop button or procedure is available in a driverless car when a human determines that car operation is not safe)."[19] While human oversight is central to the development of AI generally, such a concept of mandatory human oversight for operation is fundamentally at odds with the operation of automated vehicle technology. The General Safety Directive distinguishes "automated vehicles" from "fully automated vehicles," and clearly states that fully automated vehicles are "designed and constructed to move autonomously without any

[18] European Commission. COM (2018) 283 final. "Communication from the Commission: On the road to automated mobility: An EU strategy for mobility of the future." https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018DC0283

[19] White Paper at 21.

driver supervision."[20] CompTIA urges that any considerations of human oversight and/or intervention for AI should be limited to the training of these systems rather than public operations, which have already been validated for safe operation.

Conclusion

CompTIA thanks the European Commission for providing guidelines for trustworthy AI technologies and their openness for stakeholder input. We agree that creating trustworthy AI technologies is crucial for sustainable economic growth and beneficial for societal wellbeing. CompTIA and its members are mindful of the responsibility inherent in shaping trustworthy AI and understand that regulatory agencies, the academic community, nonprofits, and private sector innovators each have a role in promoting trustworthy and safe AI technologies. CompTIA looks forward to ongoing collaboration with the European Commission and other policymakers on this important topic.

Sincerely,

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[20] European Commission. Regulations (EU) 2019/2144 of the European Parliament and the Council of 27 November 2019. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R2144&from=EN