Hewlett Packard Enterprise

HPE's perspective on the European Commission's White Paper on Artificial Intelligence

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Executive Summary

Hewlett Packard Enterprise (HPE) is a global technology company advancing the way people live and work. The company has led on society's digital transformation since the very beginning as a founder of Silicon Valley in 1939. HPE is one of the largest providers of servers, storage and intelligent networking solutions globally. Following the acquisitions of SGI and Cray, HPE secured its position as the world leader in high-performance computing (HPC) with 40% of global market share. Present in Europe for over 80 years, the company works with businesses and organisations to capture, analyse and act upon data to accelerate business growth and modernise public administrations.

As a global leader in digital infrastructure, HPE is an important provider of systems integration for Artificial Intelligence (AI) and is continuously working to develop exciting new applications for AI. HPE's work on "Swarm Learning" is one example. Swarm Learning is a decentralised Machine Learning (ML) solution built on blockchain technology, designed to help enterprises harness the power of distributed data while providing a high level of data protection. HPE foresees powerful applications in Swarm Learning in healthcare, urban mobility and space. To take **healthcare** as an example, Swarm Learning could help cancer centers located across different continents share proprietary data sets by using computation for a more precise approach that eliminates the need for raw data transfers. Another example can be found in **urban mobility**, decentralised architectures can help citizens in connected cities safely share data, moving beyond models focused simply on modelling and prediction to close the loop in bringing intelligent systems to a new level of decision-making abilities.[1] **Telecommunications** is another growth market for leveraging new AI technologies. HPE's efforts have focused on helping Communications Service Providers to operate in hybrid, virtualized, and cloudified environments through an "Intelligent Assurance" suite, an AI machine-learning based platform that provides a powerful way to transform telecoms network data into actions that pave the way towards zero touch operations and self-driven networks. In the European Union (EU), HPE works with a range of private-sector and government partners to help test, develop and scale new AI. One example includes HPE's collaboration with the AI in Sweden initiative to help strengthen the Swedish AI eco-system, providing the basic infrastructure for a Data Factory, that will help render high-quality data sets more accessible.

HPE is grateful for the opportunity to provide feedback to the Commission's consultation on the White Paper on Artificial Intelligence. Overall, we are supportive of Europe's ambition to take international leadership in AI, and we welcome the calls for a clearer regulatory framework at EU level. **The EU is leading in AI innovation but lagging in the marketisation and industrial uptake of existing research**. The efforts of EU regulators should therefore prioritise real-life applications of AI-based solutions, through the creation of partnerships with the private sector, while paying special attention to SMEs.

Throughout this document, we outline several considerations the Commission could account for in planning the follow-up to the White Paper on AI, emphasizing above all, the urgent need for a focused and robust legislative framework to foster trust in AI technologies.

Specific feedback on the AI White Paper

Hewlett Packard Enterprise (HPE) supports the objectives set out in the White Paper on AI to accelerate the up-take of AI in a genuine single market for data. Below are listed some specific points that deserve attention.

[1] More information on HPE's work around Swarm Learning can be found here, Hewlett Packard Labs, Technical White Paper (November, 2019), "Swarm Learning: Turn Your Distributed Data Into Competitive Edge: efficient, secure, privacy-preserving and decentralised machine learning on blockchain".

Clarifying fundamental principles on AI

The White Paper is right to raise concerns that AI development could lead to a variety of fundamental rights concerns. HPE, and the wider technology industry, will continue to work closely with regulators across Europe to mitigate bias, inequity, and other potential harms in automated decision-making systems. HPE agrees with the Commission on the need to develop "responsible AI". Beyond the "human centric" approach proposed by the EU, there are certain fundamental principles that will have to be accepted early on. The adoption of "Asimov Laws", clearly delimiting areas of activity that AI can and cannot do to avoid harm to humans, is one way of addressing this. Furthermore, the European Commission should explore verticals, where the application of AI systems may happen only under human oversight and define regulations for subsequent fields. The application of AI in healthcare (i.e. medical imaging), telecommunications, and in the automotive sector, could serve as an example.

Legislation on AI is overdue

A more robust governance framework is needed with a focus on priority sectors where regulating high-risk fields will be needed, notably in healthcare and defence. Well-designed measures would accelerate the take-up of AI by fostering an environment of trust while enhancing Europe's global competitiveness in an area of strategic importance for the rest of the economy. The risks of acting too late remain visible, with examples including Audi, the German automotive manufacturer, abandoning plans to install enhanced autonomous driver-assist systems in the A8 Sedan, due in part to the lack of an appropriate legislative framework.[2] It is nevertheless crucial, for each sector to be evaluated carefully so that regulators develop a clear understanding of where stronger action would bring value or just undue harm without any benefit.

High-risk AI and mandatory requirements

HPE agrees with the White Paper's approach suggesting that regulation should take a risk-based approach, concentrating on minimizing the risks of potential harms emerging from certain AI applications. The distinction between high, low and no-risk AI systems should be based on mandatory Commission preliminary assessments that will cover AI applications in all verticals, unless a specific application field is already covered and protected by existing legislation. On mandatory requirements, HPE would emphasize that the most important requirements be a focus on the quality of training data sets and information on the purpose and the nature of AI systems. Other requirements worth mentioning include the keeping of records and data; the robustness and accuracy of AI systems; clear liability and safety rules; and human oversight.

Supporting SMEs through Digital Innovation Hubs

HPE is a strong advocate of the value of Digital Innovation Hubs (DIH) as a means of scaling AI systems to SMEs. Their most important benefit is helping SMEs raise awareness about the benefits of AI. We would stress, however, that more must be done to ensure DIHs are well-funded so that they can be rolled out more widely across Europe.

Voluntary labelling

In addition to a stronger regulatory framework, HPE agrees with the Commission that a voluntary labelling system would be useful for AI that is not considered high-risk. However, the condition for an effective labelling system would be a rigorous system of oversight to guarantee the accuracy of the labelling and the high quality of datasets.

Conclusion

HPE stands ready to keep working with the European Commission on supporting the deployment of European AI, for example by supporting the activities of the European AI Alliance. A clear regulatory framework is needed on AI in Europe. This framework should provide certainty to large and small businesses and avoid over-regulation, striking a balance between business clarity, technological innovation, and market uptake of AI systems. In doing so, HPE is confident the European Union will be able to reach a new frontier in the development and propagation of AI technology.

[2] Motor Authority (April 28, 2020), Audi gives up on Level 3 autonomous driver-assist system in A8.