

## Consultation on the White Paper on Artificial Intelligence - A European Approach 14 June 2020

While we unhesitatingly support this important work, we have two specific concerns that we hope will be addressed.

- 1. The Consultation and the seven key requirements identified in the Guidelines of the High-Level Expert Group refer only to general Al concerns. However, it is also essential to account for domain specific concerns, which differ according to the domain in which the Al is being applied (i.e., there is a 'collision' between the ethics of Al and the ethics of the domain). For example, when Al is applied in education, the developers, researchers, policymakers etc. must account for the ethics of education (e.g., choice of pedagogy) as well as the more general ethics of Al (e.g., privacy). In health, in transport, in fintech, etc., the questions are quite different. This, in our opinion, is a serious omission of the Guidelines of the High-Level Expert Group and should be implemented as an eighth key requirement, along the lines of: "Account for the ethics of the domain in which the Al is being applied."
- 2. The Consultation appears to assume that AI is always entirely data-based. However, this ignores the history of AI (i.e., symbolic AI and knowledge-based systems), the many limitations of data-based AI (i.e., in many applications it simply is not more accurate than humans), and the growing likelihood that AI development is reaching a plateau which only a new paradigm will solve, one that builds on but goes far beyond the use of data. In short, focusing on data is necessary but far from sufficient.

Dr Wayne Holmes MA, MSc (Oxon), PhD (Oxon)

Principal Researcher (Education) at Nesta

agre Holmon

Artificial Intelligence in Education. Promise and Implications for Teaching and Learning (Holmes, Bialik and Fadel, 2019)