

# Certification of AI Systems

## Discussion Paper

Jessica Heesen et al.

Working Group IT Security, Privacy,  
Legal and Ethical Framework  
Working Group Technological  
Enablers and Data Science

The certification of Artificial Intelligence (AI) is considered a possible key requirement for promoting the use of AI systems in various areas of business and life. For many AI systems, certification can contribute to exploit the societal potential in a secure and public-interest oriented manner. A successful certification of AI systems enables the fulfilment of important social and economic principles, such as legal security (e.g. liability and compensation), interoperability, IT security or data protection. In addition, it can create confidence among citizens, lead to better products and influence the national and international market dynamics. In order to prevent certification procedures from becoming an obstacle to innovation, it is necessary to guarantee certain standards of AI systems, avoid over-regulation, enable innovation and, at best, initiate new developments for a European path in AI application. Experts from the working group IT Security, Privacy, Legal and Ethical Framework and the working group Technological Enablers and Data Science of Plattform Lernende Systeme have systematized potentials and challenges within the certification of AI systems in a discussion paper. The paper sheds light on the various technical, legal and ethical constraints and provides also an overview on existing initiatives for the certification of AI systems in Germany.

**Imprint** Editor: Lernende Systeme – Germany's Platform for Artificial Intelligence | Managing Office | c/o acatech | Karolinenplatz 4 | D-80333 München | kontakt@plattform-lernende-systeme.de | www.plattform-lernende-systeme.de | Twitter: @LernendeSysteme | Status: April 2020 | Image credit: Vertigo3d / iStock | The original version of this publication is available at: <https://www.plattform-lernende-systeme.de/publikationen.html>



SPONSORED BY THE



Federal Ministry  
of Education  
and Research

 acatech  
NATIONAL ACADEMY OF  
SCIENCE AND ENGINEERING