

HENSOLDT AI Policy

At HENSOLDT, we drive technological progress in order to develop ever more innovative and powerful sensor systems. By detecting a wide range of objects and targets, our products provide the best possible support to those who protect and defend us and our values.

Hence, we develop sensor and data fusion technology for the German Armed Forces, allied forces and partners in the military and security arena. All kinds of methods for automatically analysing large volumes of data are used as part of this. This automation is vital to ensuring that the people who make the decisions get the best information that they need at the right time for responsible control and management of their own platforms, sensors and weapons.

In complex threat scenarios, you can only achieve deterrence and superiority – and therefore survivability and effectiveness – if your forces can perform the Find, Fix, Track, Target, Engage, Assess cycle faster and more effectively than your enemy. In this context, responsibility means that people always remain involved in managing the situation, but are extensively supported in this at all times by automation, ensuring they can act in a timely and optimally effective manner while conserving resources and avoiding collateral effects wherever possible.

Artificial intelligence (AI) methods have been used for decades for automated analysis of sensor data and for resource management. In particular, these are and have been model-based techniques such as propositional and predicate logic, Bayesian networks, fuzzy logic, data fusion and state estimators. The rapid pace of digital transformation and the associated increased availability of immense volumes of data have favoured the use of data-driven machine learning methods, especially neural networks, in recent years. Those who oppose our values have also recognised the tremendous potential of AI and are investing significant resources in equipping their armed forces with the necessary systems.

Model-based or symbolic approaches generate mathematical-statistical models of the real world whose elements have representations in reality. Through such modelling, people are able to interpret the respective model's internal states generated using the input data and thus also understand the results.

When using sub-symbolic methods such as neural networks, a parametrised mathematical model is optimised based on data. In general, the number of parameters is considerably higher in this scenario, while the model elements are generic and have no representation in reality. This makes it much harder to understand how the results have been arrived at through analysis of the internal states. Therefore, suitable requirements have to be defined in order to sufficiently ensure the integrity of the results.

Accordingly, on 17 July 2020, the High-Level Expert Group on Artificial Intelligence set up by the European Commission formulated seven requirements for trustworthy AI systems in its Assessment List for Trustworthy Artificial Intelligence (ALTAI) for self-assessment*:

1. Human Agency and Oversight:

HENSOLDT processes data into information that is provided to operators in a timely manner and forms the basis for their responsible decision-making.

2. Technical Robustness and Safety:

Product safety is paramount at HENSOLDT. Our development process ensures that risks to correct and robust functioning are systematically identified and suitably mitigated. We ensure that all applicable requirements are met through multi-stage, independent quality assurance.

3. Data Privacy and Data Governance:

In those rare cases in which personal data is involved, HENSOLDT complies with all relevant regulations and statutory requirements. Confidential technical data is dealt with in accordance with the requirements for handling classified information.

4. Transparency:

HENSOLDT achieves confidence in the proper functioning of its products by being transparent about the system design and the data used for training and verification purposes. Moreover, uncertainties and confidence levels in respect of results are quantified, and any inconsistencies or conflicts are indicated.

5. Diversity, Non-discrimination and Fairness:

Optimum performance is very important to our customers and ourselves. Therefore, HENSOLDT products contain algorithms that best eliminate or compensate for any bias. The training data selected or generated for data-driven processes is as representative as possible for the given application scenario.

6. Environmental and Societal Well-being:

HENSOLDT consistently pursues an ESG strategy that is aligned with the benchmark for our industry.

7. Accountability:

We take responsibility for ensuring that our products are designed and manufactured using state-of-the-art technology and regularly provide evidence of this, including to external bodies and agencies.

HENSOLDT is committed to these principles and strives to meet these requirements with its products, as far as technically possible. At the same time, through our use of advanced AI technology and methods, we firmly believe that HENSOLDT products offer the superior performance expected by the German Armed Forces, allied forces and partners.

* <https://futurium.ec.europa.eu/en/european-ai-alliance/pages/altai-assessment-list-trustworthy-artificial-intelligence>