

## Qualification and Certification Support

- Technical examination, evaluation and commenting of verification documents for qualification, certification and airspace integration of UAS
- Support of judicial authorities and international
- Organisations in the development of international certification guidelines and standards (including AEP-101, STANAG 4586, STANAG 7085, STANAG 4660, STANAG 4671, EASA Drone Rules Proposal, EASA NPAs)
- Support in the development and application of certification regulations for UAS
- Drafting and tracking of technical and procedural facets of the integration of unmanned aircraft systems into existing airspace structures
- Support in the development and technical analysis of safety-critical software [e.g. test/verification of flight control systems]
- Support in the analysis and evaluation of flight tests
- Development of performance-equivalent alternative certification procedures, especially in the domain of airspace integration of military UAS
- Concepts and simulations for traffic alert and collision avoidance systems and automated evasive manoeuvres (encounter models)

For more information please contact us:

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## Defence & Security

### Unmanned Aircraft Systems (UAS)



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**IABG**

As an independent and product-neutral service provider in the field of Unmanned Aircraft Systems (UAS), we support the German Armed Forces, NATO and the EU as well as selected domestic and international public and private clients. Our team of experts covers all components of the overall system – aircraft, payload, data transmission and control station.



We support our clients' projects holistically and continuously throughout all phases of the life cycle. We offer know-how and solutions from concept and design to implementation and use. In addition, we provide support for qualification and certification.

### Concept and Design

- Application-specific market research and assessment of commercially available systems
- Feasibility and design studies as well as concepts for integration of customer-oriented, manufacturer-neutral solutions
- Support in the development of command and
- Operational concepts (e.g. CONOPS, interoperability), including the use of technical-operational simulation of UAS and operational units consisting of manned and unmanned systems
- Analysis of the operational requirements situation, technical and economic review of specifications and determination of the compliance levels
- Drafting of training concepts, e.g. for the tactical training of sensor operators
- Development and implementation of mission planning modules
- Development of concepts and analysis of impact potential, vulnerability and survivability with UAS participation
- Studies on protection against enemy UAS
- Analysis of communication architectures (consideration of the data connection from the physical level to network technology to IT security) for the secure operation of UAS
- Development of communication solutions with aerial relays and satellites

### Implementation and Use

- Follow-up configuration of support platforms for the evaluation of flight and mission performance
- Identification of necessary adjustments to ensure the operability of commercially available systems in the German Armed Forces
- Performance analyses and requirements specification
- Regarding payloads, sensor technology (EO/IR, radar, LIDAR, SIGINT, etc.) and image chains
- Development and operation of a fully cross-sectional reference ground control station for neutral certification according to STANAG 4586
- Review of the human-machine interface of ground control stations
- Specialist technical support for (multinational) definition studies by evaluating industry proposals, studies and concepts for procurement decisions
- Risk management (risk identification and assessment, risk minimisation measures)
- Creation of IT security concepts and solutions
- Creation of NAF architecture models and drafting of IT service documents
- Development of logistics concepts and solutions as well as testing of readiness of technical and logistical supply and deployment
- Techno-economic expenditure analyses (e.g. implementation and utilisation costs, LCC, implementation plans)