

FOREWORD

European Defence Agency

By Alexander Weis, Chief Executive



It is with pleasure that I am addressing today the UAS community through the 2009 Yearbook on 'UAS: The Global perspective'. Responding to the priorities defined by the Ministers of Defence and with a view to tackle global challenges posed by UAS Air Traffic Insertion, the European Defence Agency (EDA) has been actively supporting the overall European cooperative effort on UAS in recent years.

The activities performed under the EDA umbrella in this particular domain with a view to facilitate the use of UAS in support of European Security and Defence (ESDP) missions, are guided by the wider mandate set out for the Agency since its creation in 2004, namely «to improve the EU's defence capabilities in the field of crisis management and to sustain the ESDP as it stands now and develops in the future.» In carrying out this mission the EDA brings together expertise regarding capability development, research & technology, armaments as well as industry & market in view of ensuring a capability-driven output and incorporating technologies and industrial knowledge at an early stage of planning.

The various UAS-related activities performed within the EDA framework are benefitting from this unique 'integrated way of working' and are fully coordinated with the wider European effort, undertaken by important stakeholders such as the European Commission, the European Aviation Safety Agency and Eurocontrol.

Responding to the interest expressed by EDA's Steering Board at Ministerial level, the Agency initiated in January 2008 a project on UAS Air Traffic Insertion. This activity aims at encouraging European stakeholders such as airworthiness authorities, air traffic management bodies, procurement agencies, industries and research institutes to develop and propose a joint agenda for common European UAS activities. It includes the development of a roadmap for the integration of civilian, security (state/governmental) and defence UAS into non-segregated airspace by 2015.

Building on the work performed by a strong European industrial consortium (Air4All)¹, EDA went on in early 2009 to address specifically military mission needs in the area of tactical and MALE UAS, performing surveillance missions over land and sea as well as cross-border ferry flights to operational theatres in Europe and beyond. One of the major challenges identified in this respect will be to establish and harmonise at European level a set of regulations and procedures for the operation of UAS within civil airspace on a routine basis.

The insertion of UAS into general air traffic equally has implications in terms of new technology developments and regulatory issues. Major activities performed under the EDA umbrella and with a view to the Air4All Road Map development include:

- The MIDCAS (Mid-air Collision Avoidance System) project: Sense and Avoid is one of the key technology challenges identified in the Air4All Roadmap. Developing such a capability will have an important effect on how we operate UAS in the future. The overall aim of MIDCAS is to demonstrate a Sense

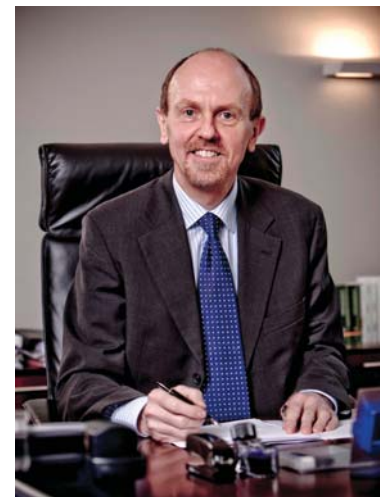
and Avoid system for UAS able to fulfil the requirements for traffic separation and mid-air collision avoidance in non-segregated air space. This € 50m technology demonstrator project is run by five EDA Member States (France, Germany, Italy, Spain and Sweden).

- An activity being coordinated with the European Space Agency as regards Command and Control (C2) of UAS over satellite as well as Air Traffic Control (ATC) data link: starting from a commonly organised workshop in May 2009, the activity will involve two parallel feasibility studies as well as a subsequent demonstration mission in order to prepare an initial operational capability in the C2/ATC area for Europe by 2015.
- The preparation of the World Radio Conference 2011 and subsequently 2015: EDA participating Member States agreed in August 2008 the business case to start a 'Study on Military Spectrum Requirements for the Insertion into the General Air Traffic for UAS' (SIGAT). The Air4All Frequency Group will work towards the identification of appropriate spectrum requirements and consolidate a common European position regarding regulatory and operational UAS requirements for the upcoming World Radio Conference.

It is the combined effort of all stakeholders that will make the routine operation of civilian, security and defence-related UAS in general air traffic a reality. The road ahead of us up to 2015 will require additional efforts in fields such as standardisation, certification, continued airworthiness and air traffic management as well as related technology developments. EDA will continue to provide support to its Member States on this important initiative and aim at responding to specific military needs in many of those fields as UAS will increasingly contribute to meet EU's security objectives. The Agency will add value notably by encouraging and catalysing collaboration in research projects to develop the technologies required for such systems and support the building up of required regulations and procedures at European level.

The military market for UAS *per se*, however, will be too limited for industry to reach sufficient economies of scale and be confident regarding its future competitiveness and return on investment. It is the development of common standards and solutions across the civilian, security and defence domain that will provide confidence to industry to invest and provide competitive products

I am therefore convinced that a fruitful and mutually beneficial dialogue between the defence, security and civilian sector will allow Europe to become a major player in preparing the future of UAS. The 'global perspective' will thereby inevitably imply looking beyond European borders to establish global standards with allies and partners and on a wider basis in the framework of efforts undertaken by ICAO with regard to ATM issues.



[†] See detailed description of the consortium under www.air4all.net