

## Conference “Los Satélites como un elemento clave para la seguridad y defensa y las aplicaciones gubernamentales”

Keynote speech (10:30)

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*(Check against delivery)*

*N.B. Speech was originally delivered in Spanish*

- First of all, let me thank the organizers of this seminar for inviting me to provide a keynote speech at such a distinguished event. Gathered here today is a pool of professionals with a wide array of different expertise and, I’m sure, very strong opinions and proposals: I am confident that, thanks to the contribution of such a diverse crowd, this seminar in its 10<sup>th</sup> edition will provide some fruitful and innovative reflections. I hope my brief intervention will contribute to stimulate some debate.
- Also, please allow me to take off for just one moment my hat of international civil servant and let me express my personal satisfaction for seeing such an high level seminar organized in Spain. It is but another indication of the continued and productive involvement and contribution of Spain to the space sector, a contribution that I know very well first-hand also thanks to the

leading role Spanish institutions and industry play in EDA space-related projects, as I will later explain.

- I would like to start my keynote speech by providing my personal view of the strategic and political context within which the major trends of the security, defence and space sectors are currently developing. I would then draw attention to five key areas of space applications for security and defence and to EDA activities in those areas. I will then conclude with some reflections on the relevance of industrial competitiveness in the space and defence sectors, and on the potential added value of the European Defence Fund for space and security.

### **[Strategic Context: a transformative moment]**

- We currently live in an age of transformation and uncertainty. This is true for almost all fields of human activity, and the security, defence and space sectors are no exceptions. All three are experiencing the impact of several intertwined and deeply transformative trends, which for simplicity we could reduce into two “megatrends”.
- From the political-strategic point of view, the international environment seems to become more and more volatile, and characterized by sudden, or difficult

to foresee, transformative events that amount to strategic surprises – such as the Arab spring, the Ukraine crisis or the rise of ISIS.

- From the technological point of view, we are observing the continued development and diffusion of technologies and tools which have disruptive impact on society, the economy but also on security – by exposing new vulnerabilities or by maximising the capabilities of big and small actors alike (include non-State actors).
- The impact of these trends, in security and defence terms, is that threats to European security are also progressively becoming less predictable, asymmetrical, diverse and hybrid. Even if the possibility of conventional warfare cannot be entirely discounted, it seems clear that our armed forces in the future will continue to be involved in several different kind of military operations, and will therefore need an increasingly varied and sophisticated array of tools and capabilities.
- At the same time, the security and defence industry will need to deal with a possible “third industrial revolution” characterised by the centrality of digital technologies and by an ever accelerating speed of technological change. This will require an intense adaptation effort

from traditional defence industry, both in terms of innovation patterns and of mentality.

- Space, of course, is not immune from these winds of change, and security and defence space-based assets and capabilities are surely no exemptions. Already in the '90s, the First Gulf war and the Balkan wars demonstrated how armed forces benefitting from space-based assets had an incomparable edge over adversaries. However, the role of space assets today is such that satellites are not merely added-value assets, but a key component indispensable to achieve contemporary security and defence objectives.
- I do not need to spend many words on this, as every one of you is well conscious of how maritime, land and air platforms are increasingly reliant on space to conduct operations, of how much our forces depends on satellites for reconnaissance, communications, navigation, etcetera.
- And this process is not likely to stop – you just need to look at the US Third Offset Strategy and the Pentagon's significant budgetary growth in 2017 for areas such as Space situational awareness, control and protection of assets: navigation, timing and communications: command and control capabilities.

- Other trends confirm this as well – for example, costs of access to space are going down and the number of governmental and commercial satellite operators has been growing almost exponentially in the last decade. Economic and industrial competition has therefore increased dramatically.
- At the same time, developments in technologies and a growing cross-fertilization with other domains are opening new opportunities, in terms of commercial and governmental applications (just think about how much RPAS are going to drive up the demand for satellite communications).

**[Policy context: increased EU action on space, security and defence]**

- In fact, what I just said is not new. Indeed, Europe has included space and security in its list of priorities for a decade. We should recognise, however, that so far we haven't fully achieved our ambitions of making space and security cooperation a tangible reality. With the expression "space and security cooperation" I intend both cooperation between civilian and military actors, and cooperation within the defence community.
- Of course there have been, and there currently are, examples of successful cooperative enterprises

between European militaries in space, both bilateral and multilateral. But, given the current security challenges facing Europe, we really need to strive for much greater progress in developing space and security links and genuine cooperation in the military domain, closer to the level to which is already well established the purely civilian domain.

- The good news is, we now have all the policy instruments necessary to deliver. Within the last 12 months, there has been a clear and determined push at the policy level to increase space and security cooperation, in practical terms.
- The EU Global Strategy, which provided an ambitious vision for the future of European foreign and security policy, clearly acknowledged this crucial area of development for CSDP. It is worth reminding that all capability development priorities included in the EUGS and in its Implementation Plan are linked, directly or indirectly, to the use of space: intelligence-surveillance reconnaissance, remotely piloted aircraft systems, satellite communications and autonomous access to space and permanent earth observation.
- Also, the Commission's Space Strategy for the first time recognised the need to “reinforce the synergies between civil and security space activities” and to

“address emerging needs related to security and defence”.

- Furthermore, the Commission’s European Defence Action Plan introduced the very significant instrument of EDF for funding research and development, which I will discuss later and which will represent an opportunity for the space sector as well. Moreover, the EDAP also further reinforced the dual-use dimension of space, launching the initiative on SatCom and starting to explore how to take into account the military side of earth observation for Copernicus next generation.
- So, political guidance from the highest level has now been secured. It is now time to turn this words into actions. This window of opportunity should not be lost.
- A pre-requisite would be to adopt a genuinely dual-use approach in the conception of space infrastructures. Possible dual use synergies should be considered from the onset for future European programmes, and in a systematic matter, so as to take into account the defence community needs as well.
- At least, an effort should be made to make sure that satellite infrastructures are compatible with the needs of defence users under the CSDP. This would guarantee

that defence actors could take advantage from existing assets at European level.

- The examples of Galileo and Copernicus demonstrate that it has not been the case so far. However, the Space Strategy hinted at a possible effort from the Commission to reinforce the defence dimensions of both programmes.
- We are looking forward to it and, as an institution designed to ensure that the views of the defence community are properly channelled, we stand ready to support the Commission as appropriate. For example, EDA would be in the best position to federate the needs of the defence community and channel it appropriately.

### **[EDA space-related projects]**

- The role and responsibility of the European Defence Agency is to support the European Council and the Member States in their effort to improve defence capabilities through cooperative projects and programmes.
- We do not achieve this goal in isolation, and this is especially true for space. EDA does so in cooperation with other key actors, such as ESA, the EU Satellite

Centre, the European Global Navigation Satellite Systems Agency, the EEAS and the Commission.

- Only in the last year, we have concluded an Implementing Arrangement with ESA on Cyber defence for space, and we are currently finalizing other three, on space and Unmanned Maritime Systems, Earth Observation Requirements and GOVSATCOM.
- These partnerships, coupled with an explicit decision on my part to make synergies with the civilian world an EDA priority, contributed to giving to our space-related activities a distinctive dual-use character.
- A first example is the EU SatCom Market project, which offers commercial SatCom services through an EDA governed contract to its 24 contributing members. The project not only achieve economic benefits for the participants, but also supports contributing States in the definition of technical requirements or the technical interoperability between them.
- Among the members of EU SatCom Market is the Athena mechanism, so that EU military operations and missions can acquire commercial SatCom services without having to launch their own bidding processes.

- The Governmental Satellite Communications capability package initiative (GOVSATCOM) is another important step forward both in terms of concrete output and in terms of promoting space and security cooperation.
- The coordinated effort of EDA, the European Commission and ESA aims to establish more secure and guaranteed satellite communication tools to CSDP and national security actors, while promoting EU strategic autonomy and strengthening the EU space industrial base.
- EDA has finalised a feasibility study on GOVSATCOM and is preparing to set up a demonstration project focused on defence users, which will contribute to the set-up of a cooperative architecture and governance for the future wider GOVSATCOM. I should mention that this work is being carried forward thanks to the very active leadership of Spain, for which we are thankful.
- ESA has completed two feasibility studies at system level, whose results have been shared with the Commission and EDA, and is establishing six Precursor Projects preparing innovative Ground Segment solutions.
- The European Commission is currently engaged on an Impact Assessment study before determining its future

efforts and the future legislative proposal for an EU Governmental Satellite Communications Initiative.

- A thorough discussion on the future governance of the architecture is poised to start soon and we urge the start of it as early as possible, since a clear governance agreement is needed before the physical infrastructure is set up.
- All three GOVSATCOM institutions are working with a coordinated approach at policy and expert level. Hopefully, the success of this endeavour will demonstrate how overarching dual-use architectures can accommodate the needs and constraints of Member States, and will maybe pave the way for further dual-use programmes.
- In the field of Earth Observation, EDA has produced a Common Staff Target for Space Based Earth Observation Capability 2025-2030, approved by our Member States in July 2017. This document, which provides the high-level needs of the EU defence community concerning earth observation, is the first milestone towards the possible establishment of a capability delivering services for participating Member States and supporting EU missions/operations in a timeframe 2025-2030.

- To further and tangibly support a dual-use approach in space, the Agency has made the CST available to the European Commission as an input for consideration within the development of future system service needs of the Copernicus Security Service.
- Always in the field of earth observation, I should also mention our constructive cooperation with the EU Satellite Centre, including our ongoing workstrand on geospatial information to deliver applications in support of EU missions. Within EDA, a follow up study on radar imagery exploitation is under preparation to improve the management of complex information sets.
- Another key area where EDA is working with Member States is Positioning, Navigation and Timing. In 2015 the EDA Steering Board tasked the Agency to “engage in discussion with Member States to explore how the military and defence sectors can benefit from EU satellite navigations programmes”. This resulted in the drafting of an European Military Satellite Navigation Policy that touched on the GALILEO services that may be used in coordination with other GNSS solutions, and pointed out the fundamental service principles of a military PNT service. This policy may become a valuable input to the European Radio Navigation Plan currently being prepared by the Commission.

- As a follow-up in this workstrand, EDA has now set up an Ad Hoc Working Group for the drafting of military Positioning, Navigation and Timing user needs via a Common Staff Target. This work on defence users' needs for PNT may in the future open the door to discuss Galileo Second Generation security user requirements from the very beginning onwards.
- I would use this occasion to express my invitation to Spain to be part of the EDA positioning, navigation and timing efforts. I believe that would be a valuable and mutually beneficial development, considering also the important Spanish involvement in Galileo and also the Spanish industry interest in developing PRS receivers.
- Finally, the Agency is also supporting its Member States in the domain of cyber security, another one of the four key capability priorities indicated by the European Council.
- If you but read the news, you will already know that in a network-centric and information-based world, the cyber protection of space assets, and thus the integrity of the data they produce or transmit, is of the utmost strategic importance.
- The defence sector may be more sensitive to this challenge but the reliability of service, including from

civil assets on which the military greatly depends, is a key aspect for all users. EDA can help in making sure that such security requirements are integrated from the onset in core specifications, which is absolutely compulsory in developing a robust space system.

- Keeping in mind the cooperation on space and cyber security, we have concluded an Implementing Arrangements with ESA on joint R&T effort in cyber defence, complementing our already extremely fruitful cooperation in other areas as for instance critical space technologies for European non-dependance and in the domain of RPAS. We are currently pursuing cooperation on Cyber Ranges as well, another key domain of shared interest.
- To conclude this brief illustration, I should add that EDA stands ready, should its Member States so decide, to support a potential future EU programme covering Space Situational Awareness. In the past, I recall, Ministers of Defence already tasked the Agency with developing a document collecting the high-level needs in this area. The establishment of the European Commission Framework on Space Surveillance and Tracking now suggests that Member States and EU SATCEN are exploring the possibility to pool and share capabilities through an EU process and framework, exploiting also the area of a Recognized Space Picture.

## [EDF]

- This selected overview of space for defence elements leads me to emphasise that Europe's strategic autonomy in space and defence would be but words were it not for our solid and innovative space and defence industry.
- Not only do we, as European actors, have a political obligation to support European growth and innovation, to protect and create jobs, we also entirely rely on industry to answer our capability needs.
- The proposed establishment of the European Defence Fund and its Research and Capability Windows is a welcome step forward, which has the potential to provide significant support to Member States' capability needs and to our industrial base: the genuine efforts in terms of political commitment and investment in defence promised with the EUGS are materialising.
- EDA has supported the Commission's work on the EDF with a particular attention to defence specificities.
- We believe the EDF has a great potential to incentivise Member States' cooperation and investments, provided it is based on some clear principles.

- First, it should benefit all Member States.
- Secondly, it has to serve capability priorities agreed by Member States via the Capability Development Plan. This strategic document includes, in its current iteration, a number of capability priorities linked to the exploitation of space, such as satellite communications. The use of CDP would ensure that resources devoted in the EDF will be actually utilized for the security of European citizens, thus giving the EDF political legitimacy.
- Third, it will be important to make the best use of the existing structures, tools, programmes and projects by building on what already exists, and to avoid duplication of procedures and competences.
- There is in fact wide space to better exploit existing synergies, as our cooperation with the Commission and ESA demonstrates, without dispersing resources by creating duplicate structures – which could also generate institutional and managing confusion.
- EDA should play an important role in the Fund, as requested by Member States which demanded the Agency to act as a central operator of EU-funded

defence-related activities in the latest Long-Term Review.

- We can use the so far successful experience and lessons learned gained in the managing of the Pilot Project/Preparatory Action, the first initiative which provided communitarian resources to defence research and which is intended as a “test run” of the future European defence program.
- In this instance, EDA is playing an upstream role (acting as platform for discussion and facilitating prioritisation), an implementation role on behalf of the Commission, and also a downstream role, facilitating the exploitation of results in follow-on research or capabilities.
- We are now fully engaged in the definition of both sides of the EDF, the so-called research window and the capability window. I foresee that space-related technologies and capabilities should be extensively considered for both.
- Our aim in contributing to the discussion is to make sure that the EDF strikes a proper balance between the intergovernmental and community approaches. The role of MS, also through the Agency, must be maintained to take into account defence specificities.

## [Conclusion]

- I hope that my long speech has not sapped your enthusiasm for the discussion! I will conclude now with my main message.
- Cooperation within the defence community and dual-use synergies in space are crucial. They make political sense, they make technological sense, they make budgetary sense.
- We now have all the political support required to pursue greater synergy, at the European level, between military and civilian users and infrastructures: the political window of opportunity is open.
- It is now time to transform this words into action. EDA stands ready to support its Member States in this endeavour.
- Thank you.