

## European Autonomy in Space: The Conference

Under the auspices of the Hungarian EU Council Presidency, ESPI organised the conference "European Autonomy in Space" on 17-18 January 2011 in Vienna, Austria. The main theme of this conference was to investigate whether "Autonomy" still is a valid concept for European space policy. The idea of an autonomous access to space through Ariane and autonomous capacities and capabilities in outer space has so far been an accepted policy approach.

The objective of the conference has been to discuss for the first time how autonomy in space can be compared to autonomy in other European policy areas and what does autonomy actually comprise in concrete terms. The challenge was to clarify, how an understanding on which way Europe should take, could be shaped.

The aim of the first day of the conference was to figure out what exactly means "autonomy" in different areas such as raw materials and energy, industry and agriculture as well as culture, science and security. The second day of the conference was dedicated to autonomy in space related fields of expertise: human spaceflight, access to space, space applications, space technologies, security and space situational awareness.

Participants in the conference included high ranking speakers from the EU Council Secretariat, the European Interparliamentary Space Conference (EISC), representatives of European non-space related think tanks, as well as renowned experts from the various space sectors.



The findings and recommendations within this flyer are based on the contributions by the speakers and the discussions, namely: Jan Wouters, Rik Hansen, Samuel Schubert, Hans Martens, Thomas Ballhausen, Roger Bonnet, Franco Algieri, Christophe Venet, Niklas Reinke, Frank De Winne, Marcel Dickow, and Jean-Jacques Tortora.

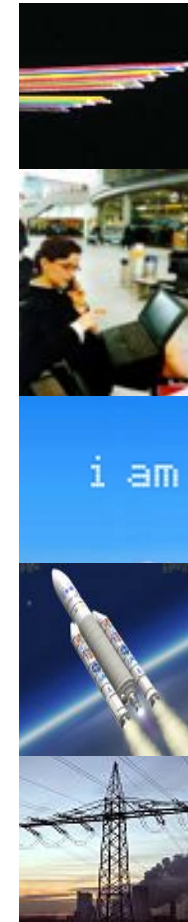
The proceedings of the conference will be published as volume „European Autonomy in Space“ in the series „Studies in Space Policy“ edited by ESPI and published by SpringerWienNewYork.



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## European Autonomy in Space - Conference Results



## Use of terms and experiences from other EU policy areas

### Definition and use of related terms

The word *autonomy* is derived from the Greek *autos* — self, *nomos* — law and describes that an entity possesses the power to determine its own law. Based on this understanding we refer to *autonomy* as the capability to make independent strategic decisions in pursuit of one's own clearly established goals and vital interests.

*Independence* and *non-dependence* are linguistically identical, though independence could be interpreted as “absence of dependence” (negative context), whereas non-dependence reflects the power to act without interference from outside (positive context). *Interdependence* reflects a mutual but not necessarily symmetric dependence between partners.

### The European Union

The European Union, which was preceded by the European Economic Community, was originally formed with a focus on interdependence, a sole internal dimension for its six founding member states. The European integration evolved focussing on Europe's role as a global actor, adding an external dimension by gaining independence through political integration. Both, internal as well as external dimensions, coexist in EU policies today:

*Trade:* The EU Trade Policy creates interdependence through a European wide single market. Externally, trade with non European countries shall fulfil supply requirements for the Union, empowering the Union to act independently. The commercial use of space will show the same feature.

*Agriculture:* Today the EU is autonomous and self-sufficient on a variety of products, therefore lessening political dependence. This goal was achieved with a significant economic investment over a long time period. A corresponding example from space is the field of navigation and the Galileo programme.

*Energy:* In the energy sector the EU is dependent on third countries to fulfil its vital needs. The EU energy policy could be seen as a policy aiming to create interdependence between EU and Russia, which needs to sell its energy resources. Such features are characteristic for the area of space situational awareness.

*Common Foreign and Security Policy (CFSP):* National sovereignty and interests of the member states makes the EU a restrained political actor in both, foreign and security policy. Political will is key to become more than just a dependent agent. This fundamental principle applies in general to Europe's activities in space.

## Space Issues

### Space Transportation

Access to space is today still a basic condition for all European space endeavours and therefore it is of vital interest for Europe to ensure autonomy in this domain. This acknowledges that space is a key element for independent decision making from a strategic point of view.

### Space Applications

Space applications are critical to many services critical to Europe's economies and governmental functions. Access to accurate and timely information sources form the basis for the protection of Europe's vital interest in numerous fields.

*Navigation:* Today Europe is dependent entirely from the US GPS navigation system. Europe's flagship in navigation, EGNOS/GALILEO, is key for European non-dependence on foreign systems and thus reaching a political autonomy with direct effects on security and mobility, both important aspects of sustainability.

*Earth Observation:* A full autonomy covering all aspects of Earth Observation is not possible. Europe can through GMES reach a leading role in selected areas, focusing on environment and to some extent on knowledge, enhancing sustainability, and creating interdependences with other actors.

### Human Exploration

Sustainable human exploration of space will be possible only in international world-wide cooperation. This will create interdependences amongst the participating partners at various levels. Europe needs to decide in which areas it wants to have its own capabilities, which then can be offered to the international partnership, thereby committing resources over a prolonged period.

### Security and Space Situational Awareness

Security today encompasses more than the traditional military security and includes i.e. environmental or social security aspects. As no globally defined security system exists, strategic partnerships with various players create a system of high interdependences. Europe is not yet seen as a political actor in this field, only a distinct commitment of resources allows engaging in strategic partnerships.

### Strategic Technologies

Europe's dependence on strategic technologies from others, especially the US, is a fact. This is true on the component level, less on the systems or sub-systems level. However, current activities (i.e. EC/ESA/EDA task force recommendation on critical space technologies and follow-ups) are far from being sufficient to close the growing gap.

## Recommendations

### Europe and Space

The 7th Space Council, held on 25th November 2010 in Brussels, reinforced the strategic priority of space. This implies the capacity to take required strategic decisions and to execute them, so as to safeguard vital interests. It is recognized that Europe's space activities today produce substantial benefits and advantages for its societies tomorrow. Moreover, sustainable achievements through European leadership in certain areas can help developing a European identity.

### Must Do's in Space Policy

The European Space Policy must pursue strategic independence in the following space interests:

- Europe must ensure sustainable access to space as it is a basic condition for all other European space activities.
- EGNOS/GALILEO, Europe's flagship in navigation, must become operational providing Europe with political autonomy and strategic independence.
- Space industry needs to maintain and enhance its technological skill and know-how which requires that Europe engages in high-profile space missions on a regular basis.
- Non-dependence through free and unrestricted access to critical space technologies must be ensured through a corresponding space policy.

### Funding

Autonomy requires an appropriate commitment of resources over a sustained period of time. The corresponding funding level must be predictable and reliable for the order of minimum one decade or longer.

### Political Support

All actors in European space activities (individual states, ESA member states, EU) must reach a consensus on the key elements of a European Space Policy, including but not limited to the Must Do's mentioned above. This will significantly contribute to sustainability in many other policy areas, including but not limited to knowledge, environment, resources, mobility, and security.

### Europe and Leadership in Space

European leadership in space must result in European leadership in space policy.

Leadership takes the concept of autonomy or independence a step further. The willingness to be a leader is shown in the announcement of credible objectives, corresponding plans and programmes and the ability to discharge them independently. The core element representing the leadership in broader based projects with other partners must be able to stand alone in case a partner opts out.