

**The different aspects of a
European space policy:
The contribution of ESA Member States**

*Presentation to the Conference on space, defence and European security
Kourou, 21 September 2006*

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Entering the 3rd period of European space activities

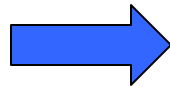
**1st period
(1964-73)**



**ESRO, ELDO + National space Agencies +
Scientists + Industry**

- **Launchers**
- **Science – cooperation with USA**

**2nd period
(1975-2003)**



**ESA + National Agencies + Scientists +
Industry + Operators**

- **Science – Horizon 2000**
- **Applications, security and defense staying
at national level**
- **Access to space and IOI**

**3rd period
(2003 onwards)**



**EU + ESA + National Agencies + Scientists
+ Industry + Operators**

- **EU dimension, including for security and
defense**

- **Today, 17 Member States “cooperating in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems” (*ESA Convention, Art. II: Purpose*)**
- **Based on that purpose, ESA Member States have invested in:**
 - Science: Space Science, Earth Sciences, Science in Microgravity
 - Applications: Meteorology, Telecommunications, Navigation, Global Monitoring
 - Enabling tools: Access to space, In-orbit infrastructure, Technology
- **Thanks to the continuous support of Member States and to the flexibility of ESA’s system (*80% of ESA programmes and activities are set-up on an optional basis*), ESA is a success story in all domains of its activities:**
 - The scientific communities in Europe are at the leading edge of science progress based on space technologies, world-wide
 - The European space industry is successful on the world-wide commercial market
 - The European operators (Eumetsat, Eutelsat, Inmarsat, Arianespace) are leaders world-wide.

The spin-off of 30 years of success

- **Citizens in Europe are more and more dependent on space systems in their daily lives, creating a growing user demand to be federated at European level and demanding a EU dimension in space activities**
- **Space has contributed to Europe`s construction:**
 - Integration of activities = 54% of government activities are today made within the ESA framework, 5% within Eumetsat and 3% within EC
 - Growing number of States involved in space activities
 - Structuring of scientific communities, industry and operators at European level
 - Image of “Europe” for European citizens, synonym of successful projects and improved daily life**contributing to an EU dimension**
- **Space has contributed to build-up the image and reputation of Europe, world-wide:**
 - A reliable partner in international cooperation (Science, International Space Station) and commercial services (Arianespace)
 - Capable of bold premieres (e.g. landing on Titan)
 - Offering possibilities to international partners to join European-conceived initiatives (e.g. Galileo)**supporting a EU dimension in a world in quick transformation**

The 3rd period: EU dimension in Space Policy

1. Building-up a relationship between ESA and the EU

- **1998** → Dedicated Resolution adopted by the 2 Councils (ESA and EU)
- **2000** → Joint document “ Europe and space: Turning to a new chapter”, defining common strategic goals adopted concomitantly by the 2 Councils
- **2003** → Framework Agreement between ESA and the European Community, creating in particular the Space Council (a joint and concomitant meeting of the 2 Councils)
- **2004 and 2005** → 3 meetings of the Space Council defining in particular roles and responsibilities of ESA and the EC
- **Since 2003**, ESA being involved in reflections and discussions at EU level on the space dimension of a European Security and Defense Policy
 - Contacts with EDA and OCCAR established.



esa The 3rd period: EU dimension in Space Policy (cont.)

- 1. Development of user-driven applications and services based on space systems, under initiatives from the European Commission**
 - Galileo
 - GMES
- 2. Development of a European space policy with a EU dimension, with the following elements:**
 - Strategy
 - Fundamentals of space
 - Applications
 - Industrial Policy
 - International Relations
 - Governance (roles and responsibilities)
 - Legal and financial issues
 - **A specific section will be dedicated to “Exploiting civil and defense synergies”**

The fundamentals of a European space policy

- 1. Providing a EU dimension to a European space policy is creating the basis for developing new applications and services based on space systems, available for all European citizens (including for security purpose)**
- 2. Such applications and services will be based more and more on Systems of Systems, integrating:**
 - Different types of space systems (Earth Observation, Telecommunications, Navigation, Intelligence,...)
 - and different types of ground-based systems**..within end-to-end systems responding to end-user needs.**

This new approach requires:

- New concepts,
- New organisations,
- New cultures

The fundamentals of a European space policy (cont.)

1. This new approach will be successful, provided:

- European space industry is strong and competitive world-wide, which requires a renewed industrial policy, adapted to a sector driven by governments world-wide and to an industry in Europe dependent on its successes on the commercial part of the sector.
- Access to space for Europe is guaranteed, which requires a continued government policy
- Science activities are consolidated since new applications and competitiveness enhancements are based on scientific progress

The fundamentals of a European space policy (cont.)

- New technologies are developed and demonstrated as a factor of competitiveness and a tool for industrial policy
- A strong exploitation of the synergies between civil and defense space services is organized as the only answer to the convergence of requirements needs, the interoperability constraints in crisis situations and the evolution towards common technologies
- A space situation awareness is developed in order to avoid restrictions in future space developments (e.g. vulnerability to space objects)

The evolution of ESA

- **The governance of the European space sector will change, the relationship between ESA and the EU will be stronger and stronger, new countries will join ESA membership. These evolutions will be managed in steps, in order to maximise their benefits and minimise the risks.**
- **ESA must evolve first and quickly, in order to further improve its global efficiency and reinforce the motivations of all its Member States in investing in space and cooperating within ESA.**
 - Such evolutions will have to be based on lessons learned from ESA current operations
 - They must prepare ESA to evolve towards the EU institutional framework while integrating new Member States
- **The main evolutions of ESA will concern:**
 - Industrial policy (industry capabilities, procurement, technology)
 - Decision-making process
 - Financial system and funding mechanisms
 - Stronger coordination between ESA and national programmes, resources and industrial policy

Roadmap

1. **22 May 2007** → Endorsement of a European space policy by the EU and ESA Council, meeting within the fourth Space Council
 - A first complete draft will be available in November 2006 at the latest, prepared by the EC/ESA Joint Secretariat, in order to accommodate consensus-building among Member States

2. **Autumn 2008** → Council of ESA at Ministerial level (C/M), deciding on the evolution of ESA and on new ESA programmes based on the European space policy endorsed in May 2007
 - The agenda and objectives of the ESA C/M will be defined in autumn 2007, based on the endorsement of the European space policy and on the on-going preparatory work on the evolution of ESA and on sectorial strategies (launchers, exploration, ESA-wide science, etc...)

Conclusions

- **The future of the European space policy and its implementation will be based on:**
 - Capitalising on current successes
 - Listening to users
 - Consolidating technological and industrial capabilities
 - Maintaining flexibility
 - Reinforcing coordination
 - Managing evolution in steps
- **Commitments from all actors will be necessary**
- **Among them, commitment of ESA Member States will be instrumental**