

SPACE POLICY : DARING OR DECLINE
50 RECOMMENDATIONS
FOR A BOLD FRENCH AND EUROPEAN SPACE POLICY
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I.- Bases for a new space policy

A. - Governance of the space sector in France

1. A *French space vision* is defined jointly by the Government, Parliament, CNES and industry.
2. The *principles of the French vision of space* are: autonomous access to space for Europe must be ensured; the space sector is the keystone of defense; France is world leader in space science; human spaceflight missions are an essential dimension for exploration of the Universe.
3. The Minister for space is a *member of the Cabinet* whose responsibilities are restricted exclusively to space.
4. To ensure the motive force behind, decisions concerning and monitoring of space policy at the highest level, a *Space Council* is set up with the President of the Republic.
5. The *High Council of Advisers for science and technology* is approached as rapidly as possible concerning "space technologies of the future", and two leading observers from the space sector are appointed immediately following the next rotation of High Council membership.
6. A *space planning law* covering a period of 10 years, and reviewed and revised if necessary after 5 years, is voted by Parliament.
7. The *CNES multiannual contract* is revised in 2007, with effect as from 2008.
8. The *national segment* of the CNES budget is increased by 8% *per year* as from 2008.
9. An *additional subsidy*, outside the framework of the multiannual contract, is allocated to CNES to enable it to take on the new regulation and certification functions assigned under the terms of the law relating to space law.
10. The CNES multiannual contract includes an *additional unallocated budget line* making it possible to respond to *new projects* set up by ESA or other partners in multilateral cooperation contexts.
11. CNES sets up a dedicated program concerning *technological research and demonstrators*, on a cooperative basis with industry and funded by a dedicated "technological research and demonstrators" budget line as distinct from the "space sciences" line, without delay.

12. The *Industrial Innovation Agency* and *National Research Agency* contribute to funding of future space programs.
13. CNES sets up *partnership* arrangements with the *regional and departmental authorities*, for the development of new space projects.
14. CNES develops *new information and communication resources* to meet its own needs and those of its partners, including industrial partners in particular, based on digital technologies, Internet and digital audiovisual satellite broadcasting, for more efficient information of the general public concerning current space achievement news.

B. - Governance of the space sector in Europe

15. *Decisions* by *ESA Council*, meeting at Ministerial or ordinary level, are taken on the basis of a *qualified majority*, defined by a minimum percentage of budget contributions.
16. The *ESA geographical return* rule applies to a set of programs, and not "program by program", and includes services as well as industrial production.
17. A *European space vision* is defined by an authority including the President of the European Commission, the Director General of ESA, the presidents of the national space agencies and the heads of space sector companies.
18. The *European vision* of space takes account of the *following principles*: the European space sector contributes to collective security, protection of the citizen, and the cohesion and balanced development of the EU; the European space sector adopts a transverse approach, and sets up systems of systems with the rest of the world; combining automatic probes and human space-flight missions, Europe participates in Universe exploration projects, and its aim is to federate these projects.
19. The European vision of space is *adopted* by the *European Council* of Heads of State and governments.
20. A *Space Council* is set up within the *European Commission*, comprising the commissioners in charge of enterprise and industry, transport, the environment, health and consumer protection and agriculture.
21. A *Space Commission* is set up within the *European Parliament*.
22. European space policy is formulated on the basis of concrete projects within the framework of a *European ten-year space development plan*, reappraised and revised where appropriate after five years.
23. Space applications are eligible for funding by the *CAP* and *ERDF*.
24. A major project designated "*space for collective security and digital equality in Europe*" is launched by the European Council in 2008.
25. The *European Union* contributes to the definition and funding of *European space policy*. The *prime contractors* for the corresponding programs are *ESA* and *Eumetsat*, also authorized to develop their own add-on programs.

II.- New French and European space programs and missions

A.- Launchers

26. The *EGAS program* is extended to offset the impact of the weakness of the US dollar on the Ariane-5 program. European funding is set up to complete the Soyuz launch pad, and install Soyuz and Vega at the CSG.
27. Research, development and test work on a more powerful new version of the EPS-AESTUS engine is initiated for the *ATV with a full load*.
28. Development of the *reignitable Vinci cryogenic engine* for the Ariane-5 third stage is initiated without delay, with the assistance of national and European public authorities.
29. A task force is set up for application of the Franco-American cooperation CFM model to the production of the new generation *Vulcain-3* launcher engine.
30. *Qualification* of Ariane-5 for *human spaceflight missions* is obtained within five years.
31. Sanctions are introduced for non-compliance with *European preference* for launching European civil or military institutional satellites.
32. Development of *sub-orbital flight* technologies is supported by the public authorities.
33. An *upstream research* program on engines for future launchers is set up by Europe in cooperation with *Russia*.
34. Studies and tests for *nuclear propulsion systems for deep space exploration* are reactivated by the Atomic Energy Authority (CEA) in liaison with industry.

B.- The defense space sector

35. *European defense space sector budgets are doubled every five years* up to 2020, within a select multilateral framework.
36. *The military telecommunications* space systems of European NATO member states are made *interoperable* within two years.
37. Investment in the *Syracuse-3C* and *Helios-3* satellites is committed in 2007.
38. Development of a protected *satellite HR Internet system* for mobile military units is initiated in 2007.
39. A European *integrated military telecommunications* system is supplied to NATO by the European Union member states.
40. A European *electromagnetic listening watch* system is set up within the framework of a select multilateral cooperation agreement.
41. Studies for a ballistic missile *European early warning* system are initiated in 2007, with the aim of commissioning the system within ten years.

C.- Space services

42. A *European 20-year plan*, ratified by the European Union and placed under the aegis of ESA, is initiated for the *observation and exploration of the Universe* by satellites and automatic probes, and integrated in the European 10-year space action program.
43. EUMETSAT is the operator for GMES space segment infrastructures.
44. Implementation of the *Galileo program* is accelerated so as to achieve *commissioning of the system in 2010*.
45. The role and access rights of the *Galileo international partners* are defined before the end of 2007, with coordination of the system reserved for ESA members.
46. Problems raised by the PRS (Public Regulated Service) are cleared in liaison with the NATO authorities.

D.- Human spaceflight missions

47. The conditions for operation of the *ISS International Space Station after 2015* are examined as from 2007, in cooperation with all partners.
48. The ESA *Aurora exploration program* is revised before the end of 2008, with a view to including the lunar project as a test bed for Martian technologies.
49. Development of the *European ATV-ARD space transportation system*, autonomous but compatible with the NASA and other transportation systems, including Russian systems in particular, is implemented as from 2007, with a view to experimentation in 2012.
50. *Moon landing* by a first *European crew*, and their return to Earth using the European space transportation system, are programmed for 2018.

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