

**Opinion of the Economic and Social Committee on the 'Communication from the Commission to the Council and the Parliament: the European Union and space: fostering applications, markets and industrial competitiveness'**

(98/C 95/03)

On 30 July 1997, the Commission decided to consult the Economic and Social Committee, under Article 198 of the Treaty establishing the European Community, on the above-mentioned communication.

The Section for Industry, Commerce, Crafts and Services, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 7 January 1998. The rapporteur was Mr Sepi.

At its 351st plenary session (meeting of 29 January 1998) the Economic and Social Committee adopted the following opinion by 75 votes to 3, with 5 abstentions.

## 1. Introduction

1.1. Between December 1996 and September 1997, EU institutions produced three documents of vital importance to European space policy <sup>(1)</sup>.

1.2. The first was a Communication from the Commission to the Council and the European Parliament <sup>(2)</sup>, providing an in-depth analysis of the situation and defining the Commission's role in this area.

The Communication ends by suggesting that work programmes be devised, with concrete suggestions for various market spin-offs from space activity.

1.3. The second reference document, drawn up in March 1997, is one of these work programmes, and deals with the link between space policy and the information society.

1.4. In September 1997, the Council of Ministers issued a number of conclusions (third document) endorsing the key principles underpinning the December 1996 Communication, and instructed the Commission to launch its political and regulatory work in the various sectors.

## 2. The Commission communication

2.1. The Commission highlights the growing importance of the space component, not just from a scientific

point of view, but also from an economic standpoint, given the large number of spin-offs and the significant markets they open up.

2.2. The Communication notes that, although space expenditure is much higher in the USA, the EU is at the forefront as regards market access and services in particular, which may represent more than ten times the total budget for satellite launchers.

2.3. On the strength of this, the Commission goes on to define its own area of intervention, i.e. to optimize both national and European Space Agency (ESA) efforts within the framework of Community policies such as R&D, human resources, training, external cooperation, industrial development, especially for SMEs, and also transport, telecommunications, intelligent use of 'sustainable resources', etc.

2.4. The Commission will have to act in an environment conditioned by:

- a) the new geopolitical scenario, which is very different from that which — basically for military and national prestige reasons — boosted the sector over the last two decades;
- b) increased globalization and an international marketplace which is open to new competitors;
- c) technological development and the transition to a global information society.

2.5. In this new context, the Commission aims to use the instruments at its disposal to create an environment which streamlines investment in industrial structures, by encouraging the European space industry to improve both its competitiveness and quality.

<sup>(1)</sup> COM(96) 617 final — Communication from the Commission to the Council and the European Parliament — The European Union and space: fostering applications, markets and industrial competitiveness; COM(97) 91 final — Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions — EU Action Plan: satellite communications in the information society; The European Union and space — Council conclusions of 22-23 September 1997 (10746/97 — Press 276 — G).

<sup>(2)</sup> COM(96) 617 final.

2.6. A vital question is the attitude of the Member States, who need to recognize that this sector requires permanent joint action at European level in this new climate.

2.7. As for the Commission, its task would be to improve coordination of European R&D policies, and cooperation with the ESA and National Agencies, as well as to help secure a common European policy in international arenas.

2.8. The Commission document goes on to look at the areas in which space policy can be applied, focusing particularly on telecommunications, tracking and observation of the earth from space.

2.9. Four types of intervention — albeit of varying scope — are proposed for these sectors:

- a harmonized, regulatory framework to encourage standardization;
- support for R&D to deduct non-recurrent expenses;
- coordination in international forums;
- incentive to extend the markets to other countries.

2.10. The document aims to maintain Europe's position on the world market as a provider of satellite launch systems, with a framework of international rules designed to secure fair competition in the sector, and a broader range of launch vehicles.

2.11. The EU needs to adopt a coordinated approach to international cooperation, both in order to be able to speak with authority in dealings with the more advanced countries, and to develop a policy of cooperation and provision of services to eastern European countries, the new independent states and developing countries.

2.12. Commission instruments should be deployed to provide space project funding problems with firm support, both strategically — with regard to the sectors which are of particular importance to the European Community (telecommunications, transport, mobility, the environment) — and operationally, by promoting use of the relevant financial guarantee mechanisms available under the EIB (European Investment Bank) and the European Investment Fund, given the prospect of secure financial returns.

2.13. There is still a natural interplay of responsibilities and interests between the players, i.e. the individual Member States, their space agencies, the ESA,

individual businesses etc.; the Commission intends to set up discussion forums and cooperation agreements, notably with the ESA and as provided for under Article 130m, and moots the establishment of European Economic Interest Groupings in the various fields of application.

### 3. General comments

3.1. The Communication appears at a time of fundamental importance in the history of the space industry: the transition from a largely prestige sector, in terms of military technology, to the civil sector which is more commercial and has an extensive services network.

3.2. The transition is already under way and it is very important that the EU play a pioneer role from the outset. The Commission and the Member States must act together to redouble their efforts to boost Europe's industrial standing.

3.3. The Committee welcomes the conclusions of the Council of Ministers of 23 September 1997, in which the Member States express their willingness to cooperate, and entrust the Community with the task of stimulating this cooperation. It is therefore necessary to examine further, and put into practice, points 2 and 4 of the conclusions.

3.4. The ESC welcomes the opportunity to highlight these conclusions, but would point out that the Commission's analysis would require much more credible timescales and intervention instruments. Moreover, it is not just a matter of R&D policy action: a credible, downstream European industrial and commercial policy action should also be promoted in the sector. To this end the governments should commit themselves to forging a more prominent common identity on the international political scene.

3.5. It should be pointed out that demand — except in some sectors where private investors are increasingly showing interest — is still basically from the public sector, with funding (and not just for R&D) coming from the public coffers. It is, however, feasible that there will be a speedy shift towards a more market-oriented (i.e. private) policy. Community policies on competition, public procurement and deregulation of services must take this into account.

3.6. The key players in space policy are the Member States and the ESA, followed by the national agencies. An over-nationalistic space policy can lead to confusion as to who does what, duplication of effort, poor

synergies and dangerous competition. In the wake of the above-mentioned Council conclusions, the Commission's action plans need to include an effective coordination project for European space industry policy.

3.7. All Member States will therefore have to agree to coordinate their space policies. This is the only way to achieve an effective industrial policy in terms of the market, and optimum use of resources. In this respect, even closer cooperation between the Commission and the ESA is needed.

3.8. The ESC wishes to point out that the space industry has a substantial impact on the European economy as a whole: it boosts competitiveness, encourages new ventures and provides greater development potential. Advancement of the space industry is thus of strategic value. All instruments and procedures must focus on this objective. If progress is not forthcoming, there could be a case for implementing the Amsterdam Treaty's 'reinforced cooperation' procedures in this sector.

3.9. In the international negotiations on the allocation of radio frequencies and ITU standards, the rules for competition and market share, the EU needs a common position and a sole negotiator if it is to have sufficient political clout with its negotiating partners.

3.10. The Committee welcomes the Commission's move to set up discussion forums, but feels that more powerful, formal and regulatory coordination machinery is needed, particularly in view of fiercer international competition.

3.11. In intervening in downstream space activity applications, the Commission does not sufficiently emphasize launch applications, which remain the main catalyst for the industry. The ESC calls for incentive and coordination activities to be deployed in this sector too, in order to guarantee Europe the requisite autonomy with regard to space launching systems.

3.12. The Commission has not sufficiently highlighted one of the fundamental problems for the future of this industry, i.e. the relationship between R&D and industrial and commercial spin-offs. This would require either a downstream expansion of the ESA's remit (currently non-market-oriented), the creation of an EU Authority, or at least a liaison body to harness potential

synergies. Clearly, the potential impact of any single body or change to the ESA's role would have to be assessed thoroughly in order to improve cost efficiency.

3.13. The creation of an association of space industries should be encouraged, along the lines of that for the defence industry, in order to align the differing stands of national industries and move towards an increasingly united industrial policy.

3.14. The Commission should pay more attention to the vital importance of continuous training for the human resources needed to develop this sector (although this is referred to elsewhere in the document).

3.15. The Commission's detailed analysis of all the potential applications of space systems is proof not just of the strategic validity of the sector, but also of its diversity, and of the synergies to be had from using satellites in the broad range of ways suggested here. The corollary is that multi-functional satellite or satellite network production (new generation) is likely to outstrip that of the single-function satellites which currently dominate the market, as will launch systems which are more suited to the various requirements of the new satellite systems.

3.16. The ESC would once again stress the complexity of the sector, and the need for an overview of all possible applications. Consequently, it would emphasize its call for coordination of the space sector's various decision-making bodies.

#### 4. Specific comments

4.1. It is essential to promote training and technological know-how campaigns, both for users and for SMEs, in order to encourage investment and market demand; the campaigns should be such as to create a self-perpetuating dynamism in loco. SME participation is needed to cut production costs, raise the profile of new technologies, and boost employment and provision of services.

4.2. As thorough a review as possible of current European R&D is needed so that the Commission and the relevant national agencies can, by common consent, cut down on any superfluous elements and identify non-profitable sectors more easily, and so that research can translate rapidly into industrial applications, with the emphasis on harnessing economic/employment

returns to the full, from a European, rather than purely national perspective. The space industry must be seen as a catalyst of these 'returns'.

4.3. It is essential that R&D streamlining should be backed by timely, efficient mechanisms for funding by European central bodies in the application stages too, (e.g. project funding), in order to stimulate private investment in particular.

4.4. In view of Europe's considerable commitment to the International Space Station, and the lack of any specific European regulatory practice governing commercial rights for 'proprietary' technologies which are applied and/or developed in space, it is essential to make such provision within the framework of Patents and Licences. Such provision already exists in the USA and is currently being amended in Japan and Russia. Eventually, common international standards will have to be determined, to regulate specific aspects of the WTO TRIPS negotiations.

## 5. Suggestions for the action plans and potential applications

The examples aim to illustrate the importance of space applications in terms of the EU economy and European society. Not all of these applications necessarily require specific intervention from the Commission.

### 5.1. Agriculture

Space applications are particularly useful for the global monitoring of this sector, and for identifying which crops are best suited to the chemical and physical make-up of specific geographical areas. Moreover, satellites can be used to assess pollution caused by human activity, and prevent damage caused by swarms of insects and other parasites.

### 5.2. Meteorology

Space has played, and can play, a vital role in weather observation, analysis and forecasting, particularly over extensive areas; to this end satellite technology should be updated, to provide satellites with more efficient sensors and better data processing and distribution capability.

### 5.3. Fisheries

Satellite observation of the seas could be a boon to the fishing industry, providing useful information on catch

sizes and movements, thus making sustainable fishing possible.

### 5.4. Science

Science is one of the cornerstones of the space industry. The Commission has emphasized the importance of exclusively commercial objectives, without paying sufficient attention to the spin-offs from exclusively scientific objectives, which have — thus far — been left to the ESA to deal with. It thus wastes the opportunity to make the most of the limited human and financial resources to enhance the long-term outlook of this sector, and give it a more flexible, industrial slant. In this respect, European industry should be encouraged to participate in the International Space Station, in order to reap the benefits of both its industrial spin-offs (metallurgy, biochemistry, pharmacology, micro-electronics, telecommunications) and scientific innovation.

### 5.5. Disaster prevention and operations management

The potential, in some cases, for prevention and subsequent monitoring of the impact of disasters on infrastructure illustrates the key role space systems can play in providing observation and communication services for efficient operations management on the ground.

### 5.6. Combating fraud

Despite their effectiveness, satellites have not yet been sufficiently exploited in the fight against fraud and organized crime (e.g. flouting of regulations, illegal toxic waste dumps, illegal immigration, drug production and trafficking, deforestation, illegal or dangerous industrial plant, etc.).

### 5.7. Environment

Over the coming years, satellite observation of the earth will play a vital part in improving the environment:

- a) more accurate mapping;
- b) policing of sources of pollution in densely populated areas;
- c) wide-range monitoring of water conditions;
- d) monitoring climate change (greenhouse effect, desertification, deforestation, etc.).

### 5.8. *Mobility*

As is widely known, dedicated, multimodal and multi-functional satellite systems are extremely useful in traffic (air, sea and land) monitoring and management, providing consistent services across continents or even globally. Such a project, given the current lack of adequate positioning, communications and security services, could provide a valid, pan-European industrial and technological alternative to US supremacy. Clear regulation (radio frequencies, standards, user terminal compatibility and inter-operability), will — at least at Community level — help to boost industrial development and services, not just for sea and air navigation, but also for surface transport. Its relative output potential is decidedly high, particularly as regards user terminals and value added services. This is also an important feature of the ESC opinion on the aviation sector.

### 5.9. *Telecommunications*

Thanks to their specific ability to provide broadband telecommunications services (multimedia platforms) transmitting high-density information throughout the footprint area (at continent level), they are able to reach the individual user where terrestrial networks fail. In

particular, mobile radio communication services can be provided much more efficiently via satellite than via terrestrial cellular networks.

5.9.1. Moreover, satellites are a quintessentially 'supranational' medium which facilitate connection between users in different countries, irrespective of how the individual terrestrial networks are managed.

### 5.10. *Launch services*

With reference to more efficient coordination at EU level, it is important to emphasize the need to press ahead with the drive to maintain European industry's current share of the market. It is also advisable to broaden the range of launches in the light of market prospects for re-useable and medium-small launchers, to meet the growing need for single launches of small and medium-sized, specific-purpose satellites.

### 5.11. *Dual use products*

It is important to put the large volume of findings of military (e.g. WEU and NATO) studies to non-military use, wherever they provided for efficient observation, monitoring and multimodal communications programmes and systems.

Brussels, 29 January 1998.

*The President  
of the Economic and Social Committee*

Tom JENKINS

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