



18.10.2011

Ladies and gentlemen;

I would like, first of all, to congratulate the hosts and organisers of this seminar and thank them for inviting the Commission.

The theme of the seminar "Technologies from space exploration" connects well with the Commission's ideas regarding EU space strategy.

Let me start by saying that, by conferring the EU a competence on space, the Lisbon Treaty puts EU space policy at the service of the Union ultimate goal of ensuring the well-being of its peoples.

In its communication "Towards a space strategy for the EU that benefits its citizens" the Commission underlines that citizens' well-being depends increasingly on space activities in areas such as the environment, combating climate change, public and civil security, transport and communications.

It also underlines the economic dimension of space activities, as they generate knowledge, new products and new forms of industrial cooperation.

Space activities are therefore a driving force for innovation and contribute to competitiveness, growth and job creation.

The space sector directly contributes to achieving the objectives of the Europe 2020 Strategy namely smart, sustainable and inclusive growth.

From the Commission standpoint, it is important to encourage close links between space exploration and social and economic challenges.

Most expenditure on space exploration is used for contracting out innovative technology development activities. There are numerous and well documented spin-off effects that result from such innovative technologies, which give rise to valuable benefits for citizen's and economy. Targeted expenditure in space exploration can trigger major innovations in sectors such as health, secure access to energy and renewable energy, and access to clean water.

As the development of space exploration technologies are not confined exclusively to the space sector itself, there are significant spill-over impacts on non-space sectors generating cross-fertilisation which are a source of economic growth and ultimately benefit citizens directly.

Let's look for example at the impact of space exploration technologies on environment, energy and health, which are areas critical to human well-being.

Technologies derived from space exploration can help us understand better our own environment, which in turn will result in better definition of environmental policies.

In a manned spacecraft the air must be revitalised constantly. Spacecraft cannot take air from the outside. Therefore advanced technologies must be developed to monitor air quality and possible contaminants, and to regenerate and purify air. Those technologies have numerous applications on Earth.

Water must be recycled up to 100% during human spaceflight. Innovations in this area can help improving the management of water here on Earth. They can also improve the quality and quantity of drinking water helping us preparing for a future where water resources may be under pressure from population growth, urbanisation and climate change.

Manned spacecrafts need an amount of energy comparable to that required by a household. Embarking chemical energy is costly and risky and the only external source is solar energy. Therefore, it is necessary to constantly optimise energy production and management. Innovations in this area can help us down here to make the transition from a fossil-fuel-based economy to one based on renewable energy and so limit the effects of climate change.

The need to ensure human health in the space environment requires technologies to monitor and study issues connected to certain diseases, ageing or immobility. Spaceflight requires systems and technologies to ensure that crew remain healthy during space missions.

This improved understanding of aging and the technologies required to deal with it and other health issues in space help us improve diagnosis and treatment to be delivered here on Earth.

Robotic exploration is also a source of technological development that has a positive impact here on Earth in areas such as tele-operations including remote micro-robotics, automated handling and storage systems and micro-analytical systems.

Overall, space exploration contributes to the competitiveness of our industry and to the development of the knowledge-based society, since all activities in space exploration support increasing knowledge through science and technology demonstration missions.

By enhancing competitiveness and generating cross-fertilisation beyond the space sectors, space exploration contributes to smart and sustainable economic growth, which in turns enhances our citizens' well-being and induces inclusive growth as well.

Ladies and gentlemen,

I think I have illustrated how technologies from space exploration generate tangible benefits for citizens.

It is indeed for the sake of its citizens that the European Commission follows closely space exploration efforts undertaken by Member States and ESA and actively contributes to bringing those efforts together into a cohesive European space exploration vision.

The European Commission is also an active supporter of international collaboration in this domain. This is demonstrated by its close involvement in the preparation of the international conference on space exploration to be held in Lucca on November 10<sup>th</sup>.

The Commission works closely with ESA, the Polish Presidency of the EU and the Italian authorities to ensure

the success of this conference. We hope that the international high-level policy dialogue that the conference seeks to initiate will ultimately translate into more and more ambitious international space exploration programmes in the future. These, in turn, will contribute to accelerate the delivery of new technologies from space exploration and lead to greater benefits for citizens.

Thank you very much for your attention.