

NSE and AI: The New Revolution Changing the World and Human Life Within It

We are living a new age of a phantastic technological development. The capability to increase our knowledge or to imagine and develop new solutions enabled by satellites technologies namely Earth Observation and satellite navigation both in Downstream and Upstream domains appear infinite.

The evolution we are living is so rapid and significant that we needed to precisely define this as the age of the “*New Space Economy (NSE)*”

The New Space Economy is the age of commercialization and democratization of Space Exploration. Because also of the incredible support of Artificial Intelligence the access to Space is as cheap as never before. I was reading in a paper published on a previous issue of GEOMEDIA that in the recent years the cost to send one kg payload into a LEO orbit decreased of 95% (from 65.000,00 \$ to 1.500 \$). It means that the capability to send satellites into orbit is no more limited to a small club of rich and powerful Countries. Space is now accessible to many other Countries and moreover also to commercial companies.

Many new stakeholders, in particular private stakeholders, can promote a new Economy enabled by the full exploitation of space assets and technologies by developing, for example in the downstream sector, new products and services which are becoming more important and pervasive in our normal life. Just one example over all: Starlink telecommunication network implemented and manged by SpaceX (Space Exploration Technologies Corp.) the company owned by Elon Musk. This company, fully exploiting the cost reduction was able to send into orbit a Mega Constellation of thousands of LEO satellites which support data transmission and Internet connection at low cost also in areas without ground infrastructures.

The Policy strategy of many Governments is pushing and stimulating the involvement of privates in accessing Space both in the Upstream as well in the Downstream. The new missions aiming at the Solar System colonization, first our Moon and then Mars, are opening a new age full of hope and enthusiasm.

Nevertheless I am some time confused and frightened by the news reports that testify to the all-too-often destructive use of the technologies we are developing. When more the 40 years ago I started to work in this domain, in a period in which Satellite Navigation and EO were still under development, the term GEOMATICS or the acronym UAV had not yet been coined and Artificial Intelligence or the colonization of Mars were topics for science fiction movies, international cooperation and knowledge sharing were the best practices instead of competition and conflicts and I believe we have to go back to that spirit.

In the same paper on the same issue of GEOMEDIA that I mentioned before the conclusion was: “NSE and AI will change our life. our society and the geopolitical scenario on the Earth and in Space, but as every instruments it is under our responsibility to use them wisely and keep them under control”. Dear Friends and Colleagues NSE and AI are neutral but their use is not and it depends also from us their safe use to create a world more just and supportive.

*Enjoy your reading,
Marco Fermi*