

Switch to Space

Space activities cover nowadays a broad range of fields attracting more and more international partners from industry, SMEs, research institutions and governments. Moreover, technology transfer between terrestrial and space applications as well as the emergence of the 'Newspace' have contributed to attracting entrepreneurs to a domain traditionally limited to national and international space agencies.

In line with this trend, the European Space Agency has adopted the concept of Space 4.0, in which interactions between governments, private sector, civil society and policy makers are strengthened. It is further acknowledged that the European space sector can be competitive only by fully integrating into European society and economy.

Worldwide, space has started attracting more and more professionals from sectors originally with few or no links with established space activities. As a consequence, universities have diversified their curricula and included space studies in their programmes. For instance, HEC Paris and ESA have recently signed an initiative for the peaceful and sustainable exploitation of space related projects.

More than ever, multidisciplinary approaches have become a key factor in this new space era and the proposed event 'switch to space' aims at contributing to raising students' awareness.

Objectives:

1. Introduce a complete overview of the space sector in the form of a series of 10- to 15-minute presentations targeting students and young professionals outside the field of Space.
2. Attract a large group of students from a wide variety of fields from social sciences to economics, law, politics, life sciences, fundamental and applied sciences
3. Cover the entire space sector through multidisciplinary presentations.
4. Transfer of Knowledge from key space professionals to an audience of young enthusiasts.

Implementation:

The event will include three parts. The first part will last about 1 hour 30 minutes duration and will introduce the background and the basic required knowledge, including space governance and key actors in the field. This part will be concluded with a tutorial on methodologies on how to acquire new knowledge with a focus on communication and multidisciplinary.

The following two parts will take around 3 hours each and will present current and future orientations of space activities.

Each speaker will receive the challenging task of presenting his topic with four levels of information following a "what, why and how" approach. The last part will give insights into the multidisciplinary aspects including the speaker's personal opinion on the trends linked with his/her topic.

An online quiz will be organised during and/or after each session.

Programme

09:00 09:10 Opening words and programme presentation

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Session 1: Background (Past)

09:10 09:30 Space Governance (Key note speaker Frank de Winne)

09:30 09:55 How to acquire a new knowledge, the importance of communication and education

09:55 10:20 Background, mission analysis what is TRL, satellite, a launcher, a ground segment and the space environment.

10:20 10:40 Quizz and break

Session 2: Current State in Space activities (now)

Space Exploration and Space Weather

10:45 11:00 Space Exploration (Universe, planets and Sun)

11:00 11:15 Space Weather

11:15 11:20 Quiz

Human space flight and Life science

11:20 11:35 Human space flight and ISS

11:35 11:50 Space Life science (medicine, biology,..)

Earth Observation

11:50 12:10 Copernicus (Ocean, Earth, Atmosphere, Security)

12:10 12:30 Monitoring CO₂ and Anthropogenic Emission, Cop...

12:30 13:30 Lunch break

Earth Observation

13:30 14:00 Ground Segment, BIG data, Block chain, DIAS

Navigation and Satcom:

14:00 14:15 Galileo and applications to transport and market

14:15 14:30 Internet, One web,

14:30 14:40 Quizz

Session 3: Future Space activities (futur)

Technological Competitiveness (Bus)

14:40 15:00 bus, fast processing chain and data flow
15:00 15:10 maturation of communication technologies
15:10 15:20 electrical Propulsion

Technological Competitiveness (Payload and robotic)

15:20 15:35 scientific instrumentation and EO technology
15:35 15:45 robotic

Break 15:45 16:05

Legal Aspects and space Policy

Exchange of views with Senators and Parliamentarians
17:50 18:00 Legal aspects
18:00 18:10 IPR, Dual Use, Ethic.
18:10 18:20 Space Policy

Strategic Programmes:

15:45 16:00 Competitiveness and European Independence to critical Technologies.
16:00 16:15 Access to Space
16:15 16:30 SST, SSA and GOVSATCOM

Business:

16:30 16:40 Newspace
16:40 16:50 Startup, SPIRE, loftorbital, ICEYE, ISIS, ..
16:50 17:00 Cubests, federatation of satellite, fragmentations
17:00 17:15 Downstream applicationa: agriculture, transport, Insurance sector
17:15 17:30 Technology transfer and market opportunities.
17:30 17:40 Exploitation of extra-terrestrial ressources.
17:40 17:50 Access to finance

Standing diner and networking 18:30 -21:30