

WG on Technologies From Space Exploration

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Space Exploration

- Space exploration one of three key components of the WG strategy.
- In the context of science driven human and robotic exploration programmes:
 - Positioning of exploration, innovation and associated technologies in the European space agenda (national, ESA, H2020 etc.)
 - Focus on EU competitiveness by fostering regional collaborative links.
 - Frame exploration in a global exploration roadmap with international cooperation as an important component.
 - Informing the ESA Council of Ministers through the delivery of position papers focusing on exploration.
 - Explore synergies, common technology development requirements, with other groups focused on planetary science and exploration e.g. Europlanet
- Space exploration important in an increasing global exploration agenda and necessary to keep Europe competitive in upstream space segment.

Work Programme Links

- Primary target of the Explo-WG is Objective 2: “Building an agreement with the new institutional framework at the European level (Commission, Parliament, Committee of the Regions...) with the aim to identify platforms of dialogue which could be used to strengthen the network and its own members”
- The Explo-WG has an interest in sustaining engagement and interaction with the EC regarding future research, technology and upstream priorities in the domain of space exploration. Harmonisation of regional, national and European requirements will be an important facet of such a programme.
- In addition, in order to achieve the proposed strategic results, the Explo-WG suggests:
 - Capitalising on the results of H2020/national projects the at regional level the by promoting the mobilisation of regional and inter-regional funds.
 - The target is to position Space Exploration as the third European pillar, after Galileo and Copernicus.
- The Explo-WG has been active in creating mechanisms to establish and sustain partnerships between industry and academia.
 - This is vital in order to generate the future generations of graduates that will respond to the increase in demand as stated in the NEREUS Work Programme under the heading “International and European Framework and Strategy”.

Outreach, Education & Training

Preparing a robust succession plan

- Inspiring the next generation of scientists and engineers through educational initiatives.
 - e.g. Space Exploration Development Systems MSc/Master’s Degree - Politecnico di Torino, Italy; ISAE, Toulouse; University of Leicester, UK.
 - Graduated 12 MSc students.
 - Project was focused on the exploration of the Mars system.
- **“Exploratoria”**: centres across Europe that work together with the common agenda to educate and inform the public about the benefits of space, exploration, technology development and inspire the next generation of scientists and engineers.
 - There are many such centres: Cité de l’Espace, National Space Centre, Planetario di Torino, Museo astronomico e dello spazio, Space Expo, etc....
 - This remains a target in the WGs agenda.
 - Mechanism to enable these centres to work together more effectively.
- Highlights since last GA was the WG Workshop – October 2013 in Leicester at the National Space Centre, where all 3 elements in the WG strategy were on the agenda.
 - Successful event attracting SMEs, Academia and large industrial concerns to a two day event.