

**NEREUS Working Group – TECHNOLOGIES FROM EXPLORATION –
Planned focus of activities 2017/18/work programme 2017/18 (DRAFT)**

Work Group Leaders	Piero Messidoro, Expert for Piedmont Region, WG Chairman on behalf of Piedmont Region Laura Gatti, Thales Alenia Space Torino, WG Secretariat Richard Ambrosi, Leicester University, co-chair
Aim of the Working Group/ Main areas of interest	See ToR
established	2010
General Objectives	The Working Group will map and use research results to make recommendations concerning the use of space exploration technologies in support of regional policy initiatives or end-user applications.
Strategic context 2017/18	Positioning of Space Exploration (Technologies and Research) with respect to the outcomes of the last ESA Ministerial 2016 and the European Space Strategy; How are businesses, in particular small companies of the sector impacted by the outcomes of the ESA-Ministerial 2016? Commercialisation paradigm; In how far do scientific missions, Big Data impact the commercialisation of Space? Awareness raising and outreach to the broad public and different regional communities with respect to the benefits of space exploration for society (in particular young people, students, SMEs etc.) and regional economies;
Planned focus of activities 2017/18	Focal topics: Space Economy: Commercialisation of direct and indirect Exploration outcomes (in terms of downstream applications but also in terms of new paradigms of the upstream (so called "new space"), e.g. asteroid data mining, in situ resources utilization on the Moon, innovative space logistics around the Earth like systems for In-Orbit Servicing, Transport, Assembly and Retrieval, Space Tourism, etc. <ul style="list-style-type: none"> • Commercialization of exploration: The Working Group will map, collect and analyze successful approaches of commercialization of exploration activities/outcomes (best practices, successful business cases and plans, model initiatives); • Impact of exploration for supporting entrepreneurship and creation of young enterprises? What is specific for the sector? • The working group will discuss and analyze the idea of Space Economy and its implications for the sector; • The working group will explore the impact of scientific missions, science, Big Data on Space Economy and commercialization of space; • Access to space and in particular the microgravity environment by a range of platforms from ISS to deep space habitats and free flying platforms. This would be an enabler for scientific experiments, IOD/IOV (In Orbit Demonstration/ In Orbit Validation) as well as commercial initiatives to develop, validate,

	<p>demonstrate and de-risk technologies for exploration and run experiments that have typically been the focus of work on the ISS. In addition, the ability to deploy and recover payloads, e.g. by using the European Space Rider vehicle, will be an important facet of new systems for accessing space. This will become increasingly important beyond ISS 2024 where alternative platforms may be required to address access to the microgravity environment. Access to space is not just about launch systems but also capacity for a range of commercial and institutional users.</p>
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Numbers

Topic	Number	Comments
Number of regular participants at WG meetings	tbd	
Planned number of WG meetings (approx.)	tbd	tbd
Planned number of conferences or major event with external participants	tbd	tbd
Planned number of policy or call briefings with EU	tbd	
Planned number of training seminars held, if applicable	tbd	
Planned number of projects stimulated from within the WG	tbd	
Closer co-operation with other related networks and / or observatories (plus contact point if possible)	tbd	