In Support of the United Nations Programme on Space Applications
SGAC Origins

• Conceived at the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) in Vienna in 1999

• 160 students and young professionals invited to contribute

• Product of the discussions were the Vienna Declaration where the States resolved

“To create, within the framework of the Committee on the Peaceful Uses of Outer Space, a consultative mechanism to facilitate the continued participation of young people from all over the world, especially young people from developing countries and young women, in cooperative space-related activities…”
SGAC Network

6 Regions, 110+ Countries, more than 10,000 Members in our network

Number of NPoCs per country
Space Generation Congress

The 15th Edition of SGC was held (22 - 24th September 2016) in Guadalajara, Mexico

- Held in conjunction with the International Astronautical Congress
- 132 delegates from 32 countries
- 13 speakers, and 6 subject matter experts
- 73 scholarships and awards
EXPLORATION:
Proving Ground

Supported by:

Advanced Exploration Systems

NASA
Exploration Focus Area

• Design a mission architecture to identify global assets/capabilities and harness the full potential of Cis-Lunar Space

• Develop a global governance strategy to implement the proposed mission architectures fostering collaborative international participation in the Proving Grounds
Recommendations

• **Maximize use of known resources to be placed in cis-lunar orbit or lunar surface in the 2020s**

• **Identify** activities that maximize use of assets, including participation of emerging space nations or companies through the development of an Inclusive Managing Committee
Space Situational Awareness: global responses to global challenges
SSA Focus Area

• Review current SSA initiatives worldwide

• Identify technical and policy challenges

• Propose effective frameworks and cooperative mechanisms to tackle these challenges, with particular reference to data interoperability and data sharing
SSA Recommendations

• Creation of a global, independent entity, supported by the UN and space-faring nation states.
  – Collect data on space debris and spacecraft.
  – Create a simulation model to improve space situational awareness.
  – Offer collision warnings and orbit recommendations.
  – Declare end of life plans and measurements for space debris
UNISPACE+50: Shared Vision, Common Action

Supported by:
UNISPACE+50 Focus Areas

• Collect inputs from SGAC members to help foster and shape a new long-term vision for space, as envisioned by UNISPACE+50

• Offer concrete ideas for actions in support of such a vision

• Identify the role that SGAC can play in the UNISPACE+50 process, notably about how the organisation can support and frame such ideas for actions into a coherent strategy.
Recommendations

• Strengthen the outer space regime and the global space governance, as it can form a pillar to guide all space actors
• Make international cooperation the norm for future space activities
• Develop space activities that provide a plethora of socio-economic benefits.
• Build capacity across space markets and place space topics on national political agendas
• Utilize space to generate tangible societal benefits, including through technology transfer and spin-offs
Spectrum and Operational Challenges
• There is increasing demand of radio frequency spectrum use, especially in regard to the increase in users caused by the trends of needing small satellites for various applications
Recommendations

Develop an educational tool with easy-to-understand guidelines on policy/process, frequency allocation, and interference mitigation that empowers and enables new space participants.

- Streamline international and national processes to encourage and enable new space participants
- Share best practices and standards to minimize the risk of frequency interference
- Promote transparency on frequency availability to enhance access and equally through innovative avenues of allocation
Space Entrepreneurship: Tap the Commercial Potential of Earth Observation Downstream Markets
Earth Observation Focus Area

• How to remove obstacles faced by governments and industries to achieve effective commercialisation of EO space-based products, applications and services

• Tools, mechanisms, and measures can support the market uptake of EO programmes and initiatives to ensure the full exploitation of downstream market segments

• Find a compromise to increase services for government and private sectors
Recommendations

• Make Earth observation data more accessible to a wide variety of end-users with higher frequencies and better quality.

• Encourage Earth observation related start-ups and innovative technologies and businesses using public and private means.
SGAC REGIONAL & NATIONAL WORKSHOPS
2\textsuperscript{nd} South America Space Generation Workshop 2016

- Astrobiology Studies in South America
- South American Space Research
- Emerging spacefaring nations
- Nanosatellites and Cubesats as an educational and research resource in South America
3rd Asia-Pacific Space Generation Workshop 2016

• Space Diplomacy: Bridging the Divide
• The Future of GNSS in The Next Ten Years
• Agricultural Applications of Space Technology
• Self-sustaining Space Economy for Asia Pacific
• Talent Development to Sustain a Space Era
Middle East

- SGAC Youth Space Forum in conjunction with the Global Space Congress, Abu Dhabi, UAE
  - 30-40 students and YPs addressing relevant issues in the space industry
    - Looking forward to 2030
    - Necessary steps for the future of space exploration
    - How space agencies can aid university space programs
  - Support from the UAE Space Agency and Lockheed Martin
THANK YOU

More details of the outcomes and discussions will be published in the SGAC 2016 Executive Summary

www.spacegeneration.org