SPACE GENERATION
ADVISORY COUNCIL

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…"

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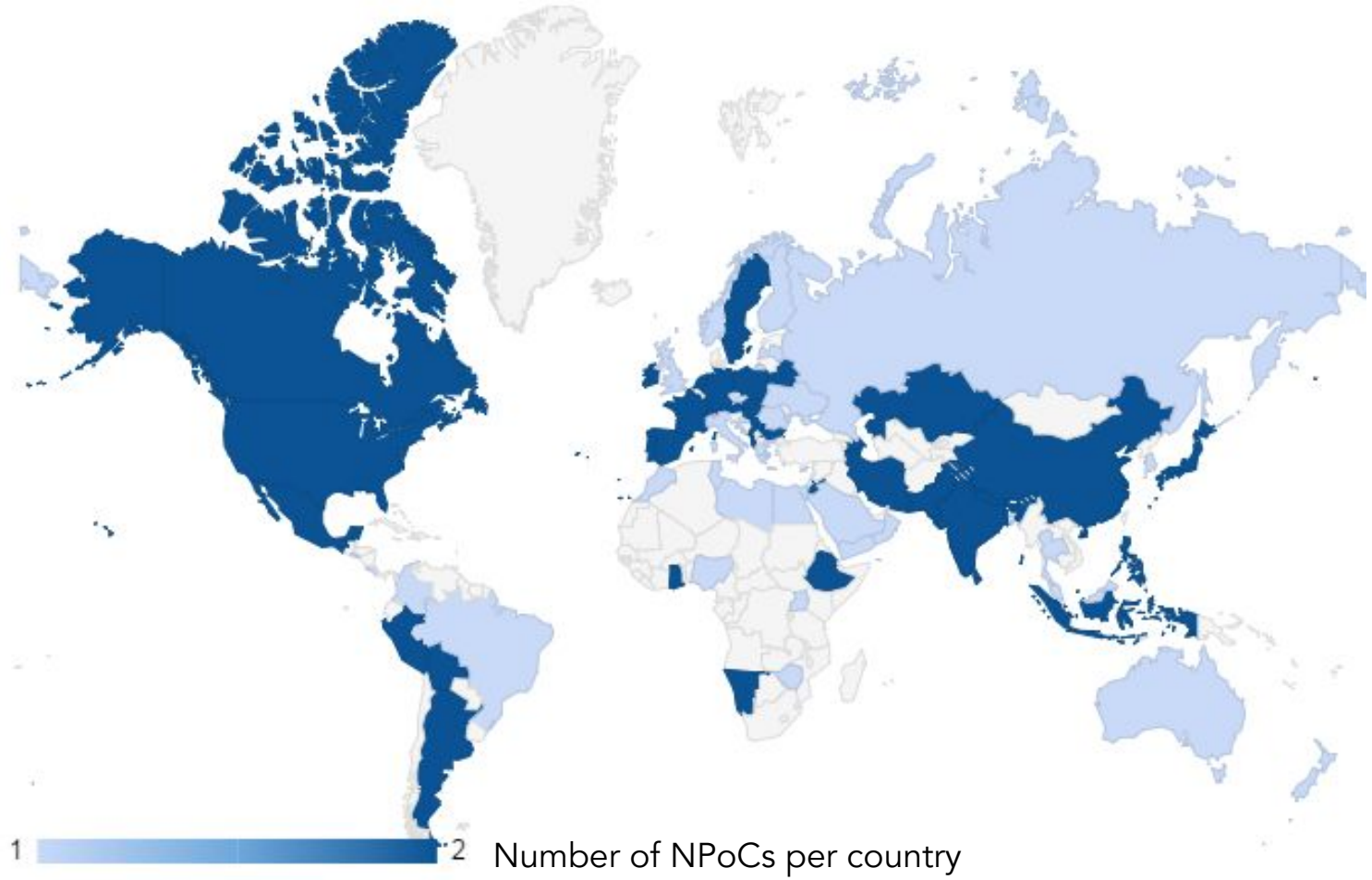
SGAC Network



6 Regions, 110+ Countries, more than10,000 Members in our network

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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

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SGC 2016 WORKING GROUP RECOMMENDATIONS

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EXPLORATION: Proving Ground

Supported by:

Advanced Exploration Systems

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

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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

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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

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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

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UNISPACE+50: Shared Vision, Common Action

Supported by:

SECURE WORLD FOUNDATION

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.

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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

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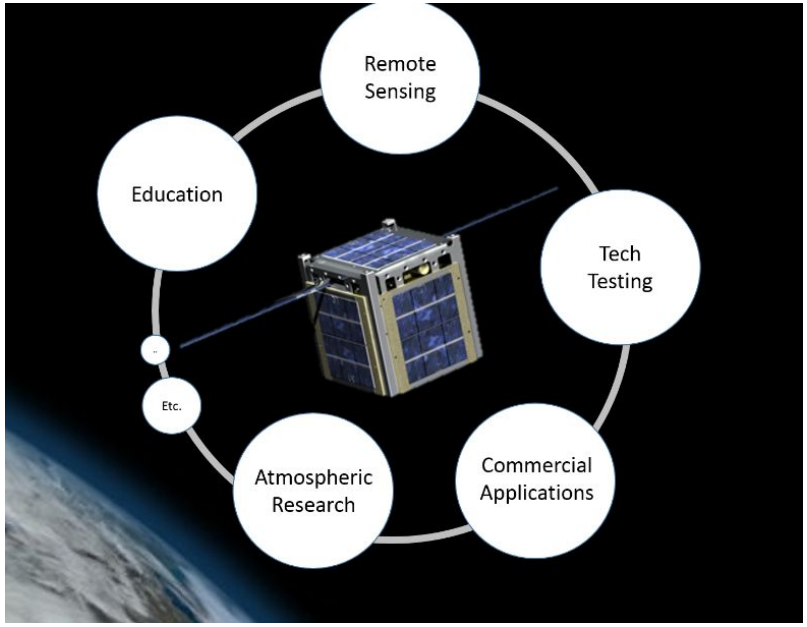
Spectrum and Operational Challenges

Spectrum Focus Area

- 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



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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

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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

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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.

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SGAC REGIONAL & NATIONAL WORKSHOPS

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2nd 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

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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

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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

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THANK YOU

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

www.spacegeneration.org

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