



6 November 2017
Dubai, United Arab Emirates

HIGH LEVEL FORUM

Setting the Scene

SIMONETTA DI PIPPO, DIRECTOR



UNITED NATIONS
Office for Outer Space Affairs



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Office for Outer Space Affairs



UN Office for Outer Space Affairs

Vision

Bringing the benefits of space to humankind

Mission Statement

The core business of the Office is to promote

International Cooperation

in the use of outer space to achieve
development goals





Roles of UNOOSA



CAPACITY-BUILDER: UNOOSA brings the benefits of space to humankind by building space capacity of non-space-faring countries



GLOBAL FACILITATOR: UNOOSA plays a leading and facilitating role in the promotion of the peaceful uses of outer space



GATEWAY TO SPACE: UNOOSA is the main UN agency on space matters and facilitates the coordination of UN activities using space-related technology to improve the human condition globally.



Space yesterday

- **Moving Frontier** – improving technology and its impact
- Need for **governance**
 - 5 Treaties and 5 Principles
 - 50 Years of the Outer Space Treaty
- Call for **trust and cooperation**
- **Interlinkages** –cross-sectoral impact as applicability of space technologies has been broadening
- **Dependency** – space offers critical infrastructure and we have become more and more dependent on it





Space today

- Impact on society, economy, security...
- Total **global space value** – \$330 Billion
 - Government = \$76 Billion (24 %)
 - Commercial = \$253 Billion (76 %)
- **Vulnerability** of technology
- Space **workforce**
- Number of **publications** has almost doubled since 1990s
- Connecting the world



Space is a “global commons”: The advancements of space technology benefit all member states of the UN in one way or another.



Space in the future

- The future of the **safety, security and sustainability of outer space activities**
- Stronger bonds between **states and private sector**
- **Cooperative missions** in LEO and beyond
- Increasing number of space technology **users**
- **Space workforce** on rise
- Broader **socio-economic benefits** from space
- **Climate change** mitigation and risk reduction
- **Capacity-building and learning** rather than starting from zero





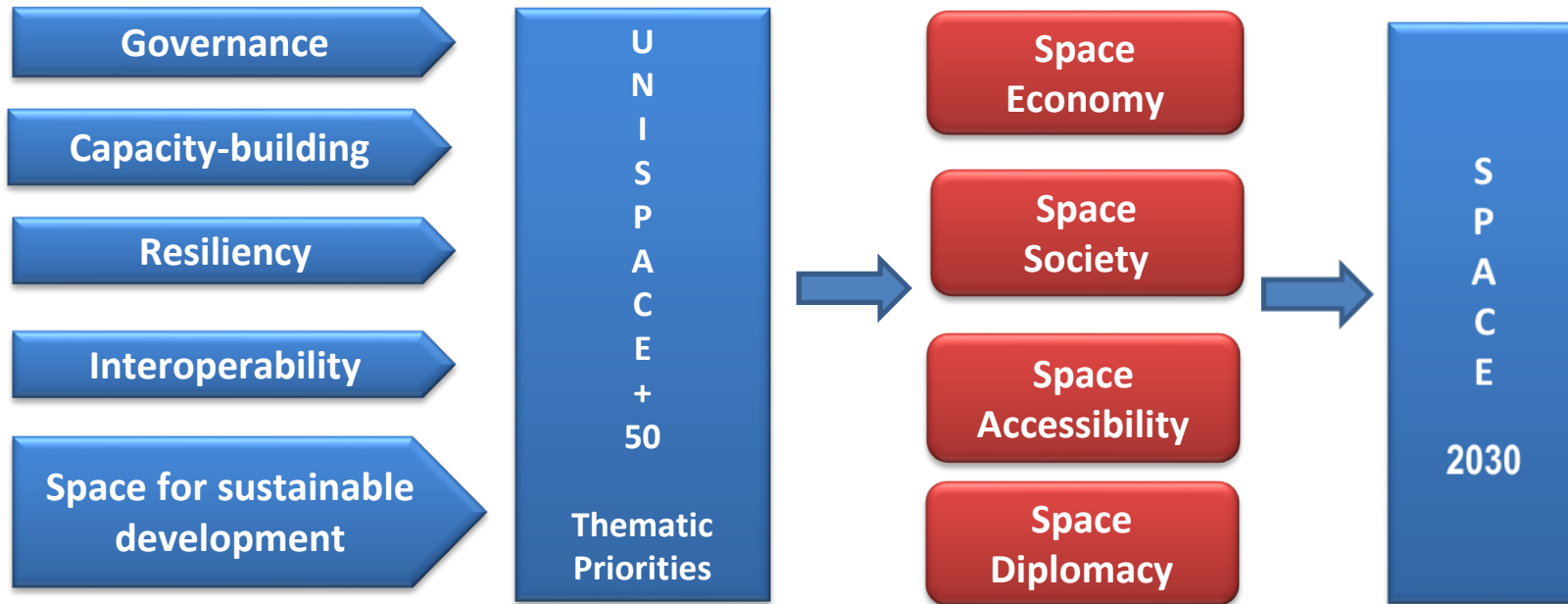
UNITED NATIONS
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UNISPACE+50 Process



Space and SDGs



All countries and all stakeholders act in **collaborative partnership to implement the 2030 Agenda** for Sustainable Development.

UNOOSA is currently developing new approaches to address the targets enshrined in the SDGs.

One joint vision has to be employed to protect space as a limited resource **for the benefit of humankind.**



SUSTAINABLE DEVELOPMENT GOALS



The Past of the UNISPACE+50 Process

There are **5 cross-cutting areas** as defined by COPUOS and its Subcommittees that serve as a base for the 7 thematic priorities of UNISPACE+50:

Governance

UN treaties and principles on outer space, COPUOS guidelines, GA resolutions on outer space

Capacity-building

The use of space science and technology and their applications for the benefit of all countries

Resiliency

Disaster risk reduction, near-Earth objects, space weather

Interoperability

Including the International Committee on Global Navigation Satellite Systems (ICG) and other current and new coordination mechanisms, such as IAWN, SMPAG

Space for sustainable development

Efforts by the Committee and its member States as well as UNOOSA to meet the 2030 Agenda for Sustainable Development



The Present of the UNISPACE+50 Process

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7
Thematic
Priorities

Today, there is a revolution in space, the beginning of a new era in space (new stakeholders, renovated interest for space, private sector involvement)

➔ UNISPACE+50 will be an **unprecedented event** during the 61st Session of COPUOS (June 2018), 50 years after UNISPACE I, a **milestone to steer and strengthen** the Committee's mandates to **address current challenges and opportunities**



People



Planet



Prosperity



Peace



Partnership



Focus on thematic priority 1: *Global partnership in space exploration and innovation*

Objectives:

- **Raise awareness** of space exploration and innovation.
- **Foster dialogue** with space industry and the private sector
- **Promote cooperation** between spacefaring nations and emerging space nations
- Allow **space exploration activities to become open and inclusive** on a global scale
- **Identify governance and cooperation mechanisms** to support this objective



TIMELINE

2018: Report of Action Team on Exploration and Innovation





Focus on thematic priority 2: *Legal regime of outer space and global space governance: current and future perspectives*

Objectives:

- Promote the **universality** of the five United Nations treaties on outer space
- Analyze the **effectiveness** of the legal regime of outer space in the twenty-first century
- Developing the **questionnaire** of the Working Group
- Studying legal mechanisms to foster an international regime of **responsibility** and **liability**
- Considering means to **strengthen the LSC**



TIMELINE

2018: Criteria for developing a guidance document on state of affairs (propose)

2020: Guidance document to be issued by COPUOS



Focus on thematic priority 3: *Enhanced information exchange on space objects and events*

Objectives

- Define and develop requirements for enhanced **information exchange** and **notification procedures** under the United Nations Register of Objects Launched into Outer Space
- **Identify cooperation mechanisms** to support this objective
- Encourage **capacity-building** and **outreach activities** on transparency and confidence-building measures



TIMELINE

2017: Establishment of a working group of the LSC to start its work in 2018

2020: Enhanced mechanisms for information exchange and notification procedures with supporting infrastructure established



Focus on thematic priority 4: *International framework for space weather services*

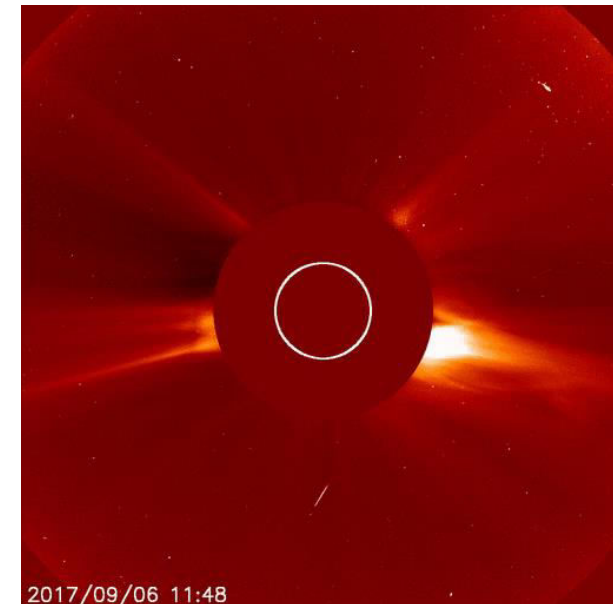
Objectives:

- **Strengthen the reliability** of space systems and their ability to respond to the impact of adverse space weather
- **Develop a space weather road map for international coordination and information exchange** on space weather events and their mitigation
- **Recognize space weather as a global challenge**
- **Increase awareness** through developed communication, capacity-building and outreach
- **Identify governance and cooperation mechanisms** to support this objective

TIMELINE

2017: Creation of a user platform to identify user requirements and promote synergies

2018: Creation of international coordination mechanisms of operational space weather services



Source: NASA

TP4 Activities & results

Results

UN/US Workshop on the International Space Weather Initiative

International cooperation and coordination were agreed as key to mitigate threats of space weather

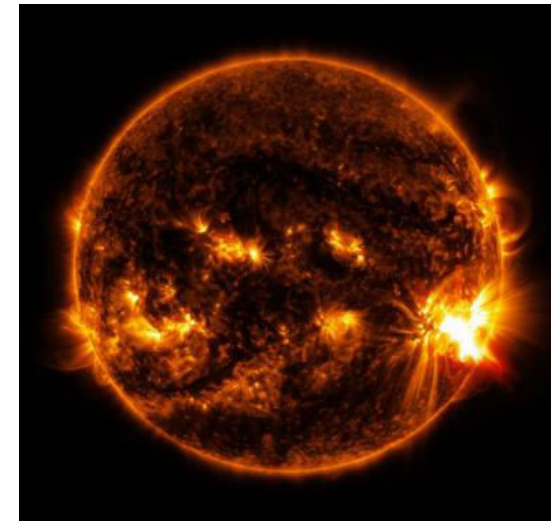
Identify gaps & benefits by open data sharing

Involve private sector & outreach activities

Awareness-raising activities should take place among stakeholders

Avoid duplication by increased coordination on the international level

3rd UNOOSA/ICAO Symposium –
Dedicated session for space weather





Focus on thematic priority 5: *Strengthened space cooperation for global health*

Objectives:

- **Improve the use** of space technologies and space-based information and systems in the global health domain.
- **Promote enhanced cooperation and sharing of information**
- **Enhance capability in integrating health data** in disaster management plans.
- **Strengthen capacity-building** in advancing space technologies in global health efforts.
- **Identify governance and cooperation mechanisms** to support this objective.



TIMELINE

2018: Compilation of practices and initiatives, current or planned

From 2018: Maintenance of an active community of practice

From 2019: Delivery of national and regional training programmes

TP5 Activities & results

- **Encourage cooperative agreements** between health and space authorities & encourage cross-sectoral effective coordination in space activities relevant to global health
- **Strengthen institutional arrangements** between UNOOSA and WHO
- **Open data sharing** for accessing relevant geospatial information to improve global health
- Focus on **how to create and reinforce relevant partnerships** for better utilization of space-based assets, data and technologies in addressing global health

[UN/WHO/Switzerland Conference on Strengthening Space Cooperation for Global Health](#)





Focus on thematic priority 6: *International cooperation towards low-emission and resilient societies*

Objectives:

- **Define synergies** between climate change mitigation efforts, disaster risk reduction and global development.
- **Provide requirements to new developers** for coverage in geographical areas not sufficiently monitored or applications that need further development.
- **Improve integrated space applications approaches** and the **interoperability** of space-based systems and ground/in situ systems.

UN-SPIDER has been providing direct support to developing countries in accessing and using Earth observation data in preparing for and responding to disasters

TIMELINE

2018: Roadmap for enhanced resiliency

2020: Strategy for an international coordination of constellation of constellations supporting 2030 Agenda



Activity

United Nations/Germany International Conference
on International Cooperation Towards Low-Emission
and Resilient Societies (to be held)



Focus on thematic priority 7: *Capacity-building for the 21st Century*

Objectives:

- **Define new innovative and effective approaches** to overall capacity-building and development needs as a fundamental pillar of global space governance.
- **Strengthen comprehensive capacity-building** and outreach activities of the Office for Outer Space Affairs.
- **Develop infrastructure** for cross-sectoral and integrated applications, with combined scientific, technical, legal and policy outputs.
- **Enhance existing partnerships and forge new ones**
Promote efforts to encourage STEM education, especially for women in developing countries.



TIMELINE

2017: Upgrade capacity-building strategy; UN/Austria flagship Symposium on TP7

2018: Strategy to be presented to MS; Space for Women project to be initiated, OpenUniverse to be initiated

2020: Consolidated engagement with tertiary education institutions; strengthen network of regional centres



TP7 Activities & results

Space for Women

United Nations/Russian Federation
Workshop on Human Capacity-Building in
Space Science and Technology for
Sustainable Social and Economic
Development

Open Universe (to be held)

UN/South Africa Symposium on “Small
Satellite Missions for Scientific and
Technological Advancement” (to be held)

United Nations/Austria Symposium on
"Access to Space: Holistic Capacity-
Building for the 21st Century"

Reach out to industry and private sector
entities

Regional Centres for Space Science and
Technology Education should be strengthened
and enhanced

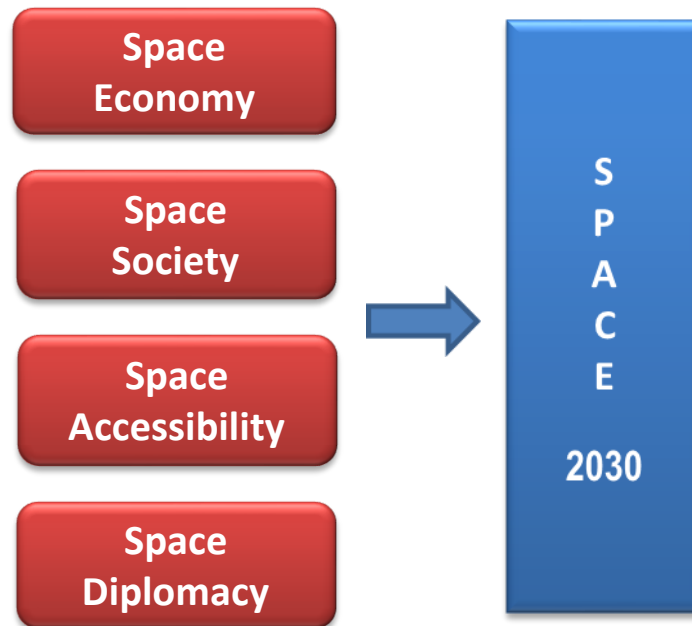
Building capacity of the youth and women in
order to attract and retain them to STEM and
inspire them

Provide legal and decision-making assistance to
governmental and regulatory authorities &
encourage involvement in COPUOS





The Future of UNISPACE+50 Process



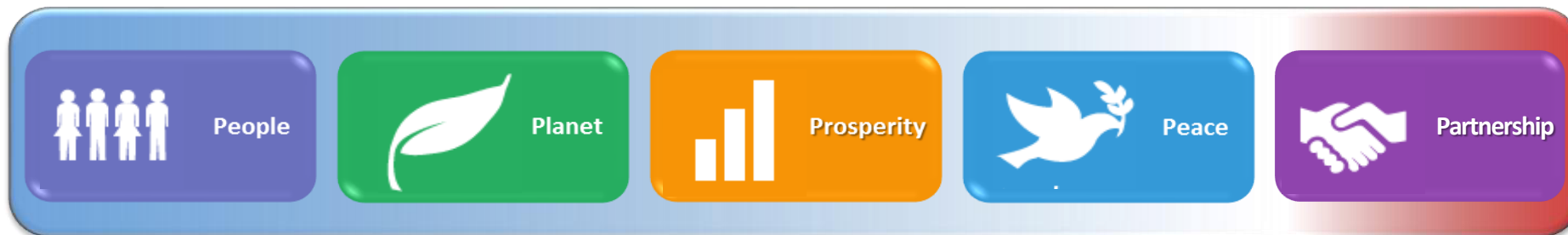
Development of space-derived **economic benefits**.

Evolution of **society and societal benefits** stemming from space-related activities.

All communities using and **benefitting** from space technologies.

Building **partnerships** and strengthening international **cooperation** in space activities.

Focus on the UN frameworks: The 2030 Agenda for Sustainable Development, The Sendai Framework on Disaster Risk Reduction 2015-2030 and the Paris Agreement on climate change



Space 2030 agenda and its strategic objectives

- The outcome of UNISPACE+50 process and its thematic priorities will form, at the UNISPACE+50 in 2018, a **dedicated General Assembly resolution**
- The **Space2030 agenda for strengthened cooperation and governance** of outer space activities and their contribution in addressing overarching, long-term development concerns will be an output of UNISPACE+50
- The strategic objectives of Space2030 agenda, based on the objectives and results of work under **UNISPACE+50 thematic priorities** as well as **targeted inputs** from other related activities and **workshops** in the lead-up to UNISPACE+50, will to be presented under the **four pillars of Space Economy, Space Society, Space Accessibility and Space Diplomacy.**





The Way Forward on Space2030

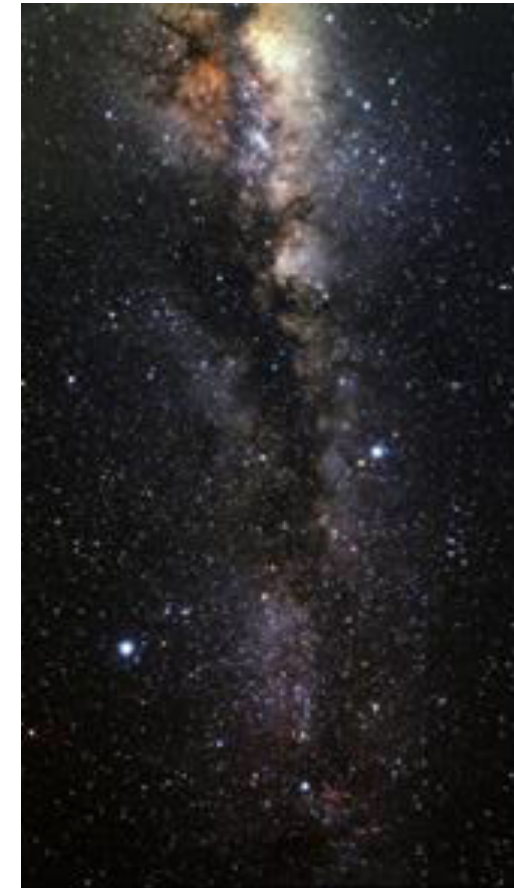
Space2030 is a **unique agenda** combining global governance of outer space activities, space science, technology, policy, and law

In line with **SGs overall reform agenda & its tree pillars** – peace and security, development, and human rights

Strengthen UN inter-governmental platforms to contribute to achievement of SDGs and other goals and targets enshrined in the international frameworks

Reduce ‘Space divide’ - Partnership to provide countries with space capabilities and enhance their opportunities to access space

Build stronger partnership and coordination in the peaceful uses of outer space at all levels – demonstrate space as a contributor to the well being of people





The Way Forward on Space2030

- Stronger cooperation in global partnerships
 - Stronger engagement with private sector, as mandated by COPUOS
 - Identify the specific needs countries have and attempt to close the existing gaps between countries
 - Improve cost-effectiveness of the process
 - Support and coordinate programmes which focus on emerging space nations and those with limited space capabilities
 - Introduce exchange programme aimed at capacity-building
 - Strengthen the role of Regional Centres for Space Science and Technology Education
 - Establish global compact for Space to involve more sector entities



- Space for Development Profile/Space Solutions Compendium
 - Demonstrate the usefulness of space and broaden access to benefits stemming from space technology and applicatios
 - Create a list of indicators which allow an initial assessment of the strengths and weaknesses regarding space development
 - Create a list of space-related solutions that each State can apply, in line with their space development strategy
- Access to space
 - Space for Women – encourage and empower women to participate in STEM field and space industry
 - Open Universe Initiative – engage and cooperate with relevant stakeholders to gather and provide open data for a wider user base
 - Orbital Mission
 - KibuCUBE Initiative
 - CMSA & UNOOSA Agreement
 - Capacity Building Network in support of the United Nations Programme on the Peaceful Uses of Outer Space



Addressing the growing role of private sector

- The General Assembly agrees that the Office should pursue **greater engagement with industry and private sector entities** to further their support for and contributions to the overall work of the Office (A/C.4/72/L.2)



Global Compact for Space

- **Primary entry** point for industry, the private sector and non-governmental actors for cooperation with the UN on Space activities
- Partnership with the private sector is not new in the UN, the **United Nations Global Compact** launched in 2000
- The UN Global Compact offers guidance, training, resources, tools, local network support and networking opportunities with Global Compact Participants
- **Global Compact for Space** would bring together a diverse group of partners in a **joint commitment** towards the access and use of Space for sustainable development.



The Way Forward of HLF

- Building **stronger partnerships and international cooperation** and coordination in the peaceful uses of outer space at all levels
- Utilize HLF as a forum to express views on the initiatives and further recommendations leading to UNISPACE+50
- Present lessons-learned and ideas on the four pillars
- Discuss the **importance of space for society** and the need to guarantee **universal access** to space activities to address sustainable development challenges
- Help shaping **Space2030**



The Future of HLF

- Establish HLF as a **regular event** to discuss actions and synergies to implement UNISPACE+50
- HLF is in the future expected to:
 - Be a conference with global impact involving speakers and participants from all sectors to address technical, scientific, political and business future of the space sector
 - Address the collective challenges, including Agenda 2030, Paris Agreement, and The Sendai Framework
 - Continue to serve for dialogue to connect the Four Pillars and the Space2030 Agenda
 - Facilitate partnership with UNOOSA



The Future of HLF

- Convene on a yearly basis to discuss the future course of space exploration, technology and policy
- Available for attendance to all Member States and broad space community
- Results of the HLF to be shared with COPUOS
- Interest in hosting the HLF to be expressed 3 years in advance
- Potential to select permanent/long-term location
- UNOOSA to cooperate with the hosting country
- 2018 Bonn, Germany; 2019 TBD



First UN GLOBAL SPACE SUMMIT of the 21st century

- Recommendations from HLF and other UNISPACE+50 related events leading towards will be reviewed & discussed
- Future of space sector to be decided in June 2018
- Space2030 Agenda as an expected outcome

**One of the most important
space-related events of this milenium**



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THANK YOU



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