



# **The Contributions of Space for Europe and Sustainable Development**

**SIOI – ASI Master in Space Policy and Institutions  
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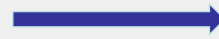
## Outline

- **Introduction**
- **Global trends**
- **European challenges and Space**
- **Europe in the global context**
- **Sustainable Development**
- **The UN Agenda 2030**
- **Conclusion**

## European societal needs mapping

### How to gauge societal needs?

- Virtual observatories
- Advocacy groups
- Social Media



Integrated societal needs mapping

### European Union Policies & the future

- Innovation Europe, Digital single market, Energy Union
- Innovative Innovation Ecosystems & Intellectual Property Rights
- Education system

## Global Trends (1)

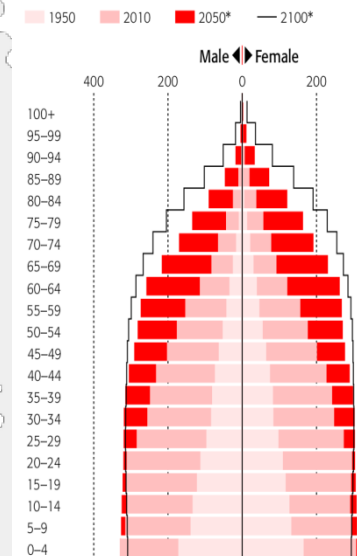
### Expanding and ageing population of empowered individuals

- Urbanisation
- Mobility
- Technology diffusion
- Education
- Health care
- Growth of the global middle class
- Reduced gender gap
- “People power”

### Ever-more dynamic technological landscape

- Speeding up of scientific and technological innovation
- Convergence of technologies leading to societal paradigm shifts

World population, by 5-year age groups, m

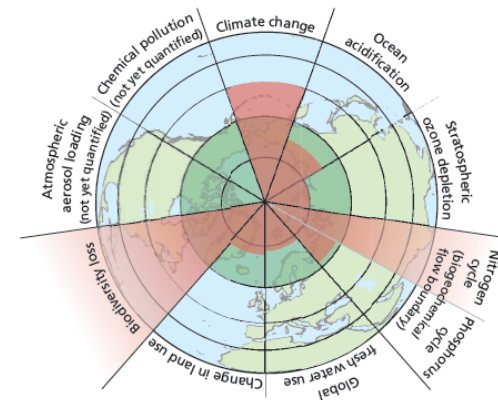


\*Projection.  
 Source: UN

## Global Trends (2)

### Increasing pressures on key resources in severe environmental conditions

- Growing demand for  
Food  
Water  
Energy
- Crossing planetary boundaries ?
- Potential negative trade-off
- Necessity for synergies



1.16 Planetary boundaries

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### Global Power shifts in a multipolar world

- Shift of geo-political/economic barycenter to dynamic Asia ?
- Multipolarisation, no hegemonic power. What governance ?
- Inter-state and intra-state security hurdles

# Space Contributions to European Challenges

## A new role for Space ?

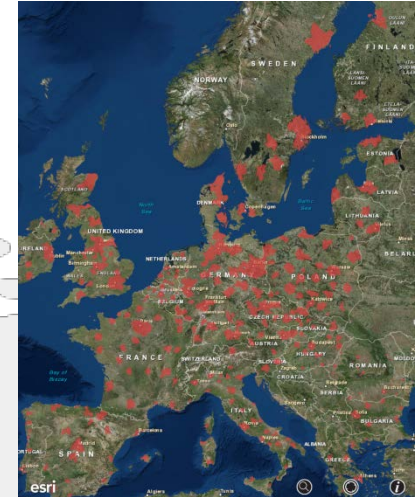
- Creation of Space programs addressing EU societal needs
- Innovative downstream services integrating Space and social data

## Space as an essential tool for life on Earth

- Sustainable development, Smart Cities, Connectivity and Big Data
- Mobility: integrated and green transportation systems
- Hypersonic point to point travel

## Space spin-in and Space spin-off

- e-health
- Key Enabling Technologies
- Human machine interactions



# Europe's global role

## Climate change

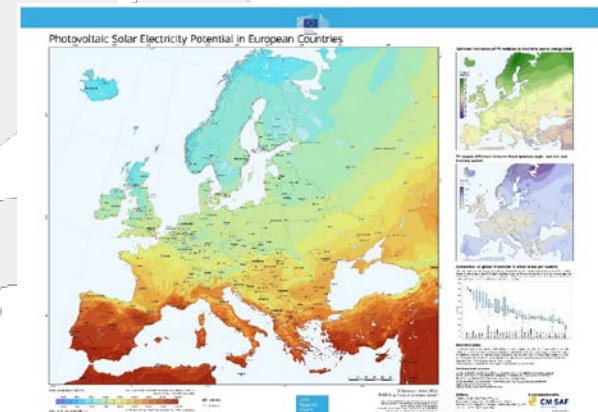
- European leading role in emissions monitoring
- The “Clean-Energy Moonshot” approach ?

## Energy and Infrastructures

- Full exploitation of renewable energy sources
- Infrastructures planning and sustainable development

## Earthquakes

- Innovative techniques for predictive analyses
- Global coverage services



## Global community & SDGs

### 4 dimensions of sustainable development

- Economic development
- Social inclusion
- Environmental sustainability
- Good governance







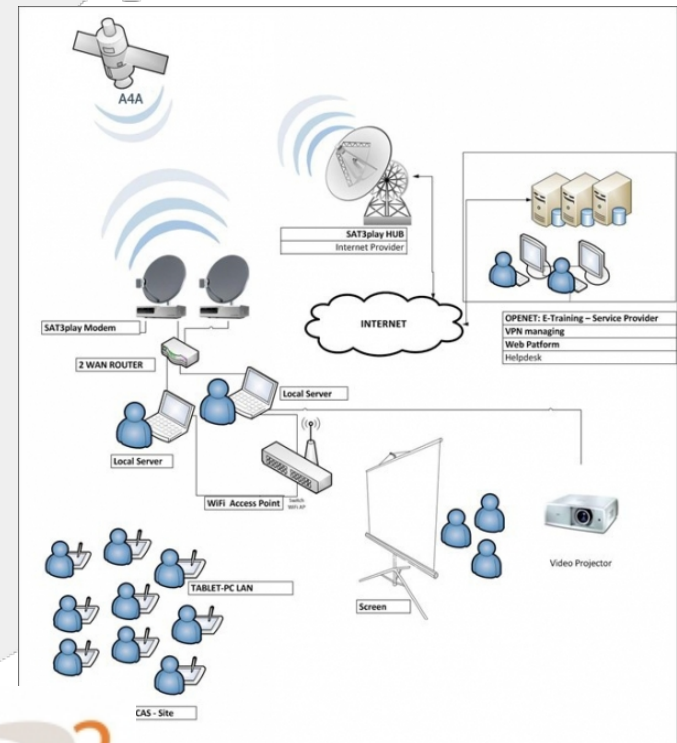
## Global Space community – supply

- Multitude of sectors and actors with very different interests, specializations, backgrounds, and institutional character
- Space technology & economic development:
  - Private actors - connectivity
  - EU Copernicus, Tiger - Earth Observation
  - UN ICG - GNSS



# Space as an enabler of Sustainable Development

- Space services vs terrestrial infrastructures
- Integrated innovative services
- Tele-education and e-health



*Sway*<sup>4</sup>edu **2**  
 Satellite way for education



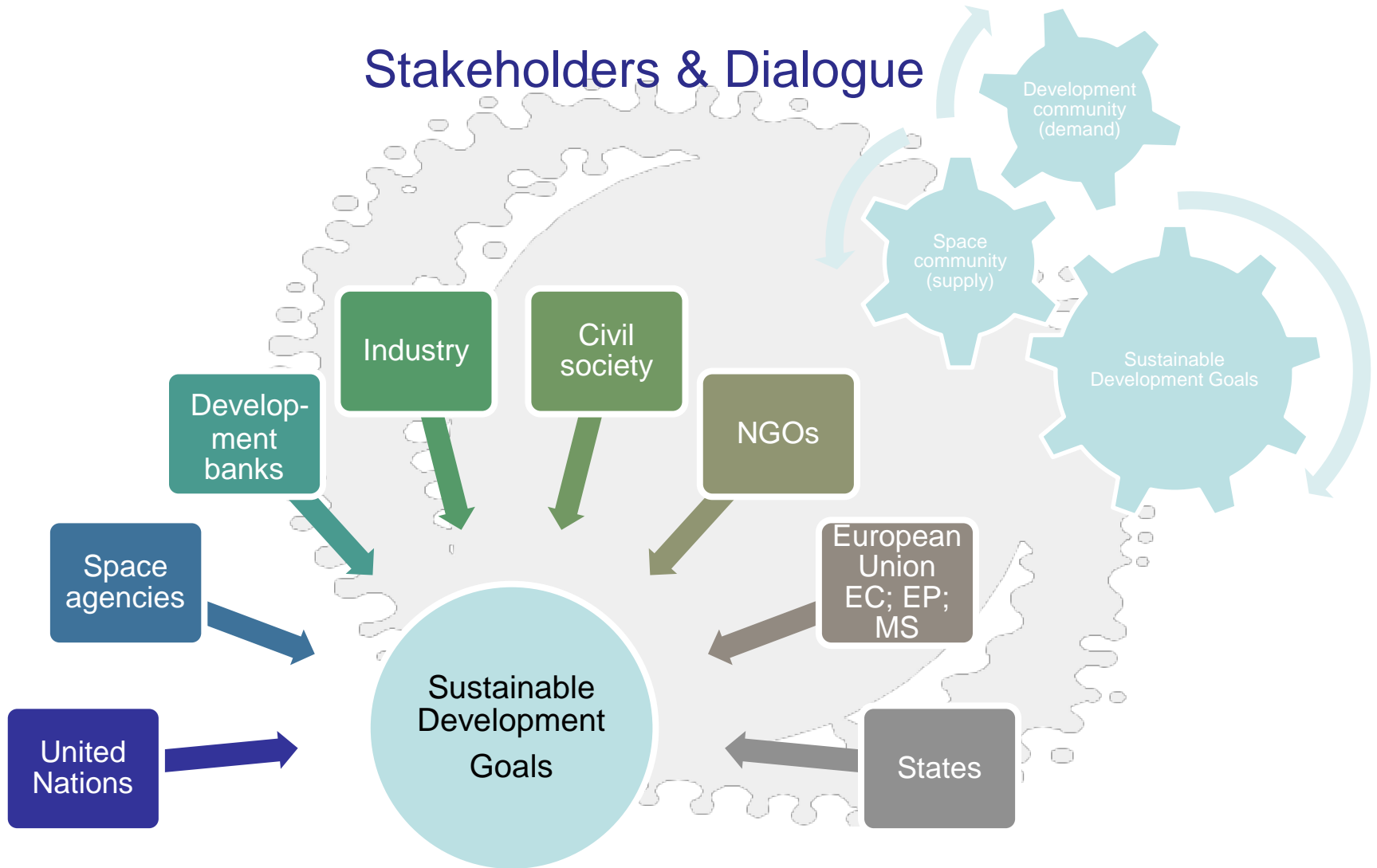
## Development actors – demand

Some of the key development actors:

- national governmental actors
- citizens
- non-governmental actors
- governmental aid organisations
- intergovernmental organisations in the field
- the Office of the UN Special Representative for the SDGs,
- development consultancy firms



# Stakeholders & Dialogue



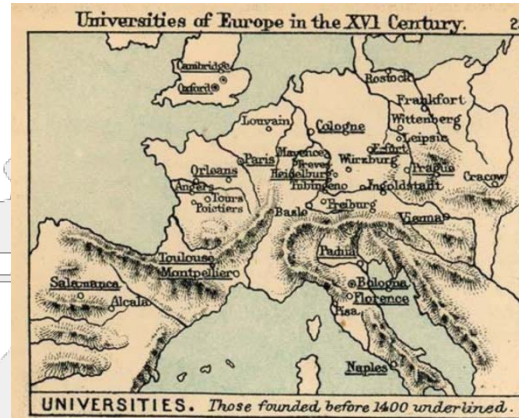


<p><b>1</b> NO POVERTY</p> 	<p><b>2</b> ZERO HUNGER</p> 	<p><b>3</b> GOOD HEALTH AND WELL-BEING</p> 	<p><b>4</b> QUALITY EDUCATION</p> 	<p><b>5</b> GENDER EQUALITY</p> 	<p><b>6</b> CLEAN WATER AND SANITATION</p> 
<p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p> 	<p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p> 	<p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 	<p><b>10</b> REDUCED INEQUALITIES</p> 	<p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p> 
<p><b>13</b> CLIMATE ACTION</p> 	<p><b>14</b> LIFE BELOW WATER</p> 	<p><b>15</b> LIFE ON LAND</p> 	<p><b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS</p> 	<p><b>17</b> PARTNERSHIPS FOR THE GOALS</p> 	



Preparing  
the Commission  
for future  
opportunities

Foresight network  
fiches 2030  
Working document



Thank you for your attention!

*“Your task is not to foresee the future, but to enable it.” - Antoine de Saint-Exupéry*

