Space as an Arena for Innovation, Integration and Investment

United Nations/United Arab Emirates High Level Forum: Space as a Driver for Socio-Economic Sustainable Development
Dubai, November 2017
ESA facts and figures

- Over 50 years of experience
- 22 Member States
- Eight sites/facilities in Europe, about 2300 staff
- 5.75 billion Euro budget (2017)
- Over 80 satellites designed, tested and operated in flight
ESA budget for 2017: 5.75 B€ (by domain)

- **Launchers***: 18.9%, 1,088.4 M€
- **Navigation***: 17.6%, 1,010.8 M€
- **Space Situational Awareness***: 0.3%, 15.1 M€
- **Associated with General Budget***: 3.9%, 222.3 M€
- **Prodex***: 0.8%, 47.2 M€
- **Technology Support***: 2.0%, 114.3 M€
- **Earth Observation***: 26.9%, 1,543.3 M€
- **Telecom & Integrated Applications***: 5.6%, 319.0 M€
- **Space Science***: 8.9%, 513.1 M€
- **Basic Activities***: 4.1%, 234.8 M€
- **Human Spaceflight & Robotic Exploration***: 11.0%, 633.0 M€
- **European Cooperating States Agreements***: 0.1%, 5.5 M€
Space 4.0: a new era of space

**Space 4.0** represents the evolution of the space sector into a new era:

- From being the preserve of the governments of a few spacefaring nations, to an increased number of diverse space actors around the world;
- With the emergence of private companies, participation with academia, industry and citizens, digitalisation and global interaction;
- Analogous to, and is intertwined with, Industry 4.0, which is considered as the unfolding fourth industrial revolution of manufacturing and services.
European integration in ESA
United Space in Europe

- Operation Centres
- Joint Statement
- EUROPEAN UNION
- Space Agencies / Entities
  - Joint Programmes
  - Cooperation Agreement
  - Consultation
sustainable moon surface operations

- Exploration
- Human & robotic
- Logistics
- Public and private
- Moon Science
- Cosmology /astronomy
- Fundamental research
- Transportation
- Resource management
- Communication
- Technology

Single place but multiple uses and multiple users

Moon Village
THE EUROPEAN SPACE AGENCY

UNITED SPACE IN EUROPE

Thank you