



Polish Space Agency



POLSA: The Polish Space Agency

- The Polish Space Agency (POLSA) is a national governmental agency, established in September 2014
- Poland formally became ESA's 20th Member State on 19 November 2012
- POLSA supports the Polish space sector by **combining the space science and business** and **assists the space sector in becoming fully competitive in a global market**
- One of the key aspects of the Agency's activities is the **promotion of Polish space sector in the country and abroad**
- Another priority is the **promotion of space education, Research & Development, and the development of satellite technology that can be used in everyday life, including communication, navigation, environmental monitoring**



- ✦ Poland is a **European Space Agency (ESA)** Member State since 2012.
- ✦ Polish contribution to ESA programs is 39 mln EUR and additionally for mandatory activities is almost 8 mln EUR.
- ✦ Polish main area of interest in the ESA is science programs (PRODEX), Space Safety, Earth Observation and Telecommunication Programs.
- ✦ Polish institutes have proven capabilities in the field of space science derived from great astronomy heritage (Kopernik, Prof. Wolszczan).
- ✦ The Polish space sector is consisting of a few global companies representations and about 30th small businesses. They specialize in space mission subsystems.
- ✦ Polish companies have experience in small satellites development (**Heweliusz** – Space Science; launched 2014, **KRAKSat** – Scientific/Technology Demonstrator; launched 2019, **Lem** – Space Science; launched 2013, **Swiatowid** – Earth water/air monitoring spacecraft; launched 2019).
- ✦ Poland is part of the **EUSST** (European Space Surveillance and Tracking Consortium). POLSA also recently established a **National Space Safety Operations Center (NOC)**, and is working to join and support **the Inter-Agency Space Debris Coordination Committee (IADC)** with our capabilities.
- ✦ In 2020, We launched the activities related to development **National Terrestrial Segment (NSN)** project.

Some Polish Space Specializations



International
Cooperation

- **International Cooperation**
 - POLSA coordinates the participation of Polish representatives in EU and ESA and other international entities programs.



Security
and Defense

- **Security and Defense**
 - The priority task of the Polish Space Agency is to increase Polish defense capabilities through the use of satellite systems.



Administrative
Authorities

- **Data for administrative authorities**
 - POLSA is to facilitate and enable the country administration use of products of satellite technology such as Earth observation, satellite navigation or telecommunications.



Space
Industry

- **Space Industry**
 - POLSA works on developing partnerships between Polish industry and research entities by organizing briefings etc. on the state of development of technological domains of ESA.



Research
& Development

- **Research & Development**
 - POLSA supports Polish scientific institutions conducting R & D in the areas of raising funds for scientific and industrial research and development work and technologies.

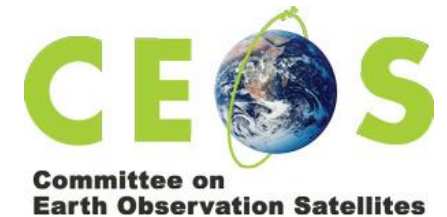
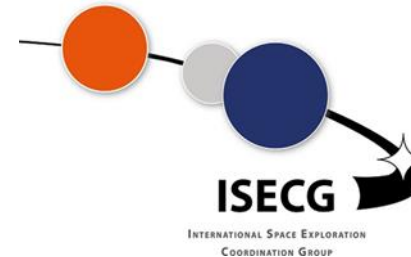


Education

- **Education**
 - POLSA conducts educational activities in space technology, space career, and the participation of Polish entities in space missions and experiments, addressed to all age groups.

International Cooperation

POLSA is engaging in bilateral arrangements with other global partners in the field of space exploration:





POLSA's Earth Observation Activities

National Space Program: Earth observation capabilities will be highlighted as an important focus of Poland's National Space Program (KPK) in the coming months

CEOS Disasters Working Group: POLSA has participated in Working Group meetings and looks forward to engaging, learning, and sharing even more as we go forward

Sat4Envi: Sat4envi: project focused on building capabilities of public administration when it comes to infrastructure and knowledge finished at the end of March 2021. Right now POLSA is involved in planning new trainings and promoting unique handbook and e-learning platform dedicated to public administration.

POLSA has continued and expanded its participation in Sat4Envi, an operating system for assembly, sharing, & promotion of digital satellite information about the environment

The Sat4Envi project works to foster infrastructure for receiving, storing, processing, and distributing data from Sentinel-1, -2, -3 satellites, and related satellite products using existing Institute of Meteorology and Water Management (IMGW) resources. As a result of its implementation, data from Copernicus and other missions are accessible to Poland's public administration entities to be applied in their activities related to environmental protection, area development and planning, development of urbanization and transport networks, and to private entities to create commercial services.

Sat4envi – EO for administration and not only

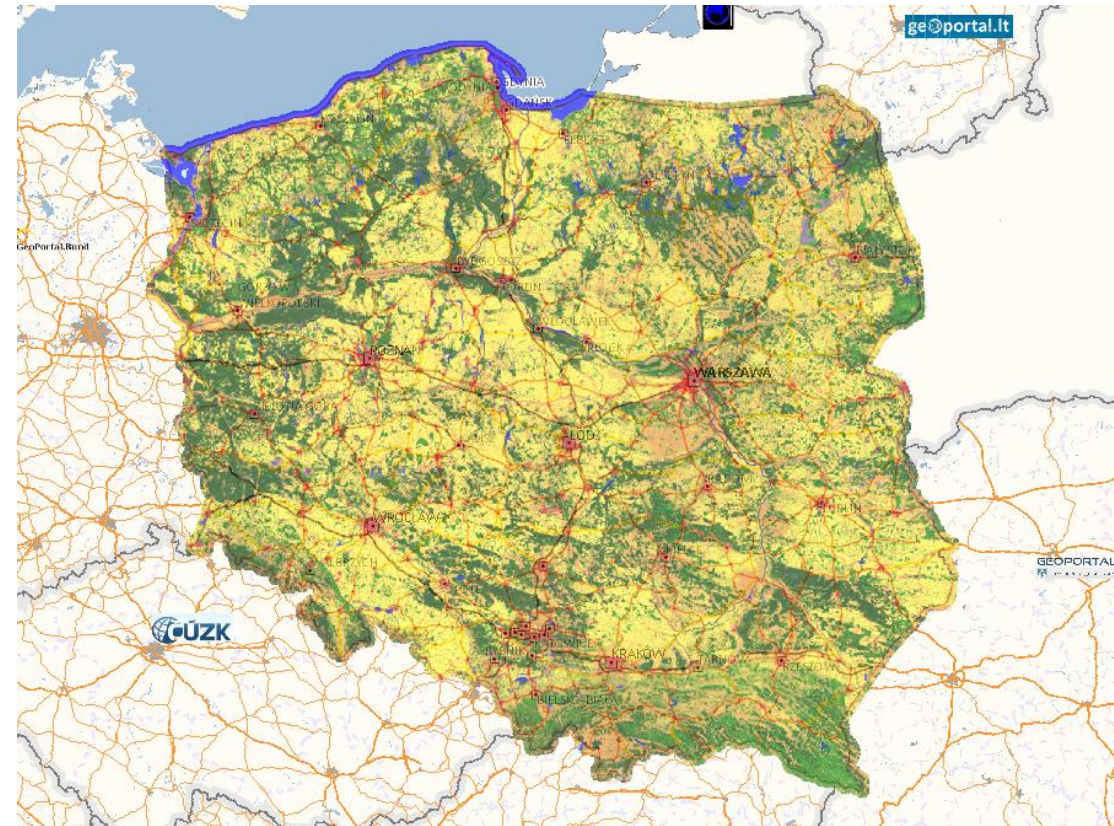
Project ended in march 2021. POLSA worked on:

- E-learning platform
- Webinars & stationary learning
- Handbook for public administration
- Through all deliverables of the project concerning education, one useful for students were promoted through channels dedicated for this target group.



POLSA's Earth Observation Activities

- POLSA co-organized a conference: Harnessing Remote Sensing for Sustainable Cities organized under Road to BERN initiative by Statistics POLSA, Statistics Swiss and Swiss Embassy in Poland, and Ministry of Foreign Affairs. POLSA is preparing for NEREUS (Network of European Regions Using Space Technologies) workshops in October and EUOSTAT conference, also in October.
- POLSA published a landcover map of Poland on geoportal, the most visited interactive map for everyone looking for updated information on Poland.
- POLSA continues Sat4envi efforts to build **National Satellite Information System**. Activities concern: purchasing landcover change detection map, landcover for 2019 and 2021 of Poland, soil moisture in Poland, conferences and meetings planned for November and December, investment in IT infrastructure.





A Snapshot of POLSA Projects

- POLSA is a member of European Clusters:
 - **EUSST** – European space safety consortium
 - **PERASPERA** – Strategic Research Cluster in space robotics
- POLSA participates in the following European research projects:
 - **ENTRUSTED** – European Network for satellite telecommunication roadmap for governmental users requiring secure, interoperable, innovative, and standardized services
 - **Future Space** – Inspiring students to pursue careers in STEM
- POLSA realizes national and international projects:
 - **SUN** – mentoring programs and pre-incubation support
 - **Cosmic Hub** – Cooperation and knowledge-sharing platform for startups, SMEs, and primes



EUSST – European space safety cluster

Consortium of eight countries (France, Germany, Italy, Spain, United Kingdom, Poland, Portugal, Romania).

The safety and security of European economies, societies and citizens rely on space-based applications such as communication, navigation and observation.

The SST services assess the risk of in-orbit collisions and uncontrolled re-entry of space debris into the Earth's atmosphere, and detect and characterise in-orbit fragmentations.

POLSA is implementing the **SSA System** (Space Situational Awareness) **consists of a network of sensors all over the world**

- to **detect and track objects** (including satellites) **that move across the Earth's orbits, to avoid collisions in space**
- to **ensure the security of space objects and to safeguard ground infrastructures**

More information: <https://www.eusst.eu/>





PERASPERA - European Space Robotics Consortium

POLSA is a member of a **robotics consortium** which gathers the leading space agencies in Europe.

Partners:



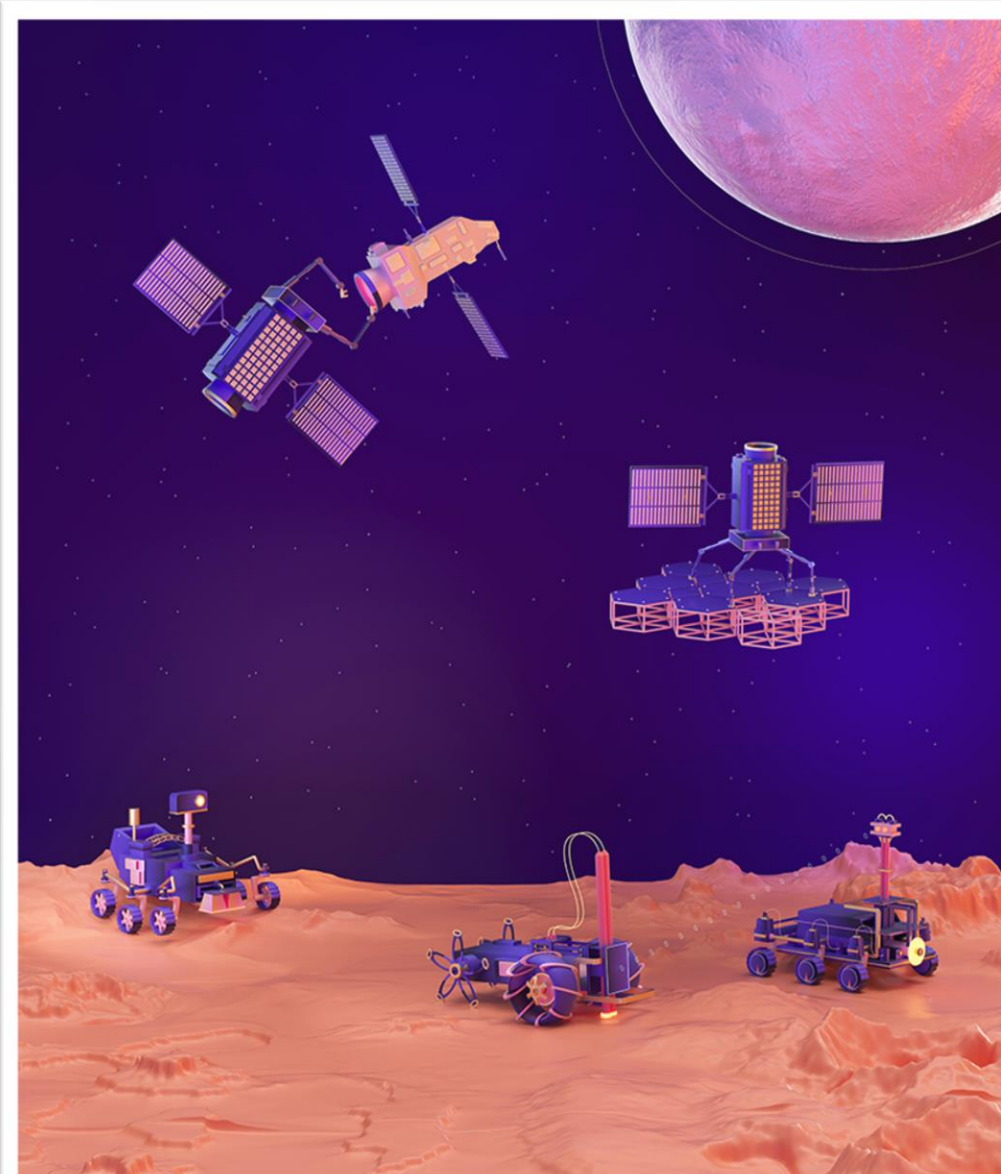
The purpose of the consortium:

- **support for increasing competence of the EU robotics industry** (planetary and orbital robotics),
- **enhancing the competitive advantage of European entities**
- **demonstrating key technology solutions in space, e. g. on orbit servicing (assembly, repair, refuelling)**

The role of POLSA:

- POLSA's participation in the consortium allows the integration of Polish entities in prime R&D projects.

More information: <https://polsa.gov.pl/en/projects/peraspera>



ENTRUSTED

- European Networking for satellite Telecommunication Roadmap
for the governmental Users requiring Secure, interoperable, Innovative and standardised services

ENTRUSTED is a scientific project devoted to the development of secure satellite connectivity for public administration use. It focuses upon the expansion of a European program GovSatCom.

Partners:

POLSA implements the Entrusted project together with nearly 20 other EU institutions and agencies.

The aim of the initiative is:

- to provide reliable and cost-effective access to secure SatCom capacities and services for governmental users in Member States and EU institutions and agencies
- to define of the users of potential services, their needs and associated requirements.
- to ensure that future EU GOVSATCOM services will comply with users requirements

More information: <https://www.entrusted.eu/>



FUTURE SPACE

- The FUTURE SPACE is the EU-funded project focused on **astronomy & space exploration in European educational systems**.

Partners: Poland, Greece and in the Netherlands

The purpose of the project:

- to **provide changes in understanding and teaching STEM subjects** (Science, Technology, Engineering and Math) in **upper secondary schools**.
- to **inspire students through space matters, increase the number of candidates for STEM studies, and introduce young people to career opportunities** in the space sector and other innovative areas.
- Future Space **promote modern tools and innovative didactic forms**, combined with an **attractive subject matter of classes**, that should result in a better understanding of STEM issues for ex. movies about role models and webinars on space career.



With the support of the
Erasmus+ Programme
of the European Union



E+ project 2019-1-PL01-KA201-065434

FUTURE SPACE



SUN - Space hUb Network

The project aims at increasing the commercialization of space enabled solutions and growth of European start-ups.

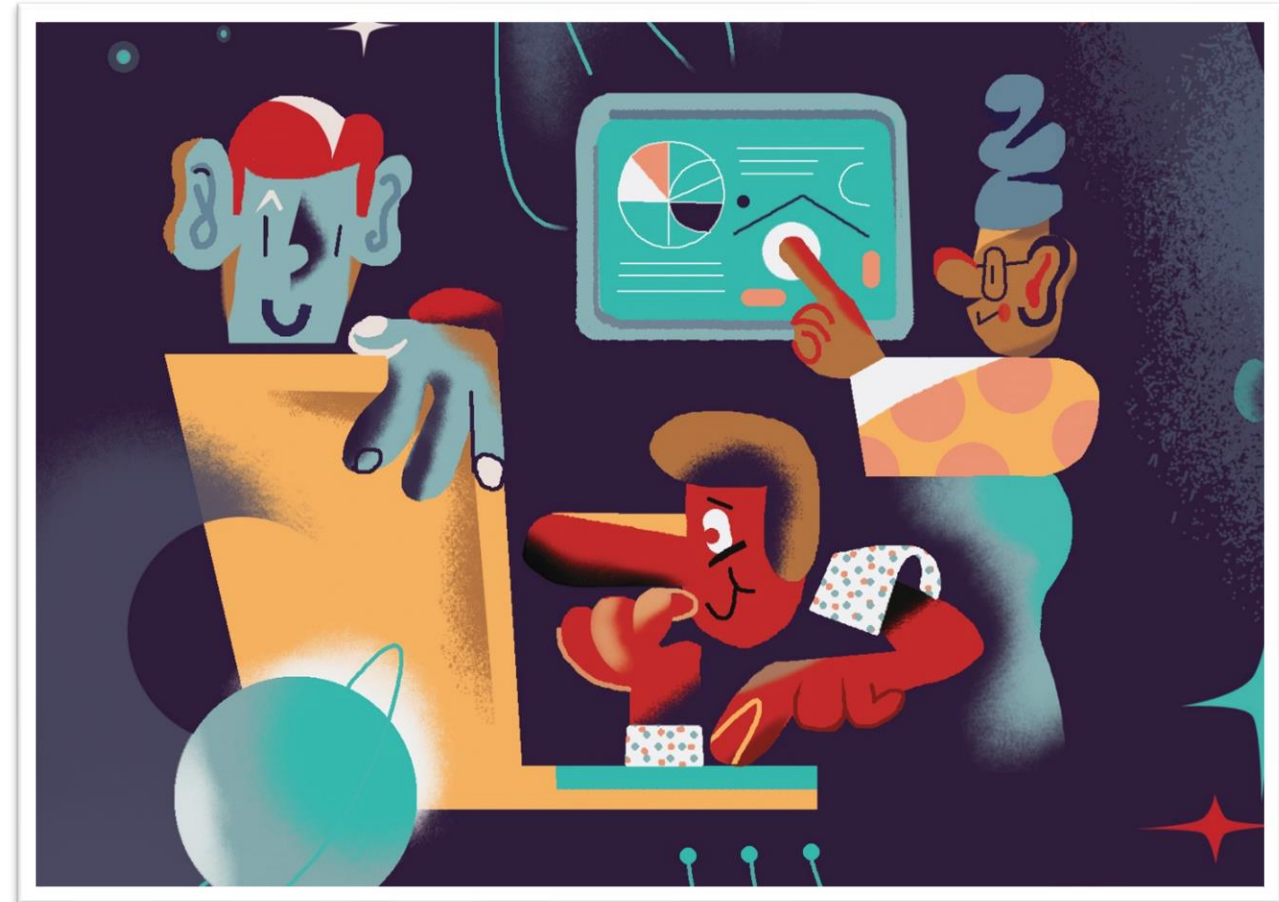
A new project in POLSA, started in January 2021.

The consortium consists of 7 entities: Lithuania, France, Ireland, Austria, Romania and Poland

Project goals:

- **increasing the use of space technologies,**
- **implementing mentoring programs,**
- **pre-acceleration and pre-incubation support**

POLSA's role is to **organise activities such as hackathons and participation in a roadshows.**



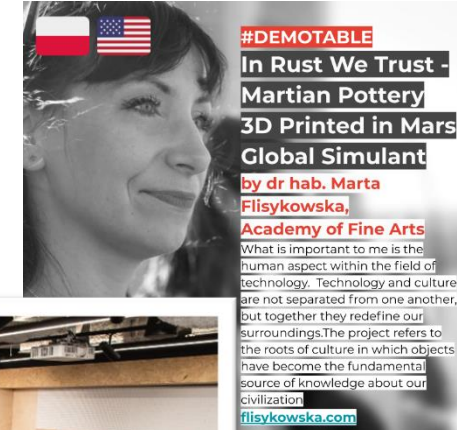
CIC (Cambridge Innovation Center) is an association of over 20 locations around the world. Specializes in accelerating ideas focused on solving problems and trends in technology.

Cosmic Hub is a space for exchanging ideas, meetings and discussions.

POLSA's roles as the operator:

- **conducting trainings** (first on Space Safety - September 2020) (3-4 planned this year)
- **organizing meetings on intersectoral projects** (4 of these have taken place), **to integrate sectors**
- **conduct other integration meetings** (such as NASA Mars 2020 landing watch party)
- **organize conferences**
- **organize Innovation Bridge**

POLSA has access to the CIC infrastructure and a network of contacts all over the world



Manuel Lopez Martinez
European GNSS Agency



Jakub Ryzenko
CIK CBK PAN

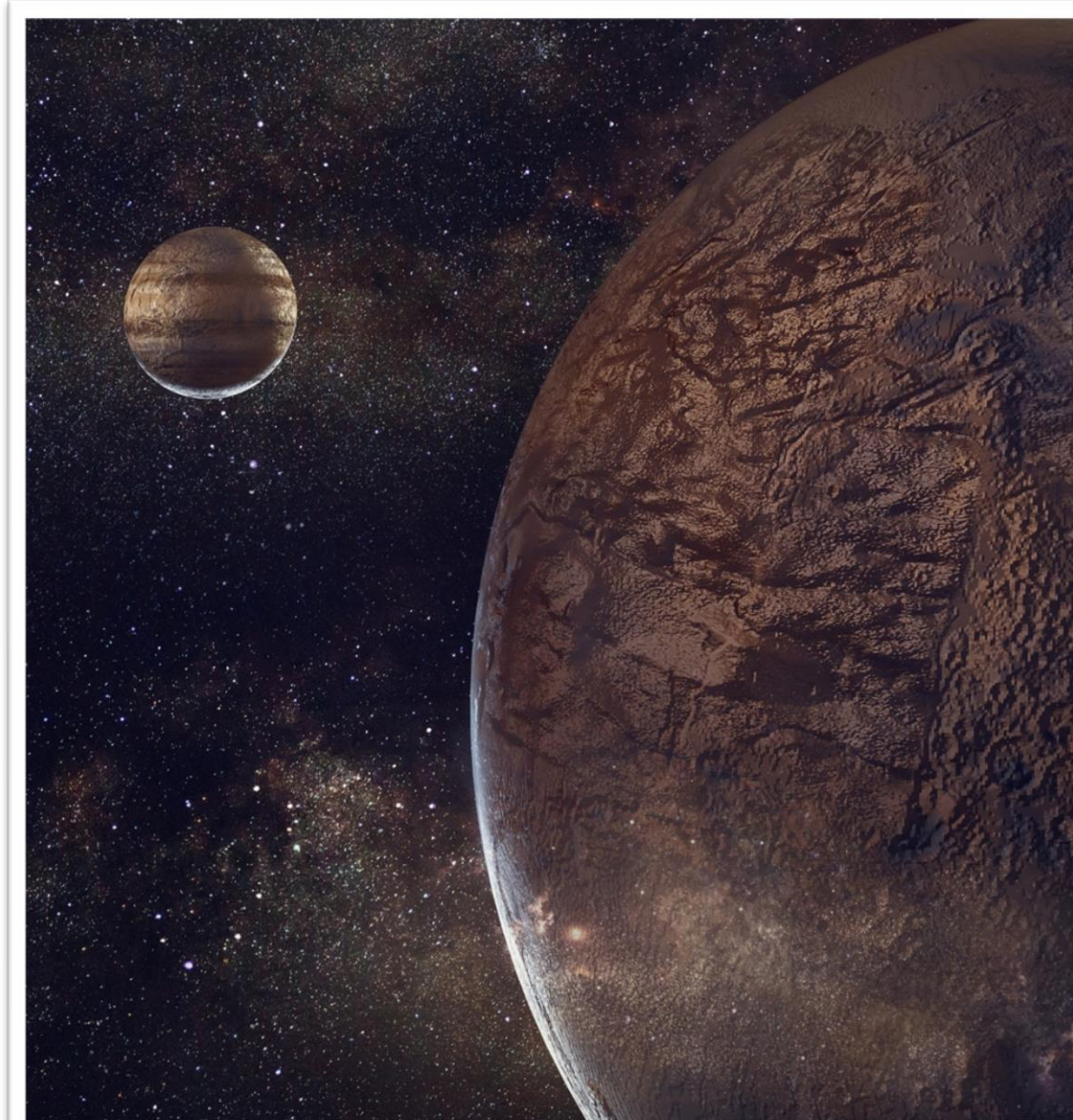


Katarzyna Malinowska
Moderator

International events and projects

Promotion of Polish industrial entities in the international market, including participation in important international events for industry:

- **International Astronautical Congress 2021**, Dubai, ZEA (25-29 October 2021)
- **Space Tech Expo 2021**, Bremen, Germany (16 – 18 November 2021) – exhibition and conference
- **Expo 2021**, Dubai, ZEA (1 October 2021 – 31 March 2022) – world's exhibition





POLSA Welcomes International Cooperation

