

Space sector in Poland



Lukasz Wilczynski

President of ESF

Strategic aims of Polish Space Sector

- To stimulate innovation and improve competitiveness of Polish companies by developing advanced technologies and fostering cooperation between R&D sector and business,
- To increase efficiency and effectiveness of public administration by developing and implementing space-based applications in order to optimise the use of existing infrastructure and resources,
- To meet national security needs by using existing instruments and developing autonomous capabilities in chosen domains.

Achievements and present objectives

- ☒ Development of cooperation with the European Space Agency and membership,
- ☒ Participation in European space projects,
- ☒ Establishment of an organisational structure coordinating Polish space activities,
- ☐ Development and implementation of a national space programme.

Priority actions and areas

- Building the competences in space technologies – support for Polish involvement in upstream and ground segment
- Support for cooperation between scientific and business sectors
- Building the competences in satellite applications – downstream segment
- Actions supporting the development of space sector in Poland – information and promotion activities, training courses etc. (including space education)

Space governance in Poland

Inter-Ministerial Board for Space Policy is composed of secretaries and under-secretaries of state from 10 ministries and PARP's Board member, coordinates the actions of governmental administration in the field of space activities and makes key decisions, including financial ones.



MINISTRY
OF ECONOMIC
DEVELOPMENT

Ministry of Economic Development

is the leading body in the implementation of the Polish space policy, represents Poland in the European Space Agency and in the European Union institutions.

Parliamentary Space Group undertakes legislative actions on the level of Sejm and Senat (two parliamentary bodies in Poland) regarding space activities.



Polish Agency for Enterprise Development fosters the development of entrepreneurship in the space sector, promotes Polish companies and Polish technologies, serves as a contact point for entrepreneurs interested in space activities in Poland.



POLISH
SPACE
AGENCY

Polish Space Agency (POLSA) supports the Polish space industry by combining the world of business and science

Support entities



Committee of Space and Satellite Research of the Polish Academy of Sciences, stimulates and integrates national research activities devoted to space and initiates cooperation with foreign scientific institutions. Since 1960, the representatives of the Committee have acted as Polish delegates to the international organisation COSPAR (Committee for Space Research).



Polish Space Industry Association

gathers space sector companies and scientific institutions, acts in favour of creating a strong Polish space sector competitive on the European market, supports Polish public administration in development of the national space policy.



European Space Foundation

fosters development of the collaboration in the space sector and supports Polish space NGOs. Promotes Polish space companies and organisation as well as Polish space technologies. Organizes popular science events like European Rover Challenge.

Poland in ESA

Mandatory programmes:

- Scientific Programme
- General Studies Programme (GSP)
- Technology Research Programme (TRP)
- Guiana Space Centre (GSC)

Optional programmes:

- Earth Observation Envelope Programme 4
- General Support Technology Programme 6
- MetOp Second Generation
- Prodex
- European GNSS Evolution Programme
- Integrated Applications Promotion (Artes 20)
- Space Situational Awareness
- GMES Space Component
- Mars Robotic Exploration Programme 2
- Artes 1

Poland also participates in space activities of other international organisations. Within Poland's overall contribution to the EU, approx. 53 million euro will be proportionally allocated to the European Union space programme in 2014-2020. As a member of Eumetsat, Poland pays an annual contribution of approx. 5 million euro.

Poland in space

Rosetta

The MUPUS instrument (MULTi Purpose Sensor for surface and subsurface science).

Cassini-Huygens

The measurements made by the Polish sensor allowed the study of Titan's surface properties.

Mars Express

Polish engineers developed the power supply unit and pointing system for the Planetary Fourier Spectrometer (PFS).

The most noteworthy missions with Polish instruments on board

Mars Science Laboratory

(Curiosity rover) infrared detectors manufactured by VIGO System.

ExoMars

Instruments manufactured by Creotech and SENER

Herschel Space Observatory

Key elements of the Local Oscillator System were designed and built in the Space Research Centre of the Polish Academy of Sciences.

From Space to Poland (downstream)

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Satellite images in the public sector

Polish companies offer a wide spectrum of services based on analysis of satellite imagery. The products supplied include analyses of agglomerations development for spatial planning, analyses of environmental changes for the purposes of environmental protection and various maps aiding the forest management sector.



Road navigation

Polish satellite navigation system Automapa gained great popularity thanks to the integration of multiple satellite technologies. The system makes use of maps which are regularly updated through detection of new buildings on satellite images.



Vehicle monitoring

Due to its geographical location, Poland belongs to the group of so-called transit countries. In order to lower costs, improve fleet management and increase safety, more and more Polish transport companies are using satellite monitoring of their vehicles.

From Space to Poland (downstream)



Precise agriculture

Agricultural lands constitute around 60% of the total area of Poland. Polish companies offer precise agriculture services, providing solutions that allow the evaluation of local crop conditions and tools for crop optimisation.



Crisis management

Observed climatic changes indicate that material losses resulting from these threats will increase. For this reason, Polish crisis management authorities are beginning to make use of satellite imaging for threat evaluation, operational planning and damage assessment, such as during the flood recovery action in 2010.

Polish Space Industry Association

Strengthen the position of members in the national and international space markets

- Associates more than 40 members including large companies, small medium enterprises and science institutes from the space sector.
- Companies employ more than 2500 employees

Polish Space Industry Association



1. ABM Space Education
2. Antmicro
3. Astri Polska
4. Astronika
5. Centrum Badań Kosmicznych
6. CLOUDFERRO
7. Creotech Instruments
8. Elproma Elektronika
9. FastLogic
10. Flytronic
11. Geosystems Polska
12. GMV Innovating Solutions
13. Hertz Systems
14. Instytut Lotnictwa
15. Instytut Łączności
16. IRES Technologies
17. ITSG
18. ITTi
19. Kapitech
20. Kosmonauta.net
21. Nobo Solutions
22. N7 Mobile
23. Piktime Systems
24. Planet PR
25. Polska Grupa Zbrojeniowa
26. Przemysłowy Instytut Automatyki i Pomiarów PIAP
27. PZL Warszawa-Okęcie
28. Radiotechnika Marketing
29. Robotics Inventions
30. SATIM Satellite Monitoring
31. SENER
32. SIRC
33. SmallGIS
34. Softwaremill
35. Solaris Optics
36. Sorcersoft
37. SpaceForest
38. Systemics-PAB
39. Thales Alenia Space
40. TS2 SPACE
41. VFRPOLAND
42. Wasat
43. WB Electronics

Youths in space sector

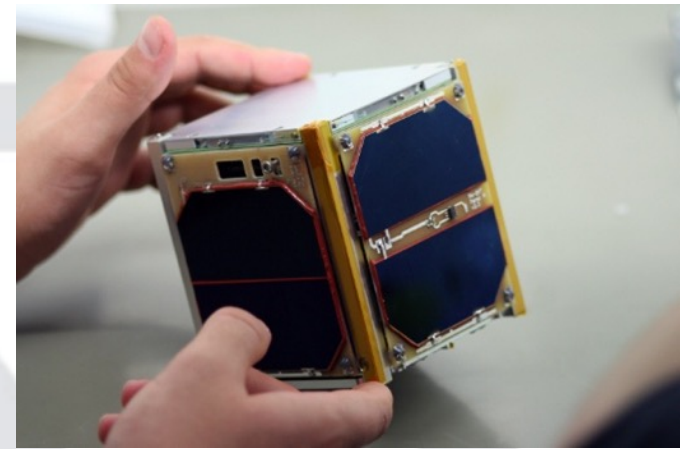
Projects connected with constructing satellites

- PW-Sat
- Young Engineers' Satellite 2 (YES2)
- SSETI Express
- European Student Earth Orbiter (ESEO)
- European Student Moon Orbiter (ESMO)

Projects connected with parabolic flights and flights of stratospheric balloons

Projects connected with constructing rovers

- Taking part in University Rover Challenge in US and European Rover Challenge in Poland



Fot. Polskieradio.pl

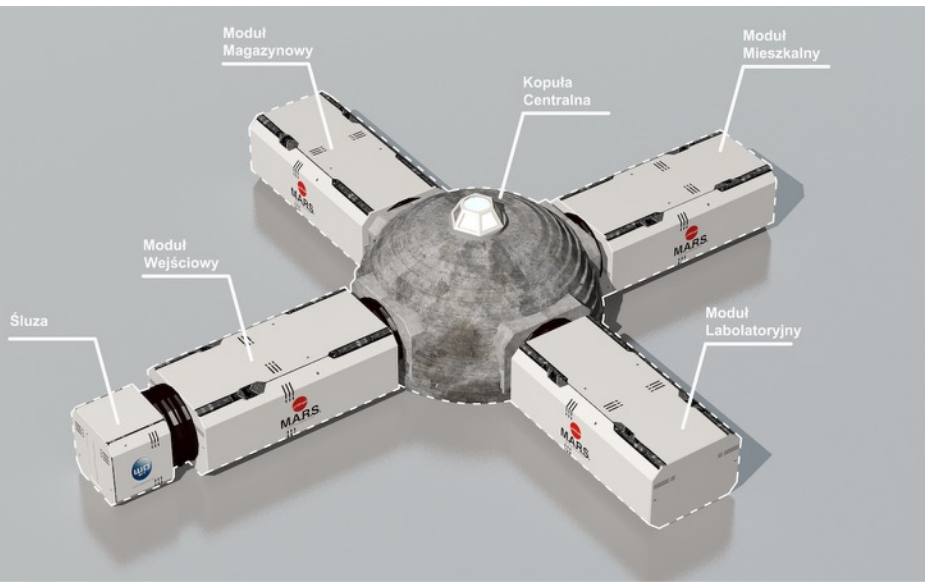


Fot. Kosmonauta.net



Fot. Roverchallenge.eu

NGOs in space sector



Above: the biggest space robotics event in Europe opened for public audience.

To the left: project M.A.R.S. – testing grounds for future Moon Missions.

SLIDE ABOUT YOU

... in Space there's a space for everyone

Credits

This presentation was created based upon materials delivered by following entities:

- *Polish Ministry of Economic Development*
- *Polish Agency for Enterprise Development*
- *Polish Space Industry Association*
- *Planet PR*

Thank you



Lukasz Wilczynski
lukasz@spacefdn.com
tel. 516 036 036