



Warsaw, 19 October 2021

PRESENTATION OF THE POLISH SPACE INDUSTRY AT EXPO 2020 IN DUBAI

Poland has joined the global discussion on the future of the space industry at Expo 2020 in Dubai. From 19 to 30 October, the Polish Pavilion will host the Polish Space Agency – its exhibition will be presented in the temporary exhibition zone alongside a number of other diplomatic, political, business, and scientific events. The Polish Space Agency will also join the International Astronautical Congress in Dubai. The Polish Investment and Trade Agency (PAIH) is responsible for the entire organisational process behind Poland's participation in Expo 2020.

- The Polish Investment and Trade Agency serves as one of the **Technical Partners** of Poland's participation in Expo 2020 in Dubai.
- A presentation of the potential of the Polish space sector is part of a comprehensive economic programme developed by the Polish Investment and Trade Agency for Expo 2020, which will benefit 2,500 Polish firms. On 19 October, the Polish Pavilion will host the Visegrád Group meeting that will gather space industry leaders from V4 countries to discuss space policy priorities and opportunities for development in Central Europe.
- On 27 October, the **Innovations and trends in space industry** seminar will be held in the Polish Pavilion, and will present possibilities of cooperation between Polish and Arab space industry and the portfolios of space industry companies.
- From 25 to 30 October, in the temporary exhibition space of the Pavilion, the Polish Space Agency will present **'Golem' – an artistic installation by Marta Flisykowska, inspired by Stanisław Lem.**
- A number of workshops, lectures, and screenings will be held in the workshop space and on the stage located outside the Polish Pavilion.

We are extremely excited to be hosting the Polish Space Agency in the Polish Pavilion. We are glad that the Polish space technology sector will add a very interesting element to our presentation of the country. In the United Arab Emirates, popularising knowledge of the potential of the space industry is one of the key priorities – in politics, the economy, education, and entertainment. The permanent exhibition in the Polish Pavilion includes a number of references to the space sector that will be further discussed during the presentation of the Polish Space Agency in late October. We would like to invite you to visit the Polish Pavilion! – comments Adrian Malinowski, Commissioner General of the Polish Section Expo 2020 Dubai.

'The Polish space industry is highly versatile and offers huge export and investment potential. We want to present it at Expo 2020 Dubai. During the World Exhibition we will showcase innovative solutions created by Polish companies, manufacturing centres, and scientific institutes. Our mission at Expo 2020 is creating opportunities for Polish companies, so they could establish new relations with players on the Middle Eastern and African markets. We also want to increase the inflow of foreign investments to the country. – says Krzysztof Drynda, President of the Board of the Polish Investment and Trade Agency.



The United Arab Emirates, the host of Expo 2020, is one of the key countries to appreciate the potential of space industry investments. In 2019, Hazza al-Mansuri was the first UAE astronaut to spend over a week in the International Space Station and, in 2021, the first Arab interplanetary space probe reached the Mars orbit.

The space sector is one of the most innovative branches of our economy. It is an emerging industry in Poland, but today – nearly 10 years after joining the European Space Agency in 2012 – we are confident in saying that it is doing really well. Polish companies are working on innovative solutions and taking part in numerous international missions, and Polish technologies are gaining worldwide recognition. We have excellent experts in scientific instruments, robotics, electronics, satellites, nanosatellites, 3D printing, space fuel, AI, coding, databases and data analysis – stresses Grzegorz Wrochna, President of the Polish Space Agency.

Space references in the Polish Pavilion exhibition

Temporary exhibition of the Polish Space Agency: 25–29 October 2021

The Polish Pavilion is one of few at Expo 2020 to present changing exhibitions of the Polish regions and institutions. From 25 to 29 October, the temporary exhibition space will be taken over by the Polish Space Agency. 'Golem', an artistic installation by Marta Flisykowska, will be showcased in Dubai. The work was inspired by the writing of Stanisław Lem and marks the 100th anniversary of the birth of this extraordinary Polish writer and futurologist. The symbolic installation will consist of a super-computer, endowed with consciousness, which computes data and performs complicated calculations. Golem will be a source of information on the Polish space industry, prepared in cooperation with the Polish Space Agency.

The use of satellite data to create elements of the exhibition of the Polish Pavilion

Earth observation and the use of satellite data are one of the most important areas of the space sector, in which Polish companies and institutions develop their activities in cooperation with the Polish Space Agency. This type of data was also used to create many elements of the permanent exhibition of the Polish Pavilion. Information from the European Earth observation program Copernicus, in which Poland acts a significant role, was used in the process of modelling the surface of 'The Polish Table'. Satellite imaging was also used to create animated infographics in zone I, presenting the most characteristic types of landscapes for Poland, thus building a living example of the use of Earth observation data in environmental research, forest management, agriculture and spatial planning.

The expert of the Space Research Center of the Polish Academy of Science, Dr. Andrzej Kotarba, was responsible for the preparation of satellite data for the purposes of the exhibition of the Polish Pavilion. The idea to emphasize the importance of Earth observation was born in the Science Now team, which is also responsible for winning for Poland the campaign to promote the largest scientific mission of the European Space Agency - Rosetta. As part of it, the film "Ambition" was made, directed by Tomasz Bagiński.

3D printed module of the Polish Table made of aluminium used in the space industry

The special module of the Polish Table, which is at the very heart of the Polish Pavilion, was printed using PIAP Space 3D technology. It was made of aluminium commonly used in the space sector. 3D printing technology is the process of creating three-dimensional, physical objects based on a computer model. 3D metal prints have just started to be used in space applications. What makes the technology attractive is the ability to create structures that are both lightweight and durable. PIAP Space is a space industry company, first set up by the PIAP Institute. The company develops products and technologies in the field of devices used for satellite integrations and testing, active removal of space debris, servicing satellites in orbit, robot–human interactions, and visual systems and mechanisms.

Polish Telescopes as a topic of one of the presentations on the interactive wall in the Polish Pavilion's main hall

One of the elements of the exhibition in the Polish Pavilion is an interactive wall presenting to visitors the network of connections between Poland and other parts of the world through various thematic scenarios. One of them is devoted to Polish telescopes located in many observatories around the world. Some of these instruments are part of large, international consortia implementing projects of the so-called "big science". Pavilion visitors can learn, among other things, that Poland is actively developing the national Space Situational Awareness (SSA) program, which uses a global network of sensors to track satellites and space debris to avoid collisions and ensure safety and effectiveness in the low Earth orbit. The opening of the scenario also resembles the figure of Nicolaus Copernicus, announcing the celebration of the 550th birthday of the outstanding Polish astronomer, that is planned for 2023.

Presentation of Polish space sector companies in the 'Poland. Spirit of ingenuity' zone

The 'Poland. Spirit of ingenuity' zone is a section of the Polish Pavilion dedicated to the most spectacular Polish successes in the areas of science, design, culture, and tourism that are highly likely to be appreciated by an international audience. Selected examples of Polish creativity have been presented on a unique exhibition stand – a wooden spatial sculpture.

Interdisciplinary topics are grouped into five clusters; these are theme-based and, combined with the artistic form of that part of the exhibition, highlight the inventiveness, entrepreneurship, and a multitude of initiatives taken up by the Poles. The multimedia material entitled '[Science, Technology and Innovations](#)' presents the potential and innovative character of Polish space sector companies such as PIAP Space, Astronika, CloudFerro, and many others.

'The Universe' scenario in the 'Poland. Landscapes of creativity' zone

As a part of an immersive zone, being a finale of the visitor journey of the Pavilion, visitors will be invited to discover a landscape entitled "The Universe", that shows the most important achievements of the modern Polish astronomy. An exploration of this landscape starts in the sphere of the imagination, recalling the most famous novel of Polish writer Stanisław Lem – 'Solaris'. Then, visitors are invited on a journey through the scale of the Universe – they learn about discoveries of the first extrasolar planets by Prof. Aleksander Wolszczan, or achievements of OGLE project developed at the Warsaw University under the supervision of Prof. Andrzej Udalski.



Events during Polish space week

The Visegrád Group meeting at Expo 2020 in Dubai

Promotion of the Polish space industry at Expo 2020 will be inaugurated via a meeting between representatives of the Visegrád Group (V4) countries: Czech Republic, Hungary, Slovakia, and Poland (19 October 2021, 3–4 pm, local time). A panel discussion will be held in the Polish Pavilion and the talks will focus on investments and development strategies for the space sector and the common policy of the four CEE countries in that industry. The meeting will open: Commissioner General of the Polish Section Expo 2020 Dubai, Adrian Malinowski; State Secretary for Science and Research at the Ministry of Education, Science, Research and Sport of the Slovak Republic, Ludovit Paulis; Ministerial Commissioner for Space Research in Hungary, Dr Ferencz Orsolya; High Representative of the Prime Minister for European Digital Policy, Krzysztof Szubert; and Secretary of State at the Ministry of Transport of the Czech Republic, Jan Sechter.

In the discussion panel will take part: President of the Polish Space Agency, Grzegorz Wrochna, and representatives of the space industry from Slovakia, Czech Republic and Hungary. During the event, astrophotographs by photographers from the Visegrád Group countries will be exhibited – among them pictures by the Gdansk-based Polish Hevelianum studio.

Business seminar – presenting the potential of Polish space sector companies

Another important event to promote the space sector will be held in the Polish Pavilion on 27 October 2021. Polish-Arab business seminar entitled ‘Innovations and trends in the space industry’ will be hosted by the Polish Space Agency and the Polish Investment and Trade Agency. The President of the Polish Space Agency, Grzegorz Wrochna will present the business potential of the Polish space sector and possibilities for cooperation between Poland and the UAE. The organisers have invited selected Polish firms to talk about their innovative technologies and solutions during the event. There is a B2B networking session planned. Representatives of the following Polish space sector companies will join the seminar: Scanway, Jakusz Space Tech, Creotech Instruments, SatRevolution, Blue Dot Solutions, SpaceForest, The Łukasiewicz Research Network, KP Labs, PIAP Space, and CloudFerro.

Secrets of space industry work, 25 October 2021

Jakub Stelmachowski, engineer and expert from the Polish Space Agency, will let the visitors take a ‘behind-the-scenes’ glimpse of the realities of working in the Polish space industry. How did he get there? What would he say to his younger self – a fresh-out-of-school engineer who dreamt about working in the space business? All aspiring universe freaks are welcome to join!

Polish space sector – a summary of research by the Polish Space Agency, 25 October 2021

The objective of this event is to characterise the Polish space industry based on the results of industry research conducted by the Polish Space Agency in 2020. The lecture will be delivered by Aleksandra Bukata, PhD, Head of Strategy and International Cooperation Department POLSA, and leader of the team responsible for drafting the evaluation that serves as a basis for the publication entitled *The Polish*



Space Sector 2020. Analysis of the current state, trends, and technologies in the domestic and international context.

Scanway – What is space technology transfer and what benefits does it bring, 26 October 2021

Space technologies are becoming more common in our daily lives. Scanway will explain to the audience what technology transfer from the universe to the Earth is, and what potential advantages it may bring.

Space robotics from the Polish perspective, 28 October 2021

The purpose of this event is to introduce the topic of space robotics development (both orbital and planetary) from the Polish perspective. The lecture offers the perfect occasion to present how Polish space sector companies have so far participated in the international robotic mission, for instance, on Mars.

PIAP Space – Space robotics in short, 28 October 2021

PIAP Space, one of the pioneers in space robotics in Poland, will explain the process of executing space robotics and mechatronics projects.

Analogue missions – what do they teach us? 29 October 2021

What are analogue missions and why is it worth carrying them out on Earth? The concept of analogue missions will be explained by Leszek Orzechowski, Director of LunAres Research Station in Piła.

Space architecture – the concept of cities on Mars, 29 October 2021

Leszek Orzechowski, a Space is More architect, will present the concept of an extraterrestrial architecture based on the design for the Mars colony 'Twardowsky'.

Habitat/airport in Piła – development strategy, business potential, 29 October 2021

Is it worth investing in space experiments in Poland? A lecture hosted by Leszek Orzechowski, who will talk about the development strategy and business model of the habitat LunAres, constructed in the former military airport in Piła.

Events for children

During space week, the Polish Pavilion will also host a number of events for children and young people, such as 3D workshops, inspired by the universe and the works of Stanisław Lem. Participants will build celestial objects with blocks produced by Skriware – a company taking part in the Partner Programme prepared by the Polish Investment and Trade Agency. The Polish Pavilion is visited by many students and hosts regular classes. We take the opportunity to present our country, culture, and technology to the pupils from the UAE. During space week, Poland will show a film about honouring Stanisław Lem on ISS. Astronomical documentaries will also be shown, such as the Polish TV programme series on astronomy and space research, and a short cartoon devoted to the Polish space sector.



The Polish Space Agency at the International Astronautical Congress

The International Astronautical Congress is an industry event accompanying Expo 2020 in Dubai that will be held from 25–29 October 2021. The Polish Space Agency will be one of the exhibitors at this major event organised by the International Astronautical Federation (IAF).

The Congress hosts exhibitions by space agencies as well as lectures, including the presentation of 30 Polish scientific papers. The POLSA stand in H hall, no. H8-31, will be a business meeting hub for space industry firms.

The Polish Pavilion at Expo 2020 Dubai

The Polish Pavilion will be the place for a multidimensional presentation of Poland. The main theme is “Poland. Creativity inspired by nature”. The **WXCA studio** together with the **Swiss studio Bellprat Partner** is responsible for the design and the architectural and thematic concept of the pavilion and the exhibition. They created a unique, immersive, and permeating space inviting visitors to experience Polish nature, culture and innovative technology. It intends to inspire and share with the world multiple solutions for a conscious, sustainable future. The final exhibition narrative, detailed concept and key experiences were created as a collaboration between the design studios **Science Now, Stellar Fireworks and Tellart**, which enriched the exhibition with distinctive, interactive experiences (eg. the Polish Table art installation), immersive spaces (eg. the Landscapes of Creativity room) and overall multimedia storytelling. The General Contractor of the Polish Pavilion was **the Poznań International Fair (MTP) - FM Aldentro** consortium.

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More information on the website devoted to Poland's participation in World Exhibitions: www.expo.gov.pl and on social media channels of Poland at Expo: **LinkedIn**, YouTube, Facebook, Instagram, Twitter.

