

Press Release

International ideas competition by DLR Space Administration

“Space Moves!” – INNOspace Masters Competition 2018/19 awards prizes to innovative ideas for the future of the space sector

The winners of the INNOspace Masters Competition were honoured in Berlin on 3rd July 2019.

More than 250 companies, start-ups, universities and research institutions in 17 European countries responded to the call.

Software technologies and intelligent materials were in particular demand to give new impetus to the space sector.

Areas of specialisation: Space, innovation, technology transfer

Under the theme “Space Moves!”, the Space Administration at the German Aerospace Center (DLR), within the fourth INNOspace Masters competition, once again started the search for new ideas and concepts designed to address the aerospace industry’s current problems and offer innovative potential solutions. Four competition categories – called ‘Challenges’ – from different development and innovation phases in the value creation chain were available for the participants to choose from. The ‘DLR Space Administration Challenge’ focused on the research and development phase, while the ‘Airbus Challenge’ and the ‘OHB Challenge’ called for proposals for existing operational solutions. The ‘ESA BIC Start-up Challenge’, which was aimed at the start-up phase, focused on business models and start-ups.

A total of 253 participants from companies, start-ups, universities and research institutions in 17 European countries submitted their project outlines and twelve were selected for the final round of the innovation competition. The winners of the competition have now been chosen, with the overall winner being ESDA-Axiotherm GmbH with an innovative polymer compound.

The prizes were presented by Dr Walther Pelzer, Chairman of DLR Space Administration, and by the competition partners at the fourth INNOspace Masters Conference at Humboldt Carré in Berlin on 3rd July 2019.

“The large number and high quality of the ideas submitted underscore the innovative strength and relevance of this competition,” explained Dr Walther Pelzer. “Pioneering research and development approaches were particularly submitted in the fields of software technology and intelligent materials this year. Overall, the wide range of topics addressed underlines the huge potential of cross-industrial transfer projects,” continued Pelzer.

Thomas Jarzombek MdB, Federal Government Coordinator of German Aerospace Policy, opened the conference with Dr Walther Pelzer. “Regardless of the ranking of today’s winners, I would like to thank all of the participants for their exceptional efforts. I am convinced that every idea we have

heard today will have a positive impact and benefit German aerospace in many ways,” said Jarzombek in his opening address.

In addition to the presentations of ideas by the finalists, two panel discussions brought together high-ranking experts to discuss future challenges and opportunities in the space sector, particularly with regard to artificial intelligence.

The German astronaut and temporary Commander of the International Space Station Dr Alexander Gerst and Matthias Hartmann, CEO of IBM Germany, supplemented the conference with speeches. “Joint research, innovation and continuous technological development are more important than ever in a global world. Only in this way can societies continue to gradually improve their living environment. The inventive spirit that reigns at the INNOspace Masters inspires me. I am proud that we are a part of it with the CIMON project and that we have brought the first autonomous artificial intelligence into space by working together!” said Hartmann.

PCM-Polymer Compound – Novel Material for Thermal Stabilisation of Component Systems

The Overall and OHB Challenge winner is ESDA-Axiotherm GmbH. The company from Eisenberg, Thuringia is developing a phase-change material (PCM) polymer compound for the thermal stabilisation of space component and systems. The PCM polymer compound features a high capacity for absorbing accumulating amounts of heat and releases the heat energy into the system during an undercooling period in order to stabilise the temperature. This material will prevent temperature peaks and produce a smoothed temperature curve.

SmartSpace – A Module for Global IoT Cloud Service Operations

Within this concept, SmartSpace – the winner of the DLR Challenge - modules serve as a data collector for multiple IoT devices and their applications and relay the collected data via a superior satellite backbone network. It is no longer necessary to operate a dedicated ground station, the intermediate SmartSpace network acts as a connecting link. This will facilitate the use of SmartSpace in remote areas and large infrastructures.

Deployables Cubed – Actuator for Nanosatellite Applications

Deployables Cubed – the winner of the ESA BIC Start-up Challenge – is developing pin-puller and release nut actuators to ensure Europe’s independence with regard to small actuators and the deployable structures like antennas or sails, that are deployed once a satellite is in orbit.

Callwise - Real-Time Container Tracking and Monitoring

Callwise Ltd., Wycombe – UK, won the Airbus Challenge with its innovative combination of satellite communication and a 5G LoRaWAN (Low Range Wide Area Network) IoT solution. This solution enables real-time tracking and monitoring of individual shipping containers from start to finish during multimodal transport. The concept is based on a novel architecture in which satellite and cellular tracking is combined with LoRaWAN tracking and monitoring of individual shipping containers.

More details at www.innospace-masters.de/inspiration/#Winners.

About INNOspace Masters

The organiser of the INNOspace Masters is the DLR Space Administration on behalf of the Federal Ministry for Economic Affairs and Energy (BMWi). The competition is part of the INNOspace© initiative, which since 2013 has promoted innovation and technology transfer between space and non-aerospace industries. The partners of the competition are the ESA Business Incubation Centers (BIC) [Bavaria & Northern Germany](#) and ESA BIC Hessen & Baden-Württemberg as well as Airbus and OHB. The INNOspace Masters is organised by AZO Anwendungszentrum GmbH Oberpfaffenhofen, which also organises the [Copernicus Masters](#) and the [Galileo Masters](#). Further information at: www.innospace-masters.de

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