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Statement by the
International Space University (ISU)

The role of ISU in preparing the new generations
for Space Sustainability

The space sector develops at an accelerating speed with the participation of multiple stakeholders and the vision for human expansion into space. According to recent studies, the global space economy might be valued at US\$ 1 trillion by 2040. This development of the space sector enables new tools and services, and has a measured impact on multiple economic sectors. Space companies are looking for skilled employees everywhere.

In particular in science and engineering, there is an immense need for talent, which will increase every year due to demographic developments. But worldwide, we are confronted with an underrepresentation of men and women in STEM professions, the workforce that engages in Science, Technology, Engineering, and Mathematics. There is a particular shortage of women in science and engineering, and this is not only a problem of training, politics, or the industry. It is primarily a social problem. There is a need for stronger cultural change in organizations and institutions to encourage women to join the STEM workforce. And gender diversity in the space sector also warrants progress.

We need recruits into the space workforce globally, and even more, employees need upskilling and reskilling. We need a trained workforce for the space sector that can think outside of the box and can support future space applications for society, and support the United Nations Sustainable Development Goals.

Space is the frontier of technological innovation, and space data can support monitoring climate change, agriculture, the growth of cities, forecasting future demographic shifts, and improving future intermodal transport systems, just to name a few. Space data will also contribute to environmental, social, and governance (ESG) standards. In the past 10 years, ~270 billion USD of equity investments have supported space start-ups all over the world.

The future space workforce will contribute to the solution and mitigation of many global challenges and sustainability, and should thus be supported by an interdisciplinary, entrepreneurial, and forward-looking space education. At the International Space University, we develop the next generation of space leaders through interdisciplinary, international, and intercultural space educational programs. We count today more than 5400 Alumni from 110 countries. Many visiting lecturers from space agencies, industry, start-ups, and academia share their experiences with the ISU students. By joining the ISU network, students engage with world space experts who are shaping the development of the global space economy. In the last year, we have organized our educational programs in Portugal, Israel, Korea, Australia, and our next summer program will be coordinated with our partners in Brazil.

In 2022, ISU has designed a new curriculum for its Master's program that responds to the needs of the rapidly developing space sector. The new ISU Master's program curriculum integrates global space economy trends to provide cutting-edge knowledge. ISU also fosters entrepreneurship and supports start-ups in its dedicated incubator at the Central Campus in Strasbourg. In fact, ISU Alumni have created more than 100 start-ups in 26 countries worldwide in the last 10 years.

ISU also hosts the space policy and entrepreneurship laboratory (SPEL). In summary, ISU is actively contributing to the NewSpace start-up ecosystem worldwide.

To conclude, we all have to invest in space education that prepares the new generations for Space Sustainability. We need a stellar workforce for the vibrant space sector that supports international cooperation and responsible behavior in planning and executing space ventures. The future of the global space economy enables exciting space exploration endeavors, opens new markets for space applications, and helps to address global challenges for the benefit of citizens on Earth. It is more important than ever to work on future challenges in the space sector together, and to combine forces.

Thank you very much for your attention.

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