



UNITED NATIONS
Office for Outer Space Affairs

SUSTAINABLE
DEVELOPMENT GOALS

ACCESS TO SPACE FOR ALL



“**PATH FOR SPACE TECHNOLOGY CAPACITY-BUILDING**”

**A SIDE EVENT TO THE 66TH SESSION OF THE UN COMMITTEE ON
THE PEACEFUL USES OF OUTER SPACE**

31 MAY 2023 13:00 - 14:00 CEST

HYBRID EVENT: ROOM CR-3, VIC / MS TEAMS

ACCESS TO SPACE FOR ALL

"PATH FOR SPACE TECHNOLOGY CAPACITY-BUILDING"

13:00 - 14:00 CEST 31 May 2023

Onsite: Conference Room 3, Vienna International Centre

Online: Microsoft Teams meeting

13:00 - 13:10	Opening Remarks	Niklas Hedman
13:10 - 13:25	Introduction to Access to Space for All	Hazuki Mori
13:25 - 13:30	Remarks by the Permanent Mission of Germany to the International Organizations in Vienna	H.E. Gotz Volker Carl Schmidt-Bremme
13:30 - 13:40	Introduction of DropTES by the Center of Applied Space Technology and Microgravity (ZARM)	Thorben Könemann
13:40 - 13:50	Introduction of HyperGES by the European Space Agency	Jack J.W.A. van Loon
13:50 - 13:55	How to apply to DropTES and HyperGES	Wenbin Zhang
13:55 - 14:00	Closing Remarks	Luc St-Pierre





Access to Space for All

Space Technology Capacity Building

The goal of the Access to Space 4 All initiative is to provide research and orbital opportunities for UN Member States **to access space and to ensure that the benefits of space, in particular for sustainable development, are truly accessible to all**



Acquire cutting-edge skills for jobs and other opportunities and **develop hands-on capabilities** from A-Z



Free of charge access to unique ground and space infrastructure, technology, and information



Gain international cooperation experience through working with the UN and space-faring partners



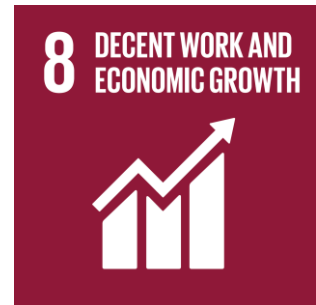
Visibility to the R&D and space activities already done in the country/region



Motivate the young generation and **boost interest in STEM**

Access to Space for All in Numbers

- **9** Hands on Opportunities
- **1** Annual Fellowship
- **32** Awardees involving **44** Entities from **32** countries
- **5** CubeSats launched
- **7** Microgravity Experiments performed
- **20** projects in development
- **68** Scholarships granted
- **100+** Hours of educational content on YouTube





Access to Space for All

Learn More About our Awardees!

Awardee Page



ACCESS TO SPACE FOR ALL
AWARDEE PAGE

Mauritius Research and Innovation Council



Team Photo Credit: MRIC

"The First Mauritian Satellite is a historical achievement for the Republic of Mauritius. We are proud to count amongst the handful of Space faring Small Island Developing States. This initiative prompts a number of promising avenues for research development and innovation in Space and Satellite technology in Mauritius - fields which were, in the recent past, inaccessible for our small nation. We look forward to seeing Space and Satellite technology bring a new thrust to STEM in Mauritius." **Vickram Bissonauth**, co- project coordinator from **Mauritius Research and Innovation Council**

AWARDS

KiboCUBE

The first satellite of Mauritius, **MIR-SAT 1** has been deployed from the International Space Station on 22 June 2021 (click here to see the deployment from JAXA YouTube) thanks to **KiboCUBE**. The initial goal of the team from **Mauritius Research Innovation Council** was to design, develop, and operate a CubeSat-class satellite to test the transmission of imagery and on-board communication systems. **MIR-SAT 1** was deployed in orbit on 22 June 2021.

[About KiboCUBE](#)



NEWS

- The Prime Minister, Mr. Pravind Kumar Jugnauth, inaugurated the Satellite Ground Station (7 October 2021)
- "Mauritius Imagery and Radiotelecommunication Satellite (MIR-SAT1) Commemorative Magazine" published (7 October 2021)
- Mauritius deploys first satellite into low-Earth orbit by ITU (25 June 2021)
- Successful Deployment of First Mauritian Satellite, Selected in the Third Round of KiboCUBE Program by JAXA (25 June 2021)
- The First Mauritian Satellite deployed in Space by the Ministry of Foreign Affairs of Mauritius (23 June 2021)
- The First Mauritian Satellite MIR-SAT 1 has Successfully Launched by AAC Clyde Space (22 June 2021)
- Mauritius deploys first satellite thanks to UNOOSA and JAXA KiboCUBE programme (22 June 2021)
- Small Satellites Deployment from "Kibo" (MIR-SAT 1, Mauritius) YouTube streaming by JAXA (22 June 2021)
- CRS-22 #NASASocial What's on Board Briefing by NASA Kennedy Space Center (2 June 2021)
- MIR-SAT 1, Mauritius First Satellite to be Launched on 3 June by Space in Africa (29 May 2021)
- Mauritius selected as winner for 3rd Round of KiboCube (June 2018)

ACTIVITIES

- Interview Article with MRIC team members by UNOOSA (11 August 2021)
- Inspiring young Mauritians to Space and Satellite Technology (December 2020)

PUBLICATIONS

- Sorefan M.Z, Shamutally M.F, Bissonauth, V ; *The Mauritian Journey to Space*, 71st International Astronautical Congress (IAC)-The Cyberspace Edition , 12-14 October 2020 . IAC-20-E1.5.12 (2020)

PHOTOS



MIR-SAT1 deployed from the ISS
©JAXA/NASA



Prime Minister of Republic of Mauritius The Hon Pravind Kumar JUGNAUTH witnessing the deployment of MIR-SAT1 (in front left)
©Government of Mauritius



Ambassador of Japan to Mauritius H.E. KAWAGUCHI Shuichiro witnessing the deployment of MIR-SAT1 (in front left)
©Government of Mauritius

Interview Articles



Contribution to the SDGs

Access to Space for All is key in raising awareness about what space technology can do for the Sustainable Development Goals. Each application for an Access to Space for All hands-on opportunity requests the applicants to provide information on how their activity will support the Sustainable Development Goals. To date, UNOOSA has received applications that spanned over the 17 Sustainable Development Goals. Examples of how Access to Space for All supports the Sustainable Development Goals are:



- **SDG 4 "Quality Education"**: Access to Space for All provides educational resources supporting the hands-on component.
- **SDG 8 "Decent Work and Economic Growth"**: Access to Space for All builds capacity for individuals to access jobs in the space industry.
- **SDG 9 "Industry, Innovation and Infrastructure"**: Thanks to some of the hands-on opportunities of Access to Space for All, institutions create facilities that remain available once the opportunity has been completed.

However, the contribution of the initiative goes beyond those three SDGs. Access to Space for All initiative for Sustainability: Interview Series is a series of interviews of the partners and the awardees in the initiative, where they explain how their projects are tackling different SDGs.

- **Article #1 - How Bartolomeo x ClimCam Project Contributes to the SDGs**, an interview with Airbus and the awardee in the first round of Bartolomeo, [read more](#)
- **Article #2 - How Education Through PNST Contributes to the SDGs**, an interview with Kyushu Institute of Technology and a graduated student, [read more](#)
- **Article #3 - DropTES: The Stepping Stone into Space Activities and its Contribution to the SDGs**, an interview with ZARM and Universidad Católica de Boliviana, [read more](#)
- **Article #4 - DropTES: The Opportunity to Expand Your Horizon and its contribution to the SDGs**, an interview with the 1st round and 3rd round awardee [read more](#)
- **Article #5 - PHI: The Platform to Realize Your Dreams**, an interview with the two 1st round awardees [read more](#)



Access to Space for All

Structure of the initiative

HYPERGRAVITY AND MICROGRAVITY

Building capacity for conducting experiments in orbit



Hands-on opportunities in hypergravity and microgravity from ground to orbit



Open source tools bridging hands-on and education components



Educational material for building up experiments

SATELLITE DEVELOPMENT

Building capacity that enables the development, deployment, and operation of satellites



Hands-on opportunities for satellite deployment



Open source tools bridging hands-on and education components



Educational material supporting the whole life-cycle of satellites

SPACE EXPLORATION

Broadening the engagement in space exploration



Hands-on opportunities to engage in space exploration



Open source tools bridging hands-on and education components



Educational material for space exploration



Access to Space for All Opportunities



HYPERGRAVITY/
MICROGRAVITY



Suborbital and
parabolic flights



SATELLITE
DEVELOPMENT

canSATs



SPACE
EXPLORATION



Ground
Analogue

Beyond GEO





Access to Space for All

Hypergravity/Microgravity Track

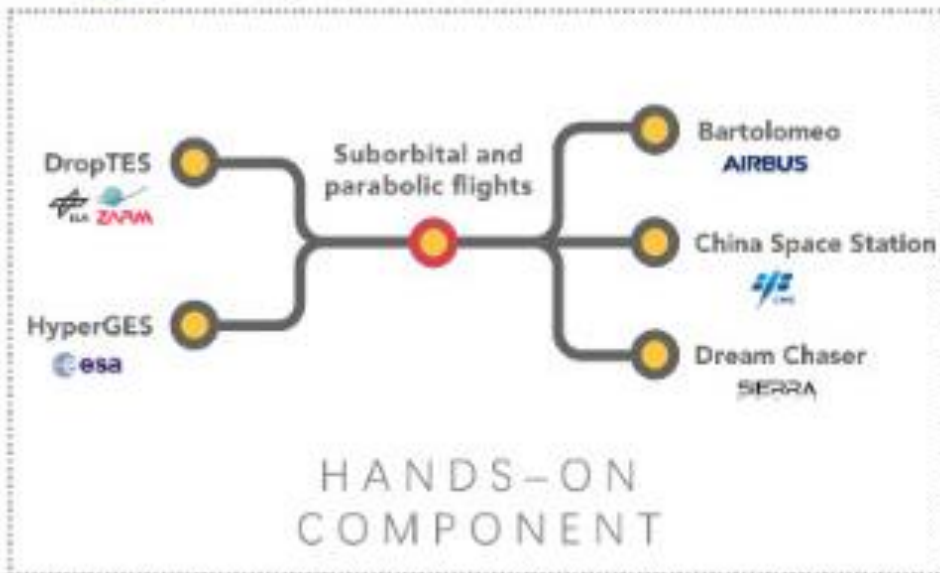
- **Achievable entry point** to acquire knowledge and skills through conducting various experiments in many different scientific fields
- **Beneficial first step to start capacity-building** for space activities

HYPERGRAVITY AND MICROGRAVITY

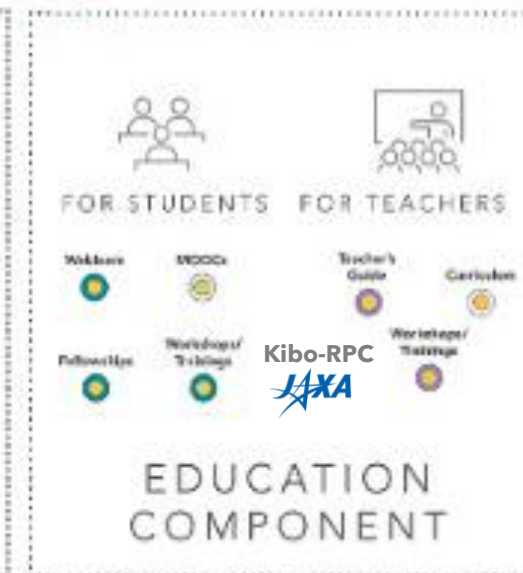
- Building capacity for conducting experiments in orbit



Hands-on opportunities in hypergravity and microgravity from ground to orbit



Education material for building up experiments



Open-source tools bridging hands-on and education components





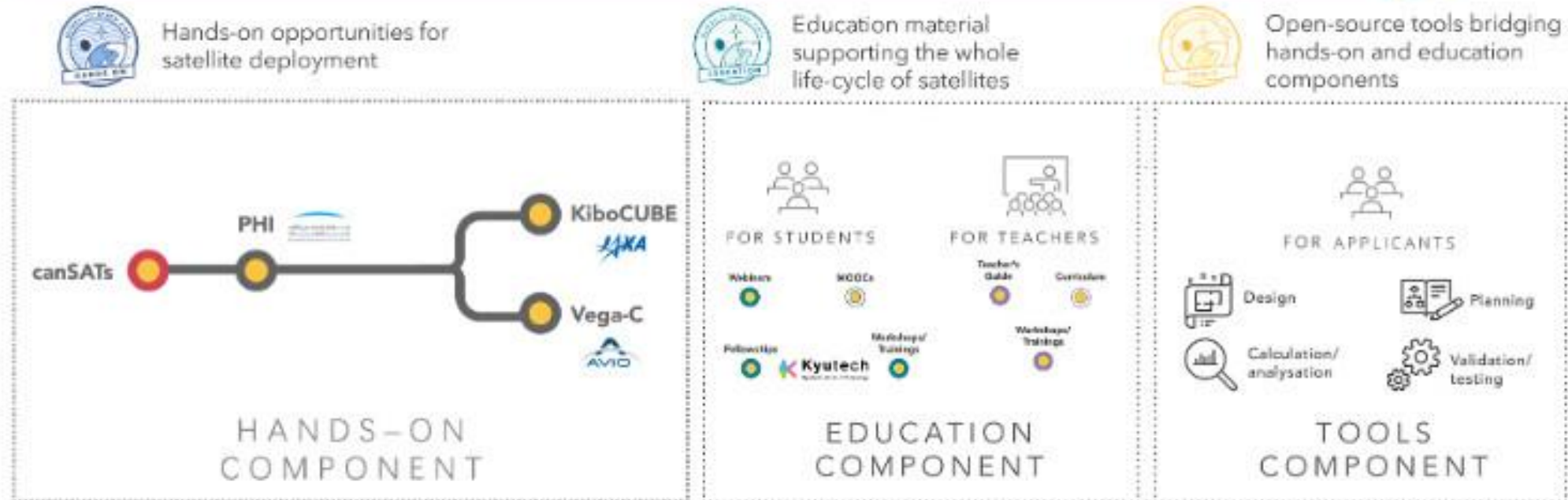
Access to Space for All

Satellite Development Track

- CubeSats offer a **large variety of applications**
- CubeSat development can be the **first step for a country in the acquisition of the skills and know-how needed to develop a space programme**
- CubeSats are **affordable to develop** and represent an **achievable entry point to space activities.**

SATELLITE DEVELOPMENT

- Building capacity that enables the development, deployment, and operation of satellites

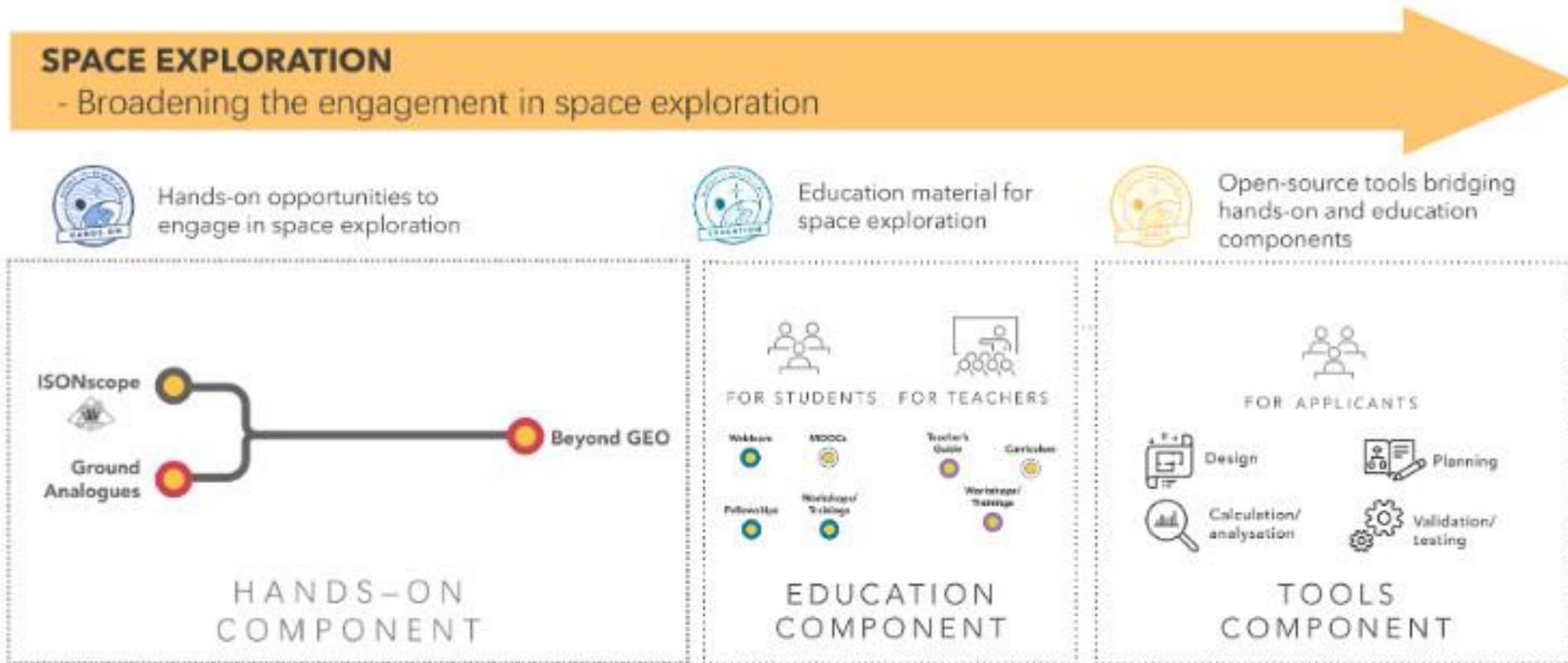




Access to Space for All

Space Exploration Track

- Increasing capability in astronomy/observation and space data analysis can **deepen scientific knowledge and support necessary technology** for monitoring space debris, managing space traffic, and future exploration beyond GEO
- Space exploration can **motivate the young generation** who are the leaders of tomorrow
- Space exploration is an international effort and it can **foster international cooperation**





Access to Space for All

Overview of the Expert Meeting



Details

Date: 15 - 17 May 2023

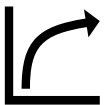
Format: online

Target Audience: partners, awardees, government, potential applicants and partners, and the general public

Objectives



Share and gain insights from success stories and challenges on capacity-building activities and effective outreach



Discuss **how to improve** the Access to Space for All initiative



Bring together partners, awardees, supporting governments, and potential future partners and applicants of the initiative to **build new partnerships**



Raise awareness of the Access to Space for All initiative



Presentations, Videos, and the Report to COPUOS are available on our website!

Click [here](#) or scan the **QR code**





Access to Space for All

Way Forward



- UNOOSA and the partners will **take the feedback into consideration** when opening a new round of applications.
- List of opportunities to be open in 2023
 - DropTES : 31 May 2023** see the [DropTES Rounds page](#) or scan the QR code
 - HyperGES : 31 May 2023** see the [HyperGES Rounds page](#) or scan the QR code
 - KiboCUBE : 2 June 2023** see the [KiboCUBE Rounds page](#) or scan the QR code
 - Payload Hosting Initiative (PHI) : Q4 2023**
 - Post-graduate study on Nano-Satellite Technologies (PNST) Fellowship: Q4 2023**
- Continue to build **new partnerships to provide more opportunities.**
- Explore more ways of **advancing the outreach activities.**





Access to Space for All Partnerships



SPACE AGENCIES



RESEARCH INSTITUTIONS AND UNIVERSITIES



PRIVATE SECTOR



We are looking for...



On-ground and on-orbit experiment opportunities



Sub-orbital, parabolic and balloon flight opportunities



Launch opportunities for CubeSats/hosted payloads



Access to infrastructure and provision of scientific tools



Fellowships/internships for students/professors from developing countries



Educational content



Open-source cost-free software and tools

Any questions?

Contact us

 [**unoosa-access-to-space@un.org**](mailto:unoosa-access-to-space@un.org)

**Help us help
#AccSpace4All**



**For more stats and information,
check out the brochure!**

