



Access to Space for All Initiative “Ask a Winner” The Mauritian Experience

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Research Coordinator

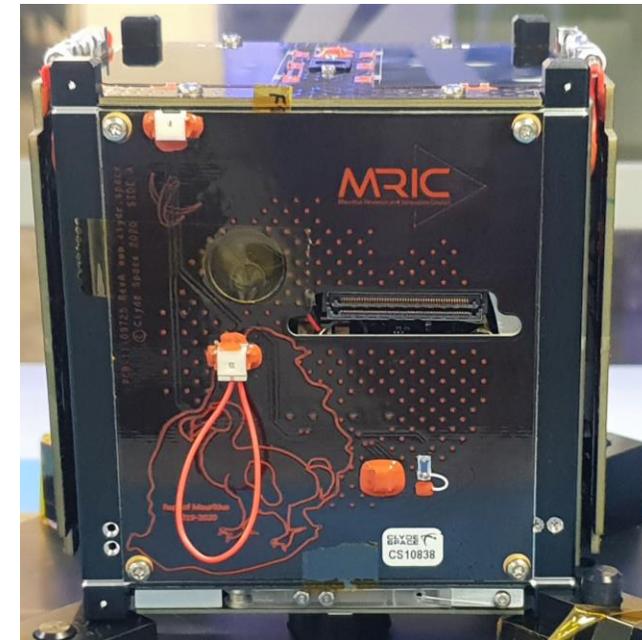
Mauritius Research and Innovation Council

mric.mu

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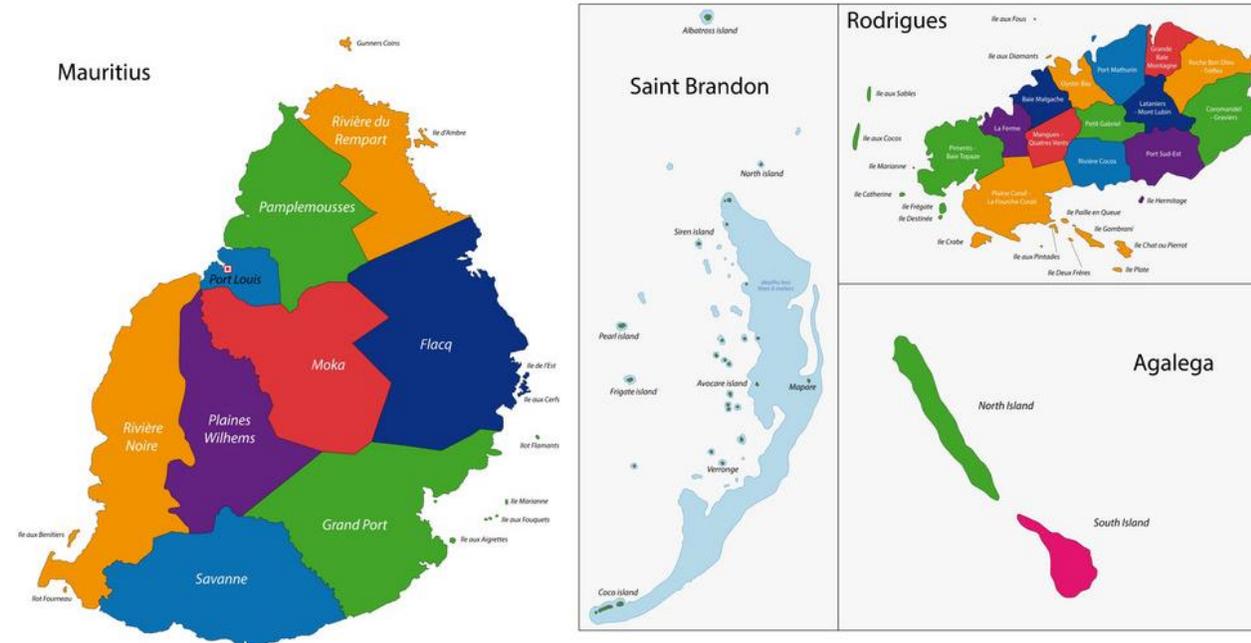
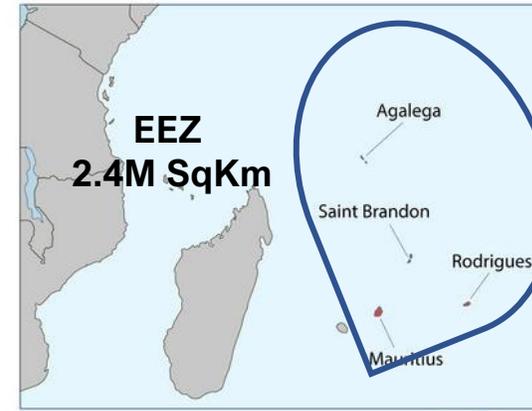
#MIRSAT1

25th November 2020



The Republic of Mauritius

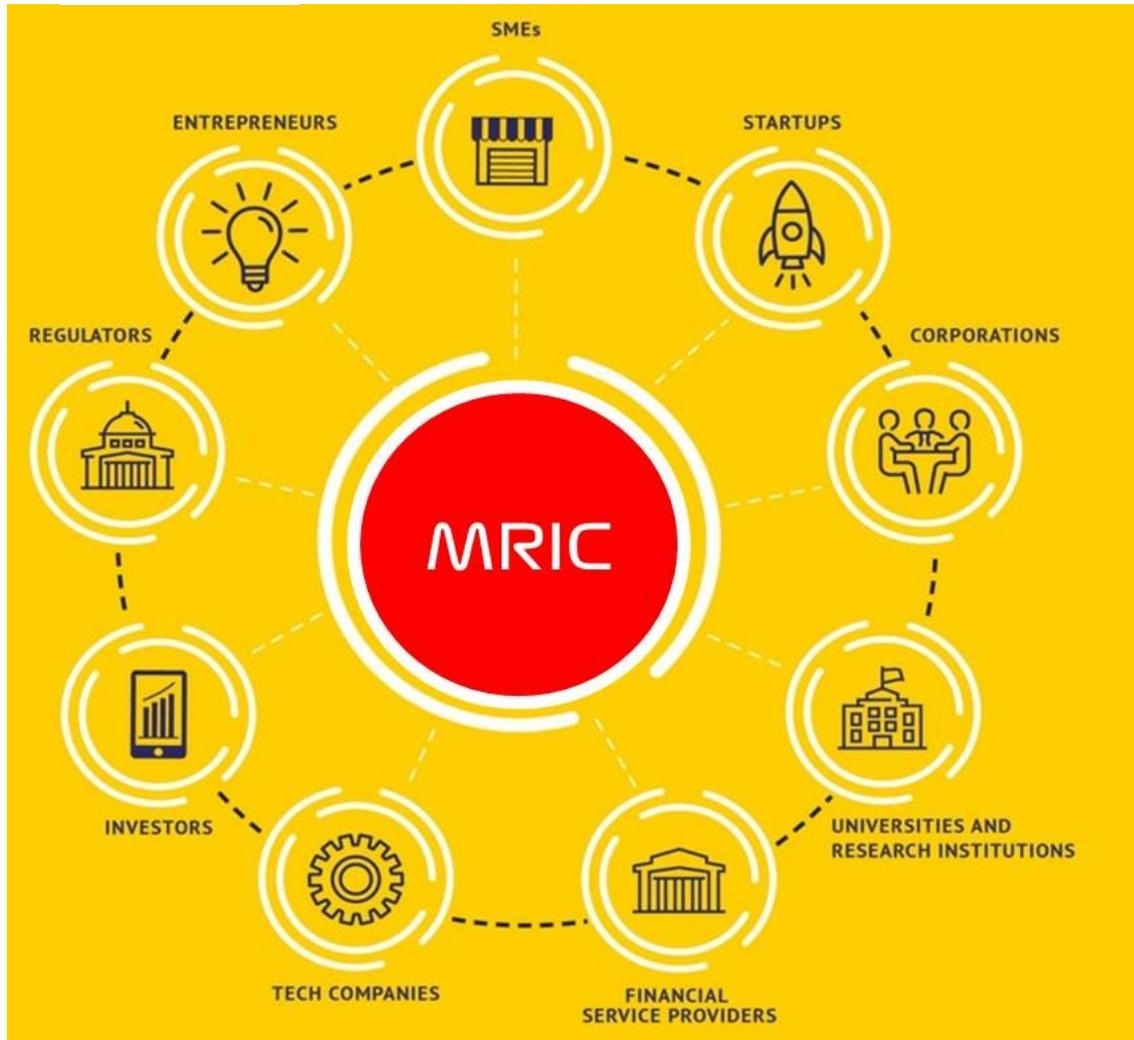
Acquired independence since 1968
Became a Republic in 1992



Source: <https://en.wikipedia.org/wiki/Mauritius>



Mauritius Research and Innovation Council (MRIC)



- Apex body, advisor to Government of Mauritius on all matters pertaining to Science Research and Innovation;
- Manages the '**National Innovation Fund**' (MUR 100M) earmarked for financing research, development and innovative projects for the socio-economic benefit of Mauritius;
- Promotes collaboration between the 4 helices: Public private, academia and society;
- Fosters inclusive innovation, creation of new knowledge by Mauritians for Mauritius, builds capacity, engages into regional and international collaborations and seeks to explore new and emerging technologies for betterment of the lives and livelihood of Mauritians

How did we get to know about the KIBOCUBE PROGRAM?

The second attempt was successful

Ministry of Foreign Affairs , through the permanent mission in Vienna called for interest for application to the KiboCube Program.

Jan
2017

June
2017

First Attempt

Unsuccessful but our proposal was runner-up.

Weaknesses:

- Ground Station
- Satellite Data Usage
- Outreach

July
2018

SECOND ATTEMPT – Won 3rd Kibocube Round

Mauritius Amateur Radio Society Joined In
Rewrote whole of proposal with technical review from AAC-Clyde

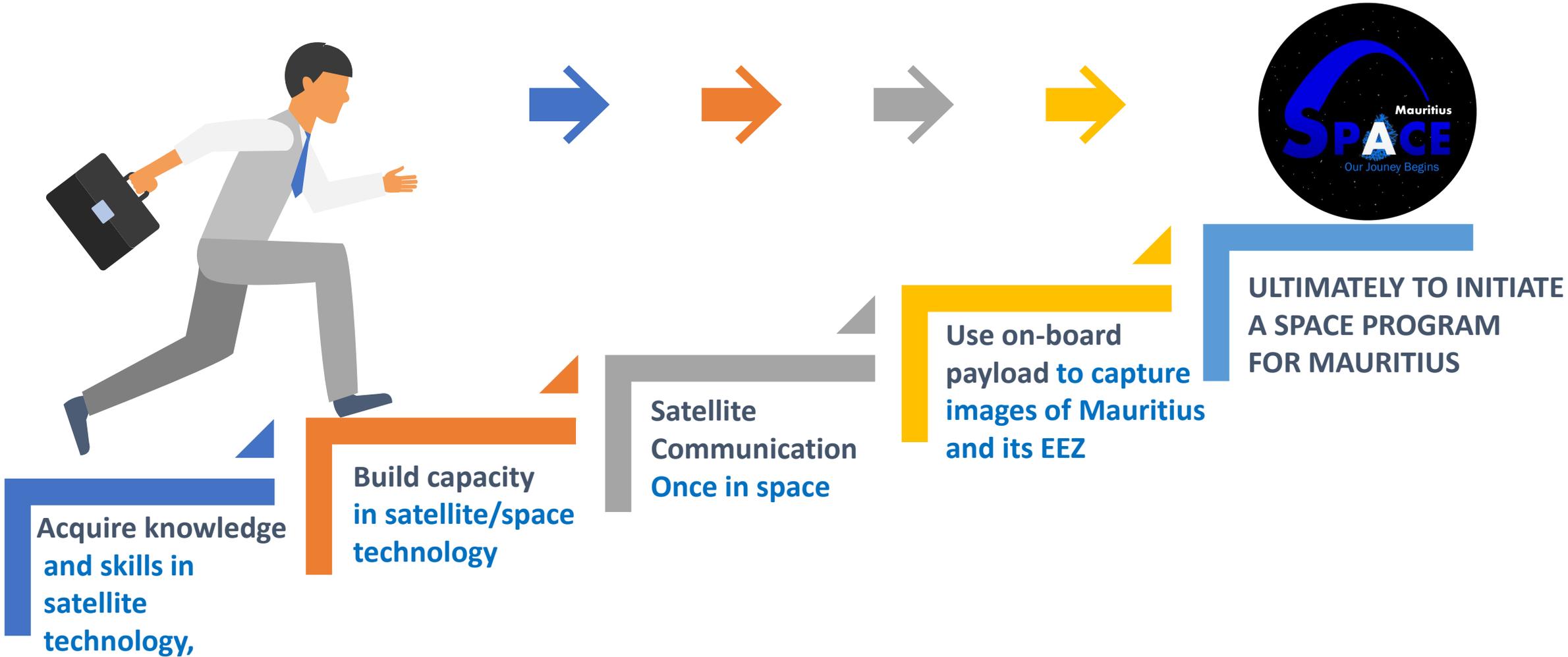
May
2021

DEPLOYMENT
IN SPACE



AIMS AND OBJECTIVES OF THE FIRST MAURITIAN SATELLITE

BUILDING CAPACITY IN SPACE AND SATELLITE TECHNOLOGY



FIRST MAURITIAN SATELLITE – OPENING NEW OPPORTUNITIES

JOURNEY TO SPACE ALTHOUGH NOT EASY BUT EXTREMELY REWARDING AND OFFERS HIGHLY PROMISING FUTURE

◆ MAURITIUS EMBARKS IN NEW SPACE ERA

- Geolocation interesting for future space related activities
- More advanced space nations interested to collaborate

◆ BOOST TECHNICAL CAPACITY

- Building highly technical capacity
- Sophisticated ground station for future missions set up
- Training of younger generation

◆ A POTENTIALLY NEW SOCIO-ECONOMIC PILLAR

- Space offers numerous possibilities for Mauritius. Data analytics, opportunities for R&D, business opportunities, intergovernmental collaborations.



◆ ENTHUSIASTIC YOUNGSTERS

- The training program on antenna building gave us an insight of the high level of enthusiasm for this new field. There is hope to enhance this interest further to build new capacity.

◆ GOVERNMENT FULLY SUPPORTIVE

- This historical initiative for the Republic of Mauritius promises to unlock new opportunities for research, innovation and socio-economic development.



OUTREACH ACTIVITIES

INTRODUCING SECONDARY SCHOOL STUDENTS TO SATELLITE TECHNOLOGY – LEO Receiving Antenna and Ground Station

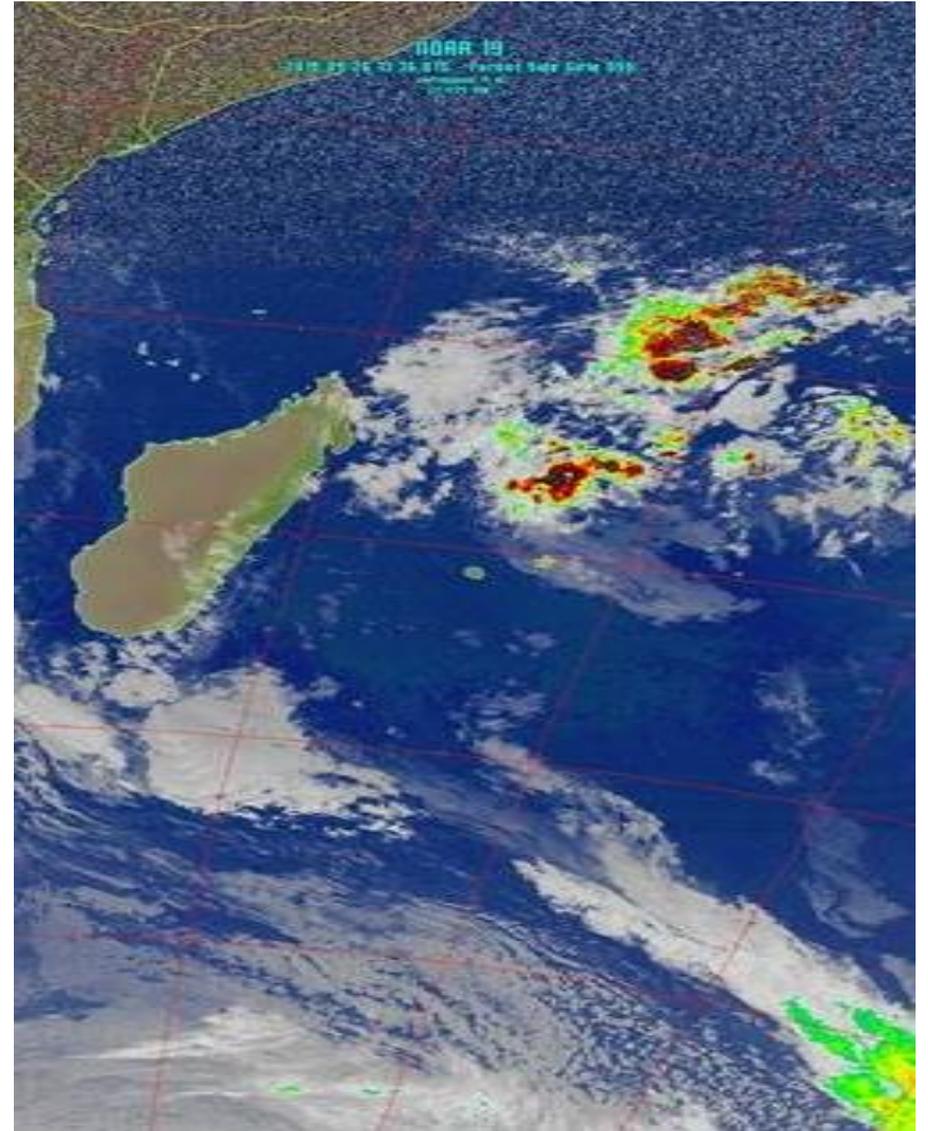


UHF antenna

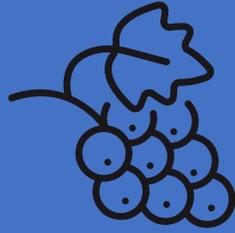


VHF antenna

- Connection box**
- **Band pass filter**
 - **Low Noise Amplifier**



KIBOCUBE OPPORTUNITY HAS TRIGGERED NEW AVENUES



BELIEVE

We need to believe that we can do things on our own



OUR UNIQUENESS

Unique geographical position of SIDS in ocean can provide opportunities for space exploration

OPPORTUNITIES



INDEGENOUS KNOWLEDGE

Exchanges between SIDS important. Collaborating can lead to creation of new knowledge and showcasing our own indigenous knowlege



COLLABORATION AND EXCHANGE

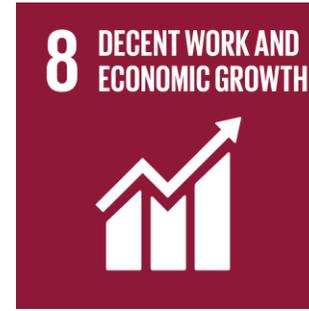
SIDS have many commonalities and together we can address threats and find solutions

PROMOTING COLLABORATION AMONG SIDS

USING SPACE TO ADDRESS CHALLENGES FACED BY SIDS



- As a SIDS Mauritius faces several challenges especially from Climate change
- We envisage using Space/Satellite technology to tackle:



MEET THE MIR-SAT1 TEAM



Dr Vickram Bissonauth

Project Coordinator

Overall project management and coordination



Faraaz Shamutally

Aerospace Engineer

Principal Investigator



Ziyaad Soreefan

Aerospace Engineer

Co-Principal Investigator



Koushul Narrain

Research Assistant

Responsible for Ground Station Implementation



Kiran Tatoree

Research Assistant

Responsible for training of Students for Simplified Antenna and Ground station

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