

Worldwide Survey of Capacity Building Activities



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December 1, 2019

CubeSat proliferation

No.	Country	Satellite name	Launch Year
1	Columbia	Libertad 1	2007
2	Switzerland	SwissCube	2009
3	Hungary	Masat-1	2012
4	Romania	Goliat	2012
5	Poland	Pwsat 1	2012
6	Ecuador	NEE-01 Pegaso	2013
7	Estonia	EstCube 1	2013
8	Peru	PUCPSat-1	2013
9	Lithuania	LitSat 1 LitaunicaSat 1	2014
10	Uruguay	Antelsat	2014
11	Iraq	Tigrisat	2014
12	Finland	Aalto 2	2017
13	Bangladesh	BRAC Onnesha	2017
14	Ghana	Ghanasat-1	2017
15	Mongolia	Mazaalai	2017
16	Slovakia	SKCUBE	2017
17	Latvia	Venta-1	2017
18	Kenya	1KUNS-PF	2018
19	Costa Rica	Irazu	2018
20	Bulgaria	EnduroSat One	2018
21	Bhutan	BHUTAN-1	2018
22	Jordan	JYAT (JO-97)	2018

List of CubeSats launched as the first national satellite

Demands for Space Capacity Building

- Small satellite is an ideal entrance for developing countries to join the space sector
- Demands for capacity building through small satellites
- Various training programs via agencies, companies and universities in space faring countries
- But not all of them are successful

Capacity building activities in Japan



- Japanese government acknowledges the merits of capacity building activities to Japanese space program
 - **Basic Plan for Space Policy write**

“Through the participation of diverse actors of industry, academia and government, we will demonstrate soft power **by promoting wide-ranging international space cooperation through science and technology cooperation and human resource development cooperation with other countries**, strengthen Japan's leadership and diplomatic power in the international community.”
- Supports to various programs
 - Universities
 - Companies
 - Others (e.g. UNISEC)
- But not based on a well-defined policy

MEXT RFP

- On October 1, 2019, Japanese MEXT (Ministry of Education, Culture, Sports, Science and Technology) announced RFP (Request for proposal) for
- “Research on Japan's support for emerging nations in space such as Asia for **nanosatellite** R & D”
- Purpose
 - Examine effective support measures including LEO and deep space for the space emerging nations such as Asia, by conducting research and analysis on the results and lessons learned from nanosatellite missions and capacity building conducted in the past, overseas nanosatellite policies, and the possibility of support by Japan, etc.
- Kutech and UNISEC-Japan submitted the proposal jointly and gained the contract.

Nanosatellite definition by MEXT: less-than 50kg

Why do we do this?

- The RFP mentions
 - Based on the results of the research and analysis, proposal for sustainable support measures for space emerging countries such as Asia using nano-satellites
- We can legitimately propose a policy to the Japanese government

What do we do?

- Trend in space faring countries (supplier of capacity building, e.g. US, Europe, etc.)
 - Government policies on nanosatellite
 - Nanosatellite activities
 - Nanosatellite Market trend
- Mission results of nanosatellite
- Technology trend of nanosatellite
- Capacity building
 - Capacity building services provided by space faring countries
 - Feed-back from those who received the capacity building services
 - Status and issues of space program and capacity building needs in the emerging countries who needs capacity building service
 - Capacity building activities in Japan
 - Capacity building infrastructure in Japan
 - Capacity building infrastructure in overseas
- Nanosatellite launch trend
- Nanosatellite launch provider and the launch sites in Japan and overseas
- Proposal of the capacity building policy
- Final report

Helps needed

- Your inputs to the following points,
 - Trend in space faring countries (supplier of capacity building, e.g. US, Europe, etc.)
 - Government policies on nanosatellite
 - Nanosatellite activities
 - Capacity building
 - Capacity building services provided by space faring countries
 - Status and issues of space program and capacity building needs in the emerging countries who needs capacity building service

Benefits

- The final report will be available to public in spring 2020
 - Sorry, it is in Japanese, but you can ask Google for the help
- Capacity building parts will be presented in international conferences
- You can use them as a reference to promote your nanosatellite and capacity building activities in your country

Your help will be highly appreciated