

# Activity Report UNISEC-Nepal



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Behalf of Nepal POC

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The 11<sup>th</sup> Virtual UNISEC-Global meeting

# Outline

- UNISEC-Nepal: The Local Chapters
- About UNISEC-Nepal
- Organized Activities
- Space Organizations in Nepal
- The Dream Project –MISSION 2050

# UNISEC-Nepal: The Local Chapters



## Tribhuvan University

- Institute of Engineering - Pulchowk Campus  
Dr. Nanda Bikram Adhikari
- Kathford Int'l College of Engineering and Management  
Er. Prashant Raj Karki
- Advanced College of Engineering and Management  
Er. Rajendra Poudel
- Kathmandu Engineering College  
Er. Dipen Manandhar



## Kathmandu University

- School of Engineering  
Dr. Anup Jung Thapa



## Purbanchal University

- Khwopa Engineering College  
Er. Yogesh Barjacharya



**ANTARIKHYA**

अन्तरिक्ष प्रतिष्ठान नेपाल

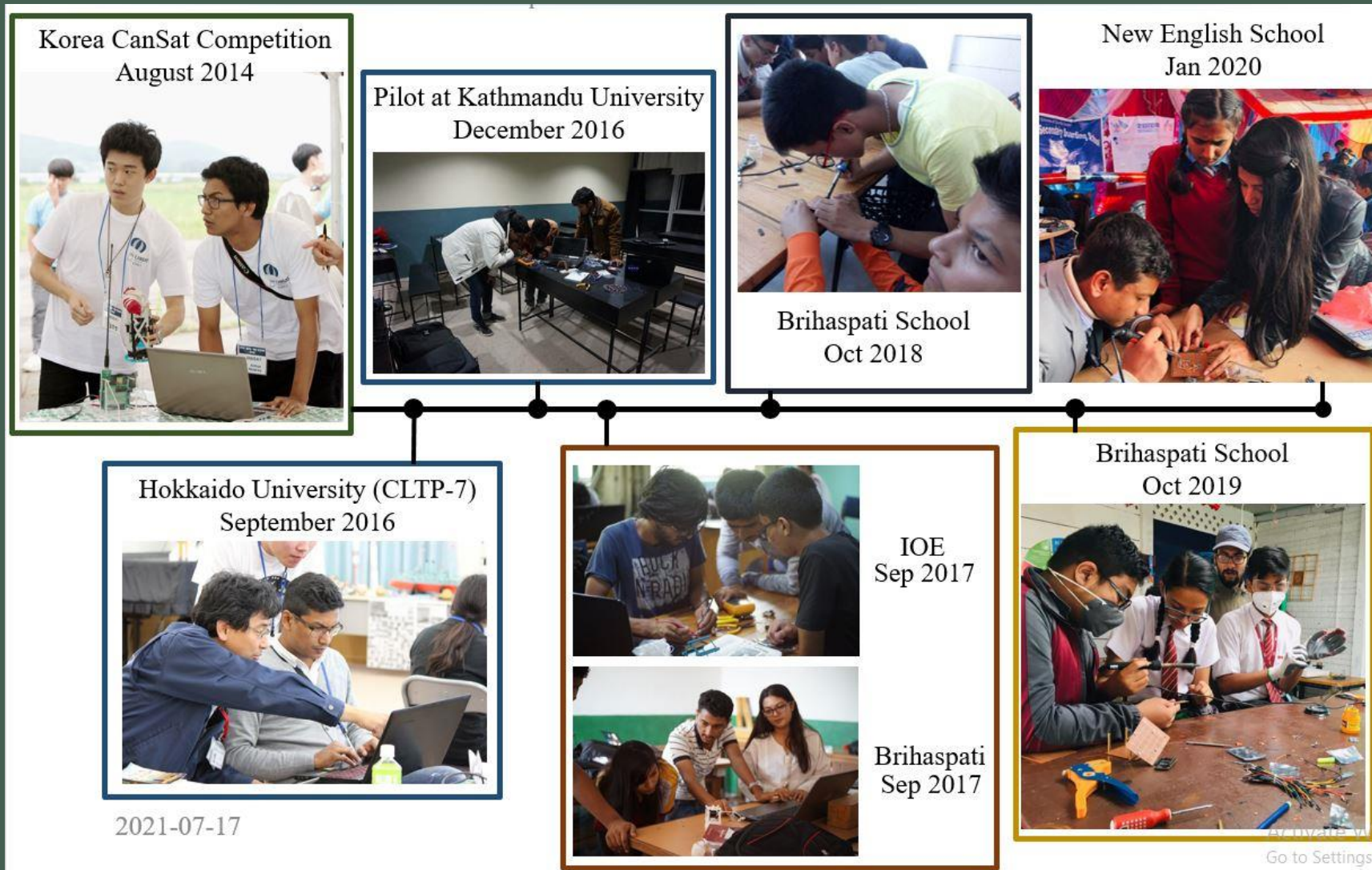
Antarikhya Pratisthan Nepal  
Dr. Abhas Maskey



# UNISEC-Nepal Timeline

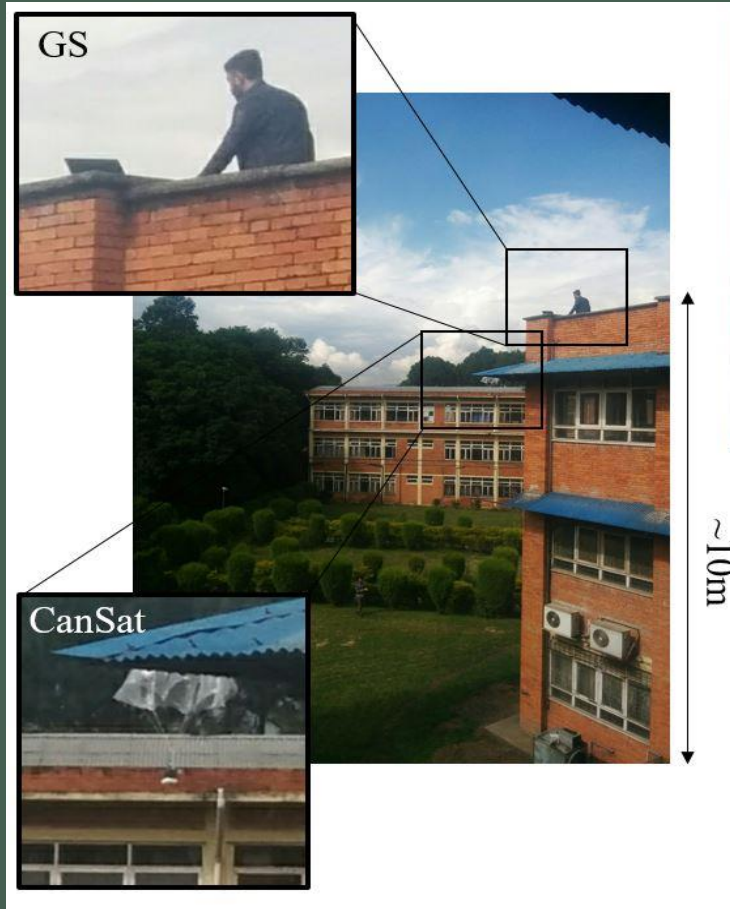


# SastoSat Grassroot Model (2016-2018)





# CanSat Workshop (2019)



Ground Station Design



CanSat Workshop



7/20/2021

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# Nepal First Cansat Competition (2019)



Conducted Cansat Competition  
Cansat at Kathmandu University



9 team participated from  
all over Country

7/20/2021

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# Nepal First Cansat Competition (2019)



Three Day Competition  
with  
I Round  
II Round  
III Round

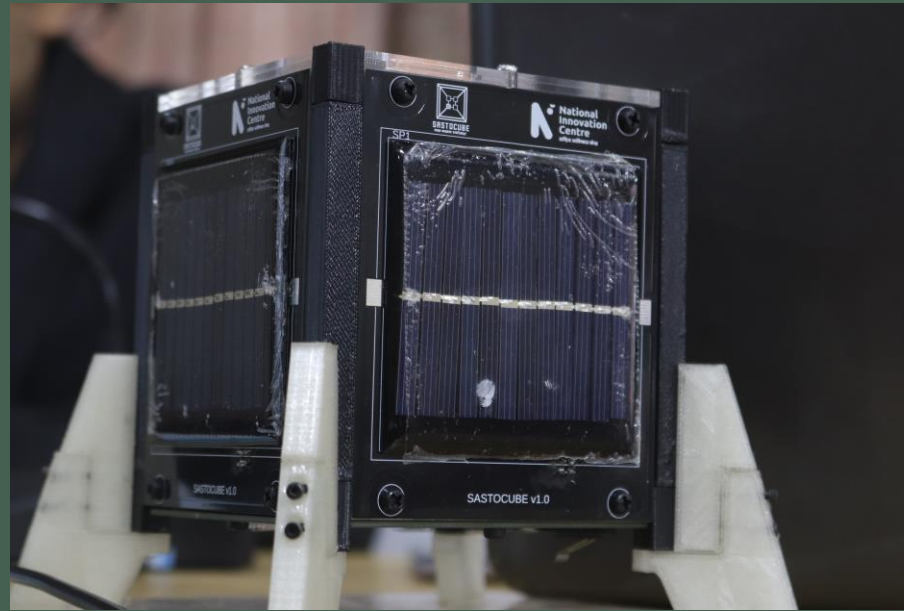


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# SastoCube (2021)



- The educational satellite kit named “SastoCube” was developed at National Innovation Centre.
- Project launched on January 1, 2021.
- Functional satellite kits that can be used in classrooms from Grade 7 and above.
- Standard 1U Cube sat Size (10cm\*10cm\*10cm).



# SastoCube Workshop (2021)



The first SastoCube field  
test organized on 5 - 11  
july, 2021

7/20/2021

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# SastoCube Workshop (2021)



Organized in remote village of  
Khotang District in Nepal  
50 Students from grade 7- 10  
were participated.

# Space Organizations in Nepal



<https://nast.gov.np/>



Government of Nepal  
**Ministry of Education,  
Science and Technology**

<https://moe.gov.np/>



<http://amsat-np.org/>



<http://orionspace.com.np/>



<http://www.nesarc.org.np/>



<https://www.nepalastronomicalsociety.org/>



<https://planeta-observatory.gov.np/>



<http://woaanepal.org/>



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अन्तरिक्ष परिचरान नेपाल

<https://www.antarikchya.org.np/>



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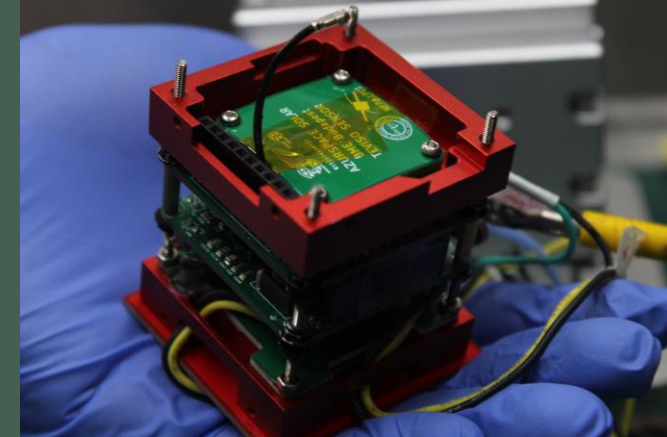
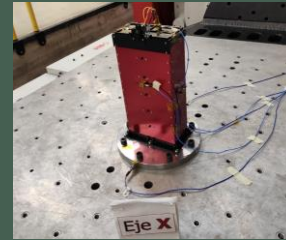
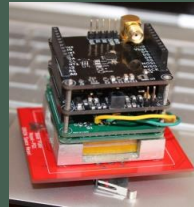
# SANOSAT-1 [NEPAL-PQ<sub>1</sub>] Pico-satellite

## Project Timeline

Preliminary Study

Preliminary PCB Design

Preliminary Engineering Model Development



2018 Aug

2018 Dec

2019 Feb

2019 May

2019 Aug

2020 SEPT

2021 Feb

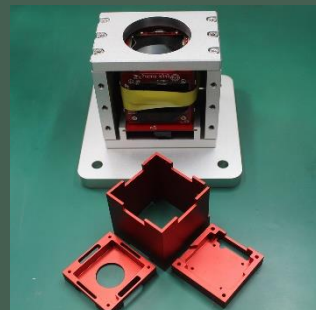
2021 Q4

Breadboard Model Design and Testing

PCB Testing

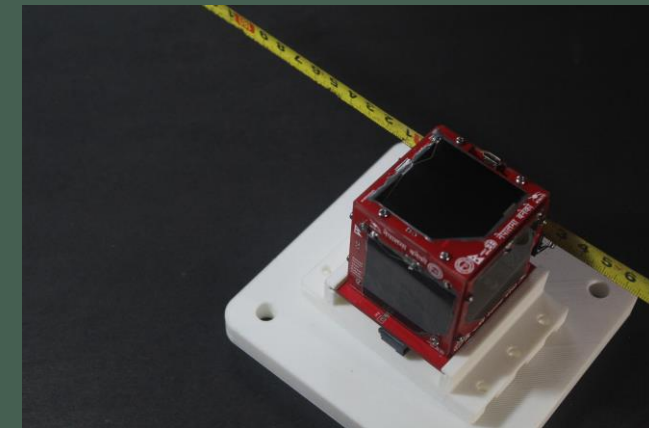


FLIGHT MODEL DESIGN



Environmental Testing Passed

Expected Launch SpaceX Falcon 9





# Rocketry project: Garuda



Student from three  
University working  
together



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# WOAA NEPAL\*

## Panel Discussion

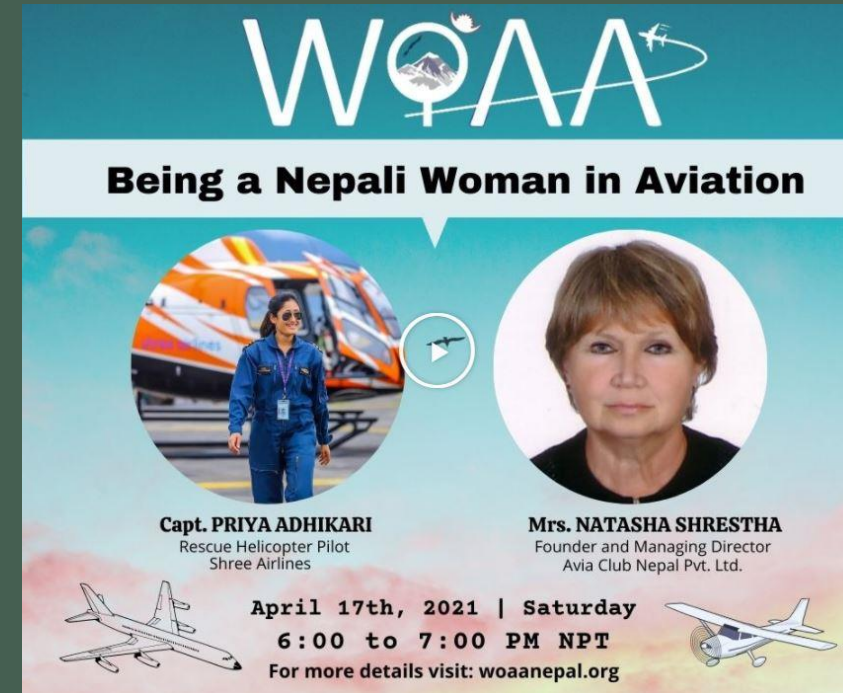
On 17th April, 2021

Being a Nepali Woman in Aviation



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## Speaker Series

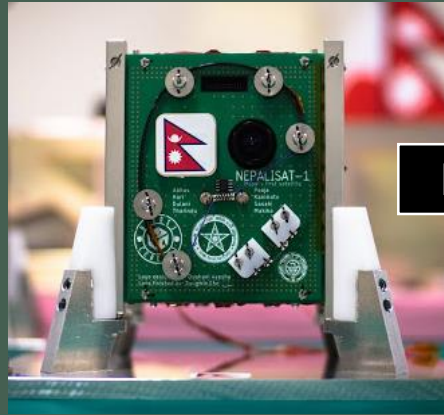
On 23rd June, 2021

International Women in Engineering Day  
2021

\*women of Aeronautics and Astronautics Nepal

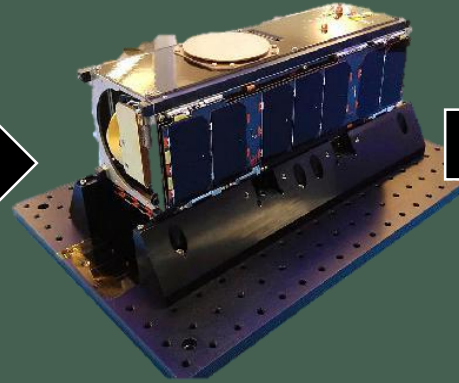


# The Dream Project – Nepali-Sat-2



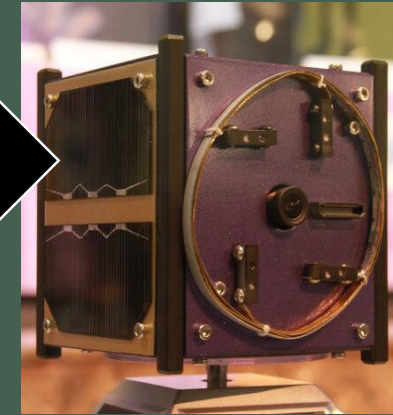
2019

Build



2021

Build



2023

- Build **World's First High-School** Satellite Constellation
- Collaboration with INSTED, **Thailand**
- Build **Strong Role-Models** in Public Schools
- Low-Cost, High Impact in **Education, Science and Technology**

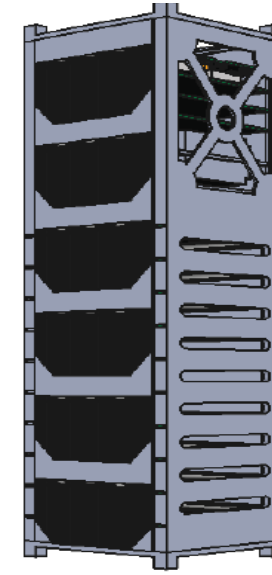


# The Dream Project – Nepali-Sat-2

## Three Phase:

1. SastoCube Project
2. Padyatri Mission
3. Vidhyalaya Mission

## Multi-Payload Cubesat Platform (MPCP)



### Bus System

- Communication
- OBC
- EPS
- Antenna

### Multi-Payload (10 Slots)

- Designed and developed by users

2021 Launch

Moved to NAST

MDR

April 20, 2021

PDR

July 1, 2021

CDR

Aug 15, 2021

FRR

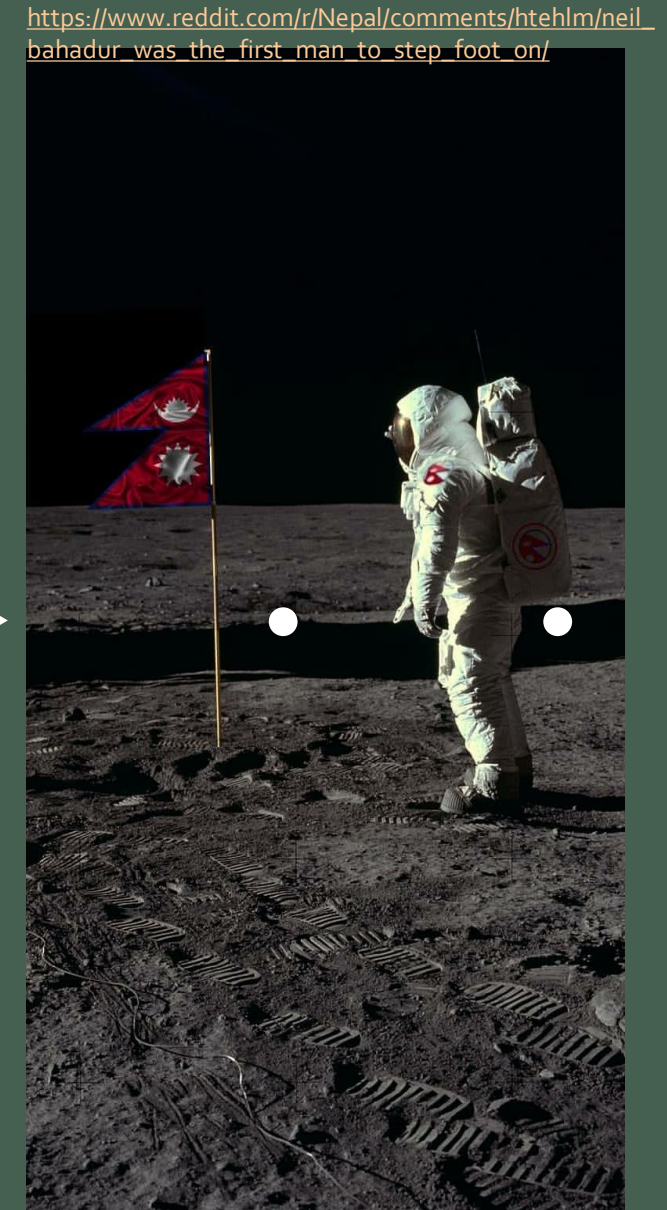
TBD

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# The Dream Project –MISSION 2050

- 2019: Nepal placed its first satellite in orbit
- 2050: Nepal places its first human in orbit







THANK YOU