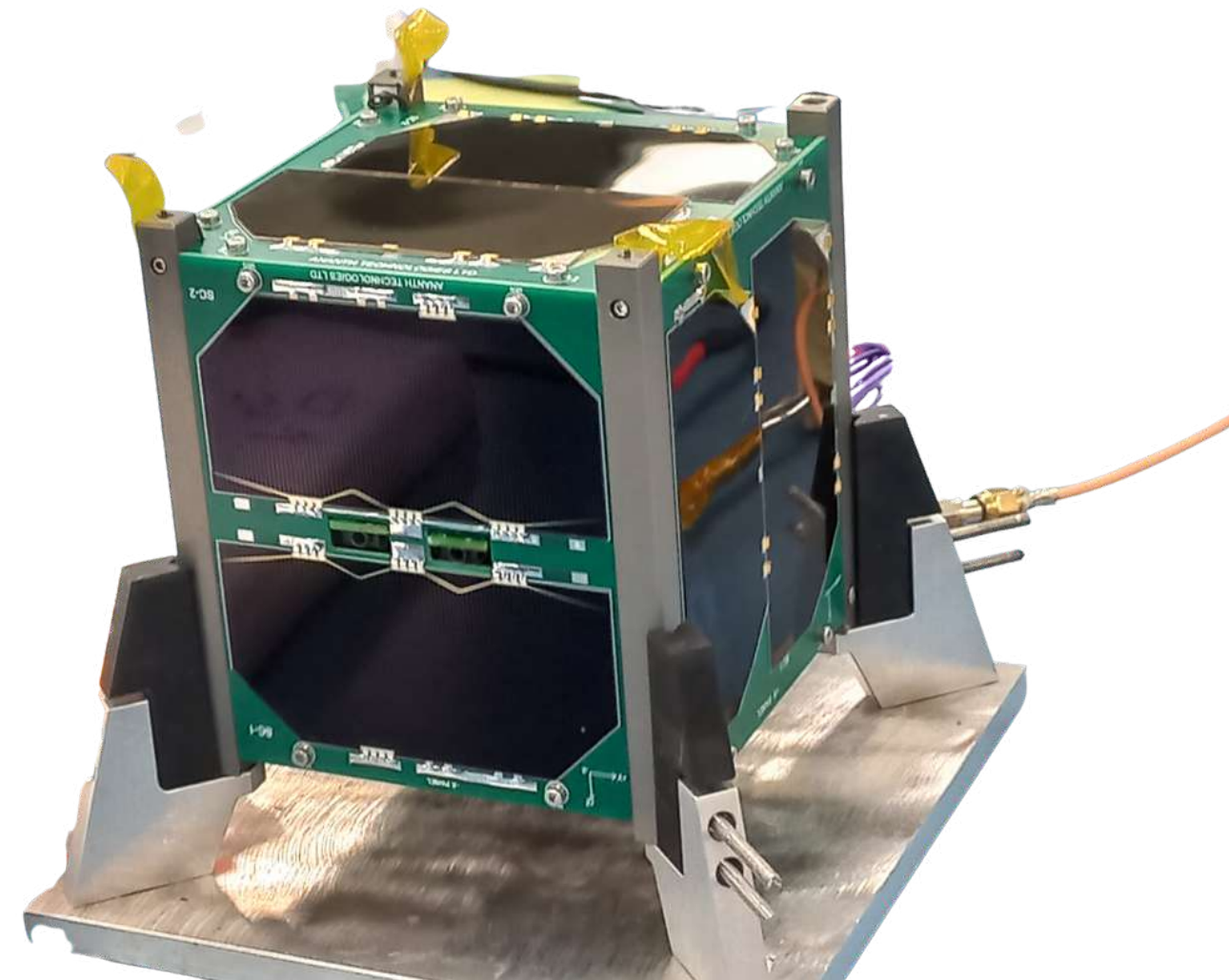**ANTARIKCHYA**

अन्तरिक्ष प्रतिष्ठान नेपाल

Insights Gained from Nepal's Space Infrastructure Development & Satellite Projects from Past Three Years

Anuja Shrestha

Antarikchya Pratisthan Nepal(APN)*

(Translates: Space Foundation Nepal)

30th Workshop on Space Technology for Socio-Economic Benefits: "Challenges and Capacity-building Opportunities for Emerging Space Nations"

ANTARIKCHYA INTRODUCTION

- Profit-not-distributing company (Non-Profit Organization)
- Aims to develop the space industry and promote space education in Nepal.

Kyutech's BIRDS-3 Members

ANTARIKCHYA

FOUNDED BY PNST RETURNEE

Training next generation space leaders

Key Achievements (Satellite Projects)

Satellite Projects

DANFE SPACE MISSION
- Pilot space project held in Nepal with International collaboration
- Trained engineers to build next-generation satellite systems for a constellation-focused future.

Project MUNAL
- First high school 1U CubeSat Project of Nepal
- Climate Change Technology Demonstration Satellite "MUNAL", built and ready to be launched
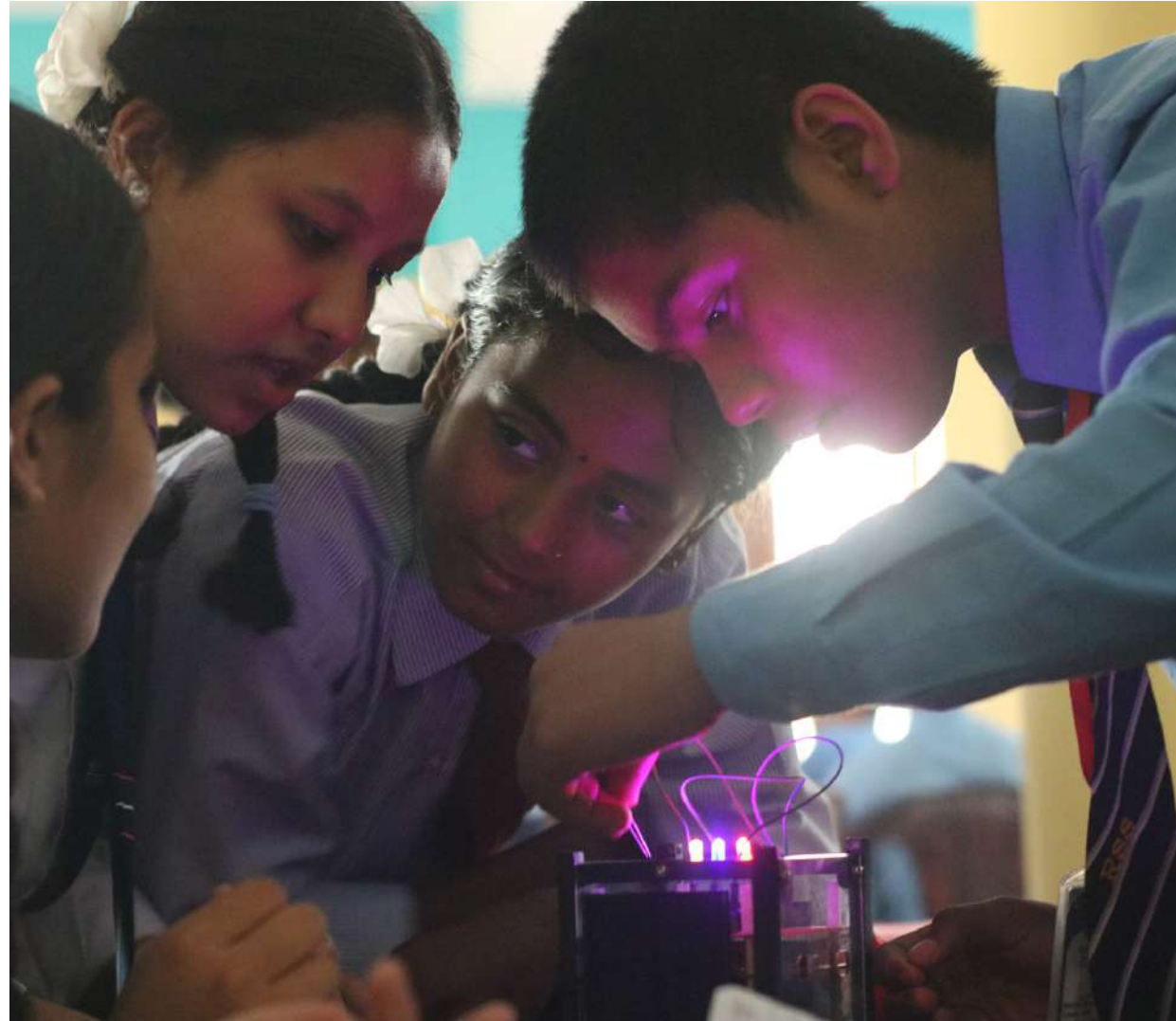- Made by 9 high school students; supervised by Senior Satellite Team

PHI
- Winner of UN's Payload Hosting Initiative(PHI) as part of UNOOSA's Access to Space 4 all program
- In collaboration with MBRSC of the UAE
- 12U Satellite is stated to be launched at the end of 2023

Capacity Building and Education

- In collaboration with UNESCO,, Antarikchya has been pushing space education through , education satellite
- ECube.
- Seven different provinces of Nepal
- Training on each province
- Targeting Schools

Capacity Building Through Satellite Project : Danfe, Munal
Building Satellite ------>>> Training and creating workforce of space enthusiasts
Danfe and Munal are the pioneer projects for capacity building, space awareness, technology advancements

Challenges Faced:

- Political Instability
- Lack of basic infrastructure
- Custom related
- Dependent on other countries for components/manufacturing facilities
- Lack of manufacturing capabilities
- Fund release systems

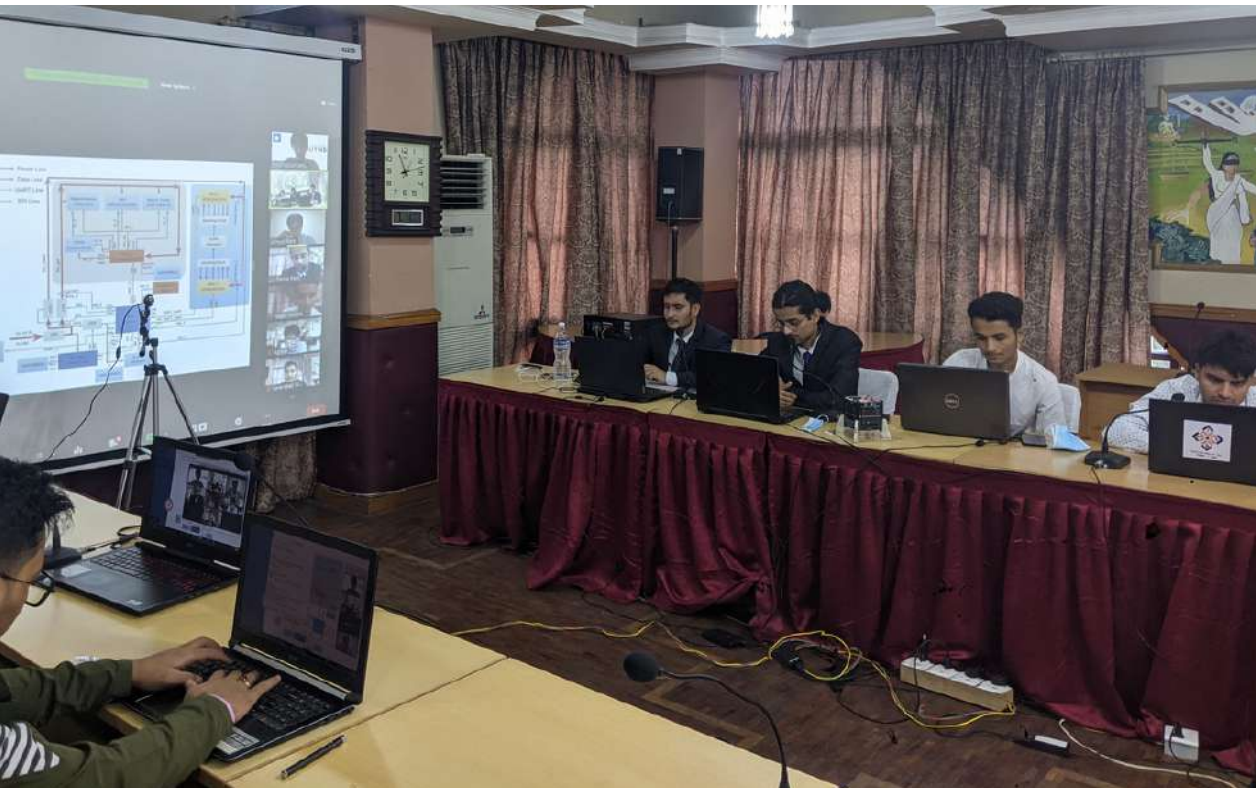# INSIGHTS, POV: SYSTEM ENGINEERS/ MENTORS

01
Enthusiasm is the key to successful project

02
Emerging space researchers require suggestions from expertise around the world

03
Mentors and trainee has to have a bond beyond teaching and learning the subject matter

Preliminary Design review of Danfe Space Mission

A fun photo session of mentor and mentee of Project MUNAL

Trainees and Mentors at Satellite Bootcamp

INSIGHTS, POV: SYSTEM ENGINEERS/ MENTORS

03
Over the past three years, the least prioritized technology is being highlighted and taken into interest

04
Non-technical difficulties, found to be more troublesome to system engineers

05
Mentoring is one effective way to hone your skills more and create like-minded workforce

Media Coverage

Prof. Mengu Cho visit at SSL, KUHS (Project MUNAL)

MOU signing ceremony between NAST, Nepal and KMUTNB, Thailand

INSIGHTS, POV: ADMINISTRATION/MANAGEMENT

01
National collaboration with different educational entities are really crucial for space development

02
Funding and custom related issue will always hamper the project and its timeline the most

03
The timeline of the project depends on how much familiar your country is with the space technology

SSL commencement

04
Over the past three years, Nepal still has to be dependent on other countries for manufacturing resources

05
International collaboration and support from space-faring countries can make a huge difference in space field of emerging countries

National/International Collaboration and Partnership

Space Systems Laboratory Commencement, KUHS

APN and MBRSC MOU signing at IAC 2022

MOU signing ceremony between NAST, Nepal and KMUTNB, Thailand

MOU signing ceremony between Khwopa Engineering College and APN

Fund Raising: Corporate Social Responsibility

Fund Raising at SSL

MUNAL testing team at Ananth Technologies India,
Sponsor: Nepal Airlines

THANK YOU FOR LISTENING!