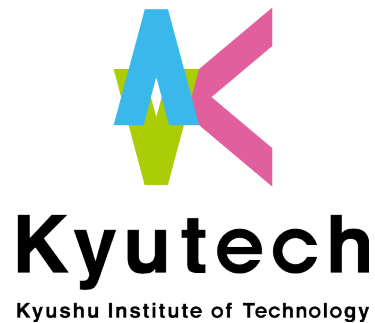


# BHUTAN IN SPACE

UN/AUSTRIA SYMPOSIUM  
ACCESS TO SPACE: HOLISTIC CAPACITY BUILDING FOR THE  
21ST CENTURY  
7TH SEPTEMBER, 2017

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PRESENTED BY: YESHEY CHODEN

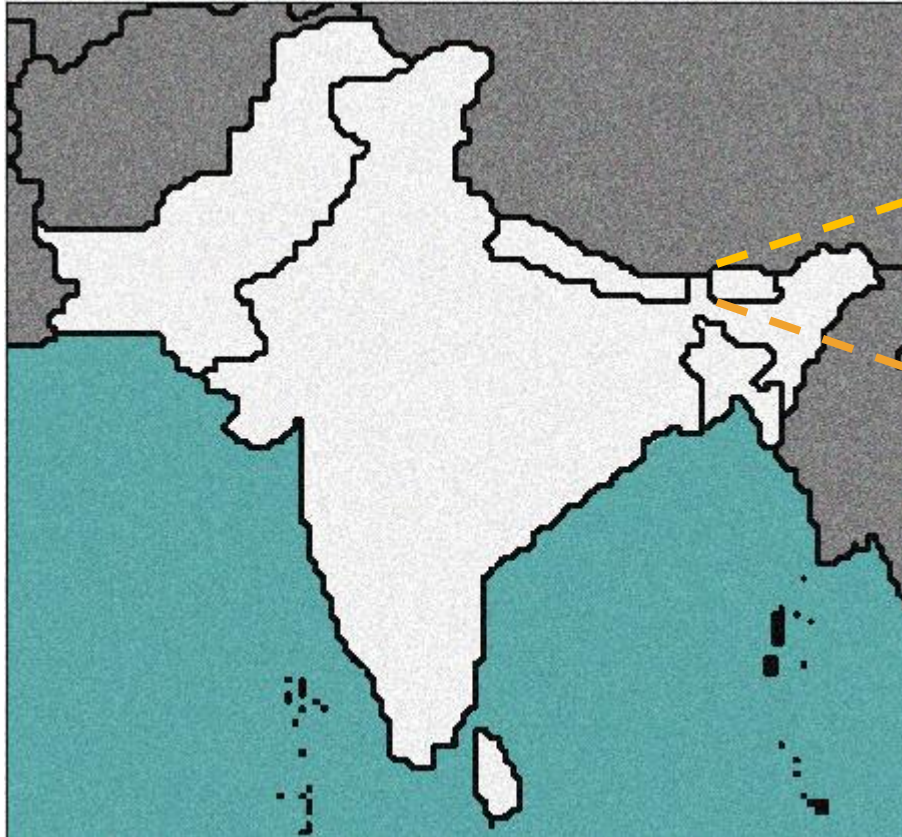
- KYUSHU INSTITUTE OF TECHNOLOGY, JAPAN
- MINISTRY OF INFORMATION AND COMMUNICATIONS, ROYAL GOVERNMENT OF BHUTAN





# BHUTAN

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Map of South Asia



- Area: 38,390 sq.km
- Population: 0.8 Million
- Government: Constitutional Monarchy



# THE BEGINNING OF SPACE IN BHUTAN

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His Majesty *Jigme Khesar Namgyel Wangchuck*, 5<sup>th</sup> King of Bhutan

- A vision of His Majesty the King of Bhutan
- Started in 2016
- Government taking the lead:  
Division of Telecom and Space,  
Ministry of Information and  
Communications



# CAPACITY BUILDING using BIRDS Project

- Joint Global Multi-Nations BIRDS Project
- BIRDS-1 : Japan, Ghana, Mongolia, Nigeria, Bangladesh (5 countries)
- **BIRDS-2** : Japan, **Bhutan**, Malaysia, Philippines (4 countries)
- Design, develop, test and launch 1U CubeSat at Kyushu Institute of Technology, Japan
- Hands-on experience and learning at low cost



Official logo of BIRDS Project



Example of 1U CubeSat



# BHUTAN'S FIRST SATELLITE PROJECT

## Objectives

- **To enhance socio-economic development by using space science and technology**
- To develop first satellite of Bhutan
- To develop capability in space science and technology



Members of BIRDS-2 project with faculty of Kyushu Institute of Technology, Japan



# WAY FORWARD

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## **Explore innovative approaches :**

- Space governance : the changing role of government
- Facilitate participation of private entities
- Cost sharing/reducing mechanism
- Realise new market potentials using space applications
- Build capacity in multiple disciplines : Holistic
- Foster international cooperation : international organizations, countries
- Fulfill my role as the first space engineer/ first female space engineer



# Thank you

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