# The Introduction of Startups Incubation in TASA

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# TASA's Vision in National Long-Term Space Technology Development Program



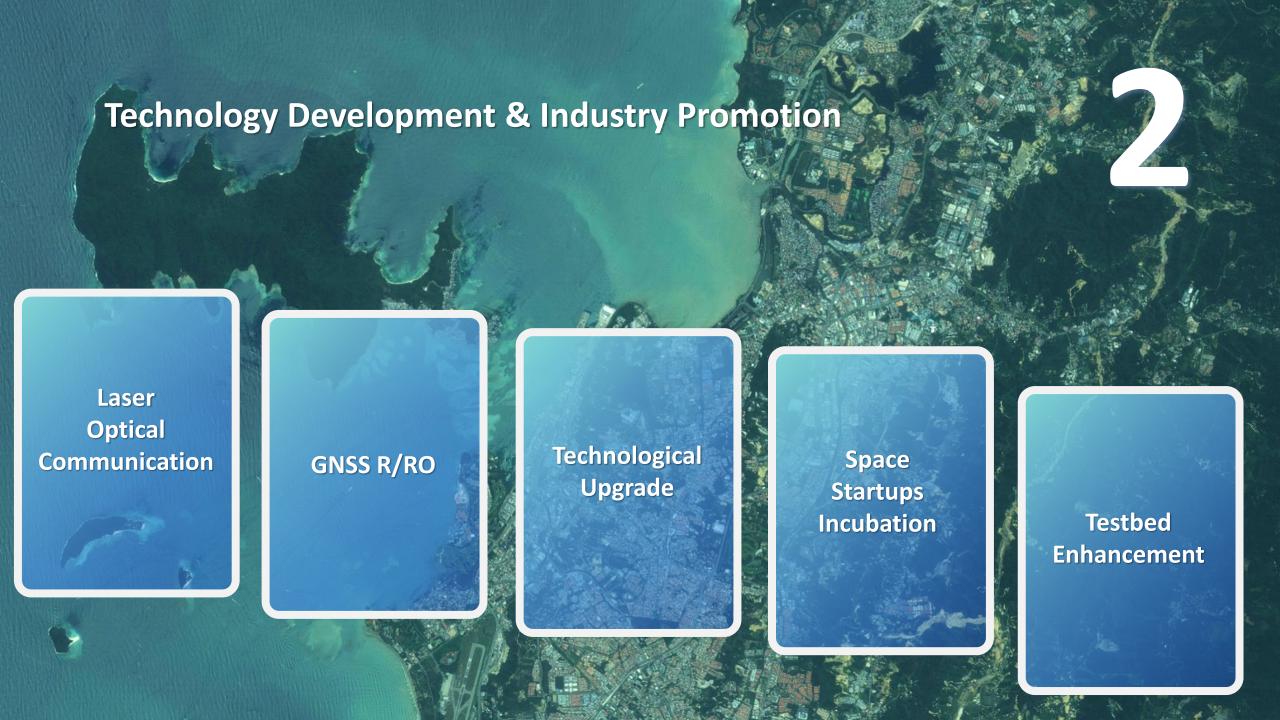
Space Autonomy & National Security

2



**Technology Development & Industry Promotion** 





### **Taiwan's Satellite Constellation Plan**

**Deep Space Exploration** 



2025

**4** Lunar Payload Development

**Remote Sensing** 

2023

Weather



Triton (FS7-R) 2027



**2+1** SAR Satellite

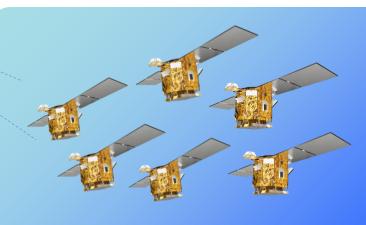
2025



6+2 Optical Remote Sensing Satellites

**GEO Laser Optical Communication 2028** 

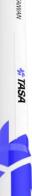
### **LEO Communication**



- **2** Beyond 5G (2027)
- 4 1.5 Gen (2028)
- 60+ Taiwan Constellation (2029)



Launch Vehicle 2030



# **Space Technology Development in Taiwan**



- Remote Sensing Satellite
- Meteorological Satellite
- Cube Satellite
- Communications Satellite



- Satellite Data
- Image Processing System
- Taiwan Data Cube



Satellite Manufacture

**Application Service** 

Space Technology

Launch

Vehicle

**Ground Equipment** 



- National Launch Site
- Orbital launch vehicle
- Indigenous Rocket manufacture



Remote Sensing and Communication Mobilé
 Ground Equipment

# **Industry Promotion Strategies**



- Construct and Update Taiwan's Space Capability Catalogue
- Organize Domestic and International Exhibitions, Forums and Seminars
- Conduct Industry Research to Formulate Promotion Strategies



Space Industry Promotion



Technology Consulting Service 3



Test Services 4



Talent Cultivation



Startups Incubation

# **Space Innovation system**



### **Key Enterprises**

# Key resources connection

- **■** Space enterprises
  - ✓ Information and Communications Technology
  - ✓ Space Technology
  - ✓ Semiconductor
  - ✓ Precision Industry
- Association/Organization
- **L** VC/CVC
- Finance/Accounting
- Marketing

# **Research** institutes

### **Technical support**

- **TASA**
- ITRI
- NCSIST
- SINICA
- MIRDC

# International resources

# International and domestic startups program

■ Inbound and Outbound

### Startup Incubation

By multiple resources connection to cultivate startups

### **University**

# Academia-institute collaboration

- Space education
- Talent recruitment and incubation
  - ✓ Young talents
  - ✓ Research development
  - ✓ System engineering

### Government

Grant Application (Research/Government)

# The Aim of Space Startup Incubation





Incubation hub



Multiple resources connection



Proof of concept



Mentors consulting



### Taiwanese Niche Market

Information and communications technology

Precision industry

**Semiconductor** 

IC design

Targeted Incubation
Areas

Satellite bus and payload manufacturing

**Ground equipment** 

Launch vehicle

Application service

### **Cultivation Phase**



### Phase 1

Raise awareness of entrepreneurship in the space industry

### Phase 2

Preparation and review before entering the incubation center

### Phase 3

**Incubating** 

### Phase 4

Commercialization

### Industrial Promotion

- Basic space know-how disseminated at school
- •Business alliance conference
- Online/Offline expert seminar
- Space application service promotion

# Qualification review and concept validation

- Build the review team
- Completed business plan

# Technology and market validation

- Training courses
- Technology consulting
- Patent application and distribution
- Prototype of Product or Service
- •POC/POS/POB

# **Business development** and resource linkage

- Key enterprises connection
- Fundraising/Pitch Challenge
- Domestic/InternationalI soft landing program
- Marketing
- Technology transfer consulting

### **TASA X TAcc+ Collaboration**



### **TAcc+ SpaceTech International Program**

- TAcc+ is supported by Small and Medium Enterprise and Startup Administration (SMESA), MOEA. TAcc+ primarily focuses on fostering collaboration and providing support within various sectors, including technology, innovation, and accreditation in Taiwan.
- This Program aims to attract global startups who is interested in Asia market. Startups can engagement with Taiwan enterprises, access supply chain ecosystem, network with startup ecosystem, investors and accelerators to speed up for accessing Asia market.

### **Program Resources**



Supply chain and ecosystem matchmaking



Corporate innovation tour



Service / Field verification



Promotion and marketing



Industry co-creation / Strategic Investment



Basic landing service.

### **Startup Request**

- Search for supply chain partner, and business strategic partner as key linking consideration.
- Learn the feasibility of technical cooperation in hybrid power/propulsion systems, earth observation (EO), communication and navigation payload systems, ground equipment (such as antennas) design and manufacturing, agriculture, etc.

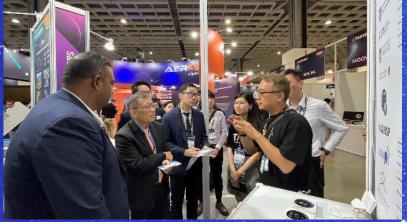
### **TASA X TAcc+ Collaboration**

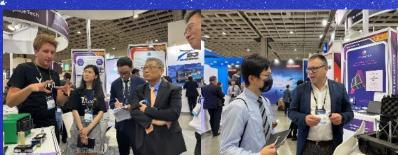




Arrange for startups to participate in Taiwan's representative space expo, Taipei Aerospace & Defense Technology Exhibition (TADTE 2023) from Sep. 14 to 16 to promote the exposure of international space innovation exhibits and spread the achievements of new innovations in Taiwan.

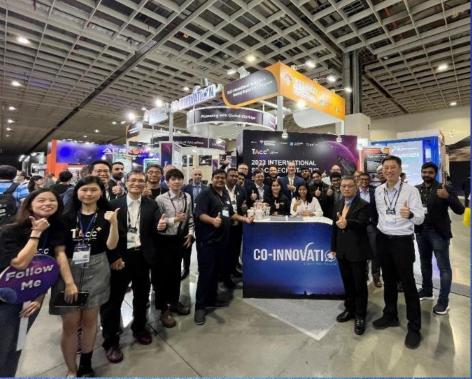
- A total of nearly 300 Taiwanese space supply chain manufacturers were linked during the exhibition.
- Link Taiwan's academic and research energy, cooperate with the Department of Space Science and Engineering, National Central University, and expand international cooperation opportunities.











# **TASA X TAcc+ Collaboration**



### **Leveraging Taiwan Strong Supply Chain**

### **SpaceX Supply Chain**

**Ground Terminal** 

- PCB (MB)
- Terminal components
- Electronic components and chip
- Router
- Power supplier
- Thermal module



- •- RF module
- IC Chip
- PCB, antenna material
- -Thermal module
- Components
- · Solar cell module



### **OneWeb Supply Chain**

**Ground Terminal** 

- Antenna component module
- Modem
- Power supplier
- Plane antenna



### **TASA Visiting**



Connection

Matchmaking

Industry Matchmaking



Business Meeting



# **TASA Satellite Integration & Testing Services**



TASA has extensive experience in satellite assembly and testing and can provide a variety of space environment and product-related testing services, there are 18 testing services that can be applied by industry in need of components testing.



Thermal Vacuum Test



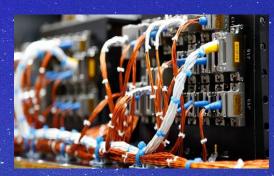
Vibration Test



**Acoustic Test** 



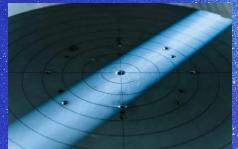
**EMC** Test



Harness Design and Manufacturing



**Shock Test** 



Mass Property
Measurement



Antenna Performance



Coordinate Measurements



Particle Impact
Noise Detection Test

# **Taiwan Space Radiation Measurement Alliance**



- ◆ In accordance with international testing standards, TASA collaborates with 13 domestic academic units, research institutes, organizations and hospitals specializing in radiation testing to form the Taiwan Space Radiation Measurement Alliance(TSRMA).
- Provide radiation testing services for space electronic components.













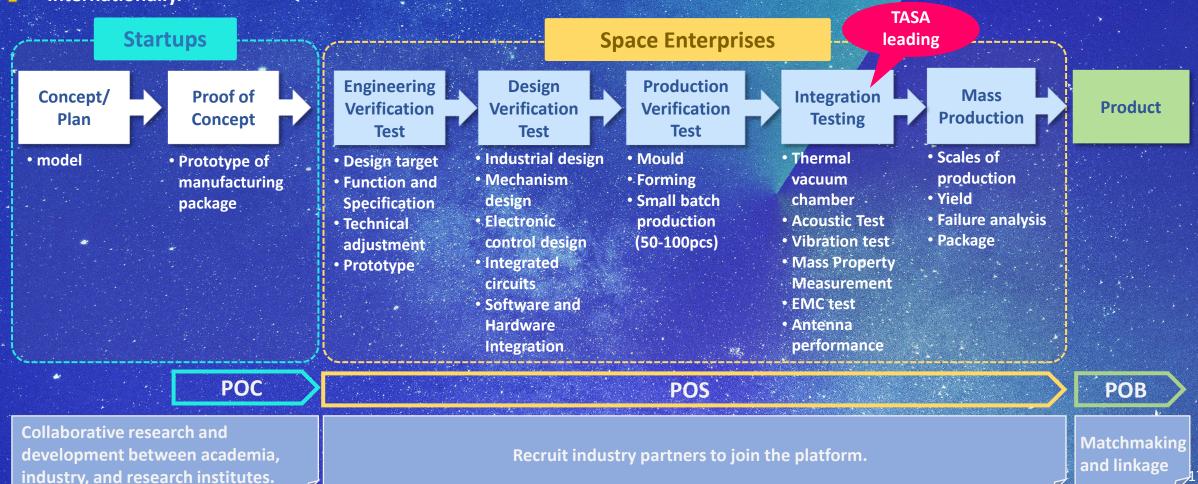




## **Innovation Prototyping Support Service**



- Assisting space startups in rapidly validating commercialization and investment feasibility, and forming partnerships with enterprises by prototyping and testing early customized small-batch products.
- Constructing a conducive environment for the production and development of space components, both domestically and internationally.



# The Taiwan Space Industry Development Association



### Introduction

- ◆ The Taiwan Space Industry Development Association (TSIDA) is a non-profit organization established in 2019 under the initiative of the Taiwan Space Agency (TASA).
- Our mission is to promote the development of Taiwan's space industry and facilitate industrial exchange and cooperation domestically and internationally.
- ◆ As of January 2024, TSIDA have a total of 92 organizational members and 20 individual members.

### International collaboration

- Forum and conference.
- ◆ International industry visit and communication
- **♦** R&D with TASA collaboration





# Thank you for your attention!

**TASA official website** 

