Chilean Space Program, Opportunities for cooperation and development
AGENDA

I. Chilean Space Strategy
II. Chile Space Program (SNSat)
III. Implementation Schedule
IV. Cooperation's Areas
V. Conclusions
I.- Chilean Space Strategy

Contribute to strengthen the National Space System

**Purpose**

**Pillar**

**Area of Interest**

**Action Lines**

- Technologic Frame
- Financial Frame
- Normative Frame
- Institutional Frame

Geospatial Information Management

Spatial geniuses

National Industry

I + D + I + C

Critical mass

SATCOM & Cibersecurity

Mathematical data modeling & Terrestrial Sensor Network

Cooperation & Collaboration
I.- Chilean Space Strategy

Stakeholders

- Civil Society
- Academy
- Government
- Economy
- Defense

Policy
Planning & Collaboration
Technical Facility & Data Science
I.- Chilean Space Strategy

INSTITUTIONALITY

Define the policy, objectives, programs and resources:
SPACE POLICY

Propose and coordinate the activities to achieve the established objectives:
SPACE PROGRAMS

Specialized advice within the framework of the National Space Policy:
DIRECTION OF MISSIONS
I. Chilean Space Strategy

NATIONAL SPACE SYSTEM

Institutionality

National Space System

National Space Center

National Satellite System

SNSat Program Launch Ceremony with 5 Ministers (May 26, 2021)
Space Development Strategy

Chilean Space Program for Science and Society

Regional, Sectorial and International Program
II. Chile Space Program (SNSat)

Reducing the Digital Divide  
Reducing the Technological Gap

NATIONAL SATELLITE SYSTEM (SNSAT)

HUMAN CAPITAL FORMATION  
DESARROLLO DE TECNÓLOGÍAS  
CHILE  
TEAM BUILDING

SUBSYSTEM 1: GEOSPATIAL INFORMATION
SUBSYSTEM 2: NATIONAL SPACE DEVELOPMENT
SUBSYSTEM 3: NATIONAL SATELLITE
SUBSYSTEM 4: SATCOM SERVICE
SUBSISTEMA EDUCACIONAL EDUCATIONAL PROGRAM

AXLES

Reducing the Digital Divide

Human Capital Formation

Desarrollo de Tecnologías

Chile

Team Building

Knowledge Generation

SUBSISTEMA EDUCACIONAL EDUCATIONAL PROGRAM

SUBSYSTEM 1: GEOSPATIAL INFORMATION

SUBSYSTEM 2: NATIONAL SPACE DEVELOPMENT

SUBSYSTEM 3: NATIONAL SATELLITE

SUBSYSTEM 4: SATCOM SERVICE

NATIONAL SATELLITE SYSTEM (SNSAT)
II. Chile Space Program (SNSat)

NATIONAL SATELLITE SYSTEM (SNSAT)

SUBSYSTEM 1
Geospatial Information
- North Station
- Austral Station
- National Space Center
- 2 HPC
- Service Images, Geoportal & APP

SUBSYSTEM 2
National Space Development
- AIT and local manufacturing of 7 satellites and payloads:
- Design and Develop a National Satellite Payload

SUBSYSTEM 3
National Satellites
- 3 Remote Sensing Satellite

SUBSYSTEM 4
SATCOM Service
- Dedicated SATCOM Service

SUBSYSTEM Educational
- Master Degree (in future)
- Academic Formation
- School Program “Columbia Space Lab”
II. Chile Space Program (SNSat)

NATIONAL SATELLITE SYSTEM (SNSAT)

- MCC with full capability to control and operate the SNSAT Constellation.
- AIT Laboratory with capabilities up to 100 kg satellites.
- Auditorium
- Sphere of Science
- National Space Astropreneurship and Innovation Centre
- Public Area
### III. IMPLEMENTATION SCHEDULE

#### Satellites Constellation

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<tr>
<th>Year</th>
<th>SNSat 1-2</th>
<th>SNSat 3-4</th>
<th>SNSat 5-6-7</th>
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#### Ground Stations

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#### Research and development

- Systems Engineering
- Building process, research and prototype testing

#### Educational Programs

- Pilot Program
- Full Program
IV. COOPERATION'S AREAS

Micro and Minisatellites

7 Microsatellite 12U
1 Minisatellite 100 Kg

**Payloads**
1. Multispectral / Hyperspectral camera
2. Space Situational Awareness
3. GPS-RO (climate change monitoring)
4. Automatic Identification System (AIS)
5. Automatic Dependent Surveillance - Broadcast (ADS-B)
6. Store and Forward (S&F)
7. Inter Satellite Link (ISL)
8. Internet of Things (IOT)
IV. COOPERATION'S AREAS

- Theoretical fundamental
- Lab AIT
- Satellite Operation
- 2 year training

- Academy
- Defense
- Critical mass
- Cooperation & Collaboration

- Local development
- Lab experiences
- Spatialized Software
- Satellite Operation
- Payload explorations
- 1 year training
IV. COOPERATION'S AREAS

Space Mission

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IV. COOPERATION'S AREAS

Chile opportunities

Austral connection by fiber optics from Punta Arenas to Asia, America and Atlantic.
Space Collaboration Activities

Space as a high value asset...

- Governmental
- Research, development and knowledge
- Life insurance
- Digital Economy and New Space

UNOOSA
Chile has changed its strategy, integrating actors, means and ends, generating a Space Program called SNSAT.

This program seeks to develop technologies and generate geospatial information for the autonomous and sovereign management of the State.

Likewise, the effective integration of national actors, media and spatial capacities.

It is essential to seek the generation of public value, social and economic profitability for the country.

Finally, Chile offers opportunities to collaborate in the fields of science, technology and education, taking advantage of the momentum of this new development and the benefits that the country has as a natural laboratory, geolocation, clear skies and digital connectivity.
Chilean Space Program, Opportunities for cooperation and development