

Airbus Science in Space Program: Space Experiments for Sustainable Development

High Level Forum: Space as a Driver for Socio-Economic Sustainable Development
Dubai, United Arab Emirates

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At the forefront of the market for our global customers.



Orion's European Service Module

The first-ever mission-critical element of a NASA mission, produced by a non-US company.

READY FOR HUMAN
SPACE FLIGHT
**beyond low
earth orbit.**

A RENDEZ-VOUZ
IN DEEP SPACE:
**Making the
impossible
possible.**



Rosetta

10 years, 6.4 billion kilometres:
First-ever mission to orbit a
comet racing along at more than
10 km/s – and sending a small
lander to its surface!

A satellite image of a tropical island, likely in the Pacific or Indian Ocean. The island is surrounded by a vibrant coral reef, appearing in shades of cyan and blue. The land itself is a mix of green and brown, indicating vegetation and terrain. The surrounding ocean is a deep, dark blue. The image is used as a background for the advertisement.

FIND HIDDEN RESOURCES AND
MONITOR ASSETS WITH OUR

**fleet of eyes
in the sky.**

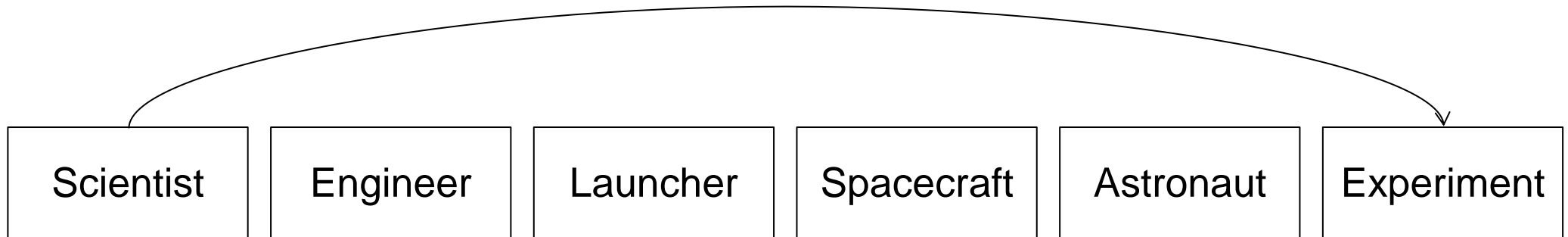
Geo Intelligence Portfolio

Access to the most
comprehensive constellation of
Earth observation satellites
commercially available today.

ISS UTILIZATION

Flying Testbed Bartolomeo

Science in Space: Upstream Space Sector



Where to enter space sustainably?

- OECD:
 - One key driver of space innovation: Human space exploration
 - Essential: Fundamental R&D, basic research
- Benefits of Science in Space:
 - Build-up of scientific, engineering, and industrial capacity in human-rated space technology
 - Internationally relevant, peer-reviewed research
 - Peaceful utilization
 - Focus on regional needs:
 - Health: e.g. rare genetic diseases, Malaria, Zika
 - Biology: e.g. coffee plant diseases, rough climate
 - Material science: natural resources
 - Leapfrog: manufacturing in space & technology demonstration

Airbus Science in Space Program & SDGs



2 ZERO HUNGER

Agricultural research & food sec.

3 GOOD HEALTH AND WELL-BEING

vaccines & medicines R&D

4 QUALITY EDUCATION

relevant skills incl. technical skills



8 DECENT WORK AND ECONOMIC GROWTH

high-value added sectors

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Enhance scientific research, incr. number of R&D workers



17 PARTNERSHIPS FOR THE GOALS

access to science, technology and innovation



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Airbus Science in Space Program: Modularity



Airbus Science in Space Program: Capacity Building in Science and Technology

Science

Scientists

Experienced Co-PIs & Airbus Science Experts

Principal Investigators

Science Board

National research calls

Evaluation of proposals

STEM Education Campaign

Classroom materials

National call
for experiment ideas

Student experiments on
parabola flights and ISS

Technology

Technology Development

Use of existing facilities
& experiment units

Use of existing facilities
& **own** experiment units

Own research facility in
space

Industrial Development

Internships

Engineering program
& exchanges

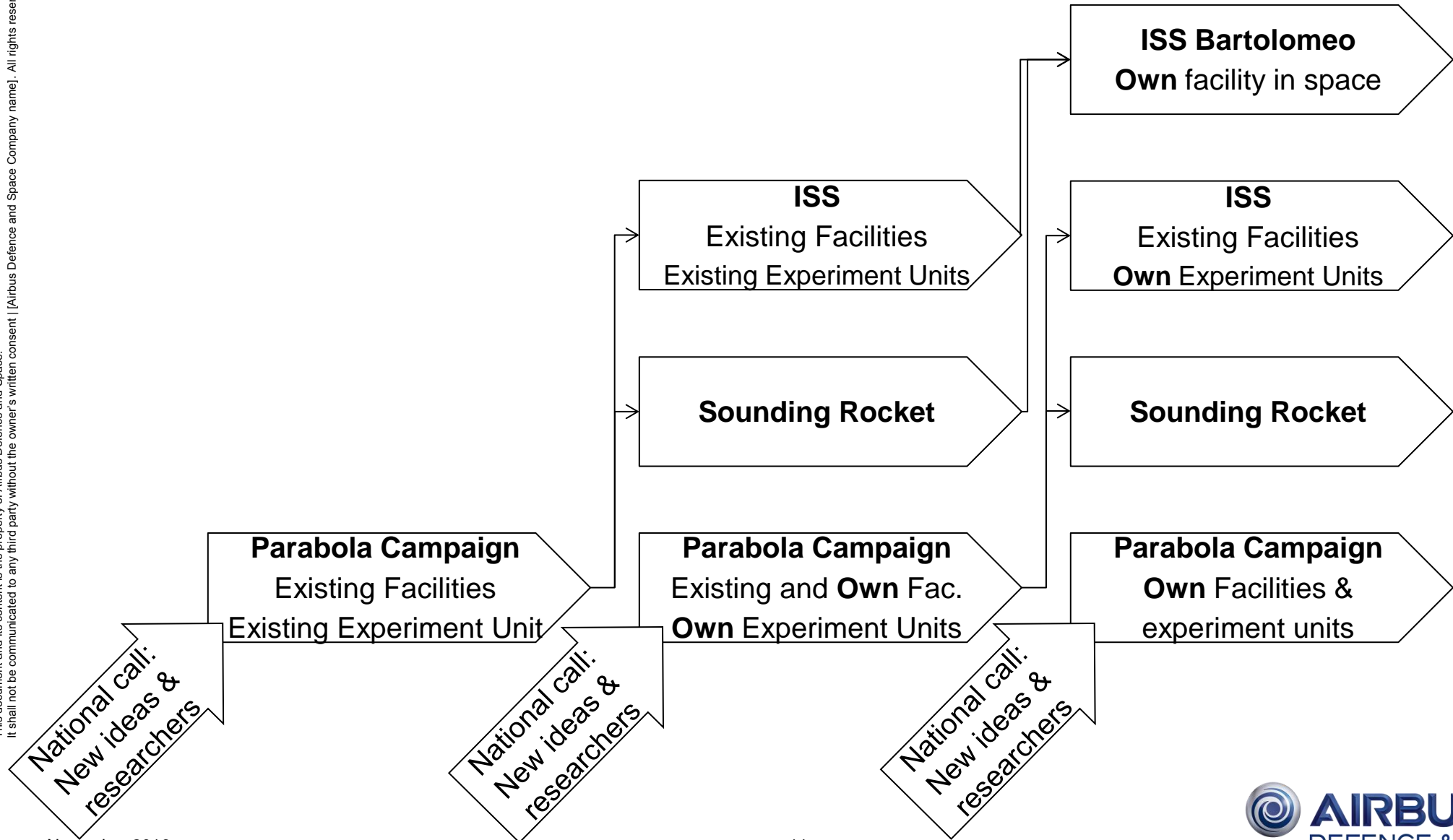
Operations

Space SME

AIT facility

Airbus Science in Space Program: Example of a 3-year space capacity-building program

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Airbus Science in Space Program: Conclusion & Proposal

- **Project Goal: Enable non-space nations to enter space sustainably: operate own science experiments in space**
 - **Immediate science results**, peaceful utilization of space.
 - Enabled through **commercial access to space**.
 - Enabling **academic, technological, and industrial** development through partnership.