



**Together we
conquer space**

Didier Manzoni, SSIG president



Space Technology



Table of contents

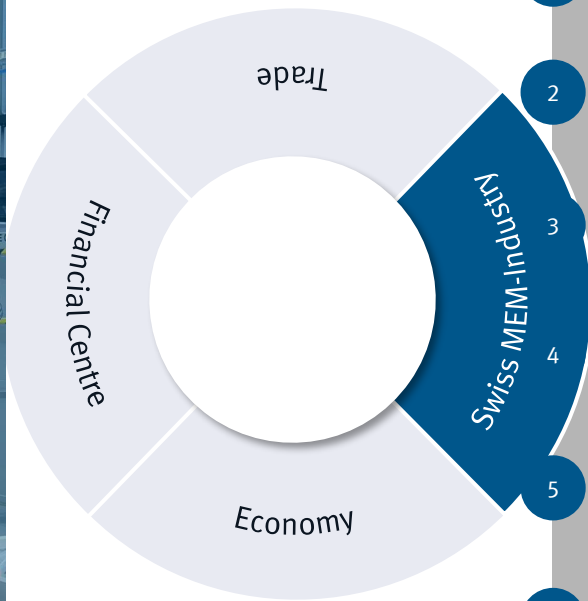
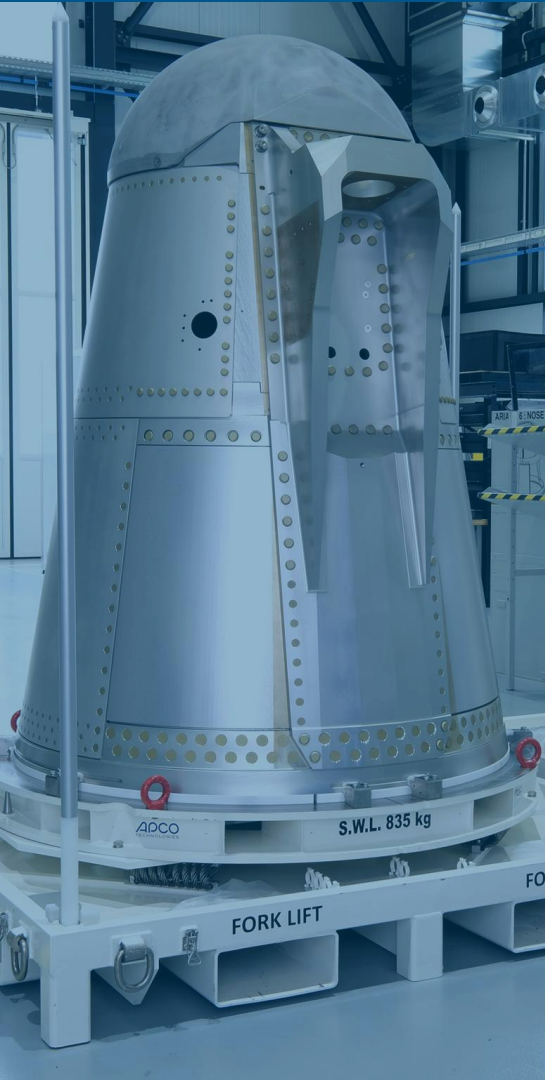


- 1 Swiss Tech-Industry
- 2 Swiss Space Industry
- 3 Contribution to Space missions
- 4 Partnership with academies
- 5 Some recent and current programs
- 6 Switzerland's strength

01



Swiss Tech-Industry



Total turnover

1
➤ **87** CHF billion

Export

2
➤ **68** CHF billion (26% of all Swiss exports)

Share of exports

3
78%
(of which 55% to the EU, 15% USA, 20% Asia)

Share of GDP

4
7% approx.

Workforce in Switzerland

5
329,000 approx. (plus around 550,000 abroad)

Apprenticeships in Switzerland

6
20,000 approx.

7

32

Swiss Space Industry





Swiss Space Industries Group

“SSIG is the association for SMEs and large Space technology firms in Switzerland, representing and promoting the interests of the Swiss space ecosystem nationally, in Europe, and worldwide.

We value reliability, networking, and common action. Our purpose is to facilitate the growth of the Swiss Space industry.”

CHF **>400** million, **> 1100**

Revenues, Employees

• SSIG Focus Areas



Networking -
Industry and
Science



Internationalisation



Communication



Defence



Ground Support

- APCO Technologies
- APM Technica
- Beyond Gravity
- Cassio-P
- Clemessy
- CSEM
- Dlab
- Fly High Engineering
- General Atomics Synopta
- Huber + Suhner
- nanoTRONIC
- RUAG
- Safran
- Sauter Bachmann
- Schurter
- SpacePharma
- ViaSat



Launcher

- Almatech
- APCO Technologies
- Beyond Gravity
- Blösch
- Carbomill
- Fly High Engineering
- Franke Industrie
- Huber + Suhner
- IHI Bemex
- Sauter Bachmann
- SpacePNT



Satellite

- Aerospacelab
- Almatech
- APCO Technologies
- APM Technica
- Arc Power
- Beyond Gravity
- Blösch
- Carbomill
- Cassio-P
- ClearSpace
- CSEM
- Dlab
- FISBA AG
- Fly High Engineering
- General Atomics Synopta
- Huber + Suhner
- Icotec
- Klepsydra Technologies
- nanoTRONIC
- Safran
- Saphyrion
- Sauter Bachmann
- Schurter
- Sirin Orbital Systems
- SpacePharma
- SpacePNT
- Swissto12
- Thales Alenia Space
- ViaSat



Operation

- APCO Technologies
- Astrocast
- ClearSpace
- SpacePharma
- Solenix Engineering
- Swissto12

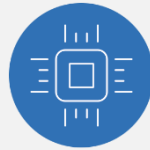


3

Contribution to Space missions



Swiss contribution to Space missions



Electronics



Optics & Timing



Sensor
technology



Mechatronics and
Instruments



Software



Structure and Thermal
Subsystems

The background of the slide is a photograph of a laboratory or industrial setting. In the center, three people wearing white lab coats and face masks are standing on a platform, looking towards the camera. To their right, there is a large, complex piece of machinery with many wires and a large black spherical object hanging from it. The entire image has a blue tint. On the left side, there is a large, dark blue number '4' that is partially cut off by the edge of the frame.

Partnership with academies

Partnership

- Participation in ESA, NASA, CNES, DLR,...missions via Prodex
- Partnership with Swiss academies (ETHZ, EPFL, UniGE, UoB...)
- Development of technologies for Space
- Development of micro-satellites and advanced instruments
- Innovations in Space robotics
- Participation to the largest ESA Science mission ever

3



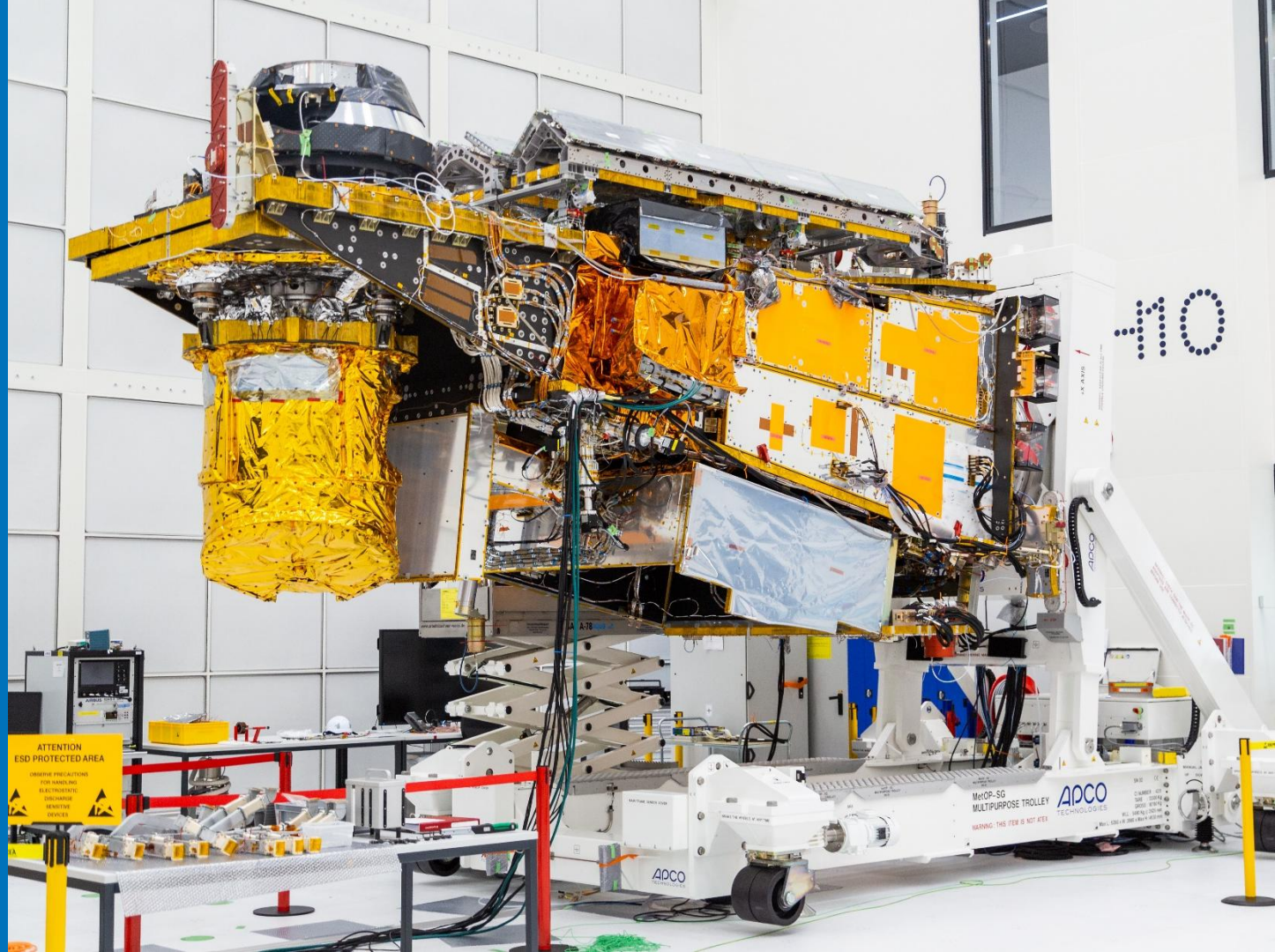
Some recent and current programs

Space Transportation System

ARIANE 6



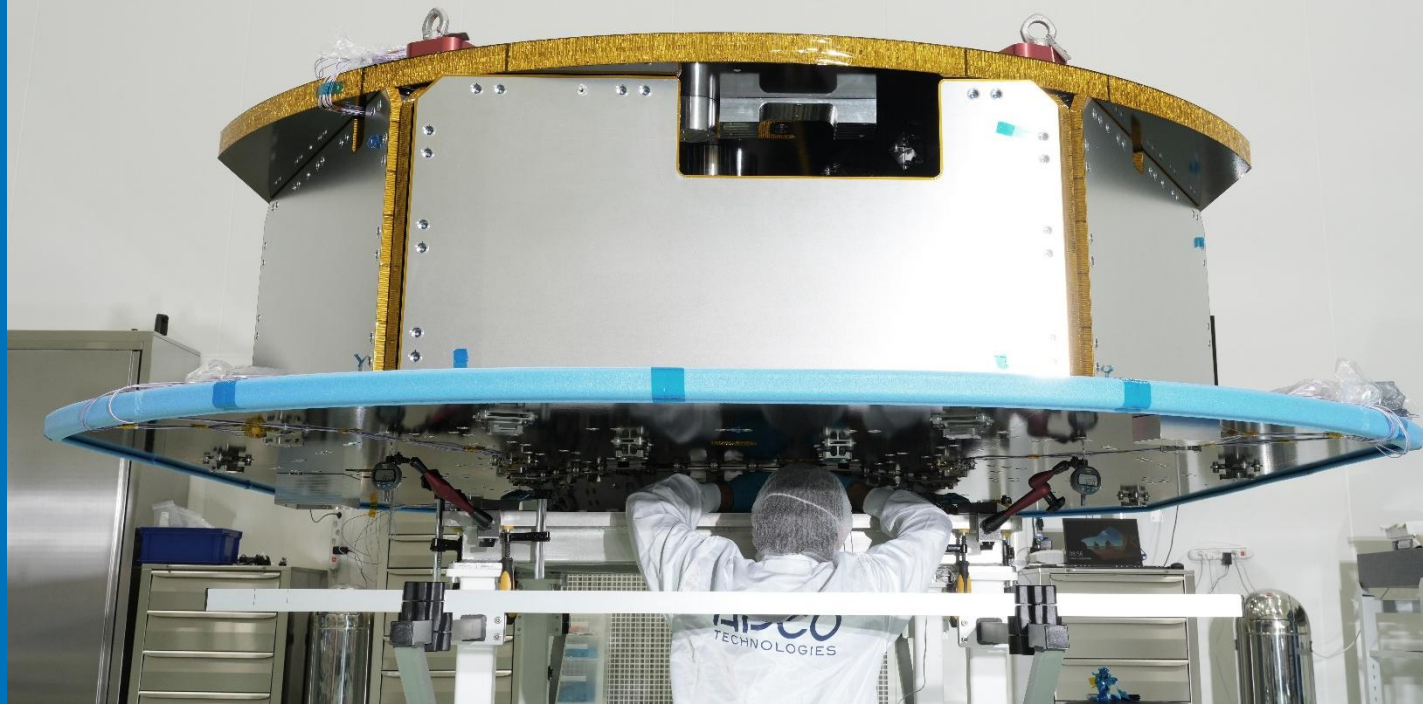
Earth Observation METOP SG



APCO
TECHNOLOGIES

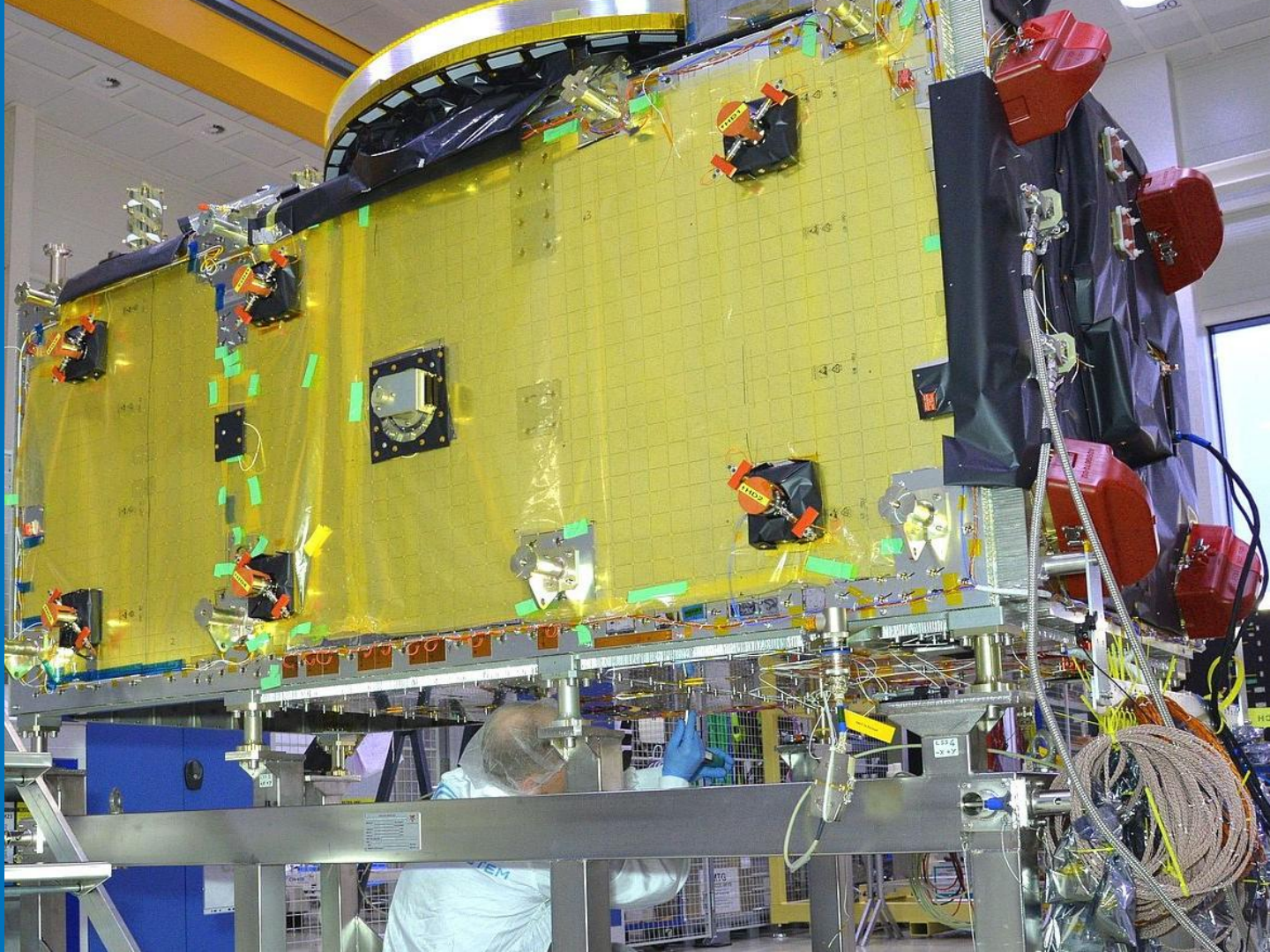
Science

ARIEL



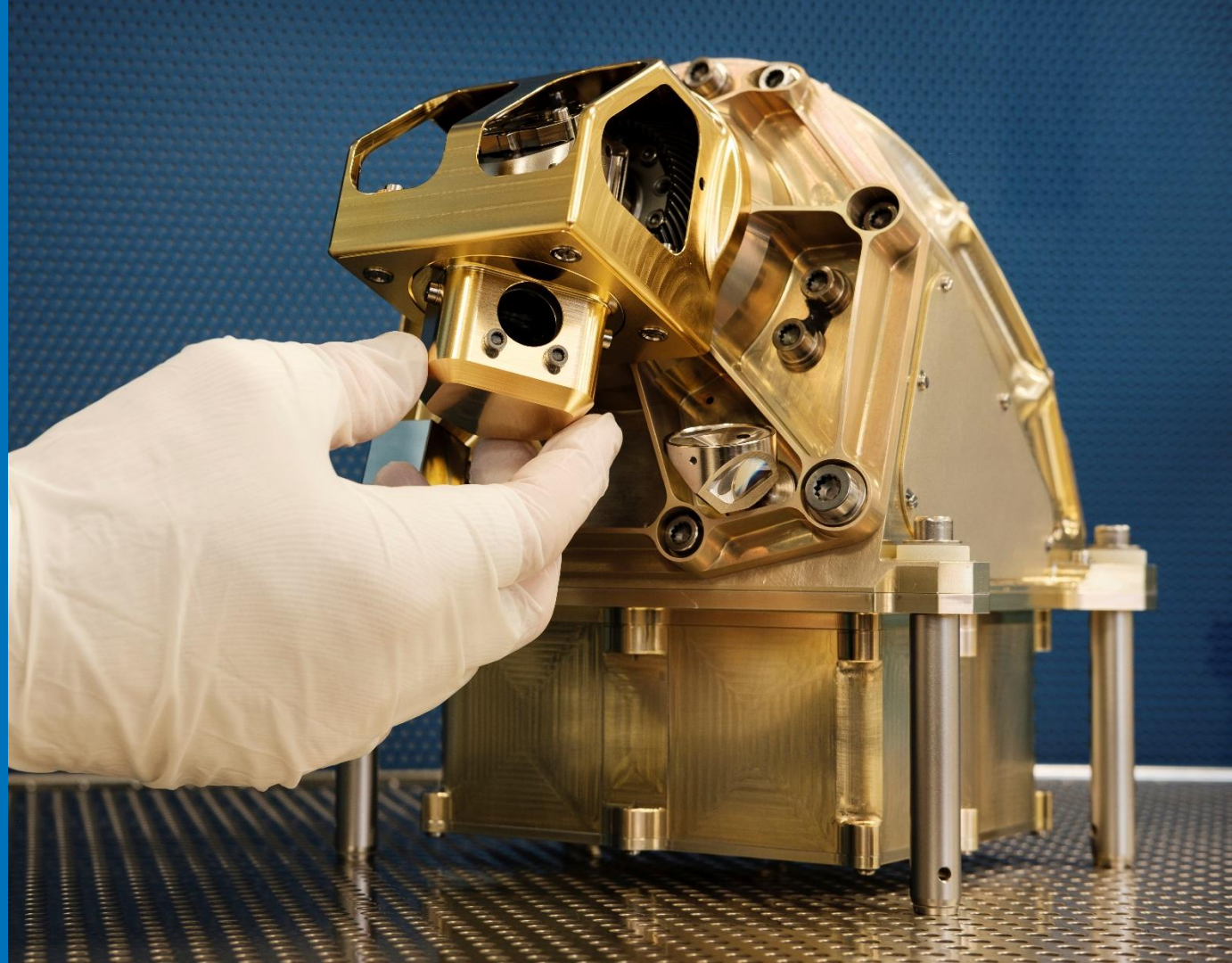
Navigation

GALILEO



Telecom

Laser Terminal



Space Safety and Security

Cleospace-1





Switzerland's strength

A highly developed education system



CHF **22.5**
billion/p. a . on R&D
(3 % of GDP)

- 1 Recognized universities and successful dual education system
- 2 Strong cooperation between industry and academies (rocket/spacecraft/rover teams)
- 3 Joint funding for applied research
- 4 Solid startup scene

Institutions

In addition to the academies, Switzerland has other important institutions that drive research and development for successful investments.



IAC 2029 in Switzerland Candidacy



Thanks



Space Technology



Video Download: - [Let's be honest](#)
Video Download: - [Swissmem Space 2019 D](#)

Contact:

Swissmem, Pfingstweidstrasse 102, P.O. Box, CH-8037 Zurich, SWITZERLAND,

Didier Manzoni, President SSIG

Raoul Keller, Secretary General SSIG, T +41 44 384 48 14, r.keller@swissmem.ch, www.swissmem.ch

© Images in this publication: ESA-Website; Eumetsat, Copernicus (contains modified Copernicus Sentinel date (2016), processed by GeoVille, CC BY-SA 3.0 IGO), ESA-Website; NASA/James Blair, ESA-Website; ESA/Science Office, ESA-Website; ArianeGroup/ Frank T. Koch / Hill Media GmbH, ESA-Website; ESA/CNES/Arianespace, clearspace.today, ESA-Website; ESA/NASA-T. Pesquet, ESA-Website; Thales Alenia Space/Briot, 2021 CERN, Foto PSI-Website (Scanderbeg Sauer Photography), EMPA, ETH Zürich (Emanuel Ammon), ESA-Pierre Carril