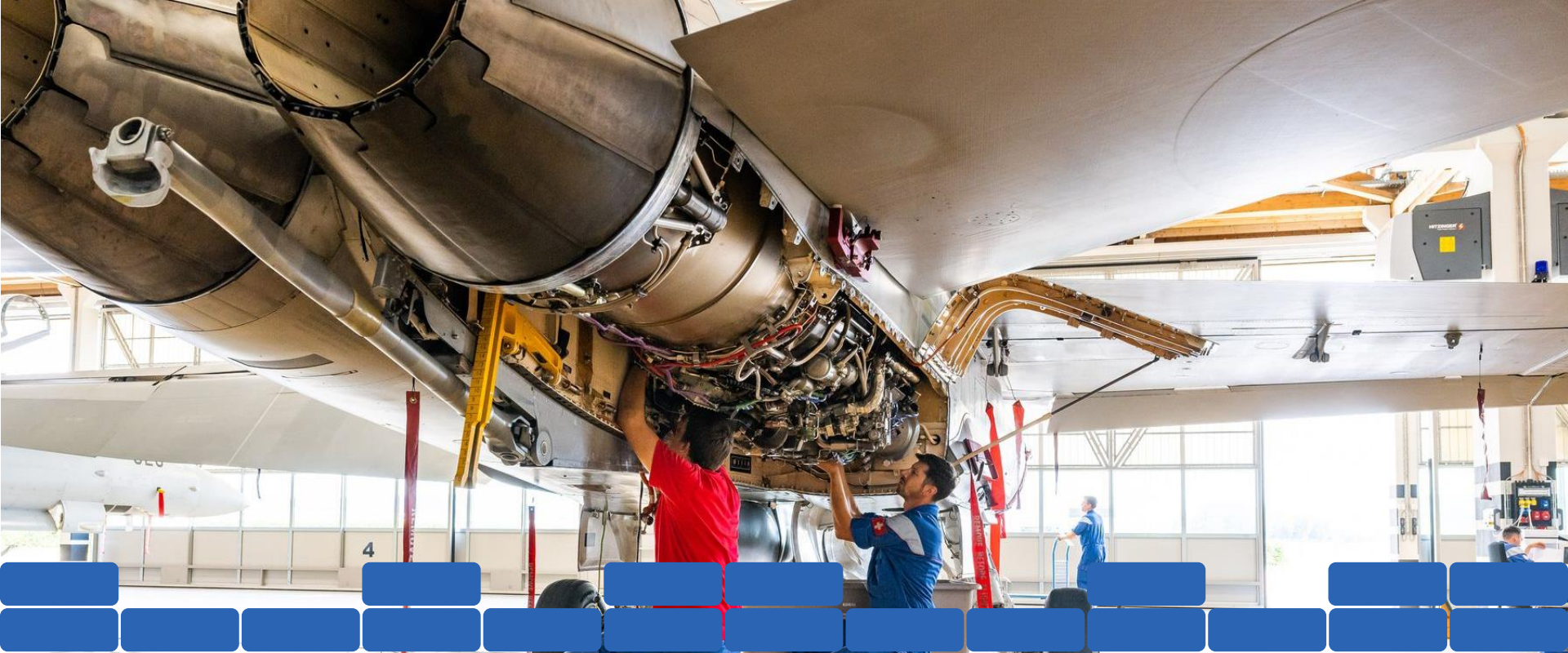


SWISS MEM



The Swiss (ASD) Industry







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Switzerland

Facts & Figures

Facts & Figures



4 official national languages

- German, 63 %
- French, 20 %
- Italian, 6 %
- Rhaeto-Romanic, 1 %



Switzerland is known worldwide for

- Mountains
- Chocolate
- Cheese
- Watches
- Machine tools
- Pocket knives

...



The largest cities in Switzerland

- Zurich
- Geneva
- Basel
- Lausanne
- Bern
- Winterthur



The Swiss flag means

- Neutrality
- Democracy
- Peace
- Protection



Switzerland

Strengths

Switzerland's strengths to your advantage



History

175 years of peace
and stability

Direct Democracy

Stability thanks
to participation and
the ability to
compromise

Neutrality

Strong and reliable
partner

Location

Switzerland – in the
heart of Europe



Switzerland
Our gold

Switzerland's gold for your business

Switzerland itself does not have many raw materials, so it has created its own gold:
A highly developed education system – one of the best in the world.



- 1 Highly respected universities
- 2 Successful dual education system
- 3 Close and strong cooperation between industry and universities
- 4 Start-up scene in Switzerland: successful and solid

In addition to the universities, Switzerland has other important institutions that drive research and development and are guarantors of successful investments.

CERN and test centres





Switzerland

Investment & Cooperation

More reasons for investment and cooperation in Switzerland





1

Stable and strong

2

One of the wealthiest countries in the world

3

More than 99 % of all companies are SMEs

4

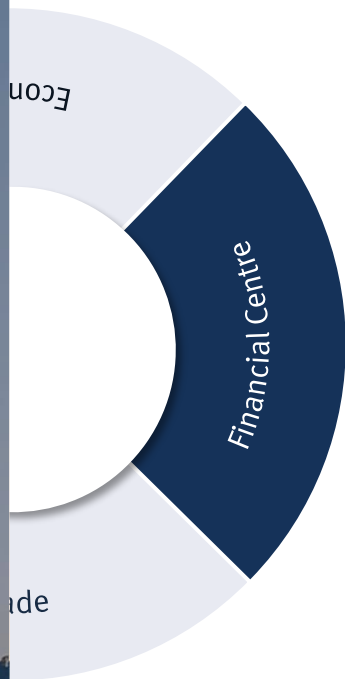
Export-oriented

5

Very low unemployment rate

6

Low debt and a competitive tax system



1

Competitive and leading

2

1/4 of total global cross-border assets managed in Switzerland

3

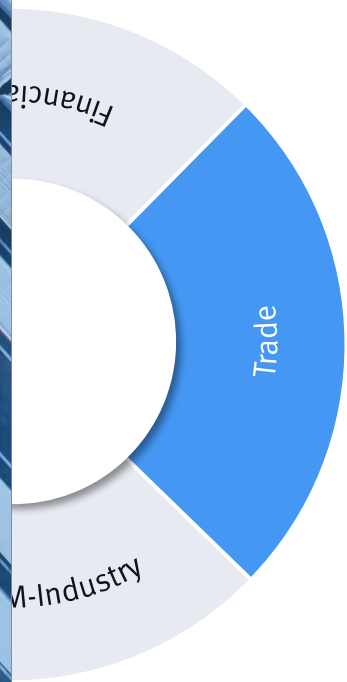
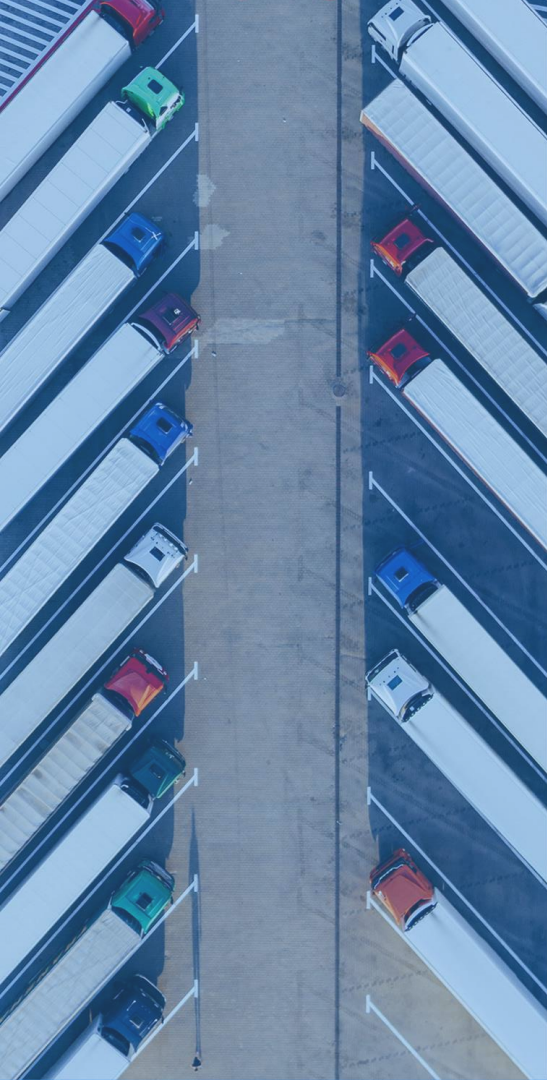
Leader in transaction financing

4

Key international location for insurance and reinsurance

5

financial sector is a cornerstone of the Swiss economy



1

Strong export nation

2

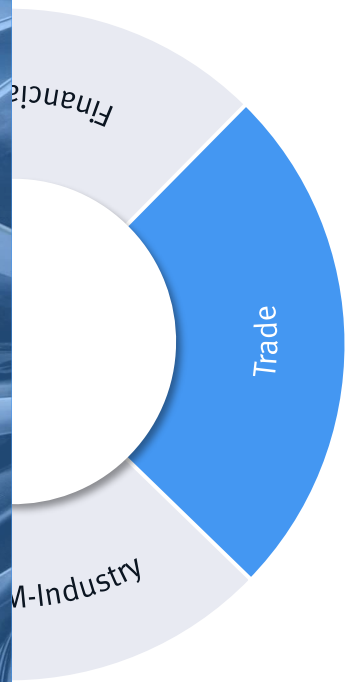
Strong player in world trade

3

Leading positions among the most important export countries

4

Switzerland regularly runs a trade surplus

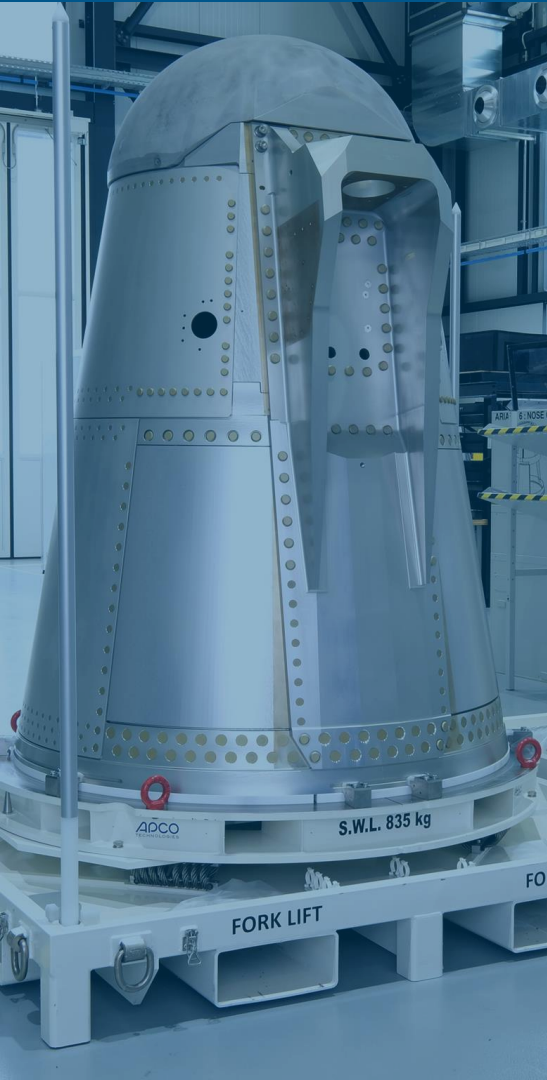


- Mechanical engineering 8%
- Precision instruments 7%
- Electrical engineering/electronics 4%
- Metalworking 6%
- Vehicles 2%

Swissmem industries:
27%
(CHF >70 billion)

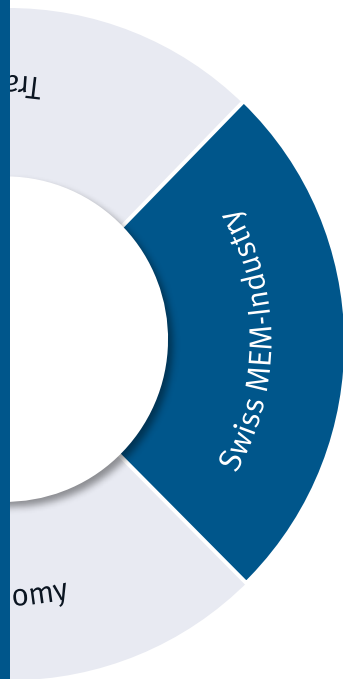


- Pharma 42%
- Watches 9%
- Other chemical products 8%
- Other sectors 14%



- 1 Important role of SWISSMEM in the Swiss Tech-industries
- 2 Leading Industry Association – > 1400 Manufacturing companies
- 3 Representation of Interest – Voice of the Industry
- 4 Advice and Support
- 5 Networking in Associating technology-oriented sectors
- 6 Vocational Training Centre / Academy
- 7 Success though high capacity for innovation

Key figures of the technology industry 2023



Total turnover

>90 CHF billion

Export

>70 CHF billion (26% of all Swiss exports)

Share of exports

78% CHF
(of which 57% to the EU, 14% USA,
19% Asia incl. 7% China)

Share of GDP

7% approx.

Workforce in Switzerland

325,000 approx. (plus around 550,000 abroad)

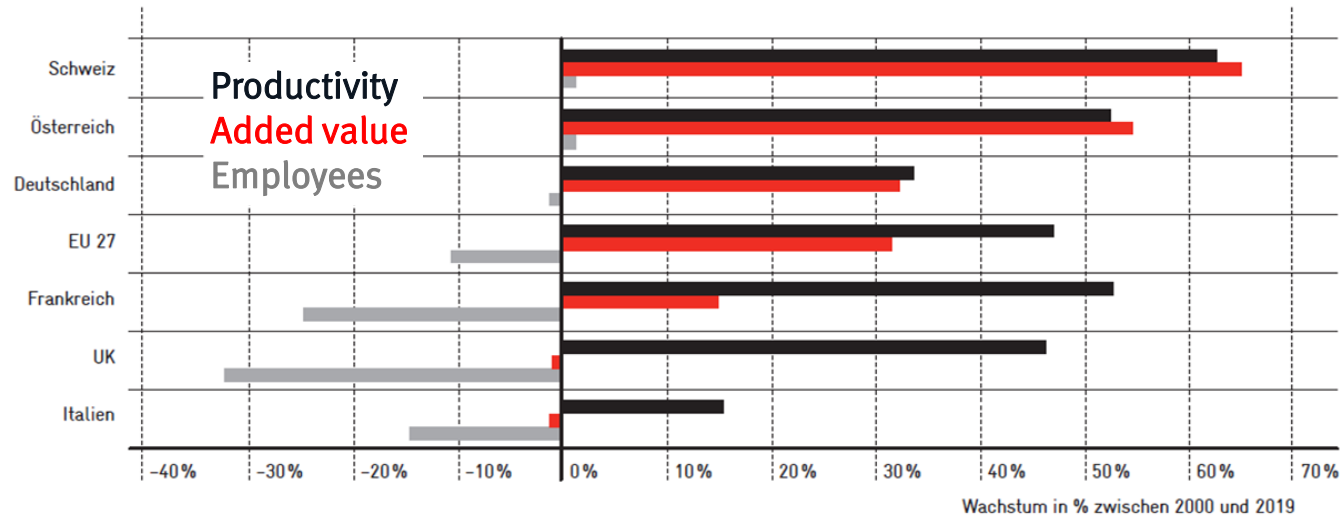
Apprenticeships in Switzerland

20,000 approx.

No industry policy but good framework conditions

Structural change leads to higher productivity, job and wealth creation

In der Schweiz wie auch in Deutschland und Österreich blieb die Zahl der Arbeitsplätze stabil und die Wertschöpfung stieg um mindestens 50%. Im Gegensatz dazu verzeichneten die ehemaligen Industriemächte Italien, Frankreich und Grossbritannien einen geringen Anstieg der Wertschöpfung – oder sogar einen Rückgang – und eine beträchtliche Vernichtung von Arbeitsplätzen.





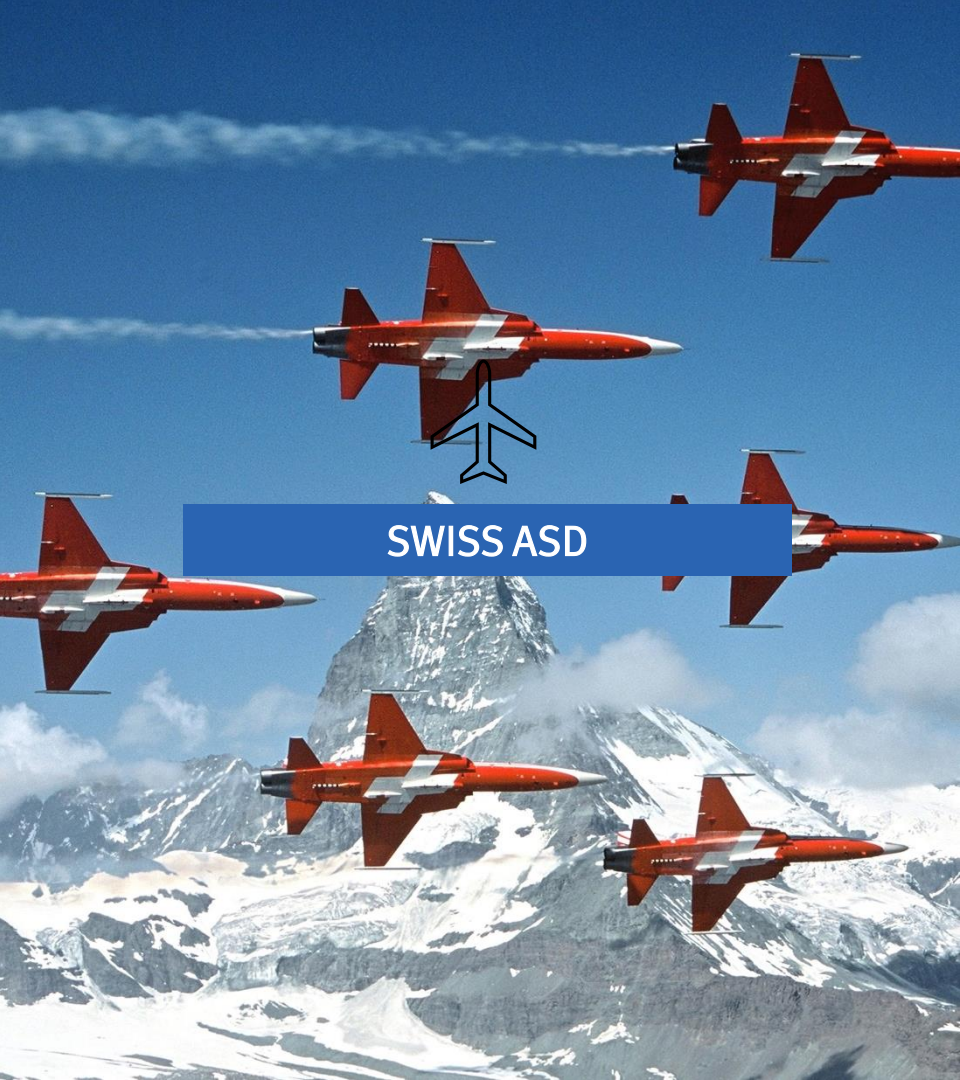
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SWISS ASD

Aeronautics, Security, Defence

SWISS ASD is the sector for the aeronautical, security and defence industry in Switzerland.

Comprising around 100 member companies, a 20-member committee and a steering committee.

President:

Reto Maurer, SVP Sales & Marketing, Rheinmetall Air Defence AG, Zurich

Secretary general:

Matthias Zoller, Swissmem



Four pillars

- 1 **Export:** Fair export conditions for all sectors of industry so that we can remain competitive.
- 2 **Domestic market:** Ensure that Switzerland retains a STIB* and that the expertise and specialist jobs remain in the country.
- 3 **Offset:** Involve Swiss industry in major armaments transactions, monitor government processing, continue to develop the offset policy.
- 4 **Aeronautics:** Ensure an ideally linked and structured business location for the manufacturing, maintenance and supplier companies in the aviation sector.



Key activities of SWISS ASD



Events for our members:

- AGM with Federal Councillor Amherd, 2* general Kohli, LM & RAY representatives...
- Start-Ups & micro companies in defence
- Participation in EU/NATO programmes
- Company visits...

Political lobbying:

- incl. founder member Allianz Security Switzerland
- Working Group for Security and Commerce ASUW
- Annual event for parliamentarians
- Specific procedural requests in Federal Parliament
- Referendum campaigns

Swiss pavilions:

- Paris Airshow
- Farnborough Airshow
- ILA Berlin
- Dubai Airshow
- Singapore Airshow

In consideration:

- World Defence Show, KSA
- AUSA; EUROLAND

Aviation certification:

- Home of Swiss RMS, which implements the requirements of the International Aerospace Quality Group (IAQG) and controls the Industry Controlled Other Party (ICOP) Scheme at national level based on the EN 9104 standards



Key activities of SWISS ASD



Information:

- Webinars on the topic of offset, aviation certification EN/AS 9100
- Advanced Air Mobility
- Invitation by armasuisse to industry brief



Media monitoring:

- Twice-weekly media monitoring with prepared brief content
- Keywords “Armaments” and “Aviation”
- Ongoing background discussions and interviews
- Placement of contact persons



Focus on aviation:

- Working group Aviation under Theo Staub
- The main topics:
 - Costs & attractiveness for mechanics training
 - Immediate solution for mechanic shortage (Part 145)
 - Aerospace event in CH



Close cooperation with:

- ASIPRO, GRPM, GMDSI, ASS, STA, NIAG, SOG, VMG etc
- Aerosuisse, Aviation-Suisse, SAC, SVFB, DIAS, GAIN etc



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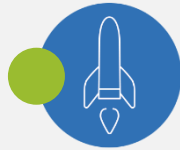


Swiss Space Industry

An overview

Swiss companies are at the forefront of space travel

Segments



Launcher



Ground Support



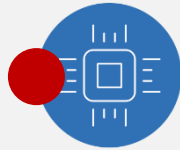
Satellites



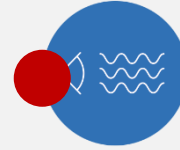
Operators

“Swiss contribution to space missions”

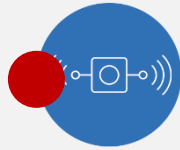
Products



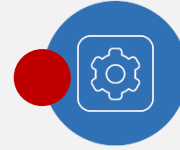
Electronics



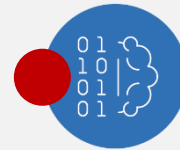
Optics



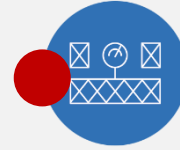
Sensor
technology



Mechatronics



Software



Structural
components and
instruments

“Swiss contribution to space missions”

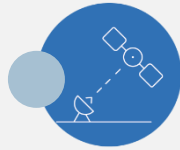
Applications



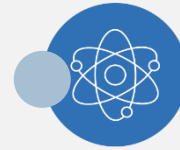
Navigation



Earth Observation



Communication



Scientific tasks

Segmentation of selected companies

Categories:



Launcher



Satellites



Ground Support



Operators

| | | | |
|---|--|--|--|
| Almatech SA | | | |
| APCO Technologies | | | |
| Art of Technology AG | | | |
| Beyond Gravity Schweiz AG | | | |
| Carbomill AG | | | |
| ClearSpace SA | | | |
| CLEMESSY Switzerland AG | | | |
| Cosylab Switzerland GmbH | | | |
| CSEM SA – Centre Suisse d'Electronique et de Microtechnique | | | |
| Franke Industries | | | |
| General Atomics Synopta GmbH | | | |

| | | | |
|------------------------------------|--|--|--|
| icotec ag | | | |
| nanoTRONIC AG | | | |
| Orolia Switzerland SA | | | |
| SAPHYRION SAGL | | | |
| Sauter Bachmann AG | | | |
| Schurter AG | | | |
| SpacePharma SA | | | |
| SpacePNT Sàrl | | | |
| Thales Alenia Space Switzerland AG | | | |
| WEKA AG | | | |



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Swiss Aeronautical Industry

Fly high

Our own Aircraft

Pilatus Aircraft



- Pilatus Aircraft planes are primarily used for business travel, cargo transport, military training, and operations in challenging environments.
- They are especially valued for their reliability, versatility, and ability to operate on short and unpaved runways.
- Models like the Pilatus PC-12 are popular among private operators and aviation companies for their cost-effectiveness and high payload capacity.
- Additionally, the PC-21 training aircraft is globally recognized for its efficiency in pilot training.

From milling to flying...

Aircraft Components



- **Engine Components**
Swiss suppliers manufacture high-precision parts for aircraft engines, such as turbine blades and compressor components. These parts are crucial for the efficiency and performance of aircraft engines.
- **Structural Parts**
These include lightweight yet highly durable aircraft components like wings, fuselage structures, and landing gear components made from advanced materials like carbon fiber composites.
- **Cabin Interiors**
Switzerland is also known for producing luxury and highly functional cabin interiors, particularly for business and private jets.

From milling to flying...

Avionics and Electronics



- **Avionics Systems**

Swiss companies develop advanced electronic systems necessary for navigation, communication, and aircraft control. This includes radar, communication systems, and flight data recorders.

- **Flight Control Systems**

Intelligent control systems, which ensure the stability and maneuverability of aircraft, are designed and manufactured in Switzerland.

From milling to flying...

Lightweight Construction and Material Technology



- **Composite Materials**

Swiss companies are leaders in the development and processing of fiber-reinforced plastics that make aircraft lighter and more fuel-efficient. These materials are used in various aircraft structures.

- **High-Precision Machining**

Switzerland is renowned for its expertise in producing highly precise mechanical components with extremely tight tolerances, essential for reliability and safety in aviation.

From milling to flying...

Engine and Propulsion Technologies



- **Electric and Hybrid Propulsion Systems**

With a focus on sustainability, Swiss companies are working on the development of electric and hybrid propulsion technologies for smaller aircraft and drones. These technologies have the potential to significantly reduce aviation's CO₂ emissions.

- **Turbine and Jet Engine Technology**

Some Swiss companies produce parts for modern jet engines that are particularly powerful and efficient.

From milling to flying...

Drones and Unmanned Aerial Vehicles (UAVs)



- **Drone Platforms and Sensors**

Switzerland has established itself as an innovation leader in unmanned aerial vehicles. Swiss companies develop advanced drones for civilian and military applications, along with the sensors needed for surveillance, mapping, and other specialized uses.

- **Flight Control Software for UAVs**

The control and navigation of drones rely on sophisticated software developed in Switzerland, recognized worldwide.

From milling to flying...

Maintenance, Repair, and Overhaul (MRO)



- **Aircraft Maintenance Solutions**

The Swiss aviation industry provides globally recognized maintenance and repair services for airplanes and helicopters. Swiss companies are especially renowned in the field of engine maintenance.

- **Lifecycle Management of Aircraft Parts**

Modern diagnostic systems and predictive maintenance technologies are developed by Swiss companies to maximize the lifespan of aircraft parts and reduce operating costs.

From milling to flying...

Simulation and Training



- **Flight Simulators**

Swiss companies offer highly developed simulators for training pilots and technical personnel. These simulators are essential for training under realistic conditions.

- **Virtual Training Platforms**

Swiss firms also leverage virtual reality and augmented reality technologies for the training of aviation personnel.

From milling to flying...

Security and Defense Technologies



- **Defense Aircraft and Drones**

Swiss suppliers provide parts for military aircraft and drones and offer specialized systems for defense and surveillance.

- **Cybersecurity for Aviation**

As aircraft become increasingly interconnected, Swiss companies are developing security solutions to protect against cyber threats and attacks on onboard electronics.



Switzerland

An overview



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Space



Aeronautics



Defence



Swiss Defence Industry

A few high-tech gems

The defence industry is key

For security, technology and the economy



The CH defence industry is the backbone of Swiss security and ensures that...

- we can keep systems operational as autonomously as possible,
- we have new technologies that will be needed in the future (technological development of the army) and
- we have an "insurance policy" in the event of an emergency.

Defence technology is cutting-edge technology

- often the technology basis for civil applications,
- Key to access to new technologies,
- common technology promotion abroad.

Defence and dual-use goods industries are economically significant



Defence industry:

- Total value-added CHF 2.3 billion
- 14,000 FTE jobs
BAK, “Die volkswirtschaftliche Bedeutung der Schweizer Rüstungsindustrie”, Studie im Auftrag des seco 2021

Dual-use goods industry:

- Total value-added CHF 35 billion
- 140,000 FTE jobs
BAK, “Die volkswirtschaftliche Bedeutung der Schweizer Rüstungs- und Dual-Use-Industrie”, Studie im Auftrag des seco, 2023

The defence industry is key

The current organisation - four main operating modes

- Industries that develop and manufacture **complete systems** in Switzerland and supply them to the international market from Switzerland;
- Industries that develop and/or produce **subsystems or components of systems** in Switzerland, which are then either used directly or exported and assembled into complete systems abroad;
- **RUAG AG**, which has expertise in ensuring the availability of complete systems (life cycle management including upgrades) and also develops its own products and system solutions;
- The pure **supplier** companies that manufacture parts or subsystems or provide services on behalf of the above-mentioned companies.

Swiss defence industry

Some examples



Sauter Bachmann

Swiss precision gears



RHEINMETALL

GENERAL DYNAMICS

European Land Systems



SAAB

SIGSAUER

B&T

- **Sauter Bachmann**

Entered the aeronautical sector (EN9100) within the FA-18 offset project; follow-up orders more than 10 times the volume of the initial compensation project.

- **Rheinmetall Air Defence RAD**

Drone defence system Sky Ranger in several EU countries in evaluation as part of European Sky Shield Initiative. Winning product in Denmark, Austria and many more.

- **Mowag - GDELS** (General Dynamics European Land Systems)

Enables Switzerland to build its own tanks (e.g., new mortars 12cm chassis, new sapper tanks etc). Mowag armored vehicles are on duty in many countries.

- **Saab BOFORS**

Produce shaped charges (known as part of Next Generation Light Anti-Tank Weapon - NLAW). Shaped charges are also used in e.g., mining, for opening oil wells or on construction sites.

- **SIG Sauer and B&T**

Supplying many special forces and police corps all over the world with small calibre weapons.

Not to be underestimated - small and micro SME's

Example: Carbomill AG for processing composit structures for Space, Defence, Formula 1, Medtech





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Main pain points for Swiss Industry

Where you could help...



- **Export law**
In particular, Swiss export law was tightened up in the area of armaments before the war in Ukraine. Today, it is a real blocker.
- **Access to capital and insurance**
While it has been recognised in the EU that the defence sector has become important, we in Switzerland have hardly any access to banks and insurance companies to this day, with reference to the issue of sustainability.
- **Labour costs**
Furthermore, the costs for personnel are very high in Switzerland. In particular, personnel-intensive work can hardly be done economically in Switzerland.
But: Trade union protection is very weak - you can get rid of staff in Switzerland within 3 months.
- **Non-EU**
Where access to EU European programmes and tenders is needed, we usually have to work with a European partner.



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