



**A CENTER OF EXCELLENCE FOR INDUSTRY
AND INNOVATION**



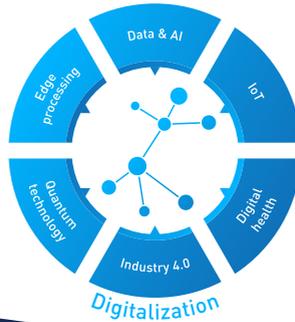
WHO WE ARE

- ∴ a dynamic, multidisciplinary and multicultural technology research center
- ∴ a public-private partnership designed to serve businesses
- ∴ a unique link between industry and cutting-edge research

OUR MISSION

- ∴ We develop and transfer world-class (micro) technologies to the industrial sector—Switzerland being our priority—in order to reinforce the sector's competitive advantage

OUR 2020–2024 RESEARCH PROGRAM



DRIVING INNOVATION



We offer our customers and industry partners innovative, custom-made solutions backed by our extensive market knowledge and technological expertise. This approach has earned us national and international recognition for our work in each of the above areas.

We play a key role in the innovation value chain, leveraging public-private partnerships and narrowing the gap between fundamental research and industrialization. And by taking steps to deepen CSEM's knowledge and adapt it to industrial needs, we are able to bring new products to market and create new ventures.



The support we get from the Swiss—federal and cantonal—authorities gives us greater flexibility and enables us to address a broad spectrum of research areas. This support also allows us to strengthen our commitment to innovation and sustainability and ensure we are well-positioned to address future social and environmental challenges.

Our services include contract R&D, strategy and innovation consulting, and developing specific business solutions for a wide range of industries.

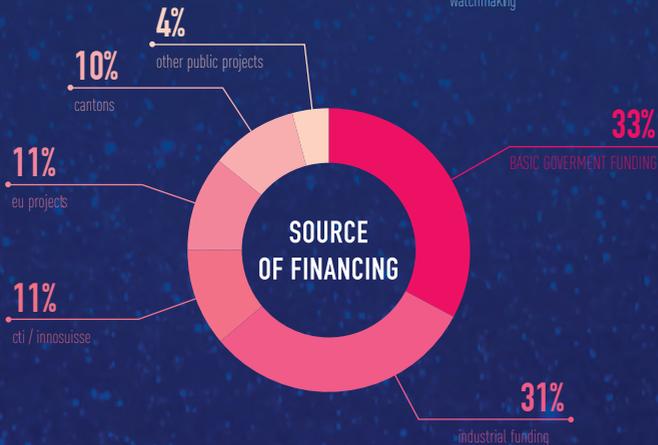
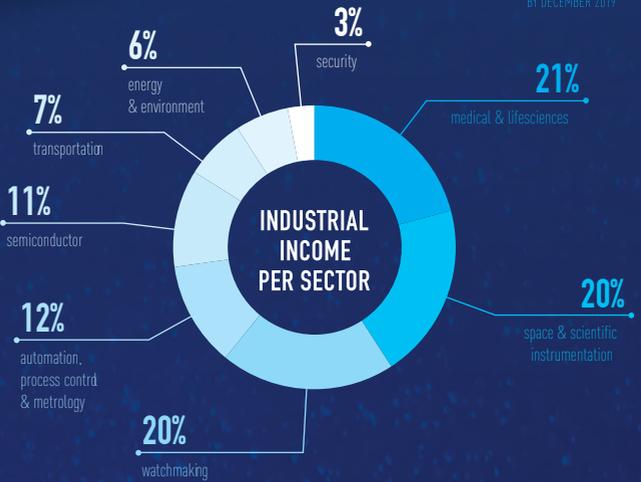


499 PEOPLE
BY DECEMBER 2019

CSEM AT A GLANCE

212 INDUSTRIAL CLIENTS
CONTRACTING WORLDWIDE IN 2019

87.5 CHF MIO
INCOME



43 NATIONALITIES
MULTICULTURAL ENVIRONMENT

219 OVERALL PATENT FAMILY
22 NEW INVENTIONS FILED IN 2019



MEETING THE NEEDS OF BUSINESSES

In our digital platforms we develop low energy consumption systems, that integrate miniature sensors, microprocessors and artificial intelligence. These are the key components for the digital transformation of the industry. They help us to drive the transfer of technology to various industrial sectors through projects that foster innovation in areas such as medical and health engineering, renewable energies, machine tools and precision instruments, watchmaking, home automation, transportation and even agriculture.

This technology transfer couldn't happen without our researchers and engineers. Their advanced training and industry experience mean that they speak the same language as the companies they work with and fully understand their needs.

CSEM researchers regularly team up with Swiss companies on innovative projects that play a key role in ensuring Switzerland remains industrially, economically and socially competitive.

A 2018 study by BiGGAR Economics showed that:

- every franc invested in CSEM by the Swiss federal and cantonal governments generated 15 francs of added value in Switzerland
- every job at CSEM created a dozen jobs in Switzerland, primarily in the secondary sector.

SUCCESSFUL PARTNERSHIPS



AVA BEST STARTUP IN 2017 & 2018

A bracelet to determine when a woman is most likely to conceive



AKTIIA

A novel way of preventing and monitoring high blood pressure



HINNI

Using smart hydrants to locate leaks in water systems



SOLAXESS SA

Decorating facades with different colored solar panels



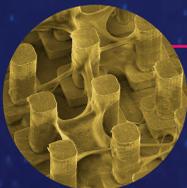
MAXON MOTOR

Industry 4.0 and precision handling



SWATCH GROUP

The smallest Bluetooth chip in the world for the Internet of Things



3BRAIN

First chip used to create 3D models of brain diseases and to test drugs



MACQSIMAL: EUROPEAN PROJECT

CSEM is the coordinator of a major project chosen by the European Commission for the new EUR 1 billion Quantum Technologies Flagship initiative.

WHAT THEY SAY ABOUT US

FIRST AUTOMATIC SKIN-GRAFTING SYSTEM USING BIO-ENGINEERING



CSEM offers comprehensive expertise, and the multidisciplinary teams really know how to find practical solutions and manage innovative projects—they're the glue holding all of the project phases together.

Vincent Ronfard—Head of Innovation—Cutiss

USING DEEP LEARNING TO MAKE SWITZERLAND'S RAIL NETWORK SAFER

During the development phase for the deep learning algorithms, the CSEM team figured out how it all works and made sure they understood the role of each component in the rail system. This allowed them to come up with a highly effective solution extremely quickly.

Joël Casutt—Tech & Development Teamleader—SBB CFF FFS



A SMART SEED DRILL TO KEEP AWAY THE WEEDS



Thanks to CSEM's camera and image-processing expertise, we were able to develop smart seed drills—and help drive the digital revolution in agriculture.

Pius Kruppenacher—CEO—Kruppenacher Saatechnik

MONITORING OIL LEVELS IN WATER TO REDUCE MARINE POLLUTION

Working with CSEM is extremely helpful. The engineers are able to grasp the nuances of your problems even if they're not from your sector.

Alois Amstutz—CEO—Sigrist-Photometer

