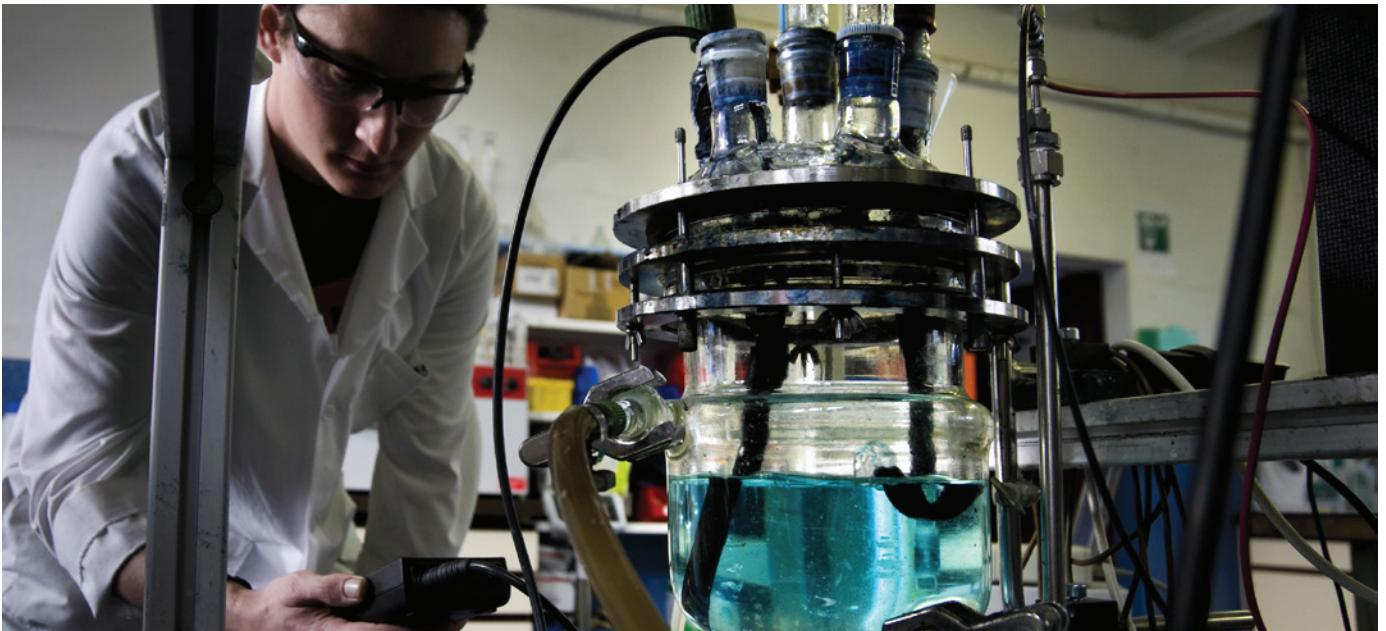




INNOVATION AND TECHNOLOGY

Situated at the heart of the Alps, the canton of Valais is known for its focus on innovation and technology. It invests in leading growth sectors, such as information and communications technologies, life sciences and engineering. In doing so, it builds on three pillars: research institutes, a favourable business environment and highly qualified personnel.

Image
An autonomous bus by PostBus carrying passengers (Sion)
©PostBus Switzerland Ltd



A canton active in research and development

Image
Manufacture of industrial dye
by electrolysis (Martigny)
© Etat du Valais Jean-Yves Glassey

AT THE CUTTING EDGE OF R&D

With its strong industrial tradition, the canton of Valais is now recognised as a centre of excellence for technology, innovation, and research and development. Ongoing collaboration with the academic sector means that companies in Valais benefit from the new technologies and skills developed by the universities and institutes of basic and applied research.

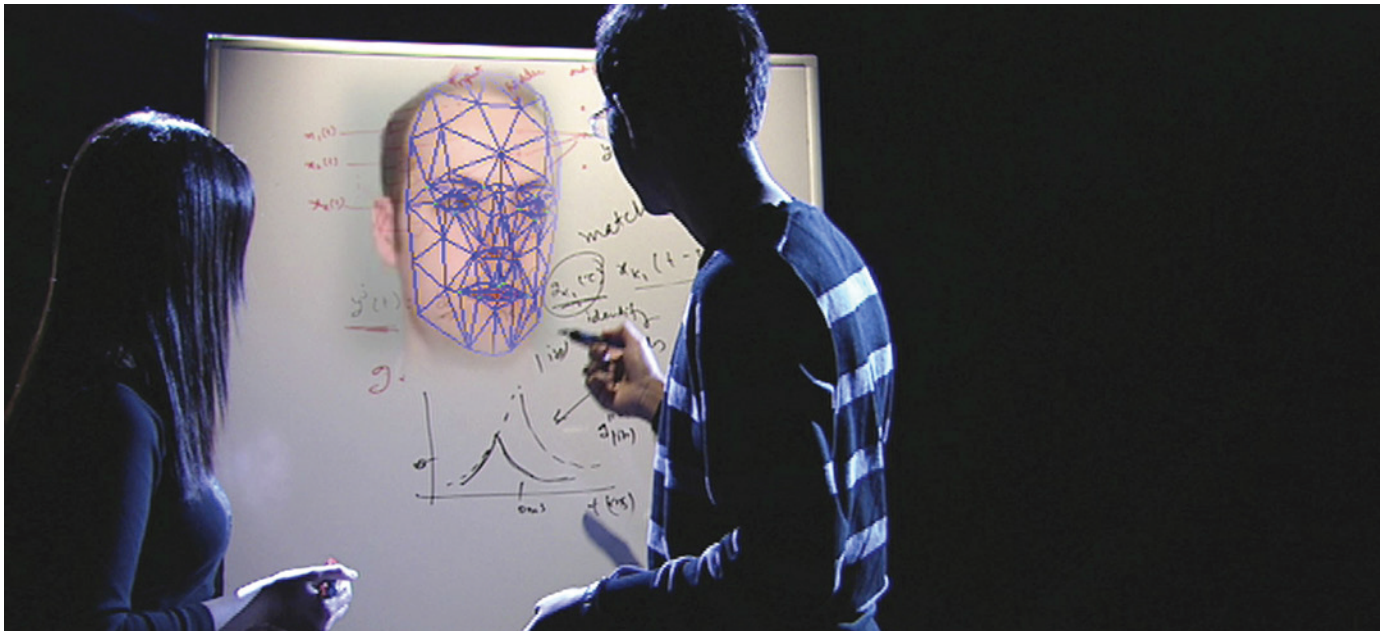
A NETWORK DEDICATED TO INNOVATION

Valais is home to unique technology sites and a multitude of organisations devoted to basic and applied research. The canton's determination to create its very own pioneering technology park became reality in 2004 when The Ark Foundation was set up. In its dual role as accelerator and incubator, the latter permits the creation of start ups (almost 100 to date, with an 80% survival rate) while also assisting existing companies with their innovation processes.

Valais's technology park has a number of standout features – it is spread across several sites and focuses on three specific areas: information and communications sciences (TechnoArk in Sierre and IdeArk in Martigny), life sciences (BioArk in Monthey and Visp, PhytoArk in Conthey Sion) and engineering sciences (energy and the environment at Energypolis in Sion). In parallel, leading institutions such as the research institutes of HES-SO Valais-Wallis, CREM (Centre for Research in Energy and Municipalities in Martigny), Institut Icare (specialising in the internet of things and ubiquitous computing in Sierre) and TEWI (Technology Centre for Business Information Systems in Brig), develop applications that utilise the new technologies.

One flagship R&D institute in Valais, Idiap (founded in 1991), specialises in multimedia information management. In 2014, it created the Swiss Center for Biometrics Research and Testing, a centre of excellence whose aim is to facilitate collaboration between industry and academia. In 2014, Valais took a further step forward into the 21st century when the last piece of the Energypolis programme, devoted to hydropower and green chemistry, was put into place. This ambitious project brings together the permanent EPFL-Valais campus (Swiss Federal Institute of Technology Lausanne) in Valais, the HES-SO Valais-Wallis (University of Applied Sciences and Arts of Western Switzerland) and The Ark, thus gathering advanced expertise in areas ranging from basic research to its application and ultimate use by industry on a single site.

In the healthcare sector, advanced research into neuroprosthetics is being conducted by an EPFL team working in partnership with SUVA (Swiss National Accident Insurance Fund).



Major sector hubs

Image
Facial recognition project (Martigny)
© Etat du Valais Idiap

- ICT (information and communications technologies)
- Life sciences (chemicals, pharma, medical technology, biotechnology)
- Engineering sciences (renewable energies, smart grids, industrial systems)

A QUALITY LOCATION FOR HIGH-END COMPANIES

High-tech sectors, particularly information and communication technologies (ICT), life sciences and engineering, play a central role in the cantonal strategy for economic development. In 1988, was created the first ICT hub in Switzerland and this centre of excellence now enjoys an international reputation. In the decades since, this strategy has been realised by focusing firmly on key sectors, thus facilitating solid endogenous growth while also attracting foreign companies and investments.

INFORMATION AND COMMUNICATIONS TECHNOLOGIES (ITC)

ITC affects society as a whole and simplifies numerous areas of our daily lives such as the exchange of information, traffic reduction, the use of energy, the creation of learning tools and the handling of medical data, etc.

Under the auspices of The Ark Foundation, Valais has built up a network of academic and industrial expertise in order to strengthen and develop ICT within the local economy. The two complementary technology sites, TechnoArk and IdeArk, focus primarily on the following areas:

- Software engineering
- The internet of things
- Business intelligence & process management
- Human & media computing
- RFID (Radio Frequency Identification)
- Green IT
- Blockchain

REPRESENTATIVE COMPANIES

Groupe T2i, Sierre

Specialising in publishing innovative software and providing high value-added services, Groupe T2i employs a workforce of 230 in Switzerland, France and Canada.

Cortex IT, Monthey

Cortex IT offers secured and personalised cloud solutions, and is a major player in data centre technologies both in Switzerland and abroad.

ALRO Engineering SA, Martigny

ALRO Engineering SA operates in the field of industrial automation and electrical engineering. Its mission is to provide industrial manufacturing companies with a comprehensive solution for the automation of their established processes. It is mainly active in the pharmaceutical, biotechnology, chemical, food and medical equipment sectors.



Image
Production of molecules via
cell culture (Monthey)
© Etat du Valais Jean-Yves Glassey

LIFE SCIENCES

Valais is a well-established centre for industries based on fine chemicals, biotechnology and the commercial exploitation of alpine medicinal plants. At present, the canton is making a name for itself in the health sector thanks to a series of research institutes and a dense network of SMEs and start ups active in life sciences. Furthermore, Valais benefits from the presence of renowned multinationals such as Siegfried, Lonza and Debiopharm Research and Manufacturing.

Life sciences generate total value added of more than 1.7 billion francs a year for the local economy. At the [BioArk](#), [PhytoArk](#) and [BioArk Visp](#) sites, Valais has created a focus on the following areas of expertise:

- Biotechnologies, pharma, chemicals
- Cosmetics
- Medical diagnostics
- Agrofood (phyto and nutraceuticals)

REPRESENTATIVE COMPANIES

Lonza Ltd, Visp

Lonza is one of the world leaders in the manufacturing of products for the life sciences market and custom manufacturing. The site of Visp has R&D, production and sales support units. Specifically, Visp's custom manufacturing division is specialized in the production of biopharmaceuticals, active pharmaceutical ingredients (APIs), highly active pharmaceutical ingredients (HAPIs), Antibody Drug Conjugates (ADCs) and peptides for pharmaceutical applications.

TECHNOLOGY SITES DEDICATED TO LIFE SCIENCES

With a strong positioning in the biopharmaceutical industry, we find in Valais platforms that meet the standards of good pharmaceutical manufacturing practice (cGMP) for the production of biological medicines and their aseptic filling, respectively at the BioArk of Monthey and Visp. In the cosmetic and phytopharmaceutical fields, the PhytoArk in Conthey Sion is dedicated to the valuation of alpine flora and natural ingredients in products with high added value. The 70% of the swiss aromatic and medicinal plants production is generated in Valais.



Image
University campus Energypolis (Sion)
© Paul Cardì

ENGINEERING SCIENCES

Valais stands out in the following areas of the engineering sector:

- Energy and environmental technologies (renewable energy, smart grids)
- Industrial systems (mechanical engineering, material design, electricity, electronics)

The engineering industry plays an important role in the canton's economy, accounting for a wide range of production activities including the manufacture of electronic elements, watch mechanisms and cutting-edge microtechnologies.

Valais also has a long tradition in high value-added aluminium products. In the field of micromechanics and microtechnology, a number of specialist SMEs based in Valais are key sub contractors for major companies. Their partnership with local research institutes allows innovative solutions to be developed.

THE ENERGIES OF THE FUTURE

Valais has taken full advantage of its topography to become a leader in the generation of hydroelectricity. The canton's government has made energy one of the cornerstones of its economic development policy. 30% of the hydro-electricity consumed in Switzerland is currently produced here in Valais.

The decision to locate the new Energypolis university campus in Valais is, therefore, entirely understandable. A dozen EPFL chairs devoted to energy and health will be located here under this project, thus enhancing the exchange of knowledge between the world of research and industry.

REPRESENTATIVE COMPANIES

Scintilla AG, St. Niklaus

Scintilla AG is part of the Power Tools Division of the Bosch Group and is its global centre for the development, production, marketing and sale of power tools accessories for professionals, industry and DIY enthusiasts.

Novelis, Sierre

Novelis is the global leader in rolled aluminium products and one of the foremost aluminium recyclers in the world. The Sierre site is the leading location for the development and production of aluminium alloy sheets for the automotive, aeronautic and railway markets.

Studer Innotec, Sion

Studer Innotec SA is now a global leader in the inverter market and the only manufacturer to cover all the photovoltaic solar power, nautical, mobile applications, emergency power supply and telecommunications markets.



An excellent system of education and training

Image
HES-SO University of Applied Sciences
and Arts Western Switzerland (Sierre)
© Etat du Valais Céline Ribordy

TRAINING THAT DELIVERS RESULTS

Switzerland's tertiary education system allows students to follow a professional track (universities of applied sciences, teacher training colleges, professional education and training) or an academic track (universities, Federal Institutes of Technology).

The professional track is well represented in Valais. HES-SO Valais-Wallis (university of applied sciences) offers 9 multilingual degree programmes in seven key areas including engineering and architecture, economics and services, and healthcare. Strategic collaborations between these programmes, the HES-SO Valais-Wallis research institutes and partner companies allow highly skilled professionals and technicians to be trained, who are capable of rapidly integrating themselves into the labour market. Young people can also choose to pursue a course in the arts, music or social work at HES level in Valais. Attractive programmes are also available at the universities in Geneva, which offers an interdisciplinary MAS in Children's Rights, and Lausanne, which runs a Master's degree in Tourism.

Valais has three hospitality management schools of world renown: César Ritz Colleges, Les Roches International School of Hotel Management and the Vatel International School of Hospitality and Tourism Management.

COMPUSLORY EDUCATION THAT IS AMONG THE WORLD'S BEST

State schools in Valais have an excellent reputation and their pupils regularly achieve very good scores in the PISA (Programme for International Student Assessment) rankings, especially in mathematics and science. Children start compulsory schooling at the age of four. Particular importance is given to language-learning: in addition to the canton's two official languages (French and German), pupils study English and other European languages.

For families with an international background, there are several private schools in Sion, Verbier and Lens that offer boarding opportunities and allow pupils aged 4–18 to study towards the International Baccalaureate and the Baccalauréat français.

Children in Valais benefit from an excellent out-of-school childcare system, presenting parents with ample placement opportunities.