

In the Field

SERV again supported numerous Swiss companies in their export transactions in 2018. This reflected its innovative spirit, as the following examples confirm.



ETH spin-off exports entire research laboratories

Not all carbon is the same: the element is present in different types of atoms, known as isotopes. The radioactive isotope 14C provides clues about the age of samples containing carbon, such as archaeological finds. lonplus, an ETH spin-off in Dietikon, develops and exports machinery that performs such analyses. The company is the market leader in this area, although it has to master a number of challenges.







It is invisible to the naked eye, radioactive and present in minuscule quantities in the atmosphere. It is called 14C and is an isotope of carbon. At lonplus AG, the ETH spin-off founded in 2013, everything revolves around this unprepossessing isotope. The Dietikonbased 25 people company is a leader in the 14C radiocarbon method, a process to determine the age of carbonaceous materials. The procedure is based on the following principles:

The isotope 14C is formed by natural cosmic rays, is incorporated into all plants through photosynthesis and is also absorbed by animals through the food chain. The level of 14C remains constant throughout the lifespan of the plant or animal, but it ceases to absorb the isotope once it dies, which then starts to decay. This fact makes it possible to determine the time of death and thus the age of a sample, given that we know the isotope has a half-life of 5730 years – the timespan within which half of the atoms decay. The method is used in archaeology, environmental and marine research, materials science, biomedicine, forensics, geology and nuclear energy.

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The only supplier of fully functional laboratories

A variety of machinery is required for this process. The most important of these is an accelerator mass spectrometer in which ions of the sample are separated in a particle accelerator to such a degree that individual atoms of the 14C can be counted. Before the atoms can be measured, the sample must be put through various preparation processes, chemically treated and converted into pure carbon (graphite). lonplus is one of three companies developing accelerator mass spectrometers. Unlike its competitors, however, the spin-off supplies the machinery for the entire process chain rather than just the measuring instruments. It also supplies the software for the evaluation of the data, including databases and extensive expertise. As a result, lonplus is the only company able to supply fully functional laboratories.

The export challenge

lonplus' market is largely made up of research companies from around the world. Supplying customers abroad always involves challenges: in addition to cultural differences and contrasting ground rules in each market, there is also a risk of non-payment. A further difficulty is obtaining sufficient funding, which was a particular challenge in lonplus' early days. CEO Joël Bourquin explains: "We need about CHF 700000 upfront to build a plant. Given that each such project takes around one-and-a-half years to complete, liquidity is enormously important for the company. This is a major issue for a start-up, as the chances of obtaining financing on favourable terms are almost zero." SERV cover can remedy the situation in such cases. This assumes lonplus' payment risk vis-à-vis the bank that in turn gives lonplus access to banking products, which in this case meant issuing an advance payment bond. As a result, lonplus does not need to provide any further collateral to the bank. "SERV was our only financing option when we were starting out. It was essential for our growth," Bourquin adds. The company now sells four to five plants worth around CHF 2 million each every year.

Swiss bus manufacturer on the crossroads between tradition and innovation

Carrosserie HESS AG is a traditional company whose innovations continue to impress. The company now supplies customers around the world, but this is not without its challenges.

Carrosserie HESS AG, which is based in Bellach and is Switzerland's only bus manufacturer, was founded in 1882 as a wainwright and blacksmith that repaired wagons and trailers. It began selling passenger buses to the cities of Biel and Basel in the inter-war years and continuously expanded its range over the following decades.

Success thanks to innovation

Since then, HESS has developed into a medium-sized company that also owns a variety of subsidiaries and employs some 450 staff. HESS and its licensees produce up to 2400 buses each year. What makes its

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Ernst Basler CFO



From a modular system to the world's first doublearticulated trolleybus: Carosserie HESS' innovations continue to impress. products and services so attractive? "We see ourselves as an innovative company that maintains a constant focus on efficiency, reliability and environmental friendliness," explains CEO Alex Naef. For example, HESS was the first bus manufacturer to use aluminium instead of the generally employed steel of the time. HESS also launched the world's first low-floor double-articulated trolleybus in 2003. In addition, HESS uses a bolted, modular system instead of a welded body. This gives flexibility and has a positive impact on both production costs and service times.

The HESS product range includes electric and dieselpowered buses with a length of 8–25 metres, as well as vehicle superstructures and the requisite servicing. The technologies and construction kits developed by HESS are also sold to other bus manufacturers beyond the company's own markets.

The majority of HESS' customers are urban and regional transport companies, garages and commercial customers. HESS supplies companies around the world. For example, the French city of Nantes commissioned HESS to supply 20 double-articulated buses worth EUR 31 million.

The export challenge

HESS received a down payment of only 5 per cent of the order value for this first collaboration, which represents a major challenge for this medium-sized company. In foreign countries, it is frequently the case that only small down payments are made, or indeed none at all. SERV Swiss Export Risk Insurance has covered the remaining 95 per cent with preshipment risk insurance, supplier credit insurance and working capital insurance. "The options provided by SERV allow us to supply more of our products abroad and consider new markets. Risk protection and the fact that we can obtain cover for a working capital loan are basic prerequisites that enable us to take advantage of such orders abroad," says CFO Ernst Basler.



Glass fibre with a difference

Omnisens SA supplies fibre-optic monitoring solutions to customers around the world. It is a company that knows no boundaries when it comes to new technologies and increasing demands in the export business.

When people think of fibre optics, they generally think of fast Internet connections. In reality, they have a considerably broader range of uses, as demonstrated by the technologies of Omnisens SA, which is based in Morges. The company is a leader in the field of fibre optic monitoring. The 32 people company was founded at ETH Lausanne in 2000. Since its inception, Omnisens has developed, manufactured, installed and maintained monitoring solutions for the oil and gas industry, wind farms, power cables and other sectors in the civil engineering industry. It also analyses the data it collects and provides training courses.

A technological challenge

Omnisens' solutions identify leaks, earth movements and temperature variations, over a distance of up to 300 kilometres. They enable the problem to be located within minutes and ideally quickly resolved. Not only can a malfunction in a plant seriously damage its reputation, it can also result in serious consequences for the environment. With this in mind, Omnisens has continuously optimised its technologies and software over the years. It has even been issued with a guarantee from the Confederation's Technology Fund to enable it to produce a new generation of monitoring solutions that are even more accurate.

Omnisens supplies infrastructure companies around the globe and depends on exports as 90 per cent of its turnover comes from export orders. One of these was placed by an Argentinian consulting firm. This company commissioned Omnisens to supply both the hardware and software to monitor a 30-kilometre underground water pipeline in the city of Cordoba worth USD 340000. This solution is generally associated with the oil industry. "Using our solutions for a water pipeline in a region exposed to strong earth movements is a first for us. This makes the project a technological challenge and therefore particularly exciting," says CFO Olivier Thévoz.

Challenging demands in the energy sector

The collaboration with the Argentinian client was new territory for Omnisens. Although the payment terms were pretty standard, the client demanded a substantial amount of securities as well as environmental and social commitments. SERV insured the transaction by means of a counter guarantee and contract bond insurance. SERV's backing meant that Omnisens received a guarantee from its bank on favourable terms and was able to keep its liquid assets available for other orders. "We have observed a sharp rise in the collateral required in the energy sector over the last two years. This makes SERV an important partner for an SME like Omnisens," says Olivier Thévoz.