



**Part of Grenoble's eco-system, ALPAO and EVEON,
two high-growth "deeptech" companies,
celebrated their 10th anniversary with all their partners.**

In the presence of Geneviève Fioraso, former Minister of Higher Education and Research, Patrick Bourdet, founder and former CEO of Orano Med and the participation of Marc Penaud, General Manager of Toulouse University Hospital, ALPAO and EVEON gathered, on Thursday 10 October, all their partners and teams to celebrate a decade of growth and innovation and to plan for the future.



ALPAO & EVEON teams – courtesy of ALPAO

ALPAO and EVEON propose innovative solutions and high added technological value products. With their shared know-how and expertise, they offer to customers a strong technological and scientific synergy founded on many years' research.

ALPAO, specialised in adaptive optics, is revolutionising geometric optics, by detecting and correcting wavefront perturbations. The company designs a wide range of deformable mirrors and the components required for an adaptive optics loop: software and wavefront sensors. The products cover a large range of applications from astronomy to optical communications, vision science, microscopy, microelectronics, space observation, etc.

EVEON, focussed on meeting health challenges, works according to an approach focussed on the needs of patients and practitioners, to develop simple, intuitive solutions to improve therapeutic performance and treatment compliance to help patients to stay at home. The company designs and produces safe, automatic and connectable medical devices for the preparation and delivery of therapeutic treatments to improve quality of life for patients.

The company designs and manufactures medical devices, automatic, secure and connectable for the preparation and delivery of therapeutic treatments to improve patients' quality of life. Its expertise has just been recognized again. Forbes magazine (article of October 7, 2019) ranked EVEON as the 3rd most inventive French company in the category of Medical Technologies, and 17th nationally in all sectors combined.

ALPAO and EVEON use the same basic technology and skill areas to serve different markets: high performance optics for the former, diagnosis and medical treatment for the latter. *"In 2012, the collaboration with ALPAO enabled the two companies to reinforce their complementary expertise and know-how. The 60 employees, specialists in microfluidics, mechanics, electronics, optics, software, plastics processing, etc. can thus work on the projects of both companies"* says Vincent Tempelaere, CEO of ALPAO and EVEON.

Located in the Inovallee technological park, near to Grenoble (France), the two companies moved to new premises in July 2018: almost 1,700m² to meet their growth requirements. All optics products are manufactured here, which is also the site of EVEON's test, characterisation and assembly areas.

"The group is growing strongly, as confirmed by the good results recorded in the past few years. In ten years, the combined turnover of the two companies has increased from 0 to €6M and our headcount from 3 to over 60 employees. The short and medium-term prospects are looking good," concludes Vincent Tempelaere. 2019 is also expected to bring further growth, averaging at above 20%.

"The goal for ALPAO, by continuing to develop its different technologies, is to strengthen its position as world leader in optical wavefront sensors. We aim to capture more than 50% of the market by 2023", adds Vincent HARDY, General Manager of ALPAO.

EVEON is looking to become a leader in safe, automatic, secure, connected devices for the preparation and administration of therapeutic drugs. With a number of co-development and exclusive device manufacturing agreements, it will be entering its industrialisation phase in 2020, notably thanks to the current fund raising operation.

■ About ALPAO and EVEON

ALPAO, very high resolution optical expertise

ALPAO, specialist in adaptive optics, develops deformable mirrors for a multitude of applications, enabling better diagnostics in microscopy, vision science (ophthalmology), astronomy, defence and space, optical communications, physics and micro-electronics.

Based on groundwork carried out at French Grenoble Alpes University and CNRS, the technology developed by ALPAO has its origin from requirements related to the field of astronomy. Thus, in 2017 a contract was signed with the European Southern Observatory (ESO), to equip the world's largest telescope, which is being built in the Chilean Andes. *"When the light from a star passes through the atmosphere to reach the telescope, turbulence deforms the image. This is where we come in, by developing deformable mirrors to compensate for these optical aberrations,"* explains Vincent Hardy, General Manager of ALPAO.

ALPAO works with the biggest names in the optics industry and is referenced by 18 of the top twenty universities of the Shanghai classification. It also collaborates regularly with Professor Eric BETZIG, winner of the Nobel prize for chemistry in 2014, for his work on very high resolution fluorescence microscopy.

To extend its product range and develop its offer to larger volume applications, ALPAO launched, in June 2019, a modal deformable mirror to use adaptive optics with excellent correction of the most common optical aberrations. This mirror, aimed at industrial applications (microscopy, laser and laser machining, 3D printing, etc.), is designed to be affordable and easily integrated into existing systems, in particular thanks to its embedded electronics.

EVEON, intelligent innovation to help patients

EVEON, which originated in Grenoble's INP engineering school and CEA, designs and manufactures intelligent medical devices for the preparation and automatic delivery of therapeutic treatments to improve quality of life for patients.

Increasing numbers of therapeutic drugs are being developed as biological medicines in lyophilised form, to be reconstituted immediately before injection. Thanks to its unique technological platform, Intuity®, EVEON facilitates the handling, preparation (lyo, dilution, liquid-liquid, etc.) and administration (injection, spray, nebulisation, etc.) of their molecules. EVEON is involved in the entire development cycle, working on drugs still in clinical trials or already on the market, from the design stage, systems engineering, software and wireless communication development, qualification and assembly, through to market launch and regulatory authorisation. These solutions meet the particular specifications of its customers, pharmaceutical laboratories and medical device manufacturers, seeking innovative, intuitive and connected devices. Based on its technological platform, EVEON also develops devices that can be used by hospitals specialised in nuclear medicine.

EVEON is conscious of the challenges of the health sector and the current trend towards personalised medicine, with the possibility of the patient being able to administer his/her own injections in safe, pain-free manner. The teams focus their approach on the needs of patients and practitioners

The company recently announced the delivery of the first functional prototypes based on its Intuity® Ject device. Developed in partnership with a pharmaceutical laboratory, Intuity® Ject is a unique, safe and automated alternative for the preparation and simple, precise injection of lyophilised biological drugs from a bottle or cartridge.

It is important to point out that these two key devices, Intuity® Mix for the automatic preparation of drugs, and Intuity® Ject, the injection device, have each won prizes at Pharmapack, awarded by a jury of pharmaceutical laboratories, in 2016 and 2017 respectively.

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