

How Israel Innovation Authority and CERN are infusing Israeli innovation ecosystem with

The Knowledge Transfer group at CERN has initiated a pilot programme in collaboration with the Israel Innovation Authority (IIA). The purpose of the programme is to explore how cutting-edge Israeli companies and institutes can embrace specific CERN technology and know-how to fuel their innovation and help drive positive impacts for society.

CERN set up a successful two-day event in June last year to meet with industrial directors from Israel and discuss possible proposals. As a result, four exciting projects have been selected by CERN and IIA within a wide range of application fields: CEVA, All-In-Image, ImmunoBrain Checkpoint and HIL Applied Medical. The four companies were awarded funds from the IIA to start a close collaboration with CERN.

The collaboration is a pilot and has shown that the Israeli ecosystem has very “fertile ground” for growing meaningful use cases out of CERN technology. The companies will have access to some of CERN’s unique technological know-how and expertise. Scientific advances in accelerators, detectors and computing have historically led to positive impacts on medical and biomedical technologies. Three of the four selected projects relate to medical applications, and will benefit from CERN’s long-standing contribution to the medical field.

The collaboration has brought out the best in both CERN and IIA. “There is a lot of innovation potential in CERN technologies, and market insights and an entrepreneurial spirit are required to realise it. Thanks to the IIA, we have found the best partners for this in Israel,” says Han Dols, leader of the Business Development section at CERN. Today, experts from different departments at CERN are working closely with the Israeli companies in order to bring these ambitions to fruition. Their involvement and collaboration are vital contributions to the success of the programme.

The cooperation with CERN has started a new age of direct industrial research benefits for the Israeli research and development community. Dr. Aviv Zeevi Balasiano, Vice President of the Technology Infrastructure Division (Israel Innovation Authority)

About the companies collaborating with CERN:

CEVA concentrates on the development of innovative neural networks for data compression with know-how from CERN on extremely fast machine-learning hardware. CEVA's technology is used in many consumer applications like mobile phones and intelligent equipment for the home.

All-In-Image focuses on machine learning techniques for data analysis in the medical field, provided via a 'software as a service' model across the globe. This project will help hospitals and clinics search for data in order to obtain new insights into illnesses and their treatment options.

ImmunoBrain Checkpoint has established a consortium with Tel-Aviv University for the use of the technology BioDynaMo, a CERN openlab collaboration for simulation of large quantities of cells. Such simulations might help to better predict the effectiveness of immunotherapy applications for the treatment of Alzheimer's disease.

HIL Applied Medical focuses on the use of CERN expertise in the field of magnets and detectors for the development of ultra-compact, high-performance systems for proton therapy. Proton therapy is among the most advanced, focused and precise forms of radiotherapy.