

Knowledge Transfer and Medical Applications @ CERN

Manjit Dosanjh (manjit.dosanjh@cern.ch)

Collaboration and knowledge-sharing are an essential part of CERN's culture. The discovery of a new particle announced on 4 July 2012 by the ATLAS and CMS collaborations is testimony to the generation-spanning talent, dedication and patience of thousands of scientists and engineers from around the world. The spirit of sharing knowledge that brings together this amazing community also underpins CERN's frameworks for knowledge and technology transfer.

CERN is engaged in a number of knowledge and technology-transfer activities, building collaborations to support the transfer of innovative solutions beyond the laboratory and the high-energy physics community. It is committed to sharing its expertise in particle accelerators, detectors and information technologies with fields beyond high-energy physics for the benefit of society. Many technologies developed at CERN for its fundamental physics research programmes have applications beyond their original scope. In the medical sector, these applications have a high societal impact. CERN's collaborative way of working in life sciences and health has been reinforced by a series of initiatives and programmes, some of which are promoted and coordinated by the Knowledge Transfer (KT; www.cern.ch/KT) and other groups at CERN.

KT has been instrumental in federating a multidisciplinary and multinational community, recognising the challenges and importance of exchanging knowledge between experts from different disciplines. Such exchange is particularly relevant in the medical sector, where differences in approach between the developers and the end users are even larger than in other fields. Bringing these communities together has been one of the major achievements of the European Network for Light Ion Hadron Therapy (ENLIGHT; www.cern.ch/enlight), which celebrated its 10th anniversary in 2012. The ICTR-PHE conference held in 2012 also fostered knowledge exchanges between physicists, biologists and medical doctors. The next ICTR-PHE conference to be held in February 2014 (www.cern.ch/ICTR2014) will be another platform for knowledge exchange.

In 2012, the proposal of a LEIR-based biomedical facility at CERN, an initiative stemming from the physics for health (PHE) workshop, started to take shape. This could be a model project that would benefit from CERN's competence in particle accelerators and in managing complex multidisciplinary projects.