Challenges and Contribution of Estonian Research Community at European Infrastructures – MAX-IV Lab, ESS and CERN and facilitating Industrial Access using the Sciencelink project.

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In 2010 the Estonian Roadmap of Research Infrastructures [1] consisting of 20 selected infrastructure objects was compiled after the careful analysis of 50 proposals by a special working group. The research infrastructures are „facilities", "resources" and related "services" needed for the development of leading-edge research in the most efficient manner as well as for knowledge transmission. In Estonia it will be used in long term (10-20 years) planning and they have to be of national importance, either new or in a need of upgrading.

Among these 20 objects there are the activities of Estonian scientists foreseen at several large scale European facilities. Among the funded objects are an Estonian beam-line at the MAX-IV Lab [2] and participation in the European Spallation Source [3], both located near Lund in south Sweden. In these facilities the Estonian researchers plan to develop own research equipment like the soft X-ray beam-line, at MAX-IV storage ring, with the end station for the gas and solid phase spectroscopy in order to investigate electronic structure and properties. The neutron science community is under formation with the main challenge to build-up knowledge needed by training young researchers, develop connections with neutron scientist in other countries and join the consortia setting up equipment covering our research interest. In CERN there is a well established scientific cooperation in high energy physics at CMS. Here we are targeting knowledge and innovation transfer, where industries from Estonia can participate in the upgrade of CERN research infrastructures. The number of Baltic Sea Region projects: Science Link and Technet_Nano with the involvement of all Baltic countries provide access of local SME’s to large scale and specialized facilities (cleanrooms) for increasing their innovation potential. The Estonian strategy along with activities foreseen at European large scale facilities and cooperation possibilities will be discussed.

References

1. https://www.etis.ee/Portaal/infrastruktuur.aspx?lang=en
2. http://www.maxlab.lu.se/maxlab/max4/index.html
3. http://ess-scandinavia.eu/