

PROJECT INITIATIVE

“ADVANCED PARTICLE THERAPY CENTER FOR THE BALTIC STATES”

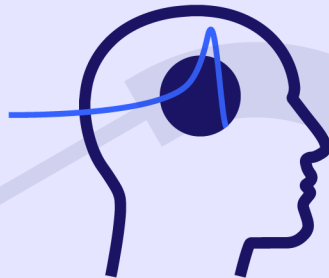
MAIN GOAL OF THE INITIATIVE

Development of large scale medical and scientific research complex dedicated to cancer treatment with particles in the Baltic States based on technologies developed in collaboration with the CERN particle physics laboratory. Activities would stand on "three main pillars" — clinical cancer treatment, multi-disciplinary research and industry involvement.



RESEARCH INSTITUTION

- Dedicated beam-lines for research
- Technology provides broad research spectrum:
 - clinical radiation oncology
 - medical, nuclear and particle physics
 - accelerator physics and technologies
 - radiation biology
 - material science
- Possible future research with heavier particles
- Facility to attract researchers from all Baltic States and beyond



CLINICAL TREATMENT CENTER

- Provide clinicians with particle therapy as another, novel cancer treatment tool
- Proven benefits in complicated localizations and recurrent tumors.
- Technology would provide:
 - established proton therapy
 - innovative helium ion therapy
 - novel delivery such as FLASH
- Radioisotope production for modern nuclear medicine - diagnostics and theranostics



INDUSTRY INVOLVEMENT INFRASTRUCTURE

- Delivery of the complex:
 - increase the capacity in particle accelerator technologies in the Baltic States - novel and
 - emerging field for the region to develop industry “know-how”
- Infrastructure would provide long-term possibilities of future R&D activities
- Future development of medical technologies, addressing the needs of particle therapy community globally.

Baltic States scientific institutions as partners in collaboration with CERN - developed technologies can be used as “toolbox” for the development of a unique facility



INVOLVED ORGANIZATIONS

- CERN Baltic group (CBG)
- CBG associated scientific institutions
- Baltic medical communities in radiation therapy, nuclear medicine and radiology
- Next Ion Medical Machine Study (NIMMS) collaboration at CERN



DEVELOPMENT OF THE INITIATIVE AND STAKEHOLDER ENGAGEMENT ACTIVITIES



FUTURE OF THE INITIATIVE - FEASIBILITY STUDY

CLINICAL CASE AND EPIDEMIOLOGY	TECHNICAL INTEGRATION	BUSINESS PLAN AND ECONOMICS
Lead: Senior researcher with knowledge in field 61 000 per year	Lead: Senior researcher with knowledge in field 61 000 per year	Lead: Senior researcher with knowledge in field 61 000 per year
PhD student or researcher 56 000 per year	PhD student or researcher 56 000 per year	PhD student or researcher 56 000 per year
PhD student or researcher 56 000 per year	PhD student or researcher 56 000 per year	PhD student or researcher 56 000 per year
PhD student or researcher 56 000 per year	PhD student or researcher 56 000 per year	PhD student or researcher 56 000 per year
FEASIBILITY STUDY LEADER: 124 000 per year + 40 550 in administrative and 9 500 in travel costs per year		



FEASIBILITY STUDY IS TO BE DONE WITHIN FRAMEWORK OF CERN WITH INVOLVEMENT OF TECHNICAL EXPERTS

A total cost of 1 722 100 for 2 years with a yearly contribution of 287 016 per country