

# GGSB – The Future of SMART|Labs: Georgian Science and Technology Center (GSTC)

## Concept, Outline

### 1. Background

For more than 20 years, the Helmholtz Research Centre in Jülich (Forschungszentrum Jülich (FZJ), Germany) successfully cooperates with a consortium of Georgian universities (Agricultural University of Georgia (AUG), Georgian Technical University (GTU), Ilia State University (ISU), Iv. Javakishvili Tbilisi State University (TSU) and recently Kutaisi International University (KIU)). In 2004 the **Georgian-German Science Bridge** (GGSB) was founded. The GGSB cooperation comprises three pillars:

- ❖ **Education:** Georgian students are participating various educational programs, e.g., internship programs at FZJ and block-lectures at Georgian universities.
- ❖ **Research:** Georgian students together with their supervisors are actively involved in diverse common research projects for their Master and PhD projects.
- ❖ **Knowledge transfer:** Georgian outstanding young scientists are supported to return to universities of the consortium to operate and lead so called SMART|Labs. Two were established (2016-2017) at TSU in the research fields of Particle Physics (SMART|EDM\_Lab) and Atmospheric Chemistry & Simulations (SMART|AtmoSim\_Lab).

The GGSB cooperation, after detailed discussions with all Georgian and German colleagues, has recently decided to evolve in the following directions:

- i. Establish **GGSB-PLUS** with a focus on „**Health as a Global Challenge**“.
- ii. Attract **additional partners** in Germany and Georgia in order to promote GGSB-PLUS and to extend the scope of the cooperation.
- iii. Develop the **SMART|Labs** into an internationally visible/recognized **Georgian Science and Technology Center (GSTC)**.

In the following, we outline the framework of the GSTC.

### 1. Excellence (*Motivation*)

- Relation to (a) flagship project(s) in Georgia (such as HTC at KIU)
- Connection to/cooperation with world-class scientific centers (e.g. HGF (Germany))

### 2. Objectives (*Ambition*)

- Scientific and technological support for above project(s)
- Development of equipment for Georgian and abroad research projects
- (Leading) participation in selected research projects (e.g.: EDM, FAIR-Experiments, Atmospheric Research, Bio-medical Imaging, Hadron Therapy, ...)

### 3. Impact (*Flexible and efficient*)

- Contribution to success of Georgian project(s)
- Education of students and experts in Georgia
- International visibility

### 4. Organization (*Lean administration, ...*)

- Affiliation to one (or more) Georgian Universities (but as an independent structural unit)
- Substructure: cooperating „Labs“ for different tasks (e.g.: Medical, Accelerator, Research, Engineering, Machine Learning, ...)

### 5. Longer-term Vision (*Think big, start smart*)

- Start with existing SMART|EDM\_Lab: extend workforce
- Acquire 3rd-Party funding (e.g.: Participation in the *Horizon Europe* programm)
- Establish a full and sustainable Georgian Science and Technology Center (GSTC)