4th Meeting of the Strategic Council
Committee for the State Research Programme
"High Energy Physics and Accelerator Technologies"

Hybrid: @CERN and remote, April 11, 2022

Agenda and supporting documents are available: https://indico.cern.ch/event/1139808/ .

Summary of the meeting

1. Welcome remarks by Prof. Toms Torims (Deputy Chairman of the Council, RTU).
2. Prof. Torims described the main objectives for the meeting:
   - to evaluate the progress of the ongoing program;
   - to verify the adherence to the strategic objectives;
   - cross-check the objectives;
   - to follow-up on the progress with the tasks and deliverables;
   - to provide strategic recommendations to the MoES.
3. Agenda was adopted with no additional points. Participants of the meeting are listed in Annex I.
4. Prof. Torims presented overview of the Latvia's CERN portfolio as well as strategy of the Full Membership at CERN (presentation is available online).

   Council noted the following strategic objectives of Latvia:
   - meaningful and well-coordinated CERN Associate Membership;
   - full CERN Membership within 2-3 years.
5. Project leader Dr. Kārlis Dreimanis (RTU) provided overall progress report of the ongoing project (presentation is available online). Dr. Dreimanis informed about certain difficulties in the technical aspects of the working time accounting for students who are located at CERN – Latvian and CERN time management systems are not fully aligned.

   Council noted that:
   - already now this project has significantly increased the scientific capacity of Latvia in HEP and AT;
   - project is fully on track with its milestones and deliverables;
   - publications in the field of high energy physics are challenging and require particular attention of the project management;
   - this project successfully fulfils its purpose of laying the groundwork for the future growth of HEP and AT research in Latvia.

   Council requested:
   - Project leader to prepare and to submit (by 30 April) to the Council and to MoES comprehensive report on the improvements needed for the successful execution of the project and improvements desirable for the State Research Programme as such. This shall be enclosed to the Council recommendations as a reference document.
6. Ms. Aija Rūse (RTU) gave update on WP1: project's administrative, management and outreach activities as well as submitted applications to other international research projects (presentation is available online).

   Council noted that:
   - at this stage more than 50% of the project budget has been spent;

- the remaining budget is well on track and there are several payments to be done in the coming months.

7. Dr. Dreimanis and Dr. Elīna Pajuste (UL) provided progress report on WP2. Team members main activities and responsibilities were listed. Update on current activities and future was delivered (presentation is available online).

   Council noted that:
   - Within the CMS experiment, the high energy physics team of WP2 is concentrating its efforts in two main avenues - Top and Higgs physics;
   - tangible results are achieved by working closely with Technical Integration group of CMS – these are high level engineering activities;
   - it is foreseen to achieve a full CMS authorship for all three doctoral students involved in the project by the end of 2022.

8. Dr. Anatolijs Popovs (LU CFI) provided with progress report of WP3. The main tasks and deliverables, main scientific results and achievements were listed (presentation is available online).

   Council noted that:
   - WP3 have performed several irradiation experiments on YAG, PWO, GAGG, PbF2 etc. with different swift heavy ions. This has been done in Dubna (Russia), GSI (Germany) and INP/ENU Nursultan (Kazakhstan);
   - the samples were characterized using luminescence excitation and reflectivity methods at DESY (Germany) and MAX-IV (Sweden) synchrotron radiation facilities.

9. Dr. Andris Ratkus (RTU) stated the progress of WP4. Overall review of the main objectives, on-going accelerator technology activities and achieved results was offered (presentation is available online).

   Council noted that:
   - Programme enabled participation of the registered of two Latvian researchers in CERN (PhD and post-doc);
   - WP4 is delivering major contributions to the CERN-based AT projects (e.g. I.FAST, HITRIplus and NIMMS);
   - two Scopus publications are achieved and third is on its way;
   - two master students were engaged with two master theses developed;
   - all deliverables have been accomplished already by now;

10. There was collegial discussion on scientific paper publication issues of the project. This mostly concerns physics, where lead-time to the fully fledged publication usually would exceed this project timeline (two years). There might be need for a certain period of grace in this case.

    Council stressed that:
    - the relevant scientific publications shall be produced and presented to the Council and to the project evaluators in due time.
    - the most important is to demonstrate that the project team and its members are in capacity to deliver high-level scientific papers in the relevant field. It is being said: to submit the relevant papers to the publication, even the actual publication will follow already after conclusion of this particular project.

11. In conclusion of the meeting Committee collegially agreed to deliver the following opinion and recommendations to the MoES:

- To this day, the project is great success and proved to be highly successful in the fulfilment of the relevant State Research Programme and its strategic objectives;
- continuation of the programme is critical to the uninterrupted and sustainable development of the Latvia's expertise in the domain of the high energy physics and accelerator technologies;
- it is essential to keep the scope of the Programme within its targeted framework: high energy physics at CERN/CMS experiment and accelerator technology projects at CERN;
- it is advisable to increase the length of the project from 2 to 5 years to ensure uninterrupted and sustainable doctoral students' participation it the project in alignment with their 4-year study pattern, starting at the last year of the master studies;
- gradual increase of the funding is critical to the capacity building – it is strongly recommended to enhance the current programme by adding on yearly basis at least funding required for the two CERN PhD equivalents,
- issues with the project participants time-at-CERN alignment with the Latvia's full-time-equivalent, has to be addressed within the next State Research Programme call;
- the Programme shall be integral part of the Latvia's portfolio at CERN and will be instrumental to Latvia's' efforts to become a full member state of CERN.

Annex 1

11.04.2022.

Participants:

1. Prof. Toms Torims, RTU
2. Dr. Kārlis Dreimanis, RTU
3. Ms Aija Rūse, RTU
4. Andris Ratkus, RTU
5. Elīna Pajuste, LU
6. Jānis Paiders, MoES
7. Lana Frančeska Dreimane, MoES
8. Dr. Anatolijs Šarakovskis, ISSP
9. Prof. Yuri Dokshitser, CNRS
10. Prof. Jonathan R. Ellis, CERN
11. Dr Christoph Schaefer, CERN
12. Dr Maurizio Vretenar, CERN
13. Anatolijs Popovs, LU CFI

Excused: Prof. Andris Skuja, University of Maryland, Prof. Mārcis Auziņš, LU, Dr. Vladimirs Gostilo, BSI.