



CREMLIN Grant Agreement Number 654166

Kick-off meeting

06.-07.10.2015, NRC "Kurchatov Institute", Moscow

Minutes of the CREMLIN Kick-off Meeting



Group photo of the CREMLIN Consortium during the Kick-off Meeting in the NRC "Kurchatov Institute", 07 October 2015

Introductory plenary session

During the Kick-off meeting, day one (6 October 2015; 15:00-16:45), four introductory talks were given by the Coordinator and by the NRC “Kurchatov Institute”:

- *Overview and objectives* (M. Sandhop, DESY)
- *Management and financial issues* (P. Wibbeling, DESY)
- *WP2 Exchange Platform* (F. Lehner, DESY)
- *WP8 Communication and dissemination; innovation; education & training* (E. Kolesnikova, NRC “Kurchatov Institute”)

These and all other talks are uploaded via indico tool (key: cremlin) and are available online here:

<https://indico.desy.de/categoryDisplay.py?categId=407>

Parallel sessions:

Six parallel sessions (17:15-18:45) provided the opportunity to discuss WP-related topics within small groups. The guideline for the discussions were these questions:

- Which are the concrete objectives of the WP?
- Who will be responsible for the milestones and deliverables; workshops and meetings?
- What is the current status of the EU-Russian cooperation in the scientific field of the WP?

The results of these sessions were presented to the plenary on 7 October (09:50-11:10):

WP2 Exchange Platform - Summary Report (Frank Lehner):

NRC KI: Vladimir Kravchuk, Alexander Petrov, Mikhail Subbotin, Ekaterina Kolesnikova

DESY: Volker Gülzow, Ute Krell, Frank Lehner, Uwe Meyer (external advisor), Martin Sandhop, Peter Wibbeling

Summary of Discussions:

Consensus on Goals:

The participants discussed and agreed on the WP2 goals. The horizontal work package WP2 (exchange platform) will ensure an integrated approach on cross-topical issues that arise in the thematic work packages of CREMLIN. The WP2 will further coordinate information exchange among the project members, disseminates project findings and exploits potential synergies. One task of particular importance is to strengthen the science policy interface and the interactions with external stakeholders.

IGNITOR:

A discussion on the IGNITOR project followed. It is seen as an important megascience project of high relevance and needs visibility within CREMLIN. At the time of the H2020 project call and the subsequent design of the CREMLIN project proposal there was not enough information available to dedicate an own „thematic“ work package on S&T cooperation.

However, it was made clear that IGNITOR representatives are invited to actively participate in all cross-topical issues of WP2 and WP8 of CREMLIN to the mutual benefits for all partners. NRC KI is encouraged to discuss with its bilateral IGNITOR partner INFN to submit proposals how to better associate IGNITOR to the project on base of in-kind contributions. It was generally agreed that the CREMLIN project should be seen as a vehicle and platform to move the discussions around IGNITOR forward.

Link to EU/ESFRI and Big data

It was suggested to establish links between CREMLIN and ESFRI & other EU organizations that are relevant when it comes to large-scale research infrastructures. An informal meeting could be envisaged for representatives from all megascience projects to discuss and learn about the general EU research infrastructures framework (incl. ESFRI processes). Such a meeting would aid in building mutual understanding and could help the megascience projects to get insights into EU long-term planning processes, as well as on views of open access/user policies for European research infrastructures. It would also contribute to raise further awareness of the megascience projects.

Big Data/e-infrastructure is an important cross-topic for all thematic work packages and an own talk by Volker Gülzow was dedicated to this topic at the project kick-off meeting. CREMLIN can support the integration of the Russian megascience projects into the European and global e-infrastructure initiatives. All involved centers/laboratories in CREMLIN have outstanding knowledge on that issue and should work together. An own workshop for all WPs/megascience projects on specific challenges on big data is therefore highly desirable and part of the work program.

Next steps:

Organize in conjunction with the next consortium board meeting (planned for mid/end June 2016 in Lund) a cross-topical workshop/meeting: Either on big data or on EU/ESFRI-related issues. The decision should be made within WP2 by end of the year.

WP3 NICA - Summary Report (Jürgen Eschke):

- Which are the concrete objectives of the WP?
 - development of CBM-STs module and ladder assembly
 - preparation and passing of the CBM-STs Production Readiness Review
 - start of module and ladder production at the assembly centers GSI/FAIR and JINR-VLHEP
- Who will be responsible for the milestones and deliverables; workshops and meetings?
 - milestones and deliverables: GSI/FAIR and JINR
 - meetings and workshops: weekly CBM-STs workgroups (GSI/FAIR) , (semi)-annual workshops (GSI/FAIR + JINR)

- JINR promised to work out a strategy for attracting more scientists from other countries for the NICA experiments
- What is the current status of the EU-Russian cooperation in the scientific field of the WP?
 - very active, years of cooperation embedded in CBM Collaboration and other FAIR-NICA contacts
- next step: first Workshop during 11.-15.4.2016 at GSI/FAIR in Darmstadt

WP4 PIK - Summary Report (Alexander Ioffe):

Objectives:

Identify the research interests and needs of European and Russian partners in the PIK project

- Develop guidelines for a general instrumentation concept of PIK reactor in cooperation with international partners
- Develop the Education and Training Programme
- Help in the development of state-of-the-art supporting structures at the PIK reactor
 - Sample environment and supporting laboratories
 - User access system
 - Data management and storage

M9: Workshops on user demands

Aims:

Task 4.1: Mapping the needs of Russian and European user community

- mapping the demands of the European user community for the PIK reactor
- mapping the needs of Russian user community in the instrumentation at the PIK reactor
- complement the existing European neutron research infrastructure
- integrate the international user facility PIK into the European neutron landscape

Schedule:

- start of PIK in the full power mode is expected in 2018
- development of user and instrumentation program should be realized in 2018–2020
- regular operations from 2020 on

Details:

Science fields to be discussed on Workshops has to be narrowed to get more focused

- cover diffraction (strain, texture, phases), SANS (nanostructures), and imaging (microstructure) ☐
obtain user demands also for imaging, which is not yet foreseen at PIK

- focus on the instrument suite including instruments transferred to PIK and new instruments to be built at PIK
- combine the workshop on mapping the demands of the European user community for the PIK reactor with the German Neutron Scattering Conference in order to reach more scientists than with an isolated workshop (Kiel, 20–21 September 2016)
- combine the workshop on mapping the demands of the Russian biosoft user community with the PNPI/Uni. St.Petersburg workshop on “Small-angle scattering in biopolymers” (Peterhof, 26–27 May 2016)

2016 D4.1: Education & Training Programme (M6)

PNPI has established the own Education and Training Program that is focused on general education in neutron physics. Particularly, PNPI is organized dedicated courses on methods and design for neutron instrumentation at the Education Profile of “Neutron and Synchrotron Physics” at Saint-Petersburg State University and a number of annual Schools and Workshops related to the development of Neutron Scattering Instruments at PIK (School on Condensed Matter Physics with neutron and synchrotron radiation, School on Polarized Neutron Physics, Workshop on neutron diffraction, Workshop on neutron spectroscopy “SPECTRINA” and Workshop on SANS&reflectometry “MUROMETS”).

The discussion resulted in the necessity to match the PIK Education&Training Programme with PNPI Workshops schedule, particularly to organize the CREMLIN Schools/workshops as satellite events for the existing series of workshops based at in Russia and for relevant European schools & workshops.

2016 MS5: PIK Instrumentation Sub-Committees Structure (M9)

Aim:

- to integrate NSAC and CREMLIN Sub-Committees to avoid the parallel structure
- Update of the CREMLIN Sub-Committees Structure

WP5 SSRS-4- Summary Report (Harald Reichert):

Participants: H. Reichert (ESRF, WP lead), Elena Tereschenko (NRC-KI), Vladimir Korchuganov (NRC-KI), Peter Andersson (MAX IV), Oliver Seeck (DESY)

The working group supports actions for the preparation of a proposal for a 4th generation X-ray source in Russia. The working group discussed briefly the various options for very high brightness X-ray sources and their rapid development in recent years (storage rings featuring a MBA lattice, XFLs). V. Korchuganov mentioned plans for a Specialized Synchrotron Radiation Source - SSRS-4, a multi-turn accelerator – recuperator with very high brightness and coherence.

The conclusion was that the selection of a particular source concept should be driven by a science case defining the use of this source. The working group suggested a strategy for the production of such a science case driven by the needs of the Russian scientific community, starting with an open

workshop in Russia in early spring 2016. This should assist the production of a “white paper” in autumn 2016, outlining the scientific need and mission for a fourth generation Photon Source to be constructed in Russia.

Next step: Open Workshop in Russia in early spring 2016

WP6 XCELS - Summary Report (Catalin Miron):

Concrete objectives:

- Identify and map the research interests and needs of EU and Russian partners for scientific cooperation in the XCELS project;
- Work out measures and action plans to foster joint research projects towards the implementation of the project
- Jointly develop and refine international standards for access, user policy, and governance of future large laser facilities;
- Undertake, from a combined EU and Russian perspective, foresight activities to identify the scientific and technological opportunities, user needs and political support for future laser facilities of the 100PW class. This includes the identification of synergies and complementarity between XCELS and international laser facilities in order to sharpen their respective scientific profiles and uniqueness.
- Explore legal and practical models for the future operation of XCELS as an integral part of the fabric of large European laser infrastructures.

Who will be responsible for the milestones and deliverables, where and when to carry out workshops and meetings?

- T6.1a&T6.2 – A workshop organized in Russia as a satellite of the conference Frontiers of Nonlinear Physics end of July 2016 will explore both the new scientific opportunities (6.2) and identify key technological issues (6.1) on the construction and operation 100PW facilities (IAP). D6.1: Report T0+18, D6.2: Report T0+22
- T6.1b – A workshop organized in France end of 2016 will focus on key HP laser technologies (CEA). D6.1: Report T0+18
- T6.3 – Specialized workshop organized in a laser user facility on internationalization, access and user policy, governance summer 2017 (ELI-DC). D6.3: Foresight document T0+24
- T6.4 – Round table in 2018 with key experts stakeholders and scientific policy makers (EU+RU) to discuss how XCELS could be considered in the ERA and the fabric of national and European laser RIs (ELI-DC). D6.4: foresight document T0+33
- T6.5 – A workshop will be organized end of 2017 in France to explore further cooperation between XCELS and European companies (CEA). D6.6: Analysis for the EC & MoU: T0+29

Current status of the EU-Russian cooperation:

- MoU with ELI-DC to be (re)signed
- MoU with THALES Optronique signed

WP7 STC - Summary Report (Lucie Linssen):

Task 7.1: research challenges and synergies

Milestone 7.1, month 4

STC session at the kick-off meeting; charge and formation of an international team of experts for task 7.1.

Deliverable 7.1, month 12

Workshop on technical and research challenges of the STC project, placed in a European and fully international context, synergy of the STC, FCC-e+e- and CLIC projects.

Deliverable 7.2, month 18

Overview report on technological requirements and R&D progress, linking European and world-wide know-how to the new generation of the highly efficient lepton colliders.

- Many technological synergy projects between STC, FCC-ee and CLIC already ongoing
- Further ideas on common challenges/technologies will be documented
- Organisation of a workshop at CERN for (by!) **young scientist in e^+e^- colliders** (accelerator+experiment), with involvement of experts from within CREMLIN consortium

Task 7.2: Internationalisation

Deliverable 7.3, month 24

Workshop focusing on internationalisation and joint research for STC

Deliverable 7.4, month 36

Follow-up report on internationalisation and joint research for STC

What does internationalisation mean?

At higher strategic level => what are the objectives and rules for foreign involvement?

At scientist level:

=> make Super Charm-Tau project better known

=> work together on science/technology aspects (link to task 7.1)

=> organise a scientific workshop at BINP

At strategic+scientist level => put in place International Advisory Committee

Task 7.3: e+e- data management platform

Milestone 7.2, month 8

Creation of a "CREMLIN data management platform for lepton colliders" and a data management repository for exchange of information and sharing of applications.

Deliverable 7.5, month 22

Status report on the "CREMLIN data management platform for lepton colliders"

Deliverable 7.6, month 36

Final progress report on the "CREMLIN data management platform for lepton"

- Task already well described in grant agreement
- Will link the task further to the corresponding across-CREMLIN activity

Part of the WP7 funding will be used for the bi-directional (!) BINP-CERN exchange of young scientists for this task

Wrap up:

Fruitful discussions at the kick-off meeting!

Common view between scientists how to proceed within the work package.

Scientific/technological exchanges (bidirectional).

Stimulate and help involvement of young scientists in e+e- colliders.

Internationalisation with help of International Advisory Committee.

The main BIG questions are of a higher strategic nature:

Strategic objectives/rules for SCT as a Russian mega-science project

Prospects for making SCT happen !!

WP8 Communication; Innovation; Education - Summary Report (Ekaterina Kolesnikova):

- The CREMLIN website www.cremlin.eu (under construction) and logo are being developed and discussed by Consortium Board members.
- A detailed discussion of organization of special sessions at RACIRI summer schools; seminars/training modules. Journalist's trip to selected mega-science facilities will follow.
- ILL partners in organizing the journalists' trip: Giovanna Cicognani cico@ill.fr, Françoise Vauquois vauquois@ill.fr, Miriam Förster forster@ill.fr
- Taking into account difficulties which may arise during the organization of all abovementioned events we have to start our work in advance.

Tour to scientific and research infrastructure of the NRC “Kurchatov Institute”

The Kick-off Meeting was rounded off with a tour through Kurchatov-labs, e.g. the synchrotron radiation source and the protein factory.

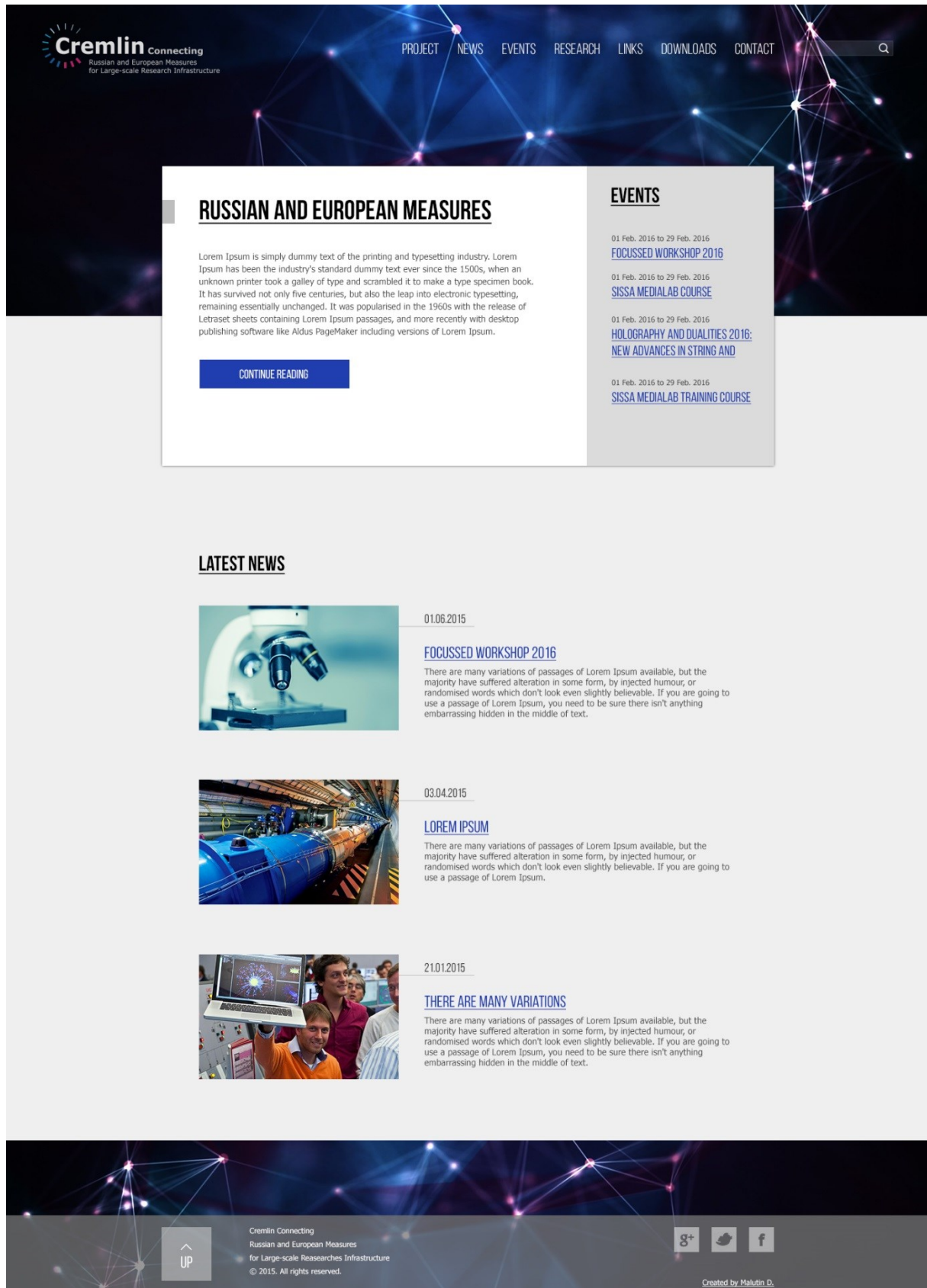
Next steps:

WP#	what	When	responsible
WP1	set-up of SPAB (MS1) 2 nd CB meeting	M4 = Dec 2016 (1st meeting Feb 2016 at DESY Hamburg) June 2016 (probably at ESS / MAX IV)	DESY
WP2	Workshop: Exchange on Big Data Handling ...	M13 = Sep 2016 (possibly back to back with 2n CB meeting)	DESY; NRC KI
WP3	next first Workshop Strategy for improved access at NICA Production readiness review for detector platform (MS3)	M12 = Sep 2016 11.-15.4.2016 at GSI/FAIR in Darmstadt	FAIR; JINR FAIR; JINR
WP4	Training program on neutron instrumentation (D4.1) PIK Instrumentation Sub-Committees Structure (MS5) Mapping of neutron users demand (D4.2) - Workshop of neutron user demand in materials science as a satellite event for German Neutron Scattering Conference 2016 SANS BioSoft User Workshop as a combined event with the PNPI Workshop for SANS in biopolymers	M6 = Feb 2016 M9 = May 2016 M9 = May 2016 20–21 September 2016, Kiel 26-27 May 2016, Peterhof	PNPI Jülich HZG

WP5	Mapping user communities SR (D5.1, 5.2) Open Workshop in Russia in early spring 2016	M14 = Oct 2016 Early spring 2016, Russia	ESRF; NRCKI
WP6	Workshop (on construction & operation of 100PW facilities) as satellite at conference Frontiers of Nonlinear Physics (D6.1 D6.2) Workshop on key HP laser technologies Specialized Workshop on internationalization, access & user policies, governance. (D6.1)	M18 = Feb 2018 End of July 2016 in Russia End 2016 Summer 2017	IAP CEA ELI-DC
WP7	Set-up international expert team lepton colliders (MS7) Data management platform for lepton colliders (MS8) Workshop on technical challenges for STC (D7.1)	M4 = Dec 2016 M8 = Apr 2016 M12 = Aug 2016	CERN CERN BINP
WP8	Launch of Project website www.cremlin.eu	End of Nov 2015	NRC KI; DESY

Appendix I

Beta-version of the CREMIN website



Appendix II

List of Participants

CREMLIN Kick-off Meeting 6-7 October 2015, NC KI; Moscow

CREMLIN Grant No. 654166

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