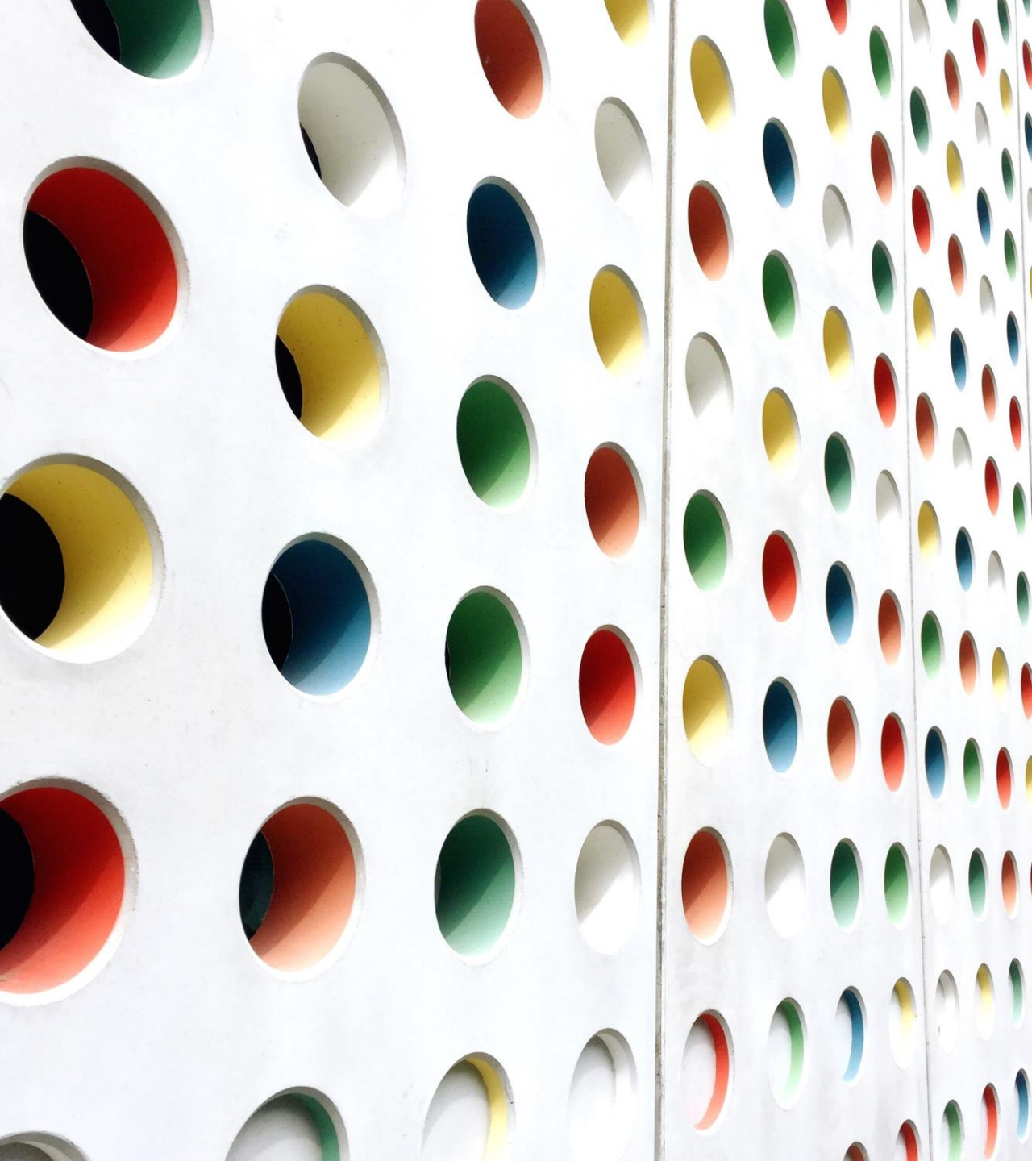


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 871072

CREMLIN PLUS
Connecting Russian and European Measures for Large-scale Research Infrastructures

CREMLINplus WP5

Vitaly Vorobyev

2020.08.27

BINP, Novosibirsk

CREMLINplus Project

A 4-year EU-Russian project: **01.02.2020 - 31.01.2024**

Funded under Horizon 2020. Grant agreement no. 871072

EU's Flagship project in the EU-Russian cooperation in the domain of RI

Budget: **25 million EUR**

Consortium: **35 partners** (9 EU countries, 10 Russian partners)

Coordinator: DESY

www.cremlinplus.eu

CREMLINplus Russian Partners

Partners who did not participate in CREMLIN are marked in bold.

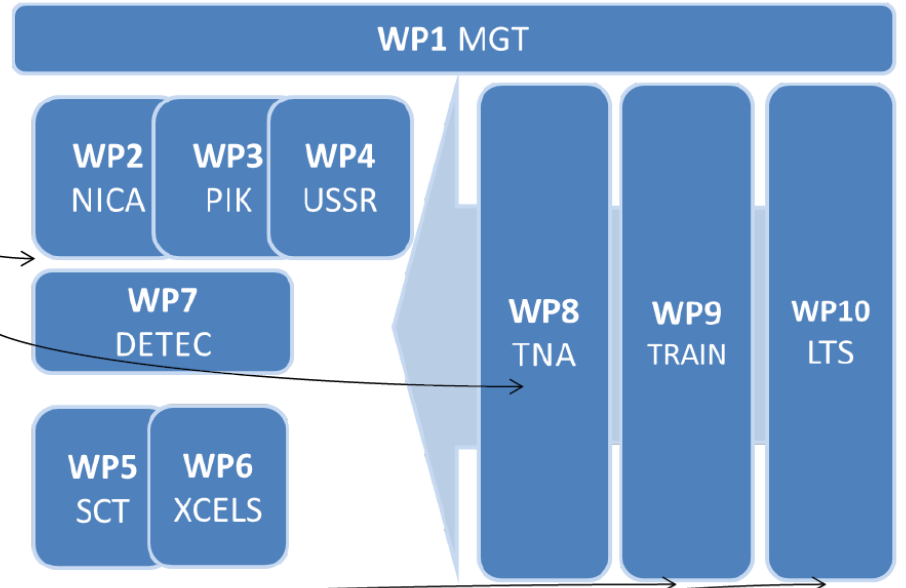
Abbreviation	Title
BINP	Budker Institute of Nuclear Physics of SB RUS
IAP	Institute of Applied Physics, Russian Academy of Sciences
ICISTE	**International Centre for Innovations in Science, Technology and Education**
INR RAS	**Institute for Nuclear Research of the Russian Academy of Sciences**
JINR	Joint Institute for Nuclear Research
MEPhI	**National Research Nuclear University "MEPhI"**
NRC KI	National Research Center "Kurchatov Institute"
NUST MISIS	**National University of Science and Technology MISIS**
PTI	**IOFFE Physico-Technical Institute of the Russian Academy of Sciences**
SPSU	**Saint Petersburg State University**

25 European partners: 12 also in CREMLIN; 13 joined

DESY	Deutsches Elektronen-Synchrotron
EKUT	Eberhard Karls Universität Tübingen
European XFEL	European X-Ray Free-Electron Laserfacility GmbH
FAIR	Facility for Antiproton and Ion Research in Europe GmbH
FZJ	Forschungszentrum Jülich GmbH
GUF	Johann Wolfgang Goethe-Universität Frankfurt am Main
HZG	Helmholtz-Zentrum Geesthacht Zentrum für Material- und Küstenforschung GmbH
JLU	Justus-Liebig-Universität Giessen
TUM	Technische Universität München
CEA	Commissariat à l'Énérgie Atomique et aux Énérgies Alternatives
ESRF	European Synchrotron Radiation Facility
ILL	Institut Max von Laue - Paul Langevin
CNRS	Centre National de la Recherche Scientifique
UCA	Université Clermont Auvergne
ELI-DC AISBL	Association Internationale Extreme-Light-Infrastructure Delivery Consortium
NPI CAS	Nuclear Physics Institute, Czech Academy of Science
MTA EK	Magyar Tudomanyos Akademia Energiatudomanyi Kutatokozpont
Wigner RCP	Magyar Tudomanyos Akademia Wigner Fizikai Kutatokozpont
INFN	Istituto Nazionale di Fisica Nucleare
UNIMIB	Università degli Studi di Milano-Bicocca
ADSI (LTP*)	Austrian Drug Screening Institute GmbH
CERN	European Organization for Nuclear Research
WUT	Politechnika Warszawska
ESS	European Spallation Source ESS ERIC
INR NASU	Institute for Nuclear Research of NAS of Ukraine
LLE-AISBL	Laserlab-Europe AISBL

Structure of the project

- Pillar 1: **Megascience collaboration**
  - around PIK, NICA, USSR, SCT, XCELS; joint development of detector technologies
- Pillar 2: **ACCESS**
  - **Facilitate the access** of EU scientists to Russian Research Infrastructures for a defined set of Russian RI "**LIST-11**" covering all 6 thematic domains of ESFRI Roadmap
  - Working out **Recommendations** for setting models and access conditions to selected Russian RIs
- Pillar 3: Develop **staff exchange programme and training for RI management**
- Ensuring **WP-interaction**, addressing **cross-topical issues** for all



WP overview

WP1 MGT	**Management and dissemination**	**DESY & NRC KI BINP; IAP; ICISTE; FAIR; FZJ; UNIMIB**
WP2 NICA	Collaboration with NICA	FAIR & JINR INR RAS; MEPhI; EKUT; NPI CAS; Wigner RCP; WUT
WP3 PIK	Collaboration with PIK	FZJ & NRC KI-PNPI JINR; PTI; SPSU; HZG; TUM; CEA-LLB; ILL; UCA; MTA EK; UNIMIB; ESS
WP4 USSR	Collaboration with USSR	NRC KI & ESRF DESY; European XFEL; INFN
WP5 SCT	Joint technology development around SCT and future lepton colliders	BINP & CERN JLU; CNRS-LAL; INFN
WP6 XCELS	Joint technology development around XCELS	IAP & CEA-LIDYL ELI-DC AISBL; Laserlab-Europe AISBL
WP7 DETEC	Joint development of detector technologies	FAIR & JINR DESY; BINP; NRC KI-PNPI; GUF; CNRS-IPHC; UNIMIB; CERN; ESS; INR NASU
WP8 TNA	Access to Russian RI	ICISTE & DESY NRC KI; NUST MISIS
WP9 TRAIN	Staff exchange and training for RI management	UNIMIB & NUST MISIS DESY
WP10 LTS	Joint long-term sustainability of RIs	NRC KI & DESY

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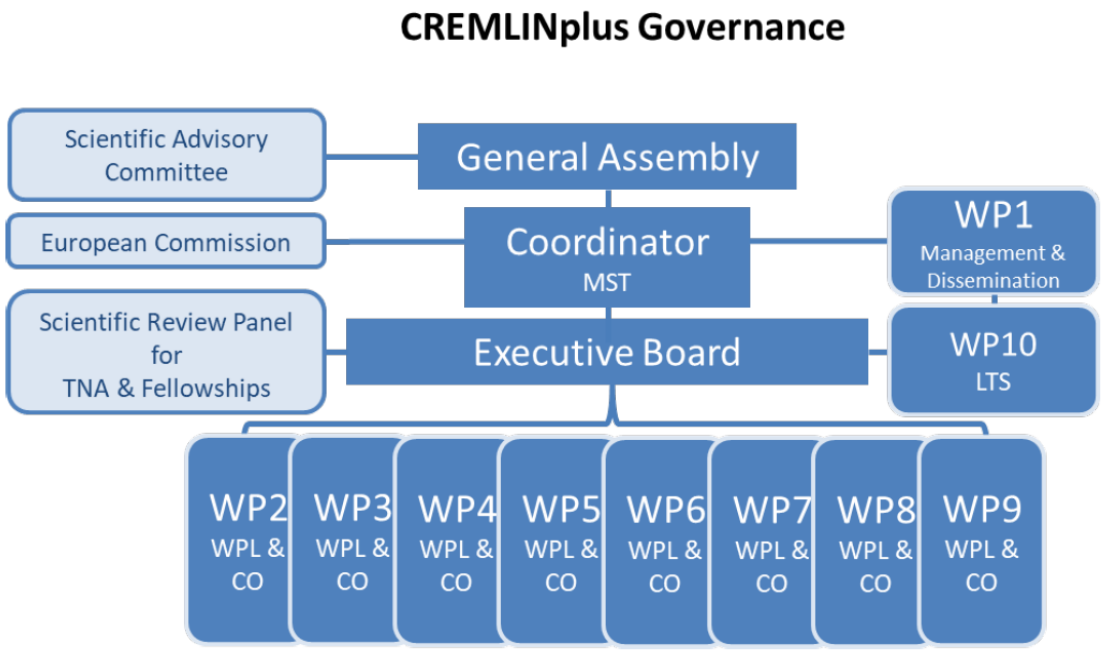
Governance

- **General Assembly** (GA): decision-making; annual meetings
- **Executive Board** (EB): engine of the project; quarterly; = WP lead tandems, following policy of **shared responsibility**
- **Scientific Advisory Committee** (SAC): recommendations to GA
- **Scientific Review Panel**: evaluates proposals within several calls in WP8 TNA and WP9 TRAIN
- **Management Support Team** (MST): to be set up with members not only from DESY



CREMLINplus kick-off meeting

CREMLIN PLUS
Connecting Russian and European Measures for Large-scale Research Infrastructures

This logo must be used in all CREMLINplus materials!

DESY, 19-20 Feb. 2020

https://indico.desy.de/indico/event/24963/

CREMLINplus Overview talk by Martin Sandhop

Financial regulartions and reporting under Horizon 2020 by Tom Minniberger

WP5. Joint technology development around SCT and future lepton colliders

Task	Activity	Institutes
5.1	Internationalization of SCT	BINP, CERN
5.2	Collider technologies	CERN, BINP, IJCLab
5.3	Software for detector design	BINP, CERN
5.4	Inner tracker	BINP, Frascati, Ferrara
5.5	Central tracker	BINP, Lecce, Bari
5.6	Particle identification system	BINP, JLU-Giessen

First WP5 meeting

Moscow, Sep. 27, 2019

https://indico.cern.ch/event/851809/

WP5 Deliverables

Deliverable	Task	Due to	Title
D5.2	5.3	M18	Status report on the software for the SCT detector
D5.4	5.4	M24	Status report on R&D work on Inner Tracker for the SCT detector
D5.6	5.5	M24	Status report on R&D work on Central Tracker for the SCT detector
D5.8	5.6	M24	Status report on R&D work on Particle Identification system for the SCT detector
D5.1	5.2	M36	Report on joint development of collider technologies for lepton colliders
D5.3	5.3	M44	Final report on the software for the SCT detector
D5.5	5.4	M44	Final report on R&D work on Inner Tracker for the SCT detector
D5.7	5.5	M44	Final report on R&D work on Central Tracker for the SCT detector
D5.9	5.6	M44	Final report on R&D work on Particle Identification system for the SCT detector

WP5 Milestones

Milestone	Task	Month	Title
1	5.3	M18	Release of the software framework for SCT detector
2	5.1	M18	Kick-off meeting of collaboration around the SCT detector
3	5.2	M42	Collider prototype with high beam current ($\mu\mu$-tron)
4	5.4	M42	Prototype for the SCT inner tracker based on the C-RWELL or Compact TPC
5	5.5	M42	Prototype for the SCT central chamber
6	5.6	M42	Prototype for PID system of the SCT detector

A conference contribution is foreseen as a mean of verification for each milestone (except the kick-off meeting)

WP5 budget

Beneficiary	Person-Months	Personnel	Travel	Equipment	Other	Total Direct	Total (including 25% indirect)
CERN	18	223104	21250	0	12500	256854	321067.50
BINP	48	63984	70000	84000	79000	296984	371230.00
INFN	84	168000	76000	0	340000	584000	730000.00
JLU	24	104994	7000	90000	0	201994	252492.50
CNRS	18	104994	5000	100000	0	209994	262492.50
Total	192	665076	179250	274000	431500	1549826	1937282.50

CREMLINplus: BINP funding

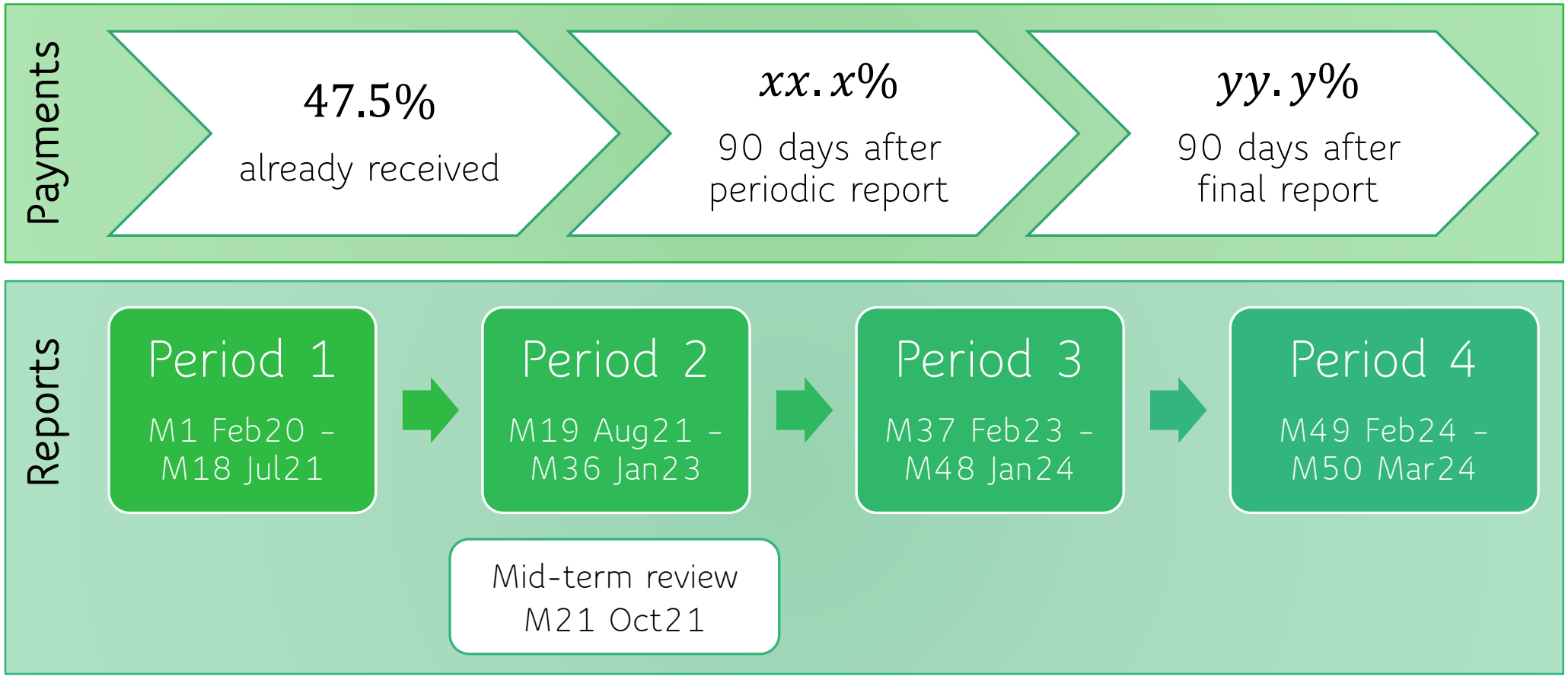
Personnel	Other direct	Indirect	Total
63984	297100	90271	451355

2/BINP	Cost (€)	Justification
Travel	70,000	Staff exchange: 65k€ (WP5); Project staff: 5k€ (WP5)
Equipment	84,000	Photon detectors, readout electronics modules for SCT subdetector prototypes and beam test beam facility (WP5)
Other goods and services	143,100	SCT subdetector prototypes elements: row material, electronic components, computer hardware etc., SCT PR material: 79k€ (WP5) Organizing of detector school: 64.1k€ (WP7)
Total	**297,100**	

Description of Action

Note 64.1 k€ for the detector school within the WP7 (talk by Sergey Kononov)

Funding and reporting



WP5: general status

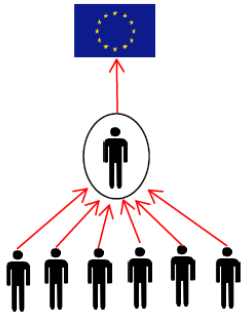
Vitaly Vorobyev, Lucie Linssen
2nd EB meeting
May 12, 2020
(There is progress since then)

- ☑ Task leaders are assigned
- ☑ M1-M12 subtasks and timeline are set (to be updated each 4 months)
- ☑ WP5 mailing list is established and is in use
- ☑ Wiki pages as an internal resource center
- ☑ GitLab software repository for SCT detector (nightly builds, code review)
- ☑ BINP SCT detector software development server is now available for all partners
- ☑ Task-related meetings are organized by the task leaders
- ☒ Public SCT webpage redesign (no progress yet)
- ☒ 2nd general WP5 meeting is to be appointed (this summer, online only)

3. Communication/Acknowledgement

- **All Communication** to the European Commission (EC) only via the Coordinator

  → Coodrinator Contact Persons:
  Martin Sandhop (Scientific, overall)
  Kaja Scheliga (Management)
  Tom Minniberger (Financial)



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or

Connecting Russian and European Measures for Large-scale Research Infrastructures – plus
CREMLINplus

- **The acknowledgement have to be present on every project related outcome (presentation, poster, leaflet, publication, etc.!)**
- EU-Flag: http://europa.eu/about-eu/basic-information/symbols/flag/index_en.htm

DESY.