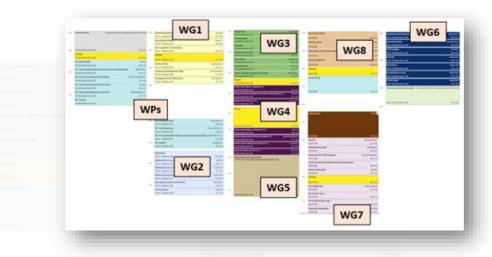
1st DRD1 Collaboration Meeting Closeout Session

Anna Colaleo, Piotr Gasik, Eraldo Oliveri, Leszek Ropelewski, Maxim Titov

DRD1 Collaboration Meeting, Closeout Session, February 2, 2024



Thanks to all the colleagues that followed the meetings.

Thanks to all the colleagues that actively contributed to the various discussions (scientific and technical, organizational).

Thanks to all the speakers, it was a great pleasure to restart scientific and technical discussions.

Thanks to all WG conveners and WP coordinators for the work done and we all recognize all the difficulties connected to the limited time.

Thanks

Main outcome of the meeting

After more than one year working on the DRD1 proposal,

everyone want to start working on research activities that are under the scope of DRD1

Clear message to the Management that should take care of the upcoming formalities, giving the possibility to most of the implementation team to focus on the start of common and collaborative activities.

February 2, 2024

Some formalities.. still

CERN RB approval & DRDC recommendation and guidelines in view of the first review and next steps

DRDC Meeting (December 4)

CERN-DRDC-2023-002 DRDC-M-001 December 2023

Detector R&D Committee Draft Minutes of the first meeting held on Monday, 4 December 2023

- DRDC: T. Bergauer (Chairperson), S. Bressler (*), R. Forty, C. Gemme, I. Gil Botella, M. Pesaresi, L. Serin, J. Troska (Scientific Secretary)
- Ex-Officio: P. Allport (*), D. Contardo, M. Krammer, J. Mnich
- Excused: S. Bentvelsen, D. Budker, P. Merkel
- DRD1: P. Gasik (Speaker), A. Colaleo, E. Oliveri, M. Titov, F. Brunbauer(*), I. Laktineh(*), L. Ropelewski(*)
- DRD2: R. Guenette (Speaker*), P. Agnes(*), W. Bonivento(*), C. Cuesta(*), A. Deisting(*), J. Dobson(*), G. Fiorillo(*), E. Gramellini(*), M. Kuzniac(*), J. Martin-Albo(*), R. Santorelli(*), M. Wurm(*), A. Zani(*)
- DRD3: G. Pellegrini (Speaker), M. Moll, G. Calderini(*), G. Kramberger(*) I. Pintihe(*), I. Vila Alvarez(*), E. Vilella(*)
- DRD4: C. Joram (Speaker), R. Pestotnik (Speaker), S. Easo, F. Tessarotto, P. Krizan(*) I. Laktineh(*), J. Lapington(*)
 DRD6: R. Ferrari (Speaker), G. Gaudio, F. Sefkow, E. Auffray(*), I. Laktineh(*),
- M. Lucchnit^(*), W. Ootan^(*), R. Posch^(*), P. Roloff^(*), C. de la Taille^(*), H. Yoo^(*)

Closed Session

Agenda

- 1. Introduction
- DRD1 Proposal Review for Approval
 DRD6 Proposal Review for Approval
- DRD0 Proposal Review for Approval
 DRD4 Proposal Review for Approval
- DRD2 Proposal Review for Approval
- DRD3 Proposal Review for Approval

Procedure

The meeting was opened by T. Bergauer with a warm welcome to the first meeting and thanks to the committee for the intensive work done so far to review all received proposals. J. Mnich also thanked the committee members for their work so far. J. Mnich reminded that following the publication of the ECFA Detector R&D Roadmap document' a process to initiate CERNhosted Detector R&D (DRD) collaborations was started by the ECFA Detector R&D Roadmap panel.

1 https://cds.cem.ch/record/2784893

DRDC Minutes: https://cds.cern.ch/rec ord/2883179?ln=en

CERN RB Approval (December 6)

statement sent to the DRD1 proposal writing team on December 11th:

Five proposals for new Detector R&D collaborations were recommended for approval by the DRDC: DRD1 (Gaseous detectors), DRD2 (Liquid detectors), DRD3 (Solid-state detectors), DRD4 (Photon detectors and particle identification), and DRD6 (Calorimetry). The Research Board approved DRD1, DRD2, DRD4 and DRD6 for an initial period of three years. The proposals for DRD4 and DRD6 can now be made public, while the final versions of those for DRD1 and DRD2 that had been provided very recently will be further reviewed by the DRDC in the coming weeks before being made public. The Research Board preliminarily approved DRD3 so that work towards establishing the collaboration can progress, on condition that the new collaboration structure be established in a timely fashion following the guidelines provided by the DRDC, and the new management appointed; approval of DRD3 will be reviewed at the next Research Board meeting in March 2024, on the basis of an updated proposal.

Drafts of RB minutes are confidential until they are approved by the RB at the next session, i.e. in March

(asked during the plenary session)

DRD Proposal in CDS (January 9)

DRD1 EXTENDED R&D PROPOSAL Development of Gaseous Detectors Technologies v1.5

Abstract

This document, realized in the framework of the newly established Gaseous Detector R&D Collaboration (DRD1)⁵ presents a comprehensive overview of the current state-of-the-art and the challenges related to various gaseous detector concepts and technologies. It is divided into two key sections.

The first section, titled "Executive summary", offers a broad perspective on the collaborative scientific organization, characterized by the presence of eight Working foroups (WGs), which serve as the cornerstone for our forthcoming scientific endeavours. This section also contains a detailed inventory of R&D tasks structured into distinct Work Packages (WPs), in alignment with strategic R&D programs that funding agencies may consider supporting. Furthermore, it underlines the critical infrastructures and tools essential for advancing us towards our technological objectives, as outlined in the ECFA R&D roadmap.

The second section, titled "Scientific Proposal and R&D Framework," delves deeply into the research work and plans. Each chapter in this section provides a detailed exploration of the activities planned by the WGs, underscoring their pivotal role in shaping our future scientific pursuits. This DRD1 proposal reinforces our unwavering commitment to a collaborative research program that will span the next three years.

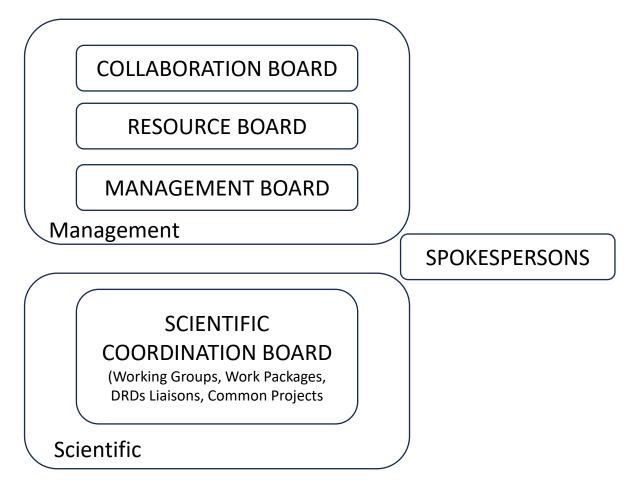
> Geneva, Switzerland December 1, 2023[†]

*DRD1 Website: https://drd1.web.cern.ch/ †Last modification on January 28, 2024 (New institutes added)

<u>Submitted to CDS</u> (2024-01-9) <u>Updated to DRD1 web</u> (2024-1-28)

DRD1 Management Proposal:

Towards Collaboration Organization



Approved during the Collaboration Board with Consensus.



Minutes will be prepared and circulated.

Having the general organization structure approved, the specific comments or remarks raised during the CB about the proposed implementation will be taken into account and implemented when possible. What will not be addressed, will be rediscussed.

Description of composition and roles in backup

Endorsement of ad interim organization and convenorships positions

Implementation Team: Leszek Ropelewski (TF1), Anna Colaleo (TF1), Florian Brunbauer, Silvia Dalla Torre, Ingo Deppner, Esther Ferrer Ribas, Roberto Guida, Giuseppe Iaselli, Jochen Kaminski, Barbara Liberti, Beatrice Mandelli, Eraldo Oliveri, Marco Panareo, Francesco Renga, Hans Taureg, Fulvio Tessarotto, Maxim Titov, Joao Veloso, Peter Wintz

WG1: P. Colas, I. Deppner, L. Moleri, F. Resnati, M. Tygat, P. Wintz
WG2: G. Aielli, , D. Gonzalez Diaz, R. Farinelli, F. Garcia, P. Gasik, F. Grancagnolo, G. Pugliese
WG3: B. A. Gonzalez, B. Mandelli, G. Morello, D, Piccolo, F. Renga, S. Roth, A. Pastore
WG4: M. Abbrescia, M. Borysova, P. Fonte, O. Sahin, R. Veenhof, P. Verwilligen
WG5: R. Cardarelli, M. Gouzevitch, J. Kaminski, M. Lupberger, H. Muller
WG6: G. Charles, R. De Oliveira, A. Delbart, G. Iaselli, F. Jeanneau, I. Laktineh
WG7: A. Ferretti, R. Guida, G. Iaselli, E. Oliveri, Y. Tsipolitis
WG8: E. Baracchini, F. Brunbauer, M. Iodice, B. Liberti, A Paoloni

Work Packages (Overall Coordination : P. Gasik)
WP1: G. Aielli, R. Farinelli, M. Iodice, A. Ochi, G. Pugliese WP2: N. De Filippis, F. Grancagnolo
WP3: P. Wintz
WP4: D. Gonzalez Diaz, E. Ferrer Ribas, F. I. Garcia Fuentes, P. Gasik, J. Kaminski WP5: I. Laktineh
WP6: F. Brunbauer, S. S. Dasgupta, P. Gasik, F. Tessarotto WP7: F. Brunbauer, I. Deppner, D. G. Diaz, I. Laktineh
WP8: D. G. Diaz, E. Ferrer Ribas, F. I. G. Fuentes, P. Gasik, J. Kaminski
WP9: J. Bortfeldt, G. Croci, D. Varga

DRDs Liaisons; DRD2 (D.G. Diaz), DRD4 (F. Tessarotto), DRD (F.Brunbauer), DRD6 (I. Laktineh), DRD7 (M. Bregant, S. Martoiu) US-CPAD: M. Titov, S. Vahsen; US-FCC: M. Hohlmann, G. Iakovidis, B. Zhou

Collaboration Board agreed on the fact that there will be complete flexibility on the number of Working Group Conveners. The decision is left to each working groups according to their needs.

Internal organization of the work package is fully in the hands of the work package. The collaboration requires only a list of WP coordinators (old terminology), without imposing rules in the number. The decision is left to each Work Package according to their needs.

Approved during the Collaboration Board with Consensus.

Spokespersons and CB Chair will verify intention to continue.





Work Packages (DRD1 Strategy)



Work Packages General Discussion (Thu. 11:30am)

General agreement to start with the simplest approach to do not delay the start of the activities linked to the work package

- MoU signature is decoupled from the approval of a Work Package. MoU will define the approval rules.
- Funding Agencies that will sign the MoU are the ones that are funding the membership (yearly fee). If the fee is paid by the institute, the institute will be the Funding Agency.
- Work Packages will not be internally reviewed (evaluation of the progress) but DRD1 Collaboration reviewed
- Work Packages will have:
 - scientific approval (alignment with ECFA Detector R&D Roadmap and DRD1 proposal)
 - resources approval (starting from the acknowledgment from the Funding Agencies involved about the existing resources)
- Approval will be granted through dedicated boards, and the corresponding minutes will serve as a reference document. No additional signatures required.

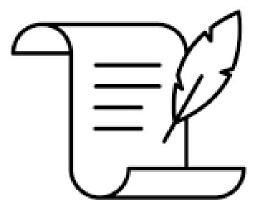
The DRD1 Constitution

Establishing a **guiding framework** to shape our collaboration

- Serves as a guiding document, embodying shared and best practices that form the foundations of our collaboration.
- ✓ It is a collective commitment, promoting transparency, effective collaboration, and a dynamic exchange of ideas.
- ✓ encapsulates the essence of how we work together, make decisions, define the common objective, collaborative policies.

It will serve in preparation of the MoU

The first draft of DRD1 constitution is currently under preparation, will be shared with CB as soon as in an appropriate shape.





First DRD1 MoU template to be released by CERN in the upcoming weeks.

Management started to work **proactively** on a template based on the RD51 MoU (<u>https://rd51-public.web.cern.ch/sites/default/files/documents/RD51-MoU-final.pdf</u>) and intend to **share the work done with CERN** soon.

If you have any specific need associated to topics covered by the MoU (ref. to plenary session document or contact us), **please reach us as soon as possible**.

A relevant example: **Intellectual Property** is a potential concern for some of our groups. Please provide us feedback or comment as soon as possible.

Common Funds

Management is proposing to follow the RD51 experience (3kCHF/y per group) with the aim of supporting scientific activities that are of interest of the collaboration, common investments, developments, infrastructures, facilities and services, co-ordination and administrative costs.

The use of Modest Common Funds **strongly recommended by the DRDC** (Detector R&D Committee, Draft Minutes of the first meeting held on Monday, 4 December 2023 https://cds.cern.ch/record/2883179/files/DRDC-M-001.pdf)

Now focusing on DRD1 upcoming activities

DRD1 Collaboration Meetings (2024)

Baseline: Three Meetings per year, one of the three outside CERN (increase to four proposed – to be discussed)

1st Collaboration Meeting, January 29-February 2 (CERN)

2nd Collaboration Meeting, June 17-21

3rd Collaboration Meeting, December (tbc)

One of the two **Outside** CERN: please reach us as soon as possible if you want to host it.



Dates for DRDC meetings

Dates in 2024 4-5 March 2024 3-4 June 2024 2-3 September 2024 (meeting TBC) 13-14 November 2024



TOPICAL WORKSHOPS

WG8 is trying to identify potential Topical Workshop for this year. Please reach them for proposals.

WP contribution at the Collaboration Meeting

Work Packages

• WP1

https://indico.cern.ch/event/1360282/contributions/5761367/attachments/2789107/4863480/DRD1_WP1_29Jan2024_v1.pdf

• WP2

https://indico.cern.ch/event/1360282/contributions/5761369/attachments/2789323/4863894/DeFilippis_WP2_DCH_DRD1.pdf

• WP3

https://indico.cern.ch/event/1360282/contributions/5761371/attachments/2788938/4863134/PW-WP3-20240129.pdf

• WP4

https://indico.cern.ch/event/1360282/contributions/5761372/attachments/2789303/4863818/WP4_presentation.pdf

• WP5

https://indico.cern.ch/event/1360282/contributions/5761374/attachments/2789352/4864124/WP5_kick-off.pdf

• WP6

https://indico.cern.ch/event/1360282/contributions/5761413/attachments/2789996/4865311/dasgupta_tessarotto_WP_3_Gas eous_photon_Detectors_2024_01_30.pdf

• WP7

https://indico.cern.ch/event/1360282/contributions/5761417/attachments/2789698/4865506/DRD1-WP7MPGD-Feb2024.pdf

- WP8 https://indico.cern.ch/event/1360282/contributions/5761418/attachments/2789826/4865125/TALK WP8.pdf
- WP9

https://indico.cern.ch/event/1360282/contributions/5761433/attachments/2789804/4864887/WP9_all.pdf



Activities are starting in all Work Packages

Working Groups Activities

Introduction Talks at the Collaboration Meeting

• WG1

https://indico.cern.ch/event/1360282/contributions/5774754/attachments/2789760/4864798/The%20organization%20of%20the%20WG1%20of%20DRD1.pdf

• WG2

https://indico.cern.ch/event/1360282/contributions/5776335/attachments/2789951/4865215/DRD1 WG2 29Jan2024 v2.pdf

• WG3

https://indico.cern.ch/event/1360282/contributions/5768332/attachments/2790630/4866505/WG3_31Jan 24.pdf

• WG4

https://indico.cern.ch/event/1360282/contributions/5767282/attachments/2790827/4866932/20240131 DRD1Collab WG4.pdf

• WG5

https://indico.cern.ch/event/1360282/contributions/5786489/attachments/2791087/4867391/DRD1_1stCo llab_WG5_intro.pdf

• WG6

https://indico.cern.ch/event/1360282/timetable/ (Friday Feb.2 9am)

• WG7

https://indico.cern.ch/event/1360282/contributions/5768391/attachments/2791385/4869163/WG7_Com monTestFacilities.pdf

• WG8

https://indico.cern.ch/event/1360282/sessions/525034/attachments/2791402/4868283/DRD1%20WG8%2 0-%20Collaboration%20Jan%202024.pdf



Activities are starting in all Working Groups...



In the next slides activities already with dates

Planned for late 2024 - possibly connected to last DRD1 Collaboration Meeting

https://indico.cern.ch/event/1360282/sessions/525034/attachments/2791402/4868283/DRD1%20WG8%20-%20Collaboration%20Jan%202024.pdf

Based on previous school with **extension to other gas detector technologies**

- Similar format: lecture program open to community + lab exercises
- Extended length 7-10 days?

DRD1 Detector School (WG8)

At CERN or other institute

- Single school for 2024, to be discussed for next years
- Regular (yearly) school targeted at students / young researchers / DRD1 community

Organising DRD1 Gaseous Detector School in 2024



Please get in contact with WG8 conveners if you are interest on contributing or hosting the school

Test Beams and Irradiation Facilities (WG7)

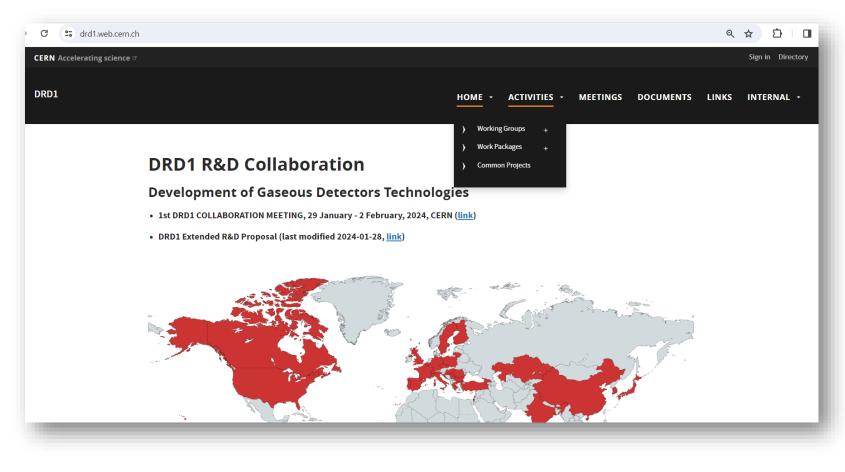


- Access DRD1 test beam at the CERN SPS extraction lines (three period of two weeks requested in April./May, June/July, August/September)
 Please contact Working Group 7 Convener if your group is interested.
- Access to the CERN GIF++ Irradiation Facility. GIF++ responsible and coordinators to be contacted, Info here:<u>https://indico.cern.ch/event/1360282/contributions/5768396/attachments/2791702/4868978/2</u>
 <u>024_02%20GIF%20DRD1.pdf</u>, please contact Working Group 7 Convener if something is unclear.

Please don't hesitate to contact us if your facility can be accessed by DRD1 groups. The information will be propagated to the community.

DRD1-WG7-convenors@cern.ch

Webpage (best place to search for information)





ALL USEFUL INFORMATION ARE ACCESSIBLE VIA THE WEBSITE

DON'T HESITATE TO CONTACT US

https://drd1.web.cern.ch/

Webpage (Activities)



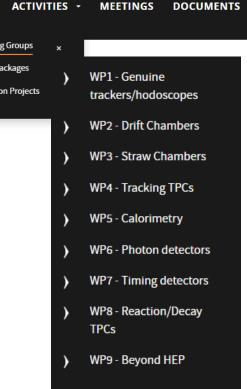
DRD1

Working Groups

- WG1: Technological Aspects and Development
- WG2: Applications
- WG3: Gas and Materials
- <u>WG4: Modeling and Simulations</u>
- <u>WG5: Electronics for gaseous detectors</u>
- <u>WG6: Production and Technology Transfer</u>
- WG7: Collaboration Laboratories and Facilities
- WG8: Knowledge Transfer, Training, Career Pro

https://drd1.web.cern.ch/

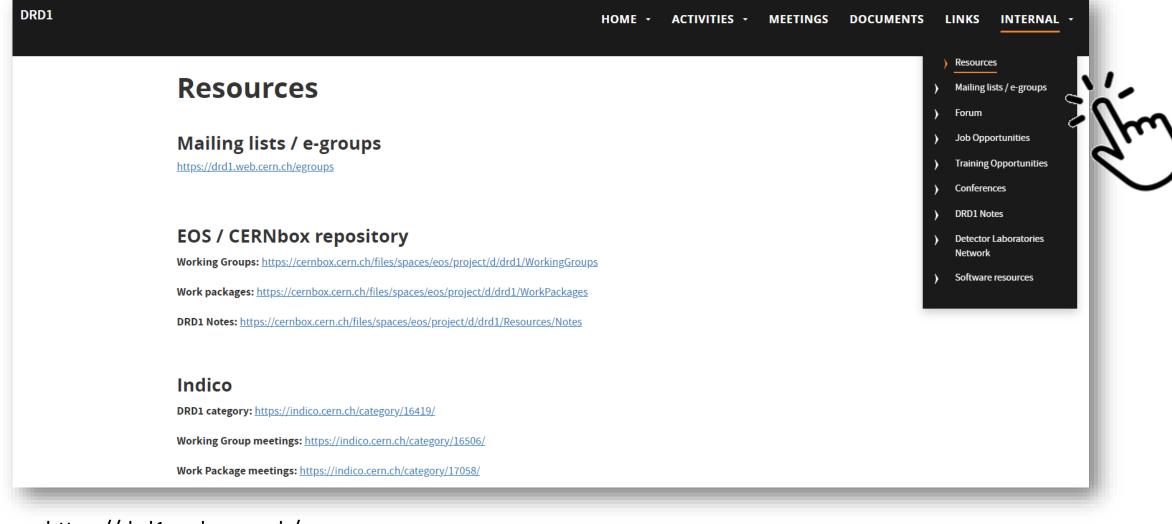
- HOME -Working Groups × WG1: Technologies Work Packages WG2: Applications Common Projects WG3: Gas and material studies WG4: Detector physics, simulations, and software tools WG5: Electronics for gaseous detectors WG6: Detector production WG7: Common test facilities WG8: Training and dissemination
- Working Groups -Objective (collaborative efforts)



LINKS

INTERNAL -

Webpage (Resources)



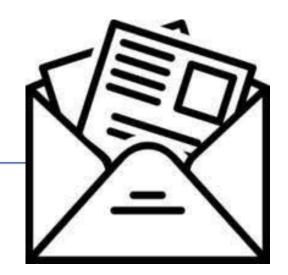
https://drd1.web.cern.ch/resources

Newsletter

DRD1 Newsletter

- Regular communication sent to **DRD1-all** mailing list
- Content:
 - Upcoming DRD1 activities (meetings, test beam, training events)
 - New job opportunities posted on website
 - Upcoming training opportunities
 - Potential updates from WGs
- Will be started from Feb/March on, prepared by Diego Gonzalez Diaz





Gaseous Detector Conferences in 2024-2025



- RPC 2024 (Santiago, Spain, 9–13 September 2024) Link
- MPGD2024 8th International Conference on Micro Pattern Gaseous Detectors (Hefei, China, 14-18 October 2024) - <u>Link</u>
- TPCs for Low-Energy Rare Event Detection (France, Paris , 15-17 December 2025 - to be confirmed)

More info will be posted on the website and will be shared in the upcoming newsletter



Thanks to all of you and see you soon...

Backup

Proposal: Towards DRD1 Organization (I)

DRD1 Management: - 2 Spokespersons, CB Chair, CB Deputy Chair(s), CB/MB Secretary,

- Technical Coordinator, Resource Coordinator,
- Overall WG Coordinator, Overall WP Coordinator
- Collaboration Board, Management Board, Science Coordination Board, Finance Board
- Spokesperson: CB-elected (EO, MT) 2-years term; future elections 2 OR 3-years term
- CB Chair: CB-elected (AC) 2-years term; future elections 2 OR 3-years term
- CB Deputy Chair(s) & CB Secretary: appointed by the CB Chair, subject to MB/CB endorsement
- Technical Coordinator: nominated by Spokespersons, subject to MB/CB endorsement/approval, in agreement with CERN Management Mandate: Responsible for DRD1 Common Assets (Tools, Facilities & Infrastructure),

 - Finance Coordinator: nominated by Spokespersons & CB Chair, subject to MB/CB endorsement/approval, in agreement with CERN Management Mandate: Responsible for DRD1 Accounts and Funds @ CERN
 Report to CB and prepare the yearly based CERN Financial Review

Proposal: Towards DRD1 Organization (II)

 Collaboration Board (1 representative per research institute) + ex-officio (SPs, CB Chair/Deputy, CB/MB Secretary, Overall WG & WP Coordinators, Technical Coordinator, Finance Coordinator)
 Mandate: policy and decision making body of the DRD1 Collaboration

 Management Board (~ 20 people): CB-wide elected members (MPGD, RPC, WIRE, ...), SPs, CB Chair/ Deputy, CB/MB Secretary, Overall WG & WP Coordinators, Technical & Finance Coordinators

Moderated by the Spokespersons

Objective: fair representation of all DRD1 detector communities, geographical regions, including diversity aspects (e.g. young researchers), coordination body among gas detector technologies, including Common fund issues

Mandate: oversee strategic implementation of the DRD1 collaboration priorities (in achieving and complying with established scientific goals and FA policies); ensure « GLOBAL » nature of the DRD1 activities; develop future DRD1 strategy for common technology developments & assets, as an input for the CB discussions & approval

- Election procedure and/or rules to define MB representation/composition needs to be defined.

 DRD1 Finance Board (not CERN RRB): FA-nominated representatives, WP Coordinators + ex-officio (SPs, CB Chair/Deputy, Overall WG Coordinators, Technical Coordinator, Finance Coordinator)
 Mandate: - initiate / prolong / terminate WPs (on request of MB & SCB);

- participate in preparation of CERN RRB Financial Reviews

Proposal: Towards DRD1 Organization (III)

- Scientific Coordination Board (~ 30 people): Overall WG & WP Coordinators, WG Conveners, WP Coordinators + SPs, DRDs Liaisons, CB Chair/Deputy, Technical Coordinator, Finance Coordinator

- Moderated by Co-Chairs (Overall WP Coordinator & Overall WG Coordinator)
- Overall WP Coordinator: nominated by Spokespersons, subject to MB/CB approval Mandate: Oversee WP Implementation and Execution,
- Overall WG Coordinator: nominated by Spokespersons, subject to MB/CB approval Mandate: Oversee WG activities (also in-charge of Common Projects)

WG Conveners (several per WG, few years mandate): nominated by SPs; subject to MB/CB endorsement *WP Coordinators:* proposed by CB representatives participating in WP; subject to MB/CB endorsement *Mandate: Execute DRD1 Core Scientific Program* (as defined by the DRD1 Management & MB/CB & FA)

- Regular meetings of extended MB (MB + Scientific Coordination Board) will be envisaged;

We propose to extend the current mandate of the WG & WP Coordinators until June 2024 DRD1 meeting.
 Once consultations with community & representatives of different gas detector technologies will converge, we will ask for CB approval for the <u>MB & Science Coordination Board Membership</u>, and updated list <u>of WG Conveners & WP Coordinators</u>