"Temporary Memorandum of Understanding"

for the

Detector Research and Development 3 (DRD3) Collaboration

Concerning Solid State Detectors

THE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH, "CERN", an Intergovernmental Organization having its seat in Geneva, Switzerland, as Host Laboratory

on the one hand,

and

the Collaborating Institutions/Funding Agencies of the DRD3 Collaboration

on the other hand,

WHEREAS

(a) The institutions listed in Annex 1 (the "Collaborating Institutions") have proposed a programme of research and development on particle detection technologies in the area of Solid State Detectors (the DRD3 R&D Programme) and, with the support of the their "Funding agencies", have agreed to form DRD3 collaboration ("the Collaboration").

(b) On the basis of an extended CERN-DRDC-2024-011 and a detailed review of the scientific merits of the DRD3 R&D Programme, the technological feasibility and estimates of the resources needed, the DRD Committee (DRDC) recommended approval of the R&D Proposal to the CERN Research Board (minutes of the 3rd meeting of the DRDC held on 3-4 June 2024);

(c) Based on the recommendation by the DRDC, the CERN Research Board approved the DRD3 R&D Programme for an initial period of three years under the reference number DRD3 (minutes of the 249th meeting of the CERN Research Board held on 5 June 2024);

(d) All experimental collaborations hosted by CERN are subject to the CERN General Conditions applicable to the Execution of Experiments (the "General Conditions"). As provided for in the General Conditions, the DRD3 R&D Programme shall be implemented and executed in accordance with a Memorandum of Understanding ("MoU") between CERN as Host Laboratory and the Collaborating Institutions (including CERN), represented for the purpose of concluding the MoU as the case may be, by their Funding Agencies;

IT IS HEREWITH UNDERSTOOD AS FOLLOWS:

Article 1 **Purpose of the MoU**

1.1 This MoU defines:

(a) The Collaborating Institutions and their Funding Agencies;

(b) The responsibilities of each Collaborating Institution in respect of:

i. design, construction and installation if applicable;

ii. maintenance and operation if applicable;

iii. dismantling and/or disposal of any substance, material, component, machinery or other item brought onto the CERN site by the Collaborating Institution for the purpose of the DRD3 R&D Programme if applicable;

iv. the intended DRD3 R&D Programme;

v. contracting with industrial partners in the context of the DRD3 R&D Programme; and

vi. organizational and financial arrangements;

(c) The list of persons with specific responsibilities within the Collaboration (including the Spokesperson, the Technical Coordinator if applicable and the Resources Coordinator, along with their contact details, which shall be included and regularly updated in the electronic register of CERN's experiment programme and projects ("the Greybook"). In the event of inconsistency with the information in the Greybook, the latter shall prevail.
(d) The application of the General Conditions;
(e) Organizational, managerial and financial guidelines and publication policies to be followed by the Collaboration; and
(f) The use of collaboration-wide infrastructure.

Article 2 **Parties to the MoU**

2.1 The parties to the MoU, referred to individually as "Party" and collectively as "Parties", are CERN as Host Laboratory and the Collaborating Institutions listed in Annex 1. Annex 2 lists the Funding Agencies of the Collaboration. A Funding Agency may be a Collaborating Institution or a body acting on behalf of one or more Collaborating Institutions in the conclusion of the MoU.

Article 3 **Obligations of CERN as Host Laboratory**

3.1 CERN's general obligations as Host Laboratory are set out in the General Conditions.
3.2 In addition, CERN is responsible for XXX (other specific CERN obligation/responsibility)

Article 4 **Obligations of the Collaborating Institutions**

In addition to its obligations set out in the General Conditions, each Collaborating Institution shall:

4.1 Contribute to the execution of the DRD3 R&D Programme, taking clear commitments, which are set out in Annexes to this MoU;

4.2 Nominate a member representing the Collaborating Institution; and

4.3 Ensure that all team members of the Collaborating Institution working on the DRD3 R&D Programme are registered in the Greybook.

4.4 Contribute to the Common Collaboration Fund (CCF), described in Article 7;

4.5 Seek financial support for contributing to the Collaboration Programme beyond the CCF, e.g. to finance common sensor production runs;

4.6 Sign a Non-Disclosure Agreements (NDA) in case the Institute requires access to confidential technologies in execution of its contribution to the Collaboration, and ensure that all members of the Institute know and comply with the obligations imposed by the NDA.

Article 5 **Equipment and Construction**

5.1 The Equipment is described in detail in the R&D Proposal. It consists of a number of Sub- systems and Equipment as set out in Annex 3.

5.2 The technical participation of each Collaborating Institution in the design, construction, installation, maintenance, operation, dismantling and disposal of the Equipment is set out in Annex 3.

5.3 Except as indicated otherwise, all cost figures in the present MoU are expressed in year 2024 currency and based on estimates valid on 1 January 2024.

Article 6 **Structure of the Collaboration**

6.1 The Collaboration shall establish a Collaboration Board representing the Collaborating Institutions and a Resources Board representing the Funding Agencies.

6.2 The management structure of the Collaboration is set out in Annex 4.1.

6.3 Persons currently holding specific responsibilities within the Collaboration are listed in Annex 4.2.

6.4 The rules governing the Collaboration's procedural matters ("By-laws") are set out in Annex 4.3.

Article 7 **Collaboration Common Fund**

7.1 To support the costs of the effort of the DRD3 R&D Programme at CERN, the Collaboration may establish a Common Fund Account ("the Common Fund"). If applicable, each Collaborating Institution shall contribute annually to the Common Fund according to mechanisms and amounts set out in Annex 5 starting from 2025. Exceptions to this rule may be granted in specific cases by the Collaboration Board. The Collaboration Board can accept in-kind contributions. To adapt to future needs of the DRD3 R&D Programme, the mechanisms and amounts of the contribution may be changed by a decision of the Collaboration Board taken with a two-thirds majority of the votes cast. The decisions by the Collaboration Board stipulated in this Article require the approval of the Finance Review Committee (FRC).

7.2 The Common Collaboration Fund (CCF) is set up to fund: scientific project of common interest not fully covered by one or more participant institutions, collaboration workshops and meetings, common research activities (e.g. test-beams, irradiations campaigns), administrative support of Collaboration, training and mobility.

7.3 These CCF will also cover expenses at CERN including, but not limited to, electronic pool charges, material cost, telephone charges, services performed by CERN or by outside contractors on the CERN site, fabrication charges from internal and external machine shops and other reasonable non-personal expenses incurred by individual members of the Collaboration in operating the DRD3 R&D Programme at CERN as well as for certain common equipment.

7.4 Funding requests for financial contributions from the CCF to specific research projects can be submitted by any Collaboration member to a review committee. The decision is made available on the DRD3 intranet and reported at the next CB meeting. Further regulations on the procedure and grant of funding are given in Annex 4.3.

7.5 The Spokesperson, the Deputy Spokesperson(s) (or the Co-Spokespersons, as the case may be), the Budget Holder and the Resources Coordinator shall each have signature authority for the Common Fund. Expenses of more than the currency value fixed in Annex 4.3.9. require the approval of the Collaboration Board in advance.

7.6 The CCF will also incorporate the remaining CCF from RD50 with spending rules described in Annex 4.3.

7.7 The Collaboration Board decides on the approval of the annual financial report of the budget holder**.**

Article 8 Work-package projects, Work Packages and Working Groups

8.1 The Collaboration Board may establish, extend and terminate Work-package, Work package projects and Working Groups

8.2 Work-package projects shall be time-limited activities with clearly defined objectives and milestones[c]. Work Packages shall be groups of Work-package projects that are intended to achieve a coherent set of objectives[d]. Annex 6 lists the Work-package projects and Work Packages of the Collaboration.

8.3 Working Groups shall reflect the internal organization of the Collaboration in support of the Work-package projects[e]. Annex 7 lists the Working Groups of the Collaboration.

8.4 For each Work-package project or Working Group, Annex 6 or Annex 7, as the case may be, shall include:

(a) A description of the Work-package project or Working Group;

(b) A list of the deliverables and related milestones as appropriate;

(c) A list of the participating Institutions;

(d) A list of the contributing Funding Agencies[f];

(e) A list of the contributions of each participating Institution to the execution of the Task or the Working Group, as the case may be;

(f) A list of functions of specific responsibilities in the Work-package project or Working Group, as the case may be;

(g) A list of persons holding functions of specific responsibilities in the Work-package project or Working Group, as the case may be;

(h) Excerpts of minutes of the Collaboration Board session and the Resources Board session and other documents evidencing the approvals set out in Article 8.5.

8.5 The terms of each Work-package project and Working Group shall be approved by the Collaboration Board and the Resources Board and, in case that a Work-package project or Working Group requires resources beyond the Common Fund of the Collaboration, also require the explicit approval[g] of all contributing Funding Agencies.

[c] For the purposes of the MoU, Tasks shall mean the smallest units that Funding Agencies may wish to commit to.
[d] Work Packages are expected to group Work-package projects into a tree structure of adequate depth.
[e] Working groups are expected to be lasting as long or longer as typical tasks, possibly spanning the whole lifetime of the collaboration.
[f] It is understood that Funding Agencies contributing to a Work-package projects or Working Group are not limited to those who are the signatories of the MoU.
[g] Explicit approval may take the form of a minuted vote in the Resources Board session~~, a confirmation of a funding~~

Article 9 **Theses, Publications and Conference Contributions**

9.1 A copy of any Ph.D. thesis or similar academic document relating to the DRD3 R&D Programme must be sent by the Collaborating Institution(s) concerned to the CERN Library for inclusion in its collection.

9.2 Any publication by a Collaborating Institution relating to the execution and results of the DRD3 R&D Programme shall list eligible authors of all Collaborating Institutions that contributed to the published work as co-authors and acknowledge the contribution of all other Collaborating Institutions.

9.3 The detailed rules concerning publications and conference contributions are further set out in the By-laws (Annex 4.3).

Article 10 **Intellectual Property**

In addition to the Intellectual Property provisions of the General Conditions, the following Articles apply:

10.1 For the purpose of this MoU, "Background IP" shall mean all intellectual property, any information and scientific and/or technical knowledge (e.g. know-how, secret processes, trade secrets, data, software in its source code version or in its object code version, files, plans, diagrams and figures, designs, formulae and/or any other type of information) in any form, whether it is patentable or not, which belongs to a Collaborating Institution prior to the entry into force of this MoU and/or which is developed outside the scope of the Collaboration.

10.2 Prior to entering into this MoU, each Collaborating Institution shall identify to the best of its knowledge the Background IP that it shall contribute to the Collaboration for the execution of the DRD3 R&D Programme, and list such Background IP in Annex 7 together with any applicable restrictions ("Included Background IP"). Subject to such restrictions, each Collaborating Institution hereby grants the other Collaborating Institutions a personal, royalty- free, non-exclusive license to use its Included Background IP for the purposes of the DRD3 R&D Programme including the right to grant non-exclusive and non-commercial sub-licenses to industrial partners for the purposes of the DRD3 R&D Programme, pursuant to Article 13. A Collaborating Institution wishing to transfer its Included Background IP or a part thereof to a third party shall notify the other Collaborating Institutions of such transfer and ensure that the rights of the Collaborating Institutions under this MoU are adequately safeguarded.

10.3 All Background IP not listed in Annex 7 is explicitly excluded from the definition of "Included Background IP" under this MoU and from any rights that otherwise would have been granted under this MoU to the Collaborating Institutions.

10.4 Access by a Collaborating Institution to Included Background IP for all purposes outside the scope of the DRD3 R&D Programme, including but not limited to commercial exploitation, shall be the subject of a separate written agreement involving the Collaborating Institutions concerned and shall be at the sole discretion of the Collaborating Institution(s) owning the intellectual property.

10.5 The Collaborating Institution(s) having developed intellectual property in the execution of the DRD3 R&D Programme (“Foreground IP”) shall inform the Collaboration Board of such developed Foreground IP once it is identified, on a confidential basis as the case may be, and of any wish to protect such Foreground IP and the proposed means of protection. Such protection shall be subject to the provisions of this MoU and shall be at the cost and risk of the protecting Collaborating Institution(s). Any commercial use of Foreground IP shall be subject to a separate agreement between the Parties owning the relevant Foreground IP.

10.6 The Foreground IP licence provided under Article 6.3 of the General Conditions shall include the right to have the Foreground IP manufactured for the purposes of the Collaborating Institutions’ scientific programmes. Any access to Foreground IP by an industrial partner shall require the conclusion of a separate agreement with the owner of the Foreground IP.

10.7 In case a Collaborating Institution having sole ownership of Foreground IP that can be protected by registered intellectual property rights does not wish to seek or maintain protection for the same, it shall so notify the Collaboration Board and CERN in writing. Interested Parties shall be entitled to protect, jointly in case of several interested Parties, such Foreground IP in their own name and at their sole cost and risk.

10.8 In case ownership of Foreground IP is vested jointly in several Collaborating Institutions, the Collaborating Institutions concerned shall jointly apply to obtain and/or maintain the relevant intellectual property rights and shall strive to set up amongst themselves, in good faith a co- ownership agreement in order to do so. The co-ownership agreement shall specify the allocation of expenses and royalties in connection with the jointly owned Foreground IP, and the share of each of the Collaborating Institutions in its development, all subject to the provisions of this MoU. In case a joint owner of Foreground IP does not wish to seek or maintain protection thereof, it shall so notify the other joint owners in writing, and the latter shall be entitled to protect, jointly in case of several other owners, such Foreground IP at their sole cost and risk, subject always to the provisions of this MoU.

10.9 A Party or Parties obtaining protection of Foreground IP shall inform all Parties thereof.

10.10 A Collaborating Institution that did not contribute to the costs of protecting Foreground IP shall not be entitled to any potential royalties generated by such Foreground IP.

Article 11 **Compliance with Export Control and Sanctions**

11.1 Each Party is responsible for complying with applicable export controls and sanctions in respect of its activity and the activity of its researchers.

11.2 A Collaborating Institution intending to export an item in the context of the DRD3 Programme shall ensure, with due regard for CERN's reputation, that the proposed export is fully compliant with the applicable export control regime.

Article 12 **Conflicts of Interest**

12.1 Representatives of Collaborating Institutions participating in the Collaboration Board and/or the Resources Board ("Representatives") shall be dedicated to and shall avoid any situations that could compromise the success, integrity and reputation of the DRD3 R&D Programme. They shall act in the best interests of the DRD3 R&D Programme, making decisions based on objective and impartial assessments. Collaborating Institutions and their Representatives shall acknowledge the importance of transparency and shall cooperate with CERN to ensure that involvement in any Conflicts of Interest is managed in an ethical and compliant manner. To this end, the Chairs of the Collaboration Board and the Resources Board shall require the members of their respective Boards to fill in a "Conflict of Interest Disclosure Form" if needed; the form is set out in Annex 9.

12.2 A "Conflict of Interest" shall mean a situation in which an individual or entity is confronted with conflicting loyalties or interests that have the potential to undermine their capacity to make impartial decisions. Such conflict could arise, among others, from personal, financial or external affiliations. Representatives shall understand that Conflicts of Interest may arise and shall commit to addressing and managing them diligently and professionally. To this end, Representatives shall:

(a) Disclose to the Collaboration Board or the Resources Board, as the case may be, any Conflicts of Interest as they arise and provide the necessary information;

(b) Abstain from participating in any decision-making processes or activities that could be influenced by the Conflicts of Interest declared herein;

(c) If required, work with the Collaboration Board or the Resources Board, as the case may be, to develop and implement appropriate strategies to mitigate the potential risks associated with these Conflicts of Interest;

(d) As may be determined by Collaboration Board or the Resources Board, as the case may be, be excluded from any voting or decision-making in relation to the potential Conflict of Interest.

Article 13 **Industrial Partners**

13.1 In the execution of the DRD3 R&D Programme, Collaborating Institutions may cooperate with industrial partners. Each such cooperation shall give rise to a written cooperation agreement between the Collaborating Institution concerned and the industrial partner(s).

13.2 A Collaborating Institution wishing to start formal negotiations with one or several industrial partners in view of a cooperation agreement shall inform the Collaboration Board of such intention as early as is reasonably possible.

13.3 Each cooperation agreement of a Collaborating Institution with one or several industrial partners shall include:

(a) A clause that stipulates that all results from the cooperation shall only be used for non- military, peaceful purposes;

(b) A reference to the MoU indicating which Articles are applicable to the industrial partner(s). Article 11 shall always be applicable to the industrial partner(s);
(c) A clause that limits access to Included Background IP, if any, to activities directly related to cooperation in the context of the DRD3 R&D Programme and that states that Included Background IP is provided on an "as-is" basis and no Party, unless explicitly stated otherwise in the cooperation agreement, provides any warranties of any kind, including, but not limited to, warranties relating to merchantability, fitness for purpose, satisfactory quality and the non-infringement of intellectual property rights held by third parties;
(d) A clause that states that should intellectual property be developed with (an) industrial partner(s) it shall constitute Foreground IP for the purpose of this MoU and the industrial partner(s) shall agree with the owners of any relevant Background IP or Included background IP. For any proposed commercial use, a written agreement shall be entered into with the owner of any relevant Background IP or Included Background IP;
(e) A clause providing for access by Collaborating Institutions for their scientific programmes to intellectual property developed with the industrial partner(s) under the cooperation agreement;
(f) In view of CERN's status as an intergovernmental organisation, a clause that provides for arbitration for the settlement of any difference between CERN and the industrial partner(s) that cannot be resolved amicably;
(g) Notwithstanding the terms of the cooperation agreement, all Parties have the right to continue to use to Included Background IP for the purposes specified in the MoU.

13.4 In case of contradiction or ambiguity, the terms of this MoU shall prevail over those of cooperation agreement with the industrial partner(s).
13.5 Any liability under a cooperation agreement shall be limited to its signatories. The Parties not signatory to the cooperation agreement shall have no liability with regard thereto, and the Party to the cooperation agreement shall keep them free and harmless from and indemnify them for any liability arising from its execution.
13.6 Before signing the cooperation agreement, the Collaborating Institution concerned shall submit it to the Collaboration Board and await its approval, which shall not be withheld unreasonably. The entry into force of the cooperation agreement is subject to the written approval of the Collaboration Board.
13.7 Industrial partners shall not be represented in the Collaboration Board nor in the Resources Board. They shall not contribute to the Common Collaboration Fund.
13.8 Team members of industrial partners may be listed as co-authors on publications to which they have contributed.

Article 14 **Observance of the MoU and the General Conditions**

14.1 The execution of the DRD3 R&D Programme is subject to the General Conditions, which form an integral part of the MoU. The current version, dated 7th December 2020, is set out under Annex 6. Unless otherwise agreed by CERN, the most recent version of the General Conditions shall apply to the execution of the DRD3 R&D Programme.
14.2 Save for Articles 10, 11 and 13 of this MoU and the provisions of the General Conditions, this MoU is not legally binding, but the Parties recognise that the success of the Collaboration depends upon their adherence to its provisions. Any default under this MoU shall be dealt with by the Collaboration Board in consultation with the CERN Management.
14.3 In case of contradiction or ambiguity, the General Conditions shall prevail over this MoU.

Article 15 **Duration of Validity of the MoU and its Extension**

15.1 This MoU is valid from the date of signing until a date not earlier than DD Month YYYY. The termination date will be set by the FRC in its YYYY session at the latest. The termination date shall require CERN's approval as Host Laboratory. *[This concerns only the final MoU, not this temporary version]*

15.2 The MoU may be extended at any time by mutual agreement of the Parties. Such extension shall require CERN's approval as Host Laboratory. Unless a Party objects, mutual agreement may take the form of an unanimous decision of the FRC. Otherwise the agreement shall be made in written form and be signed by the Parties.

Article 16 Withdrawal and Termination of Participation of Funding Agencies or Collaborating Institutions

16.1 Any Funding Agency may withdraw its support from the Collaboration by giving not less than twelve months' notice in writing to the Collaboration and the CERN Director for Research and Computing. In such an event, the financial aspects of the withdrawal shall be negotiated through the Collaboration Board and the Resources Board and approved by FRC.

16.2 Any Collaborating Institution may withdraw from the Collaboration or its membership is terminated in accordance with the General Conditions, the procedures agreed by the Collaboration and by giving notice in writing to its Funding Agency.

16.3 In its capacity as Host Laboratory of the Collaboration, CERN may terminate the participation of a Collaborating Institution upon a decision by either:

(a) CERN Council restricting collaboration with an individual Collaborating Institution or with institutions from a particular State; or

(b) The President of CERN Council under clause 10.2 of the General Conditions; or

(c) The Collaboration Board with a two-thirds majority following a motion proposed on either CERN's initiative or the initiative of at least three Collaborating Institutions.

16.4 The provisions of Article 10 (Intellectual Property) and Article 14 (Observance of the MoU General Conditions) shall survive withdrawal or termination howsoever caused.

Article 17 Participation of Additional Institutions

17.1 Subject to the agreement of the Parties via an approval by the Collaboration Board, additional institutions may join the Collaboration at any time during the lifetime of the MoU through the conclusion of an Addendum to the MoU setting out the specific terms of collaboration for the joining institution(s) and with explicit mention that the terms of the MoU (including all existing Addenda and Amendments) apply. The terms of the Addendum shall be negotiated by the Collaboration, which reserves the right to request additional contributions from such institution(s). The Addendum shall be signed by CERN as the Host Laboratory, a Spokesperson (or the Co-Spokespersons, as the case may be) as representative of the Collaboration, and by the joining institution(s), represented, as the case may be, by their Funding Agency.

17.2 The decisions by the Collaboration Board mentioned in this Article require the approval of the FRC.

Article 18 Amendments and Annexes

18.1 The MoU may be amended at any time. Without prejudice to extensions or updates under Articles 15.2 and 18.4, any Amendment shall be made in writing and is subject to prior approval by the Collaboration Board, the Resources Board and CERN as the Host Laboratory.
18.2 All the Annexes are an integral part of this MoU.
18.3 The Collaboration shall make every effort to ensure that the information contained in the Annexes to this MoU is kept up to date. To this end, it shall review the information at least annually.
18.4 The Collaboration shall have authority to decide on any update of information in the Annexes, without the need for signature of a corresponding Amendment.

This MoU is signed by the authorized representatives of CERN as the Host Laboratory of the DRD3 R&D Programme and by a Collaborating Institution or Funding Agency, as the case may be.

For the European Organization for Nuclear Research (CERN)	For the <institutionOrFundingAgency>
Signed in Geneva, Switzerland,	Signed in <town>, <country>,

List of Annexes

Annex 1 **Collaborating Institutions and their Contact Persons**

#	Country	Collaborating Institution	Contact	Email
1	Austria	Institut für Hochenergiephysik der Österreichischen Akademie der Wissenschaften (OEAW-HEPHY Vienna)	Thomas Bergauer	thomas.bergauer@oeaw.ac.at
2	Brazil	Federal University of Rio Grande do Sul (UFRGS)	Gustavo Gil da Silveira	gustavo.silveira@cern.ch
3	Brazil	Universidade de São Paulo	Marco Aurelio Lisboa Leite	leite@cern.ch
4	Canada	Carleton University - National Research Council	Thomas Koffas, Ryan H. Griffin	Thomas.Koffas @ cern.ch
5	Canada	Simon Fraser University	Bernd Stelzer	stelzer @ sfu.ca
6	Canada	TRIUMF	Oliver Stelzer-Chilton	stelzer-chilton@triumf.ca
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8	Chile	Universidad Técnico Federico Santa María	Nicolas Viaux	nviauxma@cern.ch
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10	China	Ludong University	Li Zheng	3636@ldu.edu.cn
11	China	Jilin University	Weimin Song	weimin.song@cern.ch
12	China	University of Science and Technology of China	Yanwen Liu	yanwen@ustc.edu.cn

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18	Czech Republic	FNSPE CTU	Peter Svihra	peter.svihra@cern.ch.
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Annex 2 Funding Agencies and their Representatives

#	Country	Collaborating Institution	Represented by Funding Agency	E-mail of the contact
1	Austria	Institut für Hochenergiephysik der Österreichischen Akademie der Wissenschaften (OEAW-HEPHY Vienna)		
2	Brazil	Federal University of Rio Grande do Sul (UFRGS)		
3	Brazil	Universidade de São Paulo		
4	Canada	Carleton University - National Research Council		
5	Canada	Simon Fraser University		
6	Canada	TRIUMF		
7	Chile	Universidad Andrés Bello, SAPHIR Millennium Institute of ANID		
8	Chile	Universidad Técnico Federico Santa María		
9	China	Institute of High Energy Physics, CAS, IHEP		
10	China	Ludong University		
11	China	Jilin University		
12	China	University of Science and Technology of China		
13	China	Institute of Microelectronics, Chinese Academy of Sciences (IMECAS)		
14	China	Dalian University of Technology		
15	Croatia	Ruder Boskovic Institute		
16	Croatia	University of Zagreb, Faculty of Electrical Engineering and Computing, Department of Electronics, Micro and		

		Nano Electronics Laboratory		
17	Czech Republic	Charles University		
18	Czech Republic	FNSPE CTU		
19	Czech Republic	Institute of Experimental and Applied Physics, Czech Technical University		
20	Czech Republic	Institute of Physics, Czech Academy of Sciences, Prague		
21	Czech Republic	University of West Bohemia		
22	Finland	Helsinki Institute of Physics (HIP)		
23	Finland	Lappeenranta-Lahti University of Technology (LUT)		
24	France	Aix-Marseille University		
25	France	CEA-Irfu		
26	France	CPPM Marseille		
27	France	IJCLab Orsay		
28	France	Institut pluridisciplinaire Hubert Curien (IPHC)		
29	France	IP2I Lyon		
30	France	Laboratoire AstroParticule et Cosmologie (APC)		
31	France	Laboratoire de Physique Subatomique et de Cosmologie LPSC		
32	France	LPNHE Paris		
33	Germany	University of Freiburg		
34	Germany	CiS Forschungsinstitut für Mikrosensorik GmbH		
35	Germany	DESY		
36	Germany	Fraunhofer IZM		
37	Germany	GSI Helmholtzzentrum für		

		Schwerionenforschung GmbH		
38	Germany	Halbleiterlabor der Max-Planck-Gesellschaft		
39	Germany	Heidelberg, Physics Institute		
40	Germany	II Institute of Physics, University of Göttingen		
41	Germany	Institut für Physik Humboldt-Universität zu Berlin		
42	Germany	Institute for Experimental Physics, University of Hamburg		
43	Germany	Karlsruhe Institute of Technology (KIT)		
44	Germany	Max-Planck-Institut für Physik (Werner-Heisenberg-Institut)		
45	Germany	TU Dortmund University, Department of Physics		
46	Germany	University of Bonn, Physikalisches Institut		
47	Germany	University of Muenster, Institut fuer Kernphysik		
48	Germany	Universität Siegen		
49	Germany	Hochschule RheinMain, Wiesbaden		
50	Greece	Aerospace Science and Technology Department, National and Kapodistrian University of Athens		
51	Greece	Institute of Nuclear and Particle Physics National Center for Scientific Research (NCSR) Demokritos		
52	Greece	National Technical University of Athens		
53	Greece	University of Ioannina		
54	India	Indian Institute of Technology Madras		
55	India	National Institute of Science Education and Research		

56	India	University of Delhi		
57	India	Tata Institute		
58	Israel	Tel Aviv University		
59	Israel	Weizmann Institute of Science		
60	Italy	Fondazione Bruno Kessler		
61	Italy	INFN and University of Genova		
62	Italy	INFN - Perugia		
63	Italy	INFN - Torino		
64	Italy	INFN - Trieste		
65	Italy	INFN - Padova		
66	Italy	INFN - Bari		
67	Italy	INFN - Firenze		
68	Italy	INFN - Pisa		
69	Italy	INFN - Lecce		
70	Italy	INFN - Milano		
71	Italy	INFN - Milano Bicocca		
72	Italy	University of Trento and TIFPA-INFN		
73	Italy	UniPavia		
74	Japan	KEK, High Energy Accelerator Research Organization		
75	Korea	Kyungpook National University, KNU		
76	Lithuania	Vilnius University, Institute of Photonics and Nanotechnology		
77	Montenegro	University of Montenegro		
78	Norway	Department of Physics and Technology, University of Bergen		
79	Norway	University of Oslo, Department of Physics		

80	Pakistan	National Centre for Physics(NCP)		
81	Poland	AGH University of Krakow, Faculty of Physics and Applied Computer Science		
82	Poland	Institute of Plasma Physics and Laser Microfusion		
83	Portugal	LIP, Laboratório de Instrumentação e Física Experimental de Partículas		
84	Romania	Horia Hulubei National Institute for R\&D in Physics and Nuclear Engineering		
85	Romania	Institute of Space Science - INFLPR Subsidiary		
86	Romania	National Institute of Materials Physics		
87	Slovenia	Jožef Stefan Institute (JSI)		
88	Spain	Centro Nacional de Aceleradores, CNA (Universidad de Sevilla, Junta de Andalucía, CSIC)		
89	Spain	Centro Nacional de Microelectrónica (IMB-CNM-CSIC)		
90	Spain	Escuela Técnica Superior de Ingeniería (School of High Engineering), University of Sevilla		
91	Spain	Galician Institute for High Energy Physics (IGFAE)		
92	Spain	Instituto de Física Corpuscular, IFIC, (CSIC-UV)		
93	Spain	Institut de Fisica d'Altes Energies (IFAE)		
94	Spain	Instituto de Física de Cantabria (CSIC-UC)		
95	Spain	Instituto Tecnológico de Aragón (ITAINNOVA)		

96	Switzerland	CERN		
97	Switzerland	IPA, ETH Zürich		
98	Switzerland	LHEP, University of Bern		
99	Switzerland	PSI		
100	Switzerland	University of Zurich		
101	Switzerland	UNIGE		
102	the Netherlands	PARTREC		
103	the Netherlands	ESA		
104	the Netherlands	Nikhef		
105	Türkiye	Ankara University		
106	Türkiye	Bolu Abant Izzet Baysal University		
107	Türkiye	Istanbul University-Cerrahpasa, Insistute of Nanotechnology and Biotechnology		
108	United Kingdom	Brunel University London		
109	United Kingdom	Cavendish Laboratory, University of Cambridge		
110	United Kingdom	Daresbury Laboratory, STFC		
111	United Kingdom	Glasgow University		
112	United Kingdom	Queen Mary University of London		
113	United Kingdom	University of Manchester		
114	United Kingdom	University of Birmingham		
115	United Kingdom	University of Bristol		
116	United Kingdom	University of Edinburgh		
117	United Kingdom	University of Liverpool		
118	United Kingdom	University of Oxford		

119	United Kingdom	University of Warwick		
120	United Kingdom	Lancaster University, UK		
121	United Kingdom	RAL STFC		
122	USA	Argonne National Laboratory		
123	USA	Brookhaven Narional Laboratory		
124	USA	Brown University		
125	USA	Fermilab		
126	USA	Los Alamos National Laboratory		
127	USA	Oak Ridge National Laboratory		
128	USA	Ohio State University, Department of Mechanical and Aerospace Engineering		
129	USA	Ohio State University		
130	USA	Purdue University		
131	USA	Santa Cruz Institute for Particle Physics (SCIPP) UC Santa Cruz		
132	USA	SLAC National Accelerator Laboratory		
133	USA	Radiological Instrumentation lab., UC Santa Cruz		
134	USA	University of Illinois at Chicago		
135	USA	University of New Mexico		
136	USA	University of Tennessee-Knoxville		
137	USA	Caltech		
138	USA	Duke University		
139	USA	Lawrence Berkeley National Laboratory		
140	USA	Oregon University		

141	USA	Stony Brook University		
142	USA	University of Chicago		
143	USA	University of Massachusetts, Amherst		
144	USA	University of Texas at Arlington		
145	USA	University of Washington		
146	USA	University of Syracuse		

Annex 3 Sub-Detector Structure and Technical Participation of the Collaborating Institutions

Responsibility	Deliverable(s)	Institution(s)

Annex 4 The Organizational Structure of the Collaboration

4.1 Management Plan and Structure of the Collaboration

4.1.1 Collaboration bodies

The bodies responsible for the management of the Collaboration are the Collaboration Board, the Spokesperson and/or his/her deputies, the WG and WP Conveners, Project office including Budget Holder of the Common Collaboration Fund and Resource Coordinator, Cross-DRD/CPAD coordination and Speakers committee.

4.1.2 Resource Board (RB)

Representatives of FA listed in Annex 2 form a resource board which regularly meets once a year. If requested by at least three RB members or DRD3 management (SP and deputies) a meeting of the RB can be called to discuss financial aspects of the collaboration.

4.1.3 Collaboration Board (CB)

The Collaboration Board is the highest decision-making body. It defines the Research Programme of the Collaboration including the number and topics of the WG and WP lines.

- All Institutes shall nominate an Institute Representative to the Collaboration Board.
- The Spokesperson and/or his/her deputy(es), the WP and WG Conveners, the Project office leader and Budget Holder of the Common Collaboration Fund and the Resource Coordinator are ex-officio members of the Collaboration Board. The Collaboration Board chair can appoint further ex-officio members.
- The Collaboration Board elects its chair among CB members and his/her deputy among the Collaboration members for a period of 3 years. The Collaboration Board approves the deputy chair on the proposal of the CB chair.
- Every institute has one vote in the Collaboration Board. Ex-officio members don't have voting rights unless they are also institute representatives.
- The Collaboration Board reviews and agrees on the budget.
- The Collaboration Board decides on the membership of the Collaboration.
- The Collaboration Board elects the Spokesperson. The spokesperson term is 3 years. All the appointed positions are linked to the sposkesperson's term.
- The CB can define a search committee to select candidates for the Spokesperson position. Members of the search committee cannot stand for the position of the Spokesperson.
- The candidates will be reported to the CERN Research Board for approval before the election.
- The Spokesperson(s) can nominate up to three deputies. The deputy(ies) must be approved/endorsed by the Collaboration Board.
- Resource Coordinator and the Budget Holder of the Common Collaboration Fund from within the members of the Collaboration are elected for a period of 3 years.
- The Spokesperson is responsible for officially representing the Collaboration and for liaising with official CERN bodies such as the DRDC board, the Research Board etc.
- The Spokesperson appoints the Work Group and Work Package Conveners as many as she/he deems needed; the appointments must be endorsed by the Collaboration Board by the next collaboration board meeting.
- The Spokesperson can nominate up to three deputies. The deputy(ies) must be approved/endorsed by the Collaboration Board by the next collaboration board meeting

4.1.4 Work Group and Work Package

- A Work Group (WG) represents a sustained and strategic Research and Development (R&D) effort tied to specific technologies, purposes, applications, or methods. Its primary objective is to advance specific research goals. Importantly, this encompasses R&D activities that may extend beyond the scope of specific DRDTs, e.g. R&D outside particle physics application, but they must remain closely related to semiconductor detectors.
- A Work Package (WP) represents a strategic Research and Development (R&D) initiative closely tied to specific DRDTs. Its purpose is to advance research goals, aligning with the objectives outlined in the DRDTs. WPs are essential for achieving targeted outcomes within the broader context of detector technology development.
- Each WP consists of WP projects. WP projects typically involve a subset of DRD3 institutions collaborating to prepare a project proposal. These proposals are resource-loaded, with well-defined milestones and deliverables. The WP leaders shape the WP projects into Work Package proposals which are reviewed by DRD3.
- The Work Group Conveners are responsible for coordinating the research activities of the Work Group as defined by the Collaboration Board.
- The Work Package Leaders steer the WP activities and are responsible to oversee the spending of the strategic funding. The WG conveners can serve also as Work Package leaders.
- The Work Package Leaders, the Work Group Conveners together with the spokesperson, the spokesperson deputy(ies) and the Collaboration Board Chair are responsible for preparation of the WP for strategic funding.

- Work Packages projects are described in Annex 6.

4.1.5 Tasks and procedures of collaboration bodies

Details on tasks and procedures of the Collaboration bodies responsible for its management are described in Annex 4.3.

4.1.6 Duration of appointments ~~and appointment of DRD3 EXSO~~

All nominations following election by the Collaboration Board and the Resources Board are for terms of three years each; re-elections are permitted.

4.1.7 Appointment of DRD3 EXSO

The Leader of the CERN Department responsible for the R&D programme of which the DRD3 R&D Programme is part shall appoint an Experimental Safety Officer (EXSO) on the proposal of the Spokesperson. The rights and responsibilities of the EXSO are defined in the Safety Regulation SR- SO document.

4.2 Persons Currently Positions of Specific Responsibilities Within the Collaboration

Persons currently holding Management and other senior positions within the Collaboration

Spokespersons	Gregor Kramberger (JSI, Slovenia)

Deputy Spokesperson	Michael Moll (CERN)
Deputy Spokesperson	Sally Seidel (University of New Mexico, USA)
Deputy Spokesperson	Ingrid Gregor (DESY, Germany)

CB Chair	Giulio Pellegrini (IMB-CNM-CSIC, Spain)
CB Chair Deputy	Roberta Arcidiacono (Universita' del Piemonte Orientale & INFN Torino, Italy)

Budget holder	Daniel Muenstermann (HRM/Lancaster)
Resource coordinator	TBD

The current positions of the WG and WP conveners are defined in Annex 6,7

4.3 Collaboration By-Laws

4.3.1 Publication policy

The results of the research work of the Collaboration can be published in the following forms:

- Regular status reports. All members of the Collaboration are authors. The members of the Collaboration Board maintain the list of authors from their Institute.
- Publications in scientific journals.
    - Reviews covering the research programme of the whole Collaboration. All members of the Collaboration are authors. Where author lists are subject to a length limitation, it is permissible to use, as authors list, the name of the author only, along with the statement “On behalf of the DRD3 Collaboration” and a footnote indicating the web page where the complete authors list is given.
    - Reviews and specialised articles describing the research work of one or several research projects. The Conveners concerned discuss the contents and, if required, decide on the list of authors in agreement with the involved Institutes.
    - Papers produced in the framework of the activity of DRD3. Before publication the authors signing for the paper must inform the corresponding Conveners and insert the manuscript in a dedicated list linked to the DRD3 home website (e.g. CDS …). The paper should be published with the explicit notation: "This work has been performed in the framework of the DRD3 Collaboration" or “This work has partly been performed in the framework of the DRD3 Collaboration”. If the work has been funded also by CCF the acknowledgements should include “The work was partially funded by DRD3 common collaboration fund.”.
    - The Collaboration promotes the publication of scientific papers in open access mode. Internal and external DRD3 notes.
- The review of part or all the results of the research work of the Collaboration can be presented at workshops and conferences as:
    - Contributed talks. The speaker discusses the abstract with the Conveners. Written proceedings are treated as normal publication (see above).
    - Invited talks. In the case that the invitation is received by the Collaboration, the speakers are nominated by the Speakers committee and confirmed by the Spokesperson. Written proceedings are treated as normal publication (see above).

Where presentations are subject to a length limitation, it is permissible to use, as authors list, the name of the speaker only, along with the statement “On behalf of the DRD3 Collaboration” and a footnote indicating the web page where the complete authors list is given.

4.3.2 Observance of the DRD3 rules and the General Conditions

Save for the provisions of the CERN General Conditions, this document is not legally binding, but the Parties recognise that the success of the Collaboration depends upon their adherence to its provisions. Any default under its provisions shall be dealt with by the Collaboration in consultation with the CERN Management.

4.3.3 Extension of Temporary DRD3 MoU

The temporary DRD3 MoU may be extended at any time by the approval of the Collaboration Board.

4.3.4 Withdrawal of Funding Agencies or Collaborating Institutions

Any Collaborating Institution may withdraw from the Collaboration by giving a year notice in writing to the Collaboration Board Chair and the Spokesperson(s). In such an event, the Collaborating Institution shall, in accordance with the General Conditions, settle its outstanding commitments under these rules and its engagements taken within the Collaboration prior to the effective date of its withdrawal.

4.3.5 Relation to other Experiments

DRD3 can collaborate with other experiments or DRD collaborations to perform specific developments in line with the DRD3 research programme. The activities shall be discussed and approved by the CB. Membership in the DRD3 Collaboration does not establish any constraints on Collaborating Institutes to join other experiments or collaborations.

4.3.6 Communication within the collaboration

The main channel of communication is the web page (https://drd3.web.cern.ch/) where all the official announcements will be published. The webpage will be maintained by the webmaster responsible, under the supervision of WG8 and the DRD3 management.

4.3.7 Details on tasks and procedures of the Collaboration bodies responsible for its management

4.3.7.1 Collaboration Board

The Collaboration Board (CB) is composed of one nominated Institute Representative (IR) per Institute. The spokesperson(s) and/or his/her deputy(es), the CB chair and his/her deputy, the Work Group and Work Package Conveners, the Resource Coordinator and the Budget Holder of the CCF attend the CB as ex-officio members; the CB chair can invite additional experts as ex-officio members. CB chair has the right to invite members of DRD3 to participate ex-officio in the meeting.

4.3.7.1.1 In case a nominated IR cannot attend a CB meeting, he/she can nominate an IR delegate (proxy) representing the institute and carrying all rights and duties of the IR. The Institute shall inform the CB chair in advance of the meeting.

4.3.7.1.2 The CB elects among the members of the Collaboration the CB Chair.

4.3.7.1.3 Every Institute, represented by the IR or a proxy, has one vote. Ex-officio members do not have voting rights in their capacity as such.

4.3.7.1.4 A CB vote is valid if at least one third of the voting members are present, in person or online, except in the case described in 4.3.7.1.5. The decision is taken by a simple majority of the members present; if there is a tie, the vote of the institution of the person chairing the meeting is the deciding one.

4.3.7.1.5 A vote on a change of the Annexes of MoU (when approved) requires the absolute majority of the members of the CB.

4.3.7.1.6 To start a procedure to change parts of the MoU other than the Annexes, requires a two-thirds majority of the votes cast in the Collaboration Board.

4.3.7.1.7 The CB elects the Spokesperson by secret vote. Every voting CB member has one vote to be cast for a proposal. A proposal is elected if it gets the majority of the submitted votes. Failing majority, the election is repeated with the two proposals that got the most and second most votes in the first round, eliminating all other proposals.

4.3.7.1.8 Other elections, votes and nominations are performed openly unless one or more CB member(s) request a secret procedure, in which case the election, vote or nomination must be held secretly.

4.3.7.1.9 The CB can ask at any time for oral or written progress reports, minutes or other information from the committees or persons it has appointed.

4.3.7.1.10 The absolute majority of the CB can revoke any appointment at any time, if it is not satisfied with the quality or progress of the work.

4.3.7.1.11 In case of institutes that fail to contribute actively to the Collaboration, the CB can request the spokesperson to contact that institute to enquire about the possibility or intention to provide a more active participation. In the case this latter could not be achieved, the institute is asked by the CB chair to resign from the collaboration or dismiss the institute from the collaboration.

4.3.7.1.12 Draft minutes of the CB meetings shall be distributed no later than one month after the meeting, and be submitted for approval to the following meeting.

4.3.7.2 Collaboration Board Chair

4.3.7.2.1 The CB Chair calls the CB meetings, prepares and distributes the draft agenda at least one week in advance of the respective meeting, and chairs the CB meetings.

4.3.7.2.2 The CB Chair handles requests for changes of the Collaboration membership.

4.3.7.2.3 The CB Chair helps the Spokesperson maintain the communication with the Institutes.

4.3.7.3 Collaboration Board Chair Deputy

4.3.7.3.1 The CB Chair Deputy replaces the CB Chair in case of absence or unavailability.

4.3.7.3.2 The CB Chair Deputy serves as scientific secretary of the CB and in particular writes the minutes.

4.3.7.3.3 In case the CB Chair Deputy is replacing the CB Chair, he nominates a member of the CB to write the minutes.

4.3.7.4 Spokesperson and/or Spokesperson Deputy

4.3.7.4.1 In case of single Spokesperson: the Spokesperson is assisted in his/her tasks by the Spokesperson Deputy(es). In case of Co-Spokespersons: The Co-Spokesperson takes all decisions in mutual agreement.

4.3.7.4.2 The Spokesperson officially represents the DRD3 Collaboration.

4.3.7.4.3 The Spokesperson executes the decisions taken by the CB.

4.3.7.4.4 The Spokesperson ensures the coordination within the Collaboration.

4.3.7.4.5 The Spokesperson appoints the Conveners of the WG and WP Leaders for the endorsement by the CB. They must be Collaboration members with relevant experience and expertise proven by outstanding contributions in the field, who can overview the overall quality of the research products of the respective projects.

4.3.7.4.6 The Spokesperson promotes diversity and harmony within the collaboration, also by fair and equal representation of each institute regardless of its financial status; direct and profitable contacts among the different research projects; continuous and direct exchange of information, data, literature within the Collaboration to optimise the achievement of the intended results; close collaboration with other R&D projects and experiments at CERN and outside.

4.3.7.4.7 The Spokesperson chairs the review committee of the Common Collaboration Fund (CCF) project.

4.3.7.5 Work Groups and Work Packages Conveners

4.3.7.5.1 WG conveners and WP leaders coordinate the activities of their respective research. They identify the needs of the groups Work within this activity to fulfil the goals described in DRD3 proposal document when available and in line with the 2021 ECFA detector research and development roadmap.

4.3.7.5.2 WG and WP conveners stimulate exchanges of information, literature, data and samples within the groups involved in the project, and advance towards common publications.

4.3.7.5.3 WG and WP conveners contribute to the status reports of the collaboration

4.3.7.5.4 WG and WP conveners ensure that the publication policy is correctly followed. If needed, they arrange for an internal refereeing system to ensure correct citations and author listing.

4.3.7.5.5 WG and WP conveners ensure fruitful and continuous connections with the other Research Lines.

4.3.7.5.6 WG and WP conveners can, with the agreement of the Spokesperson, nominate project leaders for specific subtasks within the Research Line.

4.3.8 New Institutes joining, Industrial Partners, Observers and Relation to other Experiments

Joining Collaboration

DRD3 is open to all research institutions interested in semiconductor detector technologies for future accelerators in line with the 2020 Update of the European Strategy for Particle Physics. The institute applying for membership is required to file in the application which has to include short description of the following points:

- Name of the institution and contact person
- Names of group members and fraction of their time devoted to DRD3 activities.
- Current and past research activities
- Fields of interest within DRD3 collaboration
- Available resources (instrumentation, irradiation facilities, design and manufacturing facilities etc.)

The application form should be sent to the CB chair at least two weeks before the next CB meeting. The joining institution representative is required to present the group at the CB meeting. The group becomes a member after being approved by a majority of the CB and paying the annual contribution fee starting from the year they join.

Leaving Collaboration

The membership is terminated by:

- a member's decision to leave by a notification of CB of leaving. The outstanding contributions to CCF should be settled before that.
- non-paying to CFF for three years
- major violations of CERN “General agreement”.
- in cases of long-term absence of scientific contribution from member institutes, the CB chair shall approach the institutes to understand their commitment to DRD3

Collaboration observer

An observer to collaboration is an institution who shares interest in the topic of research, but it is not ready for the full commitment of a member. The observer institution is not contributing to CCF and takes no part in decisions taken by the collaboration. They can take part in the common projects and can be invited to present their work at collaboration meetings. They are not co-authoring common DRD3 publications involving all the collaboration unless they contributed to the scientific work presented in the publication.

Industrial partner

Industrial partner is a commercial enterprise with which has the rights of the observer. They are co-authors to common DRD3 publications involving all the collaboration.

4.3.9 Common Collaboration Fund

Every Collaborating Institute contributes to the Common Collaboration Fund (CCF). Regular annual contribution fee is 2000 CHF per institution and is subject to change by the CB. The CCF is used to finance common projects and to support common activities of collaboration which provide mutual benefits and promote the collaboration. Expenditures should be approved by the CB.

The CB can grant a reduced contribution to very small research groups or groups from economically weak institutes upon a formal request for a period of three years.

The CB can accept in-kind contributions. For specific project funding (the scientific activity within projects, e.g. material acquisition, processing costs) additional contribution could be asked to participating institutes.

Payment to the CCF is a requirement for keeping status of a member institution. After missing three yearly contributions the non-paying institute is downgraded to observer status for the following year. The membership (observe/full member) is terminated upon failing to contribute to CCF for three years. Older outstanding contributions to CCF are settled first.

The institution that ceased to be a member because of missing payments can re-join the collaboration upon settling all outstanding fees or reach any other agreement with CB.

Expenses of currency 50 kCHF or more require the approval by the Collaboration Board in advance.

4.3.10 Rules for funding of common projects

The scientific projects proposed by collaborating institutes can benefit from CCF, where the following rules should be respected for each common project:

- A project is eligible for CCF contribution if proposed by a minimum of three member institutes excluding observers and industrial partners. The project must be presented to the DRD3 community before the submission.
- A maximum contribution from CCF is limited to 5000 CHF per collaborating institute.
- A maximum of 50% of the total project cost can be covered by CCF. In-kind contributions can be part of the total project budget.
- With approval of the CB up to 70% can be funded from the CCF. With approval of the CB the limit of 5000 CHF per participating DRD3 institute can be lifted.

Any project considered for CCF participation should be submitted to the spokesperson. The project is reviewed by the Spokesperson and his/she deputy(es), the Work Groups and Work Packages Conveners and the CB chair and CB deputy. Upon positive review it is accepted for funding and the CB is informed. The project as well as its evaluation is made available on the Collaboration intranet.

The projects funded from CCF must report on their progress at collaboration meetings and shall provide an "end of the project" report. The scientific results obtained by the institutes who received funding from the common projects should be presented and made available to the whole collaboration.

Common funds projects can support Early-Stage Researchers (ESR) to participate in scientific activities related to the activity of the DRD3 collaboration (i.e. common test beams, irradiations, etc…). The mobility projects may cover the travel and/or the accommodation cost of the researchers. This project must respect the following rules:

- mobility projects must be connected to the scientific objectives of the Collaboration.
- A project is eligible for CCF contribution if proposed by a minimum of one member institute excluding observers and industrial partners.
- The maximum contribution to mobility requests is CHF 2500 per project and per collaborating institute.
- A mobility project can be added to the common fund scientific project .
- The total amount of common funding dedicated to mobility projects is limited to 25.000 CHF per year.
- With the approval of the CB, the annual contribution towards mobility projects for that particular year can be augmented.

The rules for the approval of the mobility projects are the same as for scientific projects.

With the approval of the Collaboration Board the common funds could be used to pay the administrative support necessary for the operation of the collaboration. A maximum contribution from CCF is limited to 50.000 CHF/year for this activity.

4.3.11 Transition from RD50 to DRD3

The transition measures reflect the decision of the RD50 Collaboration Board, unanimously voted for on 30.11.2023 and have been agreed between the last RD50 spokesperson (M. Moll) and the first DRD3 spokesperson (G. Kramberger).

The RD50 Common project

- The RD50 running common projects will continue to get funded from the RD50 common fund after the common fund transfer to DRD3. The projects continue in the framework of DRD3.

The RD50 Common fund

The RD50 common fund (team account) will be transferred to the DRD3 collaboration but remain under the control of the RD50 collaboration members and the RD50 resource coordinator as of 31.12.2023.

- The RD50 common fund holds funds allocated to RD50 common projects and funds not allocated to any common project. These funds are handled differently as described below.
- The funds allocated to RD50 common projects will remain under the control of the institutions participating in the project. The running RD50 projects can spend the resources within three years after the foreseen end of duration of the project in the project request. This period can be prolonged when activities related to the project are still ongoing. Any unspent money from the project will be treated as unallocated in the RD50 common fund.
- The unallocated resources in the RD50 common fund will be transferred to the DRD3 common fund. These RD50 resources will be available to DRD3 common projects for those groups within the given DRD3 project which were also members of RD50 on 31.12.2023.
- The handling, ruling and approval of DRD3 common projects is entirely regulated by DRD3.
- DRD3 projects with participation of the RD50 groups will be allowed to include RD50 fund in the financial scheme of the DRD3 common project in accordance with the rules stated in the RD50 MoU. Those resources will count as a direct financial contribution from the participating institute. The scheme is in place until the money runs out.

4.3.12 Work Package projects

Preparation of WP projects

- The call will be issued to CB representatives for WP project proposals along the lines of WPs listed in the scientific proposal and fulfilling DRDTs. (Link of the template to be added and agreed)
- The groups will organise the consortium of interested parties planning to contribute the resources (DRD3 members) and will prepare resource loaded projects and elect/appoint a leader/deputy and organisation structure of the WP project (similar to projects in other DRDs).
- The number of WP projects is not limited – will be added if there is enough interest, the activity needs large enough funding and the project is in line with DRDTs and scientific proposals.
- WP leaders will look for synergies between similar projects, shape the proposals (merge/optimise resources) and review the projects before submitting them to the DRD3 steering committee for approval.

4.3.13 Role of Deputy Spokespersons

The DRD3 collaboration management comprises the Spokesperson and a team of deputies, with the number of deputies determined by the Spokesperson.

- Each of the members of the Management is responsible for setting up, monitoring, advising and steering (if or when needed) certain WGs and WPs that are largely linked to those WGs..
- The management selects and appoints WGs conveners taking into account composition of the collaboration (geographical, research, gender…).
- The management advises/assists the CB chair/deputy on selection of the speaker's committee and appoints project resource coordinator/budget holder/common fund.
- The management coordinates the Cross-DRD coordination team composed of interested WG leaders
- The management sets up the Resource coordination/Project office.
- Management team is responsible for setting up a Secretariat which will take care of running administrative support

4.3.14 Other bodies of collaboration

To ensure the proper functioning of the DRD3 collaboration, the following bodies will be established by the management and endorsed by the Collaboration Board.

- **Secretariat:**
    - Responsible for organising workshops and meetings.
    - Handles invitations and visas.
    - Manages CERN-related paperwork.
    - Assists in organising secondments.
    - Maintains the organisation's website.
    - The secretariat's location will be decided by the CB.
    - The secretariat may be shared with other DRDs with the approval of the CB.

- **Project office, resource Coordinator and Budget holder**:

  The Resource coordinator and Budget holder form a project office. They

  - handle bookkeeping
  - manage the common fund (advising, evaluating)
  - assist in possible tender preparations
  - advise and help to negotiate WP projects proposals with FA
  - Finances ESR visits/secondments from DRD3 common funds (pending CB confirmation).

  The Resource coordinator and Budget holder may also hold other positions (WG/WP).

- **Cross-DRD Coordination**:

  A body formed by WG leaders and the management, who can appoint a person for coordination tasks with other DRD collaborations.

- **Speakers Committee:**

  Responsible for :

  - Sending abstracts.
  - Appointing speakers for public talks.
  - Editing and taking care of the review of the common papers.
  - Maintaining an author list.

- Proposing publication policies.
- Awarding DRD3 thesis awards

Members of speakers committee holder may also hold other positions (WG/WP).

Annex 5 Overview of the Financial Participation of the Funding Agencies

5.1 Common Fund

All Participating Institutions shall contribute a fixed yearly amount to the common Fund (cf. Article 7). Per Participating Institution, the contribution to the Common Fund amounts to two thousand (2 000) Swiss francs in 2024.

5.2 Resources for Design, Construction, Installation, Dismantling and Disposal

The estimations in the table below are the person-power (FTE, or full time equivalent) and costs for construction, test and installation of the common infrastructure for the X years from YYYY to YYYY. They do not take into account prototypes or investments for demonstration of parts of XXX prior to YYYY. They do not take into account the maintenance. It is expected that each institution delivering hardware to the XXXX R&D Programme covers its ordinary maintenance. The year YYYY is considered to be the first year of running the common infrastructure for the XXXX Programme.

In case a Collaborating Institution cannot fund a part of the hardware under its responsibility, the Collaboration will seek among its collaborators the means to cover the missing amount and possibly search for other collaborators.

In case of failure of an important part of the apparatus that would appear too expensive to be covered by the institution in charge of it, the cost will be shared among the Collaborating Institutions after decision from the Collaboration Board, the Resources Board and the FRC.

	YYYY-YYYY				
Institution	**Investment (kCHF)**	**Permanent physicists and post-docs (FTE)**	**Students (FTE)**	**Engineers and technicians (FTE)**	**Common Fund / year (kCHF)**
Total					

5.3 Resources for Tasks and Working Groups

The resources for Tasks and Working Groups are set out in Annex 6 and Annex 7, respectively.

Annex 6 Tasks and Work Packages

6.1 Structure of the Work Packages

(1) Work Package A

(a) Work Package A.1

(i) Task A.1.1

(ii) Task A.1.2

(b) Work Package A.2

(i) Task A.2.1

(ii) Task A.2.2

(iii) Task A.2.3

(c) Work Package A.3

(i) Work Package A.3.1

1. Task A.3.1.1
2. Task A.3.1.2

(ii) Work Package A.3.2

…

(2) Work Package B

…

6.2Task ABC

6.2.1 Description

The purpose of this Task is to build and test a prototype of XYZ. The Task carries the number WPi.j

6.2.2 Start And End Date, Deliverables and Time Scale

The Task starts on start_date and ends on end_date.

The deliverables and time scales are indicated in the table below.

Deliverable	**Deadline**
Design and design verification	date
Construction	date
Test A	date
Test B	date
Test C	date

6.2.3 Participating Institutions

Country	**Collaborating Institution**	**Town**	**Contact**

6.2.4 Funding Agencies

Country	**Funding Agency**	**Representative**	**Institutions represented**[i]

6.2.4 Contributions of Participating Institutions to the Task

The estimations in the table below are the person-power (FTE, or full time equivalent) and costs for designing, constructing and testing XXX for the lifetime of the Task.

Institution	**Investment (kCHF)**	**Permanent physicists and post-docs (FTE)**	**Students (FTE)**	**Engineers and technicians (FTE)**

Total				

6.2.6 Management Structure of the Task

The management structure of the Task is described in **Annex 4.1.**

6.2.7 Persons Currently Holding Functions of Specific Responsibility in the Task

Function	Name
Task Leader	
Task Deputy Leader	

Function	Name
Task Leader	
Task Deputy Leader	

6.2.8 Approvals

The creation of the Task was approved by the Collaboration Board in its meeting on date and by the Resources Board in its meeting on date. All contributing Funding Agencies agreed to its creation.

Excerpt from the approved minutes of the Collaboration Board meeting on date:

Excerpt

Excerpt from the approved minutes of the Resources Board meeting on date:

Excerpt

Approval of Funding Agencies concerned:

Funding Agency	Approval
Funding Agency A	Vote in Resources Board meeting (see above)
Funding Agency B	Notice of funding grant to institution X (copy attached)
Funding Agency C	Vote in Resources Board meeting (see above)
Funding Agency D	Vote in Resources Board meeting (see above)
Funding Agency E	Letter confirming approval (copy attached)

6.3 Task DEF

(similar to 6.2)

Annex 7 Working Groups

The DRD3 structure is based on a number of mainstream activities related to solid state detectors. At the formation of the collaboration, the following eight Work Groups (WG) are foreseen [2]:

1. WG1 Monolithic silicon technologies
2. WG2 Hybrid silicon technologies
3. WG3 Radiation damage characterization and sensor operation at extreme fluences
4. WG4 Simulations
5. WG5 Characterization techniques, facilities
6. WG6 Wide band-gap and innovative sensor materials
7. WG7 Interconnections and device fabrication
8. WG8 Dissemination and outreach

The Working Groups link together activities broadly focused on Research Goals (RGs). WGs aim at long term R&D activity linked to certain technology, purpose and application. They encompass R&D that can also reach outside the scope of DRDTs, but it is related to semiconductor detectors and is of benefit for the particle physics detector community.

The conveners of the WG will steer the research towards realization of RGs, monitor the work progress, strive to include new institutions in the research activities and coordinate activities across the WGs.

7.1 Working Group ABC

7.1.1 Description

Working group ABC brings together institutions having an interest in XYZ.

7.1.2 Deliverables and Time Scale

The aim of the working group is to provide a forum for discussion about XYZ. There are no deliverables foreseen. The working group is created without any defined end date**.**

7.1.3 Participating Institutions

Country	**Collaborating Institution**	**Town**	**Contact**

7.1.4

Country	**Funding Agency**	**Representative**	**Institutions represented**

7.1.5 Contributions of Participating Institutions to the Working Group

The estimations in the table below are the person-power (FTE, or full time equivalent) for the operation of the working group.

Institution	**Permanent Phy. And Post-Docs [FTE]**

Total	

7.1.6 Management Structure of the Working Group

The management structure of the working group is described in Annex 4.1.

7.1.7 Persons Currently Holding Functions of Specific Responsibility in the Working Group

Function	Name
Working Group Chairperson	
Working Group Deputy Chairperson	

7.1.8. Approvals

The creation of the working group was approved by the Collaboration Board in its meeting on date and by the Resources Board in its meeting on date.

Excerpt from the approved minutes of the Collaboration Board meeting on date:

Excerpt

Excerpt from the approved minutes of the Resources Board meeting on date:

Excerpt

7.2 Working Group DEF

(similar to 7.1)

Annex 8 Included Background IP

Collaborating Institution	Intellectual Property	Restrictions

Annex 9 Conflict of Interest Disclosure Form

Conflict of Interest Disclosure Form

I am aware of and have read the content of the Confidentiality and Conflict of Interest Declaration Policy applicable to the meetings of the Collaboration Board and the Resources Board of the DRDn Collaboration.

In accordance with the Confidentiality and Conflict of Interest Declaration Policy, “Conflict of Interest” means a situation in which an individual or entity is confronted with conflicting loyalties or interests that have the potential to undermine their capacity to make impartial decisions. This conflict could arise, among others, from personal, financial, or external affiliations.

This Conflict of Interest Form should indicate whether the Party Representative has, or is subject to

circumstances that you believe could contribute to a Conflict of Interest:

□ I have no Conflict of Interest to report.

□ I have the following Conflict of Interest to report (please specify any nonprofit and for-profit boards you sit on, any for-profit businesses which you or an immediate family member own, shareholder, or has a managerial position, or any industrial sponsor research your team benefits from):

1. …
2. …
3. …

I hereby certify that the information set forth above is true and complete to the best of my knowledge.

Signed in …… on……

<NAME OF

AUTHORIZED REPRESENTATIVE>

<FUNCTION>

<ADDRESS FOR CORRESPONDENCE>

Annex 10 CERN General Conditions Applicable to Experiments