

DRDC and DRD review process*

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- DRDC composition and DRDC mandate (<https://committees.web.cern.ch/drdc>)
- DRDC review process
- Towards MoU
- Status of DRD proposals

**detailed presentation by Thomas Bergauer at ECFA plenary meeting : <https://indico.cern.ch/event/1220533/>*

DRDC

- Original DRDC was set up in 1990 to evaluate LHC R&D and make recommendation to CERN research board. Has been stopped in 1995 and replaced by LHCC committee
- Following European Strategy recommendations, a new DRDC is being reborn.
- Appointment of members by CERN took more time than expected and final committee set up in August 2023 (expertise and country balance)
 - 10 members appointed by CERN Director for Research and Computing
 - 2 members ex officio (ECFA EDP co chair)
 - 1 scientific secretaryTwo years mandate, renewable up to two successive mandates
- DRDC provide expertise and advice to the CERN research board on detector R&D
- At least two meetings per year with open session

DRDC composition

Name	Role	Institute
Thomas Bergauer	Chair of DRDC	HEPHY
Shikma Bressler	Referee	Weizmann Institute
Dimitry Budker	Referee	Mainz University
Roger Forty	Referee	CERN
Claudia Gemme	Referee	INFN and U Genoa
Ines Gil Botella	Referee	CIEMA Madrid
Mark Pesaresi	Referee	Imperial College
Laurent Serin	Referee	IN2P3-IJCLab
Stan Belvelsen	LDG representative	NIKHEF
Petra Merkel	Link to US R&D	FNAL
Phil Allport	ECFA EDP co-chair	Birmingham
Didier Contardo	ECFA EDP co-chair	IN2P3-IP2I
Jan Troska	Scientific secretary	CERN

DRDC mandate

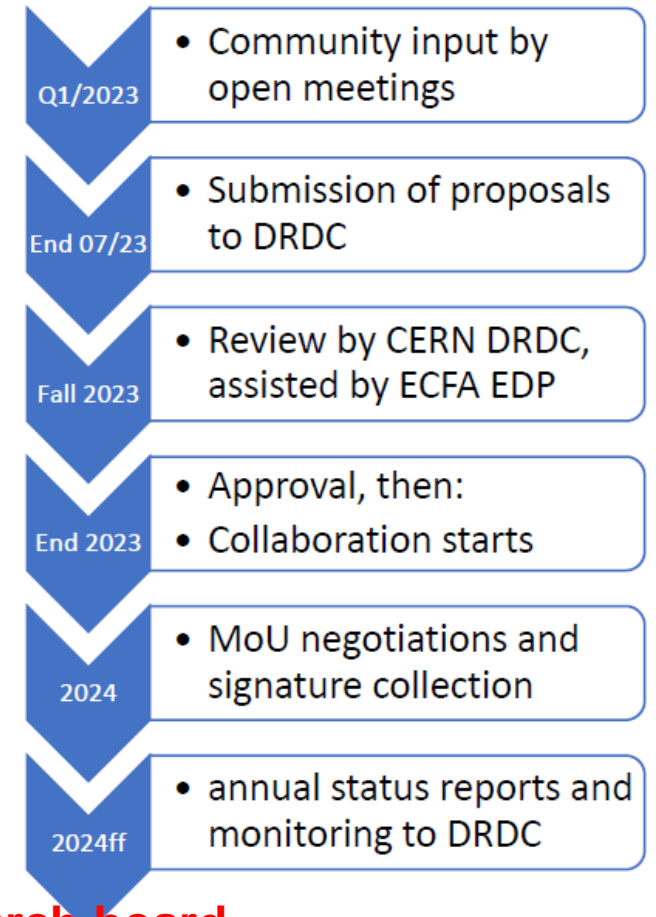
Mandate :

- Receive and evaluate the proposals for formal DRD collaboration :
 - Check it addresses the ECFA Detector R&D Themes (DRT), scientific and technical
 - Help in formalising proposal, i.e Work Packages / deliverables needed for future MoU
 - Rough evaluation of the resources available (financial and person-power)
- Evaluate/monitor on a regular basis the progress (scientific and technical, adequacy of resources*) and plans of the approved projects (at least once per year)
- Recommend corrective actions to Research Board if needed
- Provide other recommendation to the RB relating to detector R&D
- *Scrutiny of detailed financial report and budget plan outside DRDC scope, done by Finance Review Committees*

DRD review process

Timeline:

- Review of DRD proposals by DRDC this fall:
 - **Nine DRDC internal meetings** so far discussing DRD proposals *
 - Several meetings between DRDC and proponents of collabs.
 - **Three iterations** of each proposal received after suggestions from DRDC
- **Approval by the end of 2023**
 - **4th December:** 1st official (but fully closed) DRDC meeting with presentations and discussions with each DRD proposal teams
 - **6th December:** Official approval by CERN Research Board
- Once approved, DRD collaborations can start in 2024
 - Enables entry to CERN grey book, so that team leaders of each participating institute can be nominated and users registered
 - Collaborations will have kick-off meetings, elect spokespersons
 - MoU setup and collecting signatures from Funding Agencies
 - Later: Annual status reports to DRDC; monitoring of milestones and deliverables



Proposals will become public documents once fully approved by Research board

- *For each DRD, a main reviewer + at least two other reviewers with in depth reading
Comments discussed with entire committee. Quite limited time for review*

Memorandum of Understanding

- **All institutes** of one DRD collaboration sign a “light-weight” MoU
 - Does not contain commitments on strategic funds
 - Defines Common Fund, if agreed by the respective DRD Collaboration
 - Covers IP topics, how to handle involvement of industry
(In that case very similar as the current existing MoUs of RD50/51)
 - MoU Template will be provided by CERN (currently being negotiated with legal office, KT, DRC,..)
- Strategic funding will be agreed upon in annexes to this light-weight MoU
 - One Annex per Work Package, **signed by the FAs of the institutes** involved in the respective WP

IN2P3
or laboratory ?

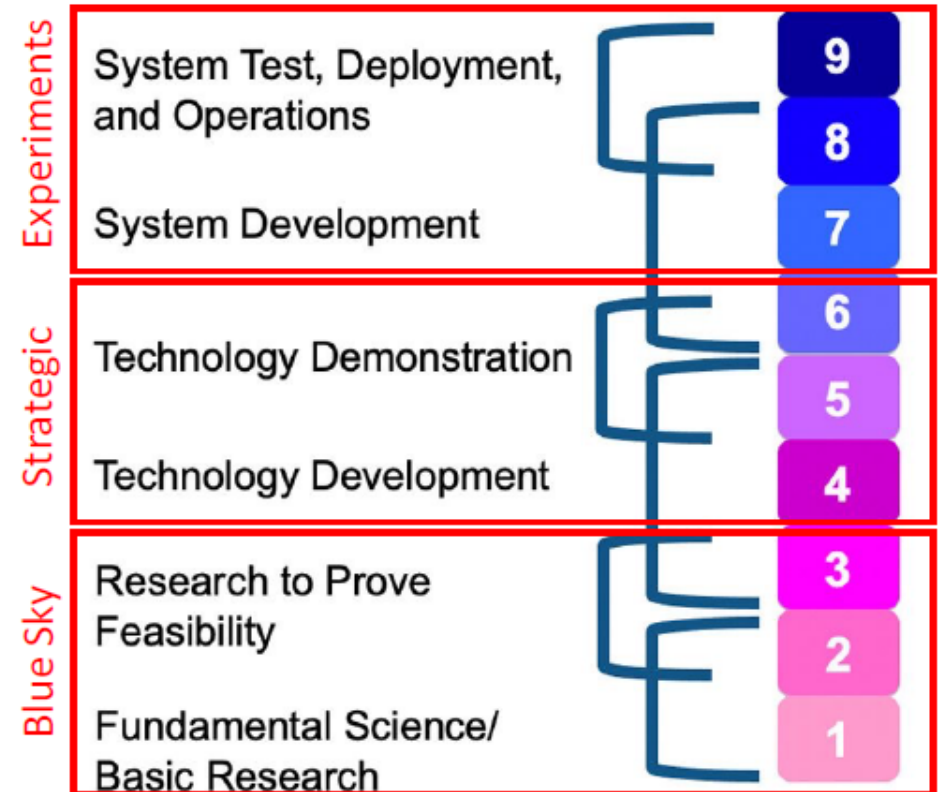
Administration
Blue sky
per lab

Strategic R&D versus Blue Sky R&D

MoU Annex

Strategic R&D towards **necessary technologies** to build future facilities and experiments

- Addresses the DRDTs in ECEA roadmap by defining **suitable deliverables** and milestones
 - Technology Readiness Levels (TRL) 3-6
 - Backed up by **strategic funding**, agreed with funding agencies (MoUs)
- DRD collaborations should also contain a small “**blue-sky**” section (TRL 1-3)
 - Allow new developments to emerge
 - Possibly financed by common fund + institute contributions (RD50/51 scheme)



Status of DRD proposals

Collab.	Topic	Initial Proposal Submission	Seeking approval	comment
DRD 1	Development of Gaseous Detectors	July 2023	Dec. 2023	Former RD51
DRD 2	Liquid Detectors	July 2023	Dec. 2023	
DRD 3	Solid State Detectors	3 Oct. 2023	Dec. 2023	Former RD50
DRD 4	Photon Detectors and Particle Identification Techniques	July 2023	Dec. 2023	
DRD 6	Calorimetry	July 2023	Dec. 2023	CALICE, CrystalClear
DRD 5	Quantum and Emerging Technologies		later	
DRD 7	R&D Collaboration for Electronic Systems	LoI submitted	later	
TF 8	Integration	-	later	Workshop on 6 th Dec.

Version 3 of proposals transmitted to Research board except DRD3 received too late
 DRD are not foreseen to work as former RDxx, took a bit of time for some communities to understand/accept this new collaboration scheme.....

For some DRD, communities had to be build from scratch

DRDC proposal status (1)

- Will not discuss scientific content
- Some proposal in very good shape, some still need iteration about deliverable/milestones definitions and organisation
 - might have only “conditional” approvals for some of these DRDs
- Proposals contain only global resource information. Detailed confidential information was provided to DRDC but difficult to check the level of confidence of declared resource (FTE + budget) as no link to FAs. Current strategic funding in proposal is more “wishful thinking’
- Some projects clearly understaffed and/or underfunded
 - might not become deliverable in MoU but still member of the DRD
- Quite large sizeable request for strategic funds on next 3 years but also person-power !

DRDC proposal status (2)

	Funds/year over 2024-2026	FTE/year over 2024-2026	Additional requested funds/y over 2024-2026	Additional requested FTE/y over 2024-2026	Common Funds	Number of institutes
DRD1	3 MCHF	270	3 MCHF	100	yes	160
DRD2	2.5 MCHF	148	7.8 MCHF	305	yes	114
DRD3	5 MCHF	327	8 MCHF	170	Yes (blue sky R&D)	129
DRD4	1.5 MCHF	100	1.8 MCHF	60	maybe	67 + 7(industry)
DRD6	3.2 MCHF	183	1.4-2.4 MCHF	100	no	133
Total	15.2 MCHF	1028	23 MCHF	735		

**A 5 % IN2P3 contribution would request additional 1.1 MCHF/y and 36 FTE/y !
DRD7 might request quite some strategic funds**

Conclusion

- Large effort of the community (strong French contribution in some DRD) to make available proposals
- First round of review by DRDC before submission to CERN Research Board
- Light MoU will be the next step (including common funds), hope to have them mostly signed by summer 2024. Not clear for IN2P3 who will sign ?
- Annex MoU, no real active role of DRDC, should be DRD collaboration with FA but might check adequacy between deliverable/goals and requested funds in MoU