

National Coordination Point Research Data Management (LCRDM)

Positioning paper for 2019 and beyond



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LCRDM

The National Coordination Point Research Data Management (LCRDM) is a national network of experts on research data management (RDM) in the Netherlands. The LCRDM connects policy and daily practice. Within the LCRDM experts work together to put RDM topics on the agenda that ask for mutual national cooperation.



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Positioning paper for 2019 and beyond

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LCRDM

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Introduction

Increasingly, researchers must comply with rules and demands set by governments, research funding organizations, publishers and their own research institute. Such rules and demands relate to dealing with privacy sensitive data, ethical questions, scientific integrity and FAIRification of data before, during and after research. Support provided by research support staff, inside or outside the own organisation, is often fragmentary. To facilitate researchers in an optimal way and allow research support staff to provide efficient and adequate Research Data Management (RDM) support, it is important that all those involved are aware that they form part of a research chain that is committed, not only to provide answers to a research question, but also to deliver FAIR data.

A research chain work mentality means RDM provides support for the researcher during the course of the entire research chain. Not just before and after, but also expressly during research. A research chain embraces more than just support, it also comprises facilities, an administrative mandate and the sharing of knowledge. Moreover, the needs of data stewards and support managers may differ per discipline. A discipline-specific approach benefits from standards, best practices and a national inclusive policy as basis.

RDM means taking care of researchers and their research output (for which researchers themselves always bear final responsibility), in the broader arena of the (inter)national transition to open science, legislation and rules (including among others the AVG), the demands of research funding organisations and society's desire for transparency in science. In the Netherlands, the *Nationaal Plan Open Science* (2017) and the *Gedragscode Wetenschappelijke Integriteit* (2018) offer policy frameworks for the facilitation of honest, efficient, trustworthy, transparent, reproducible, independent and innovative research.

The *Nationaal Plan Open Science* describes four ambitions on the basis of which research umbrella organisations hope to promote the transition to open science in the Netherlands. Good RDM is an essential mainstay of the NPOs ambition in realizing 'optimal (re) use of research data'. The *Gedragscode Wetenschappelijke Integriteit* lists the duty of care rules for Dutch research institutes. Good RDM contributes to integrity in scientific practice as formulated in the *Gedragscode Wetenschappelijke Integriteit*. It forms a set of best practices for the benefit of open science. In this way data care (research data management) is also included in an institute's duty of care.

The LCRDM brings together research support staff from a broad work field and diverse stakeholder groups: universities, university medical centres, universities of applied sciences and research institutes like those of NWO (Netherlands Organisation for Scientific Research), KNAW (Royal Netherlands Academy of Arts & Sciences) and TO2 (Organisations for Applied Research). Experts from the work field contribute topics relating to the practice of working with data that need to be addressed. These issues are

too extensive to be tackled by one research institute, whereas a national approach increases the effectivity and efficiency of the solutions devised. Such answers contribute to a good implementation of RDM (as basis for open science) during a period of 2 to 5 years.

Topics put forward by experts are made known to the work field via a pitch. Based on response to the pitch, a task group is compiled that focuses on the subject concisely and intensely. LCRDM's strength lies in the way it collaborates with experts from diverse backgrounds (IT, policy, support).

The LCRDM facilitates cooperation and offers a platform for the sharing of know-how and knowledge development. This is how the LCRDM network is able to transform policy issues into practical output.

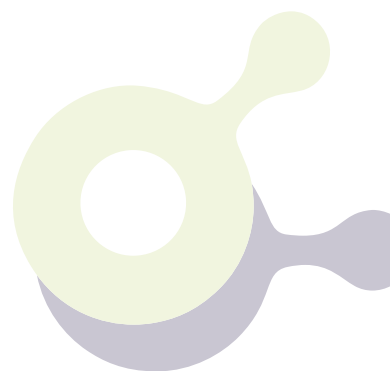
LCRDM's output consists of inventories, advice, reports, handouts, infographics and the scheduling of national meetings. It is concerned with topics that relate to the entire research chain (before, during and after research) and supports the implementation of data management policy (or open science policy) at research institutes. The LCRDM forms a link between policy and practice and seeks to connect with other stakeholders like UKB, DTL (support); SURF expertise centres, RDNL partners, Go FAIR (services), and NPOS (policy) etc, to maintain services and products and implement policy.

This practical and coordinated approach helps institutes – on the basis of good RDM – to comply with the data management duty of care as formulated in the *Gedragcode Wetenschappelijke Integriteit*. It helps research support staff to unburden researchers in adhering to RDM policy.

This ensures efficient support and facilities and the sharing of best practices at a national level to prevent re-invention of the wheel.

RDM implementation is ultimately about the research chain and the roles, processes and responsibilities it encompasses.

GOAL OF THE POSITIONING PAPER



What LCRDM task groups work on, are parts of a greater RDM puzzle that stem from everyday occurrences in Dutch research institutes.

The *positioning paper* contains themes for a national approach to RDM and supplies a framework to determine which subject matter falls within the scope of LCRDM and which doesn't.

The *positioning paper* also helps to explain pitches by highlighting a theme that is the focus of a pitch and a newly formed task group. It also mentions themes for which new pitch proposals could be initiated. Topics submitted by the work field and the readiness of experts to respond to pitches continue to be crucial for what happens in the LCRDM task groups.

FOUNDATION

The duty of care of the institute (and researcher) as established in the *Gedragcode Wetenschappelijke Integriteit*, has been governmentally approved and therefore forms the foundation of this plan. Good RDM can only be achieved by a simultaneous top down (administrative) and a bottom up (work floor) approach. Duty of care stimulates the practical impact of RDM themes at a national level. The bottom up approach remains the departure point for the LCRDM.

The plan fits in with the ambitions of the *Nationaal Plan Open Science*. In addition to the *Gedragcode Wetenschappelijke Integriteit*, the (revised) *Gedragcode Persoonsgegevens* is also important. As soon as this is available, it will be integrated in the plan.

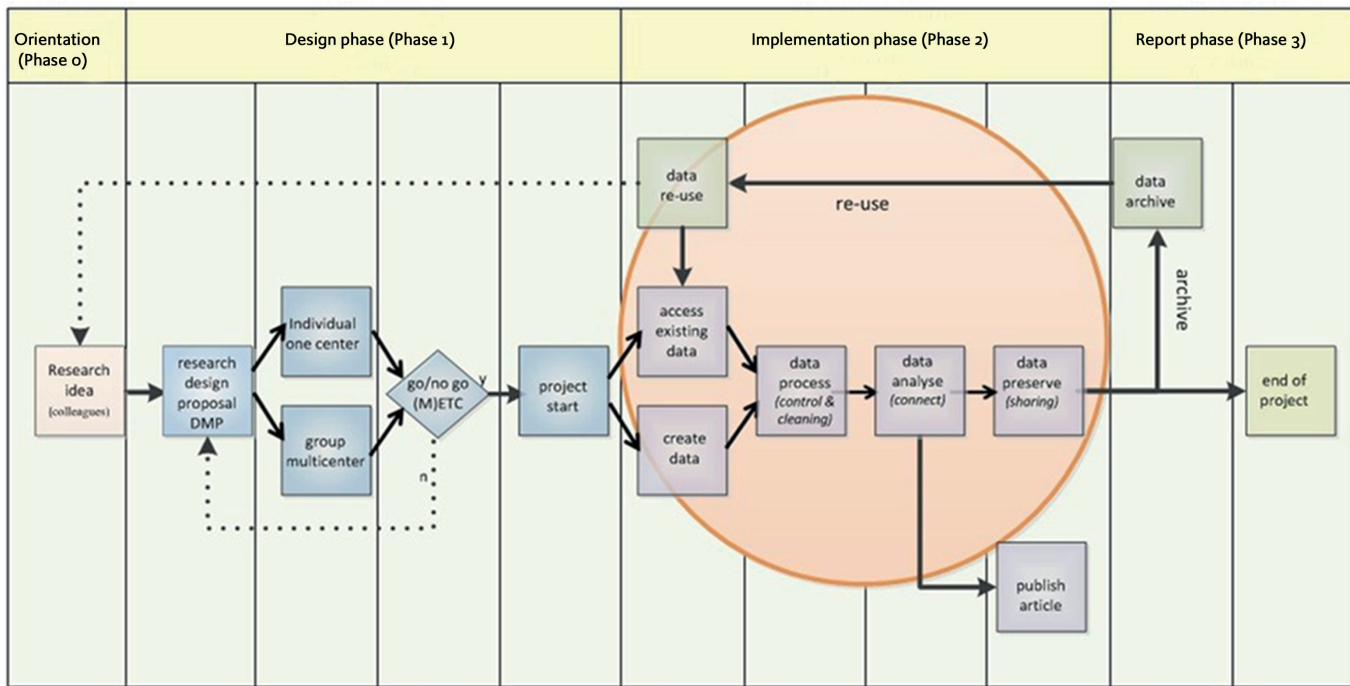
The LCRDM is part of the national data infrastructure and therefore works closely with other stakeholders in the field¹ to fine-tune matters and prevent overlap of activities.

THE RESEARCH CHAIN IN PHASES

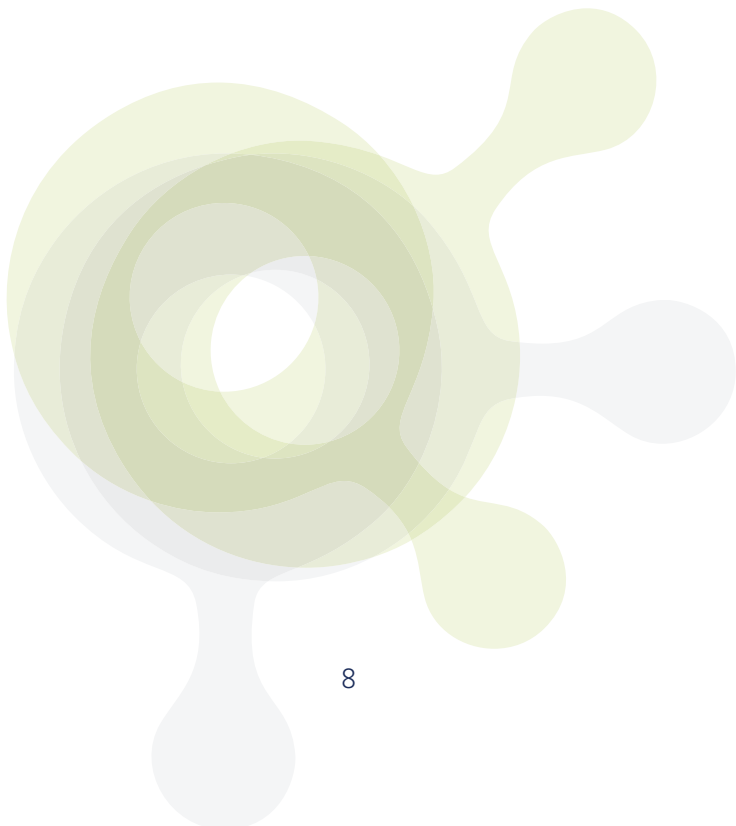
In the research chain we distinguish three phases: the design phase (research planning – phase 1); the implementation phase (implementation of the research – phase 2) and the report phase (concluding the research – phase 3). Some activities are part of all phases.

For the implementation of RDM it is necessary to translate national policy into policy at organisation level. It is expected that the outcome will be a research environment in which collaboration between different support units is self-evident.

¹ The following sources were used to write this plan: *Gedragcode Wetenschappelijke integriteit* (October 2018); *Implementation plan LCRDM 2018 and onwards* (June 2018); *Nationaal Plan Open Science* (February 2017) and the related follow up draft plans: reporting/roadmap NPOS theme group Data (November 2018), reporting NPOS theme group Encouraging and supporting Open Science, NPOS project briefs 2019–2020; HBO *Versterkingsagenda Praktijkgericht Onderzoek* (2019); NWO *Integrale aanpak voor digitalisering in de wetenschap* (March 2019), Input suggested topics *RDNL-sub group members Plan Prioritizing*; Input LCRDM working groups Evaluation 2017 – *LCRDM implementation plan*, appendix III (p. 17–20); Input Work café RDM conference 8/2/2018; Prioritizing RDM topics Members Pool of Experts (based on the Implementation plan LCRDM).



The *LCRDM road map 2015–2017* was based on 5 themes for a national approach to RDM: facilities and data infrastructure, legal aspects of RDM, financial aspects of RDM, research support and commitment. A Quicksan from 2017 shows that these 5 themes remain as relevant as ever. In 2018, another 2 themes were added: Data stewardship and RDM Governance.



PRIORITIZATION OF RDM-SUBJECTS

PRIORITIZATION POOL OF EXPERTS

With the aim of drawing up a plan with themes for a national approach, input was requested from the work field. The members of the LCRDM pool of experts that had signed up between June and November prioritized the list of RDM topics included in the LCRDM implementation plan 2018 and beyond². The experts were asked to rank 5 themes. The resulting classification was subsequently weighed by using a points system and adding up the scores. See for annex (Dutch only): Prioritization score on the basis of weighting of votes: <https://DOI.org/10.5281/zenodo.3335410>.

² This list is based on input amassed during the evaluation of the old LCRDM work groups and a number of brainstorm sessions for the new work form (2017-2018).

THEMATIC CLASSIFICATION

On the basis of the above prioritization, we arrive at the following thematic classification. The topics named in conjunction with the themes (top 3) are those topics most frequently mentioned in the submitted inventory. Daily practice with research data will continue to supply topics for pitch proposals. This results in a flexible way of working.

Research support

1. More attention for data management during research (conditions for data management and sharing of data)
2. FAIR (including: metadata; metadata synergy)
3. Re-use of data (including: measurement of)

Legal aspects

1. Sensitive data and privacy issues (including shades of open-inventory)
2. GDPR
3. Ownership; commercial interests

Facilities and data infrastructure

1. Collaboration to effect standardization; national uniformity
2. Digital preservation & curation (workflow tools), including sustainable software
3. Fine tuning of services to meet demands – facilities & services

Governance of RDM

1. Coordination diverse national initiatives (brainstorm)

Financien RDM

1. Coordination of diverse national initiatives (brainstorm)

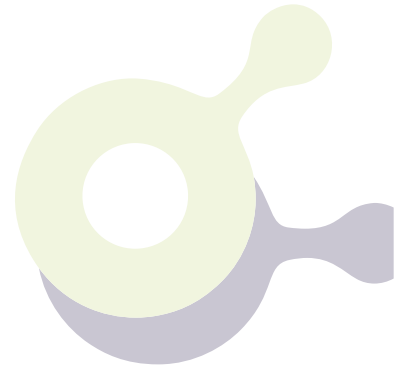
Commitment

1. Incentives, with investigation into the role of all stakeholders (e.g. libraries: registration)
2. Rewarding the researcher for using FAIR data and open data where possible
3. Use cases for every aspect of RDM, also within the scope of the new concept 'data scenario's'

Data stewardship

1. How the function of data steward is structured and what we can learn from one another, plotting the role of a data steward in existing reference architecture.
2. Tools to show what this role entails. Support for a data steward curriculum: Study plan with 3 to 4 meetings annually: Starting point for networks + in-depth meeting(s) + inter-
vision + FAIR/IT training for non-technical data stewards.
3. The data manager in the data steward role: RDM grants – plans/financing request/
consider all relevant legal aspects when setting up an organisation so that a researcher can use optimal RDM.

THREE WORK AREAS / FIELDS OF INTEREST



On the basis of administrative frameworks and themes from the work field, the LCRDM identifies three work areas. The broader perspective of discipline specificity and (inter) national coordination feature in all three areas.

Harmonisation of regulations

Harmonisation of regulations ensures that the institutional policies of various stakeholders is coordinated at a national level so that any obstacles to collaboration are eliminated. *Policy* is central to this work area. Clear policy frameworks stimulate clarity and unambiguity for research in accordance with the *Gedragcode WI*, the AVG and the ambitions of NPOS FAIR (*re-*)*use of data*, policy of research funding organisations and institutes.

This work area is concerned among others with the following policy-orientated themes:

- general RDM / Open Science-policy – umbrella organisations /institutes /research disciplines; research funding organizations
Leads to: clarity about parameters for undertaking research
- legal/ethical framework (including power of control of data; registers)
Leads to: clarity about ownership of data and helps institutes/researchers to work in line with AVG protocol
- security and privacy (including secure sharing of data and protecting privacy-sensitive data)
Leads to: undertaking research in a secure, trustworthy environment; proper handling of personal data; research undertaken in accordance with AVG
- financing RDM (including (de)selection policy, DMP-tooling)
Leads to: clarity about the costs of data management, archiving, long-term access and as an incentive for (de)selection
- data stewardship policy (including positioning, recognition and appraisal, study programme and training curriculum)
Leads to: well-trained professionals, being able to retain more professionals for scientific practice
- policy concerned with infrastructure
- storing data/re-use (CoreTrustSeal of approval for repositories)

Professionalisation

Professionalisation ensures that competent research support staff deal with RDM tasks to unburden researchers in all phases of the research chain. Their work as data steward, based on best practices, can help research communities to participate in open science. Those *people* are central to this work area.

This work area addresses the following policy-orientated themes:

- training/strengthening support staff
Leads to: support staff with expertise who focus on questions by institutes, disciplines and specialist groups
- formulating quality / assessment
Leads to: quality assurance of research and data (and re-use of data)
- formulate and share best practices
Leads to: facilitating the implementation of RDM at research institutes
- training programme
Leads to: a coordinated and topical programme for 'life-long learning' in line with the continual development of science
- awareness programme
Leads to: awareness regarding RDM, Open Science, FAIR

Facilitation and organisation

Facilitation and organisation ensures that research support takes place in a well-facilitated environment that provides services for all phases of the research chain. In research institutes this is achieved through harmonisation and collaboration between IT, policy and support services. In the broader field of data infrastructure much is accomplished by working together at a national level, especially in the case of specific auxiliary services and focus areas. This work area concentrates on making the necessary preparations for research and creating a secure work environment. It is also committed to solving questions regarding data storage and long-term access to data and software that promotes the re-use of data and FAIR research.

Among other aspects, the work area is concerned with:

- infrastructure
(architectural model; trusted repositories; software-sustainability; research workspaces)
- services and tooling
(RDM service counter; service catalogue)
- people
(professionalisation of support staff; awareness of the advantages of collaboration)

Leads to: facilitation of research in line with FAIR principles for research data while also promoting research software, the research process and research facilities.

The practical set-up and plan of action for the work areas/fields of interest still needs to be worked out in greater detail. It will be connected with the LCRDM network days for the pool of experts that is organised twice a year.

PITCHES: CONNECTION WITH WORK AREAS AND THEMES

Work area	Pitch	Expected output	Period	Participants	Results in:
Professionalisation Facilitation & organisation	Data stewardship	Inventarisation, report	10/2018 – 3/2019	17	Clarification role and tasks of data stewardship
Facilitation & organisation	Research Workspace	Handout	1-6/2019	11	Clarity, definitions
Harmonisation & regulation	Pseudonymisation	Advice	1-8/2019	9 + 7 Soundin g board group	Do's and don'ts with regard to best practices
Professionalisation	RDA Europe Project proposal	Project proposal	3/2019	4	Project plan 23 things for data professionals
Professionalisation	RDA 23 Things (long term activity)	Adapted version 23 Things	6/2019-6/2020	6 (core team)	23 Things Recommendations for RDA up-dates and references used in RDM training of diverse stakeholder groups
Harmonisation & regulation, Facilitation & organisation Professionalisation	Data curating network	Inventarisation, advice	2-8/2019	9	Do's and don'ts on the basis of best practices
Harmonisation & regulation	Anonymisation	Inventarisation, advice	4-9/2019	10	Clarity and risk analysis
Harmonisation & regulation	Policy data sharing	Inventarisation, advice	5-10/2019	12; 3 (soundin g board group)	Recommendation for policy makers
Facilitation & organisation	DPIAs & research scenarios Social WSen	Inventarisation, advice, model	6-11/2019	11; 7 (soundin g board group)	Still to be decided
Facilitation & organisation	Long-term management of research data published under restricted access	Advice	9/2019 – and beyond	Still to be decided	Still to be decided



COOPERATION WITH STAKEHOLDER ORGANISATIONS

The LCRDM coordinates its actions and collaborates as much as possible with the broader stakeholder field, both nationally and internationally to avoid the same work being repeated and to contribute to the efficient establishment of RDM in the Netherlands. Coordination expands the general support base for RDM and promotes a collectively backed RDM policy in the Netherlands. The LCRDM seeks to connect with existing initiatives in order to communicate with all stakeholder groups and prevent already completed work being repeated. It has links to the HBO sector, among others, via the *Versterkingsagenda Praktijkgericht Onderzoek*; with university medical centres via the programme *Data4LifeSciences* and *HANDS*; with the KNAW research institutes via the *Netwerk Digitaal Erfgoed*; relations with the NWO institutes and TO2-institutes are maintained via existing data management consultation groups.

Recently NWO has advised the minister of Education, Culture and Sciences about a new – still to be established work structure – for local and inter-university *Digital Competence Centres* (DCC's) to be established at universities and knowledge institutes in the Netherlands to bolster the digital scientific infrastructure. As a result, SURF has been asked to draw up a plan to support the DCC's. The LCRDM will contribute to the plan by providing expertise about national policy support, classification of knowledge and coordination.

A survey of stakeholders (status June 2019):

The Netherlands:

- UKB werkgroep Research Data
- NFU data4lifesciences
- DTL
- RDNL (DANS, 4TU, SURF)
- RDA Node Netherlands
- SURF-onderzoek (o.a. S4Research)
- Netwerk Digitaal Erfgoed
- HKI en SHB

International:

- EOSC
- GO FAIR
- LIBER Research Data Working Group
- OCLC RDM Group
- RDA / Codata
- ...

Conclusion

In past years the LCRDM has showed how it can provide added value by bringing together different support groups from the professional field to form a single network. The change of course – from work group activities to the formation and deployment of a large network of experts divided in task groups initiated by the work field – contributes to a growing support for LCRDM and increases its impact while also enlarging the involvement of stakeholder groups. The endeavours and results booked by the task groups place the work of research institutes within national parameters. Absence of such a national framework would result in lack of verification, coherence and recognition.

The LCRDM connects people, processes and products within the field of RDM





LCRDM supported by

