

# Project Management Protocol of the Netherlands eScience Center

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# 1 Scope and definitions

## 1.1 Scope

This document is the official project management protocol for the Netherlands eScience Center. It describes all phases of a project and the procedures required to successfully complete them.

The scope of this document is the execution of projects awarded by the eScience Center, though other types of projects are also briefly covered. This document gives a detailed description of all steps, both necessary and optional, that must or may be taken in the execution of projects, reflecting the so-called *project life cycle*. For each step, the document indicates the responsibilities of the project team members (RSEs) and other eScience Center employees (e.g. Programme Managers, Operations, Directors Team) involved in the process.

Call procedures have a separate protocol<sup>1</sup> and are not covered by this document. The call procedure protocol ends with the formal awarding of projects by the eScience Center Governing Board or the Directors Team, the notification of Lead Applicants and the formalization of the awarding by means of a *toekenningsbrief* ('Awarding letter') take place from that moment onwards, all the way until the formal closing of the project. An independent evaluation of projects, including impact, output, process and collaboration with project partners is outside of the scope of the current document, and will be published as a separate document or a subsequent version of this document in the future.

This document has been approved by the DT and will be subject to evaluation and possible adaptation after one year.

The structure of this document largely follows the project life cycle (see Section 1.4); the protocol describes activities in chronological order.

## 1.2 Stakeholders

An eScience Center project is a project involving the eScience Center, where responsibility is shared between different stakeholders who each have their own roles and responsibilities during specific phases of the project.

Stakeholder	Abbreviation	Assignment	Role	More info
Lead Applicant	LA	main applicant and recipient of the grant	primary contact for the eScience Center project, accountable for the (quality of the) scientific contribution to the project	responsibilities defined in the call text, the Terms and Conditions document, and potentially a Consortium/Collaboration agreement.

<sup>1</sup> 2015 NLeSC Protocol voor Calls, Subsidietoekenning en Projectmanagement (see Section 5 for the reference link).



Stakeholder	Abbreviation	Assignment	Role	More info
Programme Manager	PM	assigned by the PM team <sup>2</sup>	accountable for the eScience contribution to a project, responsible for realization of project results given predetermined resources and timelines, project budget holder	Full text of responsibilities available in the PM job profile document and PM mandate (Appendix C)
Lead Research Software Engineer	Lead RSE	appointed by accountable PM	responsible for the timely execution of the project, main contact person for the project with other stakeholders	More details on responsibilities, see the formal role description of Lead RSE (Appendix A).
Research Software Engineer (assigned to a project)	RSE	assigned by the accountable PM	responsible for the timely completion of the project	All RSE activities coordinated by Lead RSE in agreement with PM.
Consulting Research Software Engineer	Consulting RSE	involved at request of Lead RSE or accountable PM	responsible for contributing expertise to a project for a limited but predetermined time, can be involved in some of the key meetings, in addition to an expertise contribution	All activities coordinated by Lead RSE in agreement with PM in case the project team needs additional expertise.
Technology Lead	TL	assigned by the TL team <sup>3</sup>	acts as point of contact for Lead RSE to the TL team. Safeguards the technological aspects of a project; accountable for the quality, reuse and sustainability of the research software developed.	The TLs team is responsible for internal training programme of RSEs.
Section Head	SH	assigned by the PM/SH team <sup>4</sup>	line manager of RSEs, responsible for monitoring the overall effectiveness of RSEs in bringing projects to completion; maintain overview of a research domain.	The SH team assigns one SH to each RSE team, and the SH ensures that team keeps its capacity and planning up to date.
Finance & Control	F&C		responsible for maintaining financial project administration in Exact	Part of Operations, includes Controller, and led by Director of Operations

<sup>2</sup> All PMs, led by the Programme Director, constitute the PM team.

<sup>3</sup> All TLs, led by Director of Technology, constitute the TL team.

<sup>4</sup> All SHs, led by Executive Director, constitute the SH team.



Stakeholder	Abbreviation	Assignment	Role	More info
Communications			facilitate internal and external communications, including the preparation of news items and maintaining the corporate website	
Community Manager	CM		advise and support outreach activities and community building, responsible for external training programme	
Secretary			organizes formal meetings	Provide with agenda and slide template, invitation text, list of participants (with emails), and timeline.
Director of Technology	DoT		accountable (and responsible) for licences and IP, software sustainability budgets holder	
Director of Operations	DoO		handles legal questions (e.g., contracts, Collaborative Agreements and guest agreements)	
Directors Team	DT	comprised of DoT, DoO, Executive Director/CEO and Programme Director (PD)	approves formal decisions regarding projects (e.g., budget changes)	
GDPR contact person		appointed by the DT, see the QI <sup>5</sup> for contact information	consults on GDPR <sup>6</sup> or privacy-related issues in the project	The eScience Center has not appointed a Data Protection Officer. GDPR aspects must be discussed with the contact person.
eScience Center project team	eScience project team	comprises RSEs, PM and TL working on the project	responsible for the timely completion of the project	

<sup>5</sup> <https://nlesc.sharepoint.com/qi/SitePages/Getting%20Started.aspx>

<sup>6</sup> General Data Protection Regulation (GDPR), cf. <https://gdpr.eu/>



Stakeholder	Abbreviation	Assignment	Role	More info
Project team		comprises the eScience project team, LA and their team (including team members indicated in the project proposal)	responsible for the timely completion of the project	

## 1.3 Types of projects

The eScience Center receives an annual budget from NWO and SURF, the larger part of which is allocated to projects submitted by researchers working at eligible research performing organizations in the Netherlands in the form of the in-kind provision of RSEs. Projects may also be funded from external sources (henceforth referred to as *an external project*) or funded from the annual budget but carried out internally.

By awarding subsidy to a project or by pledging a contribution to an external project, the eScience Center takes on the obligation to deliver high-quality work in a timely manner.

### 1.3.1 Call projects

The eScience Center publishes a range of calls. Each project is a part of a specific call (regular calls such as OEC/ASDI, CIT/DTEC/eTEC/JEDS, SSI, or calls in collaboration with another funders such as ADAH, Big Data & Health, GO, JCER, eTEC-BIG, ESI-FAR). Projects from the regular calls before 2021 are partly in-cash, while projects awarded later are fully in-kind (plus a reserved budget for workshops).

Calls can reserve part of the project or the call budget<sup>7</sup> to serve the eScience Center agenda to increase the impact of software beyond the project itself. Henceforth this will be referred to as the software sustainability budget, formerly known as generalization budget). The budget is intended for software generalization, reuse and sustainability, and community building. The DoT is the holder of this budget. Details concerning this budget are included in the Awarding letter. See Section 3.6.3 for more information.

Project teams (mainly Lead RSE, PM and TL) are expected to consult the specific call text, Awarding letter ('Toekenningsbrief'), Terms and Conditions document ('Bijzondere voorwaarden', 'Subsidieregeling', etc.), Consortium/Collaboration Agreement (CA), and/or contracts for grant terms and conditions. The LA is responsible for adhering to the conditions of the project, while the PM, with the help of the Lead RSE, monitors this.

In our call projects, the majority of the total requested budget is dedicated to project work and project-related activities. The remaining part (referred to as "general activities") covers activities that benefit our ability to contribute to high-quality research, such as the professional development of RSEs through training, work meetings, conferences, etc, as well as the administrative coordination and project management within the eScience Center. It is up to the PMs and RSEs in consultation with the SHs to fairly distribute hours for general

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<sup>7</sup> Until 2020, each individual project was assigned a so-called Generalization budget ("Generalisatie"), for generalization and reuse of project results. Since 2020, however, this budget is no longer assigned per project, but for the entire programme/call.



activities across all the projects they contribute to. The exact percentage set aside for general activities is defined in the call within which a project has been awarded.

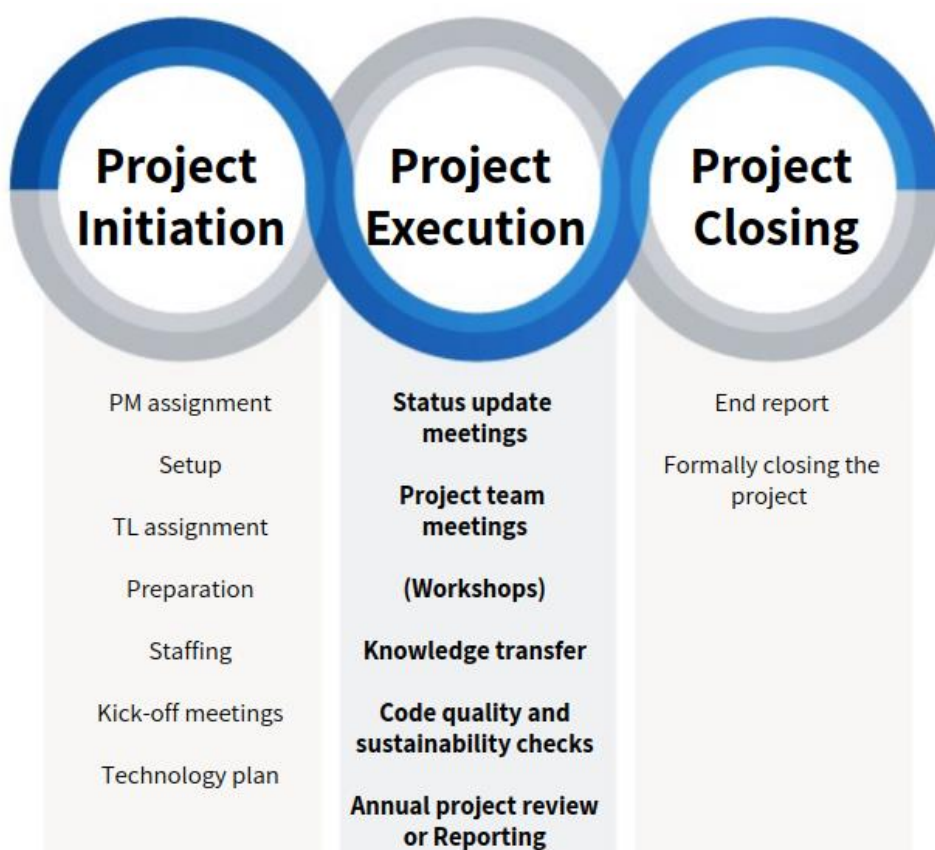
### 1.3.2 External projects

Projects funded externally by e.g. NWO or the EU, or via private-public partnerships, are governed by external funding conditions specified in a contract or agreement that may supersede our own rules. The budgets of these projects need to be approved by F&C and the DoO. Again, the project team (mostly, Lead RSE, PM, TL) must consult the specific call text, Awarding letter, Terms and Conditions document, Consortium/Collaboration Agreements, contracts for the conditions and rules. The LA is responsible for adherence to the rules and conditions, while the PM with the help of the Lead RSE monitors this.

### 1.3.3 Other projects

This document currently does not yet cover other types of projects such as those funded through Ambition 2 (Dissemination & Community, Knowledge & Development)<sup>8</sup> and Fellowship projects<sup>9</sup>. External funding is covered partially.<sup>10</sup>

## 1.4 Project life cycle overview



At the eScience Center, a standard project life cycle is a three-phase process. First, project stakeholders initiate the project. Next, the project team executes the project and monitors its progress. Finally, once the project reaches its end, it is formally closed.

These three phases are covered in detail in the next sections.

<sup>8</sup> cf. Netherlands eScience Center strategy reference in Section 5.

<sup>9</sup> Funded by the Calls budget, the purpose and the organization of these projects are different from call projects. CMs are responsible for these projects, and a PM assigned by the PM team is advising them.

<sup>10</sup> A budget for writing grant proposals for external funding, use of it follows the process described in “External funding” (see Section 5 for the reference).



## 2 Project Initiation

The project initiation phase starts immediately after the project has been granted. Its goal is to set up the project within the eScience Center, including a planning in terms of staffing as well as a work plan.

For **external projects** and projects from specific calls (e.g., collaborative calls), F&C ensures that all paperwork is in place (e.g., contracts, Consortium/Collaborative Agreements, Memorandum of Understanding) before making a project active in Exact, allowing RSEs to write on the project. The DoT regularly keeps PMs up to date on outstanding applications for external funding, signals to PMs and F&C whenever a project has been granted, and hands over relevant documents (such as proposal, agreements made, preliminary budget, etc) to PMs.

PMs are accountable for call projects. For the **external projects**, PMs assign a PM and Lead RSE to the project (i.e., the RSE involved in the submission procedure). Together with the Lead RSE the PM works with the project partners to get all paperwork in order (such as a subcontract). Whenever legal matters are involved the PM signals to the DoO that legal advice is required. Any proposed contracts are sent to the DoO by the PM for final approval. The DoO shares the information within F&C.

### 2.1 PM assignment

Each project has one accountable PM. The PM team assigns PMs to new projects at the first PM meeting following the granting decision, records the assignation and asks F&C to update Exact with new budget holder information (the newly assigned PM). If agreement over an assignment is not reached, the PD makes the final decision in their capacity as PM team chair.

Should the accountable PM become unavailable for an extended period, the PM team can decide to put another PM in charge of the project.

**Responsible: PM team.**

### 2.2 Setup

The table offers an overview of the responsibilities of the different stakeholders in setting up a project:

What	By	Responsible for
Exact	F&C	<ul style="list-style-type: none"><li>• Creating project code</li><li>• Entering and uploading attachments</li><li>• Making PM budget holder</li></ul>
Project portfolio on SharePoint <sup>11</sup>	F&C	<ul style="list-style-type: none"><li>• Creating folder in project portfolio (with template subfolder &amp; documents)</li><li>• Uploading granting package documents (incl. Awarding letter), signed start form, CA if applicable.</li></ul>
Research Software Directory (RSD),	PM	<ul style="list-style-type: none"><li>• Creating an RSD project page<sup>12</sup></li><li>• Signalling requirements for corporate website to Communications</li></ul>

<sup>11</sup> See folder URL in Section 5.

<sup>12</sup> <https://research-software-directory.org/projects>





What	By	Responsible for
project page and software pages		<ul style="list-style-type: none"><li>• Copying website summary from the proposal (if applicable) or writing a catchy summary and obtaining approval from LA for edited versions.</li><li>• Finding appropriate image (e.g., royalty-free images offered by shutterstock.com and unsplash.com)</li><li>• Copy edited version from the corporate page to the RSD one.</li></ul>
	Communications	<ul style="list-style-type: none"><li>• Assisting with text and images</li></ul>
Corporate website	Communications	<ul style="list-style-type: none"><li>• Creating corporate web page from information supplied by PM</li><li>• Editing project page on corporate website</li></ul>
Gantt	PM	<ul style="list-style-type: none"><li>• Checking if import project information from Exact is correct</li><li>• Adding labels</li><li>• Adding respective project portfolio URLs</li><li>• Planning RSEs, if applicable (e.g., for external projects)</li></ul>

**General status and progress are monitored by the accountable PM.**

## 2.3 TL assignment

The PM asks the TL team to assign a TL to the project, providing all project information. The TL team does so at the TL meeting and informs the PM of their decision (by assigning TL to the project in Gantt as well as a confirmation by email). Should the assigned TL become unavailable for an extended period, the TL team assigns another (temporary) TL to the project.

**Responsible: TL team (at request of the PM).**

## 2.4 Preparation

PM provides an overview of project requirements based on the project proposal, covering the following topics:

- What technology / eScience expertise is requested from the eScience Center, and at what level (novice, expert)? **Action:** In collaboration with the TL, the PM prepares relevant tags for technologies required by the project.
- What are the research questions and goals? **Action:** PM asks senior members of the Center with relevant domain expertise for their opinion and prepares relevant tags for the project information.
- What is the proposed workplan and timeline? Is the work feasible? **Action:** Together with the TL, the PM assesses if a workplan is feasible or needs to be adjusted in the context of the Technology plan (Section 2.7).
- What type of support other than RSE expertise is requested and needed? (e.g., training workshops, time and help of CMs, use of SURF or other infrastructure) **Action:** PM notes this information for discussion with the LA and Lead RSE. PM consults TL about management plans (see Section 3.7.3) and CMs about training workshops (see Section 3.6.2).

PM flags issues such as:

- GDPR – is there any personally identifiable information involved in the data required by the project?
- IP and licensing – does the project ask for an exception to the Apache 2.0 and the CC by 4.0 default?



- Long term sustainability of the software – does the project have a sustainability plan?
- Anything else potentially problematic – for example, military application, animal or human tests, etc. (see also the final statements in the application form).

Depending on the issue, PM contacts relevant consultants (see Section 3.11).

PM records all relevant information in the project log (Section 3.1).

**Responsible: accountable PM**

## 2.5 Staffing

To each project, the PM appoints a Lead RSE and at least one more RSE (where applicable as part of a team). The PM can adjust staffing at any point during the project life cycle whenever necessary.

To plan projects, PMs rely on information available in Ganttlic. SHs ensure that information on the availability of RSEs for at least the next 6 months is up to date; this includes the overall planning overview of an RSE's activities, such as trainings, extended leave, etc. Other work done by RSEs (Dissemination & Community; Knowledge Development) are filled in by the respective budget holders. The PM checks their planning against the financial conditions of the project.

To make staffing of projects more robust, PMs schedule RSEs on a yearly or quarterly rather than a monthly/weekly/daily timescale, on the assumption that project hours are spent at a linear rate throughout all projects. In collaboration with SHs and relevant budget holders, the PMs ensure that no RSE is planned beyond their capacity; should this be the case, assignments are removed in agreement with the RSE and SH so that capacity is on par.

In the case of teams, the PMs consider the capacity of an entire team rather than individual RSEs within this team. Furthermore, PMs ideally assign a project in such a way that it does not involve more than one team. The Lead RSE is the primary contact for the project.

PMs assign an RSE to projects, taking the RSE's expression of interest (see Section 2.5.1 below) into account, and following due consultation with relevant stakeholders such as SHs, TLs, and RSEs/teams. PMs share the resulting planning with the organization (e.g., through Ganttlic).

PM communicates staffing decisions to the LA. Project planning in Ganttlic is used as an agreement between the PMs and the RSEs. RSEs are expected to adhere to the planning as agreed; if required, they can discuss and renegotiate the planning with the PMs.

### 2.5.1 Project vacancy announcement

Project vacancies are announced internally at the discretion of the **accountable PM** in a timely manner, via email. An announcement message must contain an instruction on how to access information on the project and how to express interest (filling out form, via email, comments on Announcement Board in Teams etc.). In turn, RSEs express their interest (for themselves or on behalf of their team) within the allocated time and provide a motivational text describing expertise and skills relevant to the project work. PM informs RSEs on staffing results.



If there is a shortage of RSE expertise and the project cannot be staffed, the PM signals the vacancy to the respective SH and the PM representative in the hiring committee following rules described in the hiring process<sup>13</sup>.

## 2.5.2 Assignment of RSEs

To find RSEs suitable for the project, the PM:

- reviews the RSE expressions of interest,
- checks availability of RSEs,
- consults other PMs and the relevant SHs and TLs.

The PM assigns RSEs based on RSEs' expressions of interest, availability, technological skills and disciplinary match. If a team of RSEs is assigned to a project, the PM and the team agree as to which member(s) and in which capacity they work on the project. Team members are free to distribute the workload as they see fit, but the Lead RSE role cannot be freely transferred.

Lead RSEs play a leading role in the project execution phase. The PM assigns the Lead RSE in consultation with the relevant SH, based on (amongst others) seniority and/or potential. The PM consults the relevant SH regarding the professional and/or personal development needs of the Lead RSE.

The Lead RSE and PM use email for all official correspondence with the project team (including the LA), keeping each other in CC. This includes information regarding any significant change concerning the project (budget, deliverables, changes in research team), agreements on management plans (DMP, SMP), workshops, review meetings and end reports.

## 2.5.3 Lead RSE availability

If the Lead RSE has limited availability during the project for an extended period, this is signalled to the PM and the SH by the Lead RSE. The PM discusses with the SH whether the Lead RSE should be temporarily or permanently replaced. The eScience project team puts forward a candidate to take up the role of Lead RSE.

The PM approves replacement of a Lead RSE. In normal circumstances, the former Lead RSE organizes a transfer meeting with the new Lead RSE and the PM, and reports on the status of the project (current workplan, tasks, responsibilities of all project RSEs and the next steps in the project execution). The PM communicates the change to the LA (or Consortium for external projects) and includes both the former Lead RSE and the new Lead RSE in the correspondence.

## 2.6 Kick-off meetings

Once administration and staffing are finalized, the PM organizes two kick-off meetings: an administrative start meeting introducing the eScience Center and our way of working and a project kick-off, which is focused on the project research and workplan. The secretary can assist with organizing the meetings.

The PM archives the material used during the meeting and the meeting notes (from LA, PM or others) internally in the project portfolio folder.

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<sup>13</sup> Contact Hiring Working Group ([HiringCommittee@esciencecenter.nl](mailto:HiringCommittee@esciencecenter.nl)) for more details on the process.



The PM can combine the two meetings, if necessary, into a single workshop-style meeting. This applies in particular to specific categories of projects (e.g., based on a collaborative call, or an OpenSSI call). This is held at the eScience Center office, and a suitable room is arranged by the PM.

For **external projects**, the way kick-off meetings are arranged depends on the nature of the project. The Lead RSE attends all formal meetings of external projects. The PM joins these meetings if they deem this necessary. It is the responsibility of the Lead RSE to keep the PM in the loop.

## 2.6.1 Administrative start meeting

<b>Scheduled:</b>	Soon after awarding, but not before the Awarding letters have been sent and F&C has collected all the paperwork and put it in Exact and Project Portfolio)
<b>Stakeholders:</b>	PM (chair), LA, Lead RSE (optional). The PM can involve others at their discretion.
<b>Purpose:</b>	A procedural meeting to discuss how the cooperation on this project will be organized, administrative questions the LA may have, current availability of software and data, staffing, etc, so that problems can be caught early (e.g., licensing issues, no data, etc.)
<b>Duration:</b>	1.5 hours
<b>Location:</b>	At the eScience Center (preferably), but can be also online

For this meeting, the PM uses the administrative (PowerPoint) presentation, ensuring that information is in the line with the call text, and current Terms, IP policies etc.

The agenda for this meeting covers:

- The eScience Center
  - its mission, governance structure, technological expertise
  - request to sign up for the eScience Center newsletter.
- Working with the eScience Center
  - calls, collaboration, software and software quality, RSD
  - what are the roles of PM, Lead RSE, RSEs, teams and TL
  - suitable and welcoming work environment<sup>14</sup> for RSEs at the project location, including working-on-location permit ('gastovereenkomst')
  - additional collaboration options: workshops, trainings, other calls.
- Project life cycle
  - workshops organized by the project
  - annual reviews, reports, payments
  - Project end
  - SURF Support for the projects (infrastructure, advisors).
- Community and impact
  - RSD, project pages, pitches, etc
  - publishing, blog posts, and outreach activities
  - digital skills programme
  - contributions to open and reproducible science initiatives

<sup>14</sup> <https://www.arboportaal.nl/onderwerpen/themas/inrichting-werkvloer>



- Intellectual Property and Software Licenses
  - publication protocol: funding acknowledgement in output is a must, RSEs are preferably co-authors
  - any deviation from the default IP policy (open source from the start, not only after release).
- Project introduction
  - project needs and expertise
  - Software and data readiness (Software and Data accessibility and quality checks).

The PM logs the agreements reached in the slides or the project log (Section 3.1). The PM updates the project log with the meeting date, stakeholders present and (link to) the agreements. The PM and LA share slides with each other and the PM stores both slide decks (from PM and LA) and agreements in the project portfolio.

## 2.6.2 Project Kick-off

<b>Scheduled:</b>	Around the date indicated by LA in the start form, after the administrative start meeting
<b>Stakeholders:</b>	PM (chair), the entire project team, TL, and other relevant stakeholders (e.g., SH)
<b>Purpose:</b>	The project kick-off focuses on the execution of the project, on the technological requirements, scientific challenges, relevant communities, project goals and outputs
<b>Duration:</b>	Max. 1.5 hours
<b>Location:</b>	At the eScience Center office or at the institute of the LA

For this meeting the standard agenda is:

- Round of introductions (the entire project team) (10min)
- Project introduction and goals by LA (20min).
- Discussion on the workplan and any updates needed by the project team (30min)
  - eScience team explains the purpose of the technology plan
  - Project team in agreement with the PM and TL, decides when the technology plan should be submitted
- Roles of the project team members in carrying out the project workplan (10min)
- (Updates to) Software Management Plan (SMP) and Data Management Plan (DMP) (5min)
- Agreements on initial project planning and deliverables (with concrete action points) (10min)
- Agreements on collaboration (e.g. frequency and location of project team meetings, planning days to work together and location)
- Any other business (5min)

A workplan should always include a clear set of steps, divided into work packages, a detailed and realistic schedule, and a list of deliverables, and management plans (see details in Section 3.7.3).

In agreement with the project team, the Lead RSE prepares the project for the code development (see details in Section 3.7.1). PM logs the agreements, asks LA for the slides, and archives all of it in the project portfolio.

## 2.7 Technology plan

The project team submits a technology plan by the date agreed during the project kick-off, describing



- possible choices of the available technologies and which of them will be used for the project, and for which reason
- the technological outcomes of the project (software and data)
- steps to be taken with regard to reusability and adoptability, etc.

The technology plan covers the choice of programming language(s), expected quality levels, etc. The plan should be seen as an evolving record of the considerations and choices regarding the technology employed; it ensures that RSEs make good use of the expertise present in the Center and that optimal choices are made throughout the project.

<b>Written by:</b>	Lead RSE, in collaboration with project team (including LA, TL), CMs, and others RSEs or colleagues (e.g. with relevant expertise on the subject), or relevant SIG.
<b>Target audience:</b>	project team, TLs, PMs
<b>Schedule:</b>	<ul style="list-style-type: none"><li>• written at the start of the project work, before any software development starts,</li><li>• submitted to PM/TL by email before the deadline agreed during the project kick-off</li><li>• as a part of the project log (either full document in the log or a URL to it).</li></ul>
<b>Approved by:</b>	PM after due consultation of TL

The Lead RSE is encouraged to reach out to RSEs or other colleagues who have the relevant expertise in the process of developing the technology plan. CMs can advise on engaging the target audience with regard to software reusability and adoptability. Since TLs are accountable for safeguarding the suitable technology in the project, the involvement of the TL in writing the technology plan is important. Therefore, the PM must consult the TL on the technology plan, submitted by the Lead RSE before any technological decisions are made in the project.

Upon approval of the technology plan (via email), the project team updates the management plans, if necessary. The Lead RSE logs the decisions in the project log (see Section 3.1) and archives emails in the project portfolio, if necessary. The Lead RSE keeps the technology plan up to date: If it changes during the project, this should be simply appended to the original technology plan (e.g., in a separate document or in the project log). The Lead RSE explains why adaptations to the plan were required. The aim is to obtain a record of the lessons learned from beginning to end of the project, to facilitate collaboration and to document decisions in case a project must be transferred to other RSEs due to unforeseen circumstances. The Lead RSE discusses any changes made to the technology plan during the status update meetings (Section 3.2).



### 3 Project execution

Projects at the eScience Center vary in duration from 3 months to 5 years, depending on the call through which they were granted. In all cases, the PM (with the help of Lead RSE) monitors progress of the project and involves relevant stakeholders whenever necessary. The Lead RSE takes on a leading role during the execution phase of the project life cycle. The Lead RSE ensures that the Project team meetings take place on a regular basis: the frequency may vary with the size of the team, e.g. full team meetings once per month and meeting with only with the LA and/or LA team once in two weeks.

#### 3.1 Project logging

eScience project team members routinely log important project events and agreements. The project log is placed in the Project portfolio (the Coordinators subfolder, see Appendix D). The Lead RSE keeps the log up to date (see example in Appendix B). The project log facilitates the information flow between different stakeholders about project activities.

The following should be included in the project log:

- RSD project page URL
- important meetings, including dates, links to slides and fully written agreements/decisions
- infrastructure used and decisions regarding infrastructure
- output/deliverables (their URLs, or this is registered as an output in RSD)
- participation in workshops, external events, conferences related to the project (or this is registered as an output in RSD)
- changes to the project team
- records on management plan updates
- technology plan decisions and updates
- results of (code) reviews of the project.

Links pointing to other documents (e.g., files in the Project portfolio, project output, repositories) should be used in the project log to improve readability of the log and avoid duplicate information.

#### 3.2 Status update meetings

The PM stays informed about the status of the project and communicates with the Lead RSE on a regular basis.

<b>Scheduled:</b>	Once every 4-6 weeks
<b>Stakeholders:</b>	PM (organizer), Lead RSE, optionally: TL, other RSEs
<b>Purpose:</b>	status update on the project and discussion around project management
<b>Duration:</b>	30 min – 1 hour
<b>Location:</b>	In-person meeting is default

PM and Lead RSE discuss:

- project status (including any changes in a project workplan)
- technological issues, with due consultation of TL, respective SIG, or other RSEs, if necessary
- changes in technology plan, technological choices (Section 2.7), management plans (Section 3.7.3). For any of these changes, TL presence is required
- synergies with other projects in the Center
- issues related to the budget, communication, staffing, etc

- knowledge development and transfer, potential for software reuse, software sustainability



The frequency and duration of these meetings are at the discretion of the PM and depend on factors such as the experience of the Lead RSE and the size of the team and/or the project.

In projects that have a stronger focus on technology (such as the eTEC, CIT projects), the TL is involved in these meetings more frequently. For some projects, update meetings can be combined (e.g., for projects within the same Call) or organized in the context of a larger meeting (such as a SIG on a relevant topic). Together with the Lead RSE, the PM decides on the format of the status update meeting.

### 3.3 Project team meetings

To keep the entire project team informed on project progress, the Lead RSE together with the LA organizes a periodical project meeting. The frequency and format depend on the complexity of the project and size of the project team.

<b>Scheduled:</b>	Once every 2-6 weeks
<b>Stakeholders:</b>	Lead RSE or LA (organizer), LA (chair), RSEs and other project team members from the LA side.
<b>Purpose:</b>	progress update on the project by all team members
<b>Duration:</b>	30 min – 1 hour
<b>Location:</b>	In-person meeting is default

The agenda of this meeting should include:

- status update from all stakeholders,
- discussion of scientific progress,
- discussion of technological progress, issues and choices,
- alignment of project progress with the project workplan, and adjustment of the latter, if necessary.

### 3.4 Writing hours and managing project budget

The PM and Lead RSE must have a firm grasp of the project budget and the project duration. This information is in the Awarding letter, the proposal and Exact.

The eScience Center project team (including PM and RSEs) must submit their project hours in Exact by the end of each month. For regular call projects, RSEs can write hours on awarded projects as soon as they are active in Exact, which in general happens within a month of the project being granted. The PM writes management hours on the project budget.

Project hours are managed by different parties with different responsibilities:

Stakeholder	Responsibilities	More info
PM	<ul style="list-style-type: none"> <li>• checks and approves the hours submitted in Exact for the projects for which they are accountable before the 5th workday of the next month</li> <li>• provide monthly hour status to the Lead RSE</li> <li>• checks and signals to F&amp;C if there is an issue (for example, if project budget is incorrect).</li> </ul>	





Stakeholder	Responsibilities	More info
Lead RSE	<ul style="list-style-type: none"><li>monitors project hour expenditure and signals deviation from the workplan to the PM</li></ul>	Asks PM for hours status in Exact, or checks monthly budget status via Gantt
F&C	<ul style="list-style-type: none"><li>maintains accurate budget information</li><li>monitors and processes approved project hours</li><li>makes financial information available to the budget holders (including PMs) each month</li><li>automatically puts read-only status on the project when project hours are depleted/exceeded early</li></ul>	All budget changes require a PM and DT decision.
DoT	<ul style="list-style-type: none"><li>monitors and approves software sustainability hours</li></ul>	There is a separate protocol on handling software sustainability.

Hours must be submitted and approved on time, preferably on a weekly basis. All data must be entered no later than one working week following the end of the month.

In some projects, the LA and RSEs are free to spend the awarded hours faster than originally planned. However, the Lead RSE is responsible for results being delivered on time for the project and not exceeding the budget, and for timely informing the PM. If a project budget is fully spent ahead of its schedule, the PM asks F&C to restrict writing on the project budget only to the PM.

For **external projects**, the rules on writing hours differ from regular call projects. Only RSEs and the PM working on the project are allowed to write hours on the project budget. Moreover, for some projects (e.g., Horizon Europe projects) only direct contributions to the project are allowed; other non-project related activities such as time spent on a SIG cannot be declared on these projects. The Lead RSE and PM are aware of restrictions related to their project.

### 3.5 Workshops

Some call projects require the LA to organize workshops. These workshops aim at ensuring that software reuse and adoption (sustainability) is considered early in the project and that a dedicated research community emerges around the software. Based on the call text, the PM determines whether one or more workshops must be organized. The LA writes and submits the workshop plan(s) (see Section 5 for the reference) in a timely manner. The plans need to be approved by the PM and F&C. The Lead RSE is expected to contribute to the workshop and its organization. A CM can advise the LA (via the Lead RSE) on supporting the engagement and growth of relevant communities around the software; a CM is involved in the introductory part of the workshop, including an opportunity to address participants. The PM team appoints an eScience team member to assist in organizing the workshops. F&C supports the PM team with respect to reimbursement of the costs and records that a workshop took place.

### 3.6 Knowledge transfer

To increase visibility of the project and its results, the project team (including RSEs, PM, TL), Communications, CMs, share knowledge and outcomes both inside and outside of the organization. The Lead RSE ensures that

- information on project results is properly shared with Communications, CMs and relevant SH, and
- specific requests to facilitate project visibility are sent to Communications by RSEs.



Moreover, PMs, Lead RSEs and TLs work together to spot opportunities for cross project collaboration (e.g., by reusing software or knowledge in these projects or as a new reusability project, read more in Section 3.6.3).

### 3.6.1 Output management

Projects deliverables include output such as research articles, presentations, invited talks, posters, tutorials, datasets, blog posts<sup>15</sup>, white papers and workshops but also more software-oriented output types such as software or code releases, dedicated software publications, software demonstrators, software videos, tutorials and training material around software.

RSEs strive to apply FAIR principles to all project deliverables. Therefore, all project deliverables should have

- concept DOIs (obtained from the publisher or created by uploading to Zenodo, arXiv, DANS or similar open-access archives);
- acknowledge the eScience Center project grant,
- listed RSEs working on the project as (co-)authors.

To formally record results and facilitate knowledge transfer, RSEs must make all project output available in the relevant systems, online locations and databases:

What	Responsibility of	Responsible for	URL	Additional info
Zenodo (NLeSC community)	PM	curating and approving new publications	<a href="https://zenodo.org/communities/nlesc/">https://zenodo.org/communities/nlesc/</a>	<ul style="list-style-type: none"><li>• Publications uploaded to Zenodo, are added to this community</li><li>• PMs are curators of this community and approve new publications</li></ul>
	RSEs	getting a concept DOI for a data or software release, or a document (e.g., non-peer-reviewed articles, presentations, etc.)		
Research Software Directory (RSD), software and project pages	Lead RSE	<ul style="list-style-type: none"><li>• creating RSD project page, if needed</li><li>• maintaining RSD pages and ensuring the meta data is complete and up to date</li></ul>	See <a href="https://research-software-directory.github.io/documentation/introduction.html">https://research-software-directory.github.io/documentation/introduction.html</a> and <a href="https://github.com/research-software-directory/documentation/blob/main/docs/adding-projects.md">https://github.com/research-software-directory/documentation/blob/main/docs/adding-projects.md</a>	Each project has its RSD project page
	RSEs	<ul style="list-style-type: none"><li>• creating RSD software pages.</li><li>• a timely and accurate registration and</li></ul>		

<sup>15</sup> Indexed at <https://blog.esciencecenter.nl/>, instruction on blogging is posted via Communication's QI <https://nlesc.sharepoint.com/qi/SitePages/Communication.aspx>



What	Responsibility of	Responsible for	URL	Additional info
		maintenance of the output <ul style="list-style-type: none"> <li>keeping the (meta) data stored such as description, GitHub organization(s), concept DOI, mentions (via DOI or URL), related software and projects complete and up to date</li> </ul>		
Project portfolio (on SharePoint)	PM	adding direct link to the project portfolio folder to Ganttlic	See Section 5 for the reference URL, and Appendix D for structure explanation.	<ul style="list-style-type: none"> <li>An internal archive, which is periodically and automatically backed up.</li> <li>Direct link to the project portfolio folder is available in Ganttlic</li> </ul>
	Lead RSE	ensuring that the output is uploaded		
	RSEs	<ul style="list-style-type: none"> <li>uploading the output such as papers, reports, and presentations</li> <li>adding links to the source material to the project log.</li> </ul>		

In terms of project output, the PM expects the project team to follow the plan on deliverables; project deliverables are described in the proposal and workplan. RSEs contribute to the publications and software/data releases.

Open access publications and open software are a requirement for all call projects; PM and Lead RSE keep the LA informed on this matter, if necessary. The funds for open access publication fees are internally budgeted in the call budget by F&C (with the approval of the PD every year). The Lead RSE and PM consult F&C regarding payments for an open access publication.

For **external projects** the expected deliverables are also part of the formal project documents (proposal, contract, etc. The Lead RSE is expected to keep the PM informed of the status of deliverables throughout the project.

### 3.6.2 Outreach

The Lead RSE stimulates and promotes the visibility of the project through project demonstrators, presentations, and other means. All RSEs are expected to communicate about the project and its deliverables externally, as described in Section 3.6.1. Communications supports the project team by publishing any highlights of the project as a news item (e.g., promoting publications, interviewing the team members about exciting scientific results obtained with the research software developed on the project). The Lead RSE (or in rare occasion the PM) contacts Communications with relevant information.



RSEs engage in activities to inform colleagues about the project and the results (e.g., technology plan, milestones, code releases), including presentations at SIGs. For internal and external events, each RSE should prepare a three-slide presentation or a pitch<sup>16</sup> at an early stage of the project and regularly update it. The Lead RSE is responsible for ensuring a presentation in the form of a demonstrator (e.g., of the software developed in the project) is available after the first major release of the software.

The LA and their team are encouraged to participate in relevant Digital Skills Workshops<sup>17</sup> from the Center. Furthermore, if the LA and their team require a project-specific training workshop, the Lead RSE involves

- workshop coordination (via CMs) who can advise the eScience project team with workshop organization and the development of new training material. If applicable, the payment for the overall organization (either through or on top of the project budget) is handled by F&C.
- the PM to discuss the RSE hours spent on organizing the training. If necessary, the PM contacts F&C for a consult.

Again, for **external projects** separate agreements may exist with the project consortium on how to communicate results of the project (for example, Non-Disclosure Agreement or NDA). The Lead RSE and PM consult these agreements at the start of project in order to know what can be communicated and what not.

### 3.6.3 Increasing reusability (in this document called software sustainability)

For some projects, or entire calls, specific budget is available for software sustainability. The PM signals potential for reusability to the TL. The TL discusses this opportunity with the Lead RSE and if necessary, the TL team.

If RSEs have an idea and are interested to work on a project funded by this budget, they can contact TLs or DoT for more information on the procedures (see also Section 5 for relevant references).

## 3.7 Code quality and sustainability checks

Taking care of software quality and sustainability is integral to the code development process cycle at the eScience Center. All RSEs must follow our guide and best practices<sup>18</sup> for software development. Code should be made as generic and reusable as possible from the start.

### 3.7.1 Code development

At the initial stage of code development in the project, the Lead RSE together with RSEs:

- set up a GitHub organization for the project, following the eScience Center Guide and the Turing Way<sup>19</sup>
- add the URL of this organization to the RSD project page.

RSEs must always ask at least one project team member, relevant SIG member or other RSE at the Center to review, comment and approve pull requests in the project codebase.

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<sup>16</sup> A template is available [here](#)

<sup>17</sup> <https://www.esciencecenter.nl/digital-skills/>

<sup>18</sup> [https://guide.esciencecenter.nl/#/best\\_practices/version\\_control](https://guide.esciencecenter.nl/#/best_practices/version_control)

<sup>19</sup> <https://the-turing-way.netlify.app/reproducible-research/reviewing.html>



### 3.7.2 Code review

As part of the annual review (see Section 3.8), a code review is organized by the Lead RSE. Depending on the project it could take the form of a reusabilithon<sup>20</sup>, a review of code on GitHub, or something else entirely (format to be approved by TL). The reviewers for this process are typically other RSEs at the Center.

The goal is to review software of the project for:

- its usability (reproducing steps of installations, and running it on a machine/laptop)
- overall software quality and suitability
- adherence to the technology plan (Section 2.7)
- adherence to eScience Center best practices
- opportunities for reuse of software in other projects
- correct inclusion in output systems (Section 3.6.1).

Reviewers make written suggestions for improvements, and flag major issues encountered. These issues serve as input for the TL for the formal annual review meeting (see Section 3.8). These notes are stored in the project log.

### 3.7.3 Data and Software Management Plans

For some projects, Data and Software Management plans (DMP and SMP, respectively) provide details regarding the maintenance of the data and software output of the project.

Depending on the call, the LA must provide a fully worked out SMP and DMP within the first 6 months of the project. The Lead RSE can assist the LA and their team in drafting the DMP. The LA submits the DMP to the PM, who asks a TL for review and approval. For call projects since 2021, an SMP is a part of the proposal itself.

The LA maintains these plans and communicates any changes to the PM and TL via the Lead RSE. If needed, the PM requests an update. The Lead RSE can help the LA to update the plans.

## 3.8 Annual project review meeting

For all call projects lasting longer than one year, the PM organizes annual reviews. The details are described in the terms and conditions document (Bijzondere voorwaarden Netherlands eScience Center subsidies). For the projects with the duration of exactly 1 year, organizing a review meeting is at the discretion of the PM (in consultation with TL and Lead RSE).

A standard part of every review is a discussion and list of actions on how the results of the project will be made reusable and sustainable (as described in the DMP and SMP), how the collaboration is going, and possibilities for follow-ups to projects.

<b>Scheduled:</b>	Yearly
<b>Stakeholders:</b>	PM (chair), Lead RSE, LA, TL, optional: other project team members, SH
<b>Purpose:</b>	to ensure that the project is still on track, to discuss any persistent issues to ensure optimal collaboration between project team,

<sup>20</sup> The term coined by the Software Sustainability SIG. It refers to the 2-3 hours session with a group of RSEs to check usability of a software, give feedback to the developers and to come up with recommendations to improve the software (re-)usability.



	to explore opportunities beyond the project.
<b>Outcomes/Actions:</b>	List of agreements, action points, advises (from the PM and the TL) for project team members on future steps
<b>Duration:</b>	Max 1.5 hours
<b>Location:</b>	At the Center or the project location

The agenda of this meeting is:

- Introduction by Netherlands eScience Center (round of introductions and purpose of meeting)
- project overview and deliverables so far
  - status of the scientific goal(s) by the LA and their team
  - status of the output (e.g., publications, software, datasets, methods, documentation) by the project team
- status of the collaboration (including admin status of hours, bottlenecks)
- use of digital infrastructure and support of SURF (if applicable)
- next steps
- opportunities beyond the project.

The goals of the meeting are to:

- review the progress of the project in comparison to the original workplan (are we on track?)
- discuss research results and their novelty and current deliverables of the project
- discuss status and update the management plans, if necessary
- discuss strategies to expose project results to a broader community
- discuss strategies and actions to ensure the reuse and sustainability of the software
- identify bottlenecks and areas for improvement to ensure efficient work of the project team
- report financial status of the project (RSE hours left)
- brainstorm on further collaboration and funding options, if relevant
- brainstorm on the potential for cross project collaboration.

For **external projects**, review meetings are usually organized as part of the project process. Whether or not (a lightweight version of) our internal review procedure is needed for a project is determined by the PM, in consultation with the Lead RSE.

### 3.8.1 Review meeting preparation

	<b>Stakeholder</b>
<b>Prepared by:</b>	LA and Lead RSE of the project. Other stakeholders of the project can contribute.
<b>Reviewed by:</b>	PM accountable for project, TL accountable for technology
<b>target audience:</b>	PMs, TLs, SHs, RSEs

The PM sends the LA team the standard review meeting presentation template, updating the slide on RSE hour status. This template provides a list of the important points to be discussed. LA and Lead RSE collaboratively prepare the slides. In particular,



- the LA adds 3-5 slides (can be separate from the template) to report concisely on the extent to which the research objectives of the project have been met. The LA is not expected to present the content of published papers or the original workplan or proposal.
- the Lead RSE prepares 1-2 slides on a status of the current technology plan and software/ datasets/ methods/ documentation, and remarks on reusability, adoptability and sustainability of the software.
- the LA and Lead RSE compile the list of project deliverables. If applicable, the LA reports on the workshops.
- the LA and Lead RSE point out any scientific or technological bottlenecks, e.g., approaches that did not work, data that was not collected, or any other reasons for delays in the workplan. To this end, the LA and Lead RSE comment if the project is on track or whether the planning needs to be revised.
- the PM reports on the financial status of the project (the number of hours already spent).
- the entire project team is invited to comment on how the collaboration is going, in terms of interaction between the team members and suggestion for improvements, if there are any issues.

The Lead RSE:

- requests other project team members to contribute to the slides, wherever appropriate
- coordinates with the entire project team to finish the preparation of the presentation at least 2 working days before the review meeting
- ensures that output is correctly registered in systems described in the output management (Section 3.6.1) and all missing URLs and DOIs are added to the slides
- uploads the slides to the project portfolio (into the Reviews subfolder, see Appendix D), and
- informs PM and TL that slides are ready and are in the project portfolio

### 3.8.2 At the review meeting

The time breakdown of the meeting agenda is follows:

- presentation by the LA (max. 20 minutes)
- presentation by the Lead RSE (max. 20 minutes), including a description of RSE roles and project deliverables.
- discussion (max. 40 minutes)
- summary, action points and conclusions.

The PM chairs the meeting, acting as a reviewer together with the TL. The TL raises possible issues related to technology and software. Other invited stakeholders can comment and contribute to the discussions. The PM and TL comment on the status of the deliverables:

- have the objectives outlined in the proposal been sufficiently addressed? (PM)
- does the project follow the workplan in terms of deliverables? (PM)
- has the output been registered according to the rules of output management (Section 3.6.1)? (PM, TL)
- does all project output have publications (including software and data papers)? (PM)
- any issues flagged during the code review that needs to be discussed with the project team? (TL)
- does the project team sufficiently engage and align with relevant communities (e.g., via the workshops)? (PM)
- does the project adhere to the technology plan, SMP and DMP? (TL)

The eScience project team comments on any further possibilities for reusability, adoptability and sustainability of the software, and the project team comments on possible collaborations beyond the project.



The PM updates the slides with action points, agreements and plans (with the project partners agreement). The PM logs the meeting in the project log.

### 3.8.3 After the review meeting

PM shares the updated slide deck with the project team members to check the agreements written down. PM ensures that the final version of the presentation(s) uploaded to the project portfolio is correct.

## 3.9 Reporting

For call projects the annual review meeting and end report serve as formal progress reports.

**External projects** may require periodic reporting to the consortium on progress according to the workplan, including deliverables. The PM and Lead RSE consult the Consortium/Collaboration Agreement, the contract and the proposed workplan and involve F&C for the financial part of the report. Normally, the external project coordinator (e.g., EU project coordinator, NWO programme officer) signals the deadline of a deliverable or report. The Lead RSE contributes to the report on project activities required to be done by the eScience Center, and the PM checks the document. The PM asks F&C to check or fill in the financial part of the report, signed by the DoO if necessary. Once the final version is ready, the PM sends it to the external project coordinator (via EU portal done by F&C) and archives this report in the project portfolio.

## 3.10 Conflict resolution and complaint procedure

The eScience Center follows the Code of Conduct as outlined in the Uitvoeringsregelingen NLeSC 2020 (see QI for the details).

All conflicts on projects involving the eScience Center RSEs and the LA and their team should be resolved using the following four-step process.

- 1) When problems arise in a project, the Lead RSE is expected to resolve problems in consultation with the LA. If needed, the PM can be asked to join in discussions on finding the best course of action.
- 2) Both RSEs and LA can escalate issues related to the project to the PM (preferably, via the Lead RSE). The PM organizes a meeting to discuss the problem and tries to resolve it.
- 3) If the problem remains unsolved, the RSEs or the LA can escalate it to the PD by sending a letter summarizing the situation to the accountable PM, who will forward it to the PD.
- 4) The PD can escalate the problem to the DT.

If the problem is with the PM, RSEs can escalate to their manager (SH).

The eScience Center also has an external confidential advisor ('Vertrouwenspersoon') who can be contacted anonymously. See the QI for details.

Resolving conflicts may result in changes to the project, such as changes in staffing or changes described in Section 3.12.





### 3.11 Consultants

Certain issues will require that the project team consults with other persons inside the eScience Center. The following situations require the team member to notify the PM, any actions may be delegated to any eScience team member.

- For project related GDPR issues, or personal identifiable data, consultation with the GDPR contact person is obligatory.
- For issues related to software or data accessibility and quality, contact the TL.
- For issues related to scientific integrity, contact the scientific integrity officer.
- For issues related to SURF (use of their infrastructure or need of advisor) contact SURF liaisons<sup>21</sup>.
- For issues around sustainability, contact the TL and CMs.
- For licensing issues contact the DoT.
- For legal matters contact the DoO.

### 3.12 Changes to the project

During the project life cycle, the workplan may change substantially:

- New deliverables because of additional funding
- New workplan because of changes in the research goal and/or in the technology used
- Timeline, leading to a different end date

Any of these changes needs explicit approval from the PM team or the DT.

Type of request	Decided by:
Budget neutral requests within the PM mandate	PM team
All requests regarding budget changes outside the PM mandate	DT (via PD)
Early termination	DT (and DT informs the Board)

For **external projects** changes to a project must be handled as described in the formal documents for this project (e.g., grant agreement, consortium agreement). If it is within the PM mandate, the PM discusses with the PM team any extensions required for the project. Otherwise, the decision is made by the DT. The PM informs the external funder or consortium of the decision.

#### 3.12.1 Proposal changes request

The LA must submit a formal request to the PM team (by email via the PM, in PDF format, signed) containing:

- project title and project number
- requested change (e.g., time/dates, RSE hours, scientific goal) and motivation for this change
- conditions such as deliverables:
  - If there are new deliverables, what are those and what is the new planning?
  - If there are no new deliverables, that should be stated explicitly.
- any motivated budget change, such as
  - LA wants to increase their involvement
  - change in research personnel (if applicable in the case of older projects)

<sup>21</sup> For contacts, see “Project Infrastructure” section of <https://nlesc.sharepoint.com/it/SitePages/Development%20Infra.aspx>



- transfer from hardware costs to RSE contribution or PYR for research personnel on the LA side (or vice versa) (if applicable in the case of older projects)
  - any in-kind to cash change, or vice versa (including requests with the extra cash budget from the LA).
- any prior or planned inactivity on the project, such as
  - shortage of personnel on the LA side due to e.g. maternity leave, sick leave, hiring delays (for example, a PhD student or a postdoc needs to be hired but there is a concise timeline on the hiring procedure)
  - unavailability of RSEs
  - additional data that needs to be collected.
- any delay with the start date.

### 3.12.2 Processing the changes request and decision

Upon receipt of the request, the PM assesses if the request should be granted based on considerations such as

- whether the new objective is scientifically promising or technologically interesting? (if applicable)
- collaboration status with the LA;
- prior problems regarding the project;
- the benefit of continuing the project for the eScience Center (e.g., good wrap up of the collaboration, this leads to another funding opportunity together)
- availability of RSEs with relevant expertise to work on it

The PM can consult with RSEs and the TL on whether the new planning is feasible. In case of additional funding, the DT (via the PD) will decide, after a budget calculation by the F&C and approval by the DoO. Otherwise, the PM puts the request on the agenda for the next PM meeting, containing:

- the motivated request (uploaded to the project portfolio, the subfolder titled Coordinators<sup>22</sup>)
- the recommended action
- the prepared decision on the PM meeting agenda (uploaded to the project portfolio, the subfolder titled Coordinators).

The PM team may request more information from the LA via the PM (and thus postpone the decision on the request). The LA can provide the new information via an additional PDF signed letter or as amendment to the original letter.

After the final decision, the PM notes the official decision in the decision document. If the request is not approved, the PM communicates this to the LA. If the request is approved, the PM

- communicates with F&C, which finalizes the extension (changes in Exact, the extension letter for the LA),
- double checks if budget and hours in Exact are still correct,
- updates planning and adjusts staffing, if necessary,
- ensures website and RSD are updated (e.g., if dates or affiliation changed),
- communicates the extension to the project team.

If the request involves a DT decision, the PM submits a request formally through the PD.

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<sup>22</sup> See Appendix D for more details on the folder structure.



### 3.12.3 Early project termination

Early project termination can be

- agreed on by mutual consent,
- initiated by the LA,
- initiated by the eScience Center.

In the first and the second case, the PM submits a letter (written together with and signed by the LA) explaining the situation to the DT. The letter should contain (a proposal for) an agreement on how to handle all the remaining resources of the project (RSE hours, cash contribution, FTE commitment for LA, workshops, software sustainability budget, etc.).

The PM can request the termination of a project if the conditions and agreements in the Awarding letter and Bijzondere voorwaarden have been violated by the LA or the project partners. The PM submits the letter to the DT (via the PD explaining the situation). If the DT approves the termination, the PM communicates this decision to F&C, which finalizes the process (by making changes in Exact and preparing a termination letter).



## 4 Project closing

Project closing is the final phase of a project. In this phase the PM (with the help of F&C) processes the end report and accepts the project deliverables. Once the project is formally closed, RSEs can no longer write hours or work on this project.

### 4.1 End report

All completed call projects at the eScience Center must have an end project report.

<b>written by:</b>	the LA, assisted by the Lead RSE
<b>target audience:</b>	PMs, RSEs, Communications (layman summary), F&C (accountants), TLs
<b>schedule:</b>	<ul style="list-style-type: none"><li>• written in last months of the project,</li><li>• submitted 3 months after the project end at latest,</li><li>• archived in the project portfolio on the internal All SharePoint site.</li></ul>
<b>Approved by:</b>	The PM team and F&C

The Lead RSE and RSEs can assist the LA in writing the end report, providing necessary information for it (such as deliverables). A complete end report (in PDF format, using a template provided by the PM) contains:

- layperson summary (aka ‘lekensamenvatting’, written in English),
- summary with clearly stated objectives/results,
- a list of deliverables and project outcomes (e.g., software, papers, presentations, pitch), including list of workshops (if applicable) and the latest version of the management plans,
- signature of the LA and date of signing.

For collaborative call projects, the end report written by the LA and the Lead RSE for the other funder (e.g., NWO) is sufficient, if it contains all necessary information.

For **external projects** the way a project is formally closed depends on the formal documentation for a project. Often a final report is required for the external funder. The Lead RSE contributes to this report (PMs can assist when needed), and care should be taken to reserve some time (and budget) during the project for this effort. F&C assists with the financial part of the reporting. The necessity of a (lightweight version of an) internal end report is determined by the PM and F&C.

The Lead RSE ensures all output is registered in the appropriate systems (see Section 3.6.1) before the PM team will accept the end report.

Projects that are funded by software sustainability budgets have their own procedure for end reports (see Section 3.6.3).



### 4.1.1 Requesting end report

For call projects, one month before the project end, the PM requests the LA to submit the scientific and financial end report ('Financieel en wetenschappelijk eindverslag'), providing the template. The LA submits the report to the PM no later than three months after the project end date.

For an **external project**, the PM requests the Lead RSE to write the report or share the end report written for the external party or funder (e.g., EU, NWO). In this case, F&C prepares the financial part of the report. F&C periodically sends a list of missing end reports to the PM team. If the end report is not submitted yet, the PM sends a reminder to the LA.

### 4.1.2 Checking end report

The PM reviews the report and fills in the review document (both templates are in the templates folder in the project portfolio).

The checklist includes but is not limited to

- all items from Section 4.1 are present and satisfactory,
- all papers/software/code are stored properly and according to the rules in output management (Section 3.7.3),
- all URLs are working,
- papers are uploaded by the Lead RSE to the project portfolio in the Products subfolder,
- all entries in output systems (from Section 3.6.1) are complete.

F&C reviews the financial report and either approves it or requests corrections to the report. If the end report is not satisfactory, the PM asks the LA and/or Lead RSE for additional information or corrections to the report, before resubmitting it to F&C.

PM and F&C archive the end report and review form in the respective project portfolio folder (see Appendix D).

## 4.2 Formally closing the project

The PM puts decision to formally close project on the PM meeting agenda. After the formal decision<sup>23</sup>, the PM notifies the TLs, F&C and Communications (with the links to the documents). F&C handles the approved reports and formalities related to closing the project. This includes getting the final signature by DoO or Executive Director on the official letter for the LA about the project closing ('Afsluitingsbrief').

The PM ensures that the project is marked as complete on the

- corporate website: Communications updates the project page with the layperson summary (from the end report) and sets the project status to "Closed".
- RSD: the Lead RSE updates the status on the project, if necessary.

F&C uploads the official closing letter to the LA, as well as all appropriated documents, and moves the project folder in Project Portfolio to the Closed project folder.

The PM checks:

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<sup>23</sup> Formally recorded by the PM team, and thereafter ratified by the DT team (see more in Appendix C).

- the planning, ensuring that no one is assigned to the project in the future,
- Exact status (Is the project closed so that no hours can be written on it?),
- (other tools – close/archive the project).





## 5 Related documents

- 1 2015 NLeSC Protocol voor Calls, Subsidietoekenning en Projectmanagement ([link](#))
- 2 Netherlands eScience Center strategy ([link](#))
- 3 Job Profile TechLeads ([link](#))
- 4 Project Portfolio on All Share point ([link](#))
- 5 Post-restructure Report ([document](#) and [slides](#))
- 6 Acquisition procedure ([QI link](#))
- 7 Kickoff slides template v Feb 2022 ([link](#))
- 8 Review slides template v Nov 2021 ([link](#))
- 9 End report template 2020 ([link](#))
- 10 End report review template ([link](#))
- 11 Workshop draft procedure (available through the PM team)
- 12 Software reusability strategy ([link](#))
- 13 Knowledge and Development strategy ([link](#))
- 14 Chue Hong, Neil P., Katz, Daniel S., Barker, Michelle, Lamprecht, Anna-Lena, Martinez, Carlos, Psomopoulos, Fotis E., Harrow, Jen, Castro, Leyla Jael, Gruenpeter, Morane, Martinez, Paula Andrea, Honeyman, Tom, Struck, Alexander, Lee, Allen, Loewe, Axel, van Werkhoven, Ben, Jones, Catherine, Garijo, Daniel, Plomp, Esther, Genova, Francoise, et al. RDA FAIR4RS WG. (2022). FAIR Principles for Research Software (FAIR4RS Principles) (1.0). <https://doi.org/10.15497/RDA00068>
- 15 Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* **3**, 160018 (2016). <https://doi.org/10.1038/sdata.2016.18>



## Appendix

### A. Lead RSE role description

*This role description includes guidelines that need to be followed by RSEs fulfilling the role; they will be complemented by protocols.*

1. Role	Lead RSE
2. Place in the organization	Project
3. Contacts	Programme Managers, project team RSEs, external project partners, Tech Leads, Generalization Team
4. Purpose	To carry responsibility for the day-to-day running of a research project at the eScience Center and act as main contact point for the project. Each project has one Lead RSE.
5. Main tasks & responsibilities	<ul style="list-style-type: none"> <li>• Coordinating day-to-day activities with other RSEs working on the project.</li> <li>• Carrying responsibility for agreements with the accountable Programme Manager on the division of tasks and the allocation of time within the project.</li> <li>• Making sure that activities, procedures and targets agreed upon are carried out and met on time.</li> <li>• Monitoring project progress, including project hour expenditure, and regularly reporting progress to the accountable Programme Manager.</li> <li>• Ensuring the presence of the accountable Programme Manager at all formal meetings.</li> <li>• Ensuring that general technological solutions are approved by the Programme Manager after due consultation of Tech Leads, and monitoring their implementation.</li> <li>• Ensuring that generalization and re-usability opportunities are implemented from the start of the project, after due consultation of Tech Leads and on approval of the accountable Programme Manager.</li> <li>• Solving everyday technical and managerial problems, and, if needed, communicating these to the Programme Manager.</li> <li>• Ensuring the visibility of the project through project demonstrators, slide decks and other means.</li> <li>• Making sure all project output is properly released, documented and archived in the designated systems.</li> </ul>
6. Competencies	<ul style="list-style-type: none"> <li>• Negotiating</li> <li>• Communicating</li> <li>• Cooperating</li> <li>• Leading</li> <li>• Result orientation</li> <li>• Planning and Organizing</li> </ul>
7. Available resources (budget, hours, training)	In project budget
8. How to get this role	Programme Manager assigns Lead RSE based on skills, experience, knowledge, interest and availability, after prior consultation of Section Head.





## B. Example of the project log

### Running log for Project XXX

2022-03-12 Output: submitted paper

2022-02-02 Mr. X assigned as Lead RSE

2021-01-01 Kick-off meeting

Present – NLesC: AB (PM), AA (Lead RSE), AC (TL), AD (RSE)

Present – Team: FA (LA, TU Delft), PA (PhD student, TU Delft), RA (TU Delft)

Agreements:

- Lorem ipsum dolor sit amet, consectetur adipiscing elit,
- sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
- Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris.

2021-02-10 SURF proposal granted

We received a grant (link) to infrastructure. We did not get Snellius access but were sent to Lisa as that also has enough harddrives.

2021-02-02 SURF infrastructure proposal

We submitted a proposal to SURF (talked to Henk). We decided to use Snellius as the harddrive in my laptop is too small.

### Project Start

	date	Slides/Meeting notes/URLs?	notes
Administrative Start meeting	2021-01-01		
Project Kick-off	2021-01-01		
Review1	2022-06-01		To plan final date
Review2			
Tech plan v1	2022-06-20	Github.com/shico/techplan.rst	TL comments...
paper			TODO: Add to RSD
presentation		URL (to the project portfolio)	Uploaded to RSD and Zenodo



## C. PM mandate

Het DT mandateert het Programme Management (PM) Team besluiten betreffende aanpassingen van lopende projecten te nemen zonder tussenkomst van het DT, indien de aanpassingen zijn van de volgende aard:

- Budget-neutrale vertragingen van de start van het project tot een maximum van 6 maanden;
- Budget-neutrale looptijdverlengingen tot een maximum van 12 maanden;
- Budget-neutrale verschuivingen (cash->cash, cash->kind, of kind->kind) tussen kostenposten binnen het project met een maximale geldswaarde van 20% van het gehele projectbudget en het totaal van 50.000 EUR niet overstijgend.

Alle project-aanpassingen anders dan de bovengenoemde (dus incl. alle aanpassingen van kind->cash) vallen expliciet niet onder dit mandaat; besluiten over dergelijke aanpassingen kunnen enkel door het DT worden genomen.

Alle besluiten betreffende aanpassingen van lopende projecten zoals hierboven bedoeld dienen door het PM Team onverwijld te worden medegedeeld aan de afdeling Operations.

Als onderdeel van het bovenstaande mandaat dienen tenminste elke 6 weken de door het PM Team genomen besluiten aan het DT te worden voorgelegd, zodat deze formeel door het DT kunnen worden bekrachtigd.



## D. Project Portfolio and its Structure

The project portfolio of active projects is located in All SharePoint (see reference link in Section 5). The structure looks as follows: for example, for the ShiCo project, the location on All SharePoint is

Documents > Projectportfolio > Projects > 27014909 Mining shifting concepts through time (ShiCo)

and with the subfolders structure:

A - Start documents

B - Planning

C - Reviews

D - Products

E - End documents

F - Coordinators

Administrative information.docx

where 27014909 is Exact-code of the project, and *Mining shifting concepts through time (ShiCo)* is the project title.

These subfolders contain different type of project-related documents:

Subfolder	Its purpose/content
A - Start documents	Initial project documents such as project proposal, start form, Awarding letter, collaborative agreement, contract, changes to the Awarding letter.
B - Planning	Planning related documents such as administrative start slides, kick-off slides.
C - Reviews	Documents such as annual review slides, annual review meeting notes, reports for external projects, code review meeting notes
D - Products	Project output like Publications, presentations, etc.
E –End documents	Project closing related documents such as end report, closing letter, end report review report
F - Coordinators	Project log, official extension letters,
Root folder/ Administrative information.docx	Administrative information regarding the project.