Collaboration agreement

Between

NeIC represented by NordForsk (NO ID: 971 274 255), Stensberggata 25, NO 0170 Oslo, Norway – hereafter referred to as the "Project owner",

CSC – IT Center for Science Ltd, (FI ID: 0920632-0), P.O.Box 405, FI 02101 Espoo, Finland,

DeiC – Danish e-infrastructure cooperation, (CVR: 30 06 09 46, EAN: 5798000430723), DTU, Asmussens Allé, Bygning 305, 2800 Kgs. Lyngby, Denmark,

University of Tartu, VAT number: EE100030417, Ülikooli 18a, 51014, Tartu, Estonia acting as lead partner of **ETAIS** – Estonian Scientific Computing Infrastructure,

SNIC – Swedish National Infrastructure for Computing represented by Uppsala University (SE202100293201), Box 337, 751 05 Uppsala, Sweden,

and

UNINETT Sigma2 AS, (NO ID: 887 625 352) Abels gate 5 – Teknobyen, Trondheim, Norway.

These are hereafter referred to collectively as the "partners", or a "partner" (singular).

1 Definitions

1.1 The **steering group** is the decision-making authority to which project management turns regarding issues for which it does not have the right to make a decision. It consists of decision-makers representing the project owner, partners and other important stakeholders.

1.2 The **project directive** is a mandatory steering document for the project work. The purpose of the project directive is to provide a basis and pre-conditions for starting the project, and setting time and cost frameworks for the preparation work. The project directive is attached in Appendix 1. The project directive is approved by the steering group.

1.3 The **project manager** carries out the project and its result within the framework of the project directive and the project plan. Responsibilities include ensuring that the organisation and working methods are suitable, documented and clear; maintaining an active requirements dialogue with reference groups; providing regular progress reports for the project; and leading project work toward deliveries and successful completion.

1.4 The **project plan** is an agreement between project management and the project owner, covering the execution of the project. Working from the project plan ensures that all essential issues are agreed upon and documented, before starting the execution phase. The scope of the preparation work is set at a level that will allow for a controlled overall picture of the risks and optimum efficiency for the execution of the project. The project plan is drafted by the project manager and approved by the steering group. Once approved by the steering group it replaces the project directive as the valid project description.

2 The agreement – scope and purpose

2.1 This collaboration agreement regulates the reciprocal rights and obligations of the various partners taking part in the project **"CodeRefinery2"**, hereafter referred to as the "project".

2.2 The following attached documents shall also be part of the collaboration agreement between the partners:
Appendix 1: A description of the project in form of a project directive.
Appendix 2: The partners' interest in and competence relative to the project.
Appendix 3: The partners' obligations to perform activity and/or provide financial resources to the project.[1]
Appendix 4: Agreement between NeIC and Community Initiatives on Behalf of The Carpentries
Appendix 5: Terms of reference for the steering group

2.3 Each of the partners are required to contribute resources to the implementation of the project pursuant to the duties and obligations specified in this collaboration agreement and the project description. With regard to one another, each partner bears responsibility for implementation of the duties and obligations specified in the collaboration agreement and the project description specified for the partner. For the avoidance of doubt, there shall be no joint responsibility for any such duties or obligations.

2.4 The project period will be from 1.10.2018 to 30.09.2021.

2.5 The collaboration agreement includes this signed agreement document with five appendices, cf. section 2.2.

3 Governance and Management

3.1 The project will have a steering group[2] and a project manager.

3.2 The steering group monitors the project's progress and responds to problems as needed. The terms of reference for the steering group are given in appendix 5.

3.3 Each of the partners are entitled to appoint one member to the steering group. The partners may unanimously agree to appoint additional members of the steering group. Partners are free to replace steering group members, but are required to keep the project manager apprised of who is representing the partner. The chair of the steering group is assigned by the project owner.

3.4 The project manager will be appointed by the project owner. The project manager reports to the steering group. The project manager is responsible for managing the project and its resources in accordance with this agreement and the guidelines given by the steering group. When appropriate, the project owner enters into a separate agreement with the employer of the project manager in a way that does not violate the terms of this agreement.

3.5 The project manager will summon the steering group to meetings with reasonable notice, usually no less than two weeks prior to the meeting date. The convening letter shall be accompanied by an agenda and the documentation needed to deal with the items on the agenda. Decisions, recommendations and discussions of the meetings are recorded in proceedings that are made available to the partners.

3.6 The steering group has quorum when more than half the members are present or participate in the steering group's deliberations. The steering group's decisions will normally be agreed on unanimously among the members that are present or participate in the steering group's deliberations. In ongoing matters that do not affect any of the partners' individual rights under the collaboration agreement, the steering group may take decisions by majority. When an unanimous decision or consensus is not possible, the meeting proceedings will reflect the diversity of opinions.

4 Partners' activities and/or financial support

4.1 The interests and competencies of the partners constitute the basis for their participation in the project. These interests and competencies are described in more detail in appendix 2.

4.2 Each of the partners shall perform the R&D activity, if any, that the partner in question has undertaken pursuant to the project description, and/or provide the financial support specified in appendix 3.

[1] This document shall specify the individual partners' obligations to perform work for the project and/or to provide contributions in the form of funding, infrastructure, expertise and its own efforts.

[2] Larger collaborations may find it productive to have a collaboration forum with membership from all the partners and a smaller steering group that consists of selected representatives.

4.3 With the approval of the steering group, a partner may assign parts of the R&D activity for which it is responsible to an appropriate subcontractor. This does not release a partner from its obligations to the other partners.

4.4 In the event a partner does not perform the agreed R&D activity in a satisfactory manner, as well as on request by a partner who expects to be unable to perform in such a way in the future, the steering group may decide to transfer responsibility for the work in whole or in part to one of the other partners, based on specified terms and conditions. Such a transfer does not release a partner from its other obligations pursuant to appendix 3.[3]

4.5 The project owner takes the main responsibility to oversee the economic aspects of the project and remind the partners about their funding obligations if so needed. In general, the funding will be requested by the project owner from the partners and channelled by the project owner. Money streams are following the budget (appendix 3) and eventual transferred responsibilities. Payments between the partners are made once per three months.

5 Location, responsibility for human resources and agreements with employees and other affiliated partners

5.1 The partners agree to establish by contract the location of the activities and the manner in which the employer's responsibility will be handled for staff affiliated with the project. Under normal circumstances, employer responsibility and employment shall not be changed for employees who participate in the project.

5.2 The partners will sign necessary agreements with owners, employees (including individuals with dual employment), partners, sub-contractors, and others that are required to fulfil the relevant partner's obligations under this agreement, including measures to ensure any necessary transfer of intellectual property rights.

6 Project plan, ownership, reporting and publication of results

6.1 In order to render more concrete and follow up the measures in the project directive, a project plan shall be adopted by the steering group within 6 months of project start-up. The project plan serves as a point of departure for the technical and financial implementation of the project and stipulates the obligations of the various partners, cf. section 4.2 and appendix 3. The revised annual project plan also forms the basis for reports to be submitted to the project owner.

6.2 Partners shall without undue delay submit all project results, reports, accounting documentation and other documents that the project owner requires to fulfil its obligations to its funding authorities.

6.3 Project outcomes, including reports and software, will be made openly available to the public. Intellectual property rights of the project results shall be owned by the party, or party's employees as applicable, or parties carrying out the work generating that result. Attribution is done according to applicable branding policies. Unless otherwise agreed in writing, any equipment purchased for the purposes of the project will remain the property of the partner making the purchase.

7 Limitation of liability

7.1 The parties have no liability towards each other for damages or losses of any kind related to this Collaboration Agreement, unless the damages were caused by wilful conduct or gross negligence. Each partner shall be solely liable for any loss, damage or injury to third parties resulting from its actions under this Collaboration Agreement or from its use of the project results.

7.2 In respect of any information or materials supplied by one partner to another under the project, no warranty of any kind is given as to the sufficiency or fitness for purpose, nor as to the absence of any infringement of any proprietary

[3] It is presumed that the partners can agree on reasonable compensation for the research contributions from which the consortium participant in question has been relieved.

rights of third parties. The recipient party shall in all cases be solely liable for the use to which it puts such information and materials.

8 Reservations and Termination

8.1 The agreement may be terminated by either partner for any material breach by the other partners of the obligations set out in the agreement, by giving a written notice to the other partners of the intention to terminate. The notice shall include a detailed statement describing the nature of the breach. If the breach is remedied within a period of 30 – thirty – days after delivery of the notice, the termination shall not take effect.

8.2 The partners' compliance with funding requires that the partners receive the necessary funds from their respective authorities. A partner that cannot comply can terminate this agreement with a 3 –three- months' notice.

8.3 The project owner may terminate the agreement with a 3 –three- months' notice based on a recommendation of termination by the steering group.

9 Governing law and legal venue

9.1 The agreement is governed by and shall be interpreted in accordance with Norwegian law. Any disputes shall be settled by Oslo district court, unless otherwise agreed between the partners.

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This agreement has been prepared in 6 counterparts, of which each partner keeps one (1).

For and on behalf of CSC:

Place/Date:_____

_____

Pekka Lehtovuori, Director, Services for research

For and on behalf of DeiC:

Place/Date:_____

_____

Steen Pedersen, CEO

For and on behalf of ETAIS:

Place/Date:_____

_____

Taivo Raud, Head of Grant Office, University of Tartu

For and on behalf of SNIC:

Place/Date:_____

_____

Hans Karlsson, Director

For and on behalf of UNINETT Sigma2 AS:

Place/Date:_____

_____

Gunnar Bøe, Managing Director

For and on behalf of NordForsk/NeIC:

Place/Date:_____

_____	_____
Arne Flåøyen, Director, NordForsk	Gudmund Høst, Director, NeIC

Appendix 1: Project directive

NeIC - CodeRefinery 2

Project directive

The purpose of the project directive is to form the basis for a decision on starting the a second phase of the CodeRefinery project (DP1, see annex 1) and to define the boundaries for the preparation phase.

Background

Research heavily relies on software and too often research software is developed inefficiently, often without peer review, and without considering reproducibility and reusability. The CodeRefinery addresses these issues for the Nordic research communities with training workshops and infrastructure services.

The proposed project is a follow-up of the CodeRefinery project (phase 1), a 2-year project which started in October 2016 and is planned to conclude in September 2018. During phase 1, the project will have delivered 13 three-day workshops across the Nordics and 5 shorter events and taught over 400 students and researchers.

The project has informal ties to The Carpentries[4] and the Software Sustainability Institute[5] and can be seen as an extension of The Carpentries to more advanced programming skills and the beginning of the formation of a Research Software Engineering network in the Nordics. The CodeRefinery project has developed a very fruitful informal cooperation with Aalto Science-IT which resulted in two workshops and collaborative lesson development.

In phase 1, we learned that students and researchers who write software to produce or analyze data are in critical need of the proposed training portfolio on software management, and currently only NeIC has the scale, network, and expertise to fill this need in the Nordics until these workshops become part of university curriculum. Phase 1 of the project could already match this obvious need of the research community exceptionally well as shown by almost always fully booked workshops and the resulting surveys.

[4] https://carpentries.org
[5] https://www.software.ac.uk

We are convinced that the project requires commitment to phase 2 right after or soon after phase 1 will conclude in order to keep the momentum of an established motivated team and to reach the necessary scale, visibility, and community involvement to make this initiative self-sustained.

Project idea

Picking up on the success of the previous CodeRefinery project, the second phase will contribute to enhancing the productivity of researchers in the Nordic region and in addition to the goals for phase 1 serve as a Nordic hub for research software engineers.

Expected benefit

The expected benefit is an increased competence in research software development which will lead to more efficient collaboration and produce more reproducible and reusable research software.

1. Increased competence (continued from phase 1)

1.1 More competent scientists and researchers

Software development is a core part of research for many scientists and researchers in the Nordics. This project will contribute to an increased competence in software development tools and techniques among scientists and researchers.

1.2 More competent support staff

The preparation and delivery of CodeRefinery workshops and instructor workshops is a great learning opportunity also for the CodeRefinery team and indirectly also their colleagues.

2. Better science (continued from phase 1)

2.1 Reproducibility of research code

The expected benefit to the national e-infrastructure provider organizations and NeIC stakeholders will be a user community trained in best practices of modern software development with focus on reproducibility, collaboration, and peer review.

2.2 Reusable and extensible code

The training focus will not only be on reproducibility of published computational results but also on helping researchers creating reusable, modular, and extensible code where code modules and libraries can be composed to solve new problems according to FAIR principles (findable, accessible, interoperable, and reusable).

2.3 Collaborative learning and knowledge transfer

Peer review in programming and collaborative code development will be a core pillar of the training with the goal of not only improving code quality but also facilitating knowledge transfer within research groups and across research groups.

3. Strengthening Nordic communities and relations (new in phase 2)

3.1 Train-the-trainer program

To reach scale we will not only train the research community but also promote, train, and certify future trainers at yearly train-the-trainer workshops. At the same time we will improve competences and promote development of the project staff which will benefit the infrastructure providers.

3.2 Symbiosis with Software Carpentry, Data Carpentry, HPC Carpentry workshops, and PRACE advanced training centers

While The Carpentries provide often the introductory steps for researchers into programming, scripting, and version control, CodeRefinery can be positioned as the second step, focusing on collaboration and reproducibility, in particularly targeting researchers who already develop code. This project will actively foster collaboration and common projects with The Carpentries to catalyze Carpentry workshops, recruit instructors from the Carpentries ecosystem, and to enable knowledge and lesson transfer in both directions by contributing lesson material to the Carpentries “contributed lessons” and proactively approaching Carpentries instructors to teach at CodeRefinery workshops. The national project partners will benefit by having access to customized instructor training with certification (15 persons each year), administrative support for 6 coordinated Software Carpentry workshops and generally more Carpentry workshops catalyzed by the instructor training and the coordination assistance. The advertising of CodeRefinery workshops will be coordinated with related courses and workshops organized at PRACE advanced training centers such as CSC IT Center for Science.

3.3 Symbiosis with local units

We will not just provide services and training ourselves, but (where desire exists) partner local universities to bring our products to their community as a default service. Aalto Science IT will be our partner when organizing workshops at Aalto/Espoo/Helsinki. Aalto Science IT has committed to organize two workshops a year and contribute one instructor to each of these workshops.

3.4 Implementation of a Research Software Engineers (RSE) community in the Nordics

CodeRefinery will serve as a hub for a growing Research Software Engineers community in the Nordics. This effort will be catalyzed by contributing to a survey of the RSE landscape, providing an open chat platform, and by organizing yearly workshops. One goal of the phase 2 project will be to organize a Nordic conference for RSEs.

Basis

- Mid-term report: http://cicero.xyz/v2/remark/github/coderefinery/report/master/talk.md/
- SG group meeting minutes recommending a follow-up: https://wiki.neic.no/wiki/CodeRefinery-SG-meeting-2017-12-05#4._Planning_the_project_follow-up
- Lesson material: http://coderefinery.org/lessons/
- Long-term impact survey data: https://github.com/coderefinery/post-workshop-survey/blob/master/survey_analysis.ipynb
- List of past workshops: http://coderefinery.org/workshops/
- Feedback of past workshops (available upon request)

Contact persons

Name	Email	Role
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Kristoffer Laigaard Nielbo	knielbo@sdu.dk	SG member phase 1 (DeiC)
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Rossen Apostolov	rossen@kth.se	SG member phase 1 (SNIC)
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Juhan Ernits	juhan.ernits@ttu.ee	Programme Director (Software Engineering), Tallinn University of Technology

Timeframe and estimates for the preparations

Commitment up to	Date	Estimated effort	Estimated expenditures
DP2: preparation phase	2018-08-01	0.5 person month	
DP3: approval of project plan	2018-10-01	0.5 person month	Either cost of one steering group meeting or 0 if video meeting (apart from in-kind contribution of work time).

Project goals

Result goals and quantitative targets

The goals of the project remain the goals of the phase 1 (providing researchers with infrastructure and training in the necessary tools and techniques to create sustainable, modular, reusable, and reproducible software). Phase 2 will sharpen the project focus, increase visibility and scale, and integrate better with the community. A new goal of phase 2 is to reach sustainability after phase 2 is concluded.

Quantitative targets (key performance indicators):

- 12 carpentry instructors trained each year (ca. 3 per participating country)
- 3-8 CodeRefinery workshops organized per year (depending on the staff resources)
- 1 train-the-trainer workshop per year
- 1 research software engineers (RSE) workshop/meet-up per year (collocate with train-the-trainer workshop)
- Organization of 1 RSE conference

1. Sharpen the project's focus on training and knowledge

Reduce organisational overhead by employing a training coordinator

The position that the phase 1 was missing the most was administrative support in outreach and coordinating workshops and instructors. The training coordinator (0.5 FTE) would have the following tasks:

- Engage with NeIC Ratatosk Training Coordinator
- Engage and market to local universities
- Be the contact point for workshop requests
- Scheduling of instructors and helpers for workshops
- Room reservations
- Advertising of workshops
- Travel reimbursement coordination
- Registration for the workshop
- Surveys: pre- and post-workshop
- Sending out course certificates (which do not include ECTS credits)
- Outreach via Twitter
- Coordinate blog-posts
- Newsletter (alternatively using Twitter)

Also we can seek inspiration from https://software-carpentry.org/workshops/operations/.

Registration procedure and administration of participants is streamlined

Managing registrations for workshops can be non-trivial due to room limitations, cancellations, waiting lists, workshop preparation. The CodeRefinery team relies on a set of tools to manage workshops but for phase 2 these routines not only have to be GDPR-compliant, they also have to be smooth and decentralized.

Infrastructure services are delegated using service level agreements

Infrastructure services such as the source code repository hosting are not deliverables anymore, bound to FTE resources, but are delegated using service level agreements which are transparent to the users of the services. This way we engage partners within the Nordic e-Infrastructure Collaboration with the benefit that these services do not bind project staff directly and that support personnel operating these services are not pulled into an administrative overhead of reporting and engaging in meetings which may not be relevant to their work. The steering group of the phase 2 project will have the responsibility to evaluate the use of the provided services.

A goal of this phase of the project would be to hand over not only the operation of the infrastructure services but also the financing to national infrastructure providers for long-term maintenance.

In contrast to phase 1, the service level agreements must also contain support to avoid the situation that support requests are directed to CodeRefinery staff (or manager) who has little direct technical control over the services to answer support requests. The challenge will be to render the support uniform from the user perspective.

Decentralize support structure

The support structure of phase 1 was very much centralized around the project manager, even though the project introduced a support request ticketing system. The dependency on the PM is unsustainable both for the project and for the PM and phase 2 needs a clear separation of responsibilities with respect to questions and support requests. Not every single request should need to go through the PM in contrast to phase 1.

2. Visibility and accessibility

Increase visibility

After two years of project work the project has reached the visibility that institutions and research groups approach the project and request workshops. One result goal will be to increase visibility by marketing the project not only to local support staff at universities, but also by directly approaching managers and group leaders. For this the project will prepare a short blog post and presentation specifically targeting managers and group leaders and motivating why they should consider sending their staff and students to CodeRefinery workshops. The training coordinator will take an active role in reaching out over Twitter with at least weekly posts. We will publish a call for workshops where institutions can apply.

Federated access for infrastructure services

For services to reach scale they need to become part of teaching at university courses and for this often the current lack of federated authentication is a barrier that the phase 2 of the project will aim to overcome. The project will provide Feide/eduGain/Haka access to services and advertise the services to teaching staff. Since this task will not be core to the project, we will consider to achieve this in cooperation with the Glenna project.

3. Larger scale and reach

The community need for training is estimated to be tenfold compared to the present offer. To make the biggest impact towards a systemic change in research software development, provided the funding envelope, the phase 2 of the project will actively seek, encourage, and involve volunteer instructors participating in-kind (albeit travel expenses reimbursed) and encourage satellite/spin-off workshops reusing the workshop material.

More targeted and invited workshops

Phase 2 will put more focus on quality and preparation of workshops in order to align better with available resources. Instead of “cold-calling” universities to host workshops, the project will put emphasis on invited workshops since it simplifies coordination and lifts a significant amount of administrative effort as well as financial load. In addition to traditional three-day workshops the project will offer more targeted 1- and 2-day workshops on special topics.

Larger instructor pool

This goal has two aspects: allowing small FTE-contributions from project partners and thus enlarging the instructor pool, as well as, providing infrastructure for guest instructors to participate in teaching. To establish a larger instructor pool the project will organize workshops for instructors where anybody who is interested can join. In order to accommodate guest instructors this the project needs to offer a simple reimbursement strategy to make it easy for volunteers to become instructors at workshops. The added benefit will be not only more workshops without additional FTE-engagement for the partners, but also networking and knowledge transfer across organizations. The project will encourage satellite workshops that build on top of existing CodeRefinery teaching material and also seek partnership with local partners closer to the research community such as the libraries.

Train-the-trainer concept to reach scale

In order to reach scale the goal of the project needs to be to train future trainers and establish a certification scheme. For this we will ask former participants to become helpers in future workshops nearby. Helpers will be encouraged to participate in the Software Carpentry instructor training and CodeRefinery will require that all instructors take the Software Carpentry instructor training. The project will establish workshops for instructors where they can meet, discuss, and improve material and skills.

Scale and visibility with online material

In addition to training workshops which only have a limited scale, the project will develop and market super short best practice guides and develop brief (5 minute) screencasts demonstrating best practices in action.

4. Community and integration

Foster integration with The Carpentries

The goal of the project phase will be that lesson material will be contributed to https://software-carpentry.org/lessons/. CodeRefinery will invite Software Carpentry instructors to teach at CodeRefinery workshops and also encourage CodeRefinery staff to

contribute to Carpentries workshops with the aim to recruit trainers in both directions and to participate in the Software Carpentry and Data Carpentry instructor training.

Catalyzing a Nordic Research Engineers community

CodeRefinery will serve as a hub for a growing Research Software Engineers community in the Nordics. We will provide an open chat platform for stakeholders, team, and users/learners to meet, interact, and discuss. This community will not be forced but grow out of the present good communication culture within the team and close stakeholders organically. For this we plan to open the chatroom from currently Slack and invite-only to a more open platform where anybody can join. Since most staff will only contribute part-time to the project we will consider establishing office hours where persons are present in the chat room to discuss and answer questions. The project will also consider to offer lightweight post-workshop mentoring without having the goal/focus on community building. The open chat could also become the principal entry point for support requests which are currently 1-1 and require a paid subscription.

Establish a Centre of Excellence on Software Sustainability in the Nordic Countries

Similar to the Software Sustainability Institute in UK but with a larger range of actions, including co-design activities (as suggested in section 6.3 "Programming Environment" of the ETP4HPC Strategic Research Agenda) and strong coordination between national, European and international activities.

Organizing a Nordic conference around the RSE community

The project will involve people with RSE-type positions and organize the first Nordic conference with this focus which will catalyze new collaboration and the Nordic RSE community.

Time goals

Since this is a follow-up project, the team can start delivering workshops right from project start provided there are no large changes in staff. The latter point requires that there is no significant break between phase 1 and phase 2. The goal will be to organize a Nordic RSE conference within the first year of the project. Best practice guides will be drafted at the beginning of the project. Mid-term and final report time-line will be standard and will be detailed in the project plan.

Cost goals

See “Financing” section below.

Project objective priority

Top priority is to educate the research community in modern collaborative software development workflows with emphasis on reproducibility and peer review in software development. The duration of the project is planned to be 3 years. Since this project would be a continuation of a successful 2-year project, the time and cost boundaries are well understood and calibrated.

Result	Time	Cost
0.6	0.3	0.1

Financing

Duration

Phase 1 of the project was well received among the research community with essentially always full attendance of workshops. For phase 2 we request support for a **project duration of 3 years** to assure continuity and also to provide enough time to develop a self-sustained project by transferring the financing of services to national infrastructure providers and by transferring lesson material and lesson development to The Carpentries community.

Staff budget

The project will be co-financed with 50% contributions from Denmark, Estonia, Finland, Norway, and Sweden.

Budget option 1 for growing the project

Delivering 8 workshops per year

Partner	Staff phase 1 (previous project)	Staff phase 2 (current proposal)
Denmark	0.5 FTE	0.5 FTE
Estonia		0.5 FTE
Finland	0.5 FTE	0.5 FTE

Norway	0.5 FTE	0.5 FTE
Sweden	0.5 FTE + 0.25 FTE (SGAS project)	0.5 FTE
Project management	0.5 FTE	0.5 FTE
Administrative support		0.5 FTE
sum	2.75 FTE	3.5 FTE

Theoretically, the administrative support could also provided “outside” of the project e.g. within NeIC’s Ratatosk Training Programme.

Budget option 2 for keeping the project alive

Delivering 3 workshops per year

Partner	Staff phase 1 (previous project)	Staff phase 2 (current proposal)
Denmark	0.5 FTE	0.25 FTE
Estonia		0.25 FTE
Finland	0.5 FTE	0.25 FTE
Norway	0.5 FTE	0.25 FTE
Sweden	0.5 FTE + 0.25 FTE (SGAS project)	0.25 FTE
Project management	0.5 FTE	0.25 FTE
Administrative support		
sum	2.75 FTE	1.5 FTE

Theoretically, the administrative support could also provided “outside” of the project e.g. within NeIC’s Ratatosk Training Programme.

Travel and other budget

Operation of the source code repository: 50k NOK/ year (unchanged).

Workshops and meetings: 80k - 160k NOK/ year (depending on staff budget).

Conference budget: 30k - 60k NOK/ year (depending on staff budget).

Other costs (domain name, registration pages, promotion, support line): 3k NOK/ year.

Conference organization: 50k NOK.

Carpentries partner membership at the price of a gold membership and a 5000 $ discount (resulting in 10000 $ annually) including access to customized instructor training with certification (15 persons each year), administrative support for 6 coordinated Software Carpentry workshops and generally more Carpentry workshops catalyzed by the instructor training and the coordination assistance.

Other

Steering group

We propose to continue with the steering group which brings the phase 1 of the project to a conclusion (see “Contact points” above) plus a potential Estonian steering group member.

Known risks

Description of risk	Probability	Impact	Priority	Responses and responsible
High administrative and coordinating load to organize workshops in case the project does not employ coordinating staff.	high	high	high	Allocate resources for training coordination and administration.
Support for services and service maintenance are disconnected.	high	medium	low	When drafting service level agreements, allocate and plan for support. Responsible: PM
Insufficient in-kind contribution from partners.	medium	medium	medium	Dialogue with management to motivate and free up in-kind resources for teaching.

Opportunities

Please see the section “Expected benefit” above.

Annex 1 – Terminology

Decision points

During the life span of the project from startup to termination, a number of formal decisions must be made by the steering group. These fall into eight different types; which are numbered in the chronological order in which they are typically made.

DP1 – Decision point type 1; steering group decision to start the project, based on the project directive.

DP2 – Decision point type 2; steering group decision to continue, change or interrupt the project based on findings during the preparation phase. A project may have multiple DP2.

DP3 – Decision point type 3; steering group decision to approve the project plan developed during the preparation phase. Typically this is tied to a DP4 decision to start the execution phase.

DP4 – Decision point type 4; steering group decision to start the execution phase.

DP5 – Decision point type 5; steering group decision to continue, change or interrupt the project based on findings during the execution phase. A project may have multiple DP5.

DP6 – Decision point type 6; steering group decision to approve the result of a delivery, for example to end users. A project may have multiple DP6.

DP7 – Decision point type 7; steering group decision to transfer the responsibility for a delivery, typically to operations in a receiving organization.

DP8 – Decision point type 8; steering group decision to approve the final report and terminate the project.

Appendix 2: The partners' interest in and competence relative to the project

The partners are described in the following:

NeIC (the Nordic e-Infrastructure Collaboration) is funded by national research funding organisations in Denmark, Finland, Iceland, Norway and Sweden. The vision of NeIC is to facilitate the development and operation of high quality e-infrastructure solutions in areas of joint Nordic interest. The legal representative of and hosting organisation of NeIC is NordForsk, which is an organisation under the Nordic Council of Ministers.

CSC — IT Center for Science Ltd is administered by the Ministry of Education, Science and Culture. CSC is a non-profit company providing IT support and resources for academia, research institutes and companies: modeling, computing and information services. CSC provides Finland's widest selection of scientific software and databases and Finland's most powerful supercomputing environment that researchers can use via the Funet network.

DeiC (Danish e-infrastructure Cooperation) was established under the Ministry for Higher Education and Science by Act 70 of April 19 2012 with the purpose to support Denmark as an e-Science nation through delivery of e-infrastructures (computing, storage and network) to research and research-based teaching. Organizationally, DeiC belongs to the Danish Agency for Science, Technology and Innovation and is not an independent legal entity. DeiC is a virtual organisation, which means that all staff are employed in other organisations. Primarily at the Danish Technical University and to some extend at Aarhus University, Aalborg University, University of Southern Denmark and University of Copenhagen.

ETAIS (Estonian Scientific Computing Infrastructure) is one of the Estonian Roadmap projects that provides computational, storage and support services for other Roadmap projects, including ERIC/ESFRI objects as well as wider research community. It is a continuation of effort for developing national research e-infrastructure that has been started by FP6/7 projects BaltricGrid I & II in 2006. ETAIS aims to increase the competitiveness of the Estonian computing and data-intensive research disciplines by providing access to a new and modern scientific computing infrastructure. The infrastructure includes hardware (computers, storage media, network devices), server rooms, software and support services necessary for the operation of the helpdesk.

The Swedish National Infrastructure for Computing (SNIC) is a national research infrastructure that makes available large scale high performance computing resources, storage capacity, and advanced user support, for Swedish researchers. SNIC is funded by the Swedish Research Council and the SNIC-consortium.

UNINETT Sigma2 AS manages the national infrastructure for computational science in Norway, and offers services in high performance computing and data storage. The services are organised in research infrastructure projects, financed by the Research Council of Norway and collaborators. The business is run non-commercially. UNINETT Sigma is a subsidiary of UNINETT and is headquartered in Trondheim.

The Carpentries is a fiscally sponsored project of Community Initiatives, a registered 501(c)3 non-profit organisation based in California, USA. The Carpentries project supports communities of instructors and lessons (Software Carpentry & Data Carpentry) who share a mission to teach foundational computational and data science skills to researcher communities. The project does this through an open and inclusive model of instructor preparation and shared lesson development to bring high-quality peer instruction where it is needed.

Appendix 3: Budget and resources

The project will be co-financed with contributions from Denmark, Estonia, Finland, Norway, and Sweden. The total number of FTEs is estimated to reach 3,5 FTEs per year. NeIC funds the project manager and up to a maximum of 50%, but in a timeshifted manner. The project duration is 3 years.

By signing the collaboration agreement and pending the availability of these co-funding contributions, the parties agrees to fund the project according to the following:

CSC, DeiC, ETAIS, SNIC and UNINETT Sigma2 AS each have 0.5 FTEs per year in personnel resources to be employed by and at the respective organisations. Over the course of the three project years each of them fund a total of 0.75 FTEs by in-kind personnel resources and guarantees for the competence and availability of the agreed resources. The resource funding follows a specific time distribution as below. The resource itself and its location is not intended to change beyond the usual staff exchange.

The project also includes travel, workshop and event costs, operation of related services and the annual Carpentries Membership fee; to be covered by NeIC. The budget proposal is as follows:

Partner	Annual effort, project year 1	Annual effort, project year 2	Annual effort, project year 3	Mean effort per year over all three project years	Total effort [FTE]
CSC	0,5	0,25	0	0,25	0,75
DeIC	0,5	0,25	0	0.25	0.75
ETAIS	0.5	0.25	0	0.25	0.75
SNIC	0,5	0,25	0	0,25	0.75
UNINETT Sigma2	0,5	0,25	0	0.25	0.75
NeIC	0.5[6]	1,75	3	1,75	5,25
Total	**3,0**	**3,0**	**3,0**	**3,0**	**9**

The administrative work within the project will be shared within the team. Additionally up to 0.25 FTE of the NeIC Ratatosk training coordinator can be used to support the project.

The total effort of 9 FTEs for the whole project period of three years corresponds to approximately 9 MNOK.

Estimates over other costs: 0,35 MNOK/year plus a one-time event, adding up to a total of 1,1 MNOK. In detail:

- Operation of the source code repository: 50k NOK/ year
- Workshops (including train-the trainer workshops) and team and RSE meetings: 155k NOK/ year
- Conference attendance budget: 58k NOK/ year
- Other costs (domain name, registration pages, promotion, support line): 3k NOK/ year
- Discounted Gold Membership[7] The Carpentries: 10000$/year (~84k NOK/year)
- Organisation of a Research Software Engineer Conference: 50k NOK (one time cost)

The contribution by The Carpentries is regulated separately (see Appendix 4) and no other obligations apply.

The final budget will be defined in the project plan.

[6] Just the project manager

[7] Coordination of The Carpentries membership within this NeIC project is regulated through NeIC. The exact form of the coordination will be defined by the CodeRefinery2 SG. The Membership is regulated in a separate agreement (see Appendix 4).

Appendix 4: Agreement between Nordic e-Infrastructure Collaboration and Community Initiatives on Behalf of the Carpentries

(add scan of then signed contract here, 1/2 pages)

(add scan of then signed contract here, 1/2 pages)

Appendix 5: Terms of Reference for the Project Steering Group

The project is governed by a Steering Group (SG) appointed by the partners, with authority to make decisions on behalf of the partners within the project. Each partner may appoint one member. The SG is chaired by the NeIC representative. The SG shall ensure the success of the project with regards to quality, impact and relevance, be the formal link between the project and the partners' respective organizations and relevant projects, and actively support the project manager and group.

The SG has the following responsibilities:

Ensure the success of the project, by

- Ensuring that the project results contribute to the expected benefit.
- Making decisions in steering group meetings.
- Making decisions regarding issues where project management has no authority.
- Allocating personnel and resources to the project group ensuring availability, competence and quality
- Deciding on exact formulation of the project plan, changes to the project and related infrastructure
- Monitoring the progress of the project with regard to the project plan.
- Receiving and deciding on approval of reports, deliveries and transfers of deliverables to operations.
- Understanding the responsibilities associated with the task and reserve sufficient time to execute them.

Being the formal link between the project and the partner entails:

- Identifying changed prerequisites in operations.
- Taking care of effects in home organisations.
- Priorities and connections to other projects.
- Securing outer dependencies of the project, outer prerequisites outside the authority of project management.
- Ensuring formal personnel issues are handled.
- Communicating the benefits and results of the project

Actively supporting project management entails:

- Marketing the project and acting as its ambassador.
- Being available, and acting as a "sounding board" between steering group meetings.
- Staying constantly informed about the project's status.
- Ensure availability, competencies and quality for the resource categories concerned.

NeIC coordinates the project. Project coordination includes the responsibility to find an adequate project manager being able to carry out the agreed work. When appropriate, NeIC enters into a separate agreement with the employer of this project manager in a way that does not violate the terms of this agreement.

Quorum is required for the steering group to take decisions. The steering group has quorum when more than half the members are present or participate in the steering group's deliberations. The steering group should strive for agreement, but in ongoing matters that do not affect any of the partners' individual rights under the collaboration agreement the steering group may reach decisions by voting. In these cases, each partner gets a vote. The steering group may at their own discretion invite observers. With a uniform decision a major stakeholder (who agrees to deliver something to the project) may become a full member of steering group. With unanimous decision they may be given a voting right.

Addendum: CodeRefinery2 Collaboration Agreement

According to the decision made by the CodeRefinery2 Steering Group on the 2019-08-29 and their own wish the University of Oslo Library is a fully fledged partner to the CodeRefinery2 project as of 2019-09-01.

The partner's contribution consists of hosting a 50% position for a regional The Carpentries coordinator for the Nordic and Baltic region.

Details are regulated in the updated CodeRefinery2 projectplan and a separate service agreement on the coordinator position.

Place/Date:	Place/Date:
For and on behalf of NeIC	For and on behalf of the University of Oslo Library
_____	_____
Gudmund Høst, Director, NeIC	Håvard Kolle Riis, Deputy Library Director