Project plan
CodeRefinery sustainability phase

(CodeRefinery 3 for short)

The plan is an agreement between the project owner/orderer Tomasz Malkiewicz and the project manager Radovan Bast.

It is verified through a steering group decision.

Contents

1 Background and connections

1.1 Background

CodeRefinery acts as a hub for FAIR (Findable, Accessible, Interoperable, and Reusable) software practises. It currently focuses on the Nordic/Baltic countries, but aims to expand beyond this region. CodeRefinery aims to operate as a community project with support from academic organisations. The project started in 2016 and is now moving into its third funding phase with the goal of becoming a sustainable project and an independent organisation. The project has developed a broad curriculum of openly maintained and reviewed lessons, has taught hundreds of participants across all academic disciplines, and has managed to build a community of instructors, helpers, exercise leads, expert helpers, learners, and partner organisations.

1.2 Connections with other organisations or projects

See Sections 1.2 and 1.3 in the project proposal.

1.3 Success factors

- Motivating partner organisations to contribute with staff resources, leadership and administration.
- Motivating partner organisations to share material and staff time with other organisations.
- Legal and organisational support for forming an independent legal entity.
- Help with advertising and promoting activities, workshops, and events.
- Motivated staff and motivated partner organisations who share a common vision and are motivated to shape a common vision.
- Stakeholders who take and share ownership of the project's goals.
- Administrative support with workshop coordination and reporting.

2 Objective

2.1 Project idea

See Sections 1 and 1.1 in the project proposal.

2.2 Project objective

Activity A: Management and coordination

- A-1: Coordination of CodeRefinery workshops and events
    - Coordinating CodeRefinery workshops and events including on-demand ones (also see B-1).
    - Continuation of Carpentries membership (platinum tier; 15 instructor seats/year, see https://carpentries.org/membership/).
    - Disseminating Carpentries workshop and instructor training opportunities to eligible institutions in Nordics.

- A-2: Community building and outreach
    - Accepting and onboarding 1 new organisation per year for the rest of the project period to join the collaboration network.
    - Specialised/external workshops/events are initiated and coordinated by a project partner. CodeRefinery project supports with network and advertising.
    - Developing a standard partner workshop guide within the second year so that any partner workshop can be seamlessly shared with others.
    - Marketing events of common interest via appropriate channels.
    - Developing and implementing a rewarding scheme for CodeRefinery community members (instructors, helpers, and contributors) in the first year.
    - Maintaining and further developing a manual/handbook on workshop organisation on the CodeRefinery website for the distributed-work era.
    - Publishing anonymized pre- and post-workshop survey results on the CodeRefinery website annually.

- A-3: Administration, reporting and monitoring
    - Developing a pragmatic model to measure impact to support the benefit realisation plan, starting from the existing post-workshop survey (year 1).

Activity B: Operations

- B-1: Delivering CodeRefinery workshops
    - Delivery of high-quality workshops in a variety of formats: Online, in-person, hackathons, community meetups. Our focus is on online workshops, but we support in-person where there is local interest. We aim at training over 300 learners per year in 2 CodeRefinery workshops and supporting 1 workshop per year per partner (initiated and coordinated by the partners). Note that unlike in pre-COVID time, our online CodeRefinery workshops can accommodate 100 participants, with similar effectiveness as previous small in-person workshops with typical size of 30 participants.
    - Maintenance and improvement of workshop infrastructure, including web page template, learner guides, helper onboarding, and related infrastructure.
    - Developing a standard partner workshop guide to support shared workshops between partners, to take full advantage of online formats.
    - Discussing and improving methods for delivering workshops, in particular online and open teaching formats.
    - Develop a server solution for video production and streaming (currently done by one person on their personal computer).

- B-2: Lesson development and maintenance

- Collaborative development of new lesson materials by assisting partners in best practices
- Making lesson material citable.
- Promoting co-maintenance of lesson materials among partners
- Providing a centralised home of lesson materials when needed.

- B-3: Instructor training and development
  - Maintaining CodeRefinery instructor workshop training material.
  - Delivery of annual instructor training workshops, and other instructor/helper training workshops to different audiences.
  - Promote excellent teaching practices in general researchers and technical staff.

- B-4: Operation and support of the GitLab service
  - Making definition of and publishing a GitLab service level agreement.
  - Operation of this service (including backup, security patches, and upgrades).
  - Provision of a help desk and user support for account creation and activation.
  - Publishing GitLab usage statistics on the CodeRefinery website.
  - Transfer this service to one of the project partners within the first 2 years.

Activity C: Sustainability and Governance

- C-1: Establishment of CodeRefinery as an organisation
  - Investigation of incorporation strategies in various Nordic countries (year 1, Q1).
  - Determining and publishing a governance model and by-laws, including board roles and responsibilities, and appropriate organisational policies and structures (year 2, Q2).
  - Organising a board election within the first 2 years of the project (year 2, Q4).
  - Developing and publishing a mission and strategic plan for the organisation (year 3, Q2).
  - Registering CodeRefinery as an organisation that can accept payment for training requests outside of the partner network, or developing some similar model (e.g. partner workshops offers) (year 3, Q4).
- C-2: Business model development and implementation
  - Developing a business model for CodeRefinery and its financing plan in collaboration with CodeRefinery partners, and publishing it on the CodeRefinery website (year 2, Q2).
  - Defining a membership model where organisations can join as sponsors or as contributing partners (with one-time donations or annual fees) (year 2, Q4).
  - Creating a structure and pricing model to be able to accept payment for training (year 3, Q2).
  - Implementing the chosen CodeRefinery business model by starting membership fees for CodeRefinery association (year 3, Q4).

Total cost of the project: See Section 7 (Project cost estimate).

2.3 Priority of the objective

Priority	0.8	Result	0.1	Time	0.1	Cost

2.4 Limitations

- At the launch of CodeRefinery 3, user support for the GitLab service is provided on a best effort basis by the project manager.
- Support email (support@coderefinery.org) is tracked on a best effort basis by the project manager.
- Organisation and coordination of Carpentries workshops: the project will encourage these and provide the community a platform to coordinate (community chat), however the project manager cannot take the responsibility to initiate and coordinate workshops and events other than 2 CodeRefinery workshops per year.
- The project website is https://coderefinery.org and this will be the primary site sharing project goals, mission, vision, metrics, progress, reports, composition of team, steering group, and governance. However, the project will not duplicate this information on other websites such as the NeIC external and internal wiki or https://neic.no but rather link from these to https://coderefinery.org.

2.5 Recipients and approval criteria

Delivery object	Recipient, delivery	Recipient, transferral
Lesson material and exercises	Trainees, project partners	Organisation to be established
Workshop participation statistics	Stakeholders, e.g., NeIC	NeIC and public information
Survey and feedback data	Stakeholders, e.g., NeIC, project partners	Organisation to be established
Source code and data produced by the project	Project partners	Organisation to be established
Blog posts	Project partners, stakeholders	Community
Newsletters	Project partners, stakeholders	Subscribers
Workshops, courses, and events	Researchers	Participants, research community
Video recordings from courses and events	Researchers	Organisation to be established
Documents created during the project	Project partners	Governance board
GitLab service	DeiC and NeIC	To be decided during the

		first year of the project
Lists of contacts and newsletter subscribers	Project partners	Governance board
Name, intellectual property, domain name, chat	Project partners	Governance board
Governance charter to describe the governance terms for a community project	Project partners	SG
Reports	Project partners	NeIC and SG

3 Schedule and resource needs

3.1 Prerequisites and outer dependencies

3.1.1 Prerequisites

This project is entering phase 3 and a lot of material and experience is present to deploy workshops even with minimal central resources. Therefore, formally, there are no prerequisites for the project to start. Indeed, the project work has already started and the first workshop of 2022 (last two weeks of March 2022) is in preparation.

3.1.2 Outer dependencies

No.	Description	Possible approval criteria	Person responsible	Date

3.2 Project schedule

See Gantt chart.

3.3 Milestones, decision points

The following milestones (MS) and decision points (DP) have been defined:

Date	MS	DP	Description

3.4 Resource needs

3.4.1 Resources, skills and competencies

- Competence in FAIR software practises
- Interest in online teaching of software tools and techniques to students and researchers without technical background
- Interest in open source collaborative lesson development
- Competence in business plan development
- Communication skills (a significant part of the project is to communicate with others)

3.4.2 Training

- Carpentries instructor training
- CodeRefinery instructor training
- Training in community building
- Training in leadership within an open source project setting
- Training in fostering and supporting diversity

3.4.3 Resources, equipment, etc.

- Computers provided by local organisations
- Video cameras and microphones for streaming and recording
- Server for video processing and streaming (see Section 7)
- Indico registration platform
- Issue tracker connected to the support@coderefinery.org email

3.4.4 Phase out and conclusion

Apart from the GitLab service, there is no equipment or premises, only staff, documents, and accounts.

When CodeRefinery 3 of the project concludes, the intellectual property, including all source code, data, and documents, are transferred to the to-be-formed CodeRefinery organisation (see also the [Collaboration Agreement](#)).

When staff leaves the project, an exit interview is performed and account permissions (GitHub, HackMD, Indico) are removed from staff.

3.5 Purchases

See Section 7 (Project cost estimate).

4   Organisation

4.1   Project organisation

At the launch of CodeRefinery 3:
- Project owner: Tomasz Malkiewicz
- Steering group: approves changes to the project plan
- Project manager: Radovan Bast. Reports to project owner, NeIC, and the steering group.

4.2   Authority and responsibility

Project manager's authority:
- Decision about expenses which are allocated in the project plan budget
- Represent the project at conferences and meetings

Project manager's responsibilities:
- Reporting about the progress towards NeIC and the steering group
- Task distribution
- Onboarding and offboarding of staff

Project owner's authority:
- Decision about expenses requested by the project manager which are not allocated in the project plan budget
- Represent owner's interests at steering group meetings

Project owner's responsibilities:
- Business Benefit Realisation Management (BRM), monitoring the realisation of the benefits until the expected benefit has been achieved
- Organise and chair steering group meetings

5   Working methods

5.1   Requirement dialogue

The customers of this project are learners and participants in workshops and events. We measure and track "customer satisfaction" by measuring participation and by collecting feedback during and after events.

We collect and track input and feedback to our material in the form of GiHub issues and pull requests.

5.2   Delivery and transferral

5.3 Production models

5.4 Monitoring and learning

We will monitor the following metrics:
- Feedback during and after workshops
- Pre- and post-workshop surveys
- Workshop/event participation statistics
- Citation metrics for lessons (this however requires making lessons citable)

5.5 Change control

Changes to the project plan require an agreement from the steering group - either during a steering group meeting, or communicated via email.

5.6 Risk management

The list of risks (Section 6) will be continuously reviewed and discussed among project owner and project manager, as well as within the steering group.

5.7 Information distribution

All output of the project is public by default and will be communicated and listed via the project website, blog posts, newsletters, and GitHub organisation and discussed in monthly community calls.

5.8 Document management

Documents will be stored on https://github.com/coderefinery/ and https://hackmd.io/team/coderefinery. Workshop/event registration data is stored on https://indico.neic.no/.

5.9 Quality assurance

The main project output is course material and events. Quality assurance is achieved through continuous review and feedback mechanism in form of workshop feedback, GitHub issues, and GitHub pull requests.

5.10 Confidentiality

The project is following NeIC policies for confidentiality and security (see NeIC policies).

5.11 Environment

We avoid any unnecessary travel and meetings. Most workshops, courses, and events will be held online to minimise travel costs and impact and to improve accessibility and reach.

5.12 Administrative routines

Since all contributions apart from project management and workshop coordination are in-kind, detailed time-tracking would not be reasonable.

Travel is organised and reimbursed with the local employer unless explicitly agreed otherwise with the project manager and/or NeIC management (example: NeIC all-hands meetings).

Project staff get read and write access to GitHub repositories and documents.

Until a governance board is formed, only staff financed by NeIC has access to personal registration data.

6 Risks

- Partners not invested in contributing to the CodeRefinery material development but continue only developing their local material
- Staff with mostly 10% in-kind cannot significantly contribute beyond showing up at meetings and reading messages
- No organisation or project takes ownership of the GitLab service and its longer term operation is not secured
- Project partners are not interested in project leadership in case current leaders leave
- No person or project partner takes the legal and fiscal risk to pursue the goal of turning this project into an independent organisation
- The project does not find any means of receiving and processing workshop fees
- Insufficient outreach/promotion of service portfolio
- Lesson portfolio moves away from FAIR software practises to mostly HPC topics
- The relatively small project is suffocated in reporting and monitoring duties
- We miss the opportunity to inform and onboard out of fear of storing GDPR-sensitive data about persons

7 Project cost estimate

Partner	PM/year proposal	PM/year available	Work packages
NeIC	12	11	A1, A2, A3, B1, B2,

			B3, B4, C1, C2
Aalto University	6	6	A2, A3, B1, B2, B3, C1, C2
CSC	3	3	A3, B1, B2
DeiC	6	?	A3, B1, B2
T1C	6	?	A3, B1, B2
DSC	9	0	
ENCCS	3	2	A3, B1, B2
Sigma2	6	6	A3, B1, B2
SNIC	6	6	A3, B1, B2
USIT	3	2	A3, B1, B2, B3

Costs for NeIC:
- Events organised by CodeRefinery: 40k NOK/year
- Attending conferences: 70k NOK/year (proposed total budget was 330 kNOK but this got reduced to 110k NOK cap that NeIC puts on every project)
- GitLab hosting: 50k DKK/year for 2 years
- Web domain and promotion: 3k NOK/year
- Carpentries membership **(platinum, 15 instructors/year): 13.5k USD/year**
- Registering organisation: 4k NOK
- Support for Nordic Research Engineers during registering organisation: 2k NOK
- Collaborative tools: 2k NOK/ year
- **Service for video post-processing and streaming: 15k NOK/ year**

Terms and abbreviations

Word/abbreviation/acronym	Explanation

Edition history

Edition	Date	Comment
v1.0	*2022-02-27*	*Initial approved version by the SG*

Appendices

No.	Document name	Document designation/Id

References

No.	Document name/ designation/Id	Edition, date
1	*Proposal to the NeIC open call 2021*	
2	*NeIC open call 2021 evaluation report*	