

52°North Student Innovation Challenge 2024



Win 2.500 € for a proof of concept!

The 52°North Student Innovation Prize has a long history of creative concepts developed and implemented by students. This year we provide a pre-defined problem statement while allowing students to be creative in the area of solution development.

52°North encourages interested students to submit a proposal. All proposals will be evaluated. The top two proposals will be given the opportunity to implement the proposed concept and win the prize. The result of the implementation phase will be software released under an Open Source license.

Problem statement

We have identified a problem that addresses the pain points of **searchability in Research and Spatial Data Infrastructures** (RDI/SDI). Search functionality in such systems is generally limited to a metadata-based approach. However, geospatial data - whether vector-based or raster-based - provide a lot of interesting data that currently can only be identified by looking at the individual dataset. The challenge of this year's Innovation Prize is to develop a concept and a possible implementation that allows searching within datasets of and RDI/SDI, e.g. on the attribute level. Many interesting aspects have to be considered: technical solutions, taxonomies and semantics, language/i18n, searching in raster data, and many more.

The research software engineers at 52°North have prepared a set of user stories and features that have been identified in the project work over the last few years. These user stories provide details on the initial problem statement and related specifics. They define a rough catalog of features, but are not intended to cover all of them. Nor should they limit the scope of a proposal. The user stories are organized into a GitHub project: <https://github.com/orgs/52North/projects/7>

What do we expect from a proposal?

Your proposal should identify and address technology challenges through in-depth research and propose potential solutions. Try to demonstrate a comprehensive understanding of the problem, architecture, components, and protocols. In addition, explore potential additional benefits that could result from the overall architecture. Feel free to introduce your innovative ideas or alternative solutions and concepts to enrich your proposal. It's important to consider a realistic plan that takes into account the given circumstances, such as the timeframe and allocated hours. Throughout the proposal submission process, we encourage active engagement and collaboration by asking questions and sharing your thoughts on specific aspects using GitHub issues. This collaborative approach

ensures a dynamic and transparent exchange of ideas among the proposing students in the project. You should use this GitHub repository: <https://github.com/52North/innovation-prize/issues>

Timeline

- Proposal submission deadline: ~~April 08, 2024~~, **April 22, 2024**
- Notification of selected proposals: **April 30, 2024**
- Implementation deadline: **August 31, 2024**

Conditions for applications

- Student: You must be enrolled as a BSc, MSc, or PhD student.
- Workload: We expect a workload of about 180 hrs.
- Availability: Make sure you can allocate the appropriate amount of time to complete the project.

Prize

52°North invites students of Geoinformatics, Informatics or related fields to submit a proposal that outlines the project idea, emphasizes its innovative quality and convincingly describes its feasibility, practical use and expected outcome. Up to two strong proposals will then be invited to implement a proof of concept. Upon successful completion of the project(s) (including a working proof of concept implementation), the proposal(s) will be awarded EUR 2,500.

How/What to submit*

The challenge is to compose a project proposal and implement a proof of concept which addresses **searchability in Research and Spatial Data Infrastructures (RDI/SDI)**. The proposal should be approximately 5 pages (2500 words) written in English or German. The following criteria apply. It must:

- describe the problem statement in your own words
- provide a description of your concept
- describe the project goals
- describe the proposed solution – technical approach & feasibility, implementation
- include a work plan/road map/implementation plan
- include some references to software that you have worked on (e.g. GitHub repositories)

*see Guidelines

52°North Student Innovation Challenge 2024



Guidelines

Focus

This year's student innovation challenge addresses **searchability in Research and Spatial Data Infrastructures (RDI/SDI)**.

Who can apply?

Individuals or a team of two. Each applicant must be enrolled as BSc, MSc, or PhD student.

The Application

The application comprises

1. A written proposal
2. A written, signed declaration* from each applicant
3. Proof of immatriculation (certificate of study/Studienbescheinigung) from each applicant
4. A tabular CV from each applicant

All application documents must be submitted in digital form per email to 52nprize@52north.org.

The proposal

The challenge is to compose a project proposal and implement a proof of concept which addresses **searchability in Research and Spatial Data Infrastructures (RDI/SDI)**. The proposal should be approximately 5 pages (2500 words) written in English or German. The following criteria apply. It must:

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The implementation - expected outcome/results

- running, tested and documented software
 - well-documented source code available in the 52N GitHub repository (<https://github.com/52North>)
 - For this we need you to sign a CLA. (<http://52north.org/about/licensing/cla-guidelines>)

- project documentation
 - blog post (<http://blog.52north.org/>)
 - any documentation needed for running and using the software. Documentation must be provided as a GitHub README.md and include the following
 - How to install
 - How to develop
 - ...

Important dates

- Proposal submission deadline: ~~April 08, 2024~~, **April 22, 2024**
- Notification of selected proposals: **April 30, 2024**
- Submission of final project results: **August 31, 2024**

*see Personal declaration



**Personal declaration to accompany my application for the
52°North Student Innovation Challenge 2024**

Name:	
Date of birth:	
Address:	
Telephone:	
E-mail:	
University/College:	
Subject:	
Highest completed degree (e.g. Bachelor):	
Semesters or years:	

I hereby declare that I recognize the following conditions of the competition and the awarding of the 52°North Student Innovation Challenge 2024:

1. I am the original author and copyright owner of the ideas and concepts outlined in the paper submitted.
2. The decision of the competition's organizers is final and no correspondence will be entered into.
3. The granting of the prize will not be deemed as constituting any right to either temporary or permanent employment with any of the prize-awarding organizations.

.....
Place, date

.....
Signature