Application: Growing a Diverse and Inclusive Workflow Ecosystem with CWL

Sarah Wait Zaranek - swz-grants@curii.com
EOSS Diversity: Essential Open Source Software for Science Diversity and Inclusion Grants

Summary

ID: EOSS-DI-0000000012
Last submitted: Mar 30 2021 05:21 PM (EDT)

Applicant Details

Completed - Mar 29 2021

Applicant Details

Please complete the following information for the Applicant (required):

The information entered should be for the individual submitting the application who will act as the main person responsible for the application and as its point of contact. **Complete all fields in this task; all fields are required.**

To edit your name or email, please do so in your account information by clicking your name in the upper right corner and clicking My Account in the dropdown menu.

1. Name: Sarah Wait Zaranek

2. Email: swz-grants@curii.com

3. Degrees (check all that apply)

Responses Selected:

Bachelor's degree or equivalent
Master's degree or equivalent
PhD or equivalent

4. Current Employer/Affiliation	Curii Corporation
5. Title/Position	CEO & Chief Scientist
6. Country of Residence	United States
7. Applicant Organization	Curii Corporation

Equal Opportunity & Diversity

Completed - Mar 30 2021

Equal Opportunity & Diversity

CZI Science supports the science and technology that will make it possible to cure, prevent, or manage all diseases by the end of this century. Everyone is affected by disease, yet different communities are affected by or experience disease in different ways. Moreover, due to systemic barriers, the scientific enterprise itself is not a place where all voices and talents thrive. We believe the strongest scientific teams — encompassing ourselves, our grantees, and our partners — incorporate a wide range of backgrounds, lived experiences, and perspectives that guide them to the most important unsolved problems. To enable our work, we incorporate diverse perspectives into our strategy and processes, and we also seek to empower community partners to engage in science.

We track demographic information associated with applications submitted to CZI in response to our open calls. This information helps us learn from the RFA process, as well as improve our strategies to help ensure members of underrepresented or marginalized groups in science are aware of and able to apply to CZI opportunities. **Please note that answering all questions below is voluntary, and demographic information will not be used to make final grant funding decisions.** All responses will be shared only with limited personnel, who will use that information only for the purposes described in this paragraph.

If you have any additional questions about why we ask this, what we do with the data, or to share suggestions for improvement, please reach out to sciencegrants@chanzuckerberg.com.

Please complete for the Applicant who is the person submitting the application on behalf of the team. Please note that completing the below is voluntary, and demographic information will not be used to make final grant funding decisions.

What is your race/ethnicity? (optional)

Prefer not to state (if you prefer not to self-identify your race/ethnicity)

What is the year of your last academic degree? (optional)

(No response)

What is your gender? (optional)

Woman

Are you transgender? (optional)

Prefer not to state

Are you a member of the LGBTQ community? (optional)

Yes

Do you have one or more disabilities? (optional)

Prefer not to state

Organization Details

Completed - Mar 29 2021

Organization Details

Please complete all requested information. The information entered should be for the organization that would be directly receiving and distributing funding if a grant is successfully awarded (e.g. academic

institution, fiscal sponsor). Note that this may be different from the Applicant's main affiliation.

1. Type of Organization (required):

Industry/company

1a. For companies only

Please answer the following questions to determine if your organization is eligible to submit an application for grant funding.

Do you understand the grant funds must be used for charitable purposes (as defined by the IRS) and cannot be repurposed for your proprietary business?	Yes
Do you have the ability to provide accurate and complete financial reports on the use of grant funds?	Yes
Does your organization have the ability to track grant funds in a separate account or by using a separate project code or cost center?	Yes
Will the proposed grant project include IRS-defined lobbying activities?	No

1b. For companies only

Please answer the following question to determine if your organization is eligible to submit an application for grant funding.

If requested, could you provide the following documents within one week of a request?

Most recent two years of financial statements (audited, if available)	Yes
Current organizational budget	Yes
Evidence of legal status of organization (such as organizing documents, articles of incorporation, trust agreements, charter, tax classification, or certification from appropriate authorities)	Yes
List of governing board and key officers	Yes
Most recent annual report or brief description of the organization's history, goals, mission, recent activities, and future plans	Yes

2. Organization (required):

2a. Organization Name	Curii Corporation
2b. Address	212 Elm Street
2c. City	Somerville
2d. State/Province	MA
2e. Country	United States
2f. Tax ID (9-digits; format: XX-XXXXXXX; enter 44-4444444 if not applicable)	82-0858075
2g. Organization website	https://curii.com

Proposal Details

Please complete the following proposal information. ***All sections are required.***

1. Proposal Title: Growing a Diverse and Inclusive Workflow Ecosystem with CWL

To edit your proposal title, navigate to the main page; click on the three dots to the right of the application title (next to the Preview link); and select Rename from the dropdown menu. Proposal title is limited to a maximum of 75 characters, including spaces.

2. Funded Proposal ID:

Application number of your previously funded EOSS application (e.g. EOSS-0000005345)	EOSS2-0000000241
Name of the Grant Lead of previously funded application	Sarah Zaranek

3. Proposal Purpose:

Limit to one sentence (maximum of 255 characters, including spaces)

Hire a dedicated software engineer (a "community engineer") to work closely with CWL leadership and volunteers to grow our inclusive community so many new individuals can meaningfully contribute code, documentation, workflows and other software artifacts.

4. Amount Requested:

Enter total budget amount requested in USD, including indirect costs; this number should be between $100k and $400k total costs and match total described in the Budget Description. Enter whole numbers only (no dollar signs, commas, or cents)

400000

5. Proposal Summary/Scope of Work:

Provide a short summary of the application (maximum of 500 words)

Curii Corporation is a women-led company with a strong commitment to diversity, parity, and inclusion. This includes a Code-of-Conduct and non-discrimination policy. Curii employs Peter Amstutz (CWL leadership team, wrote 80%+ of the CWL specification and "cwl-tool" reference implementation.) Our senior team will be hiring and managing a full time software engineer (a "community engineer") who will mentor interested community members both in open source and software engineering best practices. We believe the community engineer will allow many new individuals to meaningfully contribute code, documentation and workflows to the CWL community.

The CWL project acknowledges the lack of representation in our community of Black, Indigenous and People of Color (BIPOC) and underrepresented genders including cis women, trans women, trans men, non-binary people, and those who are otherwise marginalized. With the work of the community engineer, we will support underrepresented communities and make our community and project more open to them. The community engineer will focus on 2 major topics: (1) directing and mentoring internships focused on those who face under-representation, bias or discrimination in the open source community (2) updating existing code repositories and materials to make them more "user friendly" to new contributors or those newly interested in CWL. By making it clearer and easier to contribute to the CWL project, we hope to avoid alienating or discouraging contributors and those who may not be as familiar with open source practices.

We will sponsor at least two Outreachy internships per Outreachy cycle (at least eight for the two years.) Outreachy's goal is to increase diversity in open source. Past Outreachy interns are:
* 92% women

* 4% transgender, genderqueer, or non-binary people

* 64% people of color

* 12% people from a historically disadvantaged caste or tribe

(Statistics are based on responses to the 2019 longitudinal study of Outreachy alums.)

Curii will focus on recruiting a diverse pool of applicants for the community engineer position. Recruitment will be a comprehensive process where we will search out and interview candidates from diverse groups and communities including coding bootcamps, women's and minority tech groups, and through explicit advertisements on job sites and social media.

The community engineer and participants in the Outreachy internships, supported by CZI, will be joining a global community committed to reflecting the diversity of the world and where everyone feels empowered to bring their full, authentic selves. The CWL Code of Conduct promotes a harassment-free experience for everyone and does not tolerate harassment of participants in any form. CWL is a member project of Software Freedom Conservancy that promotes, improves, develops, and defends Free, Libre, and Open Source Software (FLOSS) projects. It is formally managed by the elected CWL leadership team, however every-day project decisions are made by the CWL community which is open for participation by anyone.

CZI's support will help us realize the project's diverse and inclusive vision and overcome long-standing historical inequities that have been difficult to overcome without dedicated funding.

6. Expected Outcomes:

Describe the impact and expected outcomes of the proposed activities on the participation, retention, and leadership progression of contributors from underrepresented groups in your project(s). Top-tier applications will include clear and bold hypotheses about outcomes resulting from the work. (maximum of 250 words)

Common Workflow Language is empowering a global community of researchers, scientists, and analysts that share their batch data analysis workflows without technical barriers using an open standard. Sharing workflows this way should be a typical occurrence and seen as a preferred way of working. Such workflows should be complete and run on a variety of environments while being easy to re-use and build-on. No single vendor or organization should dominate the ecosystem.

Dedicated funding will help the CWL project recruit a "community engineer" who can focus on growing an inclusive community and help make our "Outreachy" internships significantly more impactful. By working with the Outreachy team and with support from CZI, anyone who faces under-representation, systemic bias, or discrimination will get dedicated help participating in CWL. Our goal is to increase new contributors to the project by at least 25% year-over-year with a large part of those new contributors coming from under-represented populations.

Outreachy expressly invites women (both cis and trans), trans men, and genderqueer people to apply. Outreachy also expressly invites applications from residents and nationals of the United States of any gender who are Black/African American, Hispanic/Latinx, Native American/American Indian, Alaska Native, Native Hawaiian, or Pacific Islander.

With CZI support we can be intentional and programmatic in our efforts to embrace and forward principles of inclusion and diversity. Funding for a dedicated "community engineer" has been challenging to find and, thus, this two year funding opportunity could be immensely impactful on the long term health of our community.

7. Open Source Software Projects

How many software projects are involved in your proposal (maximum of five)?

1

*Complete the table for each software project. You may need to use the scroll bar at the bottom of the table to scroll right to view and to complete all fields. Alternatively, you can tab to move through and complete the fields. If multiple software projects are involved, details must be entered for all of them. All fields are required. All URLs should be in the format https://example.com and **only one primary link should be provided where requested**:*

	Software project name	Homepage URL	Hosting platform	Main code repository	Description of software project
1	Common Workflow Language	https://www.commonwl.org/	GitHub	https://github.com/common-workflow-	The Common Workflow Language (CWL) is an open standard for describing analysis workflows and tools in a way that makes them portable and scalable across a variety of software and hardware environments, from workstations to cluster, cloud, and high performance

				language/	computing (HPC) environments. CWL is designed to meet the needs of data-intensive science, such as Bioinformatics, Medical Imaging, Astronomy, High Energy Physics, and Machine Learning.

8. Additional Organizations/Projects

How many additional organizations or projects other than open source software projects will contribute to the proposal and receive funding from this grant, if funded?

Complete the table for each additional organization or project other than open source software projects that will be contributing to the proposal and receive funding from this grant, if funded. You may need to use the scroll bar at the bottom of the table to scroll right to view and to complete all fields. Alternatively, you can tab to move through and complete the fields. If multiple software projects are involved, details must be entered for all of them. All fields are required. All URLs should be in the format https://example.com *and **only one primary link should be provided where requested***:

	Organization/project name	Homepage URL	Description of organization/project

Applicant Details

Completed - May 18 2021

Applicant Details

Please complete the following information for the Applicant (required):

The information entered should be for the individual submitting the application who will act as the main person responsible for the application and as its point of contact. Information about other Key Personnel on the proposal should be entered where requested in the Software Project Details part of the application. **Complete all fields in this task; all fields are required.** Many fields are auto-filled based on your answers in the LOI; please edit as needed.

To edit your name or email, please do so in your account information by clicking your name in the upper right corner and clicking My Account in the dropdown menu.

1. Name: Sarah Wait Zaranek

2. Email: swz-grants@curii.com

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3. Degrees (check all that apply)

Responses Selected:

PhD or equivalent

4. Current Employer/Affiliation	Curii Corporation
5. Title/Position	CEO & Chief Scientist
6. Country of Residence	United States
7. Applicant Organization	Curii Corporation

Equal Opportunity & Diversity

Completed - May 18 2021

Equal Opportunity & Diversity

CZI Science supports the science and technology that will make it possible to cure, prevent, or manage all diseases by the end of this century. Everyone is affected by disease, yet different communities are affected by or experience disease in different ways. Moreover, due to systemic barriers, the scientific enterprise itself is not a place where all voices and talents thrive. We believe the strongest scientific teams — encompassing ourselves, our grantees, and our partners — incorporate a wide range of backgrounds, lived experiences, and perspectives that guide them to the most important unsolved problems. To enable our work, we incorporate diverse perspectives into our strategy and processes, and we also seek to empower community partners to engage in science.

We track demographic information associated with applications submitted to CZI in response to our open calls. This information helps us learn from the RFA process, as well as improve our strategies to help ensure members of underrepresented or marginalized groups in science are aware of and able to apply to CZI opportunities. **Please note that answering all questions below is voluntary, and demographic information will not be used to make final grant funding decisions.** All responses will be shared only with limited personnel, who will use that information only for the purposes described in this paragraph.

If you have any additional questions about why we ask this, what we do with the data, or to share suggestions for improvement, please reach out to sciencegrants@chanzuckerberg.com.

This section has been auto-filled based on data entered in the LOI for the Applicant. Please edit as needed. Please note that completing the below is voluntary, and demographic information will not be used to make final grant funding decisions.

	LOI response	Optional description
What is your race/ethnicity? (optional)	Prefer not to state (if you prefer not to self-identify your race/ethnicity)	

	LOI response	Optional description
What is the year of your last academic degree? (optional)		

	LOI response	Optional description
What is your gender? (optional)	Woman	

	LOI response	Optional description
Are you transgender? (optional)	Prefer not to state	

	LOI response	Optional description
Are you a member of the LGBTQ community?	Yes	

	LOI response	Optional description
Do you have one or more disabilities? (optional)	Prefer not to state	

Please complete for the Key Personnel (if any) listed in the Open Source Software Project Proposal Details section. Please note that completing the below is voluntary, and demographic information will not be used to make final grant funding decisions. Please also let your Key Personnel know if you choose to enter the below in case they object to your providing that information to CZI.

Do any of the listed Key Personnel self-identify as one of the following? (optional)

Woman, Man, Non-binary/Third Gender, Prefer to describe

(No response)

Do any of the listed Key Personnel self-identify as one of the following? (optional)

Two or More Races, Black and/or African American, Asian, White, Hispanic or Latinx, Middle Eastern or North African, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Prefer to describe

(No response)

Organization Details

Completed - May 18 2021

Organization Details

Please complete all requested information. The information entered should be for the organization that would be directly receiving and distributing funding if a grant is successfully awarded (e.g., academic institution, fiscal sponsor). Note that this may be different from the Applicant's main affiliation.

1. Type of Organization (required):

Industry/company

2. Organization (required):

2a. Organization Name	Curii Corporation
2b. Address	212 Elm Street
2c. City	Somerville
2d. State/Province	MA
2e. Country	United States
2f. Tax ID (9-digits; format: XX-XXXXXXX; enter 44-4444444 if not applicable)	82-0858075
2g. Organization website	https://curii.com

3. Organizational/Administrative Contact (required):

List the name and contact information for the administrative contact to discuss additional information needed, if selected for award.

3a. First Name	Ward
3b. Last Name	Vandewege
3c. Title/Position	CTO
3d. Email	ward-grants@curii.com

4. Signing Official (required):

List the name and contact information for the person authorized to sign on behalf of your organization.

4a. First Name	Ward
4b. Last Name	Vandewege
4c. Title/Position	CTO
4d. Email	ward-grants@curii.com

5. Press Contact / Public Relations Official (required):

List the name and contact information for the person to discuss press releases and media.

5a. First Name	Alexander
5b. Last Name	Zaranek
5c. Title/Position	Chief Innovation Officer
5d. Email	awz-grants@curii.com

6. Institutional Approval Form (required):

Upload as a single PDF. This [form](#) should be reviewed and signed by a person authorized to sign on behalf of your organization agreeing to the stated institutional and investigator requirements and commitments on data, resource sharing, and publication policies, as well as endorsing/verifying your application materials and confirming their ability to receive funding for the proposal. **If you do not have an organization identified to receive funds, the applicant should sign the form and note on the form that a fiscal sponsor has not been identified.** In the event of an award, all funds will be awarded to the applicant institution as the prime institution, and the applicant institution will be responsible for ensuring compliance of all of the terms, including compliance of all partners/subcontract institutions. **These policies are non-negotiable so this form should only be signed if the organization is able to comply with the terms as stated.** While CZI does not require sign-off by all of your partner institutions, please refer to what your institution requires. **Note: digital signatures are permitted as long as the document is not encrypted or password-protected.**

[CZI-CWL-DI.Vandewege.pdf](#)

Filename: CZI-CWL-DI.Vandewege.pdf **Size:** 457.5 kB

Proposal Details

Completed - May 19 2021

Proposal Details

Please complete the following proposal information. ***All sections are required.***

1. Proposal Title: Growing a Diverse and Inclusive Workflow Ecosystem with CWL

To edit your proposal title, navigate to the main page; click on the three dots to the right of the application title (next to the Preview link); and select Rename from the dropdown menu. Proposal title is limited to a maximum of 75 characters, including spaces.

2. Proposal Purpose (required):

Limit to one sentence (maximum of 255 characters, including spaces)

> Expand our inclusive community so many new individuals can meaningfully contribute code, documentation, workflows and other software artifacts by hiring a dedicated software engineer ("community engineer") to work closely with CWL leadership & volunteers.

3. Amount Requested (required):

Enter the amount requested per year (including indirect costs), as well the total budget requested for all years in USD (this number should be between $100k and $400k total; auto-filled from LOI), including indirect costs; these numbers should match those described in the Budget Description. Enter whole numbers only (no dollar signs, commas, or cents)

Year One	199988
Year Two	199988
Total All Years	399976

6. Proposal Summary (required):

Provide a short summary of the application (maximum of 500 words) (auto-filled from LOI; update if needed)

Curii Corporation is a women-led company with a strong commitment to diversity, parity, and inclusion. Curii employs Peter Amstutz (CWL leadership team, wrote 80%+ of the CWL specification and "cwl-tool" reference implementation.). Our senior team will be hiring and managing a full time software engineer (a "community engineer") who will support new and existing CWL community members with a focus on systematically underrepresented groups in open source software.

The CWL project acknowledges the lack of representation in our community of Black, Indigenous and People of Color (BIPOC), underrepresented genders, and those who are otherwise marginalized. With the work of the community engineer, we will better support underrepresented communities and make our community and project more inclusive. The community engineer will focus on 3 major topics: (1) directing and mentoring internships focused on those who face under-representation, bias or discrimination in the open source community (2) updating existing code repositories and materials to make them more "user friendly" to new contributors. By doing this, we hope to avoid alienating or discouraging contributors who may not be as familiar with open source practices (3) performing a large-scale assessment on the current state of diversity of the project and developing recommendations on improvement. This research work will include listening and summarizing suggestions by non-Global North open source contributors to ensure that our efforts are not only focused on the Global North needs of our project and addresses any unique or different needs felt by the global community.

The community engineer that Curii hires are already part of an inclusive and community-focused workplace but will be further supported with training and learning opportunities focused on diversity, parity and inclusion in community-driven, open source projects The community engineer and participants in the Outreachy internships, supported by CZI, will be joining a global community committed to reflecting the diversity of the world. The CWL Code of Conduct promotes a harassment-free experience for everyone and does not tolerate harassment of participants in any form. CZI's support will help us realize the project's diverse and inclusive vision and overcome long-standing historical inequities that have been difficult to address without dedicated funding.

5. Work Plan (required):

A description of the proposed work the applicants are requesting funding for, including resources the applicants will provide that are not part of the requested funding. Please specify how the proposed activities will be structured and organized in the context of advancing the participation, retention, and leadership progression of contributors that are systemically underrepresented in scientific open source. Provide information on how this work will fit with the open source project's roadmaps and ongoing initiatives, and their target audience. Please describe any previous record of related efforts by the applicant/key personnel of the proposal. If this proposal involves participation from another organization, and/or multiple open source projects, please describe the collaboration and respective responsibilities. (maximum of 750 words)

Key personnel for this work plan includes a dedicated software engineer (a "community engineer") to work closely with CWL leadership and volunteers to help grow diversity and improve the inclusivity of the CWL project such that many new individuals can meaningfully contribute code, documentation, workflows and other software artifacts. Curii will focus on recruiting a diverse pool of applicants for the community engineer position. Recruitment will be a comprehensive process where we will search out and interview candidates from diverse groups and communities including coding bootcamps, women's and minority tech groups, and through explicit advertisements on job sites and social media. Peter Amstutz will provide technical mentoring and guidance to the community engineer and Sarah Wait Zaranek will provide help with overall project management and project direction.

Our work plan focuses on 3 major areas listed below with a detailed list of activities.

Mentoring Internships

Upon hiring the engineer we will sponsor and mentor at least two Outreachy internships per cycle (at least eight for the two years.) Outreachy's goal is to increase diversity in open source. Support by the community engineer will include for each cycle pre-work to determine applicable well-defined, incremental and self-contained projects, support the Outreachy application process including the contribution period and then mentor the intern through their internship project. The community engineer will be responsible for 10+ hours a week during the application period to review applicant contributions and help guide participants in their work and 10+ hours a week to mentor during the three month internship period. Projects for internships will be chosen to align with the CWL roadmap and scoped for intern success. Outreachy will not be responsible for any additional activities outside standard work done for the internship program. Peter Amstutz and Michael Crusoe are currently mentoring 2 Outreachy interns for the CWL project. They will advise the community engineer based on their extensive

experience with open source, CWL and recent mentoring activities.

Making the CWL Project More "User Friendly"

This aspect of our work is focused on reducing barriers to entry and reducing discouragement or alienation for new or inexperienced contributors. This includes updating existing code repositories and materials to make them more "user friendly" to new contributors. Some tasks include: curating and expanding the marking of beginner issues, removing or explaining any technical jargon, providing the appropriate readme to ensure contributors know "best practices" on how to contribute to the various project GitHub repositories and the contents and structure of each repository. By this, we hope to avoid alienating or discouraging contributors who may not be as familiar with open source practices. Additionally, we will provide ways for new contributors to get up to speed to be able to contribute. This means providing (or making) resources on how to use GitHub and find good issues for first contributions.

Assessing, Learning and Developing a Future Plan

We acknowledge that we currently do not know everything about how to increase diversity and foster inclusion in our project. We believe that the first two foci will be beneficial and we also feel it would behoove the project to learn more and develop a plan for the future. We believe it is important for a component of the community engineers work to be focused around learning from other projects' successful work in these areas, experts, and from the under-represented communities themselves.

As part of this work, the community engineer will engage in training and learning opportunities focused on diversity, parity and inclusion in community-driven, open source projects. Examples of training could include an Unconscious Bias training program which would provide tools to adjust automatic patterns of thinking and ultimately eliminate discriminatory behaviors. Other trainings could include a Leadership vs Control module, such as the one offered by The Linux Foundation.

Other learning opportunities include attending conferences, studying current research and talking to experts and diverse groups or individuals within the open source community. This work will also include listening and summarizing suggestions by non-Global North open source contributors to ensure that our efforts address any unique or different needs of the global community. Since we believe that these diversity advisors should not be obligated to provide "free-labor" as is often an issue with diversity discussions or initiatives, we plan to pay them for their advisory work with the community engineer and credit them publicly. This "learning" work will result in a document defining a vision for future diversity and inclusion work and will pinpoint the most effective activities and best practices moving forward.

6. Milestones and Deliverables (required):

List expected milestones and deliverables, and their expected timeline. Be specific and include (where possible) any goals for metrics the software project(s) are expected to reach upon completion of the grant (maximum of 500 words)

Q1: October - December 2021

Support Outreachy end-year applicants through the contribution period where applicants are required to make at least one contribution to a project. (October)

Mentor 2+ end-year Outreachy interns (December-March)

Prepare and submit projects for mid-year Outreachy internships

Identity repositories and tasks required to make them more "user-friendly"

Deliverable(s): GitHub tickets tagged appropriately for this work

Q2: January - March 2022

Mentor 2 end-year Outreachy interns (December-March)

Deliverable(s): Blog posts, finished projects and summary talks given to weekly CWL community meeting

Support mid-year internship applicants through Outreachy contribution period (March-April)

Continue "user-friendly" repository work

Q3: April - June 2022

Support mid-year internship candidates through Outreachy contribution period and decide on final candidates (March-April)

Mentor 2+ mid-year Outreachy interns (May-August)

Continue "user-friendly" repository work

Create plan to perform a large-scale assessment on the current state of diversity of the CWL project

Deliverable(s): Written plan publicly available for feedback

Q4: July 2020 - September 2022

Mentor 2+ mid-year Outreachy interns (May-August)

Deliverable(s): Blog posts, finished projects and summary talks given to weekly CWL community meeting

Prepare and submit projects for end-year Outreachy internships (August)

Attend BOSC with a focus on attending talks and meeting those who work on diversity, parity and inclusion in community-driven, open source projects.

Finish "user-friendly" repositories work

Deliverable(s): Closed tickets in GitHub/ updated repositories

Begin large-scale assessment on diversity of the CWL project

Determine list of Non-Global North advisors

Overarching Year 1: Community engineer will attend at least 1 training focused on diversity, parity and inclusion.

Q5: October - December 2022

Support end-year applicants through Outreachy contribution period (October)

Prepare and submit projects for mid-year Outreachy internships

Finish large-scale assessment on the current state of diversity of the project

Deliverable(s): Document with summary of assessment results available publically

Engage with Non-Global North advisors

Q6: January - March 2023

Mentor 2+ end-year Outreachy interns (December-March)

Deliverable(s): Blog posts, finished projects and summary talks given to weekly CWL community meeting

Support mid-year internship applicants through Outreachy contribution period (March-April)

Engage with Non-Global North advisors (feeds into deliverables for Q7 and Q8)

Q7: April - June 2023

Support mid-year internship candidates through Outreachy contribution period and decide on final candidates (March-April)

Mentor 2+ mid-year Outreachy interns (May-August)

Present vision and plan for future work to CWL Community for feedback

Deliverable(s): Presentation and draft plan

Q8: July 2020 - September 2023

Mentor 2+ mid-year Outreachy interns (May-August)

Deliverable(s): Completed discourse posts and project (set of GitHub finished tickets) and talk project summary talk given to weekly CWL community meeting

Prepare and submit projects for end-year Outreachy internships (August)

Finalize vision and plan for future work to CWL Community for feedback

Deliverable(s): Final plan publically available

Attend BOSC with a focus on attending talks and meeting those who work on diversity, parity and inclusion in community-driven, open source projects.

Deliverable(s): Give BOSC talk or poster about work.

Overarching Year 2: Community engineer will attend at least 1 training focused on diversity, parity and inclusion.

Note: Timeline assumes start in October of 2021 and an end of September 2023.

7. Expected Outcomes (required):

Please describe the impact and expected outcomes of the proposed activities on the participation, retention and leadership progression of contributors from underrepresented groups in your project(s). Top-tier applications will include clear and bold hypotheses about outcomes resulting from the work. (maximum of 250 words) (auto-filled from LOI; update if needed)

The CWL project is empowering a global community of researchers, scientists, and analysts that share their batch data analysis workflows without technical barriers using an open standard. Sharing workflows this way should be the usual occurrence and seen as a typical way of working. Such workflows should be complete and run on a variety of environments while being easy to re-use and build-on. No single vendor or organization should dominate the ecosystem.

Dedicated funding will help the CWL project recruit a "community engineer" who has resources to focus on growing an inclusive community, making our "Outreachy" internships significantly more impactful, limiting the barrier to entry for new contributors, and helping typically under-represented populations thrive in the CWL Project. Funding for a dedicated "community engineer" has been challenging to find and, thus, this two year funding opportunity could be immensely impactful on the long term health of our community. With CZI support we can be intentional and programmatic in our efforts to embrace and forward principles of inclusion and diversity.

By working with the Outreachy team and with support from CZI, we can increase the participant of those who faces under-representation, systemic bias, or discrimination in the CWL project. Our goal is to have 25% of those who are interns continue to actively participate in the CWL Project past their internship. Our other main goal is to increase new contributors to the project by 20% over the two funded years with a large part of those contributors coming from under-represented populations.

8. Evaluation and Learning Goals (required):

Please describe how you will assess and monitor progress towards the desired outcomes and what you expect to learn about the funded activities by the end of the grant period. Consider including any qualitative and quantitative methods you plan to use to assess progress towards the desired outcomes, and considerations on future scalability and requirements to further sustain the work funded by the grant, if activities are expected to continue past the duration of the grant. Please refer to the expected impact

and learning goals section in the LOI announcement. (maximum of 500 words)

Our success will be measured in the completion of milestones and the increased participation in the CWL project by the larger community especially those from under-represented populations.

To measure the growth and participation of new project contributors, we will track GitHub metrics, questions asked and answered in Discourse, downloads of cwltool, attendees of weekly CWL Community Video Chat and other CWL-based events.

The CWL project is very international, with contributors from the US, Canada, South Africa, Japan, Australia and many countries in Europe, however most contributors are white or asian men or otherwise members of the dominant ethnic group of their countries of origin. We would like to be able to track the demographics of our contributors to be able to see which of our efforts help increase contributor diversity. However, tracking the overall diversity of the project participants may require individuals to self-identify which may not be safe or ethical, for instance LGBTQIA members may not be or cannot be public about their identification. We hope to find a way to let this information be collected reasonably and ethically. We would like to try to assess the state of the project by distributing a questionnaire based on the open demographic project's recommended questions (http://nikkistevens.com/open-demographics). The goal of the Open Demographics project is to standardize the questions asked about demographics so that the answers can be comparable across communities. If we can do this successfully, we can then distribute a similar questionnaire periodically to measure the changes of representation in our project.

In our work with Outreachy, we hope to support under-represented communities and have our interns stay as members of the CWL community long past the end of their internships. Past Outreachy interns are:
* 92% women
* 4% transgender, genderqueer, or non-binary people
* 64% people of color
* 12% people from a historically disadvantaged caste or tribe
(Statistics are based on responses to the 2019 longitudinal study of Outreachy alums.)

Our goal is to make their internships an enjoyable and enriching experience as well as use it as an opportunity for us to focus on how to make our community and project more open to under-represented communities. By working with several cycles of interns, we hope we will progressively improve our ability to mentor them and encourage their growth into leadership roles in the community based on their

feedback and critically accessing any stumbling blocks they encounter.

One of our milestones is the creation of a document that will define a vision for the desired outcome in our future diversity and inclusion work and will pinpoint the most effective activities and best practices moving forward. Part of this document will include strategies for funding this future work.

9. Existing Support (required):

List active and recent (previous two calendar years) financial or in-kind support for the software project(s), including duration, amount in USD, and source of funding. Include in this section any previous funding for these software projects received from CZI (maximum of 250 words)

CWL is a member project of Software Freedom Conservancy that promotes, improves, develops, and defends Free, Libre, and Open Source Software (FLOSS) projects. Currently, the CWL software project has only one full time engineer (Crusoe). Development work to the project is also done via in-kind donations from participant projects & vendors (e.g. Amstutz:Curii/Arvados, Chilton: Galaxy Project, Soiland-Reyes: University of Manchester). CWL is a standards community and pan-discipline which makes it difficult to find funding from most traditional funding sources. The CWL Project has received $180,000 of funding from a cycle 2 CZI EOSS grant, Enabling Biomedical Science with Common Workflow Language.

Optional Attachments

Incomplete

Upload in PDF format; attachments should be uploaded in a combined single PDF. Include up to three pages of additional information. This section can include figures, charts and tables, references for the proposal, or any additional material in support of the proposal (maximum of three pages). Uploading any additional information is completely optional and not required.

CV of Applicant

Completed - May 19 2021

Upload in PDF format; include current and recent employment, education history, and references to any major publications, software contributions, or other relevant outputs (maximum of two pages)

20190801

Budget Description

Completed - May 19 2021

Upload in PDF format; budgets can be uploaded in a combined single PDF or one PDF for each software project (one page per software project maximum)

- *Description of the costs to be funded by this grant at a high level and in narrative or tabular form, outlining costs for personnel (including names, if known), supplies, equipment, travel, meetings/hackathons/sprints, subcontracts, other costs, and up to 15% indirect costs (excluding equipment and subcontracts).*

- *Indirect costs are limited to up to 15% of direct costs and are included within the annual budget total. Indirect costs may not be assessed on capital equipment or subcontracts, but subcontractors may include up to 15% indirect costs of their direct costs.*

- *Budget should be requested in US dollars.*

- *International grantees must use all grant funds exclusively for activities conducted outside the United States of America. Travel expenses to the United States (including round-trip tickets) should not be covered from the requested grant funds.*

- *Application budgets must reflect the actual needs of the proposal. The Chan Zuckerberg Initiative will work closely with successful applicants to arrive at a mutually acceptable budget after review.*

CZI EOSS2-DI CWL Budget - 400K DOMESTIC BUDGET

Number of Open Source Software Project(s)

Completed - May 19 2021

Number of Open Source Software Projects

How many software projects are involved in this proposal that will be supported by this grant?

Each proposal can request funding for work that includes up to five open source software projects. If multiple software projects are involved, details must be entered for all of them.

If your proposal involves more than one software project, mark this step as complete so you can fill in details for additional projects. *You may need to scroll down using the scroll bar in the task menu on the left side of the page to see these tasks. To change the number of software projects indicated after marking as complete, click the three dots in the upper right of the task and select edit, which will re-open the task.*

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Open Source Software Project #1: Details

Completed - May 19 2021

Software Project #1: Details

Provide details and metrics for each open source software project that will be supported by the grant to help us assess its impact and quality.

Software Project Details:

Complete the following table for Open Source Software Project #1 of your proposal. All URLs should be in the format https://example.com and only one primary link should be provided.

1. Software Project name (required)	Common Workflow Language
2. Homepage URL (required)	https://www.commonwl.org/
3. Hosting platform (required)	GitHub
4. Main code repository (e.g. GitHub URL) (required)	https://github.com/common-workflow-language/
5. DOI of major publication(s) describing software project (if applicable)	To reference the Common Workflow Language and the CWL project in scholarly work, please use the following citation:

	Michael R. Crusoe, Sanne Abeln, Alexandru Iosup, Peter Amstutz, John Chilton, Nebojša Tijanić, Hervé Ménager, Stian Soiland-Reyes, Carole Goble, The CWL Community (2021): Methods Included: Standardizing Computational Reuse and Portability with the Common Workflow Language. arXiv 2105.07028 [cs.DC] https://arxiv.org/abs/2105.07028 To reference the CWL specification in scholarly work, please use the following citation inclusive of the DOI: Peter Amstutz, Michael R. Crusoe, Nebojša Tijanić (editors), Brad Chapman, John Chilton, Michael Heuer, Andrey Kartashov, Dan Leehr, Hervé Ménager, Maya Nedeljkovich, Matt Scales, Stian Soiland-Reyes, Luka Stojanovic (2016): Common Workflow Language, v1.0. Specification, Common Workflow Language working group. https://w3id.org/cwl/v1.0/ https://doi.org/10.6084/m9.figshare.3115156.v2 A collection of existing references to CWL can be found at https://zotero.org/groups/cwl
6. Social media handles (if applicable)	@commonwl
7. Do you or software project key personnel have commit rights to the code repositories for this software project? (required)	Yes
8. Short description of software project (200 words maximum) (required)	The Common Workflow Language (CWL) is an open standard for describing analysis workflows and tools in a way that makes them portable and scalable across a variety of software and hardware environments, from workstations to cluster, cloud, and high performance computing (HPC)

			environments. CWL is designed to meet the needs of data-intensive science, such as Bioinformatics, Medical Imaging, Astronomy, High Energy Physics, and Machine Learning.

9. Was this software project previously included as part of your funded EOSS grant?	Yes

List of Known Key Personnel:

Key personnel are people involved in the software project who will be supported by the grant if the application is successful.

Complete the following for the key personnel on the open source software project listed above (up to 5) (required); **enter n/a if any field is not applicable.** *Personnel to be hired that have not been identified at this time can be listed in the budget section. You may need to use the scroll bar at the bottom of the table to scroll right to view and to complete all fields. Alternatively, you can tab to move through and complete the fields.* **To add another person/row (up to five), click the box at the end of the row.**

	First name	Last name	Email address	Current employer /Affiliation	Job title	Developer username if applicable (e.g., GitHub handle)	Country of Residence	Add another person/row
1	Sarah	Zaranek	swz@curii.com	Curii Corporation	CEO & Chief Scientist	https://github.com/swzCuroverse	United States	✔
2	Peter	Amstutz	peter.amstutz@curii.com	Curii Corporation	Principal Software Engineer	https://github.com/tetron	United States	✖

Completed - May 19 2021

Additional Organizations/Projects

Please complete the following proposal information. ***All sections are required.***

Additional Organizations/Projects

How many additional organizations or project other than open source software projects that will be contributing to the proposal and receive funding from this grant, if funded?

None