Community Resource Management

Personas

Some people like to use personas to simulate how different types of community members will behave in a given situation. These personas can be different **contributor** types (people who engage with code, discussion leaders, technical writers) or different **user** types (power users, casual users, users with disabilities). Personas are archetypical models of different types of users, and provide a window into the different needs and expectations of these populations.

Contributor Personas and Pathways (Mozilla)
https://mozilla.github.io/open-leadership-training-series/articles/building-communities-of-contributors/bring-on-contributors-using-personas-and-pathways/

10 open-source personas
https://opensource.com/open-organization/18/9/mozilla-open-archetypes

Finding users (open source guides)
https://opensource.guide/finding-users/

Another aspect of personas is the need to promote the work of your project to different audiences. This can be done both online and offline, and gets the message out to different groups of people. This allows you to build perspectives on your work depending on the needs and interests of different audiences.

The online promotion of open-source projects can be done in three ways: websites, social media, and virtual talks. Every project should have a good, up-to-date website. This can be hosted as a github pages site (from your project's Github organization), or elsewhere. The website should be a front door linking all of the pieces of your project together. Social media promotion is also essential. Using Twitter or Reddit to make people aware of your project and its active status is a good way to convince potential contributors to contribute. Github repository cards can provide a good summary of individual repositories in terms of active issues, number of contributors, and stars/forks.

Github pages sites (github.io)
https://pages.github.com/

Create Github Repository Cards
https://dotdev.co/github-repository-cards/

Offline promotion can serve as an alternative to virtual promotion, and attracts a different audience. Examples of these are TED talks, local meetups, academic conferences and symposia, lecture series, and more. This broadens the audience for your project beyond skill types and stakeholders who are typically online.

Financial Support

There are a number of ways to derive financial support for open-source software development and community building. One approach is to utilize a financial sponsorship organization. NumFOCUS is one such organization, which both sponsors projects and offers small-scale grants (5K-8K) for future development. Another approach is to attain 501(c)(3) status (nonprofit). Nonprofits are good for software and community activities for which a profit is not derived nor expected. This is something the OpenWorm Foundation has done for fundraising and financial grant purposes, and requires a formal board of directors.

There are a number of other funding sources that may be available. Finding a funding stream is important for sustainability, and is one of the reasons why open-source sustainability is so hard. I have provided some examples from the Mozilla and Linux foundations, which are large and mature open-source organizations. Thus, they have large budgets compared to the average open-source organization.

NumFOCUS
https://numfocus.org/

501(c)(3) organization
https://en.wikipedia.org/wiki/501(c)(3)_organization

Mozilla's status as a 501(c)(3)
https://www.mozilla.org/en-US/about/governance/organizations/

Linux Foundation revenues
https://projects.propublica.org/nonprofits/organizations/460503801

Other business types
Legal Zoom – compare business structures:
https://www.legalzoom.com/business/business-formation/compare.html

Maintenance and Educational Expenditure Funding
There are also open-source internship programs that an open-source organization can participate in to defray the costs associated with maintenance and educational activities. The two most popular programs are run by Google, and provide a contributor with a stipend in exchange for a months-long project. It teaches students about open-source, can solve a technical barrier the organization needs to overcome, and creates a potential maintainer (or enforces virtuous habits).

Google Summer of Code (GSoC)
https://summerofcode.withgoogle.com/

Google Season of Docs (GSoD)
https://developers.google.com/season-of-docs

Examples of Open-source Educational Resources
In the past few years, various educational resources have been developed in an open-source manner. This allows contributors to projects to learn new skills, or to get up to speed on specialized topics. Curating these resources is also important, and will serve your community well.

Brains, Behavior, and Complexity Curriculum (Orthogonal Research and Education Lab)
https://representational-brains-phenotypes.weebly.com/brains-behavior-and-complexity-curriculum.html

Neuromatch Computational Neuroscience Summer School
https://github.com/NeuromatchAcademy/course-content

Wakelet (series of open source educational tools for coding and tech)
https://wakelet.com/wake/ce666d07-bff4-4126-8b71-1c4a2b549c7a

FreeCodeCamp (certifications and tech skills)
https://www.freecodecamp.org/

Stakeholders
Projects have various stakeholders who are impacted by or have an interest in the project. As a campus mobile app, the Rokwire Initiative has various stakeholders from across campus, as it touches their daily lives. It is good practice to understand the identities of your potential stakeholders, either through a personas exercise or by formal committee.

Setting an Open Source strategy (Linux foundation)
https://www.linuxfoundation.org/tools/setting-an-open-source-strategy/

Exploring the Role of Commercial Stakeholders in Open Source Software Evolution
https://hal.inria.fr/hal-01519081/document

The Economic Motivation of Open Source Software: Stakeholder Perspectives
https://www.researchgate.net/publication/2961773_The_Economic_Motivation_of_Open_Source_Software_Stakeholder_Perspectives

Master Plan (or global model)
A master plan is a graphical model that attempts to estimate all of the possible conduits into your community that are unique. These conduits involve issues such as *incentives*, *sustainability*, *catalyzation*, *communication and innovation*, and *embedding*.

Incentives refer to ways in which we can encourage people to contribute.

Sustainability refers to keeping contributions relevant across releases, in addition to perpetuating the activities of new and continuing contributors.

Catalyzation refers to keeping the community relevant and open to new initiatives.

Communication and Innovation refers to the facilitation of open discussion and the encouragement of novel ideas.

Embedding involves bootstrapping calls for involvement in the program itself or more in the Github repository.

Open-source Contributor master plan
https://publish.illinois.edu/bradly-alicea/2021/04/15/open-source-contributor-master-plan/

Maturity models are another way to evaluate your project in terms of assessing your software development process. This could also be used to evaluate your open-source community in conjunction with initiatives that follow the conduits proposed in the master plan.

Open-source Maturity Models
https://en.wikipedia.org/wiki/OpenSource_Maturity_Model