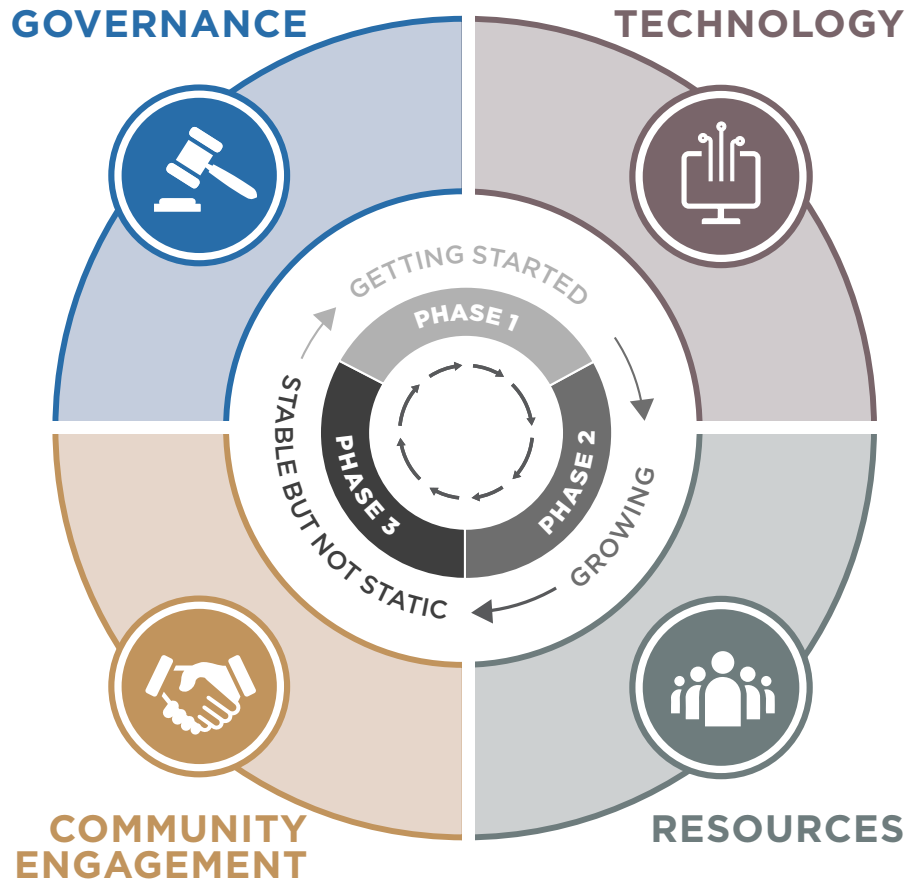




A Guidebook for Programs Serving Cultural and Scientific Heritage

Sustainability Wheel



 **GOVERNANCE**

Phase I: Establishing
Working with original engineers, project staff, or organization. [Go to page 11.](#)

Phase II: Stabilizing
Functional but limited in one or more aspects. [Go to page 12.](#)

Phase III: Evolving
Strong management structures; not necessarily formal governance. [Go to page 13.](#)

 **TECHNOLOGY**

Phase I: Laying the Groundwork
In design, pre-release or early beta testing phase; small set of early adopters. [Go to page 20.](#)

Phase II: Expanding and Integrating
Have more than one public release. [Go to page 21.](#)

Phase III: Preparing for Change
In production, well-adopted, supported. Technology stack stable. May be looking to next generation. [Go to page 22.](#)

 **RESOURCES**

Phase I: Creating Consistency
Funded by single organization, grant-funded or volunteer operated. [Go to page 26.](#)

Phase II: Diversification
Distributed resourcing; meeting expenses, small number of revenue streams. [Go to page 27.](#)

Phase III: Stable, but not Static
Diverse staff support and income streams; focused on long-range strategy. [Go to page 28.](#)

 **COMMUNITY ENGAGEMENT**

Phase I: Getting Beyond Initial Stakeholders
Focused on primary stakeholders; lack of engagement with broader communities. [Go to page 32.](#)

Phase II: Establishing CE Infrastructure
Determining how to facilitate engagement that works for community. [Go to page 33.](#)

Phase III: Evolving CE
Established infrastructure to enable engagement. [Go to page 35.](#)

Facet: Community Engagement

Phase I: Getting Beyond Initial Stakeholders

Core Goal

Identify and involve a wider group of stakeholders.

Characteristics

Phase I programs are generally focused on their primary stakeholders. There is frequently lack of engagement with the broader cultural and scientific heritage and OSS communities, and lack of an externally focused communications strategy, either from a limited experience or a feeling that outreach is not a priority at this point. In this stage, the core stakeholders may still be developing their product strategy and doing a competitive environmental scan. In this early stage, staffing resources are limited and can be dependent on one organization, with a focus on “doing” core set-up work rather than engaging with a larger audience or establishing communications practices to a wider community.

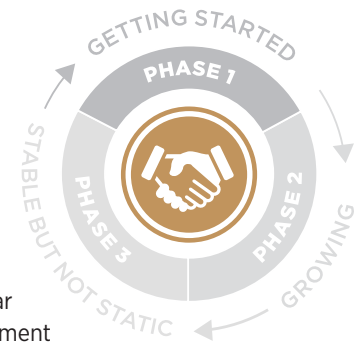
Concerns and Roadblocks

Insufficient staffing can be an issue in this stage. Work may be done by volunteers and/or overcommitted program staff. This leads to a difficult balance between doing the work and communicating about what is going on to a wider community. There may be tension among the core stakeholders between focusing on critical early set-up functions while at the same time feeling pressure to start seeding the larger community. The software may not be available to a wider audience and there is frequently a lack of documentation to share – thus making it difficult to connect with the larger potential community that the software will need in order to grow.

Moving Forward: Objectives

- **Identify and involve a wider group of stakeholders**

In order for the open source software to grow, the small group supporting it needs to grow as well. The tight group of dedicated people working on it should determine and define the audience for the software and start involving them in its growth and development. Useful questions to ask and answer as you seek to increase stakeholders include: Who are you serving? What value are you adding? Are there additional communities that can be served by this software?



- **Form an outreach committee**

One strategy for regular and consistent engagement with the community is to form an outreach committee, thus prioritizing this objective. Making a group responsible for it means that community engagement and outreach is no longer a “nice” thing to do when people have time, but rather a commitment for all stakeholders with long-term impact.

- **Formulate a communications and engagement strategy/plan**

Despite being time consuming, it is critical to create a community engagement strategy at this early stage. Programs should consider it part of their overall strategic and operating plans. Be sure to include specific elements, such as creating mailing lists, conducting member forums, giving conference presentations, and committing to regular blog posts. When considering the OSS program’s communications strategy, read through the resources in this Guidebook. Reach out to staff and community members of other OSS programs serving cultural and scientific heritage – the participant list for the ITAV forum is a great start.

- **Implement communications and engagement strategy**

An iterative and ongoing communications and engagement strategy may be appropriate for many OSS programs. Programs should continue to evaluate and adapt as they go forward. Contributors may find that weekly blog posts are too burdensome or regional in-person meetings are better than online meetings for the community. Find users who are willing to serve as program champions and tell stories of successful use of the OSS. It is not just about communicating out to people; it should be the start of the larger community engaging with and contributing to the OSS program and software.

Insufficient staffing can be an issue in this stage.

Facet: Community Engagement

Phase II: Establishing Community Engagement Infrastructure

Core Goal

Bringing more into the fold – turning users into stakeholders.

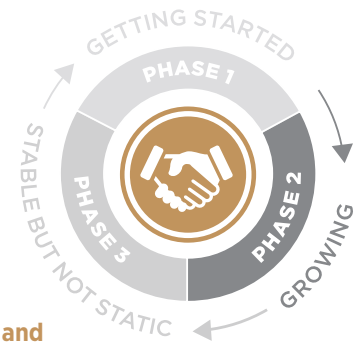
Characteristics

Phase II is when program participants determine how to best facilitate engagement that works for the specific community. At this stage, the community may be small and unsure of how to contribute. For example, individuals may be contributing code, but the processes aren't very clear, streamlined or efficient. People may want to help in a variety of ways, but aren't sure how, or they may wait until they are specifically asked to contribute.

Concerns and Roadblocks

Frustration or fatigue may be an issue in Phase II. Efforts take time to pay off and some strategies may need to be shifted. Stale patterns may need to be changed and new methods employed. Potential stakeholders may be unfamiliar with OSS models and may not understand how they differ from the traditional vendor relationship; they may be more accustomed to a “transactional” model wherein a specific price is paid for a specific service. When there are membership fees or sponsorship levels, it may be more difficult to quantify specific benefits and so individuals or institutions new to open source might need help to understand and embrace the model or explain it to their resource allocators. Efforts may be necessary to educate or explain how and why members/participants contribute, and the benefits of being a contributor.

Potential stakeholders may be unfamiliar with OSS models and may not understand how they differ from the traditional vendor relationship.



Moving Forward: Objectives

- **Setting up processes and infrastructure to facilitate engagement**

Focus on shifting people from “interested” to “engaged” and “eager to see” to “eager to participate and contribute.” Programs in this phase benefit from having policies that guide and foster engagement including contributor guidelines, community guidelines, and best practices.

- **Clear communication practices and policies**

In this phase, programs frequently need to create and improve communication policies. Examples may include: a code of conduct and onboarding materials. It is a good time to consider if you have branding issues – does the program have a cohesive overall message?

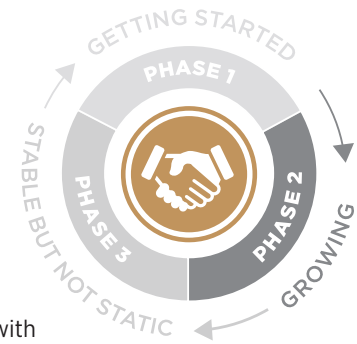
- **Increased non-directed community activities**

Increase active representatives and empower them to be ambassadors. Programs should encourage spontaneous, informal, non-directed, autonomous community activities. Participants should be empowered to do presentations at conferences, start regional meet-ups, organize a working group, etc., and act without explicit directions from program staff or leadership. A culture of shared ownership and responsiveness will also encourage the community to respond to questions. Consider creating “toolkits” or structures to facilitate more effective communication with clear and consistent messaging.

(Continues on page 34)

Facet: Community Engagement

Phase II: Establishing Community Engagement Infrastructure (continued)



- **Increased transparency**

Programs will want to ensure that their activities (ranging from governance to technology) are clear to current and potential community members. The participants need to feel that they understand how decisions are made and what development will occur. Specific ways to foster this include regularly distributed technology roadmaps, annual reports, and updates from governance and committees.

- **Dedicated staffing**

Many OSS programs benefit from dedicated staffing (commonly product manager and/or program manager and technical lead) in order to sustain their efforts.

- **Engaging a more diverse set of engaged participants**

Sustainable programs need diversity in all forms. Diversity of skill sets (such as training, translation, documentation, programming, etc.) is important. Geographic diversity may also be important to broaden the reach of the program. Programs will also want to ensure they are positioned so that people of all backgrounds feel welcome to participate.

- **Engaging with new communities**

Consider integrations with other communities as a way to broaden the reach and appeal of the software and engage a broader audience. Examples include repository software integrating with digital preservation software or collections management software integrating with another program to offer a discovery layer. The more interconnected the software is to wider workflows and processes, the stickier it is. The more embedded an OSS program is, the more critical it becomes to the institution, and as such, it will be more likely to have audiences and institutions stay engaged. Programs at this stage want to develop a strong network of relationships and partnerships with other programs, institutions, and companies. If the engagement strategy isn't working, governance may want to consider changes to marketing or membership/contributor models.

Sustainable programs need diversity in all forms.

Facet: Community Engagement

Phase III: Evolving Community Engagement

Core Goal

Continue to evaluate and evolve the program engagement model to keep up with new technologies, communities, and collaborators.

Characteristics

Phase III programs tend to have a well-established infrastructure to enable participation. They provide a variety of opportunities to engage – such as conferences, user groups, and awards. They have representation from diverse geographic regions and different skill sets represented (technical, documentation, training, etc.).

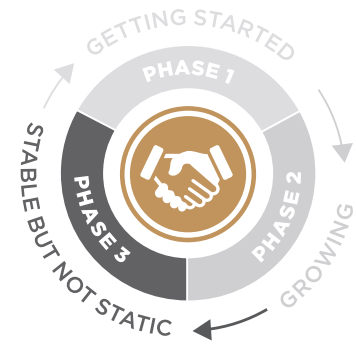
Concerns and Roadblocks

At this point the program may be considering international audiences. In order to support that, the program will need additional resources such as skill at cross-cultural communications and multilingual marketing capability. At the same time, the program needs to continue to work with and continue to meet the needs of existing users. Efforts to engage new audiences shouldn't entail neglecting longtime participants.

There may be perceived lack of communication in pockets.

A strong concern in this stage is burn out – the initial and building enthusiasm may be gone, the tendency to rely on a few dedicated participants may be wearing them out. It may be time to think in terms of succession planning or new strategies to continue to find fresh people through specific or time-bound projects so they can contribute frequently, but not constantly.

Continue to communicate with all stakeholders and users that the software needs to continue to grow. Programs don't want to be too comfortable and then face massive technical debt.



Moving Forward: Objectives

- **Working Across Communities**

If they haven't already, programs in this phase should consider infrastructure and tools to enable further communication to new communities.

- **Empower the community supporting each other**

Ensure there are mechanisms and processes that enable the participants to help each other – supporting blogs, enabling easy-to-update documentation, and hosting arenas for lively discussions are important.

- **Establish ways to continually evaluate community engagement**

At this phase, continuous improvement is important to recognize, interpret, and adapt to changing environments.

At this point the program may be considering international audiences.

Community Engagement Resources and Tools

- Bacon, Jono. *The Art of Community*. Sebastopol, CA: O'Reilly 2009.
- Hintjens, Pieter. *Social Architecture: Building On-line Communities*. Self-Published, CreateSpace, 2016.
- Kraut, Robert E. and Paul Resnick. *Building Successful Online Communities: Evidence-Based Social Design*. Cambridge, MA: MIT Press, 2011.
- McCann, Laurenellen. *Experimental Modes of Civic Engagement in Civic Tech*. Chicago, IL: Smart Chicago Collaborative, 2015.
- Owens, Trevor. *Designing Online Communities: How Designers, Developers, Community Managers, and Software Structure Discourse and Knowledge Production on the Web*. New York: Peter Lang, 2015.
- Severance, Charles Russell. *Sakai: Building an Open Source Community*. Self-Published, CreateSpace, 2015. <https://www.dr-chuck.com/sakai-book/>.

Program-based examples:

- “VuFind Community.” VuFind. Accessed 1 February 2018. <https://vufind.org/wiki/community>.

Consider tools such as:

- Group messaging and collaboration, e.g. Slack, IRC
- Customer Relationship Management (CRM) – systems to manage engagement
- Source code repositories, e.g. GitHub
- Public wikis for collaboration and communication
- Publicly available issue/bug trackers
- Email lists



Program representatives participating in one of the forum activities.

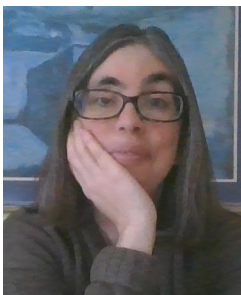
Community Engagement Case Studies

Guidebook case studies provide first-hand accounts from forum participants about their program's work toward sustainability. Community Engagement case studies are from the ArchivesSpace and Vega programs.

ArchivesSpace

By Christine Di Bella

<http://archivesspace.org/>



As an open source application, ArchivesSpace is free for anyone to download and use. On the other hand, as we all well know, developing and maintaining an open source application is not itself free. In our organizational model, dues and intellectual contributions from institutional members sustain the application

and ensure its future. To maintain sufficient membership to sustain the application, we must demonstrate that membership is not only important, but also rewarding for those who choose it. While our strategies and tactics for accomplishing this have changed over time, we increasingly recognize the degree to which community engagement is an important factor in keeping members satisfied and maintaining their ArchivesSpace membership in the face of financial and other institutional pressures.

ArchivesSpace membership has exceeded membership projections from the beginning, sometimes by as much as double, which means the community we serve has always been larger than anticipated. The membership program launched in summer 2013 with 54 charter members, which quickly grew to 156 members by the end of the first full year. Membership has continued to grow every year, and now, a little over four years in, ArchivesSpace has over 340 General member institutions, as well as 19 Educational Program Members, and three Registered Service Providers. With this kind of success has also come great expectations on the part of those members. ArchivesSpace is blessed with a vibrant and active community of users. But connecting those users to us and to each other, while keeping the application moving forward, requires continual attention and a good measure of flexibility.

The way we meet our users' engagement expectations has evolved over time. Initially our community efforts were primarily focused on exhibiting and presenting at professional conferences and working with our appointed and elected volunteer groups. In fact, when ArchivesSpace launched as a full program in 2013, it had only two permanent staff members, a Program Manager and a Developer. It was anticipated that the Program Manager would be able to manage any associated community activities in the course of his other duties.

As the community and its expectations grew, recognizing that the Program Manager could not fulfill all needs in this area, in 2015 ArchivesSpace created a position for a part-time Community Outreach Manager. The Community Outreach Manager's original focus was improved communication with and responsiveness to individual users and groups of users and organizing a few face-to-face events, such as training sessions and an annual Member Forum. The scope was somewhat limited, but for the first time, the ArchivesSpace program had a position that was solely focused on the application's users rather than the application itself. Feedback about this change from the user community was very positive; many indicated that since part of what they liked most about being ArchivesSpace members was being part of a community, anything that helped them share and share in the experience with others made membership more valuable to them.

As our community continued to grow and diversify, it was important that our community activities grew and diversified as well. With membership continuing to outpace projections, providing additional revenue for staffing and activities to meet user needs, in 2016, the community position became full-time. In 2017 the position was retitled "Community Engagement Coordinator," in recognition of our increasing

(Continues on page 38)

Community Engagement Case Studies

ArchivesSpace

(Continued)

focus on not just reaching out to our community members, but also actively engaging them around ArchivesSpace and with each other. Our Community Engagement Coordinator now organizes a full complement of online and face-to-face events, manages communications and social media, and coordinates a range of user-focused resources, in addition to interacting with and supporting individual users around the application. As well as proven offerings like our annual Member Forum, we're trying out new things, including quarterly open calls on Zoom and wrangling contributions for a community-centered blog series. Though our focus has been to engage the entire community in large platform discussions, we are also now looking at opportunities to engage more locally through regional forums. Recognizing that different parts of our community have different needs, we've also launched efforts related to cultivating our developer community, including monthly Core Committers open calls and repositories on Github in which developers can share and collaborate on plug-ins or other kinds of code that extend or supplement the application.

“When a community comes together around a software application, it is sometimes easy to favor the latter over the former.”

Our efforts have been rewarded with greater and broader participation in our activities, and especially notably higher levels of contribution and collaboration on activities that both strengthen the community and feed directly into improving the application.

When a community comes together around a software application, it is sometimes easy to favor the latter over the former. In our program, we firmly believe that while developing and maintaining a high-quality application ensures ArchivesSpace will continue to exist, engagement of our users, and particularly the members that sustain it, ensures that it will thrive. We're fortunate at ArchivesSpace that our community recognizes this, and actively supports and inspires our efforts in both areas.

Community Engagement Case Studies

Vega

By Cheryl Ball

<https://vegapublish.com/>



Vega is an open-source publishing system that provides workflows and a range of features and customizations for authors, editors, and publishers to interact with data and multimedia. Although it may be too early to discuss Vega as a fully realized case study on community engagement (its initial release is forthcoming), Vega's

origins speak to the importance of informal community engagement. Were it not for dozens of watercooler conversations regarding the failures of existing publishing tools to support, share, and remix content regardless of form, the thought that “there’s got to be a better way” might have remained an individual’s pipe dream rather than the Mellon-funded tool with a long and diverse list of early adopters.

“Vega’s origins speak to the importance of informal community engagement.”

Although the Vega community was formed around mutual unhappiness, we expect our community will develop in a more positive direction as we deliver both a technical solution (the Vega software) and a mechanism for its sustained development (a process to gather and address current and future community needs in digital publishing). While we have relied on our community to describe features and requirements, we have not used a community approach to Vega’s technical development, preferring to contract with professional software developers (Bengler) to code our first release. For Vega, this has proved to be the most efficient approach: our community’s expertise lies primarily in the publishing domain, and we want to work to our strengths, allowing the design developers to work to theirs. We will turn to our community soon to test our production release and are pleased that our early adopters present diverse needs, testing Vega’s ability to create new journals and books, convert old publishing venues, and construct new features to advance digital publishing.