popHealth Project Governance

Considerations for the Governance Plan

February 14, 2014
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Introduction

Purpose

In the spring of 2014, ONC intends to transition popHealth to the tool's open source community. Through a series of meetings and conversations with community members, both existing and potential, ONC and Audacious Inquiry (Ai) solicited feedback on the governance models to which popHealth can be transitioned. This document describes potential governance models for popHealth discussed by the community members and is intended to provide the community with options for the path forward. While a number of community members expressed a preference for a particular governance model, a range of possible models are discussed here. Preferences of community members documented here are not an indication of ONC's support or preference. It is important to note that this document is intended to present potential frameworks for governing the popHealth tool moving forward; once the framework is chosen, stakeholders may address tactical aspects of the tool's future as the framework allows.

Scope

The governance plan can be used in conjunction with a charter that governs the management of the community. The charter may be developed by the stakeholder community, prior to implementing any formalized governance structure. If a formal, membership model governance structure is created, articles of incorporation would be required to govern the membership model; processes for joining, making decisions, and technical development; and the financial model of the organization.

Document Maintenance

Ultimately, this document will be maintained by the popHealth Stakeholder Workgroup, and any revisions to the document can be made in accordance with the decision making practices of that workgroup. Any changes to the governance plan shall be sent to the community for public comment before the workgroup finalizes the changes.

Vision

popHealth is an open source software tool that can be used for calculating, visualizing, and reporting Quality Measures for a healthcare entity. Currently it is implemented as a reference implementation software service that automates the calculating, visualizing, and reporting of Clinical Quality Measures (CQMs). It currently integrates with a healthcare provider's electronic health record (EHR) system using a variety of input mechanisms, including continuity of care records (CCDs), quality reporting data architecture (QRDA) Category I, and JavaScript Object Notation (JSON). popHealth will continue to be developed to support the CQMs in the future and potentially other quality reporting programs and needs. Additionally, popHealth can be utilized for state agencies to accept CQMs, as required by Meaningful Use, or by health information organizations (HIOs) to calculate CQMs for its participants and share them electronically.

Stakeholders

There are two primary stakeholder types and one secondary type comprising the popHealth community. All three are described below.

- **Developers:** Developers perform the technical work to develop/manage the popHealth tool. The developers have a distinct role to play in the community, though they may belong to other stakeholder groups organizationally. Since the success of open source projects relies heavily on the engagement of the developers in the community, the community needs to identify and address the needs of this group of stakeholders.

- **Users:** Users are the entities or individuals who will be using the product in their operations. Many of the users may not have active representation in the developer group, and some may only interact with the developer group in a limited capacity. Some users may collaborate with each other to pool financial resources and use development resources from amongst the developers. Due to this, it is suggested that the community membership and leadership not be determined based on the code contributions or technical contributions of the group.

- **Promoters:** Promoters are organizations and entities that are interested in the popHealth tool as its being used by their own stakeholders and/or beneficiaries. This group is primarily interested in the tool as its promoter on behalf of the users.

Responsibilities

The two primary stakeholders – Users and Developers – have distinct responsibilities. The responsibilities can be carried out collaboratively by the entire community or each stakeholder group can be organized in their independent workgroups. Certain tasks are more suited for a small workgroup structure, while others are more suited for the entire community to work on. The workgroups are documented in the membership model section.

User Group Responsibilities

- **Roadmap Development:** The user group is responsible for developing and maintaining a high level roadmap for the popHealth product. The roadmap is a prioritized list of developments and may include the stakeholders that have requested the developments as well as those that have committed to perform the development work. This roadmap will allow users to identify opportunities to collaborate with developers and share resources to develop the enhancements. It will also enable users to financially plan for future development work.

- **Prioritization:** The user group may develop and maintain a plan for prioritizing use cases and developments/enhancements based on the decision making framework. As new development requests are added to the pipeline, the user group would prioritize them and add them to the roadmap.

- **Forks and Versions:** The user group will need to decide how to manage versions of the popHealth tool. If the use cases cannot be managed in a single code base for any reason, the community might decide to fork the code base into an independent tool that can be modified and maintained for that particular use case. The decision on whether the use case can be maintained and merged into a single version or requires forking, would be made by the developer group; however, it will be important to discuss the decision to permanently fork popHealth with the user group, as it may necessitate modifications to the roadmap.

- **Feedback:** The user group may not actively contribute to the code base, but it can provide valuable, real-world feedback on the product itself. The user group can also help the development team refine requirements, by participating in discussions on the use cases that would be developed.

Developer Responsibilities

- **Development Practices and Guidelines:** The developer group creates and maintains guidelines for coding practices, documentation requirements, and the rules for adding test cases in support of the code changes.

- **Design, Develop, and Test:** The developer group focuses on designing, developing, and testing of the code changes being made to popHealth. As changes are made to the tool, the developer group also ensures compliance to the development and testing guidelines.

- **Code Review:** As code is submitted by various developers to be included in the master branch, the developers can review the code and provide comments to the developers to improve, fix, or modify the code. This review must take place prior to code being committed to the master code.

- **Code Merging:** Responsibility for managing the code base may need to be delegated to a few developers. In this capacity, developers would have commit access to the code and the ability to merge submitted code into the master branch of the popHealth code base. Whether a submission is appropriate to be merged can be decided by the community, or alternately by the small group of developers with commit access in accordance with the decision making framework. The decision process is dependent on the final governance model chosen by the community.

- **Manage Assets:** The development group would be responsible for managing various assets related to popHealth, such as the website, code repository, user mailing lists, and demo server.

Membership Model Considerations

There are a number of considerations regarding membership models that the community will need to review. These considerations include the existence and number of workgroups, the membership model (contribution based or fee based), membership classes, member representation, tenure, etc. Each consideration is detailed in the following section.

Governing Workgroups

There are a number of options for organizing stakeholders into working groups. The structure can allow for an open and inclusive community, but can also provide enough structure so as to be manageable and ensure focus on the product roadmap. Typically an open-source community will enact a governing workgroup structure to which the community members can be elected, nominated, or selected. There are a number of options for how this can be done, each of which was discussed with stakeholders to collect feedback. It is also possible that a hybrid of these options can be pursued. Following are the two workgroup models discussed by the community.

Option	Details	Considerations
Single Workgroup	The community organizes a small group of stakeholders into a single workgroup that makes all the decisions for the community	Although all the decisions are made in the single workgroup, there may be a need for subcommittees or ad-hoc groups to facilitate discrete technical conversations.
User Workgroups and Technical Workgroup	The community organizes into two workgroups, one for discussing and making non-technical decisions and one for technical issues.	The user workgroup can focus on prioritization of features and roadmap development, with input from the technical workgroup members. The technical workgroup focuses on maintaining the integrity of the popHealth tool and provides work effort estimates to the user group. This structure enables the workgroups to focus on the user and developer responsibilities distinctly, while coordinating with each other on an ongoing basis.

Membership Model Options

Regardless of whether the community decides to create one or more workgroups, it will most likely need to establish clear guidelines on how organizations or individuals can become part of workgroups. Two membership models were brought forth by the community: a contribution based model and a fee based model.

Model	Details	Considerations
Contribution Based Model	This model allows organizations or individuals to become members in one or more workgroups based on their tangible contributions to popHealth.	Contributions do not necessarily have to be financial in nature, but may include: - Code contributions - In-kind contributions like contributions in listservs - Bug reports and bug fixes - Code reviews - Testing

Model	Details	Considerations
		The community may define and document the various ways a stakeholder can become a member of the governing workgroups. For example, criteria can include a specific number of code contributions, the number of months of active participation in the user listserv, or the number of feedback items provided on code reviews. Stakeholders can also become workgroup members by making a financial contribution to the community to sustain operations, such as the cost of asset management and tools.
Fee Based Model	This model is based on fees or dues. Membership to the workgroups or to have specific rights within the community would be based on a fee structure, such as an annual membership fee. These fees would be used to maintain the governance structure and support development work on popHealth.	The community expressed concerns around using such a model, but it can be explored as one of the alternatives for establishing eligibility. This will also provide the community with the ability to raise funds for asset management for the website domain and demo servers.

Considerations for Each Model

Both membership models require a number of decisions around membership classes, size, representation, application/selection/nomination, and tenure.

Consideration	Options	Details
Membership classes	Single Class - Member	All decisions are made by everyone in the community collectively by voting or consensus, depending on the issue being discussed or decision being made.
	Multiple classes of membership – such as Participating Member vs. Voting Member	The community may wish to create different classes of membership, which allow organizations or individuals to have voting rights, workgroup representation or participation, development rights, code review rights, or view only rights, etc. Rights to do more or less within the community would then be based on the

Consideration	Options	Details
		contributions or fees (depending on which membership model is chosen).
Representation	No Limit	The community can decide to enforce no limits on the number of members in the workgroup structure and the members representing any organization.
	Limits per organization	The community can decide to restrict a workgroup membership to a limited number of members from each organization. For example, the guideline could be for each organization to have one representative in each workgroup.
	Limits per stakeholder group	The community can decide to limit the number participants in a workgroup, based on stakeholder type. Examples of stakeholder types include public health, health systems, HIOs, and vendors. Organizations/individuals can then collectively elect, select, or nominate their representative for their stakeholder type.
Membership process	Application	Organizations or individuals can apply to be in a workgroup once they become eligible based on the membership model the community chooses. The community may need to establish guidelines on how the application is processed – either the workgroup approves the application or it can be automatically approved if they meet criteria and eligibility rules.
	Selection	The second option is to allow the workgroup to independently select members to join, once it has been determined that the candidate has met the criteria and conditions set forth by the group.
	Nomination	The third option is for the members to be nominated to be in the workgroup by one or more members already in the workgroup. The rest of the workgroup would vote to approve the nomination.
Tenure	Time Based Tenure	The community can decide that once a member becomes part of the workgroup, the membership expires after a certain period. The member remains part of the workgroup until that time, regardless of their status of eligibility or contribution.

Consideration	Options	Details
	Contribution based Eligibility	The community can choose that the members of the workgroup have to maintain their contributions at all times to remain part of the workgroup. If the contributions fall below the required levels, the stakeholder is no longer part of the workgroup.

Decisions

One of the most critical responsibilities for the workgroups will be to make decisions related to the operations, functions, and future of the popHealth tool. The decision making process can be limited to the workgroups themselves but also be transparent to the entire community. If only the workgroups make decisions, the structure would need to sufficiently represent the makeup of the community at large. Following are some of the key decisions the community will probably need to make as part of their operations.

- **Choosing and Prioritizing Use Cases:** As the community identifies use cases relevant to their respective stakeholders, they may collaborate on whether to pursue the use cases, the overlap between the use cases and their prioritization for the roadmap. For example use cases may have dependencies with each other, and some will need to be developed first. If there are no dependencies, the community can collectively decide, given all the stakeholder resources available, the priority of each use case. If there are specific use cases that any stakeholder needs for their organization, they can choose to work on the development and coordinate with the rest of the community, to ensure there is no duplication of work.

- **Forking and Branching:** If particular development requests to support a use case cannot be merged into the master branch, the community will need to decide how to manage a new version or branch. It can be managed as a separate branch and version, or the community can choose to fork that into an independent tool/code base. Since this is a major decision, the community would be expected to publish information and ensure wide distribution, before the decision takes effect.

- **Architecture:** Since the scope of the tool may grow significantly as new use cases are developed, architectural decisions will need to be made. Depending on whether the community decides to create an independent technical/developer workgroup, this decision might be restricted to the members of that workgroup.

- **Code Merging:** Merging submitted code into the master branch is a critical decision. This decision can be delegated to the entire community through a voting mechanism, but most likely it will be controlled by a small group of developers who will provide commit access to the master repository containing the code.

As the community makes decisions, there are guidelines that can be set and published to ensure that the community is sufficiently engaged and the process is transparent. To ensure that there is a

forum for the community to voice conflicts and resolve them, the community may choose to establish the following rules.

Rule	Details
Notice Period	A notice period is the minimum time period required after announcing a certain vote that the workgroup should wait before the vote can be conducted.
Quorum	Quorum is the minimum threshold for community engagement for making certain decisions. If a quorum cannot be established for a given decision, the workgroup or the community will need to defer the decision making until a later time when a quorum can be established.
Simple Majority/ Super Majority	A simple majority and super majority is the percent of members voting yea/nay that is required to approve decisions. Some decisions that have a major impact across the community may be deemed to require a super majority to ensure larger agreement.

For each of the above decisions, the community may choose to develop a framework that defines the decision making process. Following is a sample table containing information to assist with developing the framework.

Decision	Responsible Entity	Notice Period	Quorum Required	Process
Prioritizing Use Cases	User Workgroup	2 months	Yes	Super Majority Voting
Forking and Branching	User Workgroup	1 month	Yes	Simple Majority Voting
Architecture	Technical Workgroup	1 week	No	Consensus
Code Merging	Developers with Commit Access	None	No	Consensus based on community code review

Communications

Since the popHealth tool has major significance and operational relevance to the stakeholders, it is likely important that communication within the community be transparent and ongoing. There may be documented guidelines on when certain decisions are being made, so the community can get engaged at appropriate times. Additionally, there most likely should be enough lead time for the community members to consider their respective short-term and long-term operational impacts, prior to making a decision which would be reflected in the notice period documented above. In addition to communicating via the popHealth website, the website can have direct links to the listservs, where all the communications related to the community are posted.

There may also need to be one or more mechanisms for the community to discuss various technical aspects (as it does today through google groups). The community can identify any tools that they can use to solicit and collect feedback from the community on key aspects of development and

operations. Finally, the community may need to established a published schedule for workgroup meetings and make it available on the website and listservs.

Financials

Besides the cost of development that each of the stakeholders will need to bear, there are certain expenses the community as a whole might incur. These are, for example, website domain registration, any tool the community might need to use, and any demo server the community would like to setup to host the working version of the code. How these expenses are paid for can be considered by the community. The community can establish voluntary donation mechanisms to collect funds for paying for the assets but may also actively consider the membership model as a way for paying for some of these expenses.