



Maintenance

Community

Framework

(MCF)



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The Maintainers. Meyerson, J., Russell, A., Vinsel, L. (2020). *Maintenance Community Framework (MCF)*.

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This project is supported by a grant from the Alfred P. Sloan Foundation to the SUNY Polytechnic Institute and managed by The Maintainers and Educopia Institute.



Executive Summary

Welcome to the *Maintenance Community Framework*, a resource intended to support Maintenance Communities as they form, grow, and connect with each other to increase knowledge and recognition of the crucial roles played by maintainers throughout the world.

[The Maintainers](#) (The Maintainers, n.d.a) is a global network that focuses on the concepts of maintenance, infrastructure, repair, and the myriad forms of labor and expertise that sustain our human-built world. Part of our work is to facilitate multiple communities that help specific fields of work (e.g., transportation, recycling, information, and workforce development) to share knowledge about common challenges and to build tools and best practices.

Maintainers Central (the team that produced this *Framework*) serves as a hub for Maintenance Communities. We provide these communities with support and scaffolding that help them to form and thrive. Maintainers Central also hosts in-person and online events that enable participants to share their knowledge across domains, enriching the overall maintenance environment and calling attention to maintenance as a crucial component of our social, technological, and economic systems.

This *Maintenance Community Framework* is both a description of The Maintainers action research cycle and a blueprint for organizing and nurturing Maintenance Communities as part of the Maintainers network.

For prospective and/or new Maintainers Communities, this document will help you evaluate what it means to become a Maintenance Community: what you need to get started, how to communicate with the Maintainers Central hub and its directors in order to join officially, how to tap into our infrastructure to assist you with organizing and virtual collaboration, and what types of activities we recommend you undertake as part of your community formation and growth process.



For existing Maintenance Communities, this document provides you with tools to help you evolve, including mechanisms to assess and track your growth through a variety of maturation phases. You'll find a lifecycle model, based on Educopia Institute's *Community Cultivation Framework* and a set of tools and resources you can use as you build infrastructure to support your community.

The four phases of a Maintenance Community are proposed as follows:

- **Phase 1: Framing:** Reflect on the viability of founding a new Maintenance Community; engage with Maintainers Central; and draft an initial scoping statement
- **Phase 2: Scoping:** Form a new Maintenance Community; choose facilitators; engage in community self-reflection; establish initial community infrastructure; and revise the Maintenance Community scoping statement
- **Phase 3: Building:** Grow and mature a Maintenance Community through project design; identify dependencies and sequence activities; and formalize community roles and responsibilities
- **Phase 4: Maintaining:** Measure impact; survey community members; and bolster community infrastructure

Who are The Maintainers?

The Maintainers organization was founded in 2015 by Andrew Russell and Lee Vinsel in an effort to challenge cultural overemphasis on innovation. Through generous funding from the Alfred P. Sloan Foundation, The Maintainers has developed a multi-track research network and an organizational hub (Maintainers Central) that provides coordination and backbone support for topically focused action groups around maintenance, infrastructure, and repair.



The Maintainers' mission is "maintaining self and society through reflection, research, and advocacy."

Since April 2017, the strategic direction for The Maintainers has been provided by co-directors Jessica Meyerson, Andrew Russell, and Lee Vinsel. [The Maintainers' mission](#) is "maintaining self and society through reflection, research, and advocacy" (The Maintainers, n.d.b). Maintainers Central accomplishes this mission through a range of activities, including hosting events; public outreach in social and news media; and providing Maintenance Communities with guidance and tools to assist with communications, project management, shared virtual workspaces, and file repositories.



Why focus on communities?

Maintainers Central acts on the conviction that our society often fails to maintain things and support the people involved in maintenance because this work is under-recognized, even ignored, until something breaks. We see *communities* as the best means to draw attention to maintenance and maintainers and create a more caring and well-maintained world because “communities” exist in the space between the embodied experiences of individual maintainers and the transformation of whole societies. Our working definition of “community” draws from the [Community Cultivation Field Guide](#) in which community is defined as “an intentional collective of people who gather to address common interests and goals (Skinner, et al., 2018).”

Why do The Maintainers center community in our vision for a more caring and well-maintained world?



Maintenance Communities are bound by a common sphere of maintenance (such as social care, education, environment, information) and intentionally cut across typical stakeholder and sector-level boundaries, uniting individuals who might not otherwise interact. Maintenance Communities are effective precisely because they bring together individuals from a broad range of personal and professional identities as well as organizational settings (ie., universities, companies, government and non-profit agencies, activist movements, civil society groups, professional or scholarly societies). Maintenance Communities can be geographically locatable but they do not have to share a common geography.

The “Scoping” phase for each Maintenance Community engages an “inside-out” approach, beginning with *individual* stories and reflection from members of the Maintenance Community. Then members of the Maintenance Community and Maintenance Central synthesize across individual stories to identify common themes and goals that are *shared among members of the group*. As this process unfolds, the new Maintenance Community shares its synthesis with Maintainers Central, which serves as its crucial connection point with other Maintenance Communities. Cross-sharing among the Maintenance Communities follows, with Maintainers Central serving as a connector for information exchange, relationship building, and activity alignment between Maintenance Communities.



Participating in a Maintenance Community is valuable because they form a space where bonds are built between people who share common experiences but who would otherwise not be in contact with one another--such as the librarian who maintains digital archives, the labor lawyer who protects the bargaining rights of unionized workers, and the nurse who cares for patients.

This “inside-out,” iterative process informs our understanding of maintenance in practice and drives action research agenda development for both individual Maintenance Communities *and* The Maintainers at-large. In all fields we see people eager for more research and better data about maintenance and maintainers. The need is especially acute where maintenance has been neglected or taken for granted. Our research agenda seeks to 1) ground public discourse regarding humans’ relationship to technology, as part of our broader mission to achieve a more caring and well-maintained world and 2) align Maintainers research projects so that we can measure and document the impacts of valuing or devaluing maintenance. Questions we are pursuing as part of our agenda include:

- What are essential activities for maintenance, in technology and in society, across spheres of maintenance?
- What are the effects/outcomes of underinvesting in maintenance across different spheres?
- What labor/compensation/equity issues are the most pressing for maintainers in different maintenance contexts?
- How can the lived experiences of maintainers can be documented, transmitted, and applied to advocacy responsibly, so as to correct imbalances in compensation and job stability at micro and macro scales?

What Is a Maintenance Community?

A Maintenance Community is a group of individuals who choose to work together to bolster maintenance work in a professional field, occupational group, topical area, or geographical region, and who are aligned with the mission, vision, and values of The Maintainers. Membership within these communities is open to all who are willing to abide by a shared code of practice, and may include a mix of practitioners, organizers, and researchers. A Maintenance Community should exist for as long as the individuals involved within it find shared value in their collective work and outputs.

Frequently, Maintenance Communities are defined in terms of professional sectors or occupations, such as the “[Information Maintainers](#)” Community that supports the maintenance of information and those who manage, maintain, and preserve information systems. Maintenance Communities also can



be defined thematically to cut across sectors, as in the case of the “[Maintainers in the Workforce](#)” Community that seeks to understand, respect, recognize, and reward the contributions of those who build and maintain the infrastructure of our economy and society. Alternatively, some individuals may find it more convenient to organize Maintenance Communities geographically. The Maintenance Community Framework is designed to support all varieties of communities who share our core values and see value in connecting with the broader Maintainers network.

Maintenance Communities can be seeded by individuals in conversation with Maintainers Central leadership, but they are primarily self-organized, grassroots efforts.



Maintenance Communities can be seeded by individuals in conversation with Maintainers Central leadership, but they are primarily self-organized, grassroots efforts. These communities work through conference calls, online discussions, and in-person events to advance shared interests.

Maintenance Communities must meet a basic set of requirements, including alignment with The Maintainers’ mission, vision, and values, but they have a great deal of autonomy to set their goals, products, and timelines. Some Maintenance Communities may choose to write an advocacy campaign or co-author a peer-reviewed journal article. Others might focus on creating professional standards or best practices. Still others might work on organizing workers. Similarly, some Maintenance Communities may exist for a set period of time, while others will plan to persist indefinitely.

Maintenance Communities are in the best position to define *who* their members should be. However, we strongly encourage Maintenance Communities to include a diverse set of voices, both in terms of personal and professional identity.

Case Study: Information Maintainers

The [Information Maintainers Community](#) (Information Maintainers, n.d.a) convened several months after the [Maintainers II conference in April 2017](#) (The Maintainers, n.d.c). The group started with several practitioners with a lot in common: they worked in information stewardship organizations, shared a discursive community, shared a direct connection to one or more of the



Maintainers co-directors, had written or spoken about maintenance and an ethic of care, and felt the professional/disciplinary-bridging power of viewing their work through a maintenance lens.

Several of these practitioners could also be considered ‘grass-tops with grassroots leanings’--that is, high profile, high impact, and respected individuals covering key areas of the information stewardship sector: collection development, records management, organizational management, community facilitation, social justice, data preservation, information literacy, information science graduate curriculum development, and funders of related initiatives.

The Information Maintainers convened once per month for at least a full year before they formalized as a Maintenance Community. During that time, a group of professional acquaintances had developed into a community with a shared set of motivations, values, and questions to explore. Together, they started a group writing project that slowly developed into a white paper, “Information Maintenance as a Practice of Care: An Invitation to Reflect and Share” (The Information Maintainers, 2019).

From its beginning with affinities between a few individuals, and their shared commitment to writing a paper to express common goals and ambitions, the Information Maintainers transitioned easily from an informal group to a formal Maintenance Community over the course of the April 2019 in-person meeting. In the wake of the publication of “Information Maintenance as a Practice of Care,” membership in the group grew to over 100 individuals, and the [mailing list](#) (Information Maintainers, n.d.c) and monthly online meetings have been buzzing with energy and purpose.

How to Start a Maintenance Community

Maintainers Central has scaffolding and infrastructure that can support your Maintenance Community’s collaboration goals, activities, and outputs, including the [Maintenance Community Framework Resource Library](#). The phases outlined below are essential to the MCF action research model - building a movement across domains and professions that are connected to maintenance, but not necessarily connected to one another. Phases of development for Maintenance Communities are described below.

Phase I: Framing

A Maintenance Community starts with the Framing phase, the period in which the initial group **explores and identifies themes** by answering questions (The Maintainers, n.d.e) such as:



1. How does your work relate to the ideas of maintenance, care, and repair?
2. What does talking about maintenance help you accomplish?
3. What would be fun/useful/productive for you to get out of participation in a Maintenance Community?

Maintenance Communities are asked to develop and share the framing statement with Maintainers co-directors based on members responses to these questions.

Phase 2: Scoping

With a framing statement in place, the identification of a clear focus area, and shared commitments from The Maintainers co-directors and a small group of initial participants, you are ready to create a Maintenance Community. In the Scoping stage, a Maintenance Community must make additional decisions about roles, determine initial communication protocols, and revise the initial framing statement to reflect the outcomes of a guided self-reflection.

Phase 3: Building

So far, your Maintenance Community has selected roles, your members have met virtually or in person (at least once), you have established some fundamental elements of your community's infrastructure, and you have workshopped a revised version of the Maintenance Community scoping statement. To grow and flourish, a Maintenance Community now enters into the "Building" phase which includes designing its first joint project/deliverable. As activities get underway, the community draws on Maintainers Central support in the form of communications, coordination, and facilitation. Ultimately, the goal of the Building phase is to produce a dependable environment within which shared work can occur and shared outputs can be produced and managed.

Phase 4: Maintaining

Everything needs maintenance, and Maintenance Communities are no exception. In this setting, maintenance includes demonstrating impact, celebrating accomplishments, and engaging with other Maintainers Communities to cross-share what you learn. The Maintenance phase is ongoing until the Maintenance Community decides to wind down.



Request for Feedback

Possible models for Maintenance Communities:

While the Information Maintainers case study described above assumes that a group is being formed anew rather than working with members of existing association, society, or local community, we envision many different ways of implementing the **core ideas behind the framework (pp.6-7)**:

We look to members of the broader Maintainers network to help us think about additional models that address the core idea behind the framework and do so in ways that allow for different levels and modes of engagement. In every case, Maintainers Central is dedicated to working through explicit agreement with Maintenance Communities regarding data collection, data uses, and the collective benefit of the data for the community members themselves. Below, we've summarized several Maintenance Community models.

- **Support and nurture the development of a new Maintenance Community.** This model relies on closer collaboration between members of the Maintenance Community and Maintainers Central. The Maintenance Community would utilize the Maintainers Central staff, information technology, and community cultivation infrastructure. However, there is a still wide ranging flexibility on the amount of synchronous facilitated discussion versus asynchronous data collection and community synthesis.
- **Collaborate with professional groups, companies, consortia, or other entities that have a pre-existing community structure.** This collaboration could sustain longer-term community building, or achieve shorter-term, problem-oriented goals:
 - Share existing research and scholarship in their sector, and engage feedback on how well that research represents or mirrors their own experiences, where the gaps are, and how the community or community members may be addressing these gaps already.
 - Review their existing organizational documentation and surface insights about ways that maintenance is valued or undervalued based on content analysis.
 - Collaborate with community representatives on a survey instrument that helps us to form a composite profile of maintenance thinking and action in a given industry/sector.
 - Work with chapters, branches, and other subgroups within larger organizations to understand where they see real innovation taking place and how they characterize maintenance activities.
 - Collect and analyze data that would improve decision making around maintenance in their sector.



- Identify stakeholders in a specific geographic region who are engaged with common problems relating to maintenance, but who lack institutional common ground.

The above list is merely a point of departure for the different kinds of collaborations that Maintainers Central is eager to support and empower. We look forward to community reactions and suggestions for ways that the Maintainers network can best support you and advance our shared goals.

We also intend the Maintenance Community Framework to be a living document that both guides and reflects findings from The Maintainers action research cycle. As such, we are asking all the members of The Maintainers to complete a short feedback form to share your thoughts, suggestions, and questions on the current draft. We have provided a list of questions below that is included in the feedback form so that you can review in advance of submitting your responses:

- From reading this document, is it clear what The Maintainers action research cycle is and why it is important?
- Please share your feedback, thoughts, or questions regarding The Maintainers action research cycle that would help us to clarify the goals and intention behind the framework.
- From reading this document, is it clear what Maintenance Communities are?
- From reading this document, is it clear who can get involved in Maintenance Communities?
- From reading this document, is it clear what we hope to learn in partnership with these communities?
- Please share your feedback, thoughts, or questions regarding Maintenance Communities that would help us to clarify the goals and intention behind this framework.
- While we have named two existing and several potential spheres of maintenance for Maintenance Communities including information, education, environment, and transportation - what spheres of maintenance would you like to see explored?
- For the spheres of maintenance that you would like to see explored, would you consider yourself part of any of these spheres?
- If so, would you be willing to participate in a Maintenance Community in this area?
- For the spheres of maintenance that you have selected,– if you do not consider yourself part of this sphere, why do you think it important that we study this sphere? Please share any questions or suggestions you may have.
- What considerations should be included in a Maintenance Community agreement between members of a Maintenance Community and Maintainers Central?
- Beyond the Maintenance Community Framework, where would you like to see The Maintainers invest research time and resources?



References

Denis, J., & Pontille, D. (2015). Material ordering and the care of things. *Science, Technology, & Human Values*, 40, 338-367. doi:10.1177/0162243914553129

Digital Library Federation. (2018). Research agenda: Valuing labor in digital archives. Retrieved from <https://wiki.diglib.org/Labor/Valuing-Labor/Research-Agenda>

Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360-380. Retrieved from <http://www.jstor.org/stable/2776392>

Henke, C. R. (1999). The mechanics of workplace order: Toward a sociology of repair. *Berkeley Journal of Sociology*, 44, 55-81. Retrieved from <https://www.jstor.org/stable/41035546>

Information Maintainers. (n.d.a) About Us. Retrieved from <http://themaintainers.org/info-mc-about-us>

Information Maintainers. (n.d.b) Code of Practice. Retrieved from <http://themaintainers.org/info-mc-code-of-practice>

Information Maintainers (n.d.c) Listerv: <https://groups.google.com/a/themaintainers.org/forum/#!/forum/information-maintainers>



Jackson, S. J. (2013). Rethinking repair: Breakdown, maintenance and repair in media and technology studies today. In P. Boczowski, K. Foot, & T. Gillespie, eds., *Media meets technology*. Cambridge: MIT Press.

Kania, J. & Kramer, M. (2011). Collective impact. *Stanford Social Innovation Review*, winter issue. Retrieved from https://ssir.org/articles/entry/collective_impact

Kauffman, L.A. (2015). The Theology of Consensus. *Berkeley Journal of Sociology*. Retrieved from <http://berkeleyjournal.org/2015/05/the-theology-of-consensus>

Maintainers in the Workforce. (n.d.a) About Us. Retrieved from <http://themaintainers.org/workforce-maintainers-about-us>

Maintainers in the Workforce (n.d.b) Listserv: <https://groups.google.com/a/themaintainers.org/forum/#!forum/workforce-maintainers>

McAlevy, J. (2016). *No shortcuts: Organizing for power in the new gilded age*. New York: Oxford University Press.

Milward, H. B., & Provan, K. G. (2006). A manager's guide to choosing and using collaborative networks. IBM Center for The Business of Government. Retrieved from <http://www.businessofgovernment.org/sites/default/files/CollaborativeNetworks.pdf>

Nowviskie, B. (2012). *Lazy Consensus*. Retrieved from <http://nowviskie.org/2012/lazy-consensus>

Powell, W. W., & P. J. DiMaggio (Eds.) (2012). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.

Resnick, P. (2014). On Consensus and Humming in the IETF. RFC 7282. Retrieved from <https://tools.ietf.org/html/rfc7282>

Rosner, D. K., & Ames, M. (2014). Designing for repair?: infrastructures and materialities of breakdown. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing* (319-331). ACM.



Russell, A. L., & Vinsel, L. (2018). After innovation, turn to maintenance. *Technology and Culture*, 59(1), 1-25. doi:10.1353/tech.2018.0004

Skinner, K. (2018). Community cultivation: A field guide. Retrieved from <https://educopia.org/cultivation/>

Strebel, I., Bovet, A. & Sormani, P. (Eds.) (2018). *Repair work ethnographies: Revisiting breakdown, relocating materiality*. New York: Palgrave Macmillan.

Thorelli, H. B. (1986). Networks: between markets and hierarchies. *Strategic Management Journal*, 7(1), 37-51. doi:10.1002/smj.4250070105

The Information Maintainers. Olson, D., Meyerson, J., Parsons, M., Castro, J., Lassere, M., Wright, D., ... Acker, A. (2019). Information maintenance as a practice of care. doi:10.5281/zenodo.3251131

The Maintainers. (n.d.a) Homepage. Retrieved from <http://themaintainers.org/>

The Maintainers. (n.d.b) About Us. Retrieved from <http://themaintainers.org/about-us>

The Maintainers. (n.d.c) Maintainers II. Retrieved from <http://themaintainers.org/maintainers-ii-program>

The Maintainers. (n.d.d). Maintenance Community Framework Resource Library. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.e). Maintenance Community Framework Resource Library - Maintenance Community Framing Questionnaire Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.f). Maintenance Community Framework Resource Library - Maintenance Community Landscape Scan Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.g). Maintenance Community Framework Resource Library - Maintenance Community Framing and Scoping Statement Template. Retrieved from <http://themaintainers.org/mcf>



The Maintainers. (n.d.h). Maintenance Community Framework Resource Library - Maintenance Community Code of Practice Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.i). Maintenance Community Framework Resource Library - Maintenance Community Convener Role Interest Form Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.j). Maintenance Community Framework Resource Library - Maintenance Community Voting Form Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.k). Maintenance Community Framework Resource Library - Maintenance Community Facilitation Training Syllabus Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.l) Maintenance Community Framework Resource Library - Maintenance Community Who/What/Why/How We Maintain Questionnaire Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.m) Maintenance Community Framework Resource Library - Maintenance Community Running Meeting Notes Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.n) Maintenance Community Framework Resource Library - Maintenance Community Activity Planning Template. Retrieved from <http://themaintainers.org/mcf>

The Maintainers. (n.d.o) Maintenance Community Framework Resource Library - Maintenance Community Communication Plan Template. Retrieved from <http://themaintainers.org/mcf>