

Digital Habitats

stewarding technology for communities

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Community orientations: activities and tools



People experience being part of a community in a wide variety of ways: communities have different styles. That's why different habitats work for different communities. This chapter organizes this diversity into nine distinct "orientations" we have observed in practice. Each orientation is associated with a set of tools that supports its patterns of activity. The optimal configuration for a community includes the complement of technologies that are aligned with its key orientations.

Communities learn together in different ways: some meet regularly, some converse online, some work together, some share documents, some develop deep bonds, and some are driven by a mission they serve. We say that these communities have different orientations toward the process of learning together. An orientation is a typical pattern of activities and connections through which members experience being a community. We have observed nine orientations that have implications for the selection of technology (the order is for presentation only and does not suggest a ranking):

1. Meetings
2. Open-ended conversations
3. Projects
4. Content
5. Access to expertise
6. Relationships
7. Individual participation
8. Community cultivation
9. Serving a context

These orientations reflect the importance that communities place on various ways of being together. If we say that a community is meeting-oriented, we mean that having regular meetings is a key element of how it functions as a community. Having meetings is probably not the only thing the community does, but whatever else it does, meetings are an essential part of its “DNA,” so to speak.

Orientations are not mutually exclusive. For example, a community that is meeting-oriented may also keep a very comprehensive collection of community resources, making “meetings” and “content” its two primary orientations. It may also have a member directory or other technologies that support relationships. The nine orientations combine with various degrees of emphasis to create the overall style of a community. Although many communities do a bit of everything, typically some orientations dominate, giving the community a distinct feel.

The orientations of a community are not fixed: their mix changes over time as the community evolves. New orientations emerge, existing orientations change in importance or characteristics, and old ones disappear. Changes in orientations usually will have implications for the technology configuration that a community needs.

Orientations provide a framework for considering technology from the perspective of the life of a community, with a focus on what is unique about a given community. They offer a place to start thinking about how technology can support a community’s critical

Artifacts or conversations?

In the very early days, the community that is now CPsquare had a strong orientation to meetings. Its members connected by email and face to face. Face-to-face events became more difficult after 9/11 due to travel restrictions, so the founders had to rethink how the community would function and decided they needed to adopt an online platform. The one they initially selected had a very rich complement of tools for community activities, but it had evolved out of a platform designed to facilitate web publishing by groups of people. This orientation, it turned out, was not well aligned with the orientation of the community. At that stage, members were not as interested in the creation of common artifacts as they were in connecting through informal conversations. The platform didn’t catch on, and the community migrated to a platform that had evolved out of a discussion board and was a better fit for the orientation to ongoing, in-depth conversations.

<http://cpsquare.org>

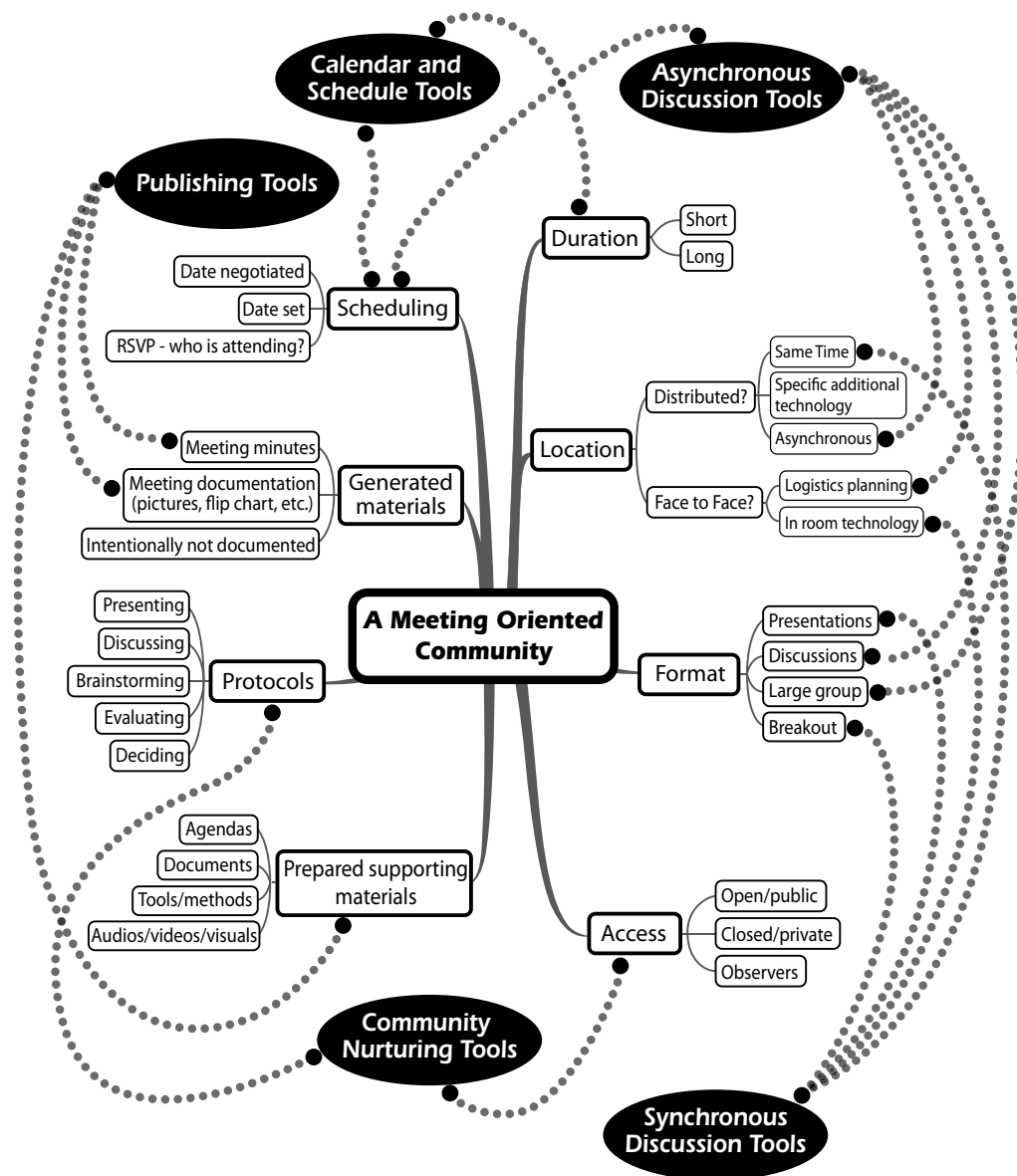


Figure 6.1: The potential configuration of technologies serving a community's orientation to meetings

activities and style. Like communities, technology platforms often do a bit of everything, but tend to focus on (or work better for) some orientations more than others. This often reflects their origin in web publishing, conversations, team support, or networking. The fit between the orientation(s) of the community and the orientation(s) of a platform is something to consider carefully. For example, Figure 6.1 gives a sense of the technology implications of a community's orientation toward meetings.

The following sections describe each of the nine orientations, with a focus on specific implications for technology. Because this chapter is long, we follow a fixed format for ease of reading and to allow you to choose where to focus:

- Each section starts with a brief *definition* of the orientation and lists the main *variants* we have seen.
- To sharpen the definition we propose some distinctive *signs of life*—indicators that the orientation is alive and well for a community.
- We list a few *success factors* we consider critical to communities with the given orientation.
- We suggest a few *questions* to consider if the orientation seems important enough to warrant configuring a set of tools to support it.
- This leads to a paragraph on the *technology implications* of the orientation.
- Included with each orientation is a table that matches a list of typical *activities* with examples of tools that can support them. A third column also includes brief “practice notes” that reflect our experience using specific configurations of tools to support a given orientation.

The lists of tools in the tables below are suggestive rather than exhaustive. You can find more details about most of the tools and some of their features in the wiki that we created to accompany the book.¹ We are not proposing a one-to-one mapping between tools and activities; many activities require more than one tool or even several *combinations* of tools. Conversely, many tools are flexible enough to be used to support several different activities. For instance, as mentioned before, polling can be used for many different purposes. Still, given the breadth of the potentially relevant tools shown in Figure 5.1 (Chapter 5), using orientations to define a required toolset is a productive exercise.

Orientation 1: Meetings

Many communities place a great emphasis on regular meetings where members engage in shared activities for a specific time. These meetings, and the visible participation of members, assert the community’s existence. The main variants of this orientation include:

- *Face-to-face or blended*: People come together in one location or join a face-to-face meeting by a phone or video connection.
- *Online synchronous*: Meetings occur at the same time but from different places.
- *Online asynchronous*: Meetings occur at different times and places but with a time-limited focus.

1. Community tools wiki, <http://technologyforcommunities.com/tools>

Signs of life:

Regular, well-attended meetings, with enthusiasm to participate, connection with others, and useful outcomes.

Key success factors:

- An appropriate rhythm of meetings over time with a frequency and schedule that fit the lives of members.
- Community meeting practices (for example, agendas, facilitation, or other practices members have devised to make their meetings productive).
- Attention to the experience of individual members' participation, regardless of the medium (for example, meeting protocols that help members who are calling in on the phone feel just as present as those who are there face-to-face).
- Enough flexibility in the agenda for some spontaneous interaction and raising of issues.

Questions to consider:

- What size are the groups? Are they face-to-face, online, or a mix of the two? How are participants distributed across time zones? How might synchronous or asynchronous interactions best support the meetings?
- What are the needs of the participants to accommodate language and other individual requirements (technical or otherwise)?
- What logistical preparation is required for meetings, such as scheduling, agenda development, invitations, confirming attendance, and sharing of materials?

From weekly broadcasts and conversations to a sense of community

Although framed as a broadcast with audience participation, the weekly Yi-Tan Tech Community Calls, or "Conversations About Change" that Jerry Michalski and Pip Coburn host, are actually the melding point for several meeting-oriented communities of practice. Jerry's community has entrepreneurs, geeks, corporate technologists and the occasional artist. Pip's has entrepreneurs, major money managers, futurists and authors.

A distinctive practice of this community is to record the calls for later podcast and to have a concurrent IRC (Internet Relay Chat) channel during the phone calls to kibitz, queue up questions, have side conversations, or contribute additional resources. A member has written an application that automatically extracts and saves any URLs that are posted in the IRC channel, as well as archiving the chats themselves. The calls are recorded and available as a podcast stream.

The calls always begin with a brief, context-setting introduction that makes the recordings self-documenting; they end with the host's phenomenal summary. The consistent participation and contribution of a group of regulars enriches and occasionally guides the weekly conversations, even though many people participate only when the topic or speaker is of particular interest to them. This shared history of learning together is most evident when a speaker isn't available for a meeting, and the group is brainstorming on a particular topic or coming up with future topics. In many cases, members of the two communities have formed lasting friendships and working relationships. The rare email flurry or wiki page annotation underscores how important vibrant meetings are for this community.

<http://yi-tan.com>

Table 6.1 - Activities and tools for meetings		
Activities	Tools	Practice Notes
Scheduling and announcements	<ul style="list-style-type: none"> • Shared calendar • Email • Scheduling utilities • SMS to call ad hoc meetings 	When members are not in the same place, it is useful to have a calendar that can send automated reminders or can coordinate with members' calendars. Group mobile phone texting tools can geolocate members, enabling instant meeting opportunities without pre-scheduling.
Synchronous interactions	<ul style="list-style-type: none"> • Videoconference • Web conference, webcasting • Teleconference, VoIP • Chat room • IM 	Synchronous meetings hold the attention of some people and may be their preferred communication mode. Shared visuals are good for focusing group attention. Using chat during a teleconference call is a good way to take notes publicly and makes it easier for those working in a second language or having a bad connection.
Asynchronous interactions	<ul style="list-style-type: none"> • Discussion boards • Wikis • Email lists 	Turn-taking discussions work well in discussion boards or email lists, while a wiki can be great for building an agenda prior to a meeting.
Attendance	<ul style="list-style-type: none"> • Presence tools • Directories • Participant pictures 	For distributed meetings, it helps to know who is present and be able to read their bios. It is also useful to have a feature that highlights who is talking.
Meeting facilitation and support	<ul style="list-style-type: none"> • Presentation broadcast • Application sharing • Whiteboards • Document distribution/sharing • Guided web tours • Group process tools (brainstorming, prioritizing, decision-making) 	Do not assume that people are engaged and not distracted during online meetings. Offering activities that people can engage in interactively increases the sense of togetherness, for example, visiting a website or drawing on a whiteboard. Long presentations without interaction are not good community-building formats and this is even truer online when people do not see each other. For these reasons, online meetings can require design and facilitation to ensure an experience of active participation.
Enabling backchannel (private side conversations for technical, facilitation, breakouts, and content purposes)	<ul style="list-style-type: none"> • Chat • IM • Phone • Microblogging 	In complicated, large, or high-stakes meetings, it is useful to have some people who use a backchannel communication device such as IM, chat, or an extra phone line to coordinate the technical and logistical aspects of the meeting, separate from the leader or facilitator.
Member/participant feedback and decision making	<ul style="list-style-type: none"> • Polls, especially instant polls • IM • "Hand raising" and related feedback tools 	Stopping and taking a poll to test people's positions is a good idea when it comes to collective decision-making, but it is also useful for gaining a sense of the group without co-presence or for determining if the group is following the conversation.
Creation and distribution of shared and/or collaborative note-taking for online or face-to-face meetings	<ul style="list-style-type: none"> • Wikis with easy refresh • Blogs • Chat rooms • Email • Photo- and video-sharing tools² • Electronic whiteboards (face-to-face) 	With web-based tools, minutes can be taken as a group activity and can be completed by the end of the meeting. They can even be broadcast immediately. In face-to-face meetings, blogs and wikis have been used to make the note-taking immediately available to those not present.
At-a-distance participation in a face-to-face meeting.	<ul style="list-style-type: none"> • Phone • Video feeds • Chat • Microblogging 	Some communities use a visible device such as a balloon or a picture to give members who must join face-to-face meetings by phone a presence in the room. It's a reminder to make space for the remote member's participation.
Recording	<ul style="list-style-type: none"> • Audio or video recording • Podcasting/vodcasting • Photo publishing 	Publishing meeting recordings and artifacts is useful for those who were there as well as for those who could not make it. Hearing it again may help someone with a different primary language or when learning a community's jargon.

2. For example, network diagrams created in a face-to-face workshop, then shared via digital pictures on a photo sharing site such as Flickr: www.tinyurl.com/2zq3pj

- What activities happen during the meetings? Presentations (one-to-many) or sharing of files or information, discussions (many-to-many), decision-making or prioritization, or working together on materials? Do people need access to bios or pictures to know “who is talking?”

Technology implications:

Technology both changes face-to-face meetings and makes new kinds of meetings from a distance possible and productive. All phases of meetings can use technology support—from scheduling meetings and preparation of agendas before the meeting, to sending announcements, to the interactions during the meeting, to the archiving and distribution of records after the meeting.

Using technology to overcome distance and time is not always a simple translation of familiar face-to-face meeting formats. A choice of technology has to reflect the style of the community: formal versus informal, presentation versus discussion, whole group versus breakouts. In turn, technology can impose a certain style. For instance, chat-based interactions require facilitation for turn-taking when large numbers of people are involved. Certain voice-enabled, web-conferencing systems require people to queue for turn-taking, yielding an orderly but less spontaneous conversation. With web-enabled mobile phones, groups now have the ability to create ad hoc gatherings. So a community member might be visiting a city, send a message to other members in that city, and quickly set up a face-to-face meeting.

Our experiences of face-to-face meetings don't always prepare us for the slightly different issues that come up in online meetings. In online meetings, it's hard to reproduce the way new relationships form through side conversations and impromptu interactions during breaks in offline meetings. However, once relationships begin to form online, conversations and impromptu meetings can flourish, using technologies such as email or instant messaging. Information sharing, an important part of many face-to-face meetings, is easy to do online, but it may not be a very good structuring device for online meetings when other ways of broadcasting information are available. This suggests we typically give more time to relationship building during face-to-face meetings. Communities accustomed to focused, face-to-face interaction may be disturbed by the fact that people can multitask during online meetings. Multitasking may be liberating to individuals who are less interested in the subject, but can be fragmenting for the group as a whole.

Orientation 2: Open-ended conversations

Some communities rarely or never meet. They maintain ongoing conversations as their primary vehicles for learning. Whether or not these conversations are punctuated by other activities, it is the ongoing, open-ended nature of the conversations that holds the community together. Open-ended conversations are common when a community is co-located

and people keep the conversation going as they “bump” into each other. For online communities, the main variants of this orientation include:

- *Single-stream discussion:* Fairly loose discussions occur, with a spontaneous exchange of information, questions, comments, and statements of opinion—all in one thread.
- *Multi-topic conversation systems:* Distinct topics proceed in parallel, either with multiple threads in one conversation or with multiple conversations.
- *Distributed:* A combination of blog posts and comments, individual emails, microblogging, social networking sites, and instant messages are available without a central repository for all messages. For instance, conversations take place across blogs: bloggers pick up a theme from another person’s blog post, and discuss that topic on their own blog, possibly leading other people to pick it up on their blogs. A common tag (keyword) used by both bloggers on their posts may tie interactions together. These interlinked strings of comments and exchanges across blogs create a sustained conversation. At any point, a new posting can reignite the conversation.

Signs of life:

A sustained flow of contributions and responses.

Open-ended conversation grows beyond a single stream

Solucient is a provider of medical software. The Solucient customer community started as a small project to test the idea that customers might be the best sources of answers for other customers if given a tool for open-ended conversation. Using a single Yahoo! Groups email list, Solucient created a customer support community around a single product. Once the first group was up and running, it was clear that the community was of interest and useful to customers, reduced customer support loads on the Solucient staff, and would be useful in supporting Solucient’s other products. Additional Yahoo! Groups were started for other products.

As the early single-product communities grew, Lee LeFever, the community manager, noticed how much people wanted to talk to each other about ideas in their work, beyond their use of Solucient’s software products. There were other conversations they wanted to have with each other once they connected around the support discussions. This created difficulties with the collection of different email groups they were using, defined by software products. The community needed more flexibility for creating conversations on various topics that may or may not be related to product support. It was time for a move to a platform that would enable them to scale up, segment subcommunities for the different products and topics, and allow everyone to choose which topics they wanted to join independently of the particular Solucient product they were using.

To support a community of rich conversations of different types, Lee and his team decided that a conversation-oriented commercial community platform would allow them to move quickly, reducing in-house development time and providing a range of needed functionality. They selected Web Crossing and then carefully planned a transition from the Yahoo! Groups that took into account both the technical and community issues. After they successfully migrated most of the members to the new platform, the community entered a new phase of development—into a more complex system of open-ended conversations that enabled it to continue to grow and thrive.

<http://www.solucient.com/clientaccess/clinical.shtml>

Table 6.2 - Activities and tools for open-ended conversations		
Activities	Tools	Practice Notes
One-topic-at-a-time conversations	<ul style="list-style-type: none"> • Email • Email lists • Chat • The comment feature of blogs • Group mobile phone messaging (SMS) 	As illustrated by the Solucient story, a community's early conversations may be focused in a single topic but may grow more complex over time, suggesting a shift to multiple parallel conversation options.
Multiple concurrent topics of conversation	<ul style="list-style-type: none"> • Web-based discussion boards • Wikis • Blog discussion tracking, categories, trackbacks, pings and aggregation services • Microblogging • SMS/text 	There is a tension between keeping everyone together and allowing topics to branch out. Separate topics make for in-depth, focused conversations. But when there are too many distinct discussions for different topics, fragmentation is the risk and members can feel lost, not knowing where to post or pay attention.
Highlighting key learning	<ul style="list-style-type: none"> • "Frequently Asked Questions" (FAQ) area • Wikis for summaries • Tags, categories • "Thumbs up" and other rating mechanisms to mark the value of an individual post • Tools that move active discussions into primary view (for example, a "What's hot?" section on the home page) 	Tools to highlight key learnings vary in the amount of intentional cultivation they require. Some are distributed and automatically aggregated, such as tags and ratings. Some require substantial attention such as adding polls to surface community feedback or creating and stewarding wikis for summaries and FAQs.
Subgroups/privacy	<ul style="list-style-type: none"> • Access control (who can participate) • Mechanism for reporting back to the larger group 	It is good to find out early what a community's perspective is about openness or privacy. Some communities need more privacy at first, and then open up later. Many keep both a public face and private spaces. The same is true for subgroups, as fully private subgroups tend to fragment the community.
Translation between languages	<ul style="list-style-type: none"> • Parallel discussions for manual translation • Automatic translator window • Automated translators integrated in discussions 	As more communities operate globally, issues of language and meaning-making across languages are becoming more important. Automated translation technology is still not quite at the stage of supporting easy communication.
Archiving	<ul style="list-style-type: none"> • Web-based repositories for email lists • Automatic archiving in discussion boards • Permalinks in blogs • Tag clouds 	Cleaning up is very important. Communities often want to hold on to old discussions. Ask the question: Will anyone ever really look at them? Do dormant discussions make it hard to find current, active conversations?

Key success factors:

- Enough variance in topics to keep it interesting but not so much as to create subdivision into separate communities.
- Enough contributions to feel active, but not so many that members get overwhelmed.
- Active participation by a representative segment of the community. (This does not mean everyone. Online open-ended conversations typically involve a large number of

readers, or *lurkers* as they are sometimes called. But it is important to make sure that the conversation is not hijacked by a small vocal group whose interests do not reflect the whole community.)

- Well-organized conversation archives that avoid circular conversations and help newcomers get up to speed.

Questions to consider:

- Do your members want (and have enough commitment) to engage with each other on an ongoing basis?
- Are conversations focused on one topic and/or over a specific time frame, or do they branch and evolve over time?
- Does everyone in the group have to have access to all conversations? Is there a need for private conversation? What is the role of backchannel (private) conversations in the community's public conversations?
- Do conversations need to be harvested, "captured," or archived for easy access in the future?
- Is the community multilingual? Are there translation needs? Do different language conversations happen in one area or in separate areas?

Technology implications:

Email lists and chat rooms work well for single conversation streams because the conversations all happen in one place, with the primary focus on responding to the most recent entry. But as the conversation moves on, topics typically get dropped. It is difficult to deepen the conversation into multiple topics in parallel without adopting more sophisticated practices that use threading or email filters. Tools that allow parallel streams of conversations are inherently more complex to use because each topic develops its own context, and contributions need to be made in "the right place." Traditionally, web-based discussion forums have been used for parallel conversations. Newer tools such as blogs and wikis are useful for single-topic streams, for instance through the use of comments, but they can also work for parallel conversations with RSS feeds, categories, and tags. Pairing discussion tools with polls and wikis can help make them useful for group processes and knowledge retention. For example, the KM4Development community has a wiki separate from its mailing list where members are asked to summarize key discussion threads they initiated on the community mailing list.³

3. Knowledge Management for Development Wiki, www.km4dev.org/wiki

Orientation 3: Projects

In some communities members want to focus on particular topics, go deep, and collaborate on projects to solve problems or produce useful artifacts. Learning is not just a matter of sharing knowledge or discussing issues. Members need to do things together in order to develop their practice. Projects usually involve a subgroup within the community: participating in the project team on behalf of the community becomes an important connection to the overall community. The main variants of this orientation include:

- *Co-authoring*: Documents and other artifacts are produced collaboratively.
- *Practice groups*: Temporary or longer-lasting subgroups focus on an area of interest, usually with the idea of reporting back to the larger community.
- *Project teams*: Temporary teams are formed to answer a question or accomplish a specific task on behalf of the larger community.
- *Instruction*: Structured learning activities, including training and formal practice transfer, are undertaken for internal or external audiences.

Beyond conversations to projects

An informal community of online community facilitators decided they needed to learn about new online community tools. The tools were proliferating faster than any one member could keep up with, and through their conversations, they realized they had different perceptions and experiences with the tools. One member suggested organizing a series of virtual field trips to different community platforms so they could learn about them together. A subgroup convened to organize the trips, captured notes, and created summaries of each trip that they posted back to the email discussion list with a copy stored in the community's file repository. This "field trip project" sat "alongside" the community's ongoing conversations. It became a regular practice of the community that lasted a couple of years. The community built its knowledge, and the subgroup of field-trippers got to know each other better and built new relationships. The community itself became known as a place to learn more about community tools from a community facilitator's perspective.

Signs of life:

Committed engagement, as a whole or in subgroups, in producing some change in the community members' world, such as developing a useful artifact, addressing a recurring problem, or responding to a challenge.

Key success factors:

- Collective definition of projects related to the community's domain
- Coordination and leadership
- Adequate communication between subgroups and the rest of the community
- If inside organizations, alignment with internal project management process and procedures

Table 6.3 - Activities and tools for projects		
Activities	Tools	Practice Notes
Creating content together (co-authoring, collaborative writing, editing, and so on)	<ul style="list-style-type: none"> Wikis Application sharing (synchronous) Track changes in word processors File sharing Workflow 	It is useful to understand how much control over content creation is needed. For close tracking and editorial control, consider tools with file check in/out and version control. For more informal situations, wikis and sharing word processing documents are more appropriate.
Subgroups	Tools with features that allow: <ul style="list-style-type: none"> Access control (who can participate and in what way) Subspaces to be set up on the fly as needs emerge A mechanism for reporting back to the larger group Group private messaging (web or mobile phone) 	Small communities can organize subgroups without a lot of technology support, but the ability to create new groups and access permissions with tools will save time in a larger community.
Project management	<ul style="list-style-type: none"> Team and project-management tools (Gantt charts, timelines, task trackers, schedulers) Calendar Project dashboard 	The voluntary nature of communities may encourage or discourage the use of specialized project management tools. For those with simpler needs, there are many creative ways of using common tools, like a simple shared calendar with project milestones.
Instruction	<ul style="list-style-type: none"> E-learning platforms Participation tracking/completion tracking Screen sharing Web meeting tools 	With content abundant on the web, instruction often entails focusing the attention of learners, organizing the content, and making it meaningful.
Communicating with or engaging the rest of the community or a wider audience	<ul style="list-style-type: none"> Project blogs Wikis Screencasts 	Blogs are good communication devices for getting comments, while wikis enable the audience to become active in the shaping of the product.

Questions to consider:

- Do members feel a need to “do” things together in order to learn?
- How formal and/or ad hoc is project definition and management? Do teams require private spaces?
- What are the requirements to support the collaborative activities? Coordination? Creation of artifacts? Project management? Meetings? File repositories?
- Are other members likely to want to be informed of the progress of subgroups or to become peripherally engaged in their work? What is the process for reporting out?
- What kinds of products or outputs are likely to be created, and what has to happen to the outputs?
- Is structured instruction or practice transfer part of the work of the community?

Technology implications:

Close collaboration often requires separate spaces where a subgroup can work together without being disturbed by others. For example, having contributions from outside the subgroup can be disruptive, but having non-group members see what is posted by the subgroup is acceptable. Collaboration may require common structures to work on shared artifacts, coordinate participation in precise ways, and manage tasks, particularly in larger groups. Collaborators may need tools to co-edit or create documents, calendar tools to coordinate activities, and project-management tools to track interdependent tasks. In addition, a subgroup focused on a project will often need to communicate with the community at large. Tools such as blogs and wikis that invite participation around published documents can be used to update and involve the rest of the community. Group size matters in tool selection, as some tools are more useful to small groups and some to larger groups. Some communities may want members to be able to create new project spaces on the fly, while others may want to have a more formal set-up process.

Orientation 4: Content

Some communities are primarily interested in creating, sharing, and providing access to documents, tools, and other content. Valuable and well-organized content is a useful resource for members; it also attracts new members and makes it possible to offer a community's expertise to others.

Creating reified “stuff” can be a byproduct of participation in community activities (for example, notes from a meeting) or engagement in practice (for example, sharing a template one has built). It can be a goal of participation in itself (for example, creating a graphic representation of a good practice together). Note that activities just described under Orientation 3: Projects often produce content, so that co-authoring and related tools are covered there. The main variants of an orientation to content include:

- *Library*: Providing an organized set of documents of any format
- *Structured self-publishing*: Members contribute structured objects, with consistent formats and meta-data fields (for example, book, paper, website address, personal information).

Building a library by tagging

With the advent of the Web 2.0 era, a community of tech stewards needed to understand what tools were available and useful to their communities. While they were good at scanning for the latest news on technologies, they were struggling to “bring back,” organize, and use the information they were finding individually. The content was critical to their work, but it wasn't available to all of them. As an alternative to writing reviews on their base platform, they agreed instead to start tagging key sites using their <http://delicious.com> accounts, and then aggregate the tagged resources back in their platform automatically. Over time they agreed on a few key tags. This provided the background material for their technology planning conversations in their respective communities—collected by many, but easily aggregated and organized into one place.

- *Open self-publishing*: Members contribute any file, text, or digitized material to share.
- *Content integration*: Integrating feeds and links from various internal and external sources for organized access.

Table 6.4 - Activities and tools for content		
Activities	Tools	Practice Notes
Uploading and sharing document files	<ul style="list-style-type: none"> • Separate document repositories • Attachments to discussions 	Many discussion boards allow the attachment of files to posts, but it may be hard to find documents later if they are embedded as attachments.
Commenting on, annotating, and discussing content	<ul style="list-style-type: none"> • Discussion forums • Wikis for annotation • Blogs with comment features • Web page annotation tools 	Discussion may be critical for the community to "own" and fully utilize some content. Linking the two is important if files are stored separate from discussions.
Publishing self-generated content	<ul style="list-style-type: none"> • File sharing • Blogs • Web pages • Wikis • Screencasts 	There are so many places members can publish. Their work may end up being out of view of the community. Finding ways to link external member publishing to the community is useful.
Publishing structured objects	<ul style="list-style-type: none"> • Content management systems • Meta-data features • Adherence to documentation standards like the "Dublin core" 	When integration of diverse data resources is an issue, predefined object structures with meta-data force contributors to indicate how their contribution fits in the overall taxonomy.
Centralized editorial control (for example, organizing, approving, editing)	<ul style="list-style-type: none"> • Editor functions to show changes, version control • Manual editing and approval for public posting • Access controls • Workflow for routing material 	Centralized editorial control makes for cleaner repositories but requires a lot of work by an editorial staff.
Distributed editorial capabilities	<ul style="list-style-type: none"> • Tagging • Rating • Commenting 	Balance control with making it easy for members to participate in the processes.
Rating contributions	<ul style="list-style-type: none"> • Rating mechanism • Activity tracking • Metrics and reporting • Tagging 	Balance vetting content against the need to encourage contributions from shy authors. Make sure that the use of ratings and metrics for content is aligned with your community's local culture.
Accessing internal and external content	<ul style="list-style-type: none"> • Search engines • Tagging tools • Subscriptions/alerts • Aggregators and newsreaders with features such as RSS, trackbacks, and pinging • Subscription links to paid content • Web-enabled mobile phones 	Balance internal and external information sources to maintain focus on your community's domain and practice, while still providing the benefit of what is happening outside.
Archiving	<ul style="list-style-type: none"> • Time-sensitive notices • Automated archiving 	Deleting or marking content as "out of date" focuses attention on current content.

Signs of life:

The regular creation or identification of new material and frequent downloads or use of existing material; active involvement with content—commenting, discussing, tagging, remixing, reorganizing, and exploring relevance.

Key success factors:

- Careful and ongoing organization of content that reflects the community's view of its domain
- A flexible taxonomy that allows for growth and evolution
- Ease of publishing internally in the community or out to a larger public
- Ease of creating new content, especially in collaboration with other members
- Archiving of aging material
- The use of tools that invite active involvement with documents
- Excellent search capabilities

Questions to consider:

- How frequently are documents, tools, and other artifacts collected, created, or used in the community?
- What does the community do with the content? Is it annotated, organized, and filed, or is it constantly in flux and in use? Is there an editorial process around it? Are discussions and critiques organized around the content?
- What types of artifacts (for example, tools, reports, transcripts, or recordings) do community members need to share? How large is the collection likely to become?
- Who is responsible for organizing and archiving material? What are their needs?
- Who has access? Does the content need to be password protected or is it something of broader interest that should be accessible to public search engines?

Technology implications:

A large volume of documents and other artifacts suggests the need for technology that focuses on content management: uploading, organizing, combining, search, application of taxonomies, and editorial functions. Documents are easier to find if stored in some sort of electronic *folder*, tagged or organized under defined categories, and searchable down to the text level. But documents often derive their value in the context of interactions—pointing to the relevance of tools for conversations, comments, ratings, and tracking downloads. Communities have to balance the need to manage documents in and of themselves with

the need to allow for their use in context. Beyond traditional content management systems, web technology affords new ways for communities to handle the management of its documents. There is still a place for centralized, structured organization of a repository, but the web also offers possibilities for members to engage actively with documents in a less structured, distributed fashion—whether in the collective production of documents through tools like wikis, or in the collective development of emergent structures for organizing resources through links, tagging, and comments, for example.

Orientation 5: Access to expertise

Some communities create value by providing focused and timely access to expertise in the community's domain, whether internally or externally. Communities with this orientation focus on answering questions, fulfilling requests for advice, or engaging in collaborative, just-in-time problem solving. Some even have an informal or formal research function to respond to requests. The relevant expertise may be held by the whole group or a smaller set of experts. A community may serve a larger organization or a network as a “center of excellence,” with a focus on identified expertise, or may serve more informally as a connection point to access the knowledge of its members. The main variants of this orientation include:

- *Access via questions and requests:* A question or request is broadcast or directed to potential respondents; responses are often kept for future reuse.
- *Direct access to explicitly designated experts:* Experts are made available through visits by guests, consulting a center of excellence, and “following an expert.”⁴
- *Shared problem solving:* A group of members is called on to help an individual solve a problem in real time.
- *Knowledge validation:* Responses or artifacts are routed to respected members so that they are fully vetted.
- *Apprenticeship and mentoring:* Learning takes place through observation of or apprenticeship with a skilled practitioner.

Just-in-time expertise

A community of sales people in a technical company has an established IM channel. When they are at a customer's site and need an answer to a question or challenge posed by the client, they can send a request to the IM channel and any member of the community who is online can respond. Sometimes, if the question is difficult, they will organize a phone conversation to discuss the issue. For them, belonging to the community means that they have immediate access to the right kind of expertise just when they need it.

4. This borrows from Brown and Dugid's concept of “stolen knowledge” (<http://www2.parc.com/ops/members/brown/papers/stolenknow.html>, 1992 Educational Technology Publications) and exemplifies Efimova's observations about blogs as a channel for “distributed apprenticeship.” Lilia Efimova, “Legitimised theft: distributed apprenticeship in weblog networks,” Mathemagenic, <http://blog.mathemagenic.com/2004/05/14.html>

Table 6.5 - Activities and tools for access to expertise		
Activities	Tools	Practice Notes
Questions and answers	<ul style="list-style-type: none"> • General tools such as email, chats, text messages, email lists, or discussion boards • Specialized tools such as Q&A systems, FAQ tools that compile questions and answers, or answer mining 	Scale is a key issue here because of the traffic that requests can generate. High traffic requires routing of requests so they reach only likely respondents and the ability to archive questions and answers so they do not get repeated.
Expertise locating	<ul style="list-style-type: none"> • Member directories • "Yellow pages" tools for self-declaration of expertise • Expert ranking and/or rating • Social networking tools 	By using technology to make expertise more visible, you alter community structure. Sorting out who's the expert is a significant community contribution. A community can become a filter to use expert time only when really needed. Without norms and agreements about how accessible "experts" want to be, many will avoid declaring their specialization too publicly.
Validating or rating responses and escalating questions not yet answered or with inadequate answers	<ul style="list-style-type: none"> • Rating tools for responses • Commenting tools • Visibly linking authors to contributions • Polls • Wikis for adding to base knowledge • Automatic routing of contributions to expert panel 	Rating responses is useful in helping decide where to route questions of the same type. But it can have both positive and negative effects. Setting things up so that comments or criticisms of a response aren't seen as personal attacks can be helpful. Alternatively, giving people credit for their answers can make it more attractive to contribute.
Shared problem solving	<ul style="list-style-type: none"> • IM/chat or telephone • Video feed • Application sharing • Whiteboards • Teleconferencing • Discussion boards 	These shared sessions often take the form of a project. See comments under Orientation 3: Projects.
Following an expert	<ul style="list-style-type: none"> • Blogs • Subscriptions, RSS • "Watch this member" feature • Microblogging 	Traditionally following an expert meant knowing what they posted or downloaded. Now we have many other options. For example, following an expert via Twitter requires a commitment by the expert to post short, frequent messages. This can enable many to follow.

Signs of life:

Rapid and reliable responses to requests for expert advice and for specialized assistance; well-established methods of eliciting community expertise; people know who they should go to for specific expertise.

Key success factors:

- Holders of expertise known or designated (by reputation, specialty, or job)
- Quick access to reliable sources of information and/or quick response from experts
- Accurate routing to the best potential sources of help
- Reliability of responses established either by the reputation of respondents or through explicit validation processes

Questions to consider:

- Do members of your community need to get rapid access to information and advice? From each other and/or from designated experts?
- How important is the formal validation of knowledge for the community?
- How do members become aware of each other's knowledge? Are members willing to "declare" their expertise on a topic? Do people care about building a personal reputation, or would they rather not accentuate differences in skills, levels, and quality of contribution?
- Does the community serve as a center of excellence for a larger group? How should access be provided?
- Does the community regularly bring in outside experts? How familiar are those experts with the tools used in the community? What support do they need?
- How big is the pool of people who need to interact? Smaller groups can manage informally with little support, but large groups benefit from tools to help automate some processes.

Technology implications:

Common communication tools such as email, the phone, or IM can be used for questions and answers, but their use assumes that the requester knows the best source of information to contact, and they tend to limit interactions to just a few people. Such simple tools may not scale up, partly because they don't provide for the reuse of questions or answers. Asynchronous discussion boards involve more people and therefore can yield more reliable responses, but they may not work for rapid responses and can overwhelm members with traffic. More sophisticated applications that enable quick and efficient access to expertise such as expertise locators and Q&A systems are also available. These can route requests, build and access a repository of questions and answers ("Frequently Asked Questions" or FAQ), and keep track of the ratings of responses that various experts receive. Contact management and social network analysis tools can be used to map the expertise in one or more communities.

Orientation 6: Relationships

Some communities focus on relationship building among members as the basis for both ongoing learning and being available to each other. This orientation emphasizes the interpersonal aspect of learning together. Communities with this orientation place a high value on knowing each other personally. They emphasize networking, trust building, and mutual discovery. Members care about who is in the community. Sometimes this focus on relationships is purely internal. Sometimes it extends outside to connecting with others

and even recruiting new members on the basis of personal connections. The main variants of this orientation include:

- *Connecting*: Networking with people with whom one is likely to find a mutual connection.
- *Knowing about people*: Getting to know each other at professional and personal levels.
- *Interacting informally*: Interacting with other community members one-on-one or in small groups.

Signs of life:

Networking, bonding, friendship, references to personal lives in conversations

Key success factors:

- Ways for people to get to know each other and build their identities.
- Opportunities to connect informally beyond participation in organized community events.
- Networkers acting as connectors with other people.
- Having individual control over personal exposure and disclosure (see the next orientation).

Questions to consider:

- Are members drawn to the community for the opportunity to connect with people as much as to find information or gain skills?
- How dependent is the ability to learn together on the level of trust and depth of interpersonal relationships?
- How curious are members about others and how willing are they to disclose information about themselves? Are members interested in investing the time and effort to build relationships and get to know each other beyond the domain-oriented interactions of the community?
- How large is the community and how widely do people need to build relationships across the community? (Complexity of creating and maintaining relationships grows with community size.) How open or closed is the community?

Beer offline and online

A group of technologists concerned with the application of an open-source content management system have a complex practice for sharing improvements to the base code, and a well-developed online information repository. Despite their technology adeptness, they realized they wanted regular, sponsored, face-to-face workshops to train others on the use of the software. But a hallmark of the community is that their gatherings always include a social element—going out for a meal or a beer—as part of their practice. They make sure people get to meet each other before the workshops start, and they often connect with each other using other social networks outside their main platform. They see themselves as connected deeply around their domain, but, more than that, as friends and colleagues as well.

In an updated version of the same process, a community of educational game designers is using Second Life as a social gathering space.

Table 6.6 - Activities and tools for relationships		
Activities	Tools	Practice Notes
Networking, finding others, revealing our relationship to others	<ul style="list-style-type: none"> • "Light" member directories (contact, but minimal personal information) • Social networking tools • Social network analysis tools 	A key issue is the balance between access to tools that help find others and explore relationships and the culture of the community with respect to privacy and personal information.
Discovering information about others, expressing personal identity	<ul style="list-style-type: none"> • "Heavy" member directories (with lots of information about members) • Profiles and personal web pages • Member pictures associated with each contribution to conversations or repository • Photo gallery, photo sharing • Lists of favorites (URLs, books, songs) • Blogs 	Our identities may now be shared in bits and pieces across the Internet and within diverse communities. Consider how you can tap into those sources and not ask members to "recreate" their identities solely within the community.
Knowing who is around the community and interacting informally with other individuals	<ul style="list-style-type: none"> • Community-specific presence indicators • Invitation to instant chat • IM buddy lists • Email • Phone, VoIP • Immersive avatar-based environments • Microblogging • SMS 	Knowing who is logged in to a website or online can be useful, but being able to say "hello" or interact informally can really make the experience of the community more personal. Informal two-way communication is a method of achieving learning in a community.
Forming casual or ad hoc subgroups	<ul style="list-style-type: none"> • Access lists • Delegation of rights needed to set up subspaces • Geolocating tools on web-enabled phones 	Some people need private space to develop trust. Others will advocate for openness. These diverse needs may cause tension in both the tool choices and the community practices.
Following others	<ul style="list-style-type: none"> • "Watch this member" features • Tagging • Seeing what someone reads or posts • Social networking sites • Microblogging (i.e. Twitter) • Friend aggregators (i.e. FriendFeed) 	Some members may express concern about "too much availability" and interruption. Consider whether your tool allows people to control who can see they are online.

Technology implications:

Relationships are between people; therefore, technology may seem less relevant. Yet technology has turned out to provide many ways to create, sustain, and represent human connections. The web has recently seen an explosion of tools oriented toward building and visualizing relationships, particularly social networking for finding and explicitly stating relationships with other people, and social network analysis tools for representation of network connections. Some of these tools are suited to communities; some are more oriented to general networking but may be used in the context of communities.

We are often asked by people who have never seen it happen whether real relationships can develop without face-to-face interaction. In our experience they can and do develop, both in purely online settings and in combination with face-to-face. As people become more experienced in using technology, new mixtures will become commonplace. Communities are experimenting with techniques for including remote participants in face-to-face gatherings. Finding the right mix of face-to-face interaction with the many tools that exist is both subtle and challenging. The different sense of presence and even of identity that we have in immersive environments like Second Life, offer new opportunities for new kinds of relationships. In the end, however, there are no guarantees in developing relationships, even in face-to-face settings.

An orientation to relationships does not necessarily apply to an entire community at once. People often discover others in a community with whom they would like to pursue a special connection, either around a topic or an activity, or at a purely interpersonal level. A relationship orientation requires the ability to let members form smaller groups by segmenting the space with a mix of public and private subspaces. This places a premium on the ability to create subspaces easily and to distribute the ability to control access or open up these areas. Relationships also may extend outside the community, allowing a community to tap other tools, such as members' bookmarking accounts, and pull those feeds into the community without asking the member to do any additional work. Over time, new communities are emerging out of interactions on microblogging tools like Twitter.

Orientation 7: Individual participation

Learning together happens in the context of a group, but it is realized in the experience of individuals. Learning together does not imply homogeneity of learning. People bring different backgrounds, communication styles, and aspirations to their participation in a community. Increasingly, their participation in any community takes place in the context of multimembership in many other communities—a factor that is bound to give them a unique perspective in any given community or facet of community life. As a result, members of the same community participate in different ways; they have different purposes, they engage with different frequencies and different

Accommodating participation styles

A global community of practice noticed that some members strongly preferred asynchronous discussions and others preferred phone calls. The teleconferences presented time zone issues as well as comprehension challenges for those who were not participating in their first language. The asynchronous discussions posed problems for people who never found time to read them.

The diverse preferences were causing a split in the community. Both options were always available, but there was not a lot of cross-pollination across the two. So, they created a practice of posting annotated notes from the teleconferences in the discussion board area, and tried to include at least one member from the discussions in the call to bring the perspectives of one subgroup to the other.

Table 6.7 - Activities and tools for individual participation		
Activities	Tools	Practice Notes
Individualized website navigation across successive visits	<ul style="list-style-type: none"> • Individualized indicators of new material (for example, pointing to what new materials on a website one has not seen) • Notepads to keep individual notes or journals • Individual message center to bookmark contributions of interest 	Navigation can quickly become an issue as a community site grows through member contributions. Practices for tracking one's participation and content vary greatly, and are often dependent on the member's technology skills. You can expect to see variation in this area and may find that some members play the role of "finder, filterer, and sorter" for the larger community.
Customization	<ul style="list-style-type: none"> • Filters (what to see and what to hide) • Individualized site maps, pointers to relevant areas, and taxonomies • Profiles (time zone, connection speed, language) • Preferences (display, look and feel, home page) • Customized search (from preferences, history, profile, or relationships) • Multi-language interfaces and translation capabilities • Choices of platform to receive content (web, email, phone, etc.) • Tagging 	The more customization options offered, the more technical orientation, training, and support is needed. Consider whether enough members will benefit from additional features.
Subscriptions	<ul style="list-style-type: none"> • Subscriptions flagged on a website • Email alerts • RSS • Individualized digests • Alert mechanisms • Multiple routing options (email, SMS) 	Subscriptions and alerts are important. Don't expect members to visit the community site regularly unless this participation is part of an explicit commitment.
Bridging interaction modes	<ul style="list-style-type: none"> • Recordings and podcasts • Real-time notes published through blogs or wikis • Video feeds • Informal interactions with IM, microblogging 	What is important here is that people can choose the interaction mode they prefer if the modes are well-integrated.
Managing individual participation publicly	<ul style="list-style-type: none"> • Bulletin boards to announce individual circumstances like absences or periods of limited access • Listings of communication preferences 	This is more of an issue for smaller, relationship-oriented communities where the impact of each individual's participation is important to the community's health.
Managing one's privacy	<ul style="list-style-type: none"> • Features of IM tools that allow members to turn on or off their availability in IM/presence indicators • Interaction tools that do not keep records or transcripts that can be accessed and viewed later • Portability of one's content across platforms 	In our experience, until people realize their privacy can be managed, they may be shy or withholding. Options may not be obvious. Once they have a sense of what they can control, they may be more likely to participate. It is important to allow them to suppress or limit personal information in directories and bios.
Explicit support for multimembership	<ul style="list-style-type: none"> • "My communities" page • Single identity (login, profile) across communities • Aggregators (RSS, tags, feeds) • Lists of communities on personal pages 	This is perhaps one of the greatest opportunities for technology innovation.

levels of commitment, they take on different roles, and they use tools differently. The community and its learning mean different things in their lives. They develop distinct identities as members and express their relationship to the community in their own ways.

Communities vary in their degree of orientation to individual participation. They make more or less effort to accommodate individual differences, recognize multimembership, or take advantage of their diversity. In bringing people together, some communities offer only one way to interact, regardless of individual preferences, in order to create a shared history of interactions. Others offer a wider range of interaction possibilities and styles, accommodating individual differences in participation but loosening the bonds created by common interaction experiences. Global communities need to accommodate diverse time zones, languages, and cultures.

This orientation to individual participation has both private and communal dimensions. It enables members to take active control of their participation, and it makes individual differences part of the life of the community. The main variants of this orientation include:

- *Varying and selective participation:* Communities accommodate various forms of participation, ranging from just staying lightly in touch, to choosing a few areas of personal interest, to participating actively overall, to taking a leadership role.
- *Personalization:* Members can individualize their experience of the community to serve their personal needs and circumstances and control access to their information.
- *Individual development:* The community helps individuals develop their own learning trajectories, through guidance, mentorship, and individualized resources.
- *Multimembership:* Belonging to multiple communities and managing participation across these contexts is a fact and a challenge that can remain private or be expressed outwardly in the way a community organizes participation.

Signs of life:

Members develop their own style of participation and are aware that other people develop other styles. They feel they can have a meaningful connection to the community whatever their individual form of participation, and the community welcomes, supports, and thrives on this diversity.

Key success factors:

- Diversity is explicitly valued.
- Different levels and modes of participation are supported and facilitated.
- Practices and tools are used to bridge between interaction modes (audio, text, video,

synchronous, asynchronous, face-to-face, online).

- Preferences, availability, and multimembership can be communicated.
- Customization options are obvious and understood.
- Members can manage their interactions across different tools and multiple communities.

Questions to consider:

- To what extent does the community's success depend on uniform participation expectations, such as logging on to an online space daily or weekly, regular meetings or interactions, and scheduled events?
- What is the degree of diversity among members in terms of level of proficiency in the community's core practice, as well as members' literacy, learning styles, language, culture, and access to and familiarity with technology? Do members have strong and different preferences about interaction modes?
- How much ownership do members take or want to take of their own learning and development compared to how much they expect this to be defined by the community as a whole?
- How many communities do members belong to simultaneously? Are they all within one organization and therefore use the same set of tools?

Technology implications:

When technology becomes the members' main window into their communities, their participation can be a highly individual experience. This participation may consist of a series of visits to a website or to web conferences. Or it could be participation in a variety of online events, conversations, and meetings. Communities need a technology infrastructure that can translate this succession of points of contact into a meaningful experience of participation over time. This is especially important if various modes of interaction are supported with different technologies. Bridging them is critical to keeping the community together while enabling various modes of participation—for instance, offering members the option of having information pushed to them via newsletters and email alerts or allowing them to selectively organize how they access content.

When the intensity of participation varies a great deal among members, those who participate infrequently or superficially can be overwhelmed by new material and new topics. In this case, it can be important to have individualized guideposts such as member-specific new flags or pointers that reflect the member's interests.

Multimembership and individual expressions of identity are taking on increasing impor-

tance as technologies multiply the possibilities for simultaneous participation in communities. Members need configuration options to manage their participation and attention across more than one community with a single set of tools. Many potential members balk at the idea of having to learn a new set of tools or to remember another user id/password for each community.

Orientation 8: Community cultivation

While many communities are happy with loose self-organization and unplanned evolution, others thrive on attention to community cultivation. They have a need to reflect on the effectiveness and health of the community to make things better, joined with a willingness to work on it. Sometimes regular members are more interested in the domain, and attention to the work of cultivation is the province of a smaller core group or one person. Such leaders facilitate conversations, convene meetings, organize activities, collect, edit, or produce resources, connect members, keep a pulse on the health of the community, and encourage it along a developmental path. Whether these people are volunteers or paid members, the success of the community comes to depend on the high level of ongoing attention that these leaders pay to process and content. The main variants of this orientation to cultivation include:

- *Democratic governance:* Some communities create governance structures and processes that enable the membership to have a voice in running the community, engaging in self-design.
- *Strong core group:* A distinct group of members habitually take a nurturing role with their community.
- *Internal coordination:* A member or a small team explicitly takes on or is assigned the responsibility of cultivating the community.
- *External facilitation:* Someone who is not a member is recruited to provide process support to the community. Such a person may not be knowledgeable or even particularly interested in the domain, but is assigned this role because of expertise in community cultivation.

Signs of life:

The community's activities are well planned, its reference materials are well produced and well organized, and members find that someone is always very responsive to their requests, contributions, and changing needs.

Key success factors:

- Efforts made to support the community by members are appreciated by other members.
- Enough time available to engage in cultivation.
- The personality, skills, leadership, and reputation of those who take on cultivation roles in the community.
- Succession planning for transitions.

Questions to consider:

- What information do community cultivators need about the activities, workings, and health of the community? For example, is there a need to track participation, downloads, and usefulness of content?
- What actions should cultivators be able to take with respect to technology? Who should be given the privilege to control other people's participation? How much time and willingness do community cultivators have to devote to learning how to use sophisticated cultivation tools?
- What is the community culture around feedback tools? What are the effects of making that participation visible? Is there a risk of people "gaming" the system to affect outcomes of things such as rating systems or polls?

Careful cultivation as key success factor for on-line community

The founders of the community CompanyCommand had not planned to become community cultivators. They were company commanders in the U.S. Army and had benefited greatly from informal conversations they were having about the challenges of leadership. They had written a book to capture their learning and had launched a website to discuss the book with colleagues. The site became the focus for a rapidly growing community of officers who were in the two-year "company command" phase of their careers, plus a good number of others who were either preparing or had moved on. The site now reaches several thousands.

The nature of the domain—perhaps the most challenging phase of an officer's career—and the camaraderie inherent in the community naturally make for a strong sense of identification among the members. They need help with their practice and are more than willing to give help. Yet it is hard to overstate the amount of cultivation work and skill that goes into making sure that the site provides a valuable learning resource for practice; it is constantly being renewed by the community.

The four founders and other volunteers form a dedicated cultivation team. For instance, they read and clean up every contributed document before it is posted. They always thank contributors individually. They interview leaders and practitioners and edit these interviews into downloadable videos. They offer a quiz of the month that challenges members with a practical problem to address and discuss. They publish a monthly column in a publication with the best of the community.

They have cultivated a core group of about 150 volunteer topic leaders who each facilitate a topic area. They have given topic leaders business cards to recognize their role. They also organize a yearly face-to-face gathering for them, for coordination, learning, companionship, and recognition. They make sure they are grooming a new generation of community leaders.

Through their constant cultivation work, the community leaders make the experience of contributing and participating very personal, useful, up-to-date, and based in practice. It is for practitioners by practitioners.

The CompanyCommand site, which was public for several years, is now behind a firewall and no longer publicly viewable. But the founders have described their cultivation effort in a book with lessons and advice that are applicable far beyond the military context.⁵

5. Nancy M. Dixon, Nate Allen, Tony Burgess, Pete Kilner, Steve Schweitzer, *Company Command: Unleashing the power of the army profession*. (West Point, New York: Center for the Advancement of Leader Development & Organizational Learning, 2005)

Table 6.8 - Activities and tools for community cultivation		
Activities	Tools	Practice Notes
Announcements, stories, pointers, and other information sent to members directly	<ul style="list-style-type: none"> • Email • Newsletter • Community blog (internal) • Calendar 	More can be less. Consider members' attention spans. If you push too much information, people may start to ignore it.
Getting community input and feedback	<ul style="list-style-type: none"> • Polling tools • Brainstorming tools • Email • SMS 	Consider making the tools available for members to create their own queries and questions.
Backchannel communication, offline conflict resolution, and private encouragement	<ul style="list-style-type: none"> • Membership contact information • Phone • IM • Email • Chat (during meetings, for example) • SMS • Microblogging 	Personal touch is still the best way to focus attention, connection, and participation. Most of us respond positively to personal contact. This requires community leaders' time, more than any specific technology.
Reflecting on community participation and health	<ul style="list-style-type: none"> • Participation statistics • Alerts noting lengthy member absences • Community health charts (indicators of level of participation, quality of conversations) • Social network analysis • Logs of technology use, such as when people have logged in, how long they stayed, or how much they have read • Lists of who has read or downloaded something 	In general, we advocate making this kind of information available to community members because it supports a reflective practice. Again, one has to be sensitive to the community's culture and the degree to which information about individual participation helps the community or becomes a distraction.
"Housekeeping" interactions	<ul style="list-style-type: none"> • Ability to move contributions from one place to another to keep an online space organized (for example, moving a post to a different conversation or a document to a different folder) • Tracking an individual's contributions across contexts • Conversation analysis tools (for example, contributions that open or close threads) • Access lists 	A facilitator of an online discussion can help keep focus and cohesion by moving misplaced posts, noticing who is contributing in different areas and who is quiet and might be encouraged. Community leaders need to be very careful about the use of such tools because they reflect authority and power. Frequent communication is recommended, such as an email to the author of a post that needs to be moved.
Rewarding behavior valued by the community	<ul style="list-style-type: none"> • Top contributors or "member of the month" • Quantified reward system (for example, points for certain behaviors) 	Rewards can be a double-edged sword. They can encourage participation or feel manipulative by encouraging only specific behaviors. Consider the community dynamics carefully before implementing rewards.

Technology implications:

General communication tools such as phone, email, and instant messaging are still the basics of community cultivation. A lot of community cultivation is simply about keeping in touch with members through backchannel communication, where people communicate privately amongst themselves. A phone call can be effective, as can a quick IM

when someone is online to say “hello” or encourage participation, particularly in smaller communities. Broadcasting tools help keep people informed about community activities. With a palette of available tools, cultivators can customize communication to the person or the context. Intensive cultivation also calls for more specialized tools to poll members, brainstorm ideas, or manage conversations, documents, and archives. Finally, some tools can help cultivators “see” the community by tracking participation statistics including logins, pages read, contributions posted, and downloads.

These tools can help identify current topics, track individuals’ contributions, and be used to chart who is engaged and who may need encouragement or be “invited back.” Again, the availability and use of these community visualization or evaluation tools raise issues of privacy and availability of information. Who can see the information? How it is used? Does it help the community or does it create unwelcome distinctions among members, such as between those who are recognized as active contributors (so are valued more) and those who only read or participate in less noticeable ways?

Many available tools can generate large amounts of log data; the challenge is to integrate information from different tools and to reduce it to something simple and easy to act on. People who have an explicit role in cultivating a community are more likely to take the time to learn how to use the tools. However, community-cultivating tools can be useful for any member who cares about a community.

Orientation 9: Serving a context

All communities of practice are oriented to their members’ learning experience. They always exist in a context that, to some extent, influences how this learning takes place. But in some cases, serving a specific context becomes central to the community’s identity and the ways it operates.

Some communities are not especially oriented to serving a context: the members mostly seek intimacy and privacy and the ability to interact and share materials far from the public gaze. Their agenda is an exclusive focus on the learning of members. But many communities of practice are defined by their orientation to serving a context beyond the learning of members. They may live inside an organization, whose charter their practice needs to serve. They may have a mission to provide learning resources to the world or to recruit members widely. Or they may seek interactions with other communities whose domain complements their own. This outward-facing focus can become a key driver of the community’s evolution, a selection criterion for members, and the inspiration for participation. The main variants of this orientation to context include:

- *Organization as context:* Communities living within an organization usually feel a responsibility to develop capabilities that serve the charter of their host organization. Organizational membership may be a condition for community membership and a key to trust. Such communities may also need to use that organization's resources and infrastructures and worry about interoperability, integration with the organization's operations, and interaction with its power structure. They may be focused on shaping organizational strategy or practice.
- *Cross-organizational context:* Some communities find value in creating connections among practitioners across organizations, without the necessity of forging more formal relationships among these organizations. This context creates its own set of relationships to these organizations' charters, resources, and power structures, as well as issues of communication across firewalls and platforms.
- *Constellation of related communities:* Some communities need to constantly interact with other communities to form broader constellations and networks. They need to negotiate related domains, seek interactions at their boundaries, encourage multimembership, and coordinate their learning.
- *Public mission:* When a community is built on a mission to serve the broader public, it needs to interact with entities and individuals outside the membership. This often entails creating specific resources and activities to make the learning of the community intelligible and accessible to non-members.

Orientation to an organizational context embedded in technology

In a large company like IBM, communities of practice easily number in the hundreds and are closely integrated in the organization: some are specifically sponsored to address a strategic domain; others are simply recognized as part of the way things are done. But all are expected by members and management alike to contribute to the business through exchanges, tools, ideas, and strategic thinking. This tight integration is reflected in technology. The company has been designing a program called CommunityMap, which serves as a kind of online registry for communities. The idea is to give each community a page in the registry with a description of the domain, the membership, and the leader(s) to contact. If someone wants to start a new community, the first step is to make sure that a community doesn't already exist for the same or a closely related domain. But the integration goes beyond a mere registry. The program also supports the integration of membership management with other systems. For instance, each community is assigned an IM channel that all members are automatically registered to use. Community membership is indicated on each member's employee page in the HR database. When employees leave the company, all their community memberships are automatically terminated by default.

Signs of life:

Community members are fully engaged in the mission defined by their context. Reciprocally, recognition and resources come from people outside the community.

Table 6.9 - Activities and tools for serving a context		
Activities	Tools	Practice Notes
Creating a public face for the community	<ul style="list-style-type: none"> • Public, searchable web pages • Community blogs (external) • "Friends of the community" email lists • Public newsletters 	Even a community mostly oriented to the learning of its members can benefit from having a "public face," if only to make others aware of its existence.
Inviting the public in and recruiting members	<ul style="list-style-type: none"> • Public areas • Guest accounts • Self-registration 	Technology can mark a clear entryway as well as provide tools to support those who are welcoming new members. However, technology is not the only thing to consider—a personal invitation is often the most effective.
Offering community content out to the world	<ul style="list-style-type: none"> • Web support for publication streams • Search tools • Meta-data • Tagging • RSS feeds 	Making community content useful to outsiders may require repurposing internal content, with a dedicated editorial staff. Any content offered to the public in this day and age should have an RSS feed at a minimum.
Knowledge transactions for non-members, help desk	<ul style="list-style-type: none"> • Question-answer systems • FAQs area • Phone • Email 	This is a version of Orientation 5: Access to expertise, but offering this service to non-members usually requires a more organized help desk to handle requests and protect the time of members.
Constellations of related communities	<ul style="list-style-type: none"> • Shared community portal • Community mapping tools 	When existing resources can serve more than one community, there is more reason to harmonize at least some of the technology used across communities.
Backend compatibility with organizational infrastructures	<ul style="list-style-type: none"> • Single login systems (LDAP/Active Directory) • Standards (databases, XML, .NET) • Look and feel of the user interface • API/web service • MAPI and directory structures 	When existing IT systems provide an important part of a community's context, reaching out to the IT people makes a big difference. Tech stewards need to partner with people who have greater technical depth and authority over security and other infrastructure.
Security	<ul style="list-style-type: none"> • Password protection • Access management • Firewalls 	Security concerns may not really be the business of community leaders, but often the activities of communities can raise unique concerns from a security perspective.

Key success factors:

- Clarity on the community context and its implications.
- Channels for negotiating the relationship of the community to its context, such as organizational sponsorship or good connections among community leaders.
- Recognized and supported boundary roles that serve the orientation to context.
- Tools that enable outsiders to interact with the community in ways that reflect both their needs and the community's desire for openness.
- Ease of granting controlled or open access.

Questions to consider:

- What goals, agenda, or mission is the community serving? What aspects of the community does this determine (for example, learning goals, membership, or assessment)?

- To what extent does the community have to keep track of its activities and its learning to justify its existence to outside constituencies?
- How important is it for the community's technology infrastructure to be integrated within broader information systems?
- Is the community open or closed? Is there a specific membership procedure or set of requirements, or can anyone join? How does the community attract new members? Is it necessary to have a strong "external face" to create that invitation?
- How important is it to make the community visible and/or accessible to non-members? What would these people need? What other communities is the community connected to or "related" to, and how do they currently interact?
- How do members integrate their activities in the community with their other activities, such as their jobs in their organizations?

Technology implications:

The degree to which a community's context is central to its identity creates specific technology-related challenges. Within an organization, it often requires compatibility with the existing infrastructure. Single login and "closeness" to the tools members use in their daily occupations can also facilitate participation.

A broader orientation to serving a context calls for specific tools that provide for an outward face to the community and affords choice in how boundaries are defined and maintained, as well as transactions across community boundaries. This orientation can require either open or closed systems. Those who seek intimacy and privacy need tools that create strong boundaries, while those with an open face to the public need the ability to be visible and to interact and share materials outside. For example, a public context suggests avoiding passwords and other barriers that prevent public search engines from indexing content. An organizational context may require passwords to protect intellectual property but provide access to anyone with an organizational password. Many communities have both closed areas for their own internal work and open areas for their interactions with the outside.

Using orientations to think about technology needs

The framework of community orientations is useful for thinking about the technology needs of a community because it places technology in the context of the community's patterns of activities. Depending on how technology stewarding is organized in a community, these orientations can be used in several different ways. In some communities, such as those where technology is a common interest, the entire community gets involved in discussing the orientations and considering which ones are relevant. In other cases,

a small group will think about the orientations and the questions they raise, and then engage the whole community in considering the results. For such an evaluation, the variants, signs of life, and questions to consider associated with each orientation provide a framework with implications for technology choice.

When a community is just forming, its profile of orientations may not yet be apparent, so a tech steward has no history to go on and can't really say what orientations are most descriptive. In this case, orientations can be used to trigger the imagination of potential members in projecting what their community will need. For an existing community, the use of the framework will depend on whether the community is happy to maintain its existing style; the framework provides an analytical tool to assess how well the community is being served in its current form. If a community is seeking change, then the framework of orientations can provide a language to imagine the future, discuss newly evolving needs, and put technology to work in the service of the community's intended evolution.

The main idea is to create an actual or intended community profile in terms of orientations and their variants. As you explore each orientation and variants listed above with each orientation, think about how closely they apply to your community, using a scale of 1 to 5, with 5 being very important. If your time, attention, and budget as a tech steward are limited, focus first on the orientations you rate 4 or 5. That way, the orientations profile provides a useful reference point for the task of prioritizing, selecting, configuring, and even supporting tools.



In Chapters 4 and 5, we looked at technology from the perspective of the full landscape of tools and how features, tools, platforms and configurations come together to support a community. We asked, "What can a specific technology do for our communities?" In Chapter 6, we looked from the other direction, using orientations to help us look at a community's technology needs through the perspective of the real activities of the community. Together, these three chapters give us the language and framework to see technology from a community perspective and community from a technology perspective. And by looking through these perspectives, we can both imagine and support the useful application of technology for our communities. With a language to talk about digital habitats, we are ready to dive into the practice of technology stewardship.