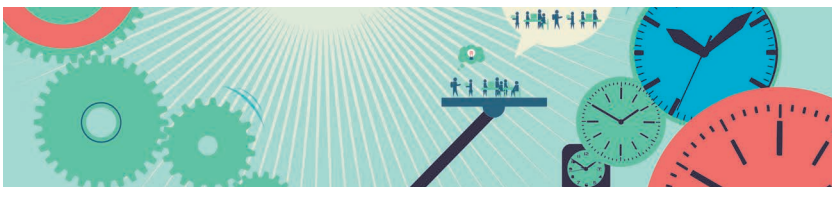
Spotify Guilds: How to Succeed With Knowledge Sharing in Large-Scale Agile Organizations

Darja Šmite, Blekinge Institute of Technology
Nils Brede Moe, SINTEF
Georgiana Levinta and Marcin Floryan, Spotify

// The new generation of software companies has revolutionized the way companies are designed. While bottom-up governance and team autonomy improve motivation, performance, and innovation, managing agile development at scale is a challenge. We describe how Spotify cultivates guilds to help the company share knowledge, align, and make collective decisions. //



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SPOTIFY IS A software company providing music streaming services that launched in 2008. Within 10 years, Spotify has managed to continuously grow and become one of the most innovative companies as well as an icon for the new generation of agile organizations. Spotify has six research and development offices in three countries. Their ways of working and organizational structures are designed to promote innovation, collaboration, and autonomy with bottom-up governance (see Figure 1).

In this article, we focus on Spotify *guilds*, communities of interest uniting members from the previously mentioned research and development offices. Guilds are implemented to promote collaboration among engineers across the company. At the same time, both enabling guilds across geographic and temporal distances and sustaining their value are challenges.

On Communities of Practice

Guilds, or *communities of practice* (CoPs), are not a new phenomenon. Communities existed in the cave times, when people gathered around a fire to discuss strategies for cornering prey.[1] Communities are cultivated for their potential to influence the knowledge culture[2] and create value for individuals, teams, projects, and the company overall.[1] In large-scale agile organizations, CoPs are also recognized for facilitating the interteam coordination.[3,5]

Communities vary in design (size, mission, membership, activities). Many communities are organic, emergent groups of practitioners concerned with improvement of a joint practice. Communities often emerge to solve current problems, but as they grow, the repertoire and deliverables become more deliberate and systematic.[1]

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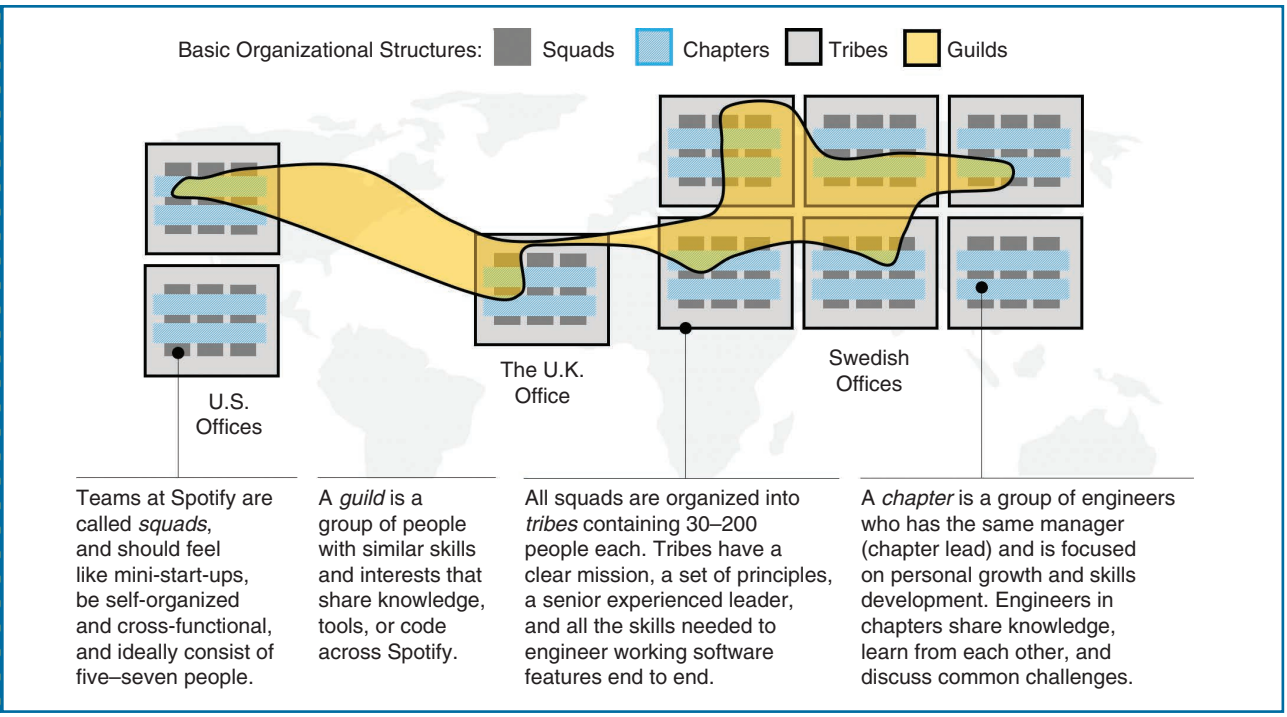

FIGURE 1. A chart showing Spotify's basic organizational structures.

Implementing well-functioning communities is, however, not an easy task.[1–3] Experiences from Oracle Corporation, UK National Health Service, Hewlett-Packard, Wipro Technologies, Alcatel, and DaimlerChrysler suggest that cultivation of knowledge culture requires organizational attention, support, and sponsorship for CoPs.[2] Experience from four CoPs at Ericsson[4] shows that success factors include a good topic, a passionate leader, a proper agenda, decision-making authority, openness, tool support, a suitable rhythm, and cross-site participation when needed.

Our work provides insight into the perceived value of CoPs and an overview of the challenges and practical advice for implementing CoPs in large-scale distributed environments.

How We Conducted the Study

In 2018, we conducted nine semistructured interviews with core members from four Spotify guilds (all sponsors and almost all coordinators), focusing on the main characteristics, success criteria, and challenges. We then studied one guild in detail through four semistructured interviews with active and inactive members, focusing on member engagement and success criteria. All interviews were 45–60 min long and were recorded. Furthermore, we organized an online survey for selected guilds to elicit member perception of the value provided by the guilds (based on previous research[1]) and the main challenges (open questions). We invited 667 members in total and received 125 responses (19% response rate, ranging from 10% to 22% per guild). In this article, we present the top values for each guild rated by at least 60% of the members (see Table 1).

We analyzed our findings in iterations, aiming at methodological and data-source triangulation. The results contain guild archetypes, which emerged from cross-guild comparison aided by metaphor analysis, and a list of common challenges, values, and recommendations for running successful guilds, which emerged from the qualitative analysis of the interviews and survey responses.

Spotify Guilds

Spotify guilds are open to anyone and have representatives from different squads, tribes, and chapters, providing a potential for making better decisions, helping others, and sharing valuable knowledge across the organization. There are both organically emerging guilds and structured guilds. The latter are called *sponsored guilds*, and they have a stakeholder (sponsor) and a budget per member. Spotify guild activities are run by one or several guild coordinators—the main contact persons—who bootstrap the guild to enable self-organization, ideally trying to get rid of the need for

Table 1. Guild profiles.

Characteristics	Agile guild	Core guild	Back-end guild	Web guild
Core members	Agile coaches	Core developers	Back-end developers	Web-end developers
Noncore members	Product owners, chapter leads, few engineers	Infrastructure and client engineers	—	Back-end developers who work with the web
Core/noncore, %	80/20	80/20	—	90/10
Structure	Two regionally divided subguilds (United States and Sweden)	Centralized, local (Sweden)	Centralized, virtual (United States, Sweden, and United Kingdom)	Two regionally divided subguilds (United States and Sweden)
Repertoire	• Annual unconference • Biweekly lunch and learning seminars (regionally) • Coaching circles • Slack channels	• Annual unconference • Biweekly meetings • Slack channels	• Annual unconference • Quarterly academies • Quarterly meetups • Slack channels	• Annual unconference • Meetings (monthly in Sweden, biweekly in the United States, quarterly together) • Slack channels
Members, n				
At meetings	25	12	—	30
At unconferences	40	20	200	100
In Slack channels	134	142	300	188
On mailing list	120	110	380	200
Values for the members and the company	• More perspectives on problems • Sense of belonging • Fun of being with colleagues • Knowledge-based alliances • Access to expertise	• More perspectives on problems • Sense of belonging • Fun of being with colleagues • Access to expertise • Coordination across units • Improved quality of decisions • Ability to foresee technological developments	• Access to expertise • Forum for expanding skills and expertise	• Access to expertise • Sense of belonging • More perspectives on problems • Fun of being with colleagues • Forum for expanding skills and expertise • Network for keeping abreast of a field • Coordination across units
Challenges	• Unclear mission • Unclear value • Regional division • Low engagement • Lack of organizational support	• Unclear direction • Low engagement • Not representative of membership • No dedicated time • No authority/mandate	• Unclear mission and identity: too generic • Size and distribution • Diverse members • Low engagement • No dedicated time • Insufficient activity	• Diverse members • Disagreements regarding practice and standardization • No dedicated time • Low engagement • Regional division • No authority/mandate
Dominant archetype	Book club	Open source society	Support line	Standardization committee

the coordinator role. All guilds have a Google email group and Slack channel, and most have regular meeting forums, including yearly colocated unconferences (open space and discussions). An engineer can join multiple guilds, depending on his or her interest. Guild members can choose how active or inactive they want to be. Some of the guilds have many members, others have a few; some have a lot of activity, and others have activities only once a year. Some die, and new guilds emerge. Some are seen as successful, whereas others struggle (see a summary of four sponsored Spotify guilds in Table 1). However, the importance of guilds is undisputed, and therefore we sought improvement ideas by visiting four different guilds and interviewing their core members.

Archetypes

While analyzing the Spotify guilds, it became evident that there is a need to describe their differences. We derived four archetypes (patterns) in relation to the guild mission and activities. All guilds have elements of different archetypes, but one dominates:

- *Book clubs* focus on learning rather than doing, with activities such as lunch-and-learn seminars, invited guests who inspire, and discussing better ways of working. Book clubs rarely make decisions or standardize the practice because the emphasis is on versatile competence development rather than imposing limitations.
- *Open source societies* focus on maintaining, improving, and setting the future strategy for owned components. Such societies resemble an onion structure, with a small group of core contributors in the middle, followed by active developers, and then readers and passive users of the components (e.g., engineers who will integrate their code or reuse pieces of the code).
- *Support lines* focus on onboarding new engineers into a practice, providing quick answers to technical questions, and facilitating solution discussions. Support lines may have hundreds of members who never meet but rely on a few core experts whose engagement is paramount for guiding less-experienced engineers.
- *Standardization committees* focus on aligning a practice across the company through establishment of concrete artifacts, such as coding standards or toolset recommendations.

Common Challenges

We found a number of recurring challenges in the guilds studied:

- Defining and communicating the purpose and expected value was one of the most important challenges. Some members said that their guilds are designed for one purpose (archetype), but in practice they fulfill a different one. Some felt that their guilds are too broad. Some did not know much about the guild activities and purpose. A lack of clarity also made it difficult for newcomers to join guilds.
- Finding dedicated time for engagement in guild work seems to be a constant struggle. Lack of time and conflicting priorities cause low attendance in meetings (only 10–15% present in each meeting). In guilds that have tasks (developing guidelines, improving repositories, or piloting new ways of working), such as standardization and open source types of guilds, subsequent lack of contribution threatens turning these guilds into book clubs. Some members associated the lack of dedicated time for guild work with the perception that it was not sufficiently recognized by the company.
- Maintaining cross-site links for guilds spanning multiple locations was a challenge. Guilds with members from the United States and Sweden, for example, had a hard time scheduling joint meetings. Those managing to set up joint meetings commented that computer-mediated sessions do not provide the same feeling of closeness. Thus, many members attributed large size and distribution with detachment and a lack of community feeling. As a result, it was not uncommon to have decentralized guild activities, inhibiting cross-site knowledge sharing.

Recommendations for Running Successful Guilds

Successful guilds establish a clear practice, demonstrate signs of mutual engagement, interact regularly, and as an outcome, improve the practice.[1,3] Success can be measured by the value a guild provides for the organization and individual guild members. Building on existing research on how to achieve success and the elicited suggestions for improving guilds at Spotify, we propose the following success criteria (see Figure 2).

Establishing a Clear Practice

We found that guilds' fulfillment of a mission was dependent on their authority and organizational attention, support, and sponsorship, as also found in

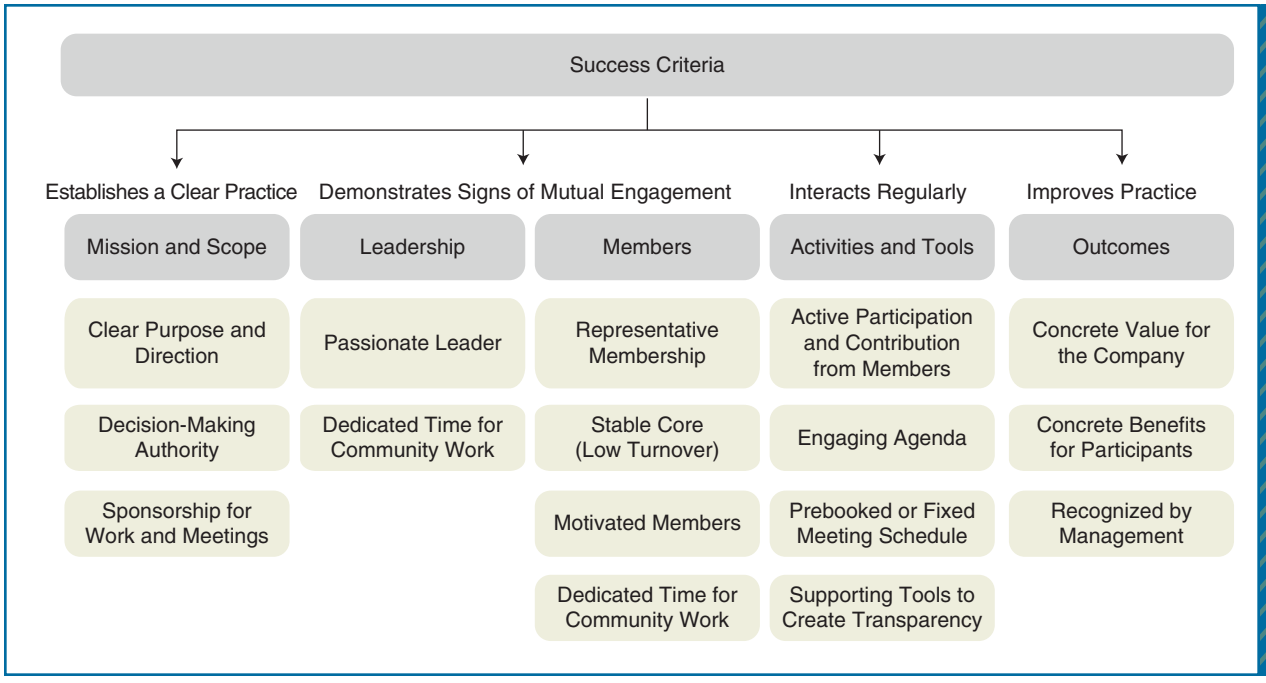

FIGURE 2. An illustration of the success criteria for guilds.

prior research.[3] Guilds whose members had disagreements about what a practice represents, or did not have a clear direction, experienced what we call *existential problems*.

Demonstrating Signs of Mutual Engagement

We found that challenges with engagement, attendance, and representative membership were often related to a lack of dedicated time, low motivation, high turnover, and lack of colocation, which guild coordinators tried to overcome by proactively contacting the members. As one coordinator explained: "We try to get people to the meetings, who we think should be there, who probably want to join, but some people are in [the] U.S. who are part of the time zones, and some are doing other projects currently. . . ."

Interacting Regularly

We found that Slack channels, Google groups, Trello boards, and other tools provide valuable means for interaction and transparency. However, face-to-face sessions were said to be crucial for boosting guild activity. Successful guild meetings were associated with active participation and member contribution, an engaging agenda, and a suitable schedule (ideally prebooked). Shared events, such as yearly joint unconferences and quarterly sync sessions, were very popular and were regarded as valuable for bridging the remote sites.

Improving Practice

Our survey indicates that the majority of members recognize the guilds' ability to create value for both members and Spotify. The top recognized benefits across the four guilds included improved business outcomes (diverse perspectives on problems and quick answers to questions) and coordination across units. Guilds also provide access to expertise and help with challenges, a sense of belonging and fun of being with colleagues, and the ability to network and expand skills and expertise. Challenged guilds had existential concerns and peripheral members who doubted that they deliver value or that the value created is recognized by the management. Finally, we found that well-functioning guilds across sites require extra effort for enabling regular interaction and mutual engagement.

"Agile in the large" has been[4] and still is[5] one of the top burning research questions. Based on a study in Spotify, we found that guilds play an important role in scaling agile as a bottom-up function, enabling knowledge sharing, allowing joint code ownership, and developing new and aligning current development practice across many teams and sites. However, we learned that implementing guilds in Spotify is not an easy task. There is no guaranteed how-to recipe for guilds because of their differences in purpose,

ABOUT THE AUTHORS

DARJA ŠMITE is a full professor of software engineering at the Blekinge Institute of Technology, where she leads research efforts and education on global software development. She has led a number of nationally funded research projects related to the effects of offshoring for the Swedish software industry, with such partners as Ericsson, Spotify, ABB, DXC, Emerson Process Management, and Boss Media. Her other research interests include large-scale agile software development and software process improvement. Šmite received a Ph.D. in computer science from the University of Latvia. Contact her at darja.smite@bth.se.

GEORGIANA LEVINTA is an engineering manager at Spotify. Her research interests include large-scale change management in agile distributed environments, in-team dynamics, and the role of leadership in fast-paced environments where change is the norm. Levinta received one M.Sc. in management and leadership from Stockholm University, Sweden, and another M.Sc. in data transmissions and telecom from the University Politechnica of Bucharest, Romania. Contact her at georgiana@spotify.com.

NILS BREDE MOE is a research manager at SINTEF, where he works with software process improvement, intellectual capital, and agile and global software development. His research interests are related to organizational, sociotechnical, and global/distributed aspects. His publications include several longitudinal studies on self-management, decision making, innovation, and teamwork. Moe received a Dr.Philos. in computer science from the Norwegian University of Science and Technology, Trondheim. He holds an adjunct position at the Blekinge Institute of Technology in Sweden. Contact him at nilsm@sintef.no.

MARCIN FLORYAN is a director of engineering at Spotify. He is interested in complex adaptive systems, agile software development, leadership, and organizational development. Floryan received an M.Sc. in biomedical engineering from the Warsaw University of Technology, Poland. Contact him at marcin@floryan.pl.

design, membership, and repertoire. At the same time, we found many common challenges. To help companies succeed, we have put forward a number of general success criteria.

Perhaps more importantly, we learned that all corporate guilds are different, and that they can be classified into four archetypes. Our results overlap with existing research,[3] in which CoPs were related to knowledge sharing and learning (our book clubs), coordination and technical work (our open source societies), and participation in organizational development (our standardization committees). In addition, we found support lines to be a special type of CoP that provide important technical guidance for inexperienced practitioners; these may have hundreds of members, but those members never meet. We used our classification to study CoPs in another international company and found that corporate-level communities there were set up as standardization committees, whereas product-level communities resembled open source societies with clear code ownership.

We recommend investing in CoPs for their potential to result in knowledge-based alliances that speed up problem-solving and strengthen professional identity. We suggest starting by identifying the mission, scope, and expected value. The archetypes can

help companies set realistic expectations and choose appropriate repertoire. Members of established guilds will benefit by visiting the reported challenges and success criteria and by revisiting their mission and scope on a regular basis. Finally, distributed guilds should focus on tackling the knowledge fragmentation challenges when scaling, using our recommendations as a start.

Acknowledgments

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