Supporting Knowledge Communities: Examples From Organisations With Innovative Management Models

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Abstract: The paper discusses how three organisations with innovative management models support the creation and work of knowledge communities. In the current unstable environment, knowledge, the ability to acquire it, create it and share it becomes one of the most critical aspects of the success of any organisation. Even though organisations may not be consciously aware of this, some adopt specific innovative management models that support their work with knowledge. The management model is how an organisation is managed, e.g. how managerial activities are executed, interlinked and organised into the systemic approach. Traditionally, management models were based on hierarchies and clear rules concerning managerial functions (planning, deciding, organising, leadership and controlling). Innovative management models are flatter; employees are empowered to decide and set objectives; control is decentralised. Some innovative management models are self-managing and look unusual, even crazy, as they deny our expectations about how organisations should be managed. Innovative management models help improve knowledge flow and sharing in an organisation. The paper provides examples of organisations whose unusual management models go even further and support or are intended to support the creation and work of knowledge communities. Knowledge communities usually benefit organisations by providing an environment where employees extensively interact, share and create knowledge. They are the silos of new knowledge, inventions and innovations. Organisations with unusual management models use different managerial tools and methods to support knowledge communities. Some organisations are successful, and some fail. In the paper, we show examples of both groups of organisations and explain why some management models work and support knowledge communities, and others do not. The paper uses secondary data about organisations available in the theoretical and managerial literature on these organisations and information from their web pages.

Keywords: Knowledge community, Knowledge, Management model

1. Introduction

The paper discusses how organisations with innovative management models support the creation and work of knowledge communities. In the current unstable environment, knowledge, the ability to acquire it, create it and share it becomes one of the most critical aspects of the success of any organisation. Even though organisations may not be consciously aware of this, some adopt specific innovative management models that support their work with knowledge. The management model is the way how an organisation is managed, e.g. how managerial activities are executed, interlinked and organised into the systemic approach. Traditionally, management models were based on hierarchies and clear rules concerning managerial functions (planning, deciding, organising, leadership and controlling). Innovative management models are flatter; employees are empowered to decide and set objectives; control is decentralised. Some innovative management models are self-managing and look unusual, even crazy, as they deny our expectations about how organisations should be managed.

Innovative management models usually help improve knowledge flow and sharing in an organisation. The paper provides examples of organisations whose unusual management models go even further and support or are intended to support the creation and work of knowledge communities. Organisations usually benefit from knowledge communities as they provide an environment where employees extensively interact, share and create knowledge. They are the silos of new knowledge, inventions and innovations. Organisations with unusual management models use different managerial tools and methods to support knowledge communities. Many organisations are successful, but many fail. In the paper, we show examples of both groups of organisations and explain why some management models work and support knowledge communities while others do not.

The paper uses secondary data about organisations available in the theoretical and managerial literature on these organisations and information from their web pages.

2. Background

2.1 Knowledge Communities

The term knowledge community is a covering term for different types of knowledge work supporting groups, from knowing communities, cooperative communities, occupational communities, learning communities,

innovative communities, and internal knowledge networks to communities of practice or question and answers communities, discussion boards and online forums or user innovation communities. Even though these communities were founded on different principles and for different concrete objectives, the primary reason for their existence is knowledge sharing and creation (Boland and Tenkasi, 1995).

In this paper, we understand knowledge communities as communities whose members interact and, via this interaction, share and create knowledge (Amin and Roberts, 2008; Boland and Tenkasi, 1995). Or as Harvey et al. (2015, p. 47) specify, "entities that rely on repeated and continuous interactions between individuals sharing a common interest or objective. Knowledge is at the core of both the activities and the outcomes of these communities, whose members actively exchange and accumulate knowledge. Through this regular exchange, group members come to share common mental schemas, social norms, and even a language, all of which can help to guide creative activities and accelerate innovation". Compared to traditional communities, knowledge communities are more professional, and users can exchange knowledge related to specialised topics such as health, academics and software development (Zhou, 2018). "Everyone can bring in the community her own view or perspective, as well as interpretations and values" (Cabitza et al., 2014, p.391), which influences the knowledge a community possess and works with. Knowledge communities are important, especially in a volatile environment where they serve as silos of knowledge creation, innovativeness and collective intelligence on one side and the other as places of stability and friendly environment.

As Harvey et al. (2015) mention, knowledge communities in organisations may be formal and informal. Formal knowledge communities are intentionally developed and managed by an organisation and may be part of its organisational structure. Informal knowledge communities emerge naturally from human interaction and communication.

Knowledge communities develop based on two mechanisms, common identity or common bonds. Some knowledge communities, for example, communities of practice, are based on both.

In common identity-based knowledge communities, "the attachment to the group is dependent foremost on the identification with the group as a whole, its goal, and its purpose" (Sassenberg, 2002, p. 28). Sassenberg (2002, p. 28) goes on: "An example of this type of group is a sports team: The common goal of the group members and the purpose of the group is much more important than the perceived interpersonal attraction between the single players." Alternatively, differently, "In these groups, the strength of group attachment depends first and foremost on one's commitment to the identity of the group" (Prentice et al., 1994, p. 85).

Common identity develops via social categorisation, interdependence, and intergroup comparisons (Ren et al., 2007; Turner, 1985; Turner et al., 1987). Social categorisation is based on the group's shared identity. Interdependence is supported via common tasks, common purposes or fate. Intergroup comparisons, e.g. community members comparing themselves to other groups and communities, increase people's commitment to their group (Ren et al., 2007).

In common bonds-based knowledge communities, "the bonds between group members primarily make up the attachment to the group. These groups can be characterised by the interpersonal conception of group cohesion, where the attraction of the group for the individuals does not play a role; rather, what is important is the attraction of the individuals to one another (personal attraction). An example is a group of friends" (Sassenberg, 2002, p. 28).

"Researchers have identified three main causes of bond-based attachment to a group: social interaction with others, personal knowledge of them, and interpersonal attraction toward them often through similarity." (Ren et al., 2007, p. 387). Social interaction helps people to learn about each other and to develop trust. Frequency is one of the factors that increase relationship development. Personal information builds understanding and interpersonal bonds. People like interacting with people with similar ideas, values, hobbies, ages, etc. (Ren et al., 2007).

Both common identity and common bonds support trust and openness toward others. They may cooperate in knowledge communities. "Further, despite their conceptual distinction, an identity-based attachment may evolve into bond-based attachment and vice versa" (Ren et al., 2007, p. 401).

In a volatile environment, the importance of knowledge is growing. Knowledge is not, and cannot, be concentrated in a single mind, and no single mind can specify in advance what kind of practical knowledge will be relevant, when and where (von Hayek, 1945). Therefore "firms would do well to understand the knowing

(knowledge) communities with which they are linked, the activities in which those communities engage, and the avenues through which they may be nurtured" (Harvey et al., 2015, p. 446).

2.2 Innovative Management Models

Management models can be defined as paradigms (Guillén, 1994), models of control (Ouchi, 1980), "the choices made by a company's top executives regarding how they define objectives, motivate effort, coordinate activities, and allocate resources; in other words, how they define the work of management" (Birkinshaw and Goddard, 2009, p. 82) or "distinct bodies of ideas that offer organisational managers precepts for how best fulfil their technical and social tasks." (Bodrožić and Adler, 2018, p. 86). Differently, a business model is what the organisation does; a management model is how they do it (Birkinshaw and Goddard, 2009).

Traditional management models used and recommended since the beginning of the 20th century (for example, by H. Fayol or M. Weber) were based on strict deciding hierarchies, bureaucracy, top-down planning, extrinsic motivation and centralised control (Birkinshaw, 2012). Traditional models fit well into a relatively stable economic environment. However, they turned out to be one of the limits in a volatile knowledge-focused environment.

Innovative management models, an alternative to the traditional ones, started to develop approximately from the 50thof the 20th century, some of them (for example, Semco and Gore models) inspired by the book of Douglas McGregor, The human side of enterprise (McGregor, 1960). Innovative management models changed hierarchies to empowerment in the field of deciding. Top-down planning was replaced by bottom-up planning that enables employees to express their ideas and comments on and participate in creating objectives and plans. Organisations discovered the importance of intrinsic motivation. Empowerment in decisions resulted in control decentralisation.

These days, organisations know the importance of knowledge and knowledge sharing for their businesses and try to support it with a knowledge-friendly environment. Many organisations (intentionally or intuitively) create new innovative management models that, as Alder (2015, p.446) notes, "support community work within and beyond firm". In this paper, we provide examples of companies with alternative management models and discuss how they support the work of knowledge communities in these organisations.

3. Objective and Methodology

This paper discusses how three organisations with innovative management models support the creation and work of knowledge communities.

The data used in this paper are secondary data from the literature. The literature on knowledge communities and innovative management models was collected by WOS search. We searched the following keywords: "knowledge community", "knowing community", and "management model". The additional literature was collected based on relevant citations found in these journals and further keyword searches in other types of academic and practice-oriented resources. Our previous research on these topics collected literature on common identity and common bond theories.

Companies discussed in this paper were chosen from the pool of companies already known and discussed in the literature on different types of management models. The collection of data about the company started with corporate web pages and materials. This search provided us with basic data about companies and their management. The next step was the key-world search in the EBSCO database. We searched for three fundamental keywords – the company's name, the company's name with the word management model and the company's name with the word case. This search provided us with research papers on companies. The third step was the Google search which allowed us to collect data from professional journals and blogs.

4. Findings

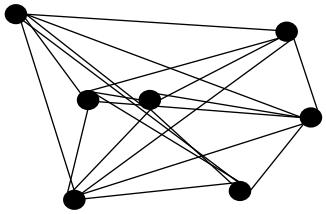
In this part of the paper, we would like to provide examples of how organisations with innovative management models support the creation and work of knowledge communities. We introduce three management models; up till now, a fully functional model of W. L. Gore & Associates, the Semco model that worked under the company owner R. Semler (he sold the company, and there is no information about the management model now) and the Spotify model that, even though well prepared, failed to work.

4.1 W. L. Gore & Associates

W. L. Gore & Associates (Gore) was founded in 1958. The founders, Bill and Vieve Gore, influenced by D. McGregor's theory Y, created the company with a fundamental belief in the individual, the collaboration of small teams, a long-term view and guiding principles of freedom, fairness, commitment, and so call waterline (rule to discuss with colleagues whatever may be dangerous for the company) (Gore, 2023).

Knowledge communities are supported by organisational structure, a limited number of teams and employees in plants, teams built from different professions, cooperation of people from different teams, and the hiring system.

Gore's "lattice" organisational structure builds on the principle of an informal network of relationships and connects every individual to every other. Therefore, as Hamel (2010, A lattice, with self-managed teams) writes: "At Gore, there would be no layers of management, information would flow freely in all directions, and personal communications would be the norm. And individuals and self-managed teams would go directly to anyone in the organization to get what they needed to be successful".



(Source: Author)

Figure 1: Lattice Organisational Structure

"The Gore Company limits the size of teams to facilitate direct communication. In addition, each Gore Company site contains only a small number of teams to promote interaction between associates and the pursuit of common goals. Also, in some locations, production occurs in multiple small plants clustered together rather than in one large factory. The teams may, in those cases, pursue their day-to-day work within their mini-plant but may also collaborate occasionally with associates or the teams in another nearby mini-plant if this makes sense in connection with, for example, a development project. Such clustering thus encourages interaction among unrelated teams" (Grønning, 2016, Challenges That the Gore Company has Experienced). Each plant has different professions (engineers, chemists, salespeople, etc.) to support cross-functional knowledge sharing and cooperation. Plants are not allowed to grow over 200 people so that people could know each other and decide together. Teams from different plants meet regularly to ensure employees know each other and cooperate.

Job descriptions are general, and employees negotiate their roles and responsibilities with their teams. Once negotiations are finished, the result becomes an unbreakable commitment, and the individual is accountable to his team. The negotiation process can be time-consuming, but it helps to bring together different talents, perspectives, and knowledge. People work in different teams, and teams also always cooperate, which may look chaotic from the outside. Employees get mentoring and support; new employees get a sponsor who helps them to understand the Gore management model, its rules and how it works.

Compensation is based on the evaluation of co-workers. Employees can use 10% of their working hours for their personal projects. They are encouraged to implement the idea if they persuade their colleagues to join them and create a team for implementation. This rule supports knowledge sharing and creativity.

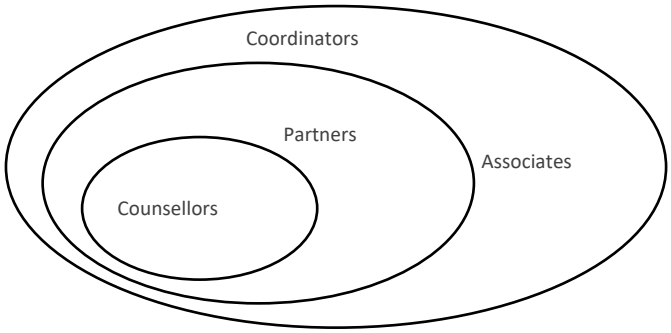
Gore is cautious about new employees. The hiring process is very long and challenging to ensure that only people who match and can sustain the specific Gore management model are hired. Applicants are interviewed and observed by members of involved teams who decide whether to employ the person.

4.2 Semco

Semco, a Brazilian industrial equipment manufacturer, was founded in 1953 as a traditional company. Since 1980 its management model was transformed by Richard Semler, the son of the founder, to a self-managed model based on employee participation in planning, decision-making and implementation. Semco adopted the management model first used by groups responsible for technical innovations, which turned out to be knowledge-work supportive (Semler, 1998).

The organisational structure, the limited size of units, open meetings, open communication and the hiring process, supported knowledge communities.

Three circles created the structure of the company; a circle of counsellors and partners, coordinators and associates. "Counsellors are like vice presidents and co-ordinate the general policies and strategies; partners run the business units; coordinators comprise the first level of management, such as marketing, sales, and production supervisors or engineering and assembly-area foremen; associates are the workers" (Petersson and Spängs, 2006, p. 34).



(Petersson and Spängs, 2006, p. 58)

Figure 2: Semco Circles

The company structure was replicated to individual business units organised in fully autonomous small units (max 150 so they could know each other). Units developed on different criteria (product, market, etc.), but each unit had full accountability for their business, including finances and communication with suppliers and customers. Each unit had a committee (5-10 workers, engineers, executives, and support clerks) that discussed its production issues. About two-thirds of employees worked in such units. (Semler, 1998). There was voting in case of important decisions, and all employees were empowered to vote. Once a month, there was a meeting focused on new ideas.

Managers became facilitators whose role was to support employees. All meetings in Semco were open to all employees, and whoever was present could vote. The management model was endorsed by the hiring process. Employees decided about new hires and could bid for new positions every half a year. Applications were evaluated by managers and the company as a whole (Semler, 1998).

4.3 Spotify

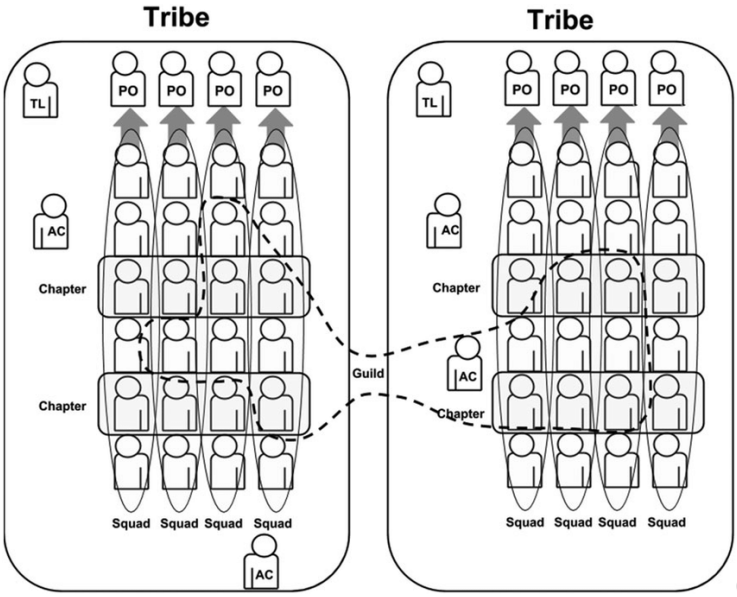
Spotify developed and tried implementing a sophisticated matrix-type management model to support knowledge communities in horizontal and vertical dimensions. Even though the model never worked in the company (Michou, 2020), it was an interesting attempt.

The Spotify management model comprises squads, tribes, chapters, guilds, and trios. The vertical level is built of stable teams of squads and trios where people with different skills collaborate. Due to extensive collaboration and stress on face-to-face communication, the team have the potential to transform into a knowledge community. Horizontal level, chapters and guilds were intended to become and work as knowledge communities.

Squads are cross-functional, autonomous, self-managing teams of experts (typically 6-12 individuals) focusing on one feature area. They are the primary value creators understood and treated as mini-startups (Knitberg and Ivarsson, 2012). "Each squad has a unique mission that guides the work they do, an agile coach for support, and a product owner for guidance" (Cruth, n.d., Squad). Product owners prioritise the work in the squad and collaborate with other product owners on coordination among their squads. They are not responsible for how the work is done. Agile coaches help to improve how squads work. Squads are encouraged to spend about 10% of their work time on their ideas and knowledge sharing. Squads are supposed to cooperate with squads in their tribe but not with squads from a different tribes.

Tribes are groups of squads that work in a similar area. Tribes consist of 40-100 people. They are located in one place and have a tribe leader. Squads and tribes meet regularly and informally when they need to. Chapters are groups of experts in specific areas and help to keep engineering standards in place across a discipline. Chapters are led by a senior technology leader, who may also be the manager for the team

members in that chapter. Guilds are communities of interest. Members are from different squads but meet to share knowledge, tools, and practices. They have a guild coordinator (Knitberg and Ivarsson, 2012; Cruth, n.d.). The trio combines a tribe lead, a product lead, and a design lead. Each tribe has a trio to ensure continuous alignment between these three perspectives when working on feature areas. Alliances are a combination of tribe trios (typically three or more) that work together to help their tribes collaborate on a bigger goal than anyone's tribe (Cruth, n.d.).



(Bäcklander, 2019, p. 45)

Figure 3: Spotify Structure

The model is supported by stress on face-to-face communication and a long and careful hiring process.

The Spotify knowledge work supporting model was never fully implemented in the company. It turned out to be very complicated, and required extensive communication among employees, shared responsibilities and cross-team collaboration (Michou, 2020). It was implemented quickly in the period of extensive company growth, which probably caused problems with implementation.

4.4 Developing Knowledge Communities via Common Bonds and Common Identity

This chapter summarises how innovative management models of three organisations discussed in this paper support creation and work of knowledge communities via common bonds and common identity.

Table 1: Developing Knowledge Communities via Common Bonds and Common Identity

Company	Gore	Semco	Spotify
Common identity			
Social categorisation (group shared identity).	Employees are called associates and are company owners through the associate stock plan.	Vote of all employees on important decisions.	Based on squads perceived as startups. Squad mission.
Interdependence (joined tasks).	Associates are encouraged to cooperate with other associates on different projects and ask for help.	Possible to participate and decide in any meeting.	In tribes. Chapters. Guilds.
Intergroup comparisons.	Comparison to other companies – a feeling of exclusivity.	Comparison to other companies – a sense of exclusivity.	Comparison to other squads/tribes. A feeling of exclusivity.
Common bonds			

Company	Gore	Semco	Spotify
Common identity			
Social interaction with others.	Supports frequent interactions.	Supports frequent interactions.	Supports frequent interactions.
Personal knowledge of them.	Factories max 200 people.	Units max to 150 people.	Tribes max 100 people.
Interpersonal attraction toward them, often through similarity.	The careful and demanding hiring system.	Careful and challenging hiring system (including reallocation to different work).	The careful and challenging hiring system.

5. Discussion

"If we can agree that the economic problem of society is mainly one of rapid adaptation to changes in the particular circumstances of time and place, it would seem to follow that the ultimate decisions must be left to the people who are familiar with these circumstances, who know directly of the relevant changes and of the resources immediately available to meet them. We cannot expect that this problem will be solved by first communicating all this knowledge to a central board which after integrating all knowledge, issues its orders. We must solve it by some form of decentralisation. But this answers only part of our problem. We need decentralisation because only thus can we ensure that the knowledge or the particular circumstances of time and place will be promptly used" (von Hayek, 1945, p. 524). This over seventy years old quote supports the fact that organisations are searching for ways how to intensify their knowledge, its utilisation, creation and sharing because "knowledge is not the inalienable product of each individual's own reasoning. It is essentially transmissible, capable of being made a common possession" (Welbourne, 1981, p. 305). "Research has shown that a firm's creativity and innovation depend heavily on its knowing communities, which reach beyond formal RandD activities or individual employees' initiatives" (Harvey et al., 2015, p. 46).

Organisations discussed in this paper understand that "A firm is seen as the repository of knowledge and the physical locus of its creation and deployment because it provides the social, political, and economic context under which knowledge is constructed" space (Lee and Cole, 2003, p. 634). Therefore they introduced innovative management models where "the lateral-flexible organizational form relies on peer-to-peer collaboration (as opposed to a vertical hierarchy) in achieving organizational objectives" (Boland and Tenkasi, 1995, p. 350). Their management models support "face-to-face interactions among knowledge developers to facilitate trust building over a long period of association and through sharing a common space" (Lee and Cole, 2003, p. 634).

Management models of organisations presented in this paper prove the statement that "Many of new management models support community work within and beyond firm" (Adler, 2015, p. 446) and that "knowledge-intensive firms are composed of multiple communities with specialized expertise, and are often characterized by lateral rather than hierarchical organizational forms" (Boland and Tenkasi, 1995, p. 350).

6. In Conclusion

The objective of this paper was to show the example of three companies and how they adapted their management models to support the development and work of knowledge communities. W. L. Gore & Associates created the management model that proved its viability through decades. The Semco model successfully helped the company in years when R. Semler owned it. Spotify model, though only partially implemented in Spotify, offers an interesting option for developing knowledge communities in organisation and supporting their interaction.

Companies discussed in this paper are not the only companies that adopted specific management models to support knowledge communities; we can name Google, Facebook, Morning Star, Buurtzorg, and Favi, among many others. The number of such companies will be growing because of the pressure of the economic environment on knowledge sharing. Therefore it will be necessary to research these organisations, their management models and how they support knowledge communities.

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