



# Knowledge Management

# REVIEW

## Learning Across Teams

How to build communities of practice  
in team organizations

by Richard McDermott PhD

For a sample issue of KM REVIEW contact Camilla Nicol at  
[camilla.nicol@melcrum.com](mailto:camilla.nicol@melcrum.com)

311 South Wacker Drive, Suite 4550  
Chicago, IL 60606, USA  
Tel: (312) 697 4782  
Fax: (312) 697 4799

Ivory Place, Treadgold Street  
London, W11 4BX, U.K.  
Tel: +44 171 229 9900  
Fax: +44 171 243 5554



Teamwork is prolific in almost every aspect of business and is often encouraged as a way of communicating and sharing knowledge. But there are some key limitations to cross-functional teams, and in this feature Richard McDermott argues that a better model is the double-knit organization, which provides a far more meaningful exchange of learning by interweaving teams with Communities of Practice in one company-wide fabric.

# LEARNING ACROSS TEAMS

## How to build communities of practice in team organizations

by Richard McDermott PhD

Ever since Shell Oil's Deepwater Exploration division reorganized into cross-functional teams, Mary, a petrophysicist, has had a much easier time coordinating with the people she depends on for information. Located at the same end of the hall as the other engineers working on plans to drill a prospect in the Gulf of Mexico, she can informally stop by and discuss the timing of key aspects of the project, her interpretation of results or the logic behind a conclusion. She can now immediately communicate information that she used to wait for team meetings to share.

But she misses some parts of the old functional organization. When she was located with other petrophysicists, she could walk down the hall to discuss her interpretation of data with a colleague, find out how well a new analytic tool really worked or hear about emerging issues in her field. Now she needs to find a colleague several floors away or make an appointment for an informal discussion. If she could only have the best of both worlds: easy contact with the other engineers working on her project and easy access to engineers in her own discipline.

### **Teams are not perfect**

Mary's concern is not uncommon, and arises from the fact that there are some key limitations to cross-functional teams. While they are great vehicles for producing products and services,

members of teams can become isolated from each other, having a negative effect on knowledge-sharing. This article discusses the idea of the "double-knit" organization – one that links cross-functional teams together through Communities of Practice (COP) and enables them to systematically learn from each other.

### **What is a team organization?**

Many companies are moving to a new model where cross-functional teams are the key building block of the organization. A team is a group of people with a common goal, interdependent work, and joint accountability for results. Frequently, teams are composed of people from different professions or jobs, whose knowledge and skills are needed to produce a whole output. Their business directives, common goals, and joint accountability tie them together into a cohesive unit. They usually sit together and report to the same boss<sup>1</sup>.

Because they are located together and have common goals, team members easily share the information and thinking that once fell in the "white space" between functional silos. By focusing on a single output – whether that's a major sub-assembly of a car or the design of an oil well – teams develop a real sense of common purpose and focus. Working together in close proximity over an extended period develops a rhythm, rapport, common identity and, ultimately,

## KEYPOINTS

- Despite their benefits cross-functional teams have key limitations, and can become new silos.
- A double-knit organization overcomes this problem by linking teams with Communities of Practice.
- In a double-knit organization, teams focus on their strengths (outputs, processes or market segments)

while Communities of Practice focus on learning within functions.

- Teams and Communities of Practice are different: teams are tightly integrated and driven by deliverables; Communities of Practice are more loose-knit and driven by value.

**Richard A. McDermott** is President of McDermott & Co., helping companies develop corporate knowledge management strategies and build local and global communities of practice. He has 18 years' experience consulting on organizational design and change. Recent clients include Shell Oil Company, Hewlett-Packard, Celestica, The World Bank, and Ben and Jerry's. His current interests are in how to build and maintain global knowledge-sharing communities.

the trust that vastly improves the team members' ability to build on ideas and solve business and technical problems.

Teams can be great vehicles for learning because their structures provide the safe environment people need to explore new ideas and challenge their own assumptions. When members develop trust and rapport, they can feel safe enough to share their thinking, the reasons behind their conclusions, the questions they have about their conclusions and even their half-baked ideas. When they take time to collectively reflect on their experience, they can build on each other's ideas and deepen the richness of their thinking and insights.

### The limitations of teams

As Mary found out, teams can become new silos. Team members often complain that they have trouble getting information from other teams. They reinvent tools, analyses or approaches developed by their peers on other teams. They waste time searching for information they know one of their colleagues has. The very thing that makes teams work well – common goals, shared focus, physical proximity and working rapport – can easily lead to two related learning disabilities: isolation and team myopia.

With a natural inward focus, teams can become isolated. When PepsiCo expanded internationally, teams charged with building the business in Eastern Europe, Russia, the Middle East and the Pacific Rim had no plans to share experiences, insights and ideas with teams working in other regions. The result was that every single team started anew, repeating the same mistakes and following the same blind alleys already explored by their predecessors. This type of isolation is common for cross-functional teams. Even when team members intend to share insight and information with other teams, team goals often pull so strongly on people's time that they simply cannot find the time to do it.

Isolation can lead to team myopia. When isolated, teams can get into the habit of rejecting

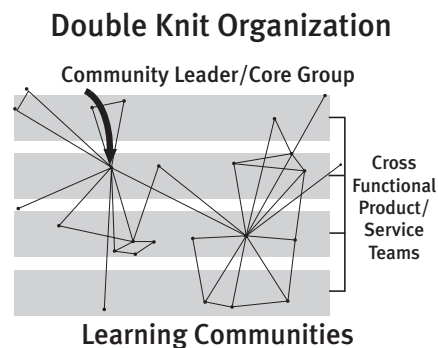
ideas from outside and lose their ability to generate new ideas. Research in creative thinking has long-shown that new ideas usually come from the intersection of disciplines, perspectives, or ways of thinking<sup>2</sup>. Scientists often do their most creative work a few years after they change fields. When teams lose touch with other teams, they often get into a rut of repeating the same approaches, tools and ideas. This can be particularly hard for technical specialists. When they lose touch with their peers, they can have trouble keeping up with developments in their field.

### The "double-knit" organization: teams and communities of practice

A double-knit organization combines teams with COPs. Several companies are trying a different way to link cross-functional teams. Instead of sharing learning through team leaders, they are creating organizational structures that weave teams together through communities of practice. Each community of practice focuses on a topic or discipline important to the organization and is responsible for sharing knowledge and standardizing practices.

This approach links the organization in two ways. Cross-functional teams focus on outputs (typically products), major processes or market segments. COPs focus on learning within functions or disciplines, sharing information and insight,

Figure 1. The double knit organization



LEARNING ACROSS TEAMS

collaborating on common problems and stimulating new ideas. COPs can preserve a discipline or technical focus, while cross-functional teams unite disciplines around common products. Teams weave the organization together in one direction, while communities weave it together in the other (see Figure Two, below).

A community of practice is a group that shares knowledge, learns together and creates common practices. COPs share information, insight, experience and tools about an area of common interest<sup>3</sup>. This could be a professional discipline (such as reservoir engineering or biology), a skill (like machine repair), a topic (such as technology), an industry or a segment of a production process. Consulting companies usually organize COPs around both disciplines, such as organizational change, and industries like banking, petroleum or insurance<sup>4</sup>. Community members frequently help each other to solve problems and develop new approaches or tools for their field. This makes it easier for community members to show their weak spots and learn together in the “public space” of the community.

As they share ideas and experiences, people develop a set of common practices. Sometimes they formalize these in guidelines and standards, but often they simply remain “what everybody knows” about good practice. Since COPs focus on topics that people often feel passionately interested

in, they can become important sources of individual identity.

**Driven by value – defined by knowledge**

Teams and COPs are different kinds of groups. Teams are tightly integrated units driven by deliverables, defined by managed tasks and bound together by members’ collective commitment to results. COPs are loosely knit groups driven by the value they provide to members – defined by the opportunities to learn and share what they discover and bound by the sense of collective identity that the members form.

Unlike teams, COPs rarely have a specific result to deliver to the organization. Instead, they are typically driven by the value they provide to individual members. Individuals share information and insights and discover ideas which will save them money, time, energy and effort. The value that individuals derive from the community is typically what keeps community members involved. While a team delivers value in the result it produces, a community discovers value in many day-to-day exchanges of knowledge and information.

The heart of a team is a set of interdependent tasks that lead to an objective. The heart of a community of practice, on the other hand, is the knowledge members share and develop. Since community members apply their knowledge on teams outside the community, it is not possible to predict exactly what knowledge will be important to the community. COPs therefore follow opportunities for sharing knowledge as they arise, and as a result the “hot topics” in a community shift over time. As topics shift new people join the community, adding their perspective and shaping its direction. While teams often have clear boundaries and membership, COPs have many partial, part-time, and marginal members. Like a double-knit fabric, they can stretch as topics and needs evolve.

**Organic growth**

Teams progress by moving through a workplan, but communities develop by discovering new areas to share current knowledge and develop new knowledge. Team members gauge their contribution by the tasks they are responsible for, while community members gauge their contribution by their interest in and knowledge of a topic. Communities frequently have a core group of high contributors and a large group of “lurkers,” who ask or contribute little. When we first discovered this distinction (in a community of geologists) we thought – following good team

Figure 2. Contrasting teams and communities of practice

Teams	Communities of Practice
Driven by deliverables <ul style="list-style-type: none"> <li>• Shared goals and results</li> <li>• Value defined by charter</li> <li>• Value in result delivered</li> </ul>	Driven by value <ul style="list-style-type: none"> <li>• Shared interest or practice</li> <li>• Value discovered/evolves</li> <li>• Value in ongoing process</li> </ul>
Defined by task <ul style="list-style-type: none"> <li>• Interdependent tasks</li> <li>• Clear boundaries</li> </ul>	Defined by knowledge <ul style="list-style-type: none"> <li>• Interdependent knowledge</li> <li>• Permeable boundaries</li> </ul>
Develops through a work plan <ul style="list-style-type: none"> <li>• Everyone contributes</li> <li>• Managed objectives through objectives &amp; workplan</li> </ul>	Develops organically <ul style="list-style-type: none"> <li>• Variable contributions</li> <li>• Managed by making connections</li> </ul>
Bound by commitment <ul style="list-style-type: none"> <li>• Joint accountability</li> <li>• Based on explicit agreement</li> <li>• Team leader or manager</li> </ul>	Bound to identify <ul style="list-style-type: none"> <li>• Reciprocal contributions</li> <li>• Based on trust</li> <li>• Core group/coordinator</li> </ul>

principles – that we should have even participation.

Before actively encouraging the lurkers to “help carry the weight of contribution,” we interviewed them and discovered that most had been with the organization less than two years. They were using the community to learn about a branch of geology new to them by listening to world-class experts discuss leading-edge problems. Managing a team means coordinating interdependent tasks; managing a community means making connections between members and keeping the topics of the community fresh and valuable.

### **Bound by identity**

COPs frequently form around disciplines or topics which community members have invested many years thinking about and developing. In the course of helping each other, sharing ideas and collectively solving problems, community members often form a strong bond and identity. Despite the community lurkers, high contributors often say they contribute because they “owe” other high contributors their insights. In team-based organizations, COPs are often the only way that members can get feedback from knowledgeable peers. And praise from community members is often more meaningful than praise from team leaders who know little about the details of your work. People therefore have a great deal of their professional identity tied up in their communities.

In a double-knit organization, COPs compensate for the limitations of teams. By linking experts from different teams together, COPs mitigate the isolation of cross-functional teams. The community provides information and insight on tools, analyses and approaches current in the discipline. Community coordinators typically know who is working on what technical problems and who the current experts are in each topic area, so they can quickly link individuals on cross-functional teams to peers in their discipline. They are also a ready reference for finding others to help solve tricky technical problems.

One group of geologists at Shell used their global geology network to find a group with whom they could review a controversial analysis. The joint analysis saved the group a considerable amount of money. By sponsoring workshops on new technical areas and hosting a mentorship program, another community develops and maintains their capability in the discipline. Combining cross-functional teams and COPs is a powerful way to make an organization

simultaneously oriented to output and learning.

COPs stay together against the pull of teams by providing value to their members. Clearly, teams are a stronger connection than COPs. They pull harder on people’s time, commitment and energy. COPs that cross team boundaries inevitably compete with teams for people’s time. Most stay together because members find participating in them valuable. But in the tug of priorities, personal value is often not enough to keep communities together. To compensate, American Management Systems (AMS) has made community participation a high-status event. Original community leaders were invited by the chairman of the board to participate, and community members attended an annual high visibility invitation-only conference.

### **A distinct organization**

A double-knit organization is different from a matrix. The double-knit organization is a solution to an old problem: how to coordinate cross-functional products and services and still keep people on the cutting edge of their functional discipline. But matrix organizations use the same kind of structure – a reporting relationship – on both axes of the organization. People have a functional and product manager. A double-knit organization is different. It weaves the organization together using different kinds of structures – tightly knit teams on one side, loosely-knit communities on the other. Since COPs have flexible boundaries, no reporting relationships and no resource allocation responsibilities, they are very different from functional organizations. Although we can develop them, they are essentially self-managed and self-organizing.

### **Building communities**

Communities of Practice arise out of a natural desire to share ideas, get help, learn about new ideas, verify thinking and hear the latest “professional” gossip. They develop as people have regular contact with colleagues who share their interests. But in team-based organizations, most day-to-day contact is with other team members.

To share learning across teams, it’s necessary to extend natural networking across the chasm of isolation. This usually means that you need to create *intentional* COPs. These are intentional in their focus, start-up activities and support, but to develop the trust, connection and sharing of natural communities it’s necessary to support the natural process of community development rather

## LEARNING ACROSS TEAMS

than impose an artificial one.

Starting COPs is very different from team-building. Since COPs are organized around knowledge, not outputs, traditional team-building activities of setting goals, dividing tasks and developing workplans are not appropriate. Starting and supporting COPs follows a different set of guidelines:

- *Focus on a few important topics.* Organizations frequently cast “too wide a net” when initiating knowledge management approaches and end up building stockpiles of under-utilized information. To leverage knowledge effectively, start with a few COPs focused on topics strategically important to the organization.
- *Build on natural networks.* Whether the organization supports them or not, COPs arise naturally in most organizations – so don’t create new communities. Once you have identified an important topic to form communities around, find the networks of people who already share knowledge about that topic.
- *Develop community coordinators and core groups.* A key success factor for intentional communities is to have a coordinator who organizes and maintains the community. This coordinator is usually a well-respected and well-connected community member.
- *Support communities.* Managers need to give people the time and encouragement to reflect, share ideas with other teams and think through the implications of other teams’ ideas.
- *Be patient.* COPs often take time to develop. One of the most successful communities at Shell started as a group of six to eight people meeting weekly to discuss cutting-edge issues. It took six months for word to spread on the value of these discussions by which time attendance at the weekly meetings had grown to about 40 people. Because they are organic, COPs need time to find the right kind of information to share, the right level of detail, the right participants and the right forums.

## References:

1. Katzenbach J and Smith D: *The Wisdom of Teams* (Boston). Harvard Business School Press, 1993.
2. Leonard-Barton, D: *Wellsprings of Knowledge* (Cambridge). Harvard Business School Press, 1997. De Bono, E: *Lateral Thinking* (New York). Harper & Row, 1970.
3. Wenger, E: *Communities of Practice* (Boston). Cambridge University Press, 1998.
4. Peters, T: *Thriving on Chaos* (New York). Alfred A. Knopf, 1987.
5. Davis S and Lawrence P: *Matrix*, Reading (Mass.). Addison-Wesley, 1977.

## Notes:

1. Thanks to Etienne Wenger, Bill Snyder, Mike Mahaffie and Sue Gilly.
2. A series of articles on leveraging knowledge is available from Richard McDermott (see above for e-mail address).

## Summary

Sharing learning across teams involves more than project post-mortem briefings or documenting the lessons learned. To convey the depth of people’s insights in a way that’s valuable to others, learning needs to be an exchange in which people build relationships that help them to understand and make sense of each other’s ideas. A double-knit organization is one way to do this.

Rather than sharing learning from one whole team to another, a double-knit organization links individual team members with people from other teams in networks and COPs. Communities of practice create the trust and understanding that allows people to share mistakes, accomplishments and half-baked ideas, as well as brilliant insights.




---

Richard McDermott

McDermott & Co

E-mail: Richard@RMcDermott.com