

Amy C. Edmondson, PhD
Novartis Professor of Leadership and Management,
Harvard Business School
Statement on Strategic Integration at The Department of Defense
Senate Armed Services Committee
Tuesday, June 28, 2016

Chairman McCain, Ranking Member Reed, Members of the Committee:

Thank you for the opportunity to discuss the utility of cross-functional teams in business as input for the Department of Defense. My goal is to explain the extensive business use of teams, and why they are considered a necessity for success in today's highly complex, fast-paced world. I also wish to explain why many cross-boundary collaborations fail, along with what is known about the requirements for success. Finally, I will describe the exciting results of successful cross-boundary collaboration and teaming in modern organizations.

As background, my expertise is in Organizational Behavior. I am on the faculty at Harvard Business School, where I teach and conduct research on organizational learning, and leadership for the past 25 years.

The extensive business use of teams.

The use of teams in business organizations is widespread. Fast-moving global markets and disruptive technologies have forced companies to find new ways to innovate, and teams play a central role in innovation, as elaborated below. But teams are not new to the business world. Starting in the 1980s and gaining momentum in the 90s, the implementation of team-based structures has been long recognized by business leaders and academics as vital to organizational effectiveness. By 1998, 70% of workplaces with 50 employees or more employees had implemented teams.¹ In a recent survey, 88% of managers in global corporations reported spending at least half of their time working in teams.² In sum, work in today's companies – be it production, sales, new product development, systems innovations, or strategy formation – is increasingly carried out in teams.

Two basic motivations explain the pervasive use of teams in the private sector:

First, and most important, certain organizational activities cannot be accomplished effectively by functional hierarchies because they require people to integrate diverse information, expertise, or interests, through back-and-forth sharing of ideas, information, and constraints. When well-managed, diverse teams can accomplish this kind of work effectively and quickly.

¹ M. Gittleman, M. Horrigan, and M. Joyce (1998). "Flexible" Workplace Practices: Evidence from a Nationally Representative Survey. *Industrial & Labor Relations Review* October 1998 52: 99-115,

² The Ken Blanchard Companies (2006). *Research findings: The Critical Role of Teams*. Accessed at www.kenblancard.com, June 24, 2016.

Second, research has shown that participating in well-managed teams promotes commitment and buy-in. Indeed, teams are seen as a crucial element of high-commitment work organizations. In large, complex organizations, people often feel a deep sense of loyalty to their team members rather than to the company as a whole, and it is this loyalty that binds them to the organization. When individuals build relationships across functions or departments by participating on a team doing meaningful work for the organization, it leads to positive outcomes including better employee engagement, retention, and performance. In short, when teams work, both the technical and human dimensions of the organization are well served.

Teams also function as a key mechanism for organizational learning, itself a crucial source of competitive advantage in a fast-paced environment. Most companies use teams to analyze current processes and performance, and to design and implement necessary changes. This reflection-action capability is akin to the U.S. Army's after action reviews (AARs) widely celebrated by organizational researchers. This collective learning capability is important because today's business leaders consider ongoing organizational change a necessity for continued success in a changing world. By organizational change, I include small process improvements as well as the periodic major organizational transformations that allow iconic companies like IBM and Ford to recover and survive after extreme industry turmoil threatened their very existence, while other firms, such as DEC or American Motors, disappear into history.

Cross-functional teams, collaboration, and collaborative cultures

Teams come in many forms in the corporate sector, most notably self-managed teams, leadership teams, and cross-functional teams. The related terms, collaboration and collaborative cultures, describe attributes of effective teams, but do not directly indicate the existence of formal teams of any kind. Collaboration refers to the willingness of people, within and across company functions or departments, to help each other to solve problems or carry out work on behalf of the organization, especially in horizontal relationships. Collaborative culture describes an atmosphere and behaviors of cooperation trust, and mutuality an organization.

For the purpose of today's hearing, I focus on cross-functional teams, which are teams created for the express purpose of accomplishing work requiring multiple areas of expertise or interest to be considered concurrently. A cross-functional team brings individuals from different organizational units or functions to work together, with shared responsibility for a specific deliverable. The clearest example of such work in business is new product development (NPD). Several decades ago, NPD was accomplished by people working in separate functions – sales, marketing, design, engineering, manufacturing, accounting, and so forth – each completing their respective tasks and “throwing them over the wall” to the next function to take over. This was not only slow, it produced poorer quality products and services. Without what organizational scholars call “reciprocal coordination” – or back-and-forth discussions of merits, constraints, challenges and opportunities – complex problems cannot be solved in innovative and effective ways. In the U.S. automotive industry, blindsided by dramatically faster and higher-quality product development in leading Japanese car companies, a revolution in NPD occurred in the late 90s, when a cross functional team approach was implemented. As documented by Steve Wheelwright, Kim Clark and other scholars at HBS, cross-

functional teams dramatically improved product innovation and speed of development in the US automotive and other industries.³

To satisfy market expectations with respect to time and quality, cross-functional teams are considered a necessity in most industries today. No successful company would consider returning to the functional hierarchy for NPD, for instance. Yet, cross-disciplinary teamwork is not solely for new product development. Such teams have also improved performance in patient care, supply chain management, and airline service, to name just a few that have been extensively studied.

Not every business task requires a team-based approach. For many activities, individuals can complete work more effectively alone and teams can slow down progress. Hierarchical management systems were designed based on the principle that managers had the necessary knowledge and perspective to tell people what to do, when to do it, and what standards of performance were acceptable. This principle no longer holds when leaders lack the full set of expertise and information needed to design and control the work, or when situations change faster than communication can flow up and down command and control structures. Functional hierarchies are a good design for efficiency, scale, cost control, and accuracy when managing routine and well-understood problems and activities. But certain problems – those that are novel and/or need input or cooperation from multiple parts of the organization – demand a team-based approach. This is why people in my field increasingly consider a company’s ability to form, lead and nurture high-performance teams as critical to its long-term success.⁴ Whether a business serves consumers (“B to C”) or businesses (“B to B”), cross-functional teamwork is increasingly considered vital to the delivery of high quality products or services in a timely manner to customers.

Merely forming a team does not guarantee its success. Good design and good leadership are both crucial to ensuring that a team’s potential performance translates into actual performance.

The requirements for successful cross-functional teams

Even when people agree about the need for teams (and/or the need for change), teamwork and change are difficult to implement. Existing culture, habits, processes, systems (including IT systems) and rewards can be barriers to success. Many people may sincerely agree with the case for change but fear losing power, or fear feeling incompetent in the proposed new organization. Or, people may not be given the resources to implement the change. And a frequent culprit is leaders who fail to “walk the talk” – to model behaviors that demonstrate that they value collaboration. It is well known that people attach more importance to what leaders do than to what they say.

³ Wheelwright, S. C., & Clark, K. B. (1992). *Revolutionizing product development: Quantum leaps in speed, efficiency, and quality*. New York: Free Press.

⁴ J.R. Katzenbach & D.K. Smith, (2006) *The Wisdom of Teams: Creating the high performance organization*. New York: Harper Business; Deloitte University Press: *Global Human Capital Trends 2016*, “The new organization: Different by design,” accessed at www.deloitte.com, June 24, 2016.

Many teams fail because the necessary conditions for their success have not been implemented. These conditions are not outlandish or complicated; rather they will strike most listeners as common sense. Yet, they cannot be taken for granted in organizations, because leaders may fail to invest the effort in setting teams up for success for a variety of reasons.

In short, team success starts with effective team design, including establishing a clear, engaging direction for the team's work, appropriate team composition (including the right size and skill mix for the work), access to necessary resources and information, and team leadership and coaching to help manage the team process. Next is the effort to develop the norms (attitudes and behaviors) and processes of healthy teamwork.

My own research examines both factors, design and process, but has particularly emphasized process, and the impact of team member beliefs and behaviors. Specifically, in multiple studies across industries, I have shown that a climate of psychological safety is an important factor in shaping team learning and team performance. Psychological safety refers to a climate characterized by mutual respect and interpersonal trust, in which candor is expected and welcomed. Psychological safety matters especially in teams characterized by diversity (of expertise, status, or demographics), and in teams working to innovate or create new processes. A widely publicized study at Google earlier this year found that psychological safety was “far and away the most important of...five dynamics” in explaining team performance at Google. The other four “dynamics” were team-member dependability, structure and clarity of roles and goals, meaning (people saw work they were doing as personally important) and impact (people believed the work mattered and created change in the organization).⁵

Cross-functional teams will be in tension with the pre-existing functional structure, especially at first. This is exactly why they should be created. A part of their job is to force the organization to make changes in how things get done. This can work well for creating necessary changes, if the teams are supported from the top (with resources and support) and if they are framed as ‘learning teams’ to help educate and shift the organization from its current to a new state.

In my experience, organizations that try to change the culture by focusing on the culture often come up short. Rather, to create a more collaborative culture, the key is to identify important work that requires collaboration to be accomplished. Assign strong individual contributors to a team with a clear and engaging directive, and give them support and resources. It is by doing the work in a new way that a new culture starts to take shape. In my view, shifting the work drives culture change, rather than the other way around.

The impact of successful cross-boundary collaboration on modern organizations

The results of successful cross-boundary collaboration can be truly remarkable. The dramatic rescue of 33 miners in Chile in 2010, trapped beneath 2000 feet of rock was one such example; the rescue involved collaboration across multiple areas of expertise,

⁵ Duhigg, C. (2016) What Google learned in its quest to build the perfect team. *The New York Times Magazine* February 28, 2016.

organizations and even industries, in which people had to work together to innovate on the fly through fast learning cycles.⁶ Reflecting on the details of the rescue, which I studied extensively, it becomes stunningly clear that a top-down, command-and-control approach would have failed. What was required, facing the unprecedented scale of the mining disaster, was cross-sector teaming—multiple temporary teams of people working separately on different types of problems, and coordinating across these teams, as needed. It also required remarkably effective leadership – at the level of individual teams and at the very top of the rescue organization.

In the less dramatic context of business, leading companies like Cisco and Google view cross-disciplinary teams as critical to their success – to shorten project lifecycles and ensure that multiple perspectives are used to identify and serve client needs. In the public sector, breaking down silos can unleash improvements. A recent study conducted by Deloitte and the Harvard Kennedy School showed how public officials can mobilize people from different groups to work across boundaries to create value.⁷ Finally, a growing literature documents collaborations across companies and sectors that produce innovations and results that would be impossible for any organization to accomplish alone.⁸

The remarkable business turnaround at Nissan in the early 2000s – from the brink of bankruptcy to renewed market leadership – is one of the best examples I know of how a small number of focused cross-functional teams, working with clear direction from the top, can accomplish remarkable business results.⁹ CEO Carlos Ghosn formed 9 cross-functional teams early in his tenure; each was asked to address a specific organizational or business problem. The teams were composed of middle managers and experts from different functions. Each team was headed by a team leader and had direct access to specific senior executives for direction, feedback, resources, and more. Each was challenged to come up with a specific proposal supported by a clearly demonstrable financial impact; they worked tirelessly for months, and succeeded beyond anyone's expectation (except perhaps those of the company's confident CEO!). Team members reported the experience as exhausting but rewarding and meaningful. Within two years, the organization was on its way to recovery, with impressive market and financial success.

Comments on the elements of Section 941.

The recommendations of Section 941 strike me as highly reasonable and arguably overdue. The following *objectives* in Section 941 are as particularly salient and

⁶ Edmondson, A.C. (2012). *Teaming: How organizations learn, innovate and compete in the knowledge economy*. San Francisco: Jossey-Bass.

⁷ Eggers, W.D. and O'Leary, J. The power of cross-boundary collaboration. Accessed June 26, 2016 from <http://www.governing.com/columns/mgmt-insights/power-cross-boundary-collaboration.html>

⁸ A.C. Edmondson (2016) "Wicked Problem Solvers: Lessons from Successful Cross-industry Teams." *Harvard Business Review* 94, no. 6 (June): 53–59.

⁹ M. Yoshino, and M. Egawa, (2006). *Nissan Motor Co. 2002*. Boston. Harvard Business School Case # 9-303-042.

admirable; they are consistent with current best practice and theory on the use of cross-functional teams.

- *To enable the Department to integrate the expertise and capacities of the components of the Department for effective and efficient achievement of the missions of the Department. (p. 694 bottom)*
- *To enable the Department to focus on critical missions that span multiple functional issues, to frame competing and alternative courses of action, and to make clear and effective strategic choices in a timely manner to achieve such missions... (p. 695)*
- *To enable the Department to anticipate, adapt, and innovate rapidly to changes in the threats facing the United States, and to exploit the opportunities to counter such threats offered by technological and organizational advances (p. 695)*

It is reassuring that the Section recognizes the following *impediments*:

- *Sequential, hierarchical planning and decision-making processes oriented around functional bureaucratic structures that are excessively parochial, duplicative, resistant to integration, and result in unclear, consensus-based outcomes that often constrain the ability of the Department to achieve core missions effectively and efficiently*
- *Layering of management structures and processes that result in decisions being made by higher levels of management where the authority for cross-functional integration exists but detailed substantive expertise is often lacking or being reduced to lowest common denominator recommendations to senior leaders that suppress rather than resolve disputes across functional organizations.*

With awareness of these impediments, progress is far more likely, through leaders taking necessary precautions to plan and educate senior leaders and others.

I believe this important recommendation (from *solutions*) provides essential guidance. The goal should not be to create more task forces or committees to discuss and advise leadership about organizational challenges but to create cross functional teams, advised and empowered by top leadership to make decisions.

- *“Mission teams are decision-making organizations rather than advisory bodies” (p. 699)*

Great leaders in both business and government recognize the complexity and uncertainty in which their organizations must operate today. It is their task to bring their organizational structures and cultures along, so that they too can recognize and thrive in this new world. Teams are by no means a panacea. But when well-designed, well-led, and motivated by the greater good, the results can be awe inspiring. I hope that this brief perspective from a management researcher adds something of value to the discussion.

It is an honor for me to offer my insights in the service of this effort.

Thank you.