

The X-Factor:

Six Steps to Leading High-Performing X-Teams

DEBORAH ANCONA

HENRIK BRESMAN

DAVID CALDWELL

NEW TEAMS FOR A NEW WORLD

The typical org chart fails to reflect the reality that in most organizations, much of the work is actually carried out by teams—teams that operate across the functions, divisions, geographies, product lines, and/or other dimensions portrayed by the org chart's neat array of boxes and lines. To a great extent, it is in these teams that strategy is put into action, ideas turn into projects, and plans do (or do not) lead to results.

Today's organizations and the teams they rely upon operate in an interconnected world in which new communication and information technologies have dramatically "flattened" and disrupted the competitive playing field. To quote John Chambers, chief executive officer (CEO) of Cisco Systems, Inc., in today's world, "It's no longer the big that beats the small, but the fast that beats the slow." In this environment, an organization depends more than ever on its ability to create and manage teams that can leverage all of its leadership capabilities and creativity—and in the process make the entire organization more agile, more responsive, and more innovative.

Unfortunately, all too many teams fail to achieve their objectives. There can be many reasons for this failure, not all of them within the control of the organization or the team, but we believe that the problem often lies in our whole conception of what makes teams effective.

The traditional model of teams – described in best-selling texts and academic articles, and taught in myriad training courses in firms and universities – focuses primarily on internal team processes. The emphasis is on issues worked out within the boundaries of the team, such as goal setting, role definition, cohesion building, and conflict resolution. This internal focus can, however, insulate the team from the external environment, and in today's interconnected world this can profoundly limit the team's effectiveness.

We believe that what we call "X-teams" represents a model better suited to today's environment. As the name suggests, X-teams are *externally* oriented. From

day one, their members reach across boundaries to forge dense networks of connection, both inside and outside the organization. These connections enable X-team members to accelerate their understanding of complex problems, and keep pace with changes in the competitive marketplace. They enable team members to orchestrate the flow of information and expertise across the networks to check the feasibility of new initiatives, create new synergies, and take advantage of emerging opportunities. And, at a macro-level, these connections enable the team to better align its work with other teams and organizational units, making the whole stronger than any of its parts.

At VDS, the Vehicle Design Summit, a set of interconnected X-teams has formed an international consortium to build a two hundred mile-per-gallon car. Why? Because "if the big car makers won't do it, we will." While the X-team in India is busy getting data on market needs and manufacturing capacity, the X-team in Belgium is connected to a top university and is designing the car frame. In Torino, Italy, several teams come together to create a prototype. Team members reach out to one of the top car design firms in the world to help with design, and to another firm to get space to work. There are trips to potential funders, as well as to a local university to learn about wind-tunnel technologies. One day a set of team members go to an old factory and buy tires, seats and a steering wheel. They found the place while doing an Internet search for parts. As one member commented, "We go outside the team to find solutions to problems, to get resources, and to discover the latest technologies. We work together to figure out the interdependencies across teams. The structure shifts as new challenges appear. It's a fast-paced work environment, but you really learn a lot. And who knows, we may really pull this off."

In the rest of this article, we will take a closer look at the traditional team model and some of its shortcomings. We will describe the core principles that underlie the success of X-teams. And finally, we will outline the leadership principles and practices that X-teams

require, both at the team and the larger organizational level.

THE TRADITIONAL TEAM MODEL

The literature and practice dedicated to teams has traditionally focused on what transpires inside the boundaries of the team. In many organizations, this internal model significantly influences how teams are constructed, how they are led, and how they prioritize their activities. It encourages team leaders and members to look inward and focus primarily on the team itself as they plan their mission, address their problems, allocate their roles, and move toward their goals.

Team leaders with this internal mindset have been trained to focus on building trust and cohesiveness, and on developing effective “task,” “maintenance,” and decision-making processes. They have been advised to guard against team dysfunctions like “solution mindedness,” “groupthink,” and a bias toward risk by advocating honest communications, devil’s advocates, and task conflict.

In and of itself, there is nothing wrong with this internal focus. There is no question that effective internal processes help team members bond, overcome the natural anxiety that comes with joining a team, and meld together into an efficient unit. At the same time, research and experience suggest that too great a focus on internal process can be counterproductive. Numerous studies of consulting teams, software teams, hardware teams, manufacturing teams, product design teams, and top management teams have all shown that while internal process is related to team member satisfaction and self-rated performance, it does not predict actual performance.

We believe strongly that the traditional focus on internal process can prevent teams from looking at a rapidly changing world with new eyes. As a result, teams built on this model are less likely to understand emerging technology and market trends, and less likely to be successful at creating innovative products that meet emerging customer needs.

THE X-TEAM MODEL

Many years of research watching teams in real world environments has led to the concept of *X-teams*. The central premise of the X-team model is that when innovation, adaptation, and execution are critical, success is closely related to how the team interacts with outsiders. It is not simply the amount of outside interaction that is crucial, it is the nature and pattern of those interactions.

Three key principles define the character of X-teams. First, X-teams make external activity their modus operandi. From day one, X-team members reach out to forge dense networks of contacts inside

and outside the organization. Second, X-teams have a flexible membership and leadership structure. Third, X-teams move through three distinct phases: exploration, exploitation, and exportation.

External Orientation

The single most defining characteristic of an X-team is that its members actively engage with those outside the team to develop a clear understanding of the environment (scouting), build support with key executives (ambassadorship), and coordinate with other groups that can contribute to their project (task coordination).

For example, one X-team that we studied at Microsoft Corp. had been tasked with developing new software for “netgeners”—the demographic cohort born after 1982 and thus raised in the digital era. The NetGen team engaged in extensive scouting—researching a wide array of products and market trends related to the target segment, and then conducting a deep study of a group of college students charged with creating a business plan. As the students worked on their project, the NetGen team studied videotapes, interviews, and text messaging transcripts to really understand how the students used technology.

As their project rolled out, the NetGen team’s ambassadorship activities included working hard to win the support of key outside managers. Every member of the team mastered a brief “pitch” making the business case for targeting netgeners as potential customers—and then presented it to managers in other parts of the Microsoft organization. To ensure that their work remained appropriately aligned with the company’s overall strategy, team members also made frequent presentations to top management.

Finally, the NetGen team members engaged in task coordination—actively recruiting the assistance of other Microsoft development groups, such as a group focused on creating photo management tools and a testing unit that could provide critical feedback as the team developed prototype applications.

Another team formed to examine a particular approach to project management also engaged in high levels of external activity. One team member commented, “Getting views from outside the team has significant benefits. People have strong opinions about this approach and have quite a bit to say. It’s clear that this is also part of the buy-in process. The external conversations have been particularly enlightening given the company tendency to value what is created inside the company.”

Flexible Membership and Leadership

Whereas traditional teams often define themselves, and protect their group identity, by maintaining a stable

membership, X-teams change membership easily. New members are added and subtracted as the work changes. For example, whenever the NetGen team needed new engineering expertise, new members were added. With the need to bring the netgen perspective “inside,” developers from the netgen age group were brought on board. When the team moved from brainstorming to design, some members chose to move on because they preferred not to work on this phase of the project.

Leadership is also flexible in an X-team. When the NetGen’s first leader became ill, her various responsibilities were absorbed by other team members. Even when half of the team got taken away to work on another project, new leaders stepped up to rebuild the team and carry the work forward.

Exploration, Exploitation, and Exportation

In completing their projects, X-teams move through three distinct phases: exploration, exploitation, and exportation. As these phases unfold, the issues the team faces change. During the exploration phase, team members try to understand their task, look at the world with fresh eyes, and map patterns and changes in technologies, markets, and competition. In the exploitation phase, the task changes from generating alternatives to choosing the one thing that the team will focus on and produce. Here the team exploits its earlier work to figure out precisely what it wants to do and how to do it. Rapid prototyping during exploitation enables the team to get feedback on its concept and further refine it. Finally, in the exportation phase the team works to transfer its excitement and expertise, along with the completed project, to others who will ultimately “own” and leverage the team’s work.

IDEO, a product design firm headquartered in Palo Alto, goes through three similar phases when creating new products. One team that was designing an emergency room for a hospital **explored**, by putting a camera on the patient’s head and letting the film roll. Team members discovered that most of the film consisted of views of the ceiling. So they **exploited** this information and redesigned the ceiling, and the waiting areas, and then **exported** these ideas by testing them with the client.

The structure provided by these three distinct phases helps the X-team harness its creativity, execute the task in a timely manner, and move its work out into the larger organization and most important of all, into the world outside the organization.

In our work with companies in a range of industries, we have seen X-teams apply these three principles – external focus, flexible membership/leadership, and a workflow characterized by exploration, exploitation,

and exportation – to accelerate product development, develop breakthrough innovations, and enhance inter-organization cooperation.

X-TEAM VERSUS TRADITIONAL TEAM: A MINI-CASE STUDY

Two teams within a consulting organization were each assigned to provide services to school districts within different regions. From the outset, one team leader operated with the traditional, internal focus. While he clearly understood that his team would eventually need to engage deeply with their client school districts, he viewed this as secondary to building trust within the team, figuring out how team members would work together, and sharing existing information about the districts. As the team leader explained, “I’ll be a facilitator and support. My greatest task will be to open communications and to keep up the enthusiasm of the group.”

The other team leader followed an X-team approach. From the very beginning he pushed his team members out into their school districts. He explicitly cited the need to see the district’s needs with a fresh eye and build strong working relationships at the district level. “I think the first requirement of the team is to become familiar with the region. We need to get them (the districts) to express their needs for services and then we will design something to address those needs.”

Over time these initial differences played themselves out. Compared with the X-team, members of the “traditional” team were more satisfied with themselves as a team, but they had far less contact with their client school districts and with other units within their larger organization. In terms of actual performance, the traditional team suffered from a lack of feedback, client satisfaction was low, and eventually the team members turned against each other and performance plummeted even further. On the other hand, the X-team scored high in client satisfaction, creating a school evaluation tool that school superintendents praised and the consulting organization’s president used as an example of “best practice.”

THE 6 STEPS OF X-TEAM LEADERSHIP

When we speak of X-team leadership, it is important to note that we do not necessarily mean that an X-team actually has one leader. While most of the X-teams we have studied did have a formal leader, the actual leadership functions tended to be both shared and rotated.

For example, it is often the case that different team members emerge as the leader around particular activities, such as sensemaking about the external environment, visioning what the team might be able to create,

relating to constituencies inside and outside of the organization, and inventing new ways of working together to facilitate innovation and execution. Similarly, different leaders emerge as the team moves through the various phases of exploration, exploitation, and exportation. On a more mundane note, the X-teams we have studied have no difficulty adjusting if a leader leaves for vacation or maternity leave; in such cases, other team members easily take over the various leadership functions. Even when a designated leader has moved on to another job, X-teams typically shift the leadership responsibility to someone else quickly and without stalling the team's progress.

In short, the concept of X-teams replaces the image of the "heroic" leader at the top with that of a *distributed* leadership model in which a core set of people provide different kinds of leadership at different times to guide the team along the path to task completion. In carrying out their leadership roles, these individuals typically follow these principles:

1: Choose team members for their networks.

Traditional team leaders try to staff their team with complementary personalities, learning styles, skill sets, etc. However, given the need for X-teams to create dense networks inside and outside the firm, X-team leaders need to also consider a person's network. In other words, X-team members are chosen in great measure for who they know—whether it be someone with a PDA (personal digital assistant) full of connections to experts within the organization, access to top management, or links to university researchers doing work that could help the team leap-frog to a new technology. An X-team leader will want to do a preliminary mapping of key stakeholders and the team's expertise requirements, and then see if she can find team members with connections to these groups.

For example, in the case of an X-team charged with using a technology not found within the parent company to develop a new drug, the team leader initially chose members with ties to university labs, big pharmaceuticals, and small start-ups to facilitate the search for the necessary technology. Later, as the team moved on to testing the technology, the team leader brought in a new member with deep connections to another team that had done some similar testing.

2: Make external outreach the modus operandi from day 1.

Traditional teams often plan to get more externally oriented as their work progresses, when they have a solution and want to get buy-in. Unfortunately, by then it is often too late.

An external focus at the start can help teams understand customer needs, engage other groups that will need to be involved downstream, prevent future problems, and build links with top management that can ensure ongoing support and resources. In the teams we have studied, those that took an external focus earlier were generally better able to view their environment and their particular task with a fresh perspective, and ultimately they were better able to come up with innovative solutions. Those that focused on developing their own ideas before "going outside" were generally less successful.

The degree to which a team is more internally or externally focused early on depends to a great extent on the leader. Team leaders who think that team building consists of setting goals and creating a safe environment by insulating the team from outside pressures will promote very different behaviors and outcomes from those who push the team to immediately examine key stakeholders and environmental conditions. While the former might have higher levels of satisfaction in the short term, the latter will have better performance and satisfaction in the long term.

Unless a team is highly trained in X-team activity, the propensity of its members is almost always to focus inward. To counter this tendency, X-team leaders should stress the priority of external activity from their very first meeting with the team. They should quickly assign team members to interview customers, suppliers, competitors, and managers. In these interviews, team members can ask about expectations for the team, what products others would like to see the team produce, what pitfalls the team might encounter, and what others have learned that might have relevance to the team's task. These kinds of questions enable the team to map its terrain. Later, when members come together to pool the knowledge they have discovered, team building can take place with an updated view of the problems and opportunities that they face. Under these circumstances, the sense of team may develop more slowly, but it does so without cutting the team off from critical engagement with the outside world.

3: Help the team focus on scouting, ambassadorship, and task coordination.

X-team leaders can reinforce the team's external focus by mentoring team members on scouting, ambassadorship, and task coordination. They can help team members develop the ideas and the actual language they will use to establish relationships outside the team. They can help identify mission critical contacts, set up networking connections to help team members get to those key contacts, and follow up to ensure that the outreach process is actually underway. And they can constantly check in with team members

to find out what they are learning “out there” and to bring that knowledge into the team as a whole.

X-team leaders can also encourage the team to brainstorm better ways to engage in scouting, ambassadorship, and task coordination. And they can provide tools and processes to help team members conduct these activities more consistently and effectively. These can be as simple as checklists to make sure that team members have done their scouting with customers, technical experts, competitors, universities, and company analysts.

4: Set milestones and deliverables for exploration, exploitation, and exportation.

One of the hallmarks of an X-team is that it goes through these three phases of activity. Moving through these stages helps the team to innovate, execute, and transfer its learning to others. Our observation of teams indicates, however, that teams often fail because they spend too much or too little time in each phase. For example, in the case of a consulting organization serving early stage client companies, one client complained to us that the team assigned to their firm spent too little time in the exploration stage and as a result did not understand the market dynamics that the company faced. On the other hand, another client indicated that their assigned team was so enamored of collecting data that they never did anything with it, and their recommendations lacked analytic strength. Similar problems were found for the exploitation and exportation phases.

Thus, one of the critical challenges for X-team leaders is to help the team do a thorough job at each phase, while simultaneously moving the process along through all of the phases in a timely fashion. Establishing realistic but demanding milestones can provide a temporal bar against which team members can measure their progress and plan their activities. Similarly, establishing clear deliverables for each phase helps team members stay focused on the task at hand, while also forcing the team to shift gears at the end of the phase, as key deliverables are completed and the next set come into play. The deliverables also punctuate team activity and redirect it in the appropriate direction. Of course the world can often change unexpectedly, in which case milestones and deliverables need to be changed as well.

While an X-team at BP wrote almost comically about the “Magic of Milestones and the Delights of Discipline,” team members came to appreciate the checklists, milestones, and guidelines. “We have seen that there is creative power in clearly writing down instructions, giving context, defining deliverables and giving hard-edged time deadlines of delivery for everyone on the team to use and rally around.” This process, “made sure we really did take the time to dig deeply into our subject, test drive a lot of different

tools and approaches, and broaden our network of input and influence...”

5: Use internal process to facilitate external work.

While the X-team model highlights the external activities often neglected in the traditional model of how teams should operate, it does not claim that internal processes are unimportant. If anything, internal process is even more important when team members are externally active. With so much information being brought into the team from outside, X-team members need to be able to process the information quickly, apply it to the task at hand (even as the information itself may alter the task), and make decisions quickly. Similarly, conflict resolution skills in an X-team can be even more important than in a traditional team, since team members who are externally engaged will often bring the conflicts found outside the team boundaries inside.

Three aspects of internal process are particularly important when a team has extensive external interactions: psychological safety, on-going reflection, and memory. Psychological safety means that members feel it is safe to engage in interpersonal risk taking without fear of being blamed. To foster this sense of safety, leaders can ask others to offer opinions, let others take the lead, and react positively when other team members make points that disagree with their own.

In addition to psychological safety, teams need to engage in ongoing reflection if they are going to improve their internal process and learn over time. Leaders can foster ongoing reflection by encouraging debriefings after task completion to discuss what worked, what didn't work, and what could be done differently going forward. They can also encourage team members to periodically reflect upon their own long-term goals.

Finally, successful X-teams need to promote “transactive memory,” or knowing what others know. It is often the case that a team member will possess knowledge that is critical to the task but not share that knowledge with other members. To bring together all the expertise that the team needs – including knowledge of the external context – X-team leaders need to make sure that team members take the time to map the expertise of others. Then islands of expertise can be integrated into a system in which the right members work on the right tasks at the right time.

Creating a culture of psychological safety, ongoing reflection, and transactive memory can be facilitated by the team leaders' bringing everyone together frequently to share information, solve problems, and allocate tasks for the future. These integrative meetings should be established with norms of participatory decision making and transparency, as well as a data management system that enables the team to handle the external information that it must process.

6: Work with top management for commitment, resources, and support.

While X-teams often give voice to people in the middle or bottom of the corporate pyramid, and enable innovation through discussion with customers, suppliers, or outside experts, top management is still a key player: Top management can provide critical resources; Top management can parlay an X-team's one initiative into more widespread corporate initiatives; Top management can use the X-team's input to shift strategic direction in ways the X-team members could never hope to do alone.

So, to make sure that their work will be completed, recognized, and fully leveraged, it is critical that X-team leaders win the support of top management. While ambassadorship focuses the entire team on getting top management support and buy-in, it is the team leaders who are often in the best position to garner this commitment and support. X-team leaders can underline the importance of bringing top management into the dialogue early in the process. They can act as a primary liaison between the team and top management. They can also push the team to reframe its ideas and language to make it more compelling to people at the top.

X-TEAM LEADERSHIP: A SUMMARY

In sum, leading an X-team requires not only the traditional skills related to internal team process, but it also requires a variety of unique behaviors. These behaviors start with team composition, with X-team leaders choosing members not only for their individual and complementary skills, knowledge, and personal characteristics but also with a major focus on each individual's networks outside the team and even outside the organization. Similarly, while paying close attention to the issues of creating trust and internal cohesion, X-team leaders do so by pushing the team members outside the team boundaries from day one. The rule here is "out before in," and the focus is on connecting to as many external stakeholders as possible before the team begins to nail down its mission and goals.

X-team leaders also need to provide coaching and tools to focus team members on the key external activities of scouting, ambassadorship, and task coordination. They need to set milestones and deliverables that keep the team moving expeditiously through the three distinct phases of exploration, exploitation, and exportation. They help the team balance internal problem solving with external activity, moving back and forth between internal reflection and external outreach. Finally, X-team leaders help the team manage upward to leverage the work of team members in the broader organizational community.

BUILDING X-TEAMS INTO THE ORGANIZATION

Individual X-teams have been found to be highly successful in serving clients, delivering innovative products, bringing in more revenue, and achieving a variety of other critical objectives. Given such results, it seems clear that organizations could benefit from systematically creating X-teams throughout an organization.

MIT's Sloan School of Management has developed a program to help organizations establish, manage, and leverage such a network of X-teams. The X-team program consists of multiple X-teams created by an organization to work on a problem of strategic importance. Training in X-team leadership and X-team concepts and practices is provided at the Sloan School, along with relevant content training, and then the teams return to their organizations to move through the exploration, exploitation, and exportation phases.

The goal of the program is to distribute leadership across the organization, creating a network of champions for a new organizational future and inventors of a new organizational design. These leaders become partners with top management in shifting organizational practices and culture. To date the program has been very successful.

At BP, X-teams have created new structures and architectures to improve project management. Working in distributed teams with members throughout the world, they have come up with new ways to contract with suppliers, new ways to evaluate projects, new ways to structure joint ventures, standardize projects and gain value from technology. These teams will now work with top management to implement these ideas, and the process will be repeated year after year.

This same process occurred at Merrill Lynch & Co., as X-teams came up with new products that brought debt and equity groups together as never before, while at Hewlett-Packard Co., X-teams created new ways to improve services provided within and outside the company. At Vale, a Brazilian mining company, the program has yielded new ways to go global, while at Newscorp, it has helped information technology (IT) managers find new ways to integrate IT into business strategy.

These are just some of the companies that have applied the X-team concept to create an infrastructure of innovation, deliver an ongoing stream of new products and processes resulting in millions of dollars in new revenue, and develop a cadre of new leaders with the skills to maximize the benefits of X-teams over time.

But X-teams are not for the faint of heart. The process of building this infrastructure of innovation is not easy. It requires participants to step outside their comfort zone and learn new skills, to occasionally stretch corporate norms as they explore externally,

and to work overtime if X-teams are simply added to already stressed workloads.

CONCLUSION

In most of our organizations, much of the work gets done in teams. In today's hyper-competitive world, those teams need to do that that work better and do it faster, in ways that take advantage of new technology and respond effectively to emerging market trends and competition on a global scale.

Research and practice show that X-teams are better able than traditional teams to lead, innovate, and

succeed in this new environment. X-teams, however, require a particular kind of leadership, and developing leaders with the requisite skills is not easy. This article has outlined some of the steps necessary to make X-teams and distributed leadership a reality. It is a starting point for leaders ready to try new things, learn as they go, and take their organizations to a new level of performance.



To order reprints of this article, please call +1(212)633-3813 or e-mail reprints@elsevier.com



SELECTED BIBLIOGRAPHY

A more detailed description of the characteristics of X-teams can be found in *X-teams: How to Build Teams that Lead, Innovate and Succeed* by Deborah Ancona and Henrik Bresman (Harvard Business School Press, 2007). Some of the original research on the general relation between a team's external activities and performance can be found in D. L. Gladstein, "Groups in Context: A Model of Task Group Effectiveness," *Administrative Science Quarterly*, 1984, 29, 499–517. The specific types of external activities in which teams engage, and their relations to performance are presented in Deborah Ancona and David Caldwell, "Bridging the Boundary: External Activity and Performance in Organizational Teams," *Administrative Science Quarterly*, 1992, 37, 634–665.

A number of perspectives on how new organization challenges call for new approaches to leadership can be found in the August, 2004 special issue of *Organizational Dynamics*. Descriptions of the importance of distributed

or shared leadership in a dynamic environment can be found in a number of sources including Craig Pearce and Jay Conger (Eds.) *Shared Leadership: Reframing the Hows and Whys of Leadership* (Sage Publications, 2003) and Craig Pearce and Charles Manz, "The Importance of Self and Shared Leadership in Knowledge Work," *Organizational Dynamics*, 2005, 34(2), 130–140.

More information about the internal processes that support meeting the external demands teams face is available from a number of sources, including Amy Edmondson "Psychological Safety and Learning Behavior in Work Teams," *Administrative Science Quarterly*, 1999, 44, 350–383, Michael West "Reflexivity and Work Group Effectiveness: A Conceptual Integration," in M.A. West (Ed.) *Handbook of Group Psychology* (Wiley, 1996), and D. W. Wegner "Transactive Memory: A Contemporary Analysis of the Group Mind," in B. Mullen and G. Goethais (Eds.) *Theories of Group Behavior* (Springer-Verlag, 1987).

Deborah Ancona is the Seley Distinguished Professor of Management at MIT's Sloan School of Management and faculty director of the MIT Leadership Center. Her expertise on teams and leadership has been widely recognized through both her scholarship and consulting. Her scholarly work has been published in a wide range of journals and her most recent book, *X-teams: How to Build Teams that Lead, Innovate and Succeed*, is published by Harvard Business School Press (E-mail: ancona@mit.edu).

Henrik Bresman is an assistant professor of organizational behavior at INSEAD and is the co-author of *X-teams: How to Build Teams that Lead, Innovate and Succeed*. His research focuses on high-performance teams, innovation and leadership. Prior to joining INSEAD, he held a number of managerial, consulting, and entrepreneurial positions.

David Caldwell is the Stephen and Patricia Schott Professor in Santa Clara University's Leavey School of Business. His research on teams and organization culture has appeared in a wide range of academic journals and he has consulted with a wide range of companies on these issues.