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A bridge too far? How boundary spanning networks drive organizational change and effectiveness

Rob Cross¹, Chris Ernst, Bill Pasmore

CAN ACTIVATING ORGANIZATIONAL NETWORKS AND BOUNDARY SPANNING LEADERSHIP OVERCOME PERSISTENT PROBLEMS WITH CHANGE?

Organizations fail at change twice as often as they succeed. That is a sobering finding for today's leaders, who are scrambling to institute changes large and small on all fronts. As they grapple with the many pressures of the 21st century business environment – competitive threats, disruptive innovation, global expansion, and shifting business models – they face multiple imperatives to do things differently, along with the knowledge that the odds of success are not in their favor.

The root of the problem is a fundamental mismatch between the nature of change and accepted approaches for achieving it. Change today is increasingly complex, involving multiple interdependent efforts that must be undertaken simultaneously. In many industries, change must now be virtually continuous and requires the ongoing creation of direction, alignment, and commitment within and across organizational boundaries. Most change efforts, however, are approached as if the changes in question are one-time, independent, and can be planned and implemented from the top down, without buy-in from others, mutual adjustment, or cross-boundary collaboration.

It's understandable that we've relied on formal organizational channels to drive change. These channels work, up to a point. But they quickly become overloaded and sluggish when multiple changes occur at the same time, each requiring mutual adjustment as they are implemented. To expand the capacity of organizations to lead change successfully, we need to *change how we change*. In our research and practice

over the past decade, we have developed an approach that seeks to overcome the limitations of current models by integrating two bodies of knowledge: organizational networks and boundary spanning leadership.

Too often leaders employ formal structures and hierarchies as maps to guide restructuring and change initiatives. The boxes and lines of organizational charts, however, often mask how work actually gets done. Research on informal organizational networks has led to the development of Organizational Network Analysis (ONA), a set of tools that enable us to map the networks of relationships that run through all organizations. These networks are often not part of the formal structure, but grow out of the many collaborations and social interactions that occur daily within the organizational system and between members of the system and those outside it. Because they are to a large extent powered by relationships rather than authority, the networks are efficient avenues for change. Rather than layer on new cross-cutting structures or create ad hoc committees of people who may not be opinion leaders or have strong cross-boundary connections, change can be led by influential individuals who already occupy pivotal spots in the network.

Just as our understanding of informal networks has grown in the past decade, so has our interest in a closely related area: boundary spanning. *Boundary spanning leadership* is defined as the capability to create direction, alignment, and commitment across boundaries in service of a higher vision or goal. Successful change requires widespread engagement – not just among senior executives, but also among people throughout the organization who have to make the change happen. This is no simple feat when these people are associated with different groups with different perspectives and priorities. Boundary spanning practices are an effective means for leading change in complex, interdependent environments.

Taken together, these two bodies of knowledge – organizational network analysis and boundary spanning

¹ Order of authorship is alphabetical as this was a fully collaborative project.

leadership – are a powerful means of building an organization's capacity for successful change. While boundary spanning practices create direction, alignment, and commitment for complex change efforts, ONA helps us understand who should carry out those practices. In the remainder of this article, we will develop these ideas further and provide guidance to those interested in accelerating change through boundary spanning networks.

Why We Need to Change How We Change

To understand why the failure rate of change is so high, we can look to recent reviews of the change literature, which point to the inadequacies of our current approaches. Most models for change call for new ways of working to be conceived and driven from the top of an organization. Often, these efforts run into problems with *direction*, *alignment* or *commitment*.

Beginning with *direction*, it is not uncommon for senior leaders to lack agreement or complete understanding concerning the purpose and priorities of multiple, simultaneous change efforts. This leads to a perceived lack of clear direction lower in the organization, as evidenced by people asking the commonly heard question, "What's most important?" Typically, the answer received relates to the pet project of the person being asked, which does nothing to help clarify the broader direction that actually needs to be taken.

This lack of clear direction causes people to prioritize work for themselves, often according to what is most important to their own department or immediate superior. As they choose for themselves among the many options available, a lack of *alignment* develops across the organization, with resources being put against different change efforts that are not coordinated. People then begin to work at cross-purposes, fighting for resources and attention for their projects. This can even result in people undermining one another's efforts or simply failing to provide needed support, the result of which is frustration and a growing lack of *commitment* to the success of the change initiatives.

Consider the quandary facing the CEO (chief executive officer) of an aerospace defense contractor. When he gathered his executive team to discuss an important change initiative needed to satisfy a key customer, he gained full agreement that the team would implement the changes – and quickly. The CEO thought he had provided clear direction for the change. A month later, he checked on progress only to find that the implementation had stalled. He was furious and began berating the team. He had made it clear that the change was important, and team members had signaled that he had their full support. Why hadn't they done what they said they would do?

The problem was that implementing the change turned out to be much more difficult than anyone had imagined. Team members explained that they were making great progress within their departments, but they hadn't counted on the amount of interdepartmental coordination that would be required to integrate systems and processes across the organization (lack of alignment). They hadn't built time or resources for cross-functional alignment into their plans, and their subordinates were stretched to the limit just implementing the parts of the change for which they were responsible. Providing extra people and resources to work on

cross-functional issues would make it impossible to manage the change initiative and their normal workloads, as well as other important change initiatives underway. With deadlines on customer projects looming, they couldn't address the interdepartmental issues that were getting in the way.

The CEO was still furious. In his experience, adapting to change meant finding ways to fulfill commitments no matter the obstacles. He insisted that the team quit complaining and get on with what it had promised to do. At that point, the team backed away from the conflict. Although no one said so, the agreement among members was to do what they could to move the change effort along, even though it would not happen in the required time frame and might not succeed at all (lack of commitment). Needless to say, in the end the customer wasn't happy with the result and demanded that penalties be paid for missed deadlines.

This is a typical example of how change driven from the top can result in disappointing outcomes. Had the CEO engaged executive team members sooner in discussing the proposed change, they would have had more time to address the many interdependencies across departments. Instead, the CEO oversimplified and therefore under-resourced the change requirements. While some changes were made eventually, they took longer and cost more than anyone had expected. Other important initiatives were sidelined while attention was directed to the priority of the moment. In the end, the top-down approach severely limited the organization's capacity to manage the complexity and rate of change.

Scenarios like the one this CEO faced will feel familiar to leaders at all levels in all types of organizations. Leading change is hard work, and it isn't getting any easier in an increasingly complex and interdependent world, where continuous, simultaneous change is the norm. In this environment, leaders need new approaches for creating shared direction, alignment, and commitment. Understanding how to leverage organizational networks and employ boundary spanning practices is key to this mission. In the sections that follow, we introduce each approach separately and then describe how they can be integrated using a boundary spanning network model of change.

Identifying and Leveraging Organizational Networks

Imagine that leaders could take an X-ray of their organizations in order to identify employees who are opinion leaders. Imagine further that they could see where direction, alignment, and commitment were breaking down and where more collaboration could knit together critical groups to implement a change. This is the power of using network analysis to accelerate change.

We have long known that informal networks exist, but we've understood them mostly through intuition, which is frighteningly inaccurate. Leaders haven't thought much about leveraging networks to advance change or performance until fairly recently. In preparing to undertake a specific change effort, it serves leaders well to identify the opinion leaders who can help engage others most effectively and efficiently in a change process. Equally important is to identify those who will likely resist the change and encourage others to follow suit.

Table 1 Influential network roles and effect on change processes.

Influential Network Roles and Effect on Change Processes		
Network Role and Definition		Effect on Change
<p>Connector – Connectors support a large number of their colleagues in different ways (information flow, personal support, or trust). ONA helps us identify 50% or more of these employees, who for one reason or another are not generally on leaders' radar screens.</p>		<p>Connectors create alignment within a team or department through their informal leadership and trusted opinions. Leaders want to tap these people as part of their implementation and communication efforts, but they must be careful not to overload them with requests. Connectors, by virtue of their position in the network, are often consumed with helping colleagues.</p>
<p>Expert – Experts are sought out by their colleagues for their specific knowledge and experience. They can have a disproportionate effect on an organization's ability to execute in times of change. Critical expertise domains can be technical, market, client based, or organizational. Carefully understanding and cultivating these employees helps ensure that changes are well designed and that the broader employee base engages in them.</p>		<p>Experts provide information that eliminates confusion and allows people to direct their efforts efficiently. Because these people are often well regarded and trusted by their colleagues, they are also natural conduits to help overcome resistance to change and skepticism to plans and ideas.</p>
<p>Broker – Brokers are central in the network not because of the number of ties they maintain, but because of the number of ties that bridge organizational boundaries. They live in the white space of the organization—and so are often unrecognized in the absence of ONA—but they are critical to crafting design and implementation plans that meet the needs of different groups.</p>		<p>Because they understand the concerns and views of various groups and are trusted liaisons among them, brokers address the need for mutual adjustment during change initiatives. They are also the most natural conduit for efficient communication to the rest of the organization and so can be lead adopters or ambassadors of a given implementation effort.</p>
<p>Energizer – Energizers create enthusiasm and energy around them. ONA often reveals that a small number of people are extremely important in infecting a large number of colleagues with enthusiasm. Engaging these people in leading change ensures that you unleash latent passion – rather than grudging compliance -- deep in the workforce.</p>		<p>Energizers overcome resistance to change by demonstrating optimism, seeing the glass as half full, and urging others to appreciate the positive effects of change.</p>
<p>Resister – Resisters have an uncanny ability to stall momentum or de-energize their colleagues. We all know people who can suck the life out of a room with their negative comments or cynicism. Seeing these negative interactions in networks helps us work through the 5% of employees who cause 95% of the misery.</p>		<p>Resisters often create misalignment within a team or department through their informal leadership and trusted opinions. Even a small number of highly influential resisters can create gridlock in a network. Getting these people on board with the change and finding ways to engage them can dramatically speed stalled initiatives.</p>

Over the past decade, we have helped leaders of more than 200 strategic networks – including such organizations as Accenture, Conoco-Philips, United Technologies and the Department of Defense – to better visualize and understand informal networks of influence and patterns of collaboration. We have found that organizational network analysis is perfectly suited to identifying a small set of employees who can make or break a change effort but may otherwise go unnoticed. The easiest way to assess informal networks is through a 10- to 15-minute web-based survey that asks employees about key collaborators in their individual networks and important dimensions of those relationships – for instance, are they important for information flow, decision-making, best practice transfer, or career advice? These individual networks can then be aggregated to reveal rich group-level patterns of collaboration that enable leaders to see the employees who play highly influential roles in the inner workings of their organizations.

There are several network roles that are critical to the design and implementation of an organizational change. Quite often the people who fill these roles are not those whom a leader would think of tapping to facilitate change. These roles are not assigned; they do not appear on any formal chart. Only those who work directly with these people understand the impact they can have on the pace and success of change. As detailed in Table 1, when we work with organizations to improve their capacity for change, we focus on five roles revealed by network analysis: (1) Connectors; (2) Experts; (3) Brokers; (4) Energizers; and (5) Resisters.

The network roles provide insight into the people leaders should engage in change in different ways. Of course these roles are somewhat malleable and can shift over time. For example, many organizations focus on role definition and incentive schemes to help encourage brokers at key points of collaboration within a network. Similarly when we study networks over time, we often see that resisters were at prior

time periods actually strong energizers until certain things went awry in their careers. And of course it is also possible for central connectors to play a negative role in a change effort if their status, compensation or job security is threatened by a change initiative. Yet while these roles can and do shift they still provide a critical starting point to obtain high impact and diffusion from initiatives targeting boundary spanning practices. Next we will show how the boundary spanning practices provide guidance on how those network leaders can collaborate and work with formal leaders to create direction, alignment, and commitment in the midst of continuous change.

Boundary Spanning Strategies and Practices

Many problems with organizational change stem from an inability to work across boundaries. Specifically, an extensive research program over the past decade at *Center for Creative Leadership* shows that direction, alignment, and commitment must be created across five boundary types.

- *Vertical*: Rank, class, seniority, authority, power
- *Horizontal*: Expertise, function, peers, competitors
- *Stakeholder*: Partners, constituencies, value chain, communities
- *Demographic*: Gender, age, nationality, culture, ideology
- *Geographic*: Location, region, markets

At one level, organizational change affects the systems and structures that determine how work gets done across these boundaries. At a much deeper level, it also touches on fundamental issues of human relationships and social identity. Let's consider these deeper dynamics in the example of an ongoing change effort in one of our research partner sites. In response to market demands for more integrated product solutions, a global agribusiness merged its two business units of crops and seeds into one. With the merger came fundamentally different demands on how people worked together: leaders and their teams needed to work in new ways across horizontal boundaries to integrate the different knowledge bases and expertise associated with crops and seeds; they also needed to engage more actively across external stakeholder boundaries to "try to think like growers;" and they needed to work more collaboratively across geographic boundaries to ensure consistency in product solutions around the globe.

With the merger also came significant change across vertical and demographic boundaries. At the top of the organization, senior leaders were challenged to negotiate issues of power and authority in the newly merged organization, while lower in the ranks, strong and deep-rooted identities associated with being a member of "crops" or "seeds" needed to give way for the integrated strategy to take hold. Finally, the merger took place within the context of shifting employee demographics, as a new generation of leaders with increasingly diverse backgrounds challenged the status quo.

As this example illustrates, the boundaries that matter today are psychological and emotional in addition to organizational and structural. The effectiveness of a change effort is fundamentally determined by issues of identity: our core values, how we define ourselves, and our beliefs concerning how we fit into our social and organizational

environment. Beyond just alterations to operational systems and structures, effective change efforts need to address the deeper issues associated with human networks – not just "what we do" but also "who we are." Simply put, identity is at the heart of change.

Identity is also at the heart of boundary spanning leadership. Who we are is defined largely through our comparisons and relationships with others – how we are unique and distinct and how we belong and connect. We meet these paradoxical needs for both integration and differentiation by being members of different organizational groups. These groups create boundaries found in virtually all organizations: vertical, horizontal, stakeholder, demographic, and geographic. When change alters the work that needs to be done across boundaries, identities must change, too. Resistance to a change in one's identity is natural; boundary spanning practices allow people to work through these changes to create direction, alignment, and commitment in a productive manner.

Effective boundary spanning can be facilitated through six practices detailed in Table 2, which fall within a sequence of three strategies: *managing boundaries*, *forging common ground*, and *discovering new frontiers*. Just as each strategy builds on the one before, so does each practice, creating the safety, respect, trust, engagement, interdependence, and reinvention necessary for leading large-scale change.

The Boundary Spanning Network Model for Change

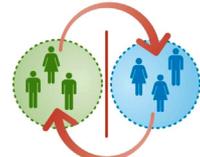
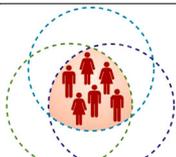
Now that we have discussed the core ideas associated with organizational networks and with boundary spanning leadership, we bring them together in the boundary spanning network change model reflected in Fig. 1. The model consists of six activities, undertaken continuously. For ease of presentation, we discuss each activity separately. But we know that organizational change is multifaceted and non-sequential. A fundamental point of this model is the acknowledgement that change cannot be undertaken through a simple step-by-step process. Instead, all six activities are essential for creating direction, alignment, and commitment for change. That they should be undertaken simultaneously, with interactions among them, is critical to our point of view.

We have worked with many organizations such as Juniper Networks, WL Gore and the U.S. Department of Defense on these six activities. We will use a composite case based on these efforts (which we will label "Telstar") to illustrate how the model works in practice. Where specific activities or outcomes are described, they are from actual change efforts with these organizations.

COALESCE THE NEED FOR CHANGE

Our model begins with engaging many voices in identifying the nature and desired direction for change. The primary purpose of widening the participation is to avoid the problems that accompany top-down change, but the benefits that flow from enhanced inputs into the planning process shouldn't be overlooked. A diversity of perspectives can help an organization deal with multiple, continuous, complex changes occurring at the same time.

Table 2 Boundary spanning practices critical to change initiatives.

Boundary Spanning Practices Critical To Change Initiatives		
Strategy	Practices <small>(For purposes of illustration, we show just two groups below, recognizing that multiple, interacting groups are typically associated with organizational change)</small>	Effect on Change
1. Managing Boundaries: <i>Taps into the power of differentiation and the need for autonomy, divergence, and uniqueness across groups</i>	Buffering 	Defines and clarifies boundaries (e.g., roles and responsibilities) to create cross-organizational <i>safety</i> for leading change
	Reflecting 	Facilitates information and perspective-sharing to foster cross-organizational <i>awareness and respect</i> for leading change
2. Forging Common Ground: <i>Taps into the power of integration</i>	Connecting 	Links people and bridges divided groups to build cross-organizational <i>trust and confidence</i> for leading change
<i>and the need for unity, convergence, and belonging across groups</i>	Mobilizing 	Crafts common purpose and shared identity to develop cross-organizational <i>community, engagement, and accountability</i> for leading change
	3. Discovering New Frontiers: <i>Taps into the power of simultaneous differentiation and integration, the source of the most innovative and advanced change activity</i>	Weaving 
	Transforming 	Brings multiple groups together in new directions to enable cross-organizational <i>reinvention and emergent possibilities</i> for leading change

When more people are engaged in the discussion, simplistic one-shot solutions are more likely to be set aside in favor of processes that allow change to be managed on an ongoing basis. Surveys, focus groups, online “jam sessions,” and large group interventions can be used to gather input from a healthy proportion of the organization and other stakeholder groups.

While leaders are still responsible for distilling the essence of the input and deciding the overall direction, they are less likely to engender resistance or overlook the complexity of the challenge if they are listening to multiple voices.

Telstar professional services company needed to change the way it used its expertise to assist clients. Over two

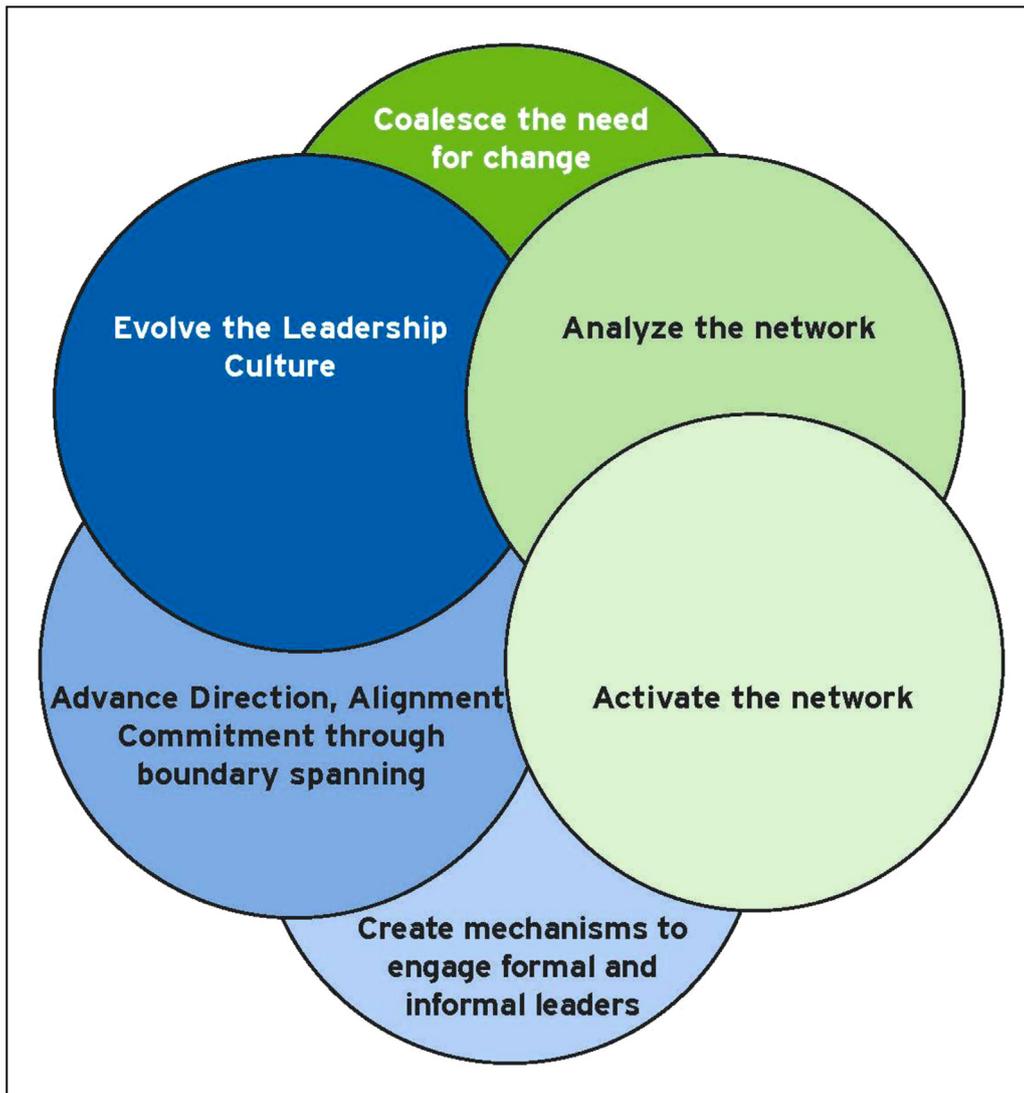


Figure 1 Boundary spanning network model of change.

decades, the firm had established a global footprint through a number of strategic acquisitions. Because of poor integration of the acquisitions, the company operated in geographic silos and so did not leverage the global experience of the firm. In order to obtain critical efficiencies and differentiate itself in a fiercely competitive industry, the firm needed to move away from its “one project, one geography” approach and develop the ability to engage experts in multiple projects around the world at the same time.

This challenge would have been daunting on its own, but Telstar had others: It needed to do a better job of integrating new employees, partnering with other firms that had specialized expertise, employing new technology, reducing overall costs, and increasing the speed with which projects were completed. Telstar was up against several traditional adversaries as well as recent international entrants. Change was no longer “nice to have;” multiple shifts in how the company operated would need to occur simultaneously to secure the firm’s future.

Telstar used a combination of surveys and extensive executive-led small group dialogues to coalesce the need

for change. Since its workforce was composed of highly educated individuals, many of whom were the best in their fields, forcing change upon them would simply not have worked. Instead of announcing a major initiative through corporate e-mails or glossy newsletters, top executives engaged in a boundary spanning process, traveling to offices around the globe in groups of two or three to sit down with employee groups of 50 to 100. Attention was given to ensuring that diverse perspectives representing the five boundary dimensions – vertical, horizontal, stakeholder, demographic, and geographic – were represented in the more than 60 group dialogues that took place over several months. These discussions built awareness across Telstar of the need for change and interest in shaping how it would play out. Furthermore, they got executives into the field to see and experience issues and challenges firsthand.

While the executive discussions allowed for direct connection with many employees, an enterprise-wide survey gave everyone at Telstar an opportunity for candid input. The survey asked employees for their thoughts and feelings regarding change, and about the current and desired

leadership culture of the firm (discussed further in the final phase below). Taken together, the survey and group discussions enabled a large number of voices – from top executives to junior staff, from Asia to Europe – to coalesce the need for change. The process of creating direction, alignment, and commitment across boundaries had begun, and the stage was now set for analyzing the network that would help lead the change.

ANALYZE THE NETWORK

Telstar deployed a 15-minute web-based survey to reveal key collaborations throughout the organization and to identify the connectors, brokers, experts, and energizers who could help with the change effort. The survey also asked people about their personal goals and values, so that Telstar could see where those influential in the network were or were not pursuing aligned objectives. The key network players identified made up less than 5 percent of the employee population. Nevertheless, as the network diagrams and analysis showed, these people were connected to more than 75 percent of the employee population. Brokers, energizers, and connectors love to connect, and they do so without being asked. Dense ties already existed; Telstar's network analysis simply made them visible. The firm chose not to identify potential resisters, preferring to focus on those with positive energy rather than worrying about convincing the naysayers to change their positions. Other organizations have found that identifying resisters is a critical step in successful change. At least for Telstar, concentrating on those who were natural brokers, connectors, experts, and energizers proved sufficient. And it was a marked contrast to traditional change efforts, which are often led by committees staffed by the leader's favorites, who don't necessarily occupy influential positions in the informal network and may not represent a multiplicity of perspectives.

ACTIVATE THE NETWORK

Activating the network at Telstar meant engaging formal leaders as well as the informal connectors, energizers, experts, and brokers in leading change. This process was led by a steering committee of five people who had formal leadership positions (more detail on the role of the steering committee is provided in the next section). The committee held a series of virtual meetings with formal and informal leaders around the world, in which participants shared observations from the small-group discussions and discussed the survey results and the implications for action. Out of these discussions, the steering committee created a set of recommendations that were then endorsed by the top executives. This, in turn, led to a second round of virtual meetings, with the purpose of identifying and clarifying the roles of both formal and informal leaders in enacting change.

Connectors. Connectors were tapped to communicate the change, collect input, uncover concerns, and answer questions within units across the organization. Connectors are naturally strong communicators. They are like the wires and routers in an information network that carry energy or information from point A to point B and then distribute it in a useful form. They also connect the receivers back to the

senders and to one another, so that communication and information can flow spontaneously around the system.

However, connectors must themselves be connected so that the story they are communicating about the change is aligned, well informed, and timely. They must also have the trust of formal leaders so that they can “speak truth to power” as the change is unfolding. They don't replace middle managers in this regard, but they can lessen the burden middle managers often feel and may be able to share feedback that middle managers sometimes find difficult to share. At Telstar, live local and virtual global forums were created for connectors to spend time with one another, with others in the system, and with leaders.

Energizers. Energizers at Telstar were charged with communicating to others why they were excited about the change and how they were contributing to its success. They were thought of as the “glue” that held the change effort together. Without them, or without their support, others may give up long before they reach the final destination. In every change effort, there are hardships, and these will be noted by de-energizers, who also exist in most systems. De-energizers are up to four times as likely to influence their peers to adopt negative attitudes as energizers are to influence their peers to be positive. Dissatisfaction drives people to fight against whatever is causing their pain. In doing so, those who are most unhappy spread their unhappiness. So it was especially important to identify energizers at Telstar and to make certain that they understood their role in the change effort. They didn't drown out the detractors entirely, but they provided another point of view for people to consider.

Energizers also proved to be good at reminding people to see the glass as half full rather than half empty. They pointed out progress that was made, promises that were kept, and reminded people that change, while not easy, was worthwhile. To be authentically positive, energizers needed to be brought into the discussions of the steering committee through online sessions. They needed to see where things were headed and why. They needed to understand that of all possible routes, the one selected by Telstar was either the best or as good as any other. They needed to hear leaders say that they knew it wouldn't be an easy trip, but that they were prepared to make it as smooth as possible and to deal with unexpected issues along the way. When problems arose (and they did), energizers needed to see that leaders were keeping their commitments and promises. When the energizers believed, others did too.

Experts. Experts exist in all organizations, at every level. They are often individuals who are not highly visible or well connected to the formal organization: bench scientists, administrative assistants, sales representatives, systems engineers, and others who hold little formal power or status. At Telstar, given the professional nature of the workforce, everyone considered himself or herself an expert. Yet the network analysis revealed that relatively few people were “experienced hands” and trusted resources. These were the people who were asked to help with the change effort. If these trusted experts gave their “seal of approval,” others were more likely to do so, too.

The identified experts at Telstar were asked to participate in a review of the recommendations that had come out of the earlier sessions and to further refine them. Groups of experts met in person with a representative of the steering

committee, who took their input back to the committee for integration with the input of other experts. Once the improved recommendations were finalized by the steering committee, they were distributed to the experts for final review and comment.

Brokers. Brokers are natural boundary spanners. They are those who are able to span the gaps that exist between silos in organizations. They are the go-betweens, trusted negotiators, and guides for those who wish to collaborate with others outside their own function, geography, level or group. They are the perfect people to engage in order to insure that issues of an interdependent nature are attended to and addressed, so direction, alignment, and commitment can be advanced as change unfolds in oftentimes new and unexpected directions. At Telstar these key players in the network were employed in ideation sessions that helped to bridge concerns of different subgroups. Getting these people engaged in the upfront planning work helped ensure feasibility of design and implementation plans. They also happened to be the most natural ambassadors for the effort, and so communicating through them and getting them to engage with colleagues in unique ways had a magical effect on propagating buy in to new ways of working.

CREATE MECHANISMS FOR ENGAGING FORMAL AND INFORMAL LEADERS

As change unfolds, it is critical to keep communication channels open so that formal and informal leaders stay engaged. Consistent with our boundary spanning network approach, mechanisms for engagement should create just enough structure to help leaders maintain focus and momentum, but not so much that they interfere with the dynamics of informal networks. Steering committees or guiding coalitions are one means of creating engagement. Collaboration and social media technologies are another. While tools such as Chatter, Google Apps, Sharepoint, and corporate Intranet sites are more well known, there are hundreds of virtual collaboration technologies available, many for free or minimal cost. These tools allow for real-time boundary spanning such as rapid dispersion of information and unscripted, informal conversation between formal and informal leaders.

In the case of Telstar, the steering committee was tasked with engaging formal and informal leaders and stewarding the change process. The five individuals on the committee were chosen because of their positions in the organization and their perceived collaborative ability. The steering committee was the formal interface during the change initiative between the top leadership team and the rest of the organization. It called on top leaders to influence other formal leaders to adopt change. It also worked with the identified connectors, brokers, experts, and energizers to plan and communicate change.

ADVANCE DIRECTION, ALIGNMENT, AND COMMITMENT THROUGH BOUNDARY SPANNING

Change knows no boundaries. It sprawls across the organization in ways both intended and unintended. Inevitably, some

teams, functions, and business units will perceive changes in positive ways. Others will experience change as a loss and a threat. As we've noted previously, change affects not just technical systems but also – and more profoundly – human relationships. Although these deeper dynamics are now well known (and are typically the reason why change efforts fail), leaders are often at a loss for what to do about them. Boundary spanning practices provide a means for formal and informal leaders to advance direction, alignment, and commitment in the face of continuous change.

At Telstar, leaders developed new capabilities for spanning boundaries both in specially designed workshops and in the course of their everyday work as change agents. Brokers, in particular, played a critical role in bridging functions and locations. Here we describe an early workshop conducted at Telstar with top executives, the steering committee, and key brokers. (Subsequent workshops included participants from different levels, functions, and geographies, chosen on the basis of the organizational network analysis, which revealed fragmentation between groups.) The goal of the three-day workshop was to explore the three strategies and six boundary spanning practices described above.

Day one focused on the strategy of managing boundaries through the practices of buffering and reflecting. Initially, groups associated with different parts of the organization worked separately, in different rooms, to clarify the outcomes they wanted to achieve over the next few years (defining boundaries through the buffering practice). During the second part of the day, all participants shared perspectives on how each group viewed the directions the changes should take (understanding boundaries through the reflecting practice). On day two, the groups moved to the second strategy of forging common ground through the practices of connecting and mobilizing. First, through a process known as “speed networking,” leaders discussed their challenges with ten or so people from other parts of the organization (linking boundaries through the connecting practice). Given that this was the first time for many in the room to meet, these conversations were essential to building trust. For the rest of the day leaders worked at mixed tables to create a vision statement that encompassed the themes and patterns identified the first day (reframing boundaries through the mobilizing practice). Each table crafted an integrated vision with three metrics for measuring success and then reported to the other tables. The statements were later integrated and consolidated to create the guiding vision and metrics for the steering committee.

Day three focused on the strategy of discovering new frontiers. First, leaders were encouraged to bring the diversity of their experience and expertise to bear on developing innovative solutions to shared challenges (interlacing boundaries through the weaving practice). Using a process known as “world café,” the participants identified the challenges that would get in the way of their shared vision, brainstormed ideas to overcome them, and voted on the best near-term and long-term solutions. Brokers were especially important in helping the steering committee and top leaders understand where structural or deeper relational issues were likely to surface and formulate actions to address them.

In the final session of the workshop, participants identified key external stakeholder groups, such as customers and partners, and developed solutions for engaging them in

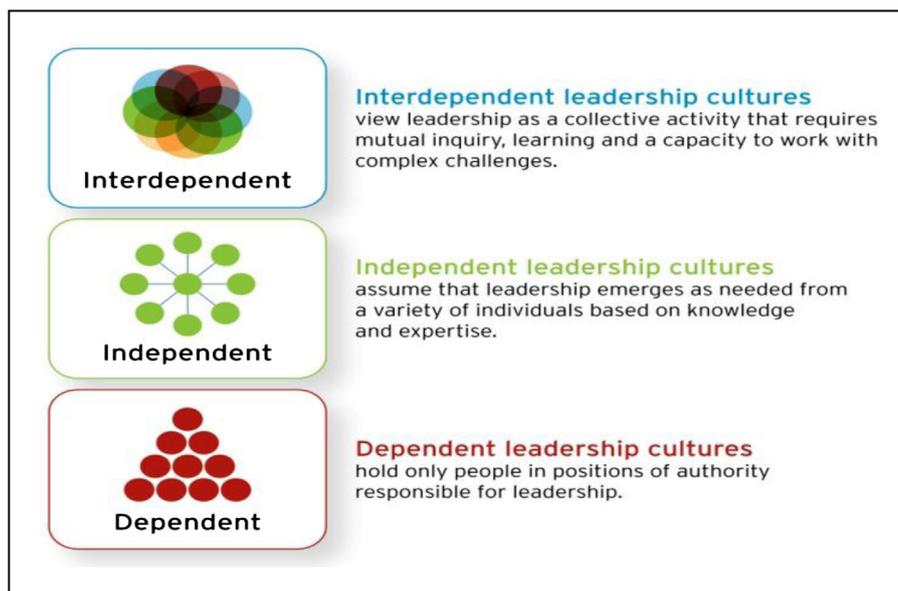


Figure 2 Three stages of leadership culture.

the change process (reinventing boundaries through the transforming practice). This and other workshops throughout Telstar established how formal and informal leaders would work together to lead change. They equipped leaders with new boundary spanning skills while advancing direction, alignment, and commitment for change. The result was the beginning of a shift in intergroup identities to create a shared allegiance to the organization and its direction. However, to sustain change, Telstar's leadership culture also needed to shift.

EVOLVE THE LEADERSHIP CULTURE TO SUSTAIN CHANGE AND READY THE ORGANIZATION FOR FUTURE CHANGE CHALLENGES

We introduce the evolution of leadership culture as the final activity in our model, but it could just as easily be the first. As Ray Fidel, CEO at DriveTime, told a recent gathering of business leaders, "Culture manifests itself in everything we do. It is time to become much more aware of the things we do. Our primary responsibility, by a large margin, is leading culture."

Change initiatives by necessity take place within a broader leadership culture: the web of individual and collective beliefs and practices in organizations for producing the outcomes of direction, alignment, and commitment. This culture is manifest in the entire social network of the organization, but it's the top leaders who play the biggest role in shaping it.

Our research finds that organizations tend to fall into one of three stages of leadership culture. Each stage includes and transcends the previous one (Fig. 2).

Leadership culture affects the boundary spanning network approach in two critical ways. First, each stage is more capable of dealing with the uncertainty, ambiguity, and complexity of change than the previous one. Second,

interdependent leadership cultures generally have stronger informal network and boundary spanning capabilities than dependent or independent ones. As the leadership culture becomes more interdependent, leading change through informal networks and reaching, bridging, and collaborating across internal and external boundaries will become increasingly natural.

Recall in the case of Telstar that the leadership culture of the organization was one of the areas surveyed as part of "coalescing the need for change." The cultural indicators surveyed indicated, not surprisingly, that Telstar's leadership culture was highly *independent*, marked by an emphasis on individual performance, a strong reliance on experts, highly localized decision-making, and competition between markets and regions within the firm. Top leaders understood that although that culture had contributed to the firm's past success, it needed to evolve for the firm to leverage global, cross-boundary expertise in service of their clients.

As part of the ongoing change efforts at Telstar, top leaders took time for learning and developing more interdependent ways of thinking and behaving. Through facilitated dialogue, they developed a deeper understanding of why traditional top-down change approaches no longer made sense at Telstar, and why informal networks and boundary spanning were critical for sustaining change into the future. As these leaders examined their beliefs and values, and as informal leaders throughout the organization experimented with boundary spanning practices, the culture of Telstar evolved toward greater collaboration and interdependence. The work of change is never complete, but Telstar took important steps to grow its leadership culture in ways that prepared the organization for future challenges.

OUTCOMES

Using informal networks and boundary spanning at Telstar helped leaders create direction, alignment and commitment

for the firm's change effort. Of course, the change journey was difficult and unfolded over multiple years. But in contrast to so many change initiatives, Telstar's was a clear success. By using network analysis on an annual basis to fine tune networks, the firm continued to take very targeted and effective action to integrate the global organization. The network analysis also allowed Telstar to track improvements in collaboration at key points in the network and associate this progress with changes in revenue and in important drivers of efficiency. Over a five-year period, employee costs dropped as people were better able to leverage their colleagues, and best practices were disseminated more efficiently. For example, costs in the IT (information technology) department fell from 5.2 percent to 3.6 percent of gross revenue despite an overall 17 percent increase in head count. These efficiencies did not come at the expense of customer service: internal customer satisfaction scores improved from 93 percent to 99 percent in this five-year period. In other domains key wins with clients were tied to a product of the new more integrated organizational model, enabling more seamless integration of expertise. Annual revenue growth over 15 percent was sustained with a workforce that did not need to grow in the same proportion, due to effective networks and boundary spanning practices.

THE ROLE OF FORMAL LEADERS

Networks are very poor decision makers. When it came to tough choices that needed to be made concerning financial priorities, formal leaders at Telstar needed to make them. They also provided legitimacy for the steering committee and the engagement of the informal network, authorizing individuals to take part in network activities, supporting their actions, and setting overall goals and deadlines. Leaders at Telstar needed to be visible and "out in front," and to demonstrate that the formal system was changing.

But they did not take over. If they had, the network would have quickly retreated into the background. Leaders must be authentic in their desire for the network to exist. They must expect and welcome challenging input. If the network seems to be heading in a different direction than planned, leaders can't hastily pull the plug. Shifts in direction and priorities are a part of the process. If the network is working as it should, these shifts are in service of successful change, rather than at cross-purposes with it. If the gap becomes too large between leaders and the employees, leaders must find ways to discuss the issues. When employees at Telstar voiced early

concern with direction of some important changes, the steering committee created a virtual forum where employees could express their concerns directly and anonymously. After hearing the online discussion, leaders agreed to a new direction.

To be sure, leaders will need some handholding the first time through a network-driven change effort. It's not like anything they have experienced previously. The fear of losing control was palpable at Telstar, even with careful education up front. Network-driven change requires continuous conversation as leaders overcome their fears and learn its benefits through experience.

CONCLUSION

Twenty-first century challenges can't be solved with 20th century change methods. Unfortunately, many leaders are still relying on top-down approaches in the face of current crises. Problems are complex, interconnected, and not easily managed by people separated by levels and silos. Promising advances are taking place in accelerating change by activating hidden social networks in organizations, systems, and cultures and enhancing their boundary spanning capabilities. Leaders who activate these networks greatly expand their organization's capacity to manage change, since change efforts do not rely on vertical channels alone to adapt to emergent issues.

Nevertheless, the additional change capacity created by engaging the network is not infinite. It is still possible to overload people with too many simultaneous change efforts. Connectors and energizers make up a relatively small percentage of the population of any organization or system. Once they are fully engaged in change, the capacity of the system to adapt using a network-driven approach has reached its capacity. Loading additional initiatives onto these individuals will decelerate change and detract from success. Since all changes run into issues and opportunities that must be addressed, some capacity should be reserved in the network to deal with them. Given that energizers are "can do" people, a sure sign that the network is overloaded is when energizers start complaining about their inability to manage everything that is on their plates.



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SELECTED BIBLIOGRAPHY

Two streams of literature heavily influenced our thinking in the development of this article. First is research from the social network tradition that has shown the extent to which information that affects what people do and think largely comes from other people in their networks. Some important works on how social networks influence information flow and diffusion in networks include Georg Simmel, *The Sociology of Georg Simmel* (The Free Press, 1952); Ron Burt, *Structural Holes* (Harvard University Press, 1992); Marc Granovetter "The Strength of Weak Ties" *American Journal of Sociology*, 1973, 78, 1360–1380; Tom Allen, *Managing the Flow of Technology* (MIT Press, 1984); and Everett Rogers, *Diffusion of Innovations*, 4th ed. (Free Press, 1995).

Although influential, this body of research has not typically focused on principles to help enact change through networks. As a result, we also sought to leverage rich research traditions in organizational change and leadership. William Pasmore, "Tipping the Balance: Overcoming Persistent Problems in Organizational Change," *Research in Organizational Change*, 19 (Emerald Publishing, 2011) lays out the issues confronting those undertaking change using current

methods of organization development. Chip Jarnagin and John Slocum, "Creating Corporate Cultures Through Mythopoetic Leadership" *Organizational Dynamics*, 2007, 36, 288–302, provides a nice overview of culture as well as an example of one-way networks influence culture creation through myths. Wilfred Drath, Cynthia McCauley, Charles Palus, C.J. Van Velsor, Patricia O'Connor and John McGuire, "Direction, Alignment, Commitment: Toward a More Integrative Ontology of Leadership," *Leadership Quarterly*, 2008, 19, 635–653, and Charles Palus, John McGuire, & Chris Ernst "Developing Interdependent Leadership," in Scott Snook, Nitin Nohria, & Rakesh Khurana (Eds.), *The Handbook for Teaching Leadership: Knowing, Doing, and Being* (Thousand Oaks, CA: Sage, 2008) 28, 467–492, contribute theory around the need for direction, alignment and commitment in increasingly complex organizational settings. Fundamental ideas about boundary spanning are covered in Chris Ernst and Donna Chrobot-Mason's *Boundary Spanning Leadership: Six Practices for Solving Problems, Driving Innovation, and Transforming Organizations* (McGraw Hill, 2011).

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