The NETWORK ROUNDTABLE *at the* UNIVERSITY OF VIRGINIA

Charged Up:
Managing the Energy
that Drives Innovation

Rob Cross
University of Virginia

Jane C. Linder
Accenture Institute for High Performance Business

Andrew Parker
Stanford University
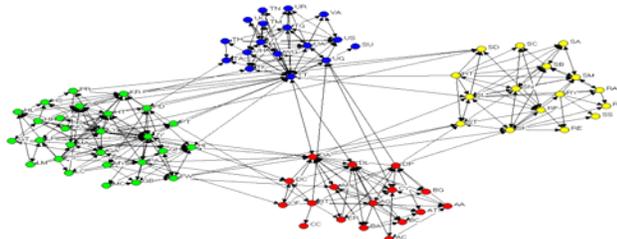
Abstract

Leaders readily acknowledge that innovation is essential for their company's success. And they recognize that energized employees are more likely to produce valuable innovations than those who have become passive or reactionary. However, they also struggle with how to drive enthusiasm and passion deep into a workforce. One often over-looked opportunity for improvement lies in the daily conversations and meetings that either energize or de-energize employees. To help address these seemingly invisible interactions we applied network analysis in 15 organizations and then conducted interviews in each organization to identify ways energy is created and diffused in networks. This article illustrates the substantial impact that energizing interactions have on innovation as well as three important ways managers can influence energy and innovation in strategically important groups.

Charged Up

The surest way an innovation or any good idea will die here is if it is developed in isolation. Nothing innovative happens without someone getting fired up about an idea and then getting others enthused about and supportive of their plan...no matter how good or technically right the idea might be. If you can't generate energy for a new idea nothing of substance ever really happens. **Director R&D, Consumer Products Organization**

Think for a moment about a time in your work life – anytime, anywhere – where you were in a conversation or meeting and became captivated by an innovative idea. All but an unlucky few of us have had this experience and been inspired by a burst of enthusiasm to bring our best effort to a worthwhile project. In the ideal, this enthusiasm – or energy -- becomes contagious and spreads as others get engaged in and supportive of the innovative idea. As energy for the innovation rises amongst a network of stakeholders, so too do the odds of the innovation being implemented effectively and efficiently.

Unfortunately, most of us have also experienced the reverse: interactions where enthusiasm has been squashed by those that focus exclusively on the flaws in a plan, adhere rigidly to a mindset that discards new ideas, or place their own political interests ahead of good business decisions. Reactions to these interactions are poignant and lasting. We all dread meeting with people who have an uncanny ability to drain the life out of a room. When possible we avoid them. But when there is no escape, our own ability to break new ground suffers as we spend time and effort protecting our plans; avoiding micromanagement; sniffing out hidden agendas and seeking trusted allies to recharge after the conversation. Amazingly, de-energizers drain us before, during and after a meeting and also affect people they don't know (those we seek out to re-charge).

Not surprisingly, de-energizing behaviors sap an organization's innovative potential quickly and effectively.[i] But some organizations avoid this drain and are able to systematically generate successful product and process innovations. Clearly a part of their effectiveness derives from the processes they employ to bring a new product to market (e.g., structured brainstorming or rapid prototyping). But these practices, though valuable, can be easily adapted in other organizations. Truly innovative organizations distinguish themselves on something immeasurably harder to transfer: an ability to integrate expertise in energizing interactions that yield important product or service innovations.[ii]

Recent research has shown how energy can be assessed with a network perspective and that a set of consistent behaviors are associated with energizing and de-energizing interactions.[iii] Here we set out to relate these energizing interactions to innovation in an organization and to demonstrate how executives can influence energy with a network perspective. Specifically, this article: 1) Reveals ways that energizing and de-energizing interactions affect innovation; 2) Demonstrates how a network view of energizing and de-energizing interactions can lead to targeted and more effective interventions and 3) Offers three ways leaders can improve innovation by managing organizational energy better.

The Critical Role of Energy in Innovation

Working through the inevitable challenges of innovation demands a wide range of new information and expertise.[iv] Whether in the diverse perspectives that make for better brainstorming, the technical capabilities that solve tough development problems or the detailed coordination needed to manage implementation, information is essential. In this process, despite the plethora of technologies available, most of us rely much more heavily on colleagues than databases for information.[v] And it turns out that energy is a primary determinant of whom we seek out and learn from. Most of us are much more likely to seek information from energizers than de-energizers. (See Appendix: About the Research.)

The diagram below shows a pattern typical of all 15 organizations in this research. Specifically, the network reflects information seeking amongst a group of key technical architects in one of the largest utilities in the United States (an arrow going from one architect to another reveals that the first architect typically seeks information from the second architect to get his or her work done). These employees plotted the technical trajectory of the utility and also played key roles in strategic initiatives such as merger integration or supply chain management. As a result, their ability to collectively recognize and implement key technical innovations was critical.
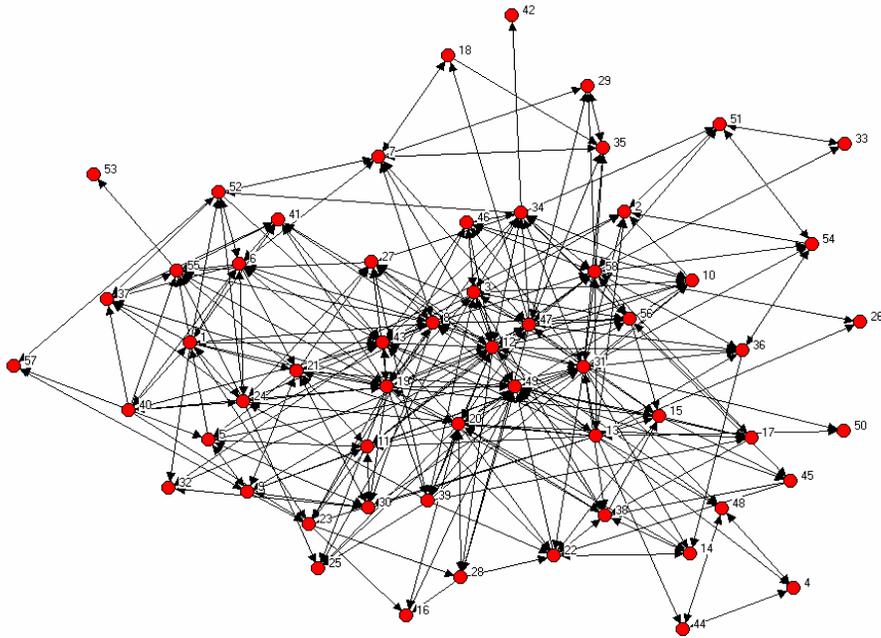
The more interesting view occurs in the next diagram, where we see a combination of the de-energizing and information-seeking networks. Specifically, this diagram shows people who seek information from de-energizers. The drop-off in connectivity graphically illustrates the extent to which people avoid de-energizers. In fact, most of the ties that remain in the network were to formal reporting relationships where an information seeker could not escape!
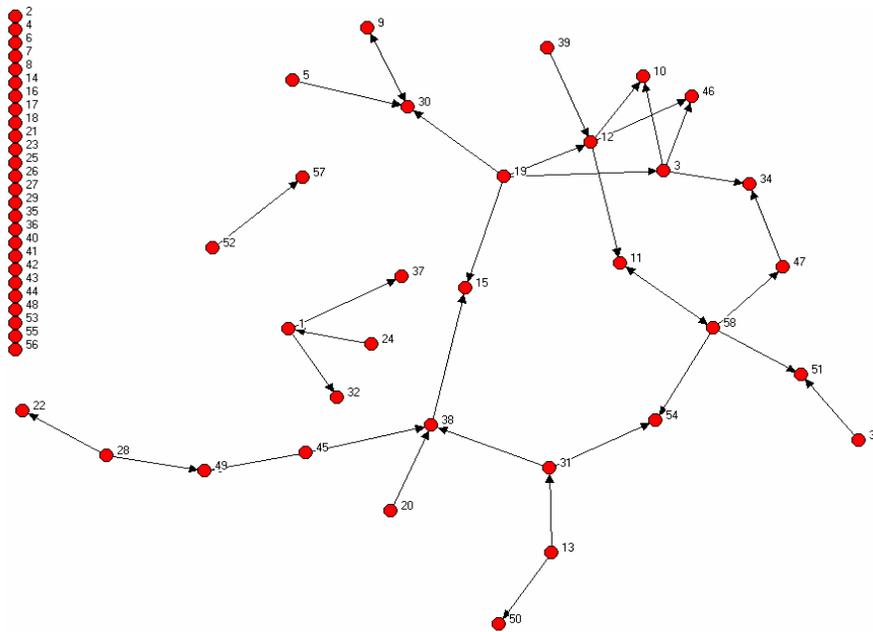
This tendency held across all organizations as we found that: 1) energizing relationships were the only consistent determinant of who learned and obtained information from whom; 2) the energy network was always the most important predictor of information seeking (4-6 times as important as traditional indicators) and 3) when we looked only at people's most effective information relationships, the role of energy became even more pronounced. Clearly, critical innovation-related activities from the creative phase of generating a novel idea to the implementation phase of realizing its potential are heavily influenced by energy.

In terms of creativity, all of our interviewees described being more mentally engaged in a conversation with an energizer. To a person, they indicated that energizing interactions enabled them to see new possibilities by integrating different expertise or perspectives. Energizing interactions helped overcome natural disconnects between people with different backgrounds and expertise by creating the social space—the mutual respect, confidence and openness—that enabled possibilities to emerge.

In terms of implementation, energizers excel at attracting others to an initiative and convincing them to act on their ideas. The energizer's ability to enthuse helps them get discretionary effort—and more of it—from those around them. In the short term, people bring themselves fully in interactions with an energizer, giving undivided attention in a meeting or problem-solving session. In the longer term, people are more likely to devote discretionary time or resources to an energizer's concerns. Reflecting on a problem during one's commute, sending an extra e-mail or two to find necessary information, or introducing someone to a valued contact are all things we are much more likely to do for an energizer than for a de-energizer.

Taking Your Organization's Energy Pulse

The first step toward managing energy is measuring it and Organizational Network Analysis (ONA) provides a valuable means of visualizing and influencing these critical interactions. For example, the diagram below shows the energy network of the technical architects and reveals a pattern and distribution of ties representative of the 15 organizations in this research. Upon reviewing the network, the leadership team commented on the extent to which central people, though not high in the organization chart, were frequently tapped to lead critical projects or rescue initiatives that were not going well. The energy network showed the extensive reach of those who had been successful and also revealed a number of others in the group who had been less successful—not as a product of technical skill but due to an inability to inspire people to adopt their ideas and technical innovations.

Throughout our research, leaders used the diagrams to make energizing interactions visible and so take a unique pulse of their organization. In all cases, the energy networks consistently revealed a small subset of people (5-8%) who energized a large portion of the network. These energizers had a substantial effect on the group as a whole and served as key leverage points for leaders to work through in either generating or implementing an innovation. In some cases this view allowed leaders to re-create energy elsewhere by defining key behaviors of these energizers and employing evaluation and reward processes to replicate energizing behaviors. In others it helped to protect against the void a departure or promotion of an energizer would have on their entire group.

Second, energy network diagrams helped leaders reach out to typically 10-15% of the people who were peripheral experts and less engaged than the leader had thought. In

addition to mentoring and individual attention from a leader, on-boarding practices that help build network connectivity—whether for new hires, temporary contractors or external partners—were an effective way to get new people contributing to the energy in the network quickly. One organization used its new hire orientation to ensure that every new employee not only knew the names of people he or she should meet, but had appointments with them set up in their calendars. The company found that these personal encounters pulled employees quickly into the high-priority work of the enterprise.

Finally, a network lens helped identify where energy was flagging and so a hidden obstacle to innovation. Across the organizations in our research, energy tended to cluster along organizational lines: people in the same function and location were more likely to be energized by each other than by colleagues in other functions or sites. An individual's level in the organizational hierarchy also had a fairly consistent (though disconcerting) influence on energizing interactions. The higher someone's place in the formal hierarchy, the less likely they were to be energizing—important feedback for formal leaders for whom energizing is a fundamental part of their role.

Network analysis provides leaders with the tools to determine which important projects have energy behind them and which do not, a key indicator of the likelihood of their success. In addition, network analysis can identify where emergent innovation is occurring and on what topics. For example, each person's technical competencies or skills can be depicted to show which knowledge domains a network is gravitating towards or important competencies that are not getting embedded in new products, processes or services. These and other views provide granular, actionable insights simply not available in standard cultural assessments.

Of course we can take the same network perspective and apply it to interactions that have a negative impact on a group's ability to innovate. The diagram below shows the network of de-energizing relationships among the utility's technical architects. In this case, an arrow going from one architect to another suggests that the first architect is typically **de-energized** by interactions with the second architect.
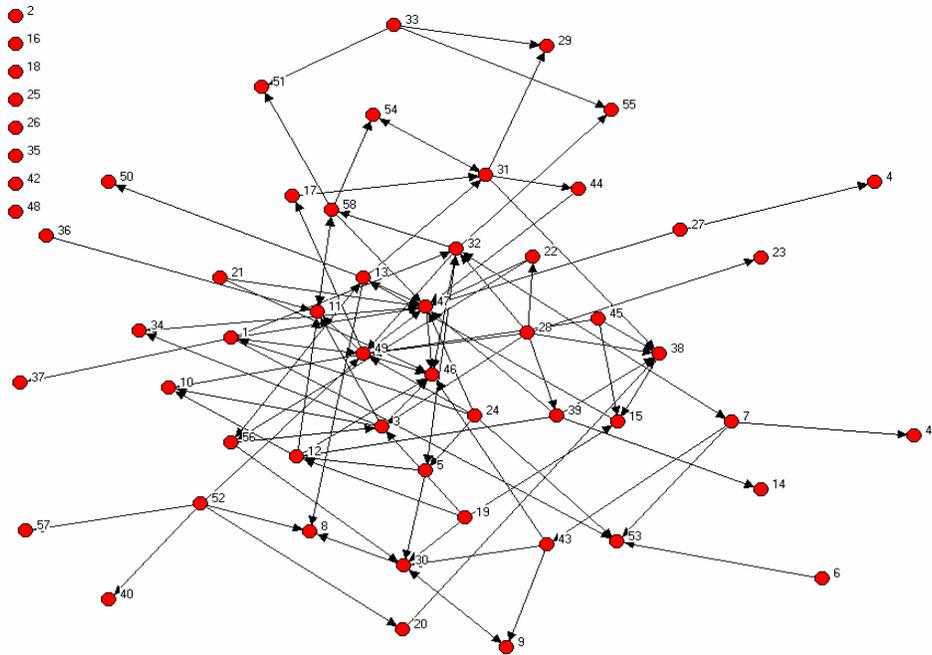
The good news is that the negative side of energy is much less prevalent than the positive. Across all the organizations we studied, people had an average of 12 energizing ties, but only three de-energizing ties. Appendix 2 reveals some broad metrics from the networks in this research and shows an important result. It is arranged from least to most energizing, ranging from an average of five energizing relations (in a government agency) up to an average of 29 (in a professional services organization). But it's not only positive energy that increases. As opposed to passive organizations at the top of the table, the bottom reveals those where people invest passion which results in an increase in **both** energizing and de-energizing ties.

For most leaders in our research, feedback about de-energizing interactions helped target coaching for those who often unwittingly sapped others' motivation. Alternatively, it also helped to identify specific threats to innovation: where people in certain roles or functions drained energy at points where effective collaboration was critical. But as odd as it might seem, de-energizing behavior also played a positive role in innovation. De-energizers "cost sunshine," in the words of one executive, and too often are overlooked despite having the potential to play a productive role in an innovation. Their perspective can temper boundless enthusiasm with realism, make sure the group has explored a new idea from all the angles and ensure that all the strong opinions are heard and considered. De-energizers frequently have expertise, experience or a perspective than can greatly improve the group's likelihood of success. It is often just the presentation of their ideas that causes trouble. Properly managed, de-energizing behavior can greatly improve the group's likelihood of success.

Creating a Context Where Innovation Can Flourish

Clearly a network view of energy provides a tremendous amount of diagnostic feedback that lets executives take action on this important feature of relationships. In addition, our interviews revealed three specific ways that leaders can systematically influence energy and innovation: 1) Manage energy at critical points in an innovation process; 2) Nurture an environment that supports energizing interactions; and 3) Develop energizing behaviors at high leverage points in the organization.

Manage energy at critical points in the innovation process. Energy needs to be maintained over different types of processes, across phase transitions, and through challenges of many types. Effective leaders manage these transitions without a loss of energy by making the shift in roles and responsibilities crisp and clear, but keeping the "out of phase" participants engaged (see Table 1 for some specific recommendations). Despite the fact that innovative initiatives often move in a non-linear path, most include four very different types of activities: ideation, selection, development, and commercialization.

Ideation: Protect the Possibilities. Innovations often emerge on the fringe of people's jobs and roles, where they are invisible to the rest of the organization. At this stage, innovations are especially fragile; de-energizing behaviors easily stamp them out. People need some latitude and encouragement from management in order to pursue budding ideas in an easy, low-risk way. Consider the market researcher at Herman Miller who believed that customers wanted more than high-end office furniture from the company; he was convinced they wanted services that would help them make their workplaces more effective. Because his role in the company was research on workplace design, which had never been a customer-facing activity, he had to enlist the assistance of a well-placed colleague in sales to get the opportunity to test his ideas on actual customers. When customers proved enthusiastic, the innovator came out from under the radar to head up an official and profitable service line for the company. The Herman Miller culture played a positive role in the story. Instead of being asked to prepare a formal business case, this innovator received the company's usual response to new ideas: "Let's give this a try."

In the ideation stage, employees are framing possibilities; in most successful cases, they are doing this with people who have expertise different from their own. Energizing interactions stimulate insights by enabling people with different perspectives to collaborate effectively. Enthusiasm and energy help bridge the natural disconnects between people with different backgrounds and expertise.

Ideation isn't limited to internal whiteboard sessions. Companies often conduct intensive and time-consuming investigations of customers' needs, technological possibilities and competitors' activities to identify promising new product ideas. The search for good opportunities to create value in other innovation arenas—branding, financial structure, administrative processes, business models and so on—is equally challenging. One chief technology officer directs his people to go "hunting in pairs." He sends an engineer and a marketer into the field to "live" with customers and customers' customers for six months.

In his experience, it takes this marriage of perspective and this length of time to see what is missing rather than what is there.

The transition from generating ideas to selecting from them involves more than just assessing investment proposals. In many ways, it's a matter of timing. Innovators test the waters to understand whether their organization and their customers are open to the new idea. Ideas whose time has come will garner enough energy and momentum to carry them through the challenges they will face.

Selection: Be Positive. Innovation's aim is to drive profitable growth, not to maximize energy. Nevertheless, it is possible—and necessary—to choose ideas to pursue in ways that do not kill organizational energy. Whereas the energy dynamic in the ideation process requires openness, diversity and creativity, the selection process rests on transparency and fairness. Its aim is less to build momentum than to avoid destroying it.

Companies can't devote resources to every idea, so most have a stage-gate or prioritization process to assess proposals and choose among them. In the typical company, the few whose ideas are funded are tremendously energized, while the many whose projects are given no resources feel discouraged. As the executive of a telecommunications company explained, "We solicit hundreds of good ideas from our very bright people each year. Then we select one to pursue. What happens to the people who sent in all those other ideas? They never send us another one."

Three ways to save energy through the selection process are critical. First, choose projects based on objective merit, not political strength, and communicate the decisions explicitly so the rationale is clear. One research and development executive asks his scientists to log all of their ideas, not just those that have won the heart of a heavyweight sponsor. This enables him to keep an eye on the selection process to make sure it remains fair and open. It also lets him work with individual scientists to review their overall impact and improve the quality of their ideas.

Second, don't just take the negative path of killing struggling projects quickly (standard "best practice" advice for managing R&D portfolios). Energizing leaders have found it is better to double the bet on innovations that are paying off: Employees who want to make a contribution will naturally be attracted to the successful initiatives. A positive focus creates an energizing market for attention and funding among innovators without undermining their initiative. At the same time, projects that are slower to show their merit can proceed at their own pace. For example, until recently Microsoft put little priority on the search function as an important Web-browser capability. However, when leaders recognized its value and decided to invest, they discovered that several cutting-edge initiatives were already quietly making their way forward.

Third, treat the innovation process as iterative rather than linear. Today's bad idea can become tomorrow's breakthrough. Selection processes that publicly brand initiatives as failures make it hard to revisit them when conditions change. A more energy-aware approach retains ideas for possible future use or grants a full license to a rejected idea to

the individual who contributed it. When Bill Gore, a chemist at DuPont, developed a variant of Teflon that could be used to insulate electrical wires, the company decided not to commercialize his product. Management did, however, grant him an unencumbered license to the technology. Some years later, Bill's son Bob adapted the technology to open up a whole new market for WL Gore and Associates: They introduced Gore-Tex.

The transition from selection to development is like a drag race. You have to build up speed quickly from a standing start, overcoming the lull that comes as a natural by-product of waiting for approval. Initiatives that have earned the organization's imprimatur now need energizing leaders who can both describe the vision and organize the charge while keeping key supporters engaged and enthusiastic.

Development: Know When to Listen to the De-Energizers. An innovation's development process, with its prototypes and experiments, involves yet another set of energy ebbs and flows. "Getting things done" and "making things work" energize practical people, especially when done in stimulating collaboration with avid clients, suppliers and colleagues.[vi] At this stage, unlike in ideation or selection, teams build momentum, organizations become invested and initiatives become more difficult to stop.

Expending effort on an initiative and making progress, however, are two entirely different things. De-energizing factors such as continually changing leadership, inattentive or overly attentive management and unrealistic deadlines can ensure that promising projects churn away unproductively. One financial services company executive admitted the organization was on its third try at developing a major new information technology capability—this time under the direct oversight of the company's most senior leaders to provide the level of focus a profound change requires. Both of its previous attempts had stumbled when program managers rotated in—and then out again—as they found little interest in the initiative from the top.

Some parts of the innovation process are destroyed by de-energizing behavior and others succeed only if leaders create room for de-energizers to be heard. As one food company executive counsels, "Don't ever let de-energizers work on the early stages of an innovative project. But when you move it to engineering, that's when you want people to ask all the hard questions." Effective development leaders help the team interpret these criticisms and challenges constructively, cultivating an upbeat attitude to take the realists' views into account, but also to keep them in perspective.

One aggressive government executive led a team hell-bent on implementing electronic tax filing. He laid out a plan that allowed nine months from start to finish. When a diligent staffer presented his task-by-task project plan, it showed that aiming for anything short of two years would be foolhardy. The executive thanked him for his contribution, tore up the detailed plan, and reiterated the due date. He recognized, however, that ordinary project management would not carry the day. He took his whole team, including outside vendors, off to a new location for the duration of the project and paid personal attention to the "human side," explaining, "It takes a lot of management and minding to develop a real team and an ethos that you will do whatever it takes to meet your

promises. You won't find that in any textbook." His highly energized team delivered on time.

Commercialization: Stay the Course. Finally, innovation's oft-forgotten long, hard march through implementation to capture value can be the most demanding process of all from an energy perspective. The organization's everyday processes must shift to make room for the innovation and get re-established again without losing too much productivity. Leaders help teams get through the hard work of changing their practices by keeping them focused on the promise of results. But if the organizational commitment, sense of purpose or focus wavers, energy quickly evaporates. One government executive described the importance of stability amid change this way, "Normally our senior executives change roles every 18 months to two years. I've been in my job for four years now because people need leadership continuity to implement radical new processes."

The transition from development to commercialization can be particularly rocky. Development engineers are renowned for endlessly tweaking new products to perfection while the commercialization team tries to get a grip on features they can sell. Handoffs are dangerous; no one wants to work on someone else's risky idea. Although it's important to keep the original team involved, organizational roles and priorities can make this difficult as product developers are asked to share responsibility for their "baby" with marketers or are moved onto new projects altogether. Teradyne does this well, keeping original innovators involved through the first customer sale and putting marketing and sales people on the innovation team from the beginning. Effective leaders manage these transitions without a loss of energy by making the shift in roles and responsibilities crisp and clear, but keeping the "out-of-phase" participants engaged.

Nurture an environment that supports energizing interactions. Of course energizing interactions do not occur in a vacuum. They are embedded in shared history, influenced by people's reputations, enabled by organizational and physical structures, conditioned by group dynamics and very strongly influenced by cultural values within an organization. Leaders set a strong tone in this context. All of the managers interviewed agreed that micromanagement was de-energizing. People need to feel that they have choice and voice, as one executive remarks, "I am conscious that I have preconceptions about what will work and what will not. But I don't force those preconceptions on the people in the field. They have their own ideas. And they have energy and passion for what they think will work."

Beyond the individual leaders and the affect that their behavior has on those around them, other important levers exist to more systematically drive innovation. For example, formal organizational design can help to generate energy and, in turn, innovation in an organization. Flat structures, latitude in one's work and the ability to influence the course of a solution all provide a modicum of control that people find energizing. Similarly, cultural values can have an even more powerful and pervasive effect on energy.[vii] Our interviews revealed three consistent values in the social space that energizers nurture to stimulate innovation: playfulness and humor; trust and realistic optimism.

Playfulness and humor. Energizers consistently create room for people to take risks with their ideas and keep interactions from getting to rigid or tense via use of humor. In fact, one of the most consistent features of energizers lies with their ability to use humor to bypass a tense or difficult situation. And beyond the creative gridlocks that humor can break it turns out to have a second effect on the network: It helps to engage people and give them a sense of genuine connection to colleagues that in turn begins to spark trust. Speaking about his boss, one manager explains, "

> She does not take herself so seriously….she lets fun happen in ways that often result in better ideas. And her ability to brighten a dull meeting or insert a joke when tension might be high or people burned out is huge. Somehow it takes the edge off, lets us re-group and keep motivated in ways that other project managers here have not figured out."

Playfulness can be built into an organization's culture and drive energy when a given leader is not present as well. For example, Netivity Solutions, a networking services company, offers 24x7 network monitoring with a 30 minute response time to any network alert, day or night. To keep its engineers focused on the target, but with a playful touch, Customer Delivery Manager, Drew Phelps, instituted his version of the beer game. If the duty engineer responds to the alert in less than 5 minutes, he or she earns a six-pack of brew. If response time is between 5 and 15 minutes—Netivity's internal goal--the engineer receives one bottle of beer. Between 15 and 30 minutes, the reward is "nothing, and you're happy with it," and responding after 30 minutes means the engineer buys Drew a six-pack. The result? Average response time went from an embarrassing 366 minutes to under 20 minutes and stayed there.

Trust. Trust forms the foundation upon which energizing interactions can unfold. A subset of the organizations we worked with also allowed us to map trust networks and we found an almost perfect mapping between energy and trust relationships. People must trust that others will not rush to criticize partially formed ideas. On an even more fundamental level, the willingness to take some form of risk is central to any innovative journey of substance. The prospect of being singled out by slippery superiors as a scapegoat for a risky venture is uncommonly de-energizing. That lack of trust easily undermines an individual's willingness to take bold action.

In addition to a belief that you can take a risk, people must also believe in others' integrity at two levels. First, energizing contexts are honest (sometimes brutally so) and transparent in contrast to de-energizing contexts where hidden agendas or political posturing keeps people from being able to rely on others. Second, integrity between words and action is critical. When people learn they can't count on others to do what they say they are going to do, energy drains out of the organization. For example, UPS executives are only half-joking when they call themselves a "bunch of boy scouts." Honesty, loyalty and trustworthiness are not on anyone's performance metrics, but these values are reinforced daily in thousands of interactions. CEO Mike Eskew says, "When I'm in the cafeteria, I make a point of asking people what we could do better. They tell

me, and I listen." When an entire company internalizes these cultural values, they become uniquely energized by making and keeping commitments.

Realistic Optimism. Playfulness and trust benefit from the third cultural value that is important to energy: optimism. It's often easier to see the obstacles, risks and costs than the upside opportunity in a new idea.viii However, where de-energizers see roadblocks at every turn, energizers naturally see realistic possibilities. Encouraging this mindset gives innovation a fighting chance. Negative cultures that persistently wallow in problems have difficulty generating energy. To create a healthy environment for innovation, leaders cultivate the habit of seeing what could be.

Effective innovators must balance enthusiasm with practicality. In addition to instilling a culture of optimism, they cultivate a bias for prototyping and experimentation to put their ideas to the test. Once they are satisfied that something new is doable, they are energized to achieve it. For example, the vice president of operations of a global consumer products company—a recognized leader in efficient manufacturing—challenged his organization to boost manufacturing reliability from about 70 percent to 85 percent, a level that conventional wisdom labeled unachievable. For the next eight years, two engineers in one business led the organization to a wholly new approach to managing production. Among other areas, they broke new ground in developing new equipment reliability concepts, methods of communicating to plant workers and external partnerships—tracking down actual rocket scientists to develop the mathematical basis for their solution. Despite the daunting nature of the challenge, the engineers persevered and ultimately saved the company millions of dollars.

Develop energizing behaviors at high leverage points in the organization. Energy is not the same as friendship, nor is it simply derived from doing work you like to do. Though clearly these can help, our interviewees described becoming energized in tasks they were not initially excited about and often with people they did not necessarily like. Rather, people get energized in interactions composed of certain behaviors. The good news is that by identifying these behaviors we can use human resource mechanisms to help re-create them either throughout an entire workforce or at targeted points in a network.

Every person in an organization connects to the informal network to some extent, but when it comes to innovation, some play a much more important role. What are the high leverage points in the network for innovation—the points at which a small improvement in energy can make a dramatic difference? Our research suggests five types of critical nodes: 1) central players who touch a large number of colleagues; 2) boundary spanners who connect disparate groups including external partners; 3) official innovators who personally drive innovation initiatives; 4) people on the periphery who may have something unusual to offer and 5) top managers whose positional authority magnifies their influence in the organization.

Executives can bolster innovation by focusing their efforts on these high-leverage individuals and using coaching and feedback to help managers improve their skills at energizing behaviors. Sometimes executives and people at the center of a network find

themselves on the wrong side of the energy equation. This is a problem because formal and informal leaders are a "high leverage point" of energy: Their behaviors are magnified and have a bigger impact than those of others. Whether you're the coach or the coached, six steps can help an executive change from a strong de-energizer into a productive, satisfied and engaged leader of an innovative initiative:

- **Bite your tongue**. Try not to criticize ideas immediately. Let them develop and then look for ways to build on and improve them.
- **Disagree with things, not people**. Phrase your disagreement in a way that keeps attention on objectives and does not appear as an attack on the person with the idea.
- **Offer genuine compliments freely**. Anyone can see through patronizing or disingenuous praise. Look for deserving behavior to compliment— which means you'll have to pay attention to people to spot the behavior.
- **Be part of the solution**. Never identify a problem, especially in public, unless you can also suggest a solution or at least a way to approach finding a solution. Be ready to lead the work to develop the alternative.
- **Start with "the answer is yes; what's the question?"** Maintain a challenging but open stance to new ideas. Start by assuming the idea can be successful; then explore what it might require to actually make it so.
- **Shake hands**. This is the easiest behavior to change, and surprisingly, research shows that it makes a big difference. People will feel more connected with you after even this most formal of personal touches.

In addition to improving energy at key points in the network, executives must help individual energizers recharge when their own store of enthusiasm runs low. When an energizer stalls, his or her performance is not the only thing that suffers; the momentum that naturally builds around the energizer also evaporates. Executives should know who these influential players are and take deliberate measures to recharge their batteries when necessary.

Conclusion

Good or at least feasible ideas are abundant in organizations. Having an epiphany is no big deal unless you can motivate others to believe in it and act on it. Energy plays a substantial role in both generating those great ideas and getting traction on their implementation. Yet while we all intuitively recognize this, managing energy has proven elusive for executives. Here we have shown how a network perspective can make tractable the myriad, seemingly invisible interactions that build or drain energy deep within an organization. Making this important substrate visible provides a number of specific and actionable insights that can help executives build generative organizations that drive innovation as well as contribute to the well-being and growth of employees.

Figure 1
Energy Sinks and Sources

Innovation Process	What Magnifies Energy?	What Drains Energy?
Innovation context: Establishing an energizing environment provides fertile ground for many types of innovations—from new products and services to internal breakthroughs.	• **Set challenging targets**. Striving to accomplish difficult goals bonds people and motivates their efforts. • **Pose a clear, simple vision**. When the vision is clear and simple, it rallies people quickly and easily. • **Identify a threat or crisis.** Naming a threat and the imminent consequences galvanizes people to action. • **Collaborate**. People get energy from working together face-to-face with other team-oriented individuals. • **Listen**. Listening to others encourages and acknowledges them. • **Cultivate optimism**. Seeing the upside attracts others to new possibilities.	• **Set unrealistic expectations**. Establish goals that the team knows they cannot reach. • **Focus only on the short-term**. Forget long-term visions and far-reaching goals. Substitute measures for a sense of purpose. • **Tolerate distrust**. Allow political posturing and personal agendas to determine decisions. • **Cultivate pessimism**. Make sure every new idea or proposal is scrutinized carefully for risk whenever it is discussed.
Ideation: Creating new concepts, ideas or solutions that, if implemented, can provide value for those who use them.	• **Create opportunities to break new ground.** Give individuals and teams latitude to propose ideas that fall outside current organizational bounds. • **Leverage diverse perspectives**. In the early stages of thinking, solicit participation from people with many different skills and backgrounds. • **Practice constructive dissatisfaction**. Continuously trawl for opportunities, big and small, to improve the way things work.	• **Maintain closed minds**. Actively deny the possibility that new ideas could be positive for the organization. • **Fail to follow-up**. Ask employees for ideas but do not act on any that they submit. • **Dismiss contributions**. Label many improvements "incremental" so people see them as almost worthless. • **Rest on laurels**. If performance seems good, eliminate investments in new ideas and proposals.
Selection: Choosing the innovative initiatives to pursue from among the many possibilities.	• **Validate "do-ability."** Innovations are uncertain, but proofs of concept, experiments and experiences of others can convince people they are not wasting their time. • **Put the decision close to the problem**. Involve those who are close to the situation in decisions about problems are most important to solve.	• **Station guard dogs in front of the selection process**. Ensure that the individual who collects innovation proposals sets up irrelevant administrative barriers. • **Select projects politically**. Rank proposals by the political clout of the individuals backing them. Enable any single member of the decision team to block an idea for

	• **License out rejected ideas**. Adopt the discipline of offering rejected ideas to others.	his or her own reasons. • **Use downside-oriented evaluation tools.** Rank proposals using methodologies that focus inordinately on risks.
Development: Turning a promising concept or idea into a working model to prove its merit.	• **Focus on outcomes**. Describe the end-state and let team members figure out how to reach it. • **Cultivate a problem-solving attitude**. Most new things don't work the first time. Instead of asking "Can this work?" ask the team "How can this work?" • **Use the network**. Reach broadly into the informal network to find expertise, get early feedback, head off problems and build support.	• **Micromanage developers**. Tell scientists and engineers what to do in explicit detail; then follow up frequently to make sure they accomplished their designated tasks. • **Make false promises**. Commit resources and cooperation to the development team, but do not actually provide it. • **Block access to critical resources**. Prohibit or endlessly delay the development team's ability to secure key resources such as outside expertise, senior management support, contact with customers or internal cooperation.
Commercialization: Scaling up the organizational machinery to implement the new idea and harvest the benefits.	• **Revisit the vision**. Reminding participants about the original purpose helps make the hard work meaningful. • **Use games, deadlines and humor**. Take the edge off long, hard hours with tactics that make work fun. • **Respect the details**. Recognize the value of making the machinery work and the ordinary heroes who do so daily. • **Count results**. Ring a bell for every new purchase order; post a chart on the wall that shows progress toward the goal.	• **Make internal systems inflexible**. Force innovation teams to work through unwieldy and bureaucratic internal systems to launch new practices. • **Demand instant profitability**. Halt all innovative efforts that fail to meet the corporate investment hurdle rates in the first year. • **Set diverging priorities**. Set priorities for internal operational groups that punish them for assisting in the change associated with an innovation.

Appendix 1
About the Research

We became intrigued with energy networks as a result of Positive Organizational Scholarship research showing links between a person's centrality in a network of energizing interactions and their performance (i.e., colleagues perceived as energizing were consistently ranked as higher performers in annual HR evaluations).[9] As additional evidence emerged showing that energy and information seeking were closely intertwined[10] we began to focus on the role of energizing interactions in innovation. We devised a mixed method approach to further understand both the relationship between energy and information flow in networks as well as key actions executives can take to support energy where it has an impact on innovation.

First, we employed organizational network analysis (ONA) across a series of 15 organizations where we assessed both information and energy networks. To visualize energy networks we asked the survey question: "People can affect the energy and enthusiasm we have at work in various ways. Interactions with some people can leave you feeling drained while others can leave you feeling enthused about possibilities. When you interact with each person below, how does it typically affect your energy level?" Respondents could indicate a value from 1 to 5, where 1 = Strongly de-energizing and 5 = Strongly energizing.

ONA was employed in the first phase of this research for two reasons. First, we wanted to be able to visualize and describe consistent features of energizing and de-energizing interactions in organizations. Second, we wanted to establish an empirical link between information flow and energy in networks. Using a form of regression known as Quadratic Assignment Procedure[11] (to account for non-independence of network data) we were able to statistically determine whether energy was a critical determinant of key informational relationships. In general this approach confirmed a very consistent link between energy and information flow across a wide number of organizations. Further, results from this phase of the research helped us to understand patterns of energizing interactions and some key influencers of energy in organizations.

In the second phase of the research we conducted interviews after the network analysis had been completed. In particular, we were able to leverage the network results to interview those people considered high energizers by their peers….a unique approach to locating and then getting qualitative insights from key people in the network. In this process we were interested in understanding two things: 1) a rich description of why energy matters to innovation – what happens in these interactions that facilitates innovation and 2) what managers can do to create (or avoid depleting) energy in key groups they are relying on for innovation. This phase of work provided us with rich insight into the impact of energy on innovation and concurrently levers that leaders can pull to influence energy in their organizations.

Appendix 2
Organization Summary Statistics

Organization	Number of People in Network	% of Energizing Ties	Avg. Number Energizing Relations	% of De-Energizing Ties	Avg. Number De-Energizing Relations
Government Agency	96	5	4.8	1	0.7
Utility	58	11	6.1	3	1.7
Financial Services	153	4	6.7	1	1.8
Consumer Products	60	11	6.8	1	0.8
Financial Services	68	10	7	3	2.2
Petrochemical	31	25	7.4	4	1.3
Manufacturing	70	11	7.7	1	0.9
Global Bio-Tech	77	11	8.4	2	1.6
Petrochemical	102	12	12.5	2	1.6
Government Agency	59	23	13.2	7	4
Strategy Consultancy	80	18	14.1	2	1.9
Engineering Firm	152	12	18.4	2	3.3
Software Development	80	23	18.6	5	4.2
Strategy Consultancy	125	20	24.6	5	6.6
Professional Services	145	20	29.2	4	5.3

[i] Gerard Tellis and Peter Golder, *Will and Vision: How Latecomers Grow to Dominate Markets*, McGraw Hill, Sept 2001. And Witte Eberhard, "Power and Innovation: A two-center theory". International Studies of Management & Organization, Spring77, Vol. 7 Issue 1, p47-70, 24p. study of 233 innovations and their results showed that de-energized initiatives took longer and generated less value.

[ii] Of course innovation extends well beyond new products and services, and includes the entire idea-to-profit cycle, but this example illustrates the pivotal role the energy network plays. The same generative processes are at work in the various scenarios.

[iii] Cross, R., Baker, W. & Parker, A. (2003). What Creates Energy in Organizations? *Sloan Management Review* 44(4), pp. 51-57. Cross, R. & Parker, A. (June, 2004). *The Hidden Power of Social Networks: Understanding How Work Really Gets Done in Organizations*. Harvard Business School Press.

[iv] Frans Johansson, *The Medici Effect*, Boston: Harvard Business School Press, 2004.

[v] Unpublished Dissertation. Rob Cross, Boston University.

[vi] H. Chesbrough, *Open Innovation*, Boston: Harvard Business School Press, 2003.

[vii] J. Martin & P. Frost. The Organizational Culture War Games: A Struggle for Intellectual Dominance. In S. R. Clegg, C. Hardy, & W. Nord (eds.) *Handbook of Organization Studies*, pp. 599-621. London: Sage, 1996.

[viii] J. Linder, "Visible Options," *Strategy & Leadership,* Vol. 33, No. 5, 2005, pp. 24-30.

[9] Baker, W., Cross, R. & Wooten, M. (2003). Positive Organizational Network Analysis and Energizing Relationships. In K. Cameron, J. Dutton and R. Quinn's *Positive Organizational Scholarship: Foundations of a New Discipline*. Berrett-Koehler Publishers.

[10] Cross, R., Baker, W. & Parker, A. (2003). What Creates Energy in Organizations? *Sloan Management Review* 44(4), pp. 51-57. Cross, R. & Parker, A. (June, 2004). *The Hidden Power of Social Networks: Understanding How Work Really Gets Done in Organizations*. Harvard Business School Press.

[11] Baker, F. & Hubert, L. (1981). The analysis of social interaction data. *Sociological Methods & Research*, 9, 339-361. Krackhardt, D. (1988). Predicting with social networks: Nonparametric multiple regression analysis of dyadic data. *Social Networks*, 10, 359-382.