



## Innovation & Organization Alignment



# Network Analysis Fuels Boundary Spanning Innovation

*Innovation is at the core of success for Silicon Valley's Juniper Networks. As a startup, it revolutionized the computer network industry with the M40 router. Today, it is a \$4.5 billion company with 9,500 employees in 47 countries.*

*Of course, growth creates new challenges and innovation at Juniper slowed due to organizational silos and poor collaboration. Through Organizational Network Analysis (ONA), Juniper gained a clear picture of the interactions that were – and were not – taking place within and across key parts of the company. By understanding the gaps and bottlenecks in its informal networks, the company was able to take a targeted approach to boost boundary spanning collaboration and innovation.*

### The Problem:

#### Boundaries & Silos Block Innovation

In most global organizations, performance largely depends on the ability to connect people across various kinds of boundaries: vertical, horizontal, stakeholder, demographic and geographic. Functional silos, geographic distance and organizational complexity all conspire to block innovation.

Knowing that collaboration is necessary doesn't go far enough. Initiatives to promote collaboration overall – the scattershot approach – are not effective for either driving culture change or meeting specific business goals. What is needed is a sharp focus on where collaboration can generate value.

To spur innovation – serve clients in new ways, generate product breakthroughs or re-think a vexing problem – organizations need to connect people with *different* bases of knowledge and experience. And, people in these networks need to interact in ways that allow them to see possibilities, integrate expertise, and explore new and meaningful ideas.

### The Solution:

#### Build a Network with a Purpose

To create meaningful innovation at Juniper, three groups – engineering, sales and infrastructure – needed to collaborate and work across barriers of function, level, location and technical expertise. Juniper tapped 85 people to create a boundary spanning innovation network. The process would test new approaches to collaboration while pursuing a strategic business goal.

Juniper conducted an ONA to discover the properties and characteristics of the new network. The results showed strong connections *within* each functional group but minimal or no connectivity *across* the groups. The ONA also identified people who played key roles:

- **Connectors** were known for their informal leadership and trusted opinions; people turned to them for technical expertise and functional advice.
- **Energizers** unleashed passion – rather than grudging compliance – amongst their colleagues.
- **Cross-boundary brokers** were connected across functional groups and were effective problem solvers in ideation sessions because they could integrate perspectives.

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3-5% of the people typically account for 20-35% of the value added collaborations in most organizations. Working through these key opinion leaders drives innovation much more effectively than isolated experts.



### Research Insight

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Typically organizations (via their talent management systems) or leaders (if you ask them to guess ahead of time) are less than 50% correct in knowing who these key influencers are. Network analysis helps to ensure that your interventions have optimal impact.

Business innovation demands an innovative approach to building boundary spanning networks.

Drawing on the ONA, Juniper could be precise and efficient in nurturing the kinds of collaboration that this critical group would need to produce innovation.

Breaking out of the norm of a typical offsite or innovation initiative, the network members were invited to a three-day “Innovation Challenge” in San Francisco. The event took place primarily in a garage space rather than a corporate center or hotel conference room.



Purpose-built “Innovation Networks” are incubated in a San Francisco garage fueled with a fully stocked bar and robot games.

The network explored the needs of their customer’s customers through assignments at area businesses and primed their creative thinking with a robot-building competition. They turned their energy toward product innovation, engaging with other Juniper subject-matter experts and developing potential business ideas.

On the third day, teams shared their two most promising ideas with senior executives – informally (no slide presentations) and with the intention of learning and exploring, rather than evaluating.

## The Outcomes:

### Cross-boundary Collaboration & Business Results

When networks are identified, activated and supported, organizations begin to benefit from genuine collaboration. Investing in boundary spanning networks for innovation can lead to:

- Greater visibility and accessibility of experts.
- Breaking down of silos and interpersonal barriers to collaboration.
- Removal of red tape and other formal structures that impede innovation.
- Capability to interact in new ways.

At Juniper, the network pursued its product development after the Innovation Challenge. In less than six months, the network built a product prototype and began to get customer feedback. Today, the product is being tested in production environments in more than a half-dozen large companies.

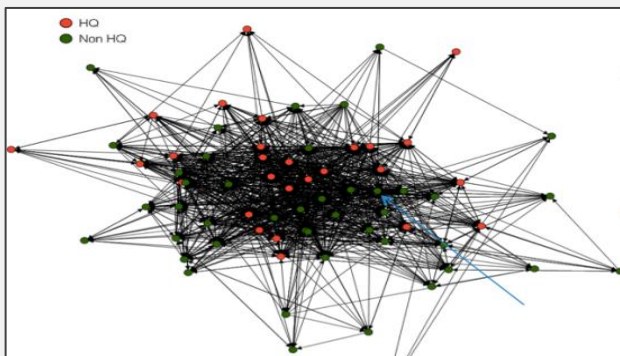
The outcomes of the Innovation Challenge went beyond the product success. After the event, 100 percent of the participants said they were:

- Engaged and excited to be part of Juniper’s future.
- Better connected to colleagues.
- Better positioned to have conversations with their customers.

Most important, the idea of using targeted networks to drive value-creating innovation gained credibility. Juniper is now deploying up to five percent of employees globally in boundary spanning networks and more will be created to fuel the innovation of Juniper’s products and services.

## ORGANIZATION NETWORK ANALYSIS:

### The Juniper Innovation Network is fragmented between HQ and Non HQ



- Individuals at the headquarters (HQ) location have larger networks, averaging 24 known contacts. Non-headquarters (Non-HQ) employees average 16 known contacts.
- Individuals within HQ interact most frequently with others inside of HQ, while those outside of HQ interact with individuals both inside and outside of HQ.

## Best Practices:

### 5 Guidelines for Innovation

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#### Clarify Goals

Why is collaboration and connectivity needed? What are you trying to achieve? For Juniper, innovation was a business imperative. Specific goals included retaining the best and brightest by creating energy, confidence and excitement about *what's possible* and identifying significant revenue opportunities while being a disruptive innovator.

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#### Map the Current State

What does connectivity and collaboration look like in relation to the goals? Who is needed? Juniper's ONA gave a clear diagnosis of their challenge to innovate across boundaries. For example, 49% of Engineering's incoming relationships were with Sales and only 21% of Sales' incoming relationships were with Engineering – less than expected levels of collaboration.

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#### Identify Key People and Roles

Innovation requires collaboration among people who have different expertise, perspectives and legitimacy. Juniper's network consisted of 85 employees that spanned six vertical layers from executive vice presidents to first-line managers and 13 horizontal functions across the engineering, sales and infrastructure groups. It also included employees representing a wide range of age and tenure with the company, 18 geographical locations, 14 cultures and 15 customer accounts.

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#### Activate a Targeted Network

Bring the network together and create experiences that build needed skills and connections. The ONA data allowed Juniper to understand the kinds of collaboration that were needed to produce innovation from this critical group.

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#### Provide Cover

Prevent business-as-usual from taking over the network. Juniper went to great lengths to avoid typical one-way, top-down communication patterns and to create opportunities for constructive conversations. Network sponsors also protected the group from the established, formal structures and pressures that could derail – or take over their efforts.

## THE TAKEAWAY:

### Assess:

Use ONA to provide insight and facts about how people, groups and functions interact.

### Ask:

What do patterns of connectivity mean for a project? Or for the organization's larger goals?

### Create:

Opportunities for improvement through strategic, targeted investment in networks.

## About the Author

Chris Ernst, Ph.D is the Vice President of Leadership & Organization Effectiveness at Juniper Networks in Sunnyvale, California. Prior to Juniper, Chris spent 15 years with the globally top-ranked Center for Creative Leadership (CCL) serving in a variety of leadership and expatriate roles. As an active speaker and writer on global issues, his work is published in top academic journals and magazines such as HBR, Forbes, Chief Learning Officer and MIT Sloan Management Review, and in authoring two books, including CCL's best-seller, **Boundary Spanning Leadership: Six Practices for Solving Problems, Driving Innovation, and Transforming Organizations** (McGraw-Hill Professional). Out of these successful experiences, and plenty of unsuccessful ones along the way, he holds the conviction that the most pressing problems in business and society span boundaries, yet appreciates first-hand that collaborating across complex boundaries is hard work. To learn more about Innovation Processes at Juniper please contact Chris Ernst – [cernst@juniper.net](mailto:cernst@juniper.net)

## About the Connected Commons

The Connected Commons is a community of people who believe that in an interdependent world, networks are now the organizing principle of our social and organizational lives. We seek to develop network ideas that advance the performance and well-being of individuals, organizations and society as a whole.