



Network interaction modeling

A unique approach to analyzing business operations and understanding the interactions across an organization

I need to understand how my organization is operating. Where do I need to focus to maximize my resources?

This is one of the most common questions an executive can ask, but as operations specialists, we know that the answer is not always clear. "Under the surface" organizational silos, interactions and internal politics between various functions create a complex network of self-forming (i.e. shadow organization) relationships that govern the organization and can complicate operational mobility across the organization. Operational mobility, or

the ability of an organization to leverage its organizational assets (key business processes, critical skills, real estate, enabling technology, etc.) to manage and balance business needs, market demand, and regulatory requirements, is essential to the success of an organization. To capture, visualize, and understand the strength of an organization's operational mobility, we developed an innovative approach called Network Interaction Modeling (NIM) designed to capture the critical interactions and relationships across an organization.

What is the Network Interaction Modeling (NIM) methodology?

Organizations are historically structured by function – or a unit of employees grouped by a common objective. For instance, think of the traditional service-based company or government agency. Each has multiple functions (e.g. engineering, strategic planning) and enabling areas (e.g. customer service, information technology, human resources) — that are separate and distinct from each other. Now consider a scenario when an organization needs to respond to market triggers or disruptive legislation. The management team tries to respond quickly to the new demand signal, but realizes it does not have a solid understanding of the business operations and visibility into the organization's operations or capabilities to address the disruption — and needs to rapidly obtain that insight.

In the last few years, we have witnessed a number of market and regulatory changes that have fundamentally shifted the way organizations operate in the face of major disruptions. Examples include an aging workforce, increasing reliance on information management, digital and mobile innovations, and increasing pressure to “do more with less.” Responding to these market changes requires organizations to have a clear view of their operations to balance resources and priorities across organizations.

Through Deloitte's experience helping public and private sector clients, we recognize that confusion abounds when capturing and analyzing the critical connections points and relationships among various supporting functions across the organization. Traditional methods such as process modeling deliver limited value in facilitating the analysis and capturing the “true” interactions and processes across the organization.

As a result, we formulated an innovative methodology – Network Interaction Modeling (NIM) — that is designed to rapidly provide an organization's leaders with the information they need to gain an enterprise view and capture the networks that truly drive an organization and its ecosystem. NIM is designed to capture critical networks and activities across an organization and shows how well they're integrated. It provides a powerful approach and a visual tool that illustrates connections and relationships to holistically and rapidly highlight challenges with:

- Insufficient resources
- Adoption of standard processes
- Data exchange and management
- Unstructured data (e.g. text)
- Applicability of existing technology
- Communication and coordination

By leveraging NIM as an enterprise analysis approach and by leveraging its associated tool, organizations can rapidly highlight cross-cutting issues and quickly move from issue identification to fundamentally changing how it does business.

NIM can provide private entities and federal agencies the capability to better understand how their organization operates in a timely manner.

The Network Interaction Modeling (NIM) approach and associated information assists organizations in capturing and visualizing formal and informal business relationships to identify and prioritize opportunities for operational optimization and business improvement. Premised on network science, NIM examines the relationships between functions to focus improvement efforts on the operations that will yield the largest organizational impact. This approach uses qualitative and quantitative data to allow for the rapid design of insight-driven programs. In the words of the Deputy Director of a large federal agency, NIM was “the only way Deloitte could have produced the information we needed to identify the true connections and relationships across our organization and target obstacles to integration.”

What is NIM's unique approach to network analysis?

Whereas similar methods are commonly used in social network analysis (e.g. to map disease transmission or quantify the influence of social media power users), NIM is a novel application of network science to analyzing an organization's mission-based operations. NIM analyzes complex business networks – including relationships, processes, transactions, and more – allowing an organization to understand how a series of interactions contribute to performance. As a result, the organization can rapidly isolate the impact of critical interactions and use responsive, data-driven, and actionable insights to design impactful improvement programs that enhance the organization's ability to execute its strategy and mission.

What are the key potential benefits?

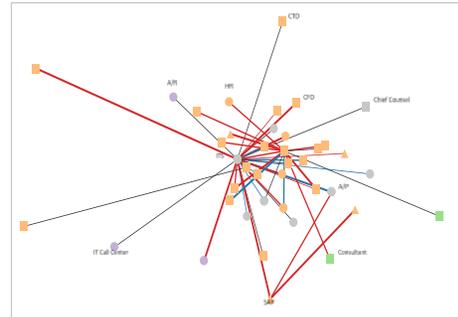
Even a single business relationship can have an overwhelming impact on an organization's broader operations, decision-making, and stakeholder relationships. Overlooking how informal relationships influence performance can obscure the root cause of business problems. As such, successful change programs require an understanding of the drivers for each business relationship and the overall dynamics across the organization. NIM can help identify these key relationships that have a positive – or negative – impact on business operations. Through this identification, NIM can provide an agency's executive with the data needed to:

- Improve cross-function information sharing
- Identify how well the agency's networks are currently connected
- Drive improved connectivity across the agency

NIM can diagnose operational challenges

When successfully implemented, NIM has the ability to:

1. **Provide** a flexible structure with which to analyze qualitative and quantitative business information;
2. **Highlight** instances of encroaching, overlapping, and poorly-defined responsibilities (i.e. multiple functions completing the same task);
3. **Facilitate** the resolution of conflicting perceptions of pain points and change imperatives within an organization; and
4. **Refocus** the lens from the level of individual functions and business processes to that of the organization and its strategy/mission.



NIM depicts an organization as a network of relationships, where key activities are captured in the links between nodes.

So how does NIM work?

NIM rapidly catalogs the people, process, and information flows within an organization to generate an enterprise-wide view of the interactions that drive operations. Using structured and unstructured data, NIM looks across functions to provide a unique perspective that incorporates even the most discrete siloes within an organization. This allows for the identification of clear breakdowns in cooperation and opportunities to strengthen viable, yet imperfect, integration points.

Through dynamic filtering and instantaneous updating of the tool, NIM also provides insight into impactful improvement opportunities by rapidly identifying actionable changes to an organization's business processes. This allows the organization to maximize the productivity of internal and external business relationships. NIM then applies quantitative tools to prioritize and test the impact of recommended business process changes. Through the implementation of insights from this analysis, more efficient work patterns, improved information exchange, and process optimization may result.

Summary

With the growing pressure on organizations to do more with less – and more quickly than ever before – Network Interaction Modeling's ability to save time and resources through targeted process and business unit improvement is increasingly relevant. NIM allows executives to dynamically view an organization's interactions, from across the enterprise all the way down to specific, targeted connection. Its intuitive presentation, customizable quantitative analysis capabilities, and unique enterprise approach enable rapid, one-of-a-kind insight, driving change to an agency's mission.

Contacts

To find out more about how NIM can impact the federal government please contact us:

Brian Greenberg

Principal
Deloitte Consulting LLP
bgreenberg@deloitte.com
+1 703 622 5992

Chris Whitlock

Managing Director
Deloitte Consulting LLP
cwhitlock@deloitte.com
+1 404 942 6907

Keihan Sedghi

Specialist Leader Deloitte
Consulting LLP
ksedghi@deloitte.com
+1 703 489 5576

Contributing authors:

Ethan Palmer

Senior Consultant
Deloitte Consulting LLP
epalmer@deloitte.com
+1 860 488 0181

Matthew Finney

Analyst
Deloitte Consulting LLP
mfinney@deloitte.com
+1 202 375 9597

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee (“DTTL”), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as “Deloitte Global”) does not provide services to clients. Please see www.deloitte.com/about for a detailed description of DTTL and its member firms. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.

Copyright © 2016 Deloitte Development LLC. All rights reserved.

Member of Deloitte Touche Tohmatsu Limited