

When to Use Value Network Analysis

Overview

This topic describes situations where Value Network Analysis (VNA) can be applied and where it is not appropriate. VNA is both powerful and versatile, but like any methodology it has limitations and must be applied to the right kind of questions. There are many other methodologies that complement Value Network Analysis and in some cases they would be a better choice. Trying to use the wrong tool is like trying to tighten a screw with a coin – you might be able to do it but it can be accomplished much better using a screwdriver.

When to do VNA

VNA can effectively address a wide variety of business issues.

Relationship management –

Relationship management typically just focuses on managing information about customers, suppliers, and business partners. VNA considers relationships as two-way value creating interactions, with as much focus on realizing value as well as providing value.

Market space strategies and investments –

Identifying lucrative and powerful investment opportunities requires the ability to quickly assess a complex environment and accurately map the current and emerging market space. Value Network Analysis helps identify, analyze, evaluate, prioritize, and manage investments in market spaces – ranging from providing seed capital through joint venture financing to supporting management buy-ins or buy-outs.

Business web development –

Resource deployment, delivery, market innovation, knowledge sharing, and time-to-market advantage are dependent on the quality, coherence, and vitality of the relevant value networks and business webs.

Fast-tracking process redesign –

Product and service offerings are constantly changing – and so are the processes to innovate, design, manufacture, and deliver them. Multiple, inter-dependent, and concurrent processes are too complex for traditional process mapping, but can be analyzed very quickly with VNA.

Open innovation –

Industries such as pharmaceuticals, media, entertainment, bio- and nano-technology, and telecom rely on innovation partners to bring forward new offerings. Success depends on the ability to creatively partner in innovation value networks around research, product development, and moving into full commercialization or implementation.

Reconfiguring the organization –

Change is all there is. Mergers, acquisitions, downsizing, expansion to new markets, new product groups, new partners, new roles and functions – anytime relationships change, Roles, value interactions, and flows change too. Instead of shuffling the boxes on the org chart VNA helps reorganize roles and interactions to more effectively deploy existing resources.

Supporting knowledge networks and communities of practice –

Understanding transactional dynamics is vital for purposeful networks of all kinds, including networks and communities focused on creating knowledge value or building skill and expertise. VNA helps communities of practice negotiate for resources and demonstrate their value to different groups within the organization.

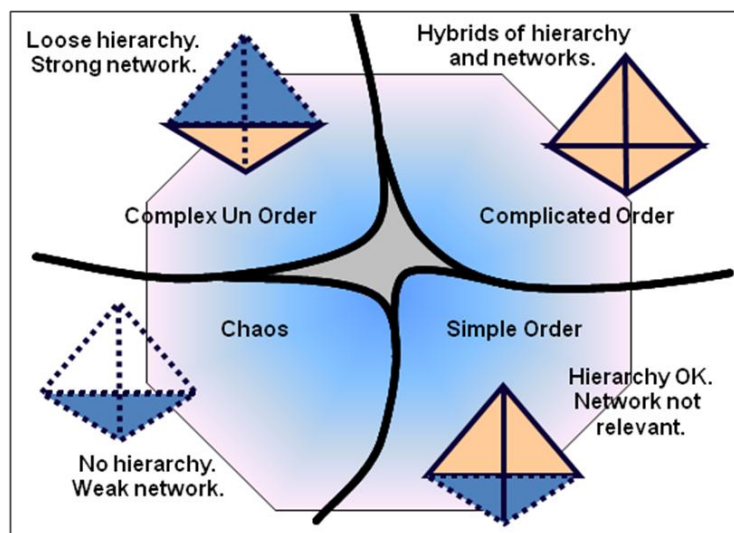
Use at every level to develop scorecards, conduct ROI and cost/benefit analyses, and drive decision making –

Because VNA addresses both financial and non-financial assets and exchanges, it expands metrics and indexes beyond the lagging indicators of financial return and operational performance. It provides a way to develop leading and predictive indicators for strategic capability, system optimization and even processes and workflow.

How to choose the right approach

Situational complexity

When considering the use of VNA it is important to consider the complexity of the presenting issue. Most management tools work best at **only one** of the four orders of complexity described in the Cynefin complexity model developed by Dave Snowden. (<http://www.cognitiveedge.com>). In 2004 Dave Snowden and Verna Allee explored the place of networks in these different levels of managerial complexity.



Cynefin Framework and Networks
Dave Snowden and Verna Allee 2004

An example of *simple order* would be managing a business process such as order fulfillment. In simple order, process tools are excellent. Further, networks may not be as important, as a strong hierarchy may actually be the best way to organize.

Complicated order would be something like building an airplane, project planning, or managing technology or operational systems. When organizations deal with very complicated products or markets they emphasize traditional structures and methods such as process engineering and formal organization models such as hierarchies and bureaucracies. However, they also tend to encourage cross-boundary

work teams and knowledge sharing networks such as communities of practice. You could think of this as a “hybrid” organization where formal and informal structures carry roughly equal importance.

Complex order dominates in situations that are highly contextual with many variables and options, such as developing a business strategy or trying to understand marketplace dynamics. There are simply too many variables to predict or control outcomes, and traditional management controls and systems cannot allow for the variation that is needed for optimal performance. In complex environments networks are very important as everyone is a sensing and sense-making node for the environment. Further it takes a lot of communication and interaction for people to make sense of their environment and collectively make good decisions. People still work toward consistent outcomes but those outcomes operate in the realm of probability, not predictability.

Chaos is where everything is in a change state and order is emergent. In true chaos hierarchies are gone. Think of large-scale disasters such as the 2006 Indonesia tidal wave, the 2007 Katrina disaster in the U.S., or the devastating earthquakes in China in 2008. In the chaotic conditions immediately following the catastrophe people were able to be locally effective through weak networks.

The only one of these four orders of complexity where Value Network Analysis would not be very useful would be in true *chaos* – as the network or system is in a state of flux and ad hoc negotiation. Roles and transactions are changing too much in the moment to effectively map the network. However, where there is a high level of network competency people can more quickly negotiate the Roles that are needed and organize weak but locally effective networks through a simple network narrative based on Roles.

Simple, complicated, and complex situations can all be addressed with VNA. Simple order may be more effectively managed using process tools and quality control systems, however. Value network patterns may show more tangible transactions in simple situations; have more of a balance of tangible and intangible interactions in complicated situations; and show a higher ratio of intangible transactions in complex situations where many different options require a great deal of conversation and knowledge sharing.

VNA provides a skill set and toolset that allow people to operate effectively from the “sweet spot” in the middle of the diagram, moving fluidly between different methods and approaches that complement Value Network Analysis.

Complementary methods

There are a number of analytic techniques from other disciplines that are complementary to VNA. If you are facing one of the challenges described below then there are other tools and methods that would be more appropriate or that would need to be brought in to expand the network analysis.

If you are mapping a process you cannot see the whole system. With a whole-system methodology such as VNA, you see all the processes plus their interdependencies and a lot more besides. Processes tend to break down where there is misalignment between human interactions and formal structures and systems. VNA show how formal processes and human processes work together. Once you understand the whole system then process mapping and analysis can be much easier, faster, and closer to the way people really interact to get work done.

Working with organizational culture

Cultural norms are a primary variable determining value exchange patterns. They also are important factors in the ability of a Role or Participant to add or convert value. While VNA readily points to places where there might be culture issues around norms of behavior, values, trust, or similar concerns, it is not itself a culture assessment. When such issues do arise you might want to conduct a more formal culture assessment for the network, working with organizational development or change specialists.

Culture assessments are organizational profiles designed to discover patterns of human behaviors, beliefs, values, and assumptions that drive decision making and influence those behaviors. Such assessments take varying approaches, from questionnaires and interviews to direct observation, ethnographic methods, and social network analysis. They are generally used to generate a report with comparative data displayed in graphs or charts, along with descriptive observations and demographic profiling. A culture assessment provides baseline data so that behaviors can be worked with in a deliberate way to try to improve performance.

Process, Lean, and Six Sigma

VNA integrates beautifully with process tools. Process tools are especially useful to help people better execute their Roles. Related to process tools is value stream mapping. VNA is both an alternative and an augmentation of process and value stream mapping. The Value Network Map itself can easily be converted from Strategy Maps or Blueprints to Business Blueprints and then Technology Blueprints. Value networks are endorsed as critical in strategy blueprinting by the newest editions of industry process standard ITIL (Information Technology Infrastructure Library) and are integrated into eTOM (the enhanced Telecom Operations Map). See the [Help Library](#) topic From Strategy to Process for more on this.

Remember the goal of process tools is to drive out variation. VNA supports variation by helping people understand the multiple flows of formal business transactions and informal knowledge flows across the entire value network. Both approaches drive toward more consistent outcomes. But VNA allows the kind of variation that supports innovation and allows rapid response to changing conditions.

System dynamics

System dynamics analysis may be helpful in defining the underlying structure of the system in which a value network operates. The Boeing Company combines system dynamics and VNA to understand complex aspects of its global operations. In Commercial Airplane Flight Operations Test and Validation they first used system dynamics to define the desired structural dynamics for the organization. They then used this as a guidance system to define the value network Roles and interactions that would support the optimal system.

Scenarios and role play

Patterns of exchange and Role behaviors change over time as a system responds and adapts to changes in its environment, beliefs, or guiding principles. Scenario building and simulations are ways to create views of what might be possible in the future or trace historical events, by isolating and exploring key variables. Once a group has defined an optimal value network people can run simple scenarios by conducting Role plays of how different situations would play out in the network.

Simulations are dynamic models of how things change over time in response to certain events. The ValueNetworks.com™ application can be used to create a series of “snapshots” of how the network would be impacted by changing conditions or variables. Both scenarios and simulations can reveal and test important variables and system behavior patterns.

After you have done an “as is” picture of the value network it is possible to ask “what if” questions to build views of alternative strategies. “What if this Role were to disappear? What if these two Roles were in closer communication? What if we eliminated this flow?”

It is possible to do both an historical analysis and to pose possibilities for the future. Such an exercise can help people understand the implications of mergers, acquisitions, divestiture, or outsourcing – or unravel the history of a particularly thorny mess or bottleneck. It can also help people consider disruptive changes that might cause the network to reconfigure, such as a new technology coming in that makes an old Role obsolete. It is also interesting to run different simulations with variables of cultural norms or Role attributes.

Social network analysis (SNA) or organizational network analysis (ONA)

Social network analysis is a network analysis discipline that focuses on relationships among social entities such as members of a group, between corporations, or between nations. It explores both directional and bi-directional exchanges, including sharing of information or business relationships. The term organizational network analysis is coming into usage to describe the organizational applications of SNA. Such methods can reveal constraints, patterns of interaction, and communication flows that are not visible through other methods.

SNA also can serve as a “reality check” that the intangible pathways are open in a value network. Intangibles tend to move person to person, relying on personal relationships. If the social network pathways are not open then it is less likely that intangibles and knowledge exchanges are actually taking place in the way the value network model describes. The ValueNetworks.com™ application can do both a Standard Value Network (Role Based) and a Collaborative Value Network (Participant Based). In both, classic SNA indicators reveal different aspects of the value network such as Risk, Reciprocity, and Agility. For more on this see the topics About Reports, VNA/SNA/ONA, and Network Indicators.