Next Generation Enterprise Visualization and Analytics
Value Network Definitions

- **Value Networks** are roles, interactions and relationships that generate economic, social or environmental value. Any purposeful organization can be understood as a value network.

- **Value network analysis (VNA)** is a methodology for understanding, using, visualizing, optimizing internal and external business value networks and complex economic ecosystems.
Today’s business tools are process-centric. Processes failing for complex industries, products, and markets. Process and engineers strive for consistent, predictable outcomes by driving out variation.

In complex environments, variation is not only a given – it is desirable. Variation supports innovation and flexibility.
What is the Opportunity?

- Value networks augment and expand the process view and evoke new discoveries in the business models.
- Value networks focus on key activities, networks, roles and relationships that build and optimize network business – which are often overlooked.
- Value networks aid business execution, reduce cost and expand performance.
People are Saying…

“In several strategic situations the value network effect perspective rather than a value chain perspective has made the difference.”

– President & CEO, TELENOR

“Good ideas can emerge from an inventor working solo, but more often they are a result of collaboration throughout an organization and its value network.”

– VP and Distinguished Analyst, GARTNER

“Software must be designed to allow, and where possible support, rapid modification of sophisticated inter–company processes. It must be capable of mapping not only value chains but entire value networks in order to keep pace with changing conditions.”

– Chairman and CEO, SAP AG
What it Provides

- The ability to model and comprehend complex business relationships
- The capacity to visualize, plan, and implement organizational performance and development solutions
- A faster and flexible approach to enhancing productivity
- A non-linear yet rigorous management approach based on living systems theory and intangible asset utilization
How the Value Network Approach Gets Results
Applied Value Network Analysis

- Endorsed by thought leaders
- Tested and validated
- Integrated with financial and non-financial scorecards 1997 and value conversion
- First used in research for the book *Digital Capital*, Tapscott, Ticoll and Lowy 2000
- In use @ Boeing, Cisco, Telenor, Mayo Clinic, Rolls Royce Marine Engine, etc.
- Used to improve global action networks in
- Used to evaluate the impact of billions in ICT investment in Europe
Organizations are Living Systems

- They have a networked pattern of organization, specifically an ecosystem of intelligent networks
  - They have cognition, perception, and complex responses
  - They continually renew and re-create themselves
- Re-create themselves through continual exchanges of...
  - Tangibles (goods, services, revenue)
  - Intangibles (knowledge, benefits, support)
Value Creation is the Exchange

*Tangible Exchanges*
Goods, services, revenue (traditional value chain). All contractual or mandated activities that directly generate or deal with revenue.

*Intangible Exchanges*
Knowledge
Strategic information, collaborative design, planning knowledge, process knowledge, policy development, etc.

Benefits or Favors
Benefits that go beyond actual service such as exchanging business contacts, image enhancement, recognition, co-branding opportunities etc.
Nodes represent participants (real people), and the roles that they play.

Solid green lines show tangible (formal, contractual) deliverables being transacted.

Dashed blue lines show intangible deliverables being transacted.
Cisco Traditional Transactions

Cisco Intangible Exchanges

Value Impact Analysis

Impact Analysis

Tangible impact?
Intangible impact?
Perceived value?
How do we add value?

Extend value to other participants?

Utilize assets to create value?

Value Creation Analysis

MANUFACTURERS & ASSEMBLERS

DISTRIBUTORS

CISCO

OEMs

Planning
Knowledge

Orders

Product Info

Design Input

Planning
Knowledge

Payment for Parts
Value Networks Fill the Gap

Organization Chart

Value Network Analysis

How well is our formal structure resourcing and supporting our value creating networks?

Social/Organizational Network Analysis --

Value Network Analysis

How well does the Knowledge Network support intangible flows?

Asset Mgmt

Tangible and Intangible Assets

Financial

Human

Brand and

Internal

Process Modeling -- Workflow

How well are we utilizing assets to create value offerings?

How well are we realizing value and growing our Assets?

How well do the different flow paths perform?
Value Network Analysis

- Fills the managerial gap between processes and the organizational chart
- Assesses current and future capability for value creation.
- Aids conversion of financial and non-financial assets, such as intellectual capital, into other forms of value.
Value Network Analysis

- Supports industry benchmarks.
- Creates robust network business and business networks.
- Provides a powerful language for collaboration.
- Works at every level of organizational and market complexity.
Value Conversion Depends on exchanges and sequences... 
... that leverage assets
Examples of Applied Value Network Analysis
Scalability

- Regional and Global Networks
  - EU Innovation Networks
    - GRI strategy South Africa
    - Austrian Gov’t political networks
  - e-Office partner strategy
    - Viagra™ value network
    - Scottish Enterprise
- Business Webs & Industry Clusters
  - Cisco Customer Interaction Network
    - ARCBS supplier relationships
    - York Healthcare patient support
  - Boeing Fight Test & Validation
    - Rolls Royce Marine Engine
    - AgResearch (NZ) commercialization
- Stakeholder Relationships
- Task Networks/Complex Supply Chains
- Knowledge Networks
- Business Units & Organizations
- Workflow
  - AT & T Product Launch
    - Telenor fault handling
    - Mayo Clinic, Boeing
  - Openwave 2-month reorganization
    - Environment Canada funding
  - MWH CoPs
    - Alzheimer's Helpline

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Benefits

Users reconfigured internal relationships system wide in only two months

- Uncovered inefficient core processes and tasks
- Unblocked structural dams to increase knowledge flows
- Unleashed core value innovation, sustainability and resilience
- Shortened information and feedback loops
Benefits

Users reconfigured internal relationships system wide in only two months

- Enabled a zero productivity hit during reconfiguration
- Deepened understanding of business issues
- Build strong consensus on need for change
- Improved inefficiencies in support services
- Developed new proactive support services
- Designed preemptive remote-based support services
Cisco Customer Interaction

Pattern of Calls
European Innovation Networks

Asset Generation

Organizational Networks

Inter-Orgainizational Value Networks

Network Archetypes
VNA at Boeing

- Boeing Flight Test & Validation.
- Achieved a six fold increase in productivity from testing one airplane a day to six per day.
- Organization of 3500+ people.
- Also used at Boeing in Lean projects, logistics and supply chain.

"Value Network Analysis, through visuals and conversations, helps build and strengthen the relationships and trust that are vital for people working together as a global enterprise….Now that I know the value networks methodology, I would not consider doing a six sigma, lean, or any other kind of project without first doing a VNA to provide the "systems" context for the initiative."

– Glenda Turner
Supply Chain Integrator, Value Networks, Boeing Integrated Defense Systems
Tools for Value Network Visualization and Analysis
Understand the “As Is” Value Network

- Map
- Analyze
Optimize the Value Network

- Optimize
- Monitor

Note: All ranges (yellow, green, red) are customized based on organizational needs and relevant benchmarking data. Scales should be revisited regularly.
To significantly and quickly improve performance across multiple interdependent processes (networks) at low cost by:

- Seeing how people truly get the work done
- Clarifying roles and deliverables
- Making intangibles visible and servicable
- Simplifying complicated contexts and relationships
- Making relationships more transparent
- Revealing opportunities by visualizing value flows
- Easily involving everyone
- Quickly evolving to an expanded language for workflow
VNA Visualization

- ASP Visualization Tools
  - Animated and customized visualizations of workflow for comprehensive business networks
  - One-click visualization and animation of networks
  - Easy to use distribute and edit format
  - One-click merging of networks for aggregate evaluation
  - Advanced (immersive) visualization capability for large data sets
  - Open APIs for connecting into your IS environment
  - Open source widgets for internal customization
Value Network: All Transactions

Perceived value
- High
- Medium
- Neutral
- Negative

Asset creation
- Financial
- Business relationships
- Competence
- Structure

Asset impact
- Cost
- Benefit
Value Network: Tangible Transactions

Perceived value

Asset creation

Asset impact

High
Medium
Neutral
Negative

Financial
Business relationships
Competence
Structure

Cost
Benefit
Value Network: Intangible Transactions

(Click in presentation mode to animate)

```
Perceived value
High
Medium
Neutral
Negative

Asset creation
Financial
Business relationships
Competence
Structure

Asset impact
Cost
Benefit
```
Analytical Tool Suite

- ASP Solution
  - Dashboard for monitoring & benchmarking performance indicators at the individual, group, and network levels
  - One-click analysis reports of key network performance indicators
  - Web based survey tool for network assessment
  - Source data files for corporate reporting
  - Providing vital linkages
    - financial and non-financial assets
    - brand management
    - reputation
Value Network Intelligence

- Resilience
- Stability
- Reciprocity
- Risk
- Maturity
- Innovative Capacity
- Asset Utilization
- Strategic Alignment

Note: All ranges (yellow, green, red) are customized based on organizational needs and relevant benchmarking data. Scales should be revisited regularly.
Coherence and Integration

- Community Building: 40%
- Human capital: 6%
- Market capital: 30%
- Process capital: 23%
- Renewal & Development capital: 1%

Asset Generation
- Collaboration
- Network

Network Outcomes
- Coordinator
- Third Party
- Partner
- Research
- Community
- Beneficiary
- Commercializer
- Product
- Packager
- Practitioner
- Community
- Project Team

Market Validation
- Human capital: 6%
- Market capital: 18%
- Process capital: 48%
- Renewal & Development capital: 13%
- Financial capital: 15%

Value Network Intelligence

- Workflow
- Streamlined…
- Asset Generation
- Aligned…
- Collaboration Network
- Denser…
- Role-based Network
- Harmonized…
- Network Outcomes
- Optimized…
- Enterprise SOA
- Network-centric…

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New Skills

- A new skill set provided through coaching, action learning and qualification programs:
  - Ability to create and edit workflow animations
  - Competence to use network centric performance measures for management interventions
  - Skills to use network centric tools for performance optimization
  - Capability to better negotiate needs and expectations
  - Language to clearly define deliverables
  - Capacity to expand accountability to intangibles
New Mindset

- A new mindset developed through master classes, scenario workshops, executive briefings and projects:
  - A network centric orientation toward workflow
  - A role based orientation for individual performance
  - A living systems based understanding of organization and network dynamics
Why the Value Network Approach Works
Value Network Analysis

- Conceptually simple – easy to learn
- Fast – achieves breakthroughs in hours
- Robust – links network activity to financials
- Visual – Maps and analytics
- Integrative – Finds whole system patterns
- Effective – Focused on people
- Comprehensive – defines the business transactions, process and network
## Comparison of Business Methods

<table>
<thead>
<tr>
<th>Process</th>
<th>Value Network</th>
<th>Social Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on mass production principles.</td>
<td>Based on living systems theory.</td>
<td>Based on human dynamics.</td>
</tr>
<tr>
<td>Linear, sequential, mechanistic.</td>
<td>Shows whole system – people, knowledge flows, <em>and</em> processes.</td>
<td>Shows social relationships and interactions.</td>
</tr>
<tr>
<td>Events and functions are central (<em>not</em> people or knowledge flows).</td>
<td>Puts <em>people</em> and roles at the center of the action.</td>
<td>Shows communication and knowledge flows.</td>
</tr>
<tr>
<td>Shows business transactions.</td>
<td>Shows how knowledge and other intangibles create value.</td>
<td>Focus is on people – good for locating expertise.</td>
</tr>
<tr>
<td>Works at multiple levels.</td>
<td>Reveals dependencies in business transactions.</td>
<td>Does <em>not</em> typically show business processes.</td>
</tr>
<tr>
<td>Requires an ordered environment.</td>
<td>Fast <em>and</em> robust – works at multiple levels.</td>
<td>All links denote the same relationship.</td>
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### Diagrams

- **Hierarchical Model Design**
- **Value Network Diagram**
- **Social Network Diagram**
Comparison of Business Tools

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<td>Visio</td>
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<td>Workflow Configuration</td>
<td>Google Group</td>
<td>Pajek</td>
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<td>Performance Monitoring</td>
<td>Value Network Consortium</td>
<td>Netdraw</td>
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<td>Process Modeler</td>
<td>Value Networks Composer</td>
<td>Ucinet</td>
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<td>Simulation</td>
<td>Plug-In</td>
<td>Mage</td>
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<td>Workbook</td>
<td>SoNIA</td>
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<td>Templates</td>
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<td>Practitioner Community</td>
<td>Cortona</td>
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<td>Developer Community</td>
<td>King</td>
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Consortium Support at www.value-networks.com

Welcome to Open Value Networks
The Value Networks Consortium (VNC) is the global network leading value network standards, taxonomies, visualization, analytics, vocabulary, methods, open tool development, benchmark datasets and techniques. Join the open value networks discussion.

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A Value Network Approach
Tool Supported Implementation

- Educate management
- Map formal processes as value networks using available documentation
- Identify participants in value network initiatives
- Coach participants in tools and methods
- (Web) Survey all participants
- Expand, validate and enrich current state understanding
Tool Supported Implementation

- Visualize, simulate and evaluate future value network
- Optimize future state value network
- Identify change measures
- Simulate change measure impact
- Modify optimized flow paths with redesigned processes
- Implement new processes with IS support and enablement
- Monitor new process
Visualization Tools

• Real-time generation
• Hyperlink via connectors and spheres to other applications
Company Details

ValueNetworks.com

1072 Folsom Street, Suite #386
San Francisco CA 94103
Phone: 978-468-0267
Fax: 206-984-2429
Web: http://www.valuenetworks.com/
eMail: http://xri.net/@valuenetworks