

Exchange Analysis

(Excerpted from the Value Network Fieldbook, <http://www.alleevaluenetworks.com>.)

Overview

The Exchange Analysis is an assessment of value dynamics throughout the whole network. It focuses on finding overall patterns in the transactions, and surfaces key issues for the network — such as its health, robustness, and resilience.

It is designed to:

- Validate or disprove that the network pattern fits its espoused purpose.
- Clarify roles and participant attributes.
- Identify patterns of reciprocity.
- Reveal key value linkages, chains of causality, and “missing links.”
- Show overall patterns of value creation or value loss.
- Provide insights into whole network optimization.

How to use it

This is one of the core analysis tools for the methodology. If you have to choose ONE analysis to do, this should probably be it. It is also one of the easiest ways to identify key **Performance Indicators**. The questions it addresses are grounded in systems thinking, social network analysis, and living systems theory. Facilitators with experience in these traditions will more readily be able to expand the questions and notice significant patterns.

When to do it

The Exchange Analysis should be conducted after completion of the visual **Value Network Map**

Exchange Analysis requires that:

- All **Participants and Roles** have been identified.
- All **Transactions and Deliverables** are indicated.
- **Sequencing** or other validation is complete.
- Weights or values have been assigned to each transaction (optional). Note this step is required to conduct the **Perceived Value** analysis.

Caution

No one person can understand a complex system. The exchange analysis is most effective as a way to enter into dialogue with people who represent different roles who want to better understand the system or network. The exchange analysis is a sense-making exercise that is best conducted as a structured dialogue.

Benchmarking indicators for network performance

Growth (comparative analysis over time)

- *Total interactions across the network*
- *Number of entities involved in tangible interactions (participant, group, and the network)*
- *Number and percentages of tangible interactions among those entities*
- *Number of entities involved in intangible interactions (participant, group, and the network)*
- *Number and percentages of intangible interactions among those entities*
- *Number of people participating in each role, group, and the network*

- Average total perceived value received per participant
- Total perceived value received for the network
- Increase in meaningful diversity *
 - Growth in participant variety that adds new capabilities
 - Growth in product and technical variety that adds new functionality
 - Growth in diversity of consumer experiences

Stability

- Ratio of participants with negative perceived value to participants with positive perceived value
- Participant turnover rate (survival rates) *
- Persistence of ecosystem structure *
- Predictability *
- Continuity of products, tools, and capabilities *

Value conversion

- Output of goods, services, or social contribution
- Revenue by participant, group, and the network
- Profitability by participant, group, and the network

Productivity

- Average aggregate ROIC (return on investment capital) *
- Change in productivity over time *
- Time between first appearance of an innovation and wide dissemination *

* A resource for understanding more about these particular indicators is *The Keystone Advantage* by Marco Iansiti and Roy Levien, Harvard Business School Press, 2004.

Analysis Questions

1.

- What is the overall purpose of the value network?
- Why does it really exist?
- What other value networks does it serve?

Every system fulfills its real purpose. Sometimes the espoused purpose of a value network is actually quite different from the purpose that is revealed by its activities.

2.

- Are there influencers or beneficiaries that have been overlooked?
- Are key players being discussed in your conversations that are not represented?
- Should they be?

It is always important to ask what is missing or who has not been included. Look for key stakeholders who influence or are affected by the network activities even if it appears they are not directly involved.

3.

- How does value gained by one participant extend to other groups or strategic partners within an organization in a way that accrues value for the company as a whole?

If a group of participants belongs to the same organizational entity, then value that is gained by one participant from an external stakeholder accrues both directly to that entity and either directly or indirectly to all other participants in that

organization. When value gained by one participant is not accrued efficiently to its internal and external organizational partners, then value gain is diminished.

4.

- What does the pattern of interaction suggest about the level of trust in the network?
- What norms of behavior are revealed by the patterns of exchange?

The ratio of tangible to intangible transactions, or the depth and quality of knowledge flows, can be an indicator of trust.

5.

- Is one type of value exchange more dominant in the whole system or between groups of participants?
- Why do you think that is?
- What would the implications be if it were different?

The dominance of a particular type of exchange may be an indicator of assumptions about value that drive system behaviors. This pattern also may point to places there might be structural or behavioral constraints on maximizing value.

6.

- Are there places people need to be engaged in exchanges, or offering value, but they aren't?

Every interaction is an opportunity to create value or build relationship.

7.

- How deeply enmeshed and interdependent are the participants?

The number, type, and frequency of interactions are indicators of the degree of structural coupling between a pair of participants and may indicate the quality of a relationship.

8.

- Is every participant both contributing and receiving value from the network as a whole?

Perceived value is determined by the number of in-going and out-going value transactions. If people feel they are not gaining positive value from the network they are more likely to withdraw.

9.

- Does it appear that some participants might be gaining value at the expense of another?
- If so, what are the implications?

This also is a question of perceived value. If other participants feel a particular participant is behaving unfairly, they are more likely to reconfigure roles and interactions in ways that diminish that participant's role in the network – or alter the value interactions.

10.

- What do the patterns of reciprocity flows tell you about this network?
- Do they appear to be healthy or is there a possible imbalance?

A consistent pattern of reciprocity of exchanges is an indicator of healthy value flows and whole-system optimization. Missing links, dead links, and broken pathways of value are indicators of missed opportunities for maximizing value. Sequencing transactions as they occur in the overall activity helps reveal missing links and poorly configured value paths.

11.

- Are there bottlenecks, constraints, or instability in the flow of value?

- If so, why?

Network patterns can be affected by control mechanisms and decision making. When one participant unduly constrains or controls transactions it is an indicator of structural or behavioral constraints impeding value flow.

12.

- Does every action elicit a response on the part of the participant?

- If not, why not?

Every action either triggers another transaction or has an internal impact on the participant who is the recipient. If an action does not trigger a positive value-creating response or generate additional value interactions, one needs to ask why is that activity happening?

13.

- How does the pattern or rate of growth in knowledge and other intangible exchanges compare to corporate growth and profitability?

Knowledge is the intangible that is easiest both to grow and to convert to other types of value - so systems that generate high value probably would have correlating high growth rates for value-added knowledge exchanges. If there is high growth of knowledge exchanges, yet corporate profitability and growth remain flat, then there may be problems with value realization. A high number of intangible exchanges is not always a positive sign. It could indicate that people are interacting a lot to try to manage infrastructure problems or unhelpful behaviors.

14.

- Who might play a new or different role in the value network?

- What would happen if roles disappeared or were combined?

- How closely aligned are your role and your brand?

- What if the position of a node changed and the participant suddenly forged new ties to those with whom they currently have no contact?

Questions around "What role do you really play in this value network?" can be very powerful. By imagining themselves in different roles people will often spot unseen opportunities.

15.

- How closely aligned are your role and your personal or group brand?

- What do the intangibles tell you about the different "brands" and reputations that are represented in this network?

Intangible deliverables often point to kinds of things that people are know for — how they might be regarded. There can sometimes be disconnects between the role people think they play and the role that is actually represented by their interactions. Looking at outgoing intangibles can also indicate certain kinds of attributes or qualities of individual participants.

16.

- If there is a "heartbeat" in this network, where is it?

- What participant plays the most critical role in the life of this network?

- What would happen if the role were not there or the person playing that role were replaced with someone else?

Sometimes the most important participants are simply overlooked. Either their role is taken for granted or they appear to be peripheral to the network (such as a champion or resource provider) — but if they were not there or someone else took that role the whole dynamic of the network could change in — well, in a heartbeat.
