
Reconfiguring the Value Network

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The key business question in the knowledge economy is, “How is value created?” The traditional answer to that question is – “through the value chain.” But value chain thinking is rooted in an industrial age production line model that gradually has been superceded by the new enterprise model of the value network or value web. A major strategic challenge today is reconfiguring a business from value chain organization to the more fluid structure of the value network.

In the fast-moving world of e-commerce there is increasing buzz about e-webs and business webs. But business webs are just one type of value network. Virtually any organization can be understood as a value network. Yes, any organization, including government agencies and non-profits. Although interest in business webs is fueling development of new types of analysis, these value network perspectives can help explain the dynamics of non-profits, economic clusters, and national economies as well. Earlier issues of the *Journal of Business Strategy* have explored this shift by featuring new thinking about value clusters, value webs and Value Networks, and our understanding is continuing to grow.

However, most approaches to analyzing and reconfiguring value networks have not taken into account the role of *knowledge* and *intangible* value exchange as the foundation for these emerging networked enterprises. Even with the widespread interest in the knowledge economy, intellectual capital, and intangibles, these generally have not found their way into our business models. As a result, efforts to understand value networks often confuse rather than help.

The Three Currencies of Value

The key to reconfiguring business models for the knowledge economy lies in understanding the new currencies of value. A value network generates economic value through complex dynamic exchanges between one or more enterprises, customers, suppliers, strategic partners and the community. These networks engage in more than just transactions around goods, services, and revenue. The two other currencies are knowledge value and intangible value or benefits. I call these currencies because all three serve as a medium of exchange, which is the basic definition of currency. All three are important in a value network.

1. Goods, Services, and Revenue (GSR)

Exchanges for services or goods, including all transactions involving contracts and invoices, return receipt of orders, request for proposals, confirmations, or payment. Knowledge products or services that generate revenue or are expected as part of service (such as reports or package inserts) are part of the flow of goods, services, and revenue.

2. Knowledge

Exchanges of strategic information, planning knowledge, process knowledge, technical know-how, collaborative design, policy development, etc., which flow around and support the core product and service value chain.

3. Intangible benefits

Exchanges of value and benefits that go beyond the actual service and that are not accounted for in traditional financial measures, such as a sense of community, customer loyalty, image enhancement, or co-branding opportunities.

These value exchanges lie at the heart of a value network. Further, every exchange of value is supported by some mechanism or medium that enables the transaction to take place. For example, if two people want to exchange messages about a meeting they may use the mechanism of e-mail or voice mail to support the exchange.

Or consider a more detailed example. Let's say a technology vendor would like to provide an on-line user group discussion for its customers for a fee of \$20 per month. The mechanism of an interactive user group allows several exchanges of value to take place between the provider and the user. Exhibit 1 lists the value exchanges that might be enabled through such a mechanism.

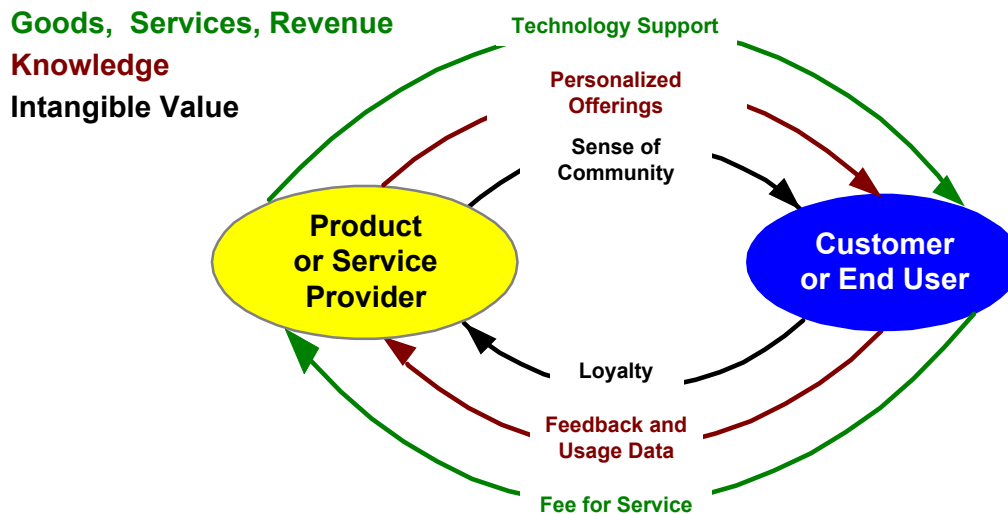
Exhibit 1: Table of Value Exchanges		
Mechanism	Provides Value	Returns Value
Interactive On-Line Discussion Group	GOODS, SERVICES <ul style="list-style-type: none"> Moderated discussions Responses to questions 	REVENUE <ul style="list-style-type: none"> Subscription fee
	KNOWLEDGE <ul style="list-style-type: none"> Personally targeted news Offerings based on user preferences 	KNOWLEDGE <ul style="list-style-type: none"> Feedback for product development Customer usage data
	INTANGIBLE BENEFITS <ul style="list-style-type: none"> Sense of community 	INTANGIBLE BENEFITS <ul style="list-style-type: none"> Customer loyalty

- **The traditional value chain exchange is the provision of moderated discussions, information, and responses to questions in exchange for a fee.**
- **The knowledge flow may involve exchanges of customer usage data and feedback that is valuable for product development. As a result of their participation, users receive in exchange value-added knowledge, which may take the form of personally targeted news or offerings based on their unique personal preferences.**
- **By tracing the intangible benefits that accrue in the network, one finds that the underlying logic for creating such a discussion group is not only about gaining revenue from the service (indeed it may barely break even). The user group may really be about providing a sense of community on the part of the user. In return, of course, one would hope to receive an increase in customer loyalty. The intangible value exchange is the real reason for engaging in the activity.**

Mapping the Value Exchange

Using the same example, we can “map” these value exchanges as a flow diagram showing goods services and revenue (GSR), knowledge flow, and creation of intangible value. To be sure that nothing is overlooked it is best to consider each flow separately. See Exhibit 2.

Exhibit 2. Mapping the Value Exchanges



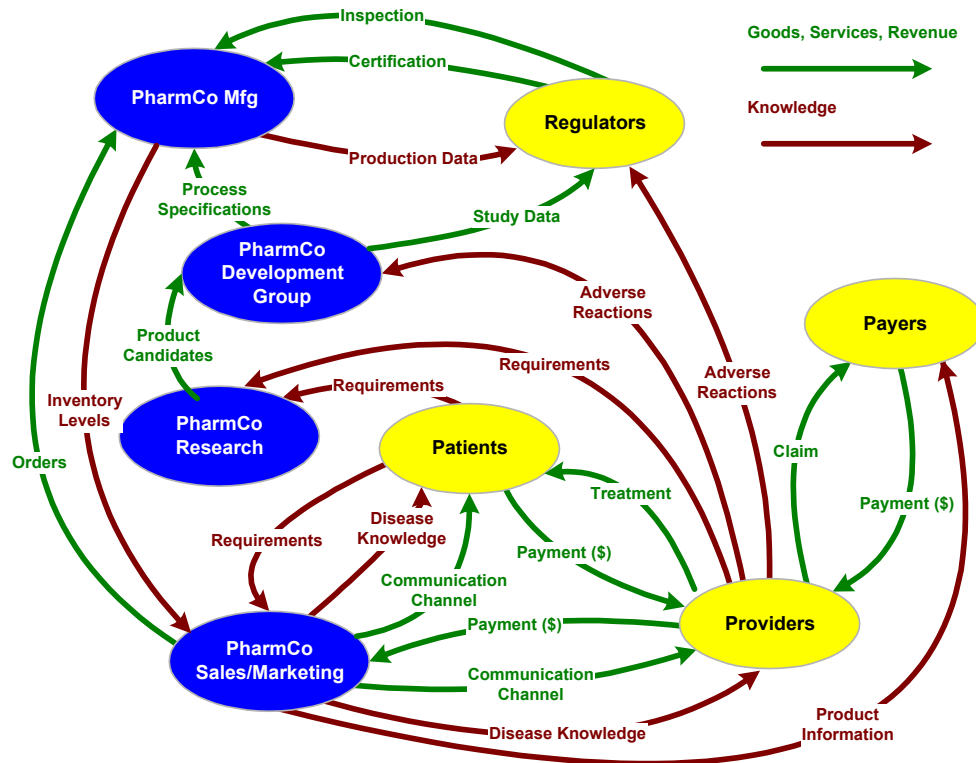
Revenue-generating value exchanges are but part of the picture in a value network. The flow of knowledge value and intangible value is of equal importance. Please note there are no double-headed or unlabeled arrows in this analysis approach. Unlabeled or double-headed arrows are meaningless. Diagrammed this way, however, we know exactly who initiates the exchange, what specific value or product is being conveyed, and who receives it. With this level of detail, we can analyze value creation from multiple perspectives such as time, goals, resources, results, costs, or value added by linking the diagram to analysis tables. Note also that the originators and recipients are real people or groups of people. In the rush to understand the wild and woolly world of e-commerce, people often confuse the mechanism with the exchange. New technologies are only pipelines for knowledge and value exchange. The exchange is what is really important.

This example shows a straightforward exchange of goods and services for revenue, knowledge exchanged for knowledge, and an intangible exchanged for an intangible. Knowledge is the most interesting currency of all, because knowledge can be exchanged for any of the three! We can exchange knowledge for money in the form of a knowledge product or service, we can exchange knowledge for knowledge, and we can exchange knowledge for an intangible. An example of exchanging knowledge for an intangible would be when Sun Microsystems gave away its Java technology in hope of generating a web of loyal users, thus exchanging knowledge for loyalty. Unfortunately for the Java alliance, the dynamics of this were only partially understood, and the returns were not fully realized.

Mapping the Value Network

Mapping a Value Network involves diagramming all three value exchanges with each and every member of the business or organizational network. Let's explore some of the insights that surface from this perspective. Exhibit 3 is a diagram of a pharmaceutical company that we will call PharmCo. To keep this simple, we will look only at a few of its interactions focusing on the first two currencies: Goods, services and revenue (GSA) and Knowledge.

Exhibit 3: Value Network Analysis Diagram



The analysis revealed that even though PharmCo respected its financial relationship with medical providers, it neglected knowledge exchanges, which were handled inconsistently across the company. From this new perspective, it gained appreciation of the importance of feedback about medications from the providers, and of how the communication loop about disease was vital to smooth the way for providers to prescribe PharmCo products. It also realized that other than marketing materials, there was no real exchange of knowledge and that it could deepen the relationships by concentrating on knowledge and intangible value that could flow both ways.

Reconfiguring for E-Commerce

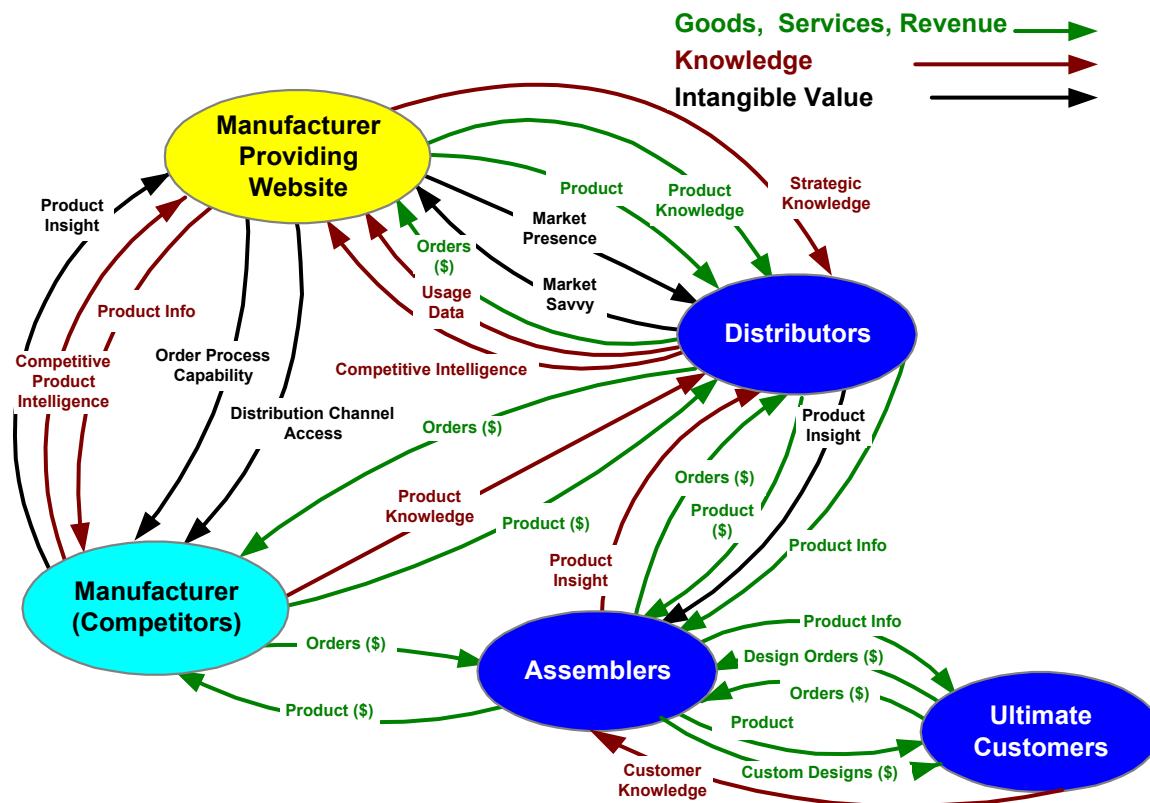
A value network perspective can expand the strategy toolkit for any company as the above example shows. However, it is especially critical for moving into the world of e-commerce. Web investments are not like traditional marketing. Using the same return on investment criteria that one does for marketing campaigns or other technology investments simply doesn't work. The net is web of

conversations, as the provocative book *The Cluetrain Manifesto*, by Christopher Locke, Rick Levine, Doc Searls, and David Weinberger (Perseus Boosk, 2000) so aptly demonstrates. Net strategies that succeed concentrate on knowledge value exchanges and intangible benefits such as brand recognition and loyalty.

The value network diagram in Exhibit 4 shows how knowledge and intangibles can be leveraged in an Internet strategy. A clothing manufacturer moved into e-commerce through the mechanism of providing free marketing Web sites to its distributors. In this case, the manufacturer also allowed competing manufacturers to sell products via the same Web site.

Whoa! What's going on? Why in the world would a company provide a marketing channel to their competitors? In this example, the selling of competitor products on a manufacturer's Web site only makes sense if we understand the flow of knowledge and intangible benefits that the manufacturer gains. The company gained usage data not only about sales of their own products, but also about those of their competitors. This very savvy company focused on the intangible benefits of building closer relationships with its end users and gaining market intelligence, customer feedback, and competitive intelligence. Knowledge value and intangible value in this case outweighed the financial return. More examples of value network analysis applied to e-business webs are featured in a recent book, *Digital Capital*, by Don Tapscott, David Ticoll and Alex Lowy, (Harvard Business School Press, 2000).

Exhibit 4: Value Network Analysis Diagram



Conclusion

Value networks are complex. They encompass much more than the flow of products, services, and revenue of the traditional value chain. Whenever there is a transaction in a complex enterprise there is an exchange of value. Yet, only a portion of value exchange can be tracked or measured through service delivery or revenue generation.

As more and more products and services depend on the exchange of knowledge and information, knowledge and intangibles become mediums of exchange or currencies in their own right. Direct revenue exchanges are but part of the picture. Knowledge and intangible value are of equal importance, and success depends on building a rich web of trusted relationships. In the knowledge economy, these may indeed tell much more about present and future capability to achieve sustainable advantage.

Verna Allee is a consultant in new business models, knowledge management, and intangibles. She developed the core methodology described here, *HoloMapping™* and its application. Her book, *The Knowledge Evolution*, was published by Butterworth-Heinemann in 1997. For more about her work, see <http://www.vernaallee.com>.