
Value Network Analysis, Strategic Planning Faces the Music

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Summary

Fundamental changes are taking place in the external environment of many organizations. These changes are partly because consumers, with the help of the Internet, are becoming more vocal and want to be involved in the process. Companies are forced to change their methods from supply-driven to demand-driven and from independent with competition to business ecosystems. Many well-established organizations do not become aware of these structural changes in their market in time to react and change appropriately and quickly. One possible reason for this may be that these organizations use strategic analysis tools that emphasize the consideration of tangibles. A better tool – one that analyses value networks and can handle more complexity – could be an answer. A Value Network Analysis can illustrate the balance between tangibles and intangibles more clearly, and can help organizations to recognize structural changes and to formulate sound strategy. Organizations, employees, and technology must adapt to their environment – which is a network – to be and remain successful.

Value Network Analysis, Strategic Planning Faces the Music

After five days of uninterrupted programming, Shawn Fanning introduced Napster in 1999. This software, which is used for downloading music from the Internet free of charge, launched a revolution in the music industry. What is the result of this in 2005? Computer manufacturer Apple is leading the way in the online music sales industry with its paid online music and a business ecosystem that makes all types of music available to the consumer using the iTunes and iPod platforms. The established players, such as Sony and BMG, are now a step further away from the consumer in this new environment. This is just one example of the many opportunities that have been missed by well-established companies recently. It leads us to ponder a few questions:

1. Which trends and developments possibly cause these "revolutions"?
2. Why are successful and well-established organizations missing these opportunities?
3. What can these organizations do to come out on top in such a revolution?
4. What does all this mean for the role of ICT as a strategic tool in organizations?

I will answer these four questions in this article, beginning with the online music sales industry as an example. Then I will explain a few trends and developments mentioned in the literature that are relevant to this example, which will help us see it in the larger scheme of things. I will then substantiate the fact that well-established companies possibly do not react to developments in the marketplace fast enough or well enough because they are using traditional analysis tools. Such tools prevent them from seeing structural changes which are concealed behind the symptoms they are trying so hard to fight. Subsequently Value Network Analysis is introduced as a potential new tool for strategic planning. This tool enables organizations to recognize structural changes and opportunities better than tools that are commonly used today. I will take a real-life example and explain how Value Network Analysis is used for strategic planning by e-office, an ICT services provider. I will conclude by identifying the implications of my findings for planning ICT strategy.

The silent revolution in the music industry

Why did Shawn Fanning develop Napster in 1999? Because he was frustrated with the available way for him to enjoy music. The music he wanted could only be obtained on pre-programmed CDs, which might contain two selections he was interested in and ten that he had no interest in. Also, he wanted to be able to download music directly onto his computer. With his Napster program, Shawn made it possible to find music on the Internet, to download it and to share it with other Napster users. The music industry immediately called it "piracy" and turned to the courts to shut Napster down, with minimal effect. Of course, there were some small legal victories where distributors of online music lost out. However, the fundamental change that had started could not be halted – the supply in fact was no longer being determined by the supplier, but driven by the customer with his specific wants and needs.

Meanwhile, there are a few who have followed in Napster's footsteps, such as Kazaa and eDonkey. These companies have enabled the online distribution of films as well as music. In addition, the established music publishers now pay BigChampagne.com a sizeable amount of money each month for marketing information emanating from the same illegal music services that they are trying to have shut down.¹ But that's not all....

In January 2001, Apple launched version 1.0 of its iTunes Music Store. This innovative computer manufacturer saw the enormous potential of the customer demand that was hidden behind Napster – that many did not use Napster for the sole purpose of getting free music. People used Napster because it was a new, and for many, valuable way of experiencing music – and they would be willing to pay for this added value. In addition to the online music store, Apple established the iPOD platform that met the demand to have music available anywhere at any time. Apple also completed contracts with all the large music suppliers, so that all imaginable types of music would be available via iTunes. Now, according to Winter Green Research,² Apple has 1% of the global music market, and according to researcher Michaels,³ Apple is the market leader in online music sales with a market share of 70%. It is estimated that by 2009 the majority of music will be available online as a paid service.

How is it possible that well-established players in this growing market missed the opportunity and that Apple is leading? Apple was able to see the structural change in consumer needs and behavior that was concealed behind the Napster "symptom."

Recent management literature illustrates the trends that help to place the Apple example into perspective.

Trends and developments in the services era

Consumers are very well informed these days. They know exactly what they want and are extremely vocal about it. Consumers expect suppliers to meet their needs with customised answers and a set of solutions offered to them as a functional entity. A patient no longer simply accepts a doctor's diagnosis or prescription, but confronts him with information found on the Internet – about new treatments that he thinks will provide a cure for his ailment. This is just like the music lover who no longer accepts the music industry determining how and in which order the music is to be packaged and presented to him. Thus, to meet consumer demand there is a major shift taking place from supply-driven to demand-driven sales.

Not only have consumers become more vocal about their expectations for a product or service, they also want to be involved in the process of creating or delivering the product. They want to be able to influence the development of new products and services and to make their own choices and decisions. They want to be kept continuously up-to-date on the progress and status of orders. According to management gurus Prahalad and Ramaswamy,⁴ the value experience is shifting from a final-results basis to a combination of process and results. Consumers value "discovering" their own music and creating a CD with that music – exactly how they want it. They may also want to create their own cover for it. Consumers want to use

Internet discussion forums to participate in the process with their idols and to share their opinions with other fans.

These changes in consumer behavior are mainly facilitated by the Internet. Prior to purchasing a product, consumers can find information about a product's advantages and disadvantages on product comparison websites such as Froogle.com. Then they can place an order with the supplier offering the best price/quality ratio. Through online communities, consumers share information and experiences about very diverse subjects and keep up-to-date on current affairs and ideas. On their personal weblog they provide their own opinions about issues that affect them. Soon after Lego put "mindstorms"^a on the market, fans developed and introduced an alternate operating system. People find each other and organize themselves via the Internet – and Lego tolerates this development, actively engaging these consumers in dialogue in order to improve its own products.

To provide all consumers with the complete experience they demand, organizations are forced to embrace new forms of organization. Looking at the computer industry – there is not a single manufacturer that can, all by itself, provide a consumer with a complete solution. A laptop computer consisting of parts from a number of specialized manufacturers must be assembled into a complete and functional product. The product has to be marketed to the consumer by a supplier such as Dell or HP. Without the specialized graphics card supplier or Microsoft, there is no whole working product for Dell or HP to market to the consumer. Or, think about Linux – a business network of various major IT players and consumers that, under the leadership of visionary Linus Torvalds and with an enormous community of volunteers, invests billions of dollars and a lot of free time into creating an alternative operating system that can compete with Windows. However, Linux the ecosystem does not have a CEO, a corporate office, or any shareholders.

We see that to be able to continuously meet the additional and ever-changing demands of the consumer, industries are organizing themselves more like business ecosystems. According to Harvard Business School Professor Marco Iansiti,⁵ the performance of a single company in an ecosystem, like the computer industry, is largely determined by the characteristics and structure of the network that influences the combined behavior of the many partners, competitors, and customers. Strategy is more about how to influence all these aspects of the network, including concerned parties that are outside the limitations of the traditional organization.

Implications for strategic planning

These trends show that in general organizations do not have any formal control over the entire ecosystem that delivers value to them. As a result, intangibles such as collaboration, community, interests, information sharing, transparency, dialogue, trust, risks, and knowledge

^a Mindstorms is a new Lego product you can use to design your own Lego concept with a simple computer program. You can control it through its built-in microprocessor.

are becoming very important production factors and management tools. This requires more out-of-the-box thinking than in traditional management areas where competition, money, and tangible assets are a source of competitive advantage.

In addition, the trends described here also show that the playing field of organizations has become much more complex in recent years. The fact that organizations participate in a network – a larger entity in which the elements are linked together, either directly or indirectly – makes it difficult to isolate and analyse symptoms independently from the dynamic environment.

A visionary leader like Steve Jobs of Apple probably has a special intuition for sensing important changes in the market and succeeds, with his abilities and charisma, in successfully adapting to these changes in a timely manner. Most organizations however, in addition to leadership must use tools to analyse the indicators in the environment, make choices based on the findings, and implement them. Is it possible that the tools that are presently being used for this purpose limit organizations in sensing the complexity and the intangibles of structural change? After all, these tools were developed during a “supply-driven” age, a period in which these emerging trends did not yet play a role and the technological infrastructures that facilitate these trends did not yet exist.

Old paradigms and new tools

Two well-known and widely-used analysis tools for industries and organizations were researched and developed by Harvard Professor Michael Porter. In his Five Forces Model,⁶ he describes an industry as a financial pie that is divided among five competing forces: competitors, new entrants, substitutes, customers, and suppliers. At the organizational level, Porter introduced the Value Chain.⁷ This model is used for charting and classifying an organization’s activities into primary processes and supporting processes so that separate activities and competitive advantages can be identified. These models are widely used analysis tools for organizational strategy and form the core of most MBA programs.

Both tools, however, are strongly geared towards the tangible aspects of the organization and the external environment. They also very much isolate an organization’s activities from its environment. In addition, the tools force an organization to either choose to differentiate products or services – or choose to be a cost leader. According to Porter, it is not possible to combine both. In an essay, Professor Hans Strikwerda⁸ argues that Porter’s thinking in this case is too one-sided and outdated. The “we against them” attitude toward new developments is possibly reinforced by the conclusions that result from these linear and financially oriented models. Since they force the user to concentrate on the tangible aspects and they drastically reduce the complexity of today’s reality, there is an increased risk of missing important elements in the analysis. Porter himself concludes for example, after applying his own tool to the developments of the Internet,⁹ that the Internet only adds value as an extension of incumbent strategies. At that time, right after the “dot-com crash,” traditional management took everything back to how it used to be.

If we apply Porter's Five Forces model to the example from the music industry, it becomes apparent that the model falls short in the analysis of the intangible elements and their corresponding complexity. In this example, the power shifts from the producer to the consumer and there is a substitute for the existing products in the form of digital music via the Internet. Furthermore, it appears that a new and innovative player has entered the market – one that takes away a part of the profits. A logical reaction according to Porter could translate to: "Use legal means to prevent new players from entering the market, use your existing products and legal measures to put pressure on the consumer, and reinforce the position of existing products by competing on price." And that is exactly how it played out. Napster and users of other online services are dealt with by the courts, artists such as Metallica are used to explain to consumers that their behavior cannot be tolerated, and the prices of music on CD have decreased globally in the last two years.¹⁰ The Five Forces model is geared toward protecting a market share, which translates to money, and which has to be protected against all competition, whatever the cost. This focus on financial results conceals the important structural changes taking place in the environment.

The Value Chain raises the same objection. Value in that model is defined as the financial margin that remains after the costs of all activities developed by the organization have been deducted. The problem with strategically managing in terms of financial value is that success can only be measured after the fact. Margin is the result of the process that has made its way through the value chain. It can be equated with driving your car by looking in the rear-view mirror. Research into the value of organizations shows that the main part of their value is intangible in nature. Besides the financial book value, there are three categories of intangible assets: competencies, internal structures, and relationships with the external environment. According to Hanken Business School Professor Karl-Erik Sveiby, the flows of knowledge between these intangible elements are the driving factors behind the financial results of processes and organizations.¹¹ To recognize structural change pro-actively, and to influence it from inside the organization, it is necessary to use tools that explicitly take into account these intangible elements that indeed do give indications about future revenues.

Value Network Analysis

One such tool is Value Network Analysis. A method that has been in use for several years now is *ValueNet Works™* Analysis, developed by organizational consultant and researcher Verna Allee. Value Network Analysis can handle more complexity than linear models. It also considers both tangible and intangible elements.

According to Allee,¹² the network is the natural pattern of work and organization. Her method combines tools that analyse strategy with insight into the complexity of interactions among people.

The model is different in three respects from the more traditional forms. The analysis is based on the concept that intangible elements should be considered as negotiable and exchangeable assets. Furthermore, the tool offers the capability to reflect an organization and its

relationships as a system of tangible and intangible transactions. Finally, it offers the capability to link scorecards or indexes to a network analysis, so that organizations can gain better insight into the strategic consequences of decisions concerning transactions and activities in the network.

Figure 1 illustrates how Value Network Analysis works. There are two participants in this simple example – a supplier and a customer – who perform tangible transactions in which the deliverables are services and payments. These are shown using solid lines. Intangible elements are also exchanged, such as product information and loyalty. These are displayed as dotted lines.

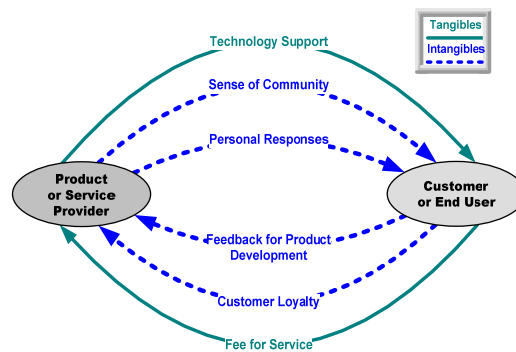


Figure 1: Elements of Value Network Analysis

A real-life example of Cisco illustrates how Value Network Analysis can help an organization arrive at some surprising insights. The analysis shows that the structure of Cisco’s business ecosystem includes both tangible and intangible transactions.

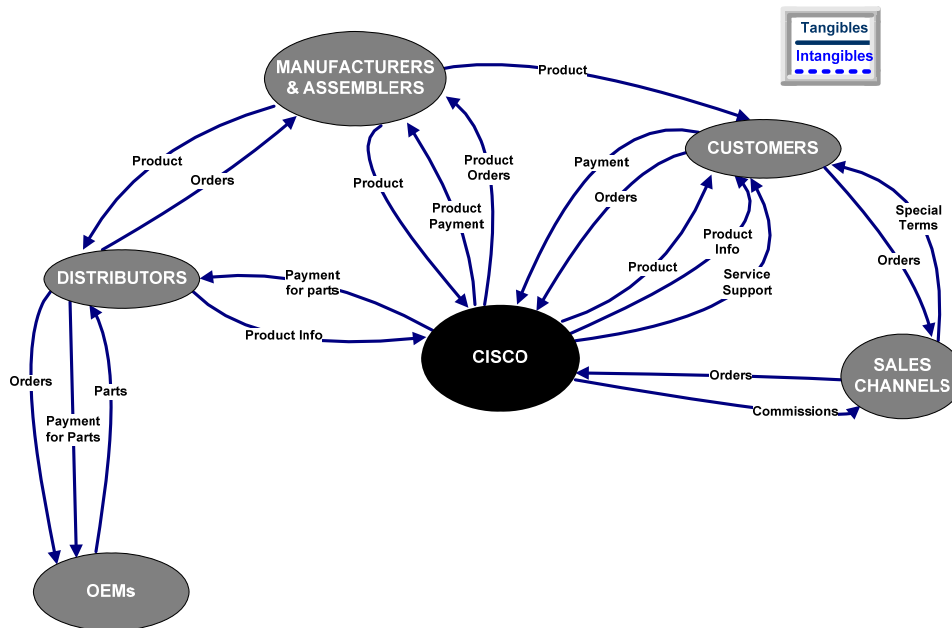


Figure 2: Tangible transactions in Cisco’s value network

Figure 2 shows the tangible transactions and deliverables between Cisco and its most important contracting parties. This analysis offers good insight into Cisco's business ecosystem with emphasis on its formal relationships.

Figure 3 shows the network with essential intangible transactions and deliverables added. Three participants have been added to the analysis, with whom Cisco has only an informal relationship; however these relationships are crucial to the success of the organization's strategy. Examples are the exchange and collaboration with competitors in establishing standards for the entire industry, and the collaboration with strategic partners.

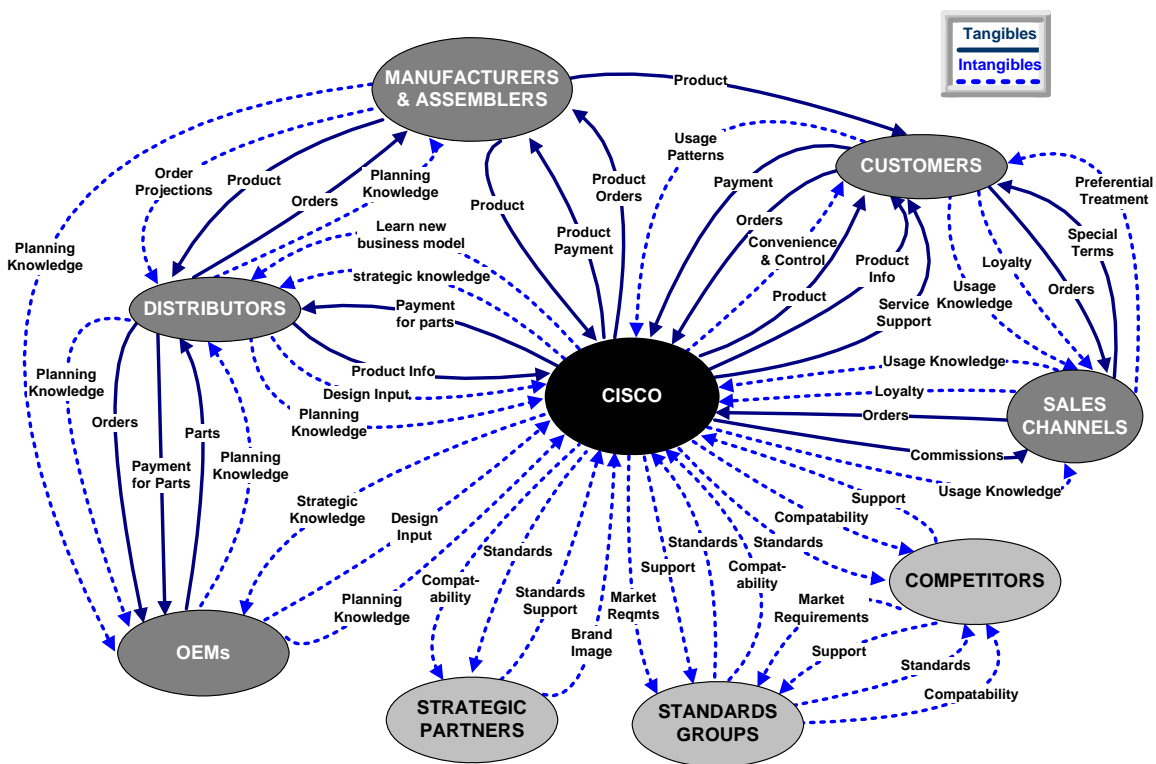


Figure 3: Cisco's value network including intangible transactions and deliverables^b

The value network of ICT services provider e-office

As a study of how the method could apply to our own company, we have conducted a Value Network Analysis of the e-office^c business ecosystem.

^b From *The Future of Knowledge: Increasing Prosperity with Value Networks* by Verna Allee.

^c e-office is an ICT specialist with 85 employees who focus on improving work processes of people by implementing ICT in an office environment.

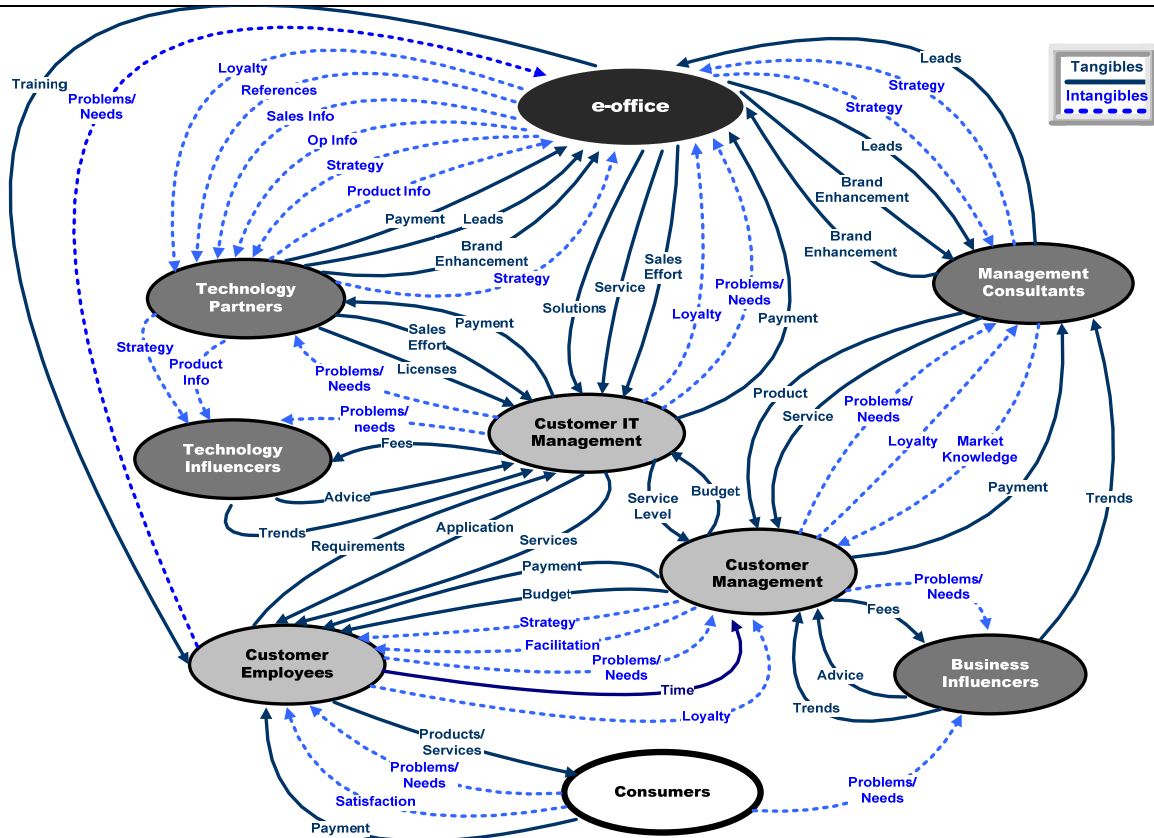


Figure 4: e-office ecosystem's value network

e-office is a partner of IBM and Microsoft and bases its solutions on the technology of these software suppliers. In this analysis IBM and Microsoft have been combined as “technology partners.” The services are generally delivered to the “customer’s IT manager” In figure 4, we can see many transactions, both tangible and intangible, in that part of the network.

What stands out is that Value Network Analysis, unlike existing models, offers the capability to join network participants together or to split them apart. In this analysis, IBM and Microsoft are combined, e-office is considered as a single organization, and its customers are split up into units. By using the smaller units, e-office gained more insight into the results of its services to its customer’s areas of business management, IT management, employees, and their customer.

e-office came to the following conclusions based on this analysis:

1. The transactions between IT management, e-office, and technology partners are strong.
2. The transactions between e-office, business management, and users are weak.
3. The transactions between business management, users, and IT management are relatively weak and very tangible in nature.

Given the fact that 80% of the benefits of the e-office solutions are for the employees and business management, e-office found the second conclusion to be a point of concern. The network relationships between e-office, the users, and business management must be improved to be more certain of realizing the benefits of e-office's services. Furthermore, because collaboration among all involved customer parties is crucial to the success of the projects implemented by e-office, assistance in reinforcing the e-office customer's network was noted as a second issue.

In addition to analysing the relationships within the network, Value Network Analysis offers the possibility to further research specific issues such as the e-office findings mentioned above. An Impact Analysis can be made of the transactions that are "received" by one of the participants. In the e-office example, a further study was conducted on the impact of the network on business management. Value Network Analysis also offers a Value Creation Analysis. Using this cost/risk and benefit analysis of all transactions in the network, an organization can choose projects that will support the strategy and can further draw up business cases. Finally, it is important to be able to follow the implementation of the strategy and to make adjustments where necessary.

Value Network Analysis is a relatively young tool. It can become complex very quickly and much research still needs to be conducted on its application in specific situations. For example, it is sometimes difficult to determine the range and depth of a specific analysis. That is why universities, suppliers, and potential employees have been left out of the scope of the e-office analysis. The first results from the implementation in our own organization are nevertheless very surprising and offer insights that fit well with today's trends. Now e-office has a better insight into how its services create value in the customer's internal value network, and has indications of how to influence its own business ecosystem to increase its total value. The next step for e-office is to support the new strategy with information and ICT.

The consequences for organizational and ICT strategy

What are the consequences of all this for ICT as an enabler of organizational strategy? In order to achieve a competitive advantage, a high level of maturity is needed in ICT infrastructure, the management of information itself, and the information behavior and values of users.¹³ And these three factors should conform to the underlying pattern of the organization and its environment – the network.

The first large-scale use of ICT in the business environment was in the 1960s. Whoever was first in automating an information-intensive problem reaped the benefits of a strategic advantage, with the Sabre airline reservations system being the most well-known example. By the 1980s, this approach was no longer a strategic advantage because organizations could distinguish themselves by implementing ERP software to automate the entire value chain. Even today, many organizations are struggling to take advantage of the benefits of this ICT evolution phase. Information systems and their use have always conformed to the organizational structure.

The Internet made it possible for Shawn Fanning to create Napster. The trends and developments described here have mainly been made possible by this network infrastructure in combination with the changing behavior of consumers and markets. This leads to the theory that organizations have to adapt to the pattern of their environment in order to connect to structural changes in their environment. If we wish to see organizations and their environment as a network – information systems, information management, and the behavior and values of the users will also have to conform to this pattern. Adapting the internal network infrastructure and protocols to the metaphor of the Internet was relatively easy. Changing information behavior and values and information management into a system that is already commonplace for the consumer will be a much greater challenge.

Information management and use must therefore be organized based on the network inside and outside the organization. Organizations that can transform their own infrastructure, information management, and information behavior into a network pattern will be the first ones to reap the benefits. A tool like Value Network Analysis offers an excellent approach for connecting these three components to be successful in the services era.

Conclusion

Many well-established organizations miss a lot of opportunities by not sensing structural changes in their market – the pressure to change from being supply-driven to demand-driven, the shift in the consumers' value experience from the final result to the process, and the shift from traditional competition to complex networks of organizations or "business ecosystems." These organizations are looking at change through existing interests in the industrial paradigm and the tools they use for strategic planning do not adequately show the underlying trends and developments.

Therefore, organizations must look for tools that help them to adapt quickly and efficiently to the changes in the marketplace. Value Network Analysis is the type of new tool I am referring to, being ideal for analysing complex situations along with the trends and developments that are part of the services era. On the other hand, new tools can still be raw, making further development and action-based research necessary. The real-life examples of Cisco and e-office show that Value Network Analysis is a tool that provides insight and the capability to analyze the business ecosystem so that manageable and measurable steps can be defined.

ICT must also support working in the network pattern. Because many organizations still struggle with reaping the benefits from ERP, which is in fact the ICT extension of Porter's models, there is a major opportunity for organizations that already do ERP well. They can transform their ICT, information management, and information behavior into the network pattern – and help create new value in their business ecosystems so that they can cater to the new demands of their consumers.

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