

VALUE INNOVATION: PASSPORT TO WEALTH CREATION

Here are practical ways to help your company grow profitably.

Thomas A. Dillon, Richard K. Lee and David Matheson

OVERVIEW: *Although most managers will agree that innovation can be the passport to wealth creation, many of their actual business practices and behaviors fail to support the activities crucial to value innovation. In particular, many companies over-emphasize technology innovation and R&D, which, when used in isolation, are insufficient to create new wealth. Through literature review and interviews with value innovators, a subcommittee of the Industrial Research Institute's Research-on-Research Committee has defined a value innovation process, providing a framework to develop a new product, service or business model that will have a strong, positive effect on enterprise value. The subcommittee also created a Value IQ instrument to help companies understand their ability to value-innovate*

and identify those areas where changes in behavior and company culture may be required.

KEY CONCEPTS: *value creation, value innovation process, enterprise value, corporate culture, stakeholder behavior, capability to innovate.*

Wall Street, institutional investors and shareholders expect CEOs and CTOs to think and act boldly, move from incrementalism and implement plans to drive sustained significant increase in enterprise value. Yet few companies are meeting the challenge.

Well-known consultants and professors—including Clayton Christensen (1,2), Gary Hamel (3–6), W. Chan Kim and Renée Mauborgne (7–9), Constantinos

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Markides (10,11), James Brian-Quinn (12), Jim and David Matheson (13), C. K. Prahalad (6,14), and Leifer et al. (15)—have researched creating value through value innovation and written excellent books and articles on their findings. They describe tools to stimulate value innovation and “outside-the-box” thinking, and provide examples of companies that have demonstrated significant and sustained increases in enterprise value. However, they have neither described the value innovation process nor published tools that allow a company to determine its ability, or capacity, to value-innovate.

These authors agree on one fundamental principle: innovation is the primary source of wealth creation. Furthermore, the greatest economic value comes from innovations that directly impact customer value, providing exceptional value to the most important customer in the value chain. Virtually every executive and manager of every organization knows this principle and desires to act upon it. Yet many organizations behave in ways that conflict with this principle. The primary challenge facing these organizations today is to act more in accordance with this fundamental principle by bridging the gap between the stated desire to create wealth and real actions that undermine the ability to do so.

Many organizations over-emphasize technology innovation, believing that it alone will create new wealth. Tracking the \$275 billion annual R&D investment made by the top 1,000 global R&D investors (16) understates the total investment in innovation. For the most successful value innovators, the R&D contribution is only a portion of the investment and, in some cases, it may be zero. Best Buy, Costco, Dell, Enterprise Rental Car, eBay, General Electric, Home Depot, Microsoft, Southwest Airlines, Starbucks, Virgin Group, WalMart, and Whirlpool are value innovators. They have significantly increased their enterprise value on a sustained basis. All of these companies have used technology to enable their business models.

For example, when we interviewed the Virgin Group in 2000, it had just launched Virgin Mobile, one of the first mobile virtual network companies. The company sold pay-as-you-go phones and bought capacity. In just four years, Virgin Mobile grew to more than 4 million customers and reported EBITDA of £75 million on sales of £442 million in 2003 (17). At the time of its IPO in 2004, Virgin Mobile had a value close to £1 billion. By providing exceptional value in the form of cellular phone service to the consumer, Virgin Mobile significantly increased the enterprise value of the Virgin Group.

Boards of Directors, CEOs and CTOs are responsible for increasing enterprise value but the CTO typically faces a number of challenges:

- Creating exceptional value for, but with limited access to, the most important customer.
- The fact that technology innovation in isolation rarely increases company value (5,7).
- Constraints on R&D spending (18).
- Meeting increased demands from Wall Street to reduce the time required to introduce new products and services.

In 1999, the Industrial Research Institute’s Research-on-Research (ROR) Committee formed a subcommittee to address these challenges within the context of creating value through innovation. The goal: close the gap between the recognized principles of value innovation and the limited number of companies that take advantage of, and practice, them.

In this article we:

- Highlight the differences between value innovation and technology innovation.
- Describe a practical value innovation process model that will help translate the principles of value innovation into organizational reality.
- Describe the first-generation Value IQ Instrument designed to focus meaningful discussion on a company’s ability to value-innovate and identify where a company needs to modify its culture and make behavioral changes.

Value Innovation, Technology Innovation and Value Creation

Value is one of the most powerful words in the lexicon of management arts and science. Shareholder value, customer value, value chain, and value proposition are just a few examples. It is almost universally accepted that innovation is our economy’s value creation engine.

Our focus has been on value innovation, simply defined as: creating exceptional value for the customer, most effectively when that customer is the most important customer in the value chain. Continuing success in delighting the customer, in turn, drives sustained increase in enterprise value. With the proper process, value innovation can occur with or without technology innovation in any organization and at any time in a sustainable manner (7). It can take place in product, service and delivery; it leads technology innovation, and outputs usually cannot be patented unless a new process is involved.

Value innovators:

- Are not necessarily first entrants to their markets.
- Create new aggregate demand through a leap in value at an accessible price.
- Do not always follow conventional practices for maximizing profits.

Technology innovation is the creation of a new product or service that increases the benefits and/or reduces the costs of that product or service. Without a corresponding value innovation, this potential is unrealized. Sometimes value innovation and technology innovation are tightly linked, as in the case of Research In Motion's Blackberry pagers, or Procter & Gamble's Swiffer Sweeper.

Value innovators often create value through the use of another company's technological breakthrough; e.g., Ampex invented videotape recording technology but it was the Japanese electronic companies that capitalized on this technology by developing the products for the consumer marketplace (19). Xerox's Palo Alto Research Center (PARC), was the birthplace of technologies such as laser printing, Ethernet, the graphical user interface, and ubiquitous computing, that transformed industries but created little commercial value for Xerox (20). The output from technology innovation can generally be patented or otherwise legally protected.

Radical innovation is defined as a disruptive technology (e.g., steam ships displacing sail, email reducing the cost and delivery time of regular mail, cellular communications displacing conventional land line phone service, etc.) that changes the business landscape significantly (15).

We use the term "value" in the sense of Figure 1, which shows the exceptional value created for the most important customer in the value chain, the consumer who, by way of example, likes his/her cup of coffee. Of course, the most successful value innovations will lead to values that are multiples of the firm's costs of goods and/or services. This allows a price that is both far below the customer's perceived value (thus catalyzing sales) and far above costs (thus catalyzing profits).

Ten years ago, would anyone have imagined paying \$3.50 for a cup of coffee at one of the uncounted number of coffee shops across the United States? Today millions are happy to do so. Starbucks is far more than just a large collection of coffee shops; it has rapidly outgrown other established branded and popular chains like Dunkin Donuts. How? Its real innovation is the complete customer experience: choices of flavors, an attractive and comfortable setting, etc. Basically, its living room is better than your living room.

Figure 1 shows how Starbucks' value innovation looks economically. The cost is the coffee, cups, facilities, wages, overhead, etc. The customer's willingness to pay is a direct function of the value he/she places on the use,

	At a Typical Restaurant (\$)	At Starbucks	Comments
Value Proposition	Commodity coffee	Starbucks express	
Willingness of the customer to pay	Low	High	Willingness to pay is a dollar measure of total customer perceived value.
Price	\$1.00	\$3.50	Price of a "Venti" is a \$2.00 to \$2.50 premium over a regular cup of coffee.
Cost	Approx. \$0.50	Approx. \$1.40	Starbucks cost of sales and related occupancy costs were 41.3% of sales in 4Q,2003. Gross Margin, approx. 60%

Figure 1.—The consumer's willingness to pay a premium for a cup of coffee at Starbucks creates a high economic surplus and 60 percent margins.

or consumption, of the product and/or service. In the Starbucks case it is a measure of the pleasure and stimulating effects of buying a coffee, firing up the laptop to check the latest emails wirelessly, holding a business meeting in a relaxing environment, or checking today's headlines while enjoying the beverage. The willingness to pay is the total value created in the transaction, sometimes called the economic surplus. Starbucks' value innovation was to realize that the whole experience of drinking coffee translated into a strong willingness to pay a premium on a low-cost commodity product.

Setting the price of a product divides this economic surplus between the supplier (in margin) and the consumer (in that the willingness to pay is higher than the price). Value innovation requires creating enough economic surplus to support a price that makes business sense and thrills customers with the benefits.

While technology innovation may be a means to create this economic surplus (e.g., the case of new pharmaceuticals), it is only one of many means. Even in cases where technology plays an important role, for example in Wal-Mart's back-end systems or Microsoft's operating system, it is enabling the value innovation.

The Value Innovation Process

Based on a review of the literature, interviews with "innovative companies," and value innovation principles, the ROR team (see the Acknowledgement below) developed a process model that translates value innovation into organizational reality. The model is divided into three primary sections, illustrated in Figure 2:

- Providing exceptional value to the most important customer/increasing enterprise value.
- The five-stage value innovation process.
- The key cultural factors influencing the enterprise's ability to value-innovate.

The drivers of the process, providing exceptional value to the most important customer in the value chain, which

in turn fuels enterprise value, are shown in the model's lower disk.

Enterprise value is delivered through an iterative business process, based on five stages (shown in the central disk). We visualize the disk as rotating, providing the mechanism to drive value innovation and keep it focused on the result. The stages are:

- Business Intelligence.
- Value Modeling and Analysis.
- Decisions and Prioritization.
- Communications and Implementation.
- Value Validation.

The force in the model is created through the reinvention culture, shown in the upper disk. We visualize this disk as having great weight, which relentlessly drives further value creation when directed correctly through the business process. The ability and effectiveness of an organization to value-innovate is influenced largely by its culture. Hamel has described the ten principles that affect a company's ability to bubble up billion-dollar

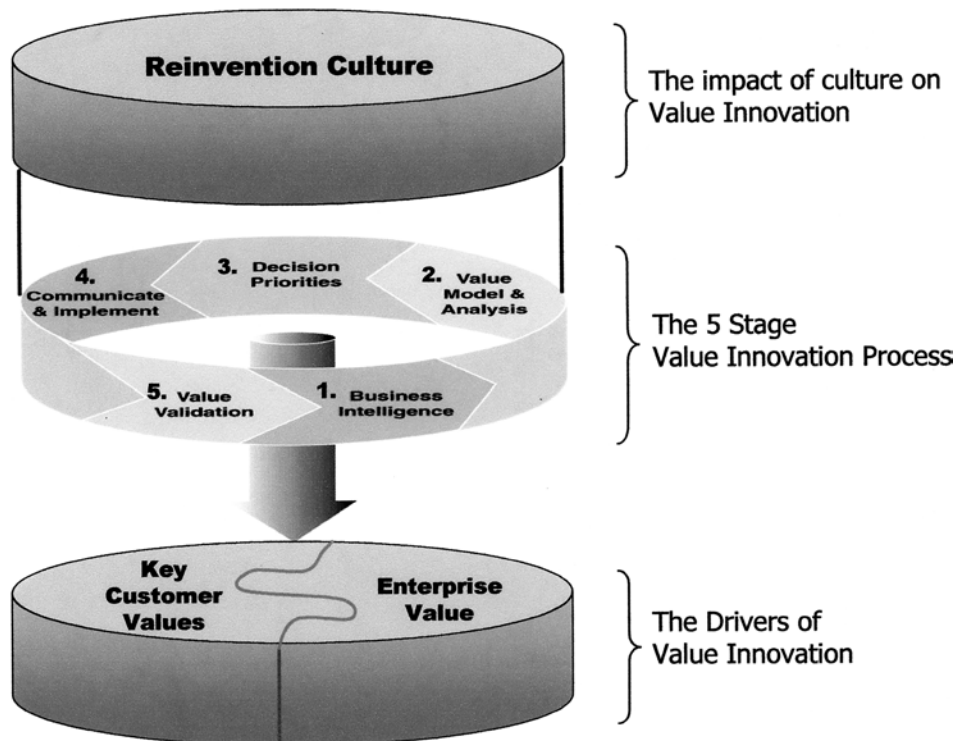


Figure 2.—The Value Innovation Process Model provides a framework a company can use to develop a new product, service or business model that will give a strong boost to the value of the enterprise. The central ring represents the five-stage Value Innovation Process itself. The success, or lack of success, gained from this process is in large measure influenced by the company's culture of reinvention, which overlays the process as suggested by the two vertical lines. Implement the process without changing the culture and the results are likely to be disappointing.

ideas and provides many examples where companies have been successful (4).

Based on our experience and findings, there must be:

- An authentic market for new ideas.
- Teams crossing all functions and comfortable with intense, detailed, high-energy debates where the focus is on the most important customer and the business environment.
- Systems thinking permeating all planning.
- Recognition of the difficulty of managing risk for economic outcomes and quantitative tools used to evaluate a broad range of ideas and scenarios.
- Trust, honesty and candor throughout the organization.

Consider Whirlpool, for example. In 1999, Whirlpool re-assigned 75 people and tasked them with answering the question, “What other rooms in the home can Whirlpool bring value to?” The company installed a new innovation system that defined innovation as a creative idea focused on a customer touch point (21). This customer-centric focus, supported by 350 Innovation Mentors, has led to the introduction of 25 new products over the past three years. In 2003, Whirlpool unveiled the Family Studio™ (a complete fabric-care and family activity center for today’s home), the Personal Valet Clothes Vitalizing System™ (for the closet) and Gladiator Garage Works™ (a set of garage storage solutions). Whirlpool’s launch rate of new products has doubled and its COO projects revenues of \$0.5 billion each year for the next three years from new products (22).

The Five Stages

The five stages are described below, and their objectives, top-level tasks, and “best practices” and instruments to be used listed in Table 1.

Stage 1.—Business Intelligence. The first stage of the Value Innovation Process (VIP) calls for the identification of new business models and opportunities that will create exceptional value for the most important customer. This high-level ideation process captures inputs from multiple sources and builds on core competencies to generate value propositions from which the most important customer will perceive high value in the product, service or delivery. Inputs to the VIP can come from multiple sources, including: the company ideation process, innovation mentoring (21), alliance partners, customers, vendors, and the general public.

Stage 2.—Value Modeling and Analysis. This stage requires that the value propositions developed in Stage 1 be validated through discussions with key customers.

**Do not let technology
alone assume the
mantle for innovation.**

Risks and uncertainties are identified and “killer issues” surfaced.

Stage 3.—Decisions and Prioritization. Here, the risks and uncertainties identified in Stage 2 are quantified using focused market research and testing in the hands of the ultimate customer. A series of instruments are available to help the team with its decisions.

Stage 4.—Communication/Implementation. After a “Go” decision following Stage 3, project teams are assembled for each value proposition and move into action. To maximize project success, the best project leaders (future general managers) are selected, every team member is an “A” player, and each project is championed by members of the senior management team. For each project, the business opportunity is described fully and communicated; the path forward is clearly articulated.

Stage 5.—Value Validation. This is the last stage before the new business is launched. Only when it is clear that the new business opportunity or model, or the new product opportunity, creates exceptional value for a key customer and that success will increase the company’s value, will the new business be launched.

The Value IQ Instrument

The Value Innovation Process is relatively easy to understand and describe. Reinvention of culture is harder. Yet companies must assess their reinvention culture—the source of all the force for value innovation. Areas where improvement is required must command management’s attention. We have developed the Value IQ Instrument (Table 2) to provide management with the outputs required.

The Value IQ Instrument is based on The Organizational IQ, a highly developed instrument created by David and James Matheson (13) and adapted to include the value innovation cultural elements. The Value IQ Instrument builds on principles identified by Hamel as key contributors to a vibrant value innovation process (4) and provides diagnostic questions for each principle. The ten principles used in the Instrument are:

- Open Culture
- Value Creation Passion

Table 1.—Five Stages of the Value Innovation Process

1: Business Intelligence.

Objective: Identify new businesses and business models that create extraordinary value for customers.

Tasks	Best Practices and Instruments
<p>Forecast the market by centering on the customer's value proposition.</p> <p>Market</p> <ul style="list-style-type: none"> • Size • Growth • Profitability • Lifetime value <p>Generate intellectual capital options.</p> <ul style="list-style-type: none"> • Reinvent core competencies outside scope of current business. • Develop and install an ideation process that encourages unique insights into the marketplace. • Exploit networks/alliance partnerships outside the normal business sphere. <p>Landscape ideas into projects.</p> <ul style="list-style-type: none"> • Leverage current strengths into new business opportunities. 	<p>World Event Mapping Trend Analysis.</p> <ul style="list-style-type: none"> • Search for discontinuities. • Search for high rate of change. <ul style="list-style-type: none"> — Consumer trends — Social/cultural — Transforming technology — New business model <p>Instruments</p> <ul style="list-style-type: none"> • Value propositions • Strategic positioning maps (10) • Value curves (8) • Portfolio of businesses (8) • Value IQ Instrument • Clayton Christensen litmus tests (1)

2: Value Modeling and Analysis.

Objective: Validate extraordinary value for customers.

Tasks	Best Practices and Instruments
<p>Develop models for value propositions.</p> <ul style="list-style-type: none"> • Quantify risk and uncertainty. <p>Analyze models and options.</p> <ul style="list-style-type: none"> • Complete value chain analysis • Risk quantification • Uncertainty quantification and forecasting • Sensitivity analysis <p>Identify "killer issues."</p> <ul style="list-style-type: none"> • Outside factors 	<p>Valuation Techniques</p> <ul style="list-style-type: none"> • Options analysis • Market-based valuations, Discounted Cash Flow, NPV, EVA • Probability assessment and debiasing • Value tracking <p>Instruments</p> <ul style="list-style-type: none"> • Value curves (8) • Value management systems • Tornado diagrams (13) • Monte Carlo analysis (13) • Influence diagrams

3: Decisions and Prioritization.

Objective: Embrace risk if payoff justifies; allocate resources for success.

Tasks	Best Practices and Instruments
<p>Test concepts.</p> <ul style="list-style-type: none"> • Address all killer issues. • Conduct focused market research studies. • Set up and conduct beta testing, pilots and trials. 	<p>Find champion at or near CEO level.</p> <p>Use subject matter experts.</p> <p>Assess skills gap.</p>

3: Decisions and Prioritization (continued)

Tasks	Best Practices and Instruments
<p>Make decision early.</p> <ul style="list-style-type: none"> • Focus on decision quality. • Make a clean "Go/No-Go" decision. <p>Address and Manage Risks.</p> <ul style="list-style-type: none"> • Refine concept tests. • Manage killer issues. <p>Commit resources aggressively.</p> <ul style="list-style-type: none"> • Avoid underallocation trap. • Address make vs. buy options. • Identify innovation leader. <p>Protect priorities.</p> <ul style="list-style-type: none"> • Address and minimize cultural resistance. • Manage cultural issues. 	<p>Instruments</p> <ul style="list-style-type: none"> • Value IQ instrument • Decision trees • Spider diagrams • Portfolio analysis • Uncertainty tracking • Expected value calculations (24) • Portfolio navigator • Systems thinking

4: Communications and Implementation.

Objective: Maximize success by leveraging resources.

Tasks	Best Practices and Instruments
<p>Drive the Project.</p> <ul style="list-style-type: none"> • Clear direction, measurable goals and deliverables. • Focus and drive innovation. • Communicate clearly, broadly and often. • Reward focus and speed. • Attack ambiguity. • Learn and refine; update forecasts; track value progress. <p>Establish authority and accountability.</p> <ul style="list-style-type: none"> • Project management vibrancy. <p>Organize for success.</p> <ul style="list-style-type: none"> • Attract and retain the best. 	<p>Knowledge ecology (25)</p> <p>Value and uncertainty tracking</p> <p>Instruments</p> <ul style="list-style-type: none"> • Stage-Gate • KM instruments • "Web-enabled" instruments • Design for Six Sigma

5: Value Validation.

Objective: Confirm value based on quantitative results and independent reviews.

Tasks	Best Practices and Instruments
<ul style="list-style-type: none"> • Prove marketplace response. • Confirm exceptional value created. <p>"Go/No-Go" Decision</p> <ul style="list-style-type: none"> • If a "go" launch new business. • If a "no-go," go back to Stage 1 or kill. 	<ul style="list-style-type: none"> • Conduct external audit of value proposition. • Use subject matter experts. <p>Instruments</p> <ul style="list-style-type: none"> • Beta test • Blind test • Tracking value

- Articulating Compelling Business Cases
- Organizational Learning Processes
- Catalyze Breakthrough Options
- External Focus
- Address the Full Company Value Chain
- Robust Decisions
- Incentives
- Implementing in the Face of Risk and Uncertainty

Each question or statement has an anchored scale based on a “typical” organization’s pattern of behavior and a “value-innovating” organization’s pattern of behavior.

Representatives from more than 50 IRI member companies established the practical applicability of the Value IQ Instrument at two workshops in 2001 and 2002. These representatives were provided with the Instrument and asked to rate their company for the five descriptors listed under each of the ten principles. Instructions on how to rate their company and then to generate scores were provided. For each principle, the lowest possible score is -15 and the highest possible score +15.

For each principle, workshop attendees were asked to line up against a wall at a position equivalent to their score for that principle. Photographs of these “Human Histograms” were taken to record the distribution of scores for the principle, and each participant was asked to expound on their score. In all cases, illuminating discussions ensued; the power of the Instrument lay in those discussions.

Participants found that the Value IQ Instrument provided some surprising insights into their company’s ability to value-innovate. As a diagnostic instrument, it was helpful in focusing attention on the critical issues and fostering constructive conversation about value innovation in the participant’s organization. The instrument has been shown to be useful in translating value innovation from an exciting concept to a practical reality.

A successor ROR subcommittee took this Instrument, applied more rigorous academic standards to it, and tested it at scale for statistical validity. Readers interested in using the Instrument for academically valid measurements should consult “Assessing Your Organization’s Potential for Value Innovation,” page 37, this issue (23).

Applying the Value IQ Instrument

How can CEOs and CTOs re-focus their thinking? There is no single prescription that fits all situations, but there are a few crucial points. Fundamentally, it is important to remember that, “Value innovation can occur with, or without, technology innovation in any organization and at any time in a sustainable manner with the proper process” (7).

An organization’s ability to value-innovate is largely influenced by its culture.

This means that CTOs should conceive of their role not merely as the steward of the company’s technology, but rather as the steward of one of several critical sources for value innovation. Their role is akin to a marriage broker, trying to find the right match between business opportunity and technology capability. Sometimes this marriage may be driven by technology; sometimes the marriage will be driven by business opportunity. Because of the natural biases in a technology organization for the former, the CTO should be especially vigilant to find and support marriages that start with a business opportunity capable of delivering significant value to the most important customer.

CEOs must encourage and support CTOs in this re-defined role. The CEO should also encourage value innovation from all parts of the organization. Do not let technology alone assume the mantle for innovation; rather, let it be in service of value innovation from whatever source.

The Value Innovation Process Model and Value IQ Instrument provide a rich framework for asking questions about your organization and understanding the practical gap between value innovation and the organizational realities that prevent its realization. Use these instruments to diagnose your situation and identify directions for improvement. For example:

- Use the IQ instrument in the finance, production, research, and sales organizations separately. Encourage facilitators to focus on individuals’ rationale for ratings.
- Compare IQ ratings among the various organizations for subculture issues.
- Identify the five most frequently cited barriers to value innovation.
- Identify the five most frequently cited value innovator strengths.
- Use the model to structure cross-functional teams capable of implementing the model’s processes.

Text continues p. 35

Table 2.—The Value IQ Instrument

The Value Innovation Quotient or Value IQ is based on a concept introduced by David and Jim Matheson. In their book, *The Smart Organization* (13), they introduced a self-assessment instrument called the “Organizational IQ Test.” They provide the content, a format, a methodology, and an interpretation scheme that is very powerful.

In developing the Value IQ Instrument, we referred to, and were stimulated by, the many papers and books authored by W. Chan Kim, Renée Mauborgne, C. K. Prahalad, Gary Hamel, and Constantinos Markides. We used the Value Innovation Process Model (described earlier in this article) as a starting point for the creation of the ten principles and the five questions or statements listed under each one.

We believe that this sort of self-assessment instrument is the best way to communicate “value innovation” best practices. Unlike the Mathesons’ carefully researched and developed Organizational IQ, the Value IQ is only in its infancy. It is being developed so that any organization/company can determine where it is positioned today and identify those areas where cultural and/or process changes are required to increase success rates in catalyzing significant increases in enterprise value.

The next steps in developing the Value IQ Instrument are:

1. Have interviewers use the instrument within their own company and recommend changes based on the inputs received. (We recommend this be carried out before interviewing the target companies—it will familiarize you with the Instrument).
2. Refine the instrument based on the output from the interviews carried out with target companies.

Instructions: For each principle below, read the question or statement and review the descriptors provided for the conventional (–3) and value innovation (+3) organizations. Rate your company using these descriptors on a seven-point scale (–3, –2, –1, 0, +1, +2, +3). For example, the first descriptor under Open Culture is, How empowered are people to question the value of activities? If the descriptor for the conventional organization describes your company, then insert a –3 in the score column on the right. If your company is not described by either of the two descriptors, then judge where it falls on the seven-point scale and insert that number in the score. When you have completed scoring for the five descriptors for Open Culture, sum all the positive numbers, repeat the process for the negative numbers and enter these into the respective columns on a scoresheet. Add the total positive and total negative scores and insert into a Total Sum column, e.g., if the total positive score is +6 and the total negative score is –4, enter 2 into the Total Sum column. (The lowest and highest scores for each principle are –15 and +15 respectively.)

Repeat this process for the remaining nine principles.

Initially it will not be possible to identify where your company scores relative to a population of companies; however, a successor ROR subcommittee plans to develop a tool and build a database so that it will be possible in the future (23).

Open Culture

	Conventional Organization (–3)	Value Innovation Organization (+3)	Score
A. How empowered are people to question the value of activities?	People are discouraged from questioning the value of a task. They fear or have experienced unresponsiveness or backlash.	Inquiring into how the task creates value is a legitimate way to question. Activities not adding value are modified or stopped.	
B. How many alternatives are considered in decision-making? How are perspectives integrated into decisions?	Limited options are evaluated simultaneously. Projects progress sequentially. Preferred alternative often dominated by politics. Few perspectives are represented. Additional ideas are discounted and rarely listened to.	People are expected to explore alternative strategies and plans. Detailed plans are developed only for the selected strategy. Different perspectives are incorporated and diversity of thought is encouraged. The organization has developed a listening culture.	

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
C. How open is the organization to opportunities beyond the current business model?	The focus is on the improvement of the core business. Non-core businesses are divested.	Unusual opportunities are approached with a “How can we...?” rather than a “This won’t work” attitude. Organization is flexible enough to try, and fail often and honorably. The company encourages revolutionaries.	
D. How easy is it to get information?	People must work hard to get information. They feel out of the loop on critical issues. Information is used as a source of personal power, or, is kept in business “silos.”	People obtain information readily. There are few secrets and channels of information flow are abundant. People are encouraged and trusted to seek and use information appropriately.	
E. How is knowledge managed?	There is no formal approach. Informal practices exist leading to errant assumptions or misinformation.	There are numerous communities of practice and formal instruments to retrieve, sort and convey information.	

Value Creation Passion

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. What is the driving focus within the company?	<p>People are focused on achieving the business goals defined by their supervisor, using the skill sets and experience learned during their career. They are guided by the company’s mission, vision and strategy.</p> <p>People focus on their own jobs and lack an understanding of how the organization ultimately creates and captures value.</p>	People are confident that they are contributing to a cause that will make a significant difference in the lives of customers and colleagues. People have the courage to leave some part of themselves behind and strike off for parts unknown and are encouraged to do so. There is a passion within the company to continuously reinvent itself. People know who the customers are and how the company captures value by serving them	
B. How does the company carry out its business intelligence?	The company relies on sales and marketing to define the needs of existing customers using conventional instruments (market research, voice of the customer). The company places value in competitive analysis and benchmarks its performance against its competitors. The company focuses on customer segmentation, customization and retention.	People are encouraged to interface with non-traditional customers to generate or test new models, concepts and ideas that could lead to new businesses, or entirely new ways of doing business. The company seeks to render the competition irrelevant by generating market space where there is no competition. The company searches for key value commodities that unlock the mass market even if some existing customers will be lost.	
C. How do people within the company think about shareholder value?	The company annual report opens with the words, “Our company is focused on increasing shareholder value by listening to our customers’ needs.” There are genuine efforts to improve service levels. The resulting increase in shareholder value is incremental.	Everybody in the company is encouraged to challenge the conventional wisdom and define ways to create major improvements in enterprise value. The focus is on increasing enterprise value by several orders of magnitude.	
D. Look for formal measures of value creation.	There are no measures of value creation, or, conversely, there are so many, people are confused about what really is important	There are a few common measures of value creation that are used as the basis of decision-making and compensation. All people know the importance of value innovation and are constantly searching to provide exceptional value to the buyer.	
E. Are people empowered to question activities they do not believe create value?	People feel discouraged from questioning the value of a task. There is a fear of political repercussions and even loss of a job if one steps too far out of the box.	People are confident in giving examples where the conventional has been challenged. Asking how the task creates value is a legitimate way to question activities. Tasks not creating value are modified or abandoned. The company has many “Value Innovation Heroes.”	

Articulating Compelling Business Cases

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. Examine the role of technologists in strategic business planning.	Technologists are responsible for defining improvements in products or processes. Discounted cash flow calculations permit a credible return calculation to justify costs.	Technologists play a key role in using analysis and probabilistic techniques to permit company executives to manage investments in high-risk, high-reward ventures.	
B. Examine reports from technology organizations to corporate.	Reports emphasize control of costs and achievement of major milestones. Emphasis is on the reduction of production costs or incremental improvements of current products.	Reports emphasize progress on the reduction of uncertainty in high-payoff projects. There is a quantitative link between uncertainty reduction and economic value to both the market to be served and to the firm.	
C. Examine the logic of project justification.	Credibility of the logic is tied to clear returns from incremental cost reductions or increased sales and profits from current product lines.	Justification logic provides an estimate of benefits to the served market. Risks and uncertainties in the logic are highly rated and treated quantitatively. These values in the served market are then translated into shareholder value creation.	
D. Ask a complex question and observe how it is answered.	Answers reflect judgments based on gut feelings, experience or trusted company norms. In some areas, responses are vague or evasive.	The answer represents the broad perspective on the question and its full complexity. The answer reflects the devil in the details. Gaps in logic or uncertainty are highlighted and estimates of probability ranges are cited.	
E. Examine the logical chain connecting project success to shareholder value.	Justification seeks to demonstrate marginal impact on sales and/or gross margin. Logic assumes all sales and other market-facing channels operate "as usual."	Justification identifies every logical step to creation of value in the market. All assumptions are documented and justified. All risk and uncertainties are estimated and treated qualitatively. Consequential shareholder values are then calculated in a risk-discounted range.	

Organizational Learning Processes

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. Does the company encourage experimentation?	The company allows industry conditions to dictate the realm of what is possible, probable and profitable. Management starts the planning process by considering existing assets and capabilities.	The company challenges the inevitability of industry conditions. Management encourages people to consider starting anew in the continuous search for value creation.	
B. Look for formal channels of communication and ask people how much they use them .	The few channels that exist are viewed as not relevant to creating value. Informal channels are discouraged. Stories exist about relatively modest changes or about failed attempts to change. Some stories convey pride in being unchanged.	Channels are abundant and not restricted. People are confident that the systems are a major part of the company's success. Colleagues are forthcoming and helpful. Informal networks and communities of practice abound. There are many stories of successful changes, including those that created significant new value.	
C. How effectively does the company implement a new product, service, or business?	The company is cautious about the new launch. Each new piece of information is scrutinized and any bad news increases the level of caution. Plans are directed from the top. Critical information is not shared with all members of the launch team.	Implementation plans are well defined and communicated to everybody involved. No details are left to chance. Speed, "best practices" and a highly motivated team are used to implement the plan. Everybody believes the venture will be successful and will do whatever it takes to assure success.	
D. Observe how people react to new ideas, criticisms.	People are inflexible. They are unable to understand the new idea and regard it as dangerous and threatening. It is rejected with prejudice. There is little experimentation with new approaches or organizational structures. Messengers generally are shot.	People are excited about the prospect of learning and growing. They are encouraged to explore new ideas and find their value using informal small groups to help them.	

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
E. Look for formal or informal activities to search for new approaches, practices and ideas.	The company lacks such activities and discourages people who would use this approach.	People are encouraged to seek opportunities for continuous improvement. People are given a percentage of their 40-hour work week to pursue new ideas and funding is available to support such activities.	

Catalyze Breakthrough Options

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. Examine the number, nature, and breadth of drivers used in idea generation.	Innovators generate new ideas on the basis of competitor intelligence, cost reduction targets, perceived needs of existing customers. Focus is generally internal to existing company or industry.	Innovators seek foresight to exploit external trends and discontinuities, seek to overturn existing rules of the game, seek to create and satisfy new customer needs, leverage competencies in related domains. Innovators take a broad value chain perspective when searching for new opportunities.	
B. Examine the processes used to generate new ideas and opportunities.	Open brainstorming, creative inspiration, and serendipity are the primary sources of new ideas/opportunities. Most ideas come from narrow group of experienced staff. Generally a strong technology-driven approach.	Advanced creativity techniques are used to systematically search new opportunity spaces, inside and outside existing businesses. Innovators disrupt existing mindsets through experiential learning, scenario learning. Cross-disciplinary networks are employed to enhance diversity of thought and experience.	
C. Examine the approaches used to evaluate and value new ideas and opportunities.	Ideas are evaluated on the basis of NPV or ROI using discounted cash flow approaches. Uncertainty is generally accounted for by employing expected long-term values for model variables in deterministic models.	Breakthrough ideas are valued using a real options approach, or a probabilistic DCF approach is used to determine a probability-weighted distribution of potential outcomes.	
D. Examine the focus and nature of risk management practices.	Only technical and market uncertainty are recognized. Processes to capture and share learnings are primitive. Rigid development processes don't allow for changes to the plan on the basis of organizational learning. Transition to an operating unit often occurs early in the life of the idea.	Organizational and resource uncertainty are recognized and managed together with technical and market uncertainty. Processes and plans are flexible and allow for changes on the basis of market feedback. Migration paths to envisioned futures are frequently reworked to maximize learning and manage exposure. Partnerships are considered as an instrument for learning new competencies.	
E. Examine the culture and norms of the organization.	In the existing culture, most ideas are introduced by experienced staff or managers. People are rewarded for behaving and thinking like their managers. Failure is penalized or avoided. Human resources are owned by business units and general managers. Plans are made on an annual basis. The organization is risk-averse. The culture is closed.	There is a significant effort to involve diverse voices from the geographic and organizational fringes in idea generation. People feel free to challenge the status quo. People are risk-tolerant and aim to fail fast and cheap, maximizing and sharing learning broadly. Talent is freer to move to new projects and planning is evergreen. The culture is open.	

External Focus

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. Extent of experience and perspective-expanding activities outside the organization.	People focus on their existing jobs. The company discourages external activities and budgets are restrictive.	People are expected to participate in activities that broaden perspective. This is reflected in a budget for such activities and an influx of new ideas and suggested speakers.	

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
B. Knowledge of the business environment.	People understand their customers and business impact of their work but only in conventional ways. Competition is narrowly defined as that within the same industry.	People have a broad view of forces changing the industry, customers and competition. The competition becomes redefined within the context of future business opportunity.	
C. Process of planning and decision-making.	Assumptions are built based on current business success and industry orthodoxies.	Assumptions are few; they are challenged and grounded in solid understanding of external forces. Planning process considers the convergence of trends.	
D. Process of obtaining business intelligence.	The company relies on sales and marketing using conventional market research techniques. Competitive analysis is done routinely but usually focused on perceived needs of current customers.	People are encouraged to interface with non-traditional customers and to explore emerging technologies. Business intelligence extends beyond market research to innovative practices and technical innovation.	
E. Measures of success with external focus.	No measures. New ideas believed to come from within. "Not invented here" attitude.	Pipeline of new ideas. Unique unconventional partnerships.	

Address the Full Company Value Chain

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. How is your company aligned to support major innovations?	Company is divided on the basis of markets or geographies served. Functional areas are typically broken out within each business unit, nurturing a silo mentality.	Company is organized in teams which include all the competencies required to achieve the overall goal.	
B. Examine the structure of technology participation in company strategic decisions.	Technologists participate in or even chair cross-functional teams to explore issues of product or process improvement.	Technologists are involved in formulating options to improve market-facing value chain elements (i.e., sales, distribution, service, etc.) as well as product-intensive elements.	
C. Examine the scope of a proposal for major business innovations.	Proposal focuses on cost and feature characteristics of a new product or service. Assumes marketing and distribution channels will deliver.	Proposal examines and optimizes every element of the value chain and challenges all business-as-usual options.	
D. Look for mechanisms to engage people broadly in discussions focused on business innovations.	Value chain elements innovate primarily within "stove pipes." Cross-functional teams are formed but primarily to build "buy-in" for plans drafted within stove-pipes. Respect for "turf."	Regularly, every element of the value chain is reviewed for possible transforming innovation. Cross-functional teams meet at the front end of the brainstorming process to provide options for dramatic change.	
E. Question managers about interfaces connecting elements of the value chain.	Managers respond with interface definitions that are clearly traditional. The responses do not reflect much concern with interfaces but more compliance with company courtesies.	All managers are examining interfaces among and between value chain elements as a high-priority concern. The expectation is they are dynamic and require substantial thought and negotiation.	

Robust Decisions

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. Does the company lower risk of experimentation even though the bets being made are major departures from the norm?	The company has a majority of managers who believe it is better to be a fast follower than a foolhardy risk taker. There's a minority who argue that to capture new markets a company must be bold. The company makes many incremental "low risk" bets and a few major "bet the farm" bets. Failure is seen as a weakness and often rewarded with demotions or termination. The "bet the farm" bets generally fail.	The company accepts the inevitable uncertainty around new business opportunities. It seeks to put prototypes in front of the customer as quickly as possible with the least investment. Speed is everything. If the customer reaction is lukewarm, the project is shelved to release funds for the next promising opportunity. Failure is recognized as a natural consequence of this process and is rewarded just like success. (For every success there are many more failures.)	

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
B. Does the company promote division and differentiation?	Divisions are encouraged to be autonomous. Cannibalization of existing products is regarded as a problem, particularly by manufacturing. Growth at market rates is accepted and rewarded.	The company recognizes that cellular division drives innovation. It encourages new thinking, new business models and provides more opportunities for the entrepreneurial thinkers in the organization. By keeping business units small, general managers are much closer to the customer, and power is dispersed across a much larger cross section.	
C. Ask how a recent strategic decision was made.	Decisions are made without much conscious choice. If there is a choice, the reasons for it are often unclear and undocumented. People are either unable to identify the true decision maker or they admit the real decision process is at variance with the written process.	There is a systematic decision-making process in place which focuses on creating value using best value innovation processes. People can explain that it was a conscious decision and they can point to documentation. They can explain the process.	
D. How does the company prioritize?	A prioritization process is defined and followed religiously. Financial metrics are required for all projects even in the instances where the effort to generate an NPV is not worth the effort. Rigid adherence to the process fosters incrementalism.	A prioritization process is defined and is followed. Flexibility is built into the process and while metrics are used, they are only a part of the equation. It is recognized that flexibility is a requirement to be a value innovator.	
E. The company has a continuous value validation process.	The company relies heavily on its sales force to communicate the results. A commission program incents the sales force and therefore it has little interest in assuring the new venture's success. It takes time and effort that are not rewarded. The company accepts that it's going to take a long time before the new business or offering is successful.	The whole team is a part of the value validation process. The process is well-defined and communicated to everybody. Objections are regarded as an opportunity to improve the business or offering. Incremental results are not tolerated and if sustained the plug will be pulled on the new venture. After all, there's another one to replace this one.	

Incentives

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. Reward systems.	"One size fits all." Yearly award ceremony.	Flexible reward system that reflects different motivations. Appropriate rewards given in a timely manner. Customization encouraged.	
B. Recognition for contributions to communication channels or helping others.	Contributions are limited and opportunities to contribute are few.	People regularly explain their recent contributions and feel they have been rewarded for them formally or informally.	
C. Compensation, options and bonus systems.	Pay scales are based on job levels and HR procedures/rules. They are rigidly adhered to. Options and bonuses are reserved for senior management. Payouts are tied to performance with little focus on value.	Pay is tied to performance with an overriding emphasis on value. Entrepreneurs are treated like heroes and are paid very well (well above the norms). Bonuses and options are awarded at all levels within the company. Under-water options are replaced quickly.	
D. Career path opportunities.	Promotions are based on experience and years in a position.	Promotions are based on demonstrated ability to achieve exceptional results.	
E. What activities are rewarded?	Being a good employee (never late, do the right thing) and fitting in with the accepted way of doing things within the corporation.	Good no-go decisions. Those that were known to be much higher risk and were terminated effectively, or were successful and generated exceptional value.	

Implementing In the Face of Risk and Uncertainty

	Conventional Organization (-3)	Value Innovation Organization (+3)	Score
A. Review business plans, how they are made and implemented.	Plans focus on a negotiated or widely accepted set of assumptions, often conservative estimates. Often, these baseline assumptions reflect a wishful, sometimes incorrect, belief about the future.	Plans focus on the major elements of risk or sources of uncertainty. Plans deal with both risk and uncertainty quantitatively using probability assessments. Uncertainties, particularly marketplace uncertainties, are clear and primary focal points in the plans.	
B. Examine the process of setting budgets and estimating the payoff.	Budgets, schedules and primary results are rigid. There is a culture of "sandbagging" to manage expectations for success.	There is an open market for capital and it is clear that costs and schedules to address major sources of uncertainty cannot be precisely predicted. Budgeting is flexible with managers accountable for early identification of budget and schedule problems.	
C. Create an open market for new ideas by monitoring commitments and accountability.	All information relevant to a project becomes an implied commitment. This creates a major barrier to candor and innovation.	Commitments and documentation are linked to achievable goals and managers are not held accountable for uncertainties clearly out of their control. However, managers are accountable to accurately assess current uncertainties and keep entire organization informed.	
D. Lower the personal risk of experimentation.	Managers and individual members of a team are rewarded to "confirm" the plan. Departures from plan are regarded as failures.	Plans build in margins for experimentation. Negative results are not scored as failures but as valuable information.	
E. Examine the project control system for flexibility and true insight.	The system maintains discipline by defining milestones and schedules. Rapid reconfiguration of objectives is difficult or impossible.	Project control systems give management insight into progress without rigidly locking in milestones. "Earned value" is scored in a manner that reflects the narrowing of uncertainties and unforeseen benefits. Excellence in implementation requires a disciplined formal system such as a stage-gate system.	

- The model emphasizes iteration and learning. Personally monitor improvements in the business case and risk management after each iteration.
- Reuse the Value IQ Instrument to measure evolution of the value innovation culture.
- CTOs should be proactive leaders because this model requires creativity, discipline and analysis for success. They and their staff have natural aptitudes in these areas.

Our goal in this project was to close a perceived gap between broadly held (and espoused) beliefs about the importance of innovation and the actual behavior of organizations. The policies, procedures and behaviors that foster value innovation *can* be measured and managed. Technologists can and should play a lead role for the enterprise in spite of the fact that success will require active engagement of the entire firm. Recently, the Council on Competitiveness published summary findings and conclusions from its year-long National Innovation Initiative (26). The Council defined

America's task as follows: For the past 25 years, we have optimized our organizations for efficiency and quality. Over the next century we must optimize our entire society for innovation. ☺

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