



## Management 2.0: leveraging the growing intangible side of business

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**We live at the intersection between what are often described as the industrial and the knowledge economies.** The first is a tangible economy—it involves raw materials, machines and products you can see and touch. The second is an economy based on intangibles—it involves knowledge, ideas and services you cannot see or touch. The basic concepts and tools that work in a tangible economy do not always work in an intangible economy. In fact, they are increasingly failing to work in tangible contexts as well. The profits of every business today come from a mixture of tangible and intangible value. That is why every manager needs to add intangibles management to his or her toolkit today.

The shift to a knowledge economy was foretold by thinkers such as Peter Drucker and Alvin Toffler. More recently Thomas Friedman, in his book, *The World is Flat*, helped make this shift very real through his stories of how improved global education, high speed communications and technology are combining to create a highly-competitive global economy. In this “flat” world, ideas and knowledge rule the day.

Recent data from the OECD shows that national investments in the U.S. in knowledge intangibles like R&D, software, and education now exceed those made in tangible capital goods.<sup>1</sup> The shift in our economy is also visible in the public equity markets. In the mid-1970's, the equity value of most companies was essentially the same as their tangible book value—their value was in the assets they owned. Today, tangible book value represents only 30% of the equity value. The remainder is, today, undefined and truly intangible using traditional tools. What is clear, however, is that this value comes from knowledge.

The data makes sense if you think about a company like General Electric. Today, General Electric is not known for the number of its factories but for the quality of its processes, its Six Sigma competencies and the power of its management. Ultimately, what a company like GE *knows*, not what it *owns*, is its principal competitive advantage.

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While most businesspeople understand this change on an intellectual level, we are still new at working in this “flat,” intangible world. A lot of the concepts and tools that we use in our day-to-day business lives are legacies of the tangible industrial era that dominated in the last two centuries. Most of these concepts still serve a purpose. But as intangibles have become more important to business, new concepts are emerging to help managers deal with the unique challenges of leveraging and profiting from intangible knowledge assets.

This paper outlines ten concepts that are key to successful intangibles management. For the sake of clarity, these concepts are presented in relation to similar concepts in the tangible economy. It is important to look at tangible and intangible concepts side by side because most organizations need both. The featured concepts fall into three categories: intangible assets themselves (the new factory), tools for managing intangibles (the new management) and tools for measuring them (the new accounting).

## I. The New Factory

### Knowledge is the New Oil

*Oil has been a critical resource of the tangible economy. It has a stand-alone value as a source of power. In this form, oil is bought and sold as a commodity. But it also has a secondary value as a raw material. In that form, its value becomes embedded in other products such as plastics and synthetic fabrics.*

Knowledge is the oil, the fuel of the intangible economy. Like oil, it can have a stand-alone value and be bought and sold in a finished form such as a book. But it also has a secondary value as a raw material and its value becomes embedded in other products. One critical difference between knowledge and oil is that knowledge is an infinite resource whose value is limited only by its potential market.<sup>ii</sup>

Stand-alone knowledge products include: training, packaged knowledge (books and any number of electronic media), software, services, consulting, outsourcing, and innovation. Many times, knowledge is bought and sold directly in these stand-alone forms. However, there is also an increasing knowledge component in tangible goods as well. This can be harder to see but it is a very important concept. For example, the costs and/or savings from intangibles such as innovation and process improvement can be embedded in the price of a piece of a physical product. This is very obvious in an iPod, which is a highly innovative delivery system of an on-line music service. It was also true for But it is also true for a company like Wal-Mart, which is known for the low cost of its merchandise. This cost advantage reflects its innovative retail information technology, supply chain management, and new efforts in energy use and impact.

In order to leverage knowledge in a company, it is critical to identify and understand core organizational knowledge and competencies. This is the kind of thinking that helped UPS realize that one of their core competencies is not just package delivery—it is logistics. They have been teaming up with printer

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manufacturers like HP that realize that the repair services that they must offer to their customers are at heart a logistical challenge—how to get a printer to a repair center and back at the lowest cost. Logistics is not a core competency of printer manufacturers so it makes sense for many of them to outsource this function.

In your own business, it is important to have a clear idea of what your core knowledge is. This is a case where you must take a step back and see the forest, not the trees. The most helpful way of making sense of the huge array of knowledge that exists in any company is to focus on core competencies, specifically to:

- Identify – What are your core competencies as an organization? That is, what are the critical knowledge and capabilities that form your competitive advantage?
- Evaluate – Are they as strong as they could/should be? What's missing?
- Leverage – What problems does your knowledge solve? How can you maximize the value of your knowledge?

It is also possible to look at knowledge in a more specific way by identifying the different classes of intangible assets where knowledge is embedded.

### **Intangibles are the New Raw Material**

*In the tangible economy, raw materials are combined to make finished goods. It is often impossible to see the different raw materials in a finished product—they are combined to make an entirely new good. In fact, there is often a progression of processes that lead to a final product. Stalks of wheat, for example, are processed and ground to make flour which then goes into making bread.*

When knowledge is used as a raw material in the intangible economy, it becomes part of tangible and intangible resources which may, in turn, be used for making or doing something else. Knowledge actually gets embedded in an organization in three very different forms:

**Human Capital:** This is the knowledge that is often described as *going out the door every night*. People are the source of ideas, inspiration and innovation in every organization. Their knowledge, competencies and experience become part of the organization's capital until they leave or until it becomes part of shared knowledge of the organization.

**Structural Capital:** Shared knowledge that has been captured and remains in the company becomes internal structural capital. Another way of looking at it is as knowledge that *stays behind* in an organization when the employees leave at night. The most recognized form of structural capital is intellectual property (IP) because of its special legal status. However, it is a mistake to just focus on IP.

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Most of the important knowledge in an enterprise is embedded in software and processes that cannot be protected as IP but still provide core competitive advantage.

Relationship Capital: External structural capital is usually called Relationship Capital. This category focuses on market knowledge and connections that have become institutionalized in an organization. Relationship Capital is usually broken down into three categories: customer relationships, external network and branding. An outsourced business function is considered relationship capital.

These categories help you “see” in more concrete terms the intangible side of businesses. Believe it or not, these categories are evident in our local service station. For the last twenty years, we have visited this same service station to buy gas and get our cars repaired. As the years have gone by, this business has developed more and more intangible assets. We remember when the station acquired its first computer. Today it’s a source of structural capital as the station’s staff uses it to check parts catalogs and repair manuals that have all been digitized. The quality of human capital is managed more explicitly as all of the station’s staff has been certified by the Automotive Service Excellence organization. The station has important relationship capital earned through state certification that allows it to issue annual inspection stickers for its clients’ cars. Its parts inventory is kept at a minimum because of its relationship capital with just-in-time parts and tire distributors that immediately deliver the parts. These intangible assets are ways that knowledge has become embedded in this neighborhood service station.

Perhaps the most important point is that these intangible assets are the core of the station’s competitive advantage. Most customers do not choose this station because it has a garage and boxes of tools. They choose it because it has trained employees, it can get parts on the day you take the car in, and because it can issue an inspection sticker. It is easy to extrapolate from this simple example to almost every other business in our economy. Intangibles are an increasingly important part of every business and are at the heart of most companies’ competitive advantage.

Despite the critical nature of these intangible assets, most companies today do not have an inventory of their intangibles. It is hard to manage something explicitly without identifying it. Can you imagine owning a factory without having an inventory of what is inside? That is why an intangibles inventory is an important first step to effective intangibles management. The types of assets to include are:

- Human Capital: Who are your key people? What are the experiences, knowledge and competencies that they bring to your organization?
- Structural Capital: What are your key processes? Do you have software, manuals, or systems that capture knowledge? What is your key intellectual property?
- Relationship Capital: What are your key customer relationships? What is/are your brand(s)? What are your key external relationships (suppliers, distribution partners, certification organizations, outsourcing partners, etc.)?

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After you have identified the individual assets on the intangible side of your business, it is helpful to look at how the assets work together to create value.

### **Intangible Capital is the New Factory**

*The core of the tangible economy is the factory. Simply put, a factory is a building where production equipment converts raw material into finished goods. Companies make their money by selling these finished goods. The story of the industrial economy was the story of organizing and running these factories.*

The core of the intangible economy is intangible capital. IC is a series of assets that together convert knowledge into salable form. The story of an organization's "knowledge factory" is the story of how each of these discreet asset classes (human, structural knowledge and relationship capital) interacts to create value. By definition, knowledge factories do not operate by rote. They are not like the single, linear production line in the factories of old.

Think about what happens when you place a call to a customer service line. Your selection of a category for your problem determines where the call is sent—to an external first stage service center (part of a company's relationship capital) or to an internal advanced stage troubleshooting team (human capital). The person that answers the phone usually has personal knowledge and experience with your type of problem but also probably has access to on-line information sources about your problem (structural capital). The success or failure of the call affects customer satisfaction (relationship capital). Even though a customer service phone call is a very simple intangible capital process, it is flexible and structured around knowledge.

In your own business, it is helpful to pick apart the inner workings of your knowledge factory:

- How much of your revenue comes from rote repetition of a work pattern?
- How important is it for your business to have knowledgeable workers?
- How easy is it to train new employees in your business?
- How important is strong process to your intangibles "production"?
- How much support do your employees need in their daily routine in terms of access to knowledge and information?
- How much do you rely on external "outsourcing" partners for critical business processes?
- How important are your customer relationships?
- How important is your brand to the strength of your company?

The answers to these questions begin to tell you the extent to which intangible capital is important to your business. It will also highlight the extent to which there is interdependence between these assets. The greater this importance and interdependence, the more important it will be to understand how all the intangible

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components of your organization work together to produce value for your customers and make money for your company. This can be accomplished by drawing a graphic of how each of the key pieces of intangible capital fit together or even modeling them with Lego blocks.<sup>iii</sup>

Understanding the extent and nature of your knowledge factory is an important starting point. But this knowledge alone does not guarantee success. This new kind of factory operates in a different way than traditional factories. To maximize its effectiveness, new approaches to management are needed.

## II. The New Management

### Networks Are the New Organization Chart

*In the tangible economy, command and control organizations use an organization chart to explain how resources and authority are distributed. Who reports to whom? What is the extent of the control of an individual manager? How are resources allocated? Just about every organization has and needs an org chart.*

In the intangible economy where knowledge workers must collaborate to get work done, the organization chart often falls short in describing what is happening. Cross-functional teams, alliances with external partners and innovation co-creation with customers cannot be explained using a traditional org chart. For this reason, there are a number of emerging approaches that help map work and interactions within an organization.

One of these approaches is called Social Network Analysis. In this approach, researchers count interactions between members of a team or an organization. This type of analysis often yields surprising results. The greatest number of interactions is often between peers rather than between superiors and subordinates on an org chart. This kind of analysis makes it clear that individuals are playing roles that do not appear on a traditional org chart such as serving as a knowledge source and/or intermediary to help people make connections with other knowledge sources.

An enhanced version of this approach is the Value Networks Analysis developed by Verna Allee.<sup>iv</sup> Rather than just counting interactions, Allee's approach identifies the nature of interactions between each specific role (as opposed to organizational titles). The interactions are further divided between those that are tangible and intangible. A tangible interaction is the exchange of a contract or money. An intangible interaction is the exchange of information.

In your own organization, use maps to understand how your knowledge factory works. The process of mapping current interactions is, in itself, very instructive. It can also create the starting point for your team to

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“design” a new and improved map for important processes. Some of the things to think about when you are mapping your business include:

- Who are the players in the network?
- What are their roles?
- What is the nature of the interactions?
- Would the players benefit from training to act more effectively in their roles?
- What roles/interactions are missing?
- What resources do they need?
- What resources are missing or would help improve the overall effectiveness of the network?

This kind of intangibles management enables companies to fully leverage their intangible capital to produce profits and much more.

### **Orchestration Is the New Command and Control**

*In the tangible economy, mechanization and mass production drove huge productivity gains as manufactured goods replaced those made by hand. These efficiencies came through strict discipline. Managers could describe to their employees in great detail the smartest way to accomplish their work: “take Part A, attach these two screws then join Part A to Part B.” Through time and motion studies, the fastest, most efficient way to do things could be identified. To achieve these results, employees had to adhere to strict guidelines. In such an organization, decision-making was an activity that resided with management. Like military commanders, the word of managers was the guide for corporate action.*

In the knowledge economy, the nature of work is changing. Leaders of the corporation cannot know or understand the work of many of their employees well enough to dictate how they do their job. The path to success cannot be laid out in great detail for knowledge workers. This leads to a new management approach: orchestration.

The first time we saw the term orchestration was in an essay by Peter Drucker. In his many writings about the shift to the knowledge era, he often described the modern manager as the conductor of an orchestra. A good conductor, he asserted, did not know how to play each of the instruments of an orchestra. The conductor cannot and should not get too deeply into the technical details of each individual instrument and musician. Rather, the conductor chooses the music, sets the pace, and ensures that all the musicians are playing together.<sup>v</sup>

In a recent seminar we gave on Strategic Thinking, one IT manager began nodding his head vigorously when we discussed this idea. He said, “You’re right. I have no idea how my people are going to solve a problem. I

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try to put the problem into context for them, help them shape their thinking, but they figure out the right solution.”

This is then the management challenge of the Knowledge Economy: how to create the conditions and structure that will enable and empower employees to do what needs to be done. In your own business, this means ensuring that you:

- Attract the right people with the right skills
- Retain them
- Provide the right resources for them to do their job
- Give them a clear idea of where you want to get to as an organization
- Provide structure to monitor progress
- Ensure they have support when they need it
- Let them do their jobs

The new understanding of management emphasizes the need to facilitate knowledge flows from the bottom of an organization, which is critical to meet the strategic challenge of the contemporary business: innovation.

### **Innovation Is the New Strategy**

*In the tangible economy, strategy and strategic planning typically occur within a defined market space. To form their strategy, senior managers study opportunities in the market and align the company to take advantage of the available opportunities. The path laid out for a company is usually clear and concrete. The strategy says, “We know what we need to do and we will do it.” This is often termed “deliberate” strategy.*

In the intangible economy, markets change quickly. The “right” strategy for the future is not always as clear. New opportunities often come from leveraging the company’s intangible capital in new ways. These opportunities are not always evident to the senior management—they need the input from their knowledge workers. In the intangible economy, strategy says “We are going to find new ways to leverage our knowledge to create value for our customers and our company.” This is often termed “emergent” or innovation strategy.<sup>vi</sup>

At an organizational level, innovation strategy is about creating an ecosystem where new ideas can be created, developed and commercialized. This innovation ecosystem is a place where smart people share their knowledge and, often in cooperation with customers or partners, create new opportunities for growth. This innovation ecosystem is a critical part of the knowledge factory described earlier. The foundations of innovation are smart people (human capital), good organizational knowledge and support (structural capital) as

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well as effective partners and engaged customers (relationship capital). Thus, managing intangible capital is the foundation of any innovation strategy.

Almost every company in the U.S. pursues both deliberate and emergent innovation strategies. A great example is the recent success of Apple's iPod. This product became a blockbuster and continues to evolve based on both deliberate and emergent strategies. Apple began this product as part of a deliberate "digital hub" strategy that sought to take advantage of the growing market for consumer digital devices. The final product was, however, the product of an emergent strategy that maintains a strong innovation ecosystem at Apple to foster and encourage experimentation. In the case of the iPod, this ecosystem included partners that developed both the hardware and the software. The iPod continued to evolve and the switch to a very deliberate strategy involved getting access to music catalogs, aggressive advertising and market segmentation. The challenge for Apple and, indeed, all corporate leaders, is to manage both of these strategic processes and know when to use each one to greatest effect.

In your own business, innovation needs to be a part of your overall strategy and your intangible capital development. Specific areas of focus include:

Human Capital:

- Ensuring that you have the right mix of experience and competencies
- Cultivating a culture that permits experimentation and risk
- Providing innovation-related training opportunities

Structural Capital:

- Ensuring that there is a documented innovation process in place
- Creating means of communication for knowledge sharing and cross-functional teams
- Tracking existing IP as a leverage point for new innovation

Relationship Capital:

- Providing forums for interaction with potential innovation partners
- Communicating on a strategic level with customers and others in the market to understand evolving and/or untapped needs

Management of the knowledge factory requires new skills around network discovery, orchestration and innovation. But all these management activities are ultimately fueled by information. The development of intangibles information requires new approaches as well.

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### III. The New Accounting

#### I-Capex Is the New Capital Expenditure

*Capital expenditure (capex) is an accounting concept that has ingeniously supported the tangible economy for centuries. It allows a company to apply the cost of investments in its future productive capability to its balance sheet. Then the cost of this investment is depreciated over a period of years. This is an extremely important feature that helps companies avoid having to show decreased earnings in a period where they make large investments. It is through a corporation's capex that the tangible production value of the company (and by extension, its balance sheet) is built and maintained.*

Intangible capital expenditure (i-capex) is the way that companies build and maintain their knowledge factory or production process. Unlike with tangible capex, i-capex is unfortunately not eligible to be capitalized on the balance sheet of today's corporation. There are two main reasons for this. First, many intangibles (such as employees and relationships) are not owned by the company in the first place; our current standards (for many good reasons) only account for owned assets. Second, the dollar value of intangibles can be difficult to identify through traditional accounting based on financial transaction value; what is, for example, the value of an idea in an employee's head?

In 2007, it is estimated that US businesses invested \$1.6 trillion in intangibles versus a tangible investment of \$1.2 trillion.<sup>vii</sup> This investment is made despite the lack of favorable accounting treatment. The full cost of i-capex is expensed the year it is made. Corporate managers spend this money because they have no choice. They know, as we have seen in the examples ranging from the corner service station to "manufacturing" giants like GE, that intangible resources are at the core of their company's competitive advantage.

So what can you do in your own business? You obviously have to continue to follow existing accounting standards. You cannot capitalize i-capex. But you can use your accounting data to perform alternative calculations, to begin to construct an intangible balance sheet. As a starting point, it is advisable to keep a log of your intangible capital investment. This log should record line item expenses that represent investments in your intangible capital portfolio that will build value that lasts beyond the current year. These will include expenses such as:

#### Human Capital:

- Talent acquisition expenses
- Training
- Staff development
- Knowledge management

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#### Structural Capital:

- Process consulting
- Software development
- R&D
- Patents

#### Relationship Capital:

- Marketing/branding
- Customer acquisition
- Product or quality certifications
- Outsourcing partner development

Understanding how much is being invested in i-capex in an important starting point. But just counting costs does not give you enough information. A dollar of training does not automatically buy you a dollar of value. A new approach to valuation and measurement is required.

### Assessment is the New Balance Sheet

*In the tangible economy, a stakeholder wishing to understand the tangible productive capacity of a company has to look no further than the balance sheet.*

While the creation of the i-capex statement recommended in the previous section is an important first step in understanding a company's intangible assets, it is not sufficient. The effect of i-capex investments such as training, software development, branding and research, cannot be observed directly with the eye or the accounting system. This section makes the case for assessment as an approach to understanding the performance of intangible assets.

Assessment is a way of getting comparable data about hard-to-quantify questions. It usually involves systematic surveys using consistent scales. GE, for example, uses an assessment as one of its key indicators of the strength of their relationship capital with customers. They use a "net promoter score" based on customers' willingness to recommend GE (expressed on a scale from one to ten) as a way to understand whether all their investments in good relationships have paid off. Assessment implies careful study, although it moves beyond financial and physical measurements. Assessment basically answers the questions:

- *Are we getting the desired effect of our investment?*
- *Does it help us get the intangible capital we need?*

These are not questions that can be answered out of an organization's accounting systems. To answer questions like this, you actually need to consult knowledgeable stakeholders that are familiar with the situation.

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How can this be done in a reliable way for an organization? A reliable assessment of intangible capital includes:

- The right measuring stick: What is the right measuring stick for intangibles? It depends on what you are measuring. The most universal standard is an organization's strategy. For example, what does it mean to say a group of employees is smart? Any answer would be wildly subjective. However, what if the question is whether the employees demonstrate the five core competencies that the company has identified as critical to its success? Or how the competencies compare with those of the company's peers?
- A standard scale: Assessments can be further strengthened through use of a consistent scale. A Likert scale, for example, allows assessment of an issue on a scale of 1 to 5 (or 10). This produces a set of data that becomes specific and comparable.
- A balanced sample: While an assessment can theoretically be performed by a single person, the strength of the findings is greatly enhanced by using a broader but balanced sample. Interviewees should represent a variety of levels and functions within a company. Ideally, interviews should query both internal and external stakeholders.

Using a standard tool based on a Likert scale to poll a variety of stakeholders and assess intangible capital assets against the company's strategy will answer the question, "Are we getting the return we expect on our i-capex investment?"

How to apply this in your own business? Start with the inventory described above in the Raw Materials discussion. Now prepare a tool that assesses the strength and appropriateness of these intangibles. The question for each should be something like, "on a scale from 1-X, rate the degree to which this asset supports the company's strategy." If you are unsure whether your list is complete or your tool accurate, there are standardized tools available in the market such as IC Rating™. Either way, an IC assessment allows organizations to ensure that their i-capex is having the desired effect on the improvement or creation of intangible business resources.

Checking on the status of an asset at a point in time in this way is similar to the function of a balance sheet. It gives you a baseline, a starting point for future measurement. There are also ways to check on progress over time.

## **Performance Measurement Is the New Income Statement**

*In the tangible economy, the income statement tracks the cost to produce, distribute and sell a product. It provides an operating picture told in financial terms.*

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An income statement is still the key tool in the knowledge economy used by managers and investors to measure profitability at the end of a period. But the path to profitability is no longer as clear as it was when the financial statements tracked the progression from purchases of equipment and raw materials through the production, sales and delivery processes. This kind of financial depiction of value creation is missing in the case of intangibles. To fill this information gap, dashboards, scorecards and other systems of performance management are emerging as a means to identify and track a company's progress along the path to knowledge profits.

As we have seen, traditional quantitative measurements often fall short in the intangible economy. The field of performance measurement attempts to break the intangible productive process down into steps that can be measured and/or assessed using quantitative metrics. Good indicators are proactive, leading indicators of performance. Rather than waiting for an accountant to give them the score at the end of the period, companies that use indicator-based performance management are measuring progress throughout their value creation process.

A good way to understand the concept of indicators is to think about the way a professional money manager builds a portfolio. The ultimate metric for a financial portfolio is performance. But how do money managers get the best performance? Certainly not by waiting for performance information at the end of the year. Most have an idea about the right balance they need in assets. So the starting indicators revolve around investment goals (growth, income, risk tolerance, etc.). Other indicators involve the size of a fund, specific investments and the fund managers. A change in any of these indicators is often a reason to reconsider and, often, to exit an investment (which is a good reason to track them). External indicators are also considered, such as economic and financial market trends. All these indicators are, in the view of the portfolio manager, important drivers of the ultimate performance of a fund. Many of them, while not quantitative, are still objective. They can be identified and tracked. In fact, creating and tracking a framework of indicators is the main job of a professional money manager. Their use of indicators helps them deliver on the bottom line metric of annual portfolio performance.

To apply performance management thinking in your own business, you should start with the intangible capital assessment "balance sheet" (described in the previous section) as a baseline. When you know where you are and where you want to be, then you can design a set of indicators that will help you measure your progress toward that goal. Creating performance measurement indicators is as much an art as a science. The thought process to develop indicators should be something like this:

- Where are we?
- Where do we need to be?
- What needs to happen for us to get there?
- How will we know that we are making progress?

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Intangible capital expenditure calculations, assessments and scorecards shed light on the critical intangible aspects of a company. They will help you track your day-to-day operations more accurately and successfully. But the final and, in many ways, most important measure of the success of intangibles management is your company's reputation.

### **Reputation is the New Bottom Line**

*In the tangible economy, the ultimate metric for all companies is and will be their ability to generate cash and profits. Cash is the way that a company ensures that it can survive to the next year.*

The ultimate metric in the intangible economy is the same as for the tangible economy: the corporation's ability to generate cash and profits. Business is still business and business exists to make a profit. However, the nature of intangible economy also requires organizations to focus on other effects of their operations.

The revolutionary story of the Boeing 787 illustrates all the intangible concepts featured here, including this last one. The company's previous plane, the 777, had 2,500 pages of specifications. Boeing had a very deliberate strategy that left no room for discussion. Their relationships with suppliers were highly controlled and followed strict reporting lines. With the 787, Boeing took a totally different approach. They wrote 20 pages of specifications. They allowed 100 companies in six different countries to design and develop the individual parts that would go into the new plane.<sup>viii</sup>

This process hasn't been without problems but it has been a critical learning experience that has helped Boeing move into the knowledge era. Boeing's role was no longer one of control but, rather, of orchestration of these many resources. This approach reflected an innovation strategy that leveraged the company's core competency of large scale production (embedded in both human and structural capital) and the significant value it its supplier network (relationship capital). This kind of organization is drawn with a map, not an organization chart, and is interconnected with a computer network and software that is, in itself, part of the company's structural capital. To be successful in this environment, Boeing has to pay much more attention to cultivating and nurturing its supplier network. These suppliers are no longer held at arms' length. The company has to be conscious of its role in a bigger community. Its current and future profits will depend on the organization's ability to manage its reputation within its network.

This new type of interdependence that occurs in intangibles-heavy organizations is why there is increasing attention on social responsibility and green operations—the bottom line for most companies has to take into account the environment, the community and the well-being of their employees. In an intangible economy, employees, customers, suppliers and outsourcing partners play ever more important roles in the success of an organization. So maintaining goodwill and spreading satisfaction throughout your network is in important goal of intangibles management. In this world, your reputation is your license to continue to do business.

excerpt from *intangible capital: putting knowledge to work in the 21<sup>st</sup> century organization*

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You are probably already investing as much or more in intangibles as you are in the tangible aspects of your business. Isn't it time to take the next step: to actually quantify that investment, to understand how intangibles contribute to your profits and create competitive advantage? Applying these ten concepts will help you track, assess and manage your intangible assets for greater and greater value.

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<sup>i</sup> “Yoshiaki Tojo, “Creating Value from Intellectual Assets,” presentation to Intangible capital for Communities in the Knowledge Economy, 29 June, 2006, available at [www.oecd.org/dataoecd/8/45/38194512.pdf](http://www.oecd.org/dataoecd/8/45/38194512.pdf)

<sup>ii</sup> Peter Romer, Chapter 3 in *Intangible Assets*, edited by John R.M. Hand and Baruch Lev, (Oxford: Oxford University Press, 2003),

<sup>iii</sup> For an example of how to use Legos to model a knowledge factory, go to YouTube and watch “You Can Grow Like Google.”

<sup>iv</sup> The open source community for Value Networks is at: <http://www.value-networks.com/>

<sup>v</sup> Peter F. Drucker, *Managing in the Next Society*, NY: Truman Talley Books, St. Martin's Press, 2002, p. 125

<sup>vi</sup> Henry Mintzberg, Joseph Lampel, and Bruce Ahlstrand, *Strategy Safari: A Guided Tour Through The Wilds of Strategic Management*, Free Press, 1998.

<sup>vii</sup> Michael Mandel, “The GDP Mirage,” *Business Week*, October, 29, 2009.

<sup>viii</sup> Don Topscott and Anthony D. Williams, *Wikinomics: How Mass Collaboration Changes Everything*, NY: Portfolio, 2006, pp. 226.