EINSTEIN
IN THE
BOARDROOM

Moving Beyond Intellectual Capital to I-Stuff

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AND
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To Sandra, Juan, Derek, and Alana.
Without them there would be nothing of value.
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As any author can attest, a book is a complex and interacting set of activities. Good ideas have many parents, and this was certainly the case with Einstein in the Boardroom. Einstein is the fifth book the authors have written about getting value from intangibles. This book is the result of collaboration with a number of people who provided the inspiration guidance, support, and ideas that have made it possible. For these people and their willingness to share company stories with us, we are deeply grateful. Although we conceived the original framework of ideas, many people spent hours helping us shape the concepts, and countless others donated their time and insights to animate the ideas further.

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AUTHORS' FOREWORD

THE ICM GATHERING

In the Autumn of 1994, several of us in the then nascent IC management community realized that we had very different perspectives on the thing called “Intellectual Capital,” as well as on how it should be managed. Wanting to explore these differences further, we decided it could be a good idea to bring together all of the companies in the world that actively managed their intellectual capital. That would allow us a way to define and perhaps to delve into active approaches to managing intellectual capital.

We were able to bring seven companies together, in Berkeley, California, in January 1995 to share what we knew on the topic. The participating companies included Dow, DuPont, Hewlett-Packard, Hughes Space and Communications, Hoffman LaRoche, Skandia, and the Law & Economics Consulting Group.

The participants set as their purpose to define the term intellectual capital and to determine how it is managed, at least for those companies attending the meeting. We realized early in the proceedings that we were having difficulty communicating because, while we used similar terms to define elements of intellectual capital, we each defined them differently. As a result, we had to create a language and to agree on common terms and definitions in order to communicate with one another; and so we did. By noon of the second day the excitement level in the room was almost electric; no one wanted the meeting to end. We agreed to meet again, and four months later we reconvened to continue the conversation. The group has continued to meet three times each year for, now, over ten years.

Before each meeting, the members agree on the “hot topics” to be featured at the forthcoming meeting. Sometimes outside speakers are invited but, after long experience, the group has learned that more is learned from the sophisticated membership than from outside speakers. For that reason, most of the meetings involve only the participating companies.

Meetings usually begin slowly, with show-and-tell around the table on the agreed hot topic. Often one or more companies are asked to prepare a report.
to the group about some aspect of a hot topic: what they have been doing about it at their firm, what they would like to do about it, or requesting assistance in thinking through how to tackle the hot topic at their firm. At the beginning of the second day, a list of potential topics for focused discussion has been created from the first day’s proceedings. The list is quickly winnowed down to the two or three “hottest.” The discussions that follow take on a life and an energy of their own. In the room are people who are among the most knowledgeable in the world about the practices of managing intangibles. They share a collective knowledge that is probably unequaled. When this collective knowledge is focused on topics of mutual interest and importance, the result represents the very best thinking possible.

ICM Gathering members are perhaps three to five years ahead of others in their thinking about the ways to extract value from IP and I-stuff. This book contains many of the lessons these companies have learned, from themselves and from one another. These are not proprietary or secret. The Gathering companies realize it is in their self-interest to have more companies learning and sharing how to manage and profit from intangibles. As Einstein once said, “The only source of knowledge is experience.” So we invite you to read this book and to use the companies’ experiences to help shape and grow your own knowledge. In so doing, you become a part of the process of creating a world where the ultimate source of value is limited only by our imagination and the creation of new ideas.
INTRODUCTION: THE EINSTEIN LEGACY

HUMANS ARE CREATIVE beings. They think and are the source of all knowledge for society, whether in the form of new sources of power (draft animals, water wheels, hydroelectric turbines, nuclear power), new methods of communication, faster and cheaper personal transportation, or an improved method for irrigating crops. We continue to create new ideas that add to the world’s storehouse of knowledge. Humans have been adding to their total knowledge steadily over the centuries, and the amount of knowledge we create is multiplying at an incredible rate. Beginning with the amount of knowledge in the known world at the time of Christ, studies have estimated that the first doubling of that knowledge took place about 1700 A.D.. The second doubling occurred around the year 1900. It is estimated today that the world’s knowledge base will double again by 2010 and again after that by 2013.

The pace of change that was dramatically brought to public attention in 1970 by author Alvin Toffler in Future Shock continues to accelerate. Our benign acceptance of this astonishing rate of change of knowledge, innovation, and information would be staggering to anyone who had not experienced its development. Were we able to transport someone from the early 1900s forward in time to observe our society today, doubtless they would be amazed by the amount of knowledge, innovation, and information that we often blithely take for granted.

Intangibles such as knowledge and know-how, as well as products based on those intangibles, have come to play a dominant role in our society. Although their effects can be seen everywhere around us, we rarely give them notice. To illustrate the point, think of just one intangible: information; it is all around us. We seek it out, and we pay for access to it, yet we rarely mention how useful it has become in daily life. In an average day, we wake up in the morning and turn on the radio or television for the news, weather, and traffic reports (all types of information). We want the latest information about stock movements and interest rates, or the long-term forecast for the Dow Jones Industrial Average.
We pay for broadband capabilities for our computers in order to search quickly for information on the World Wide Web. We go to movies (which provide information in the form of entertainment), as well as rent and buy entertainment to enjoy at home. Cell phone use has exploded around the globe, providing us with instant access to friends, relatives, and business contacts, all of whom may exchange information and pictures with us over the phone. Our automobiles are filled with technologies that keep us in touch, entertain us, and provide up-to-the-minute news. Rather than seeking out the solitude of distant vacation retreats, many of us grumble if we are even briefly out of touch with the information-providing networks that feed our PDAs.

**Intangibles in the Einstein Context**

Albert Einstein’s greatest contribution to our society was to think about an everyday phenomenon (light) in new ways and to develop a framework within which one could think about and describe better what was happening all around us. In addition, Einstein came to understand the relationship between an intangible (light) and tangibles (mass) in his famous equation $E = MC^2$. We chose Einstein as a symbol for this book because here we discuss the management of intangibles, something that many firms have been doing for quite some time but without a framework or way of discussing or describing it fully.

In the business context, we have learned that from the perspective of people managing intangibles, there are really only two kinds. There is intellectual property (IP), which companies have used to “cut their teeth” on how intangibles may be managed. The second kind that managers define is the “non-IP” intangibles, or “everything else.” The “Edison” book was about Best Practices in managing IP. “Einstein”, the obvious next book was to reveal Best Practices in managing the firm’s non-IP intangibles. But, defining the intangibles of interest in terms of what they are not; (i.e., the non-IP intangibles) is not very satisfying. So we asked companies in the Gathering, clients, and colleagues to suggest a better term. We explained that we wanted a term capable of encompassing all tacit knowledge, know-how, relationships as well as the non-legally protected and codified knowledge of the firm. In addition, the term should not contain financial or accounting overtones. Discussions raged over the course of a full year; with many ideas and terms proposed. In the end, we found that we had eliminated all alternatives but one. While I-stuff is not a term we all embrace, it was the only term we could identify that matched the criteria with
a minimum of baggage. We are open to alternatives, but for purposes of this book, we will use I-stuff.

Issues Surrounding the Management of Intangibles

The discipline of managing intangibles continues to evolve as new lessons are learned and new practices and methods replace older, no longer adequate ones. Still in its infancy, the movement has a number of challenges:

1. No agreed definition of what comprises intangibles and no common set of measures or measurements for them developed by the community. Using an old management saw: “If you can’t measure it, you can’t manage it.” Until an adequate and broad-based set of measures of intangibles and intangibles value is agreed, it will be difficult to manage fully this important component of the organization’s value.

2. Confusion about disciplinary frameworks. During the early development of knowledge about intangibles, a series of “disciplinary” frameworks were developed to provide a better understanding and description of the phenomena of intangibles. These frameworks were formed within the context of several different disciplines or schools of thought. Examples include knowledge management, innovation, human resources, IP (legal), and IP (business). Each disciplinary framework was helpful in the development of ideas and concepts within its own confines, but intangibles management has now grown so large that it can no longer be contained within any one disciplinary view. The different views espoused by proponents of each discipline are often difficult to rationalize, often represent insular thinking, and are no longer as helpful as they once were.

3. No generally agreed-on management framework for intangibles management. Although the framework described and illustrated in this book outlines how the ICM Gathering companies think about and manage their intangibles, previously we had not seen a comprehensive and well-practiced framework for describing, defining, and managing the entire set of the organization’s intangibles.

4. Inadequate information on best practices for managing the full set of the firm’s intangibles.

5. Lack of a practical financial framework to aid accountants, regulators, investors, and managers in measuring, valuing, and disclosing intangibles.

6. Lack of effective tools for intangibles management.
In the pages that follow, the authors and the ICM Gathering companies provide some illumination on most of the foregoing issues. Intangibles management is an evolving discipline. The Intangibles management community continues its journey to understand and to capitalize on the full range of the firm’s intangibles. For firms who began their intangibles journey with intellectual property, the shift to I-stuff is the obvious next stop. Although no claims are made that the methods, processes, and frameworks that follow are “the answer,” we believe that they will be helpful for practitioners, managers, stakeholders, and the financial community in understanding how firms can manage and extract value from their intangibles on a regular and sustained basis.

The Increasing Importance of Intangibles

In recent years the number of companies whose value lies largely with their intangibles has increased dramatically. In a study of thousands of nonfinancial companies over a 20-year period, Dr. Margaret Blair, then of the Brookings Institution, reported a significant shift in the makeup of company assets. She studied all the nonfinancial publicly traded firms in the Compustat database. In 1978, her study showed, 80 percent of the average firm’s value could be attributable to the value of the tangible assets on its balance sheet, with 20 percent of the company’s value due to other factors. In 10 years, by 1988, the makeup had shifted to 45 percent tangible assets and 55 percent other factors. By 1998, only 30 percent of the value of the firms studied was attributable to the value of their tangible assets, whereas a stunning 70 percent was attributable to other factors. What are these other factors? Why have they become so important?

It was originally suggested that the “other factors” were the firm’s intangible assets. The hypothesis was that the value of the company is the sum of its assets, both tangible and intangible. On closer examination, this theory has generally been discarded, in favor of the more widely held belief that a firm’s market capitalization includes investors’ expectations of future revenue in addition to any value they might attribute to the firm’s intangibles.

An Accenture study written in 2004 found similar patterns in the evolving size of the “other factors” component of market capitalization but explained it differently. The Accenture study concluded that the amount of a firm’s market capitalization less the value of its tangible assets represented that portion of the firm’s assets and activities not under active management.1

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**What Are Intangibles?**

Over time, the intellectual capital community has defined the elements that constitute both tacit knowledge and nonprotected codified knowledge. Companies managing their intangibles on a full-time basis categorize their intangibles using a listing such as that shown in Exhibit 1.1.

In the simplest terms, intangibles represent the knowledge, know-how, and relationships that may be used to create value for their owner or owning organization. Intangibles may be tacit or codified. When they are tacit, they reside within the mind(s) of company employees and other stakeholders. When they are codified, they have been committed to some form of media—typed into a computer, drawn on a blueprint, written on a piece of paper, or painted on a canvas. In an attempt to make the definition of intangibles more understandable, the U.S. Financial Accounting Standards Board, whose interests include developing standards for measuring and reporting on intangibles, has created a list of what it considers to be a firm’s intangibles (see Exhibit 1.2).

Different sources produce different lists of what may be included under the heading of “intangibles.” No one list is definitive, and all are illustrative. We believe this makes the point that the elements constituting the set called “intangibles” are not entirely known; there is no one comprehensive list of intangibles.

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**EXHIBIT 1.1 Elements of Intellectual Capital from the Perspective of the Intangibles Community**

- Knowledge
  - Tacit
  - Codified
- Relationships
  - Individuals
  - Groups
- Processes (including combinations of tacit and codified knowledge)
- People
  - Knowledge-laden people
  - Relationship-laden people
  - Customers
    - Individuals
    - Defined entities (including combinations of tacit and codified knowledge)
Nevertheless, there is substantial agreement as to the elements that constitute “intangibles”: tacit and codified knowledge and relationships in all of their many forms. Of particular relevance to the topic of this book, however, is the set of intangibles that can be converted into profits.

**How Intangibles Differ from Tangibles**

The characteristics that differentiate intangibles from tangibles are of particular importance to anyone who wants to measure them or extract value from them. Professor Baruch Lev of New York University’s Stern School of Business provided an early identification and discussion of some of the major differences. In his book *Intangibles*, he lists the primary differentiating characteristics (see Exhibit 1.3).

From the value extraction and valuation perspectives, however, there are two characteristics of particular importance:

1. **Context dependency**: The value potential of intangibles depends on the context in which that value will be realized. Each company or organi-
zation has a unique set of strategies, strengths, weaknesses, assets, internal champions, stakeholders, shareholders, and so on. Because of these and other factors, an intangible may have a specific value in the context of one organization and an entirely different value in the context of another.

2. **Multiple simultaneous value streams**: Intangibles are capable of generating more than one value stream simultaneously. Tangible assets are almost always capable of generating only one value stream. If a firm owns a building, it cannot generate revenue from its use as an office building during the day and, for example, another value stream for its use as an apartment house at night. Tangible assets have only one use and generate only one value stream for their owner. Intangibles are different, however. They may be used in many ways simultaneously without interfering with one another. (There are, of course, circumstances in which one use of an intangible precludes some of its other possible uses. In such a case, the highest and best use for the owner should be the major consideration in deploying such an intangible.)
A major difference between intangibles and tangibles is the way in which they may be valued. Accounting rules call for valuing tangibles according to their cost or current market value, whichever is lower; intangibles, however, may be valued according to the sum of the discounted value of their multiple value streams, or the amount offered for them by a party outside of the firm, whichever is higher.

The Importance of Context

Context determines the value of an intangible. Several years ago, for example, Coca-Cola had a business unit that developed and sold home vending devices, whereas long-time competitor Pepsi-Cola did not. With this in mind, it should be obvious that someone with a new innovation in home vending could have expected a much more interested response from Coke than from Pepsi. Here we see two companies, the same industry, similar products, but different contexts.

Context may be thought of on two levels. The first is the level of the organization. The example of Coca-Cola and Pepsi-Cola demonstrates organizational context. Organizational context typically is determined by long-term direction, corporate strategy, corporate resources, stakeholders, shareholders, and other “big picture” factors. Value stream context, on the other hand, is determined by the many factors that firms consider in deciding how to extract value from their intangibles. Factors in the value stream context include:

- **The kind of intangible:** Knowledge, know-how (know-how is knowledge that is actionable), relationship, IP, and so on.
- **The kind of value sought:** Firms may seek defensive value, such as protection or freedom to operate, or offensive value, such as revenue, cost avoidance, or positioning (see Appendix B for a discussion of the different kinds of value available from intangibles).
- **How the innovation will be applied:** Often an innovation will have a number of potential applications. For example, several years ago Xerox developed a new intermediate chemical for use in making toner for its copying machines. This chemical could also be used as an intermediate in five other chemical processes for different kinds of plastics. The company had to decide whether to commercialize only one application of the chemical or one or more of the others as well.
- **The cash conversion mechanism:** For value extraction when revenue is the desired outcome, a fixed set of mechanisms is available for converting an innovation into cash: sale, licensing, joint venturing, strategic alliance, or integration in company activities.
• Market segments: For each application selected, define the markets into which it will be marketed. Some applications may be capable of commercialization in a range of market segments, whereas the commercialization of others may be more focused on one or only a few segments.

• Perspective: This element of context identifies from whose perspective the value stream is to be developed. Possible perspectives for valuation include those of the owner, an internal decision-maker, a potential buyer, shareholders and investors, and outside stakeholders.

• Dimensions of measurement: The dimensions of measurement for an intangible may include qualitative measures using words (e.g., “a little” or “a lot”) or quantitative measures using measures such as vectors, ranges, or points. Quantitative measurement may be stated in monetary terms (dollars, yen, euros) or in nonmonetary terms (percentage, size, rate of change).

Understanding and defining the context for intangibles is an important step in understanding the potential value of an intangible to the organization. Whether at the strategic or value stream level, context is a fundamental contributor to the usefulness and value of an intangible.

Perspectives on Intangibles

The intangibles management community began and evolved from separate perspectives or schools of thought. Although these schools of thought tend to agree on the elements of intangibles, they do not agree on which of those elements are most important.

To illustrate this point, suppose one made a pile of colored balloons in the middle of the floor, with each balloon representing one element of intangibles. The pile of balloons might look like Exhibit 1.4.

Someone looking at the pile from the top would see a different configuration than someone looking at it from the side. For purposes of illustration, let us say there are four different perspectives on an organization’s intangibles: the knowledge view, the value extraction view, the financial reporting view, and the investor view, as demonstrated in Exhibit 1.5. There can, of course, be many more perspectives on the firm’s intangibles, but four will suffice to make our point.

From each vantage point, the viewer sees some balloons in the foreground and others in the background. Different balloons are in the foreground from the knowledge view compared with the value extraction view. From the perspective
EXHIBIT 1.4  The Elements of Intangibles

EXHIBIT 1.5  Different Perspectives on Intangibles