

The Power of Intellectual Capital Assessment

Executive Summary

Authorities from Alan Greenspan to Peter Drucker have highlighted the global shift from an industrial to a knowledge economy. Today, many companies from Mumbai to Boston operate with virtually no fixed assets or inventory—only people, services and a network of partners and customers. Even traditional companies compete less on their ability to produce a product and much more by improving the quality of their workforce, their processes, and their connection with customers (think GE and Toyota). This knowledge edge, this intellectual capital, is *the* basis of competition in today's economy. Winners in this economy will know how to build intellectual capital and fuel future innovation.

U.S. businesses invest millions of dollars each year in building intellectual capital through workforce development, process improvement, software, R&D, advertising and market development. However, few organizations understand and manage intellectual capital in a direct and specific way. One of the fundamental reasons for this is the lack of consolidated information available to management about a company's full portfolio of intellectual capital resources.

Current accounting and measurement techniques do not give businesses the information they need to track and manage their intellectual capital resources. There are piecemeal solutions such as valuations of specific intangible assets and scorecard systems that seek to move beyond financial metrics. However, these solutions do not examine intellectual capital in its entirety. Without good information, it is difficult to have a coherent strategy for building intellectual capital and increasing corporate competitiveness.

The best alternative available today for understanding the entire intellectual capital portfolio is the assessment. Intellectual capital assessments provide objective, consolidated, quantitative evaluations of the strength of an organization's intellectual capital portfolio. This is power-

ful, focused information that is invaluable for managers facing the challenges of increased competition in the global knowledge economy.

The Rising Importance of IC

Intellectual capital (IC) has always been important. IC enabled the construction of the pyramids in Egypt. It helped Henry Ford fuel the industrial era. However, until now, economic value has been created primarily through the use of tangible resources like factories and raw materials. Peter Drucker helped us understand that this dynamic began changing in the last century. Beginning around 1900, the amount of labor used to produce each incremental unit of manufacturing output dropped by roughly 1% per year. After WWII, the raw materials and energy needed to achieve growth in GDP also began to drop at similar rates. At the same time, the number of educated workers on company payrolls rose (also by about 1% per year).¹

Thomas Stewart, author of two books on intellectual capital and now Editor of the *Harvard Business Review* puts it simply, "What has taken the place of matter and energy is intelligence....We are all knowledge workers now, working for knowledge companies."² The increased importance of knowledge assets can be seen in two key metrics:

- The stock market prices of the S&P 500 have shifted dramatically in relationship to the book value of the corporations' equity. From 1982 to 2002, the average market-to-book ratio of these companies has increased from 1.0 to about 5.0, showing that the value of a company is no longer tightly linked to its tangible productive assets.³
- Leonard Nakamura of the Philadelphia Federal Reserve has estimated that the investment in intangible assets by U.S. corporations has an equilibrium value of at least \$5 trillion, which is equal to about half of their market value.⁴

The Definition of IC

The clear and growing value of intangible corporate resources sparked a new field of study in the 1990's. Through the work of academics and businesspeople around the world a broadly-accepted definition of intellectual capital has emerged that is illustrated in Figure 1 below.

IC Investments

The Federal Reserve estimates that U.S. businesses are already investing \$1 trillion per year in intangible intellectual capital resources.⁵ This money is spent to:

- Attract, train and retain good people
- Develop or purchase software
- Improve internal processes, work flows, and services
- Innovate, research and develop new products and services
- Develop markets and strategic partners
- Advertise to build brand and market share

These investments are critical to the future competitive strength of most businesses. However, they are not tracked specifically and are generally treated as operat-

ing expenses. Since the value of these investments is not tracked over time, it is not possible to measure the return on money spent.

The Historical Roots and Limits of Management Accounting

The reason for the lack of specific information about intellectual capital has deep historical roots. The standards used in accounting today were established through the work of Luca Pacioli, a monk in the 15th century. Pacioli observed the record-keeping practices of successful merchants in Venice and wrote a clear set of instructions

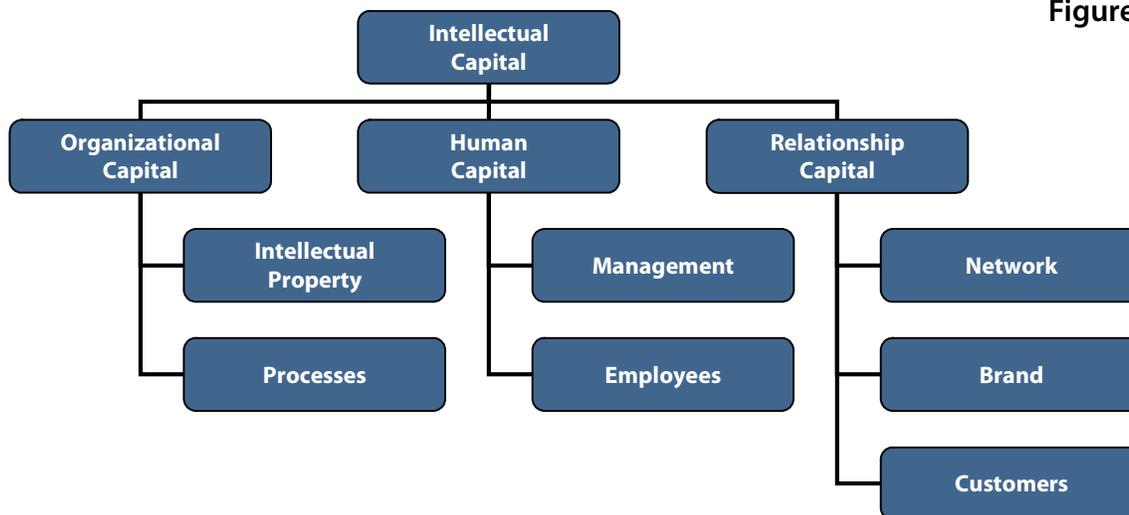


to the businessperson on how to create good financial records.

He advised that before starting any business endeavor, one should prepare an inventory of everything the enterprise owns. It should be

completed on one day and updated periodically, always "as of" a certain date. This inventory and other financial records that Pacioli recommended became the balance

Figure 1



IC as a Competitive Force

A quick view of the importance of intellectual capital in an individual business can be developed through the following exercise. Rate each of the following resources as to their importance to your organization's future competitive position (on a scale from 1 for least important to 5 for most important):

Physical Capital:	1-5	Intellectual Capital:	1-5
Inventory	___	People	___
Production equipment	___	Processes	___
Buildings	___	Relationships	___
Land	___	Strategy	___
Total	___	Total	___

A comparison of the two sums is a simple way to understand the relative importance of intellectual capital in the development of competitive advantage. Most companies today have a higher total in the right-hand column and view their future success to be dependent upon the strength of their intellectual capital.

sheet and income statement that are still in use today.⁶ The accounting systems that have evolved from Pacioli's work provide several distinct advantages:

- Objective standards
- Quantitative measures
- Consistent methodology
- Consolidated presentation

These factors have made financial statements the gold standard for management reporting for countless years. However, modern accounting cannot produce an inventory of intellectual capital resources. There are several reasons for this:

- **Most IC cannot be owned.** Accounting only tracks assets owned by the organization. There are only a few categories of IC that can be identified as specific property of a company such as brands, patents, trademarks, and copyrights. The rest of its structural capital, its human capital, and its relationship capital cannot be owned.
- **Most IC cannot be controlled.** Employees and management alike can be controlled day-to-day but cannot be compelled to stay at a company over time. In a like way, customers, vendors and strategic

partners cannot be compelled to do business with a company. Even structural capital can quickly become useless when competitors find better ways of doing things or invent new products. The implication of this lack of control is that reporting current intellectual capital is of limited use without understanding the organization's prospects for maintaining access and for building new IC going forward.

- **Most IC is not measured financially.** The system of accounting that we have had in place for five hundred years provides IC information only in special cases and only about specific intangible assets. The cost of R&D, marketing, software, and employee training is expensed annually, and no recognition is made for the enduring structural capital created in a company by its brands, its knowledge and its relationships. Even owned intangibles are posted to a balance sheet only when acquired through a specific transaction; in such cases, the financial value of the intangible is determined by a third party valuation firm, not by its accountants.

For all these reasons, managers cannot rely on traditional accounting and information systems to effectively man-

age critical IC resources and maximize the growth and value of their company. A new approach is in order.

Available Alternatives

Today, there are a number of approaches available to generate information on intellectual capital within a business:

Valuations – Valuations assign a dollar value to specific types of intangible assets. They are performed by third party experts and can value assets such as technology, in-process research and development, customer base, assembled workforce, trade names, contracts, and patents. Valuations are expensive and are used today only in circumstances where specific intangibles can be capitalized, such as in a buy-out. A valuation is rarely, if ever, developed for a company's full intellectual capital portfolio.

Valuations are the only alternative available that yields dollar values for individual IC assets. However, an absolute dollar value in isolation has limited value to a management team—there is a big difference between quantifying the value of an asset and understanding what the “right” value is for an individual business.

Scorecards – A scorecard is used for measuring progress in the execution of a company's strategy. It is designed by a company to track leading and lagging operational indicators of its progress against specific goals. In practice, most scorecards are limited to internally generated information, although external indicators can be used, especially in automated “dashboard” reporting systems. Like valuations, scorecards focus only on a limited number of indicators, not the full intellectual capital portfolio.

Indeed, scorecards are not specifically designed for intellectual capital management. The commonly-used Balanced Scorecard concept from Kaplan and Norton does address selected aspects of intellectual capital through its metric categories (learning and growth, internal business processes, and customer categories). Another scorecard system, the Skandia Navigator, does have a more direct focus on IC, tying customer, human, and process capital to financial results, while examining

renewal and development as a way of understanding future potential. However, neither system gives a complete portfolio view of intellectual capital.⁷

Assessments – Assessments are used to specifically evaluate intellectual capital. This type of assessment is typically performed by a third party using a standardized tool. Assessments do not put a dollar value on intellectual capital—instead, they derive an objective assessment of IC strength relative to a company's stated strategy. This information comes from conversations with knowledgeable stakeholders, which provides very different information than indicator-based financial reports or scorecards. These interviews yield meaningful real-time data about the current strength of an IC portfolio.

An assessment can tap into the experience of stakeholders to determine the strength of renewal and innovation efforts and areas where IC is at risk. Performing periodic assessments of IC also serves as a reality check on management and innovation efforts. It is a great starting point for creating scorecard systems as well.

Hard vs. Soft Data

In his most recent book, Henry Mintzberg (one of the leading authorities on strategic planning) makes the case in a chapter entitled “The Soft Underbelly of Hard Data” that while we tend to trust “hard” data, it is often limited in scope, overly aggregated, and focused on the past. He advocates using oral forms of communication saying, “while hard information may inform the intellect, it is largely soft information that generates wisdom.” Most managers know this intuitively and, in fact, Mintzberg cites the many studies that have “demonstrated that managers of every sort rely primarily on oral forms of communication, on the order of about 80 percent of their time.”⁸ Assessments improve the quality of oral information by aggregating and statistically validating the opinions of knowledgeable stakeholders.

Comparison with Financial Information

As discussed above, Pacioli's financial approach has endured for centuries because it provides objective standards, quantitative measures, consistent methodology and consolidated presentation. Table 1 below compares the available IC information sources against these criteria. The assessment is the only IC information source that provides all four of these benefits:

- **Objective standards** – Most assessments are performed by third parties using validated standards. This approach gives the results a greater degree of objectivity and reliability.
- **Quantitative measures** – Good assessments provide quantitative information...with a twist. Since dollar valuations cannot be performed across the full IC portfolio, assessments often provide a numerical rating or evaluation of the different components of the intellectual capital portfolio.
- **Consistent methodology** – Good assessments use a consistent methodology so that the results are comparable from year to year and from company to company.
- **Consolidated presentation** – Since they are specifically designed for intellectual capital, assessments provide a consolidated view of a complete IC portfolio.

Assessments have an additional benefit over financial statements. Whereas financial reporting reflects only past performance, assessment interview methodologies can generate information that is forward looking, allowing the examination of future prospects and risk.

Why Consolidated Information Matters

Assessments are unique in that they provide a consolidated view of an organization's intellectual capital portfolio. This is an important attribute because individual IC components have limited value in isolation. IC value is only created when the individual components are used in concert. In a factory, for example, value is created through a process that uses inventory, equipment, physical plant and labor. A knowledge enterprise also creates value through an integrated process. The IC value creation process uses:

- People to innovate and create new ideas and knowledge.
- Mechanisms to record and share this knowledge throughout the organization in the form of instructions, software, formulas and processes.
- Collaborative relationships with customers, enabling the organization to understand and proactively meet customer needs.
- Connections with partners to complement and expand organizational capabilities.

This is an integrated process. The value of each component is dependent on the strength of the overall system. Good external networks demand good internal processes. Good processes only work with good people. The value of good people is diminished if they do not share their knowledge to build knowledge capital that stays in the business.

Most businesses already know a great deal about discrete parts of their IC. They track employment costs and productivity, generate operational reports, and have

Table 1

	OBJECTIVE	QUANTITATIVE	CONSISTENT	CONSOLIDATED
Valuations	✓	✓	✓	
Scorecards	✓	✓		
Assessments	✓	✓	✓	✓

specific business groups to focus on relationship building with clients, vendors and partners. However, just as one would not try to manage a factory by looking exclusively at inventory, neither should a knowledge enterprise be managed using information on one or two isolated components of IC. The best information on intellectual capital will, therefore, address IC as a system or a portfolio.

When to Use an Assessment

Assessments are appropriate for situations such as:

- **Increasing performance.** An external assessment gives objective feedback on an organization's current status, risks and opportunities. It quickly highlights strengths that can be exploited and weaknesses that can be addressed.
- **Motivating change and innovation.** An external assessment provides objective feedback to ensure a clear starting point for change management efforts.
- **Building an internal measurement system such as a scorecard.** A third party assessment establishes an objective starting point and helps to determine the best metrics for successful execution of the organization's strategy.
- **Communicating IC viability, strength and prospects.** A consolidated assessment of an IC portfolio is a unique and powerful information source for management, partners or potential M&A candidates. An external assessment provides objective information and gives them a consolidated view of the enterprise unlike anything they have seen before, helping them to appreciate the intellectual capital resources that are not included in traditional financial reporting.
- **Introducing active intellectual capital management.** An external assessment helps an organization to develop a shared vocabulary and understanding of where it is currently and what will be needed to increase performance and competitiveness going forward. This is a great way to begin an effort to explicitly manage the growth and value of a firm's intellectual capital.

Choosing an Assessment Tool

In choosing a standardized assessment process by a third party, it is important to consider the following issues:

- **Validation** – Has the tool been used before? By whom and for what purpose? Make sure that the tool has been tested and proven in real-life situations.
- **Breadth of coverage** – Does the tool examine all or just part of an intellectual capital portfolio? Make sure that it will cover all the aspects of the organization's IC.
- **Consistency** – Are the criteria consistent so that results can be compared from one time period to another or among different divisions within an organization? The ability to compare can add a valuable perspective to the information.
- **Benchmarking** – Is data available about the organization's competitors or other similar organizations? This type of information provides an instant yardstick against which to measure results.
- **Methodology** – Does the approach rely only on the subjective judgment of the consultant or does it seek other objective sources of information, both from within and without the organization? Look for a broad reach.

Tapping the Power of Intellectual Capital Assessment

In this new century it has become clear, the spoils will go to those with the ability to create and exploit intellectual capital. The creation and management of intellectual capital starts with good information. Using third party assessments is an excellent way to gather good information—they can serve as an important yardstick for measuring performance and as an effective complement to internal reporting systems. For the winning managers of tomorrow, assessments provide a critical understanding of the resources that will create value in the global economy.

For more information on the field of intellectual capital and IC Assessments, please contact Mary Adams at 781-729-9650 or visit www.icrating.com.

¹ Thomas A. Stewart, *Intellectual Capital: The New Wealth of Organizations* (New York: Doubleday/Currency, 1997), p. xiv.

² Ibid.

³ John R.M. Hand and Baruch Lev, *Intangible Assets: Values, Measures and Risks* (Oxford: Oxford University Press, 2003), p. 4.

⁴ Leonard Nakamura, Economic Advisor to the Federal Reserve Bank of Philadelphia, Chapter 1 in *Intangible Assets*, op. cit., p. 28.

⁵ Leonard Nakamura, op. cit., p.25. Nakamura uses three distinct approaches to derive this estimate. He uses different indirect ways of quantifying intangible assets. His definition of intangibles goes beyond the more limited accounting definition to include what we call intellectual capital in this paper.

⁶ History of Accounting by the Association of Chartered Accountants http://www.acaus.org/acc_his.html#8

⁷ These and other tools are profiled in the portal www.valuebasedmanagement.net

⁸ Henry Mintzberg et al., *Strategy Bites Back* (Saddle River, NJ: Pearson/Prentice Hall, 2005), pp 114-18.