PART ONE

The New Field of Play

CHAPTER 1

The Rise of Intellectual Capital and the New Economy

The Changing Economic Landscape

Tis not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.

—Charles Darwin

Since the beginning of the 1990s, there has been a tremendous increase in economic activity in the United States, Western Europe, Asia and other parts of the world. Mergers and acquisitions, the Internet, globalization, and complex new financial vehicles emerged and forever changed the economic landscape and the course of enterprise. In retrospect, we can see that this confluence of factors worked together, and on each other, to shift our entire worldview and socioeconomic paradigm, and consequentially, created a new economic climate.

Prior to that, toward the end of the 1980s, growth had become more difficult to achieve within many industries. The traditional strategies of scale and scope that had fueled consumption and ensured new levels of market penetration from the previous decades were losing their luster and ability to drive expanding revenues. To deliver earnings, many corporations had to focus on delivering bottom line improvements through efficiency and cost-reduction approaches. In the absence of revenue growth, profitability and bottom-line growth became the targets of the day for strategic thinking. Downsizing, right-sizing, cost-reduction, operational management, quality control, and operational effectiveness strategies became *du jour*.

Many markets began to show the first signs of topping out and, by that last decade of the twentieth century, consumption began declining and became unsustainable in some traditional growth markets, such as consumer products and automobiles. For early pundits, it was the beginning of the end of the "industrial paradigm" as some businesses with declining performance struggled to make their quarterly earnings release "numbers" for Wall Street. Fortunately, there was time and opportunity for growth in filling out and maximizing distribution or in developing new products, but an end was in sight. Throughout the decade, many markets slowed, consolidated, declined, and even disappeared along with the companies that served them.

It wasn't that economies of scale were no longer relevant—they just lost their competitive advantage as they were easily copied by competitors. In hindsight, it was time for new ideas and new strategies. For the corporate world and the financial markets, the objective of growth remained—what changed forever was how it would be achieved. Industry, the corporate world, and public companies found it hard to achieve the continual growth required of their enterprises by Wall Street in what was increasingly becoming saturated and exploited markets.

At this time, an important new growth strategy emerged and had the effect of consolidating markets and providing growth. With its promise of new growth, it became the darling of CEOs. The thinking was: If growth through new or expanded consumption was becoming harder to deliver, why not own a greater share of any respective market by acquiring competitive or related players? Even though the market was not growing at a dynamic rate, an enterprise could deliver vibrant growth to investors by owning more of the market.

Simultaneously, a new financial vehicle arose to drive the new strategy. The idea of "stock-driven" acquisitions emerged, allowing acquisitions to be financed with cash and with the appreciated stock value of the acquiring organization. Suddenly, it was possible for a company to grow by leveraging its appreciated market capitalization or public stock value to acquire another company.

As the consequent tide of acquisitions rose, the concept quickly evolved to allow even "noncash" acquisitions to occur through a "pooling of the assets" of the acquirer and the acquired company. This made acquisitions

even easier to conceive, and hence, the history of the modern acquisition began.

The Need to Value a New Asset Class

—Whose wealth, arithmetic cannot number.

—Philip Massinger

Since the beginning of modern business during the Industrial Revolution, the primary measures of enterprise wealth were based upon traditional, tangible assets such as cash, financial capital, property, plant, equipment, inventory, and the like—the "physical and financial assets" of an enterprise. Unexpectedly, during the early 1990s, a subtle shift in this ruling oligarchy of traditional assets became evident.

The rise in mergers and acquisitions brought new problems in reaching company valuations, setting acquisition prices, and accounting for the surrounding transactions. "Book value," broadly the combined worth of tangible assets in an organization, and "market capitalization," book value plus the value of intangible assets, were suddenly often widely variant numbers. Acquirers were putting up the value of their public stock to acquire companies, and acquired companies were asserting the value of their intangible assets to set the value of their company for acquisition. Unexpectedly, traditional approaches to valuing enterprises in mergers and acquisitions proved to be inadequate in addressing the new value and importance in acquisition candidate companies. This was attributed to "intangible assets" and previously underrecognized and unmonetized entities like "brands" and "intellectual property."

As the decade gained momentum, these "intangible assets" that were not on balance sheets but were *de facto* recognized in the newly appreciated stock values that were driving acquisitions, swiftly emerged as primary sources of value and wealth in both the values of acquiring and acquired companies. Moreover, in the need to account for price paid and assets acquired, these newly accepted "intangible assets" began to be formalized variously as "intangible assets," "intellectual assets," "knowledge assets," "knowledge-based assets," and eventually, to encompass their

overlapping definitions, *intellectual capital* in juxtaposition to the tangible, physical assets of the balance sheet.

THE EARLY TERMINOLOGY OF INTELLECTUAL CAPITAL

> When I use a word, it means just what I choose it to mean – *neither more nor less.*
>
> —LEWIS CARROLL, *ALICE IN WONDERLAND*

When defining "intellectual capital," one must articulate it with regard to a set of terms and phraseologies that are often confusingly similar, with each describing a dimension of intellectual capital as seen from a particular moment in history and from the perspective of a particular profession and its body of knowledge (see Exhibit 1.1).

"Intangible assets," "intellectual property," "intellectual assets," and "knowledge-based assets" are discipline-specific terms that are often used interchangeably and synonymously to refer to what at it most articulate has become intellectual capital.

"Intangible assets," also often known as "nonfinancial assets," are accounting and financial terminology that predates the 21st century understanding of intellectual capital. Such terms are used by accountants and financial professionals to refer to the entities or factors of financial analysis that couldn't be captured and reported in the traditional documents of financial reporting, such as balance sheets and profit and loss statements. Originally lacking the ability to be formalized within the traditional financial concepts, such "intangible" entities were often subsumed, if they were attended to at all—for accounting purposes under the term "goodwill" and placed on the balance sheet as such. Thus, until the turn of the 21st century, any monetary value attributed to brands and intellectual property was chiefly captured as goodwill.

"Intellectual property" has long been recognized in modern law as those ideas, inventions, processes, names, and creations that could be protected and asserted under the law as patents, trademarks, copyrights, and trade secrets. Since the European Renaissance, the economic and political significance of ideas and inventions has been acknowledged in some form or other, initially as business monopolies or commercial grants that were bestowed

by a monarch or nobility, and later, under the U.S. Constitution and legislation as patents, copyrights, and trademarks.

Near the end of the 20th century, it became clearer that intellectual property was a business asset as it had both economic and strategic significance. At that time, lawyers and managers referred to it in its strategic deployment as "intellectual assets." Soon after, a new discipline referred to as "intellectual asset management" emerged. During the 21st century, intellectual asset management sufficiently formalized and became the topic of numerous scholarly publications, journals, seminars, conferences, and job positions in various corporations and enterprises.

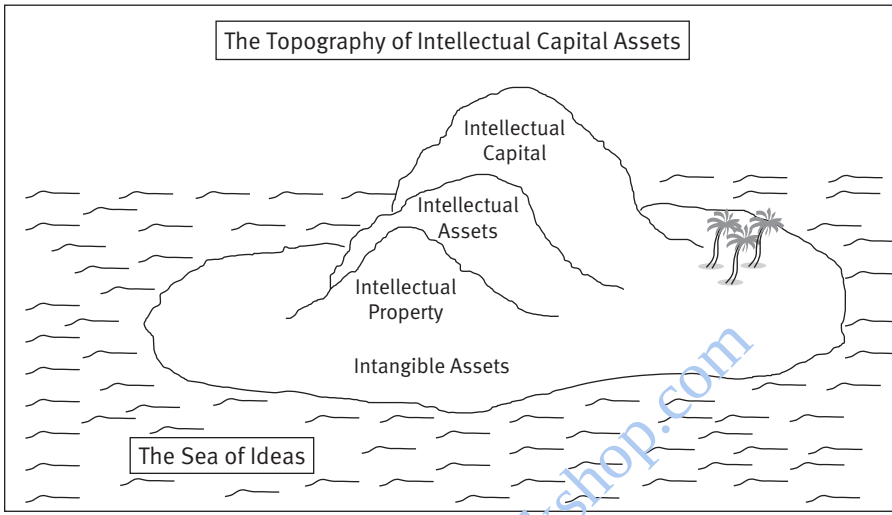
Simultaneously, economics and the emerging knowledge management and informational technology disciplines referred to intellectual assets as "knowledge-based assets." As the production process for creating intellectual assets became increasingly codified, data was collected and turned into information, and then finally to knowledge, and thus "knowledge-based assets" became the operational term for increasingly sophisticated intellectual assets.

Strategically, and at the senior and executive levels within corporations, "intellectual capital" became *de rigueur* as the synthetic terminology used to refer to all the intangible, intellectual, knowledge-based assets that were being formalized for business deployment within society and that could be protected under the law. As a result, the "intellectual material" under study and to be identified, captured, formalized, and managed became known as "intellectual capital."

Suddenly, *intellectual capital*,[1] a concept latent in the accounting language of "intangible assets" and "goodwill," became broadly recognized as merger and acquisition (M&A) candidates negotiated final valuations and set their purchase or sale prices during the M&A boom that began in the early 1990s.

Prior to this time, the traditional measures of valuation had always been "book value" and some multiple of "times revenues" to reflect the likely immediate sales projections and the ongoing business of a company. However, companies facing acquisition increasingly negotiated enhanced valuations by asserting the worth of their "intangible assets." Entities like

EXHIBIT 1.1 **THE EMERGENCE OF INTELLECTUAL CAPITAL ASSETS**



brands, patents, intellectual property portfolios, and even knowledge and management talent were to be factored into purchase prices, especially if you were selling. In some sense the recognition and assertion of value for "intangibles" was an ordained response to the idea of purchasing another company with appreciated stock. The values tendered were circular, because both the appreciated stock to be used to finance an acquisition, and the appreciated value of the company to be acquired, were driven by the same capital market forces that were monetizing all intellectual capital assets.

Accordingly, as these assets soared in value, it became increasingly necessary to value this emergent class of intellectual capital assets in a formal and traditional accounting sense. Early methods to quantify these assets focused on financial approaches that set asset values through net present value calculations on future revenues, or approaches that, following the model of valuing tangible assets like real estate, tried to appraise the value of a respective asset. "The brand" was the first such widely valued intangible asset. The brand was generally seen as the symbol of the combined goodwill or intangible value of an enterprise, and the most immediate proxy for the amalgamated intangible value of an enterprise. Later, and in some

accountings of relatively brandless organizations, intellectual property assets often replaced the brand as the index of intangible asset value and of all knowledge-based assets *per se*.

By the mid-1990s, as brand valuations advanced under the early valuation models, it became clear that these assets possessed surprising levels of value, often values significantly greater than the physical and financial assets of the enterprise under study. What's more, in the aggregate, across the economy, they constituted an astounding proportion of the value of the greater economy.

The Shifting Asset Base and the Rise of the New Economy

Wealth is the product of man's capacity to think.

—Ayn Rand

As the 1990s progressed, it became clear that intangible, intellectual capital assets were more important than originally thought, and in fact, were driving a stealth-like sea change in the U.S. economy that was not immediately perceptible.

From 1978 to 2004, the asset base of the Standard and Poors (S&P) 500 Index, regarded as a broad measure of the U.S. economy, shifted radically from 95% tangible assets to 85% intangible assets. The tangible and intangible asset bases flip-flopped from an economy based almost entirely upon tangible assets to an economy based progressively upon intangible assets. As this base shifted, intangible assets became worth, conservatively, two to three times the value of the traditional, tangible physical and financial assets.

This momentous shift in the asset base of the economy drove the emergence of a *new economy* that is based on intangible, knowledge-based, nonfinancial intellectual capital assets. This shift has a number of profound implications for business that will be discussed in this chapter and throughout this book. Foremost among them are:

1) The recognition that these new assets differ in kind, nature, and dynamics from the traditional assets.

2) That because these intellectual capital assets differ in kind, they are deployed under different economic principles.
3) That because these assets behave differently and find their optimization under different economic principles, they require new strategic thinking for their full deployment.

The simplest way to unpack these implications is by turning to the shift in economic principles and by looking at the primary differences between the two classes of assets. We can identify these contrasting differences with the following table that broadly displays the shifting economic principles by asset class and type:

Shifting Economic Principles	
Tangible Assets	**Intangible Assets**
1) Scarcity drives value	Adoption drives value
2) Wasting assets	Nondepleting assets
3) Nonvolatile	Highly volatile
4) Empirical knowability/control	Unknowability/incomplete control
5) Arithmetic growth	Exponential growth

With these characterizations, we can begin to understand why the management of intellectual capital assets is of such great concern in modern business and enterprise, and why strategy, as the rudder for all enterprises, must be *revised*.

Assets and Wealth Creation

The primary distinction between tangible and intangible assets lies in their differing ways of creating value.

The value of tangible assets has largely been set in accordance with the assets' abundance or scarcity and their consumption or depletion. Under the traditional economy, the bases for wealth creation are a company's hard or physical assets such as raw materials, equipment, energy, and labor. These physical assets are finite in size and application. For example, diamonds and precious stones are considered to be of great value mainly because of their scarcity relative to other commodities such as wheat or

bananas. With tangible assets, scarcity drives value relative to consumption; that is, the more there is of a respective tangible asset that is desired, the less its value. Consequently, in traditional commodity markets, an overabundance of food crops generally results in a reduced value per any respective market quantity. For instance, if diamonds should ever be as abundant as dirt, we would have to assume that their value would drop to that of dirt.

However, the value of intangible assets is driven by their adoption and use, and because they are nondepleting, they can be used again and again without being consumed. Thus, where intangibles, such as know-how and information, are used to create wealth, these assets can be shared without being depleted and in fact increase in value the more they are used. Software, or a body of knowledge, can be deployed over and over and have their useful life subject only to being superseded by a superior knowledge-based asset or innovation.

Accordingly, the Microsoft Windows Operating System has become more valuable than any other computer operating system because of its broad, universal adoption. It would be worthless if only a few people used it, but almost everyone uses it. The more it is used, the more valuable it becomes. In this sense, intangible assets enhance their value by a mechanism that is opposite to that of tangible assets. Their value is increased through adoption, not scarcity, and the more abundant or in-use they are, the greater their value.

All enterprises create and hold such intangible assets, ranging from their trade name and valuable brands, to their patents, the secret know-how of their core competencies, or their strategic plans.

Leveraging Assets

Secondarily, each *class* of assets is leveraged in its own respective way.

With tangible assets, the primary economic leverage is in driving *consumption;* and it is in their being used-up that their economic value is realized. Whether it is coal or cars, tangible assets are "depleting" or "wasting away" and they are consumed in their economic deployment. You can only burn coal once.

Alternatively, intangible assets are neither consumed nor used-up through their use. They can be used over and over again, and are thus "nondepleting"

assets. While coal and cars decline in value from the moment of their creation, computer operating systems become more valuable with their abundant availability and ongoing use. In this case, use does not consume, but increases asset net worth.

Under the new economy of intangible assets, increasing the returns on investment is accomplished by sharing, partnering, collaborating, and forming alliances that has replaced the unequivocal silo-based competition of the traditional economy. Making proprietary software code available for the creation of expanded software libraries by third parties would have been inconceivable under the traditional business model, while just such an approach has driven the success of Microsoft and the PC platform to the detriment of others like Apple Computer.

Analogously, pricing within the traditional economy was driven by the availability of raw materials and the scarcity of products within a market—the rarer the product or its materials, the higher its price.

With intangible, intellectual assets, adoption drives value, and prices can fall while profitability increases with market penetration. In some cases, such as Internet access or cell phones, providers have offered their product or service at low or zero cost to the customer to gain adoption, achieve critical mass, and to sell related services or supplies. Further, the rise of brands taught manufactures that market differentiation drove demand and that even commodities, like water, could be sold at a premium if they were tied to the right intangible assets (e.g., a powerful brand like PepsiCo's Aquafina bottled water).

Manageability

Importantly, tangible and intangible assets differ in their volatility.

Tangible assets are relatively "fixed" and certain. We know how many items we have in inventory. We can count them. We can see them. And with the partial exception of perishable tangibles, such as bread or fresh fruit, we wouldn't say that tangibles like books or cars are volatile. But intangible assets are extremely volatile. The value of the brand of a major company can plummet millions of dollars in a day based upon a negative news report that damages the company's reputation. And while news of a war can have a big effect upon global oil prices, it is because supply is affected and not because the underlying asset value has changed.

While tangible assets lack volatility, intangible assets can be extremely volatile and their differing volatilities directly link to their ability to drive varied magnitudes of value. Tangible assets are characterized as being capable of incremental or arithmetic growth, while intangible assets are characterized as being capable of exponential growth or decline. Hence, this volatility can be a mixed blessing.

A corollary to this point is the observation by economists and financial analysts that intangible assets offer the greatest opportunity to drive the creation of wealth in the modern world. Broadly, this is considered to be true because most tangible assets have been and are being fully optimized or highly exploited, while the exploitation of intangible assets has yet to fully begin. Strategies of operational effectiveness, scale and scope, have been in practice in the industrialized nations for decades unto centuries. Hence, in many cases, only finite levels of further optimization can be eked out of tangible assets. However, intangible assets are a recent discovery, and with their increasing formalization, the strategies that optimize their potential in many cases have yet to be discovered and are far from being fully exploited. A well articulated brand or a brilliant invention can be, exponentially, worth billions of dollars with successful commercialization, but each barrel of oil, even when it is highly inflated, still operates within an arithmetic and relatively narrow range of value fluctuation.

Further, this volatility or nonvolatility affects the ability to manage the respective intangible and tangible assets. Volatility impedes the ability to gain complete or full control of a respective intangible asset. Intangibles tend to shift under us when they are managed, and they always remain partially indefinable in our knowledge or deployment of them—they lack set limits.

However, we shouldn't imagine that there is a total schism between the two economies and their respective asset classes. Most companies will continue to have a lot invested in both kinds of assets, and will thus require the skills necessary to manage both kinds of assets for the foreseeable future.

Nevertheless, as the ratio of assets shifts toward intangible assets, new strategies and understandings are needed to build value and leverage the most valuable enterprise assets to provide sustainable competitive advantages and deliver new levels of enterprise value.

In many cases, this need for new, intangible asset-based strategies will be problematic because many managers and executives within today's organizations were taught during their careers to deliver growth and create value through the exclusive use of factories, working capital, products, and the specific traditional assets quantified on the balance sheet. Under the paradigms of industrialization and manufacturing that ruled in corporations throughout most of the twentieth century, strategic thinking was concerned with orchestrating functional disciplines,[2] developing process-based competencies, achieving economies of scale and scope, managing costs, perfecting vertical integration, and instituting ongoing incremental optimizations. Until the 1990s, such strategies of "operational effectiveness" ruled the corporate world and dictated the careers of managers and executives.

The strategic deployment of intangible assets is fairly new in the history of strategic thought, and, at this stage, often difficult to actually apply. Many of the individuals who built their careers within the traditional approaches to tangible assets lack the experience, understanding, and vision necessary to effectively shift into the era of intellectual capital assets. While they may be experienced at trimming one-tenth of one percent off the cost of goods sold in a manufacturing plant, they are often unclear on how to build brand equity, how to bundle and unbundle copyrighted media content, or how to enhance the strategic positioning of the enterprise in its markets and to drive market capitalization by utilizing patents in creative ways.

While the operational effectiveness strategies of the manufacturing era are still important and relevant to their respective tangible assets, individuals schooled within the manufacturing era often find it hard to develop strategic thinking that leads to the exploitation or leveraging of intangible assets. As a result, many managerial competencies are paradigm-specific, and the tangible asset paradigm does not easily embrace the intangible asset vision without a leap in thought, a shift in the perceptual gestalt, and the development of appropriate new managerial and leadership competencies.

Today's best strategic thinkers are those who are strategically "bilingual"—able to think in terms of strategies that ensure the optimal, effective leveraging of the traditional tangible assets, and simultaneously the highly differentiated strategic deployment of the new intangible intellectual capital assets.

HOW TO START MANAGING INTANGIBLE ASSETS

Whether you believe that leaders are born or made, any enterprise and anyone in an enterprise can begin to better align their thinking and activities with the concepts expressed in this chapter. Here's how to begin:

1. Assess whether executive leadership is thinking strategically about intangible assets or if they are operating only under the traditional asset paradigm.
2. Take stock of where you are. Look at the current organizational structure and see if the brand or IP, and their respective functions, are integrated into strategic planning.
3. Encourage everyone to read and become more educated in the new ways of thinking that equally understand both tangible and intangible assets, and leverage each to achieve corporate goals.
4. Keep alert for opportunities to make intangible, intellectual capital assets a part of strategic thinking in your organization.

Concurrent with the above-mentioned manufacturing paradigm, there is also a theory of corporate organization that often locates responsibility for what are now beginning to be recognized as intellectual assets within separate functional discipline silos.

Within corporations or large organizations, assets are assigned to levels of leadership and responsibility according to their value and strategic significance, with the strategic direction of the most valuable enterprise assets being trusted to the executive levels of management that form overall corporate strategy. Therefore, as intellectual capital emerges, functional disciplines, such as the marketing and legal departments that have traditionally held responsibility for the brand and intellectual property, find their roles changing to reflect the new, greatly increased value and strategic significance of their assets.

However, functional disciplines often lack the strategic orientation that is appropriate to the management of valuable intangible assets. Such functional disciplines, often originally defined during the manufacturing era, are regularly unable to rise to the level of responsibility required for the

executive management of intangible assets. Therefore, under the emerging intellectual capital paradigm, these assets that are actually or potentially the most valuable assets of the organization, are becoming the responsibility of executive management, the material of strategic planning, and the new *means of production* that even replaces traditional manufacturing.

For example, in the past, an asset that is today as valuable as a brand, was once the sole responsibility of the marketing department and was treated as a mere tool of the marketing "discipline" and an instrument of a specific marketing strategy. Today, with brands in very large companies valued at billions of dollars,[3] "the brand" has become the responsibility of the CEO, the newly titled C-suite "Chief Marketing Officer," and often the entire executive leadership team.

Another example is that of patents. In most technology-based companies, the intellectual property portfolio consists of technologies, trade secrets, know-how, and patents. In the past, these holdings were viewed as matters of law and title, and thus safely administered within the legal department which played a "strategic" role in the business only when there were significant matters of infringement, wrongdoing, or contractual arrangements, such as licenses or joint venture agreements.

Today, traditional intellectual property management departments often experience an identity crisis as the objects of their administrative activities become the substance of the new intellectual capital strategic thinking. As the focus at the levels of strategy formation shifts from tangible to intangible assets, General Counsels, Vice Presidents of Intellectual Property, and Chief Intellectual Property Officers are often called to play new strategic roles within their organizations that go beyond their normal functional role competencies of filing, prosecuting, maintaining, protecting, litigating, and reporting on intellectual property.

As a brand or intellectual property portfolio (as portrayed in Exhibit 1.2) is deployed anew as intellectual capital, and under the leadership of top corporate executives and for strategic purposes, we see the materialization of a new discipline of *intellectual asset management* (IAM) emerge cross-functionally among the executives and practitioners atop all of traditional functional areas and professions. This new body of thinking assumes the burden to straddle both the worlds of the root functional disciplines (e.g., marketing, IT, R&D, and law) and the strategic world of executive responsibility.

Because corporate strategy is not formed at the level of functional area management, this is where the matter of vision and leadership comes into the

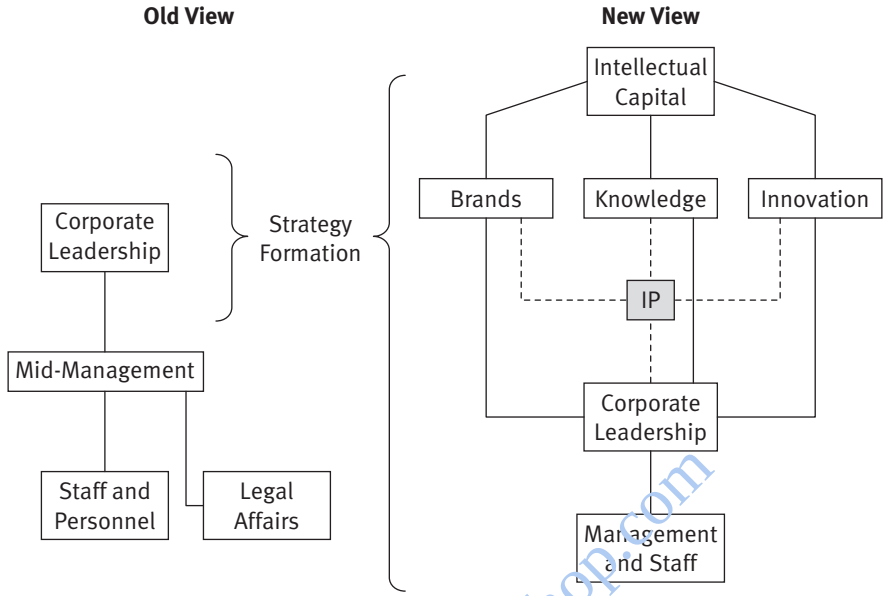


EXHIBIT 1.2 **THE NEW STRATEGY PICTURE**

successful strategic positioning of intangible assets within an organization. Intangible assets are rarely handled in a strategic manner by mid-management or personnel within a company. Intangible assets are strategically positioned only in the persons of the CEO, the Chief Marketing Officer, the Chief Intellectual Property Officer, and the like, and only when they realize the strategic connections between the respective assets and the planned results for the company. It is only in the hands of individuals at this level that intangible asset matters are on the table as strategic assets, and the expertise is present to form the appropriate enterprise strategy. Thus, the adoption of intangible asset strategies at the top of an organization is less a function of the theory or practice of functional disciplines *per se,* and is more the direct result of the ability of those persons who have a seat at the strategy table to think strategically within the new paradigm of intellectual capital and to deliver on key corporate objectives.

We may marvel at the purported degree of market capitalization that is now driven by intangibles in the public markets. We may agree that these intellectual capital assets are of the greatest significance and strategic importance to an enterprise. But in the end, it is those persons that have

the vision and the responsibility to embrace the new paradigm (e.g., to build a lifestyle brand, to leverage a patent to create a new revenue stream, to gain adoption for a new technology, or to create a merger around copyrighted content and to form the strategies), that will turn intangible assets into competitive advantage and profitability.

Thus, the strategic positioning of intangible assets depends upon both the knowledge of how to leverage intangible assets, and, of equal importance, upon intangible asset leadership at the executive level.

We may hear of the savvy CEO who makes intangible assets a plank in their strategic platform, or of executives who know what the intellectual asset manager knows and bring it to the strategy table, but on the whole, the thousands of organizations in the world will begin to create and leverage their intangible assets only when those with the vision of the new paradigm have assumed the responsibility to lead at the top and form those strategies that successfully leverage intangible assets, turning them into intellectual capital.

BECOMING AN INTANGIBLE ASSET LEADER

The intangible asset leader does the following:

1. Studies the history of strategy, understands, and can articulate the differences between industrial/manufacturing era strategies and intangible intellectual capital asset strategies.
2. Thinks strategically about the central problems of the enterprise.
3. Advances and defends strategically sound strategies that use intellectual assets when they offer a superior solution.
4. Gets involved in strategic planning and joins the strategic conversations within the company.
5. Grows out of functional discipline management into executive leadership.

Today, driving enterprise value, market capitalization, or stock price means both fully optimizing tangible assets and "strategically" leveraging

intangible assets. Hence, assuming that the tangible assets in most successful organization are already highly optimized and being effectively managed, the greatest strategic and financial impact can be accomplished by leveraging the intellectual capital assets of the organization.

The Significance of Intellectual Capital

> *The industrial laws of gravity are being supplanted by rules dictated by knowledge . . . old value chains will break or become obsolete.*
>
> —Leif Edvinsson

As suggested earlier in this chapter, "the brand" was just the first among an ever broadening range of intellectual capital assets that have emerged since 1991 to drive the development of business and to provide economic growth. Early, in the recent history of managing intellectual capital assets, the problem was to identify, capture, and make such assets operational in business activities. By the turn of the 21st century, it had become clear that all intangible, intellectual, knowledge-based assets were intellectual capital assets, and the challenge was to deploy such assets effectively against strategic ends.

Ultimately, the driving factors in the discovery of intellectual capital assets were twofold: the need to drive consumption in saturated markets and the need to derive new sources of competitive advantage in increasingly homogenized markets. But, as the new assets were discovered and put to work, a new horizon of potential wealth beyond that developed with physical assets appeared. It became clear that the new class of intellectual assets was but the beginning of a shifting paradigm and a previously unimagined new world. While physical asset wealth and markets were becoming saturated, the promise of new wealth made possible by intellectual assets suggested new possibilities beyond consumption *per se* and the traditional scale and scope models of competition. To many, it seemed that the rules of the economy and the principles of how an economy works were being turned on their heads. Under industrialization, physical assets and the ownership of the means of production determined who had or did not have wealth, but with intellectual capital assets, the main social

and economic distinctions for enterprises and individuals were becoming the distinction between those who possessed know-how and those who did not.

Of course, in the end, the real significance of intellectual capital is that it is the discovery of *a whole new class of assets* that can create value and immense wealth. The emergence, recognition, and ability to manage intellectual capital have repositioned the strategic significance of all the intangible assets included within this new concept of intellectual capital. Intellectual capital has reframed the value and opportunity for brands, knowledge, and intellectual property to drive innovation, provide competitive advantage, and to create equity while delivering shareholder value. In this sense, the rise of intellectual capital has also shifted the focus of strategy in all business and enterprises going forward.

Notes

1. An intangible asset that cannot be physically touched that provides a competitive advantage or confers enterprise value, such as a strong brand, enterprise reputation, intellectual property, or employee know-how.
2. "Functional disciplines" is a human resource term that is used in corporate management to refer to the various functional specializations, such as "marketing," "finance," and "operations," that are necessary for the operation of a business or company.
3. Coca-Cola, the most valuable brand in the world, was recently valued for *Business Week* magazine at $65.324 billion in 2007.