

INTEGRATED VALUE CREATION - PART 1

ACCOUNTING, ESG AND THE INTANGIBLE INFORMATION GAP

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This paper is the Part 1 of an examination of integrated value creation. This first part is somewhat detailed and theoretical. Part 2 is oriented to practice and includes many examples and case studies. If you're not interested in the details, feel free to skip right to [Part 2!](#)

THE DRIVE FOR INTEGRATION

Today 100% of U.S. public companies provide accounting information publically. It's a requirement and an accepted practice. At the same time, over [80% of those companies](#) are also disclosing some kind of sustainability data. This latter kind of disclosure is not yet a requirement in the U.S. and standards are still in development. But as the data show, the practice is already well underway.

These two kinds of presentations have traditionally been made in different reports offered on different sections of their websites with differing messages. Now, however, the financial markets are awakening to the importance of Environmental, Social and Governance (ESG) issues as a source of risk and a driver of innovation and value. They are looking to connect the dots between these different messages. This creates a dilemma for companies. They have a business rationale for both their financial and their sustainability reporting. But they are not accustomed to telling a unified value creation story.

The International Integrated Reporting Council (IIRC) is leading the charge in creating a model that unites these differing perspectives. Its Framework provides a way forward to creating holistic presentations that explain the multiple forms of capital that support a company's value creation ecosystem. The IIRC model draws on the traditional accounting/financial reporting perspective, the sustainability/ESG movement and a third, less understood field of study, broadly referred to as intellectual or intangible capital (IC).

The IC field has been focusing for several decades on the rise of the knowledge economy. While IC practice is not as advanced as accounting and sustainability

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reporting, there is already significant research that suggests the size and importance of this class of capital to the success of companies in today's economy.

As a student of this perspective, I feel strongly that IC can add to the theory and practice of the integrated movement. To that end, this paper endeavors to connect the dots between IC and integrated concepts and research.

Seven capitals

One of the core ideas of integration is the multi-capital model. It views the foundational capital of a company as much more than the traditional assets that are on its balance sheet. These capitals include the traditional and non-traditional assets that make up the infrastructure or ecosystem that a company uses to create value for shareholders and stakeholders over time. These include:

- **Financial** – Financial assets such as cash, equity, loans.
- **Manufactured** – Physical assets such as plant and equipment.
- **Structural** – Digital and analog knowledge such as data, processes, designs, intellectual property, systems
- **Human** – Contributions from competencies and experience of employees, managers, board members.
- **Relationship** – Connections with people outside the organization such as customers, suppliers, media, regulators, community
- **Natural** – Environmental footprint such as natural resources, land and waste generation
- **Strategic** – Value proposition, business model, governance and culture

Each of the capitals is an integral part of the corporate value creation ecosystem. Some of these capitals are directly owned. Others could be seen as being earned or attracted by a company through its license to operate. Employees choose to engage and contribute. Customers choose to buy. Government and society allow the use of natural resources.

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If you are familiar with the IIRC Framework, you will note two differences in this list. The first is the use of “structural capital” instead of “intellectual capital.” In my experience, the [use of the Intellectual label](#) leads people to think of “intellectual property” which is confusing and limits peoples’ understanding. Intellectual property is a well-defined legal form of knowledge. But it is a tiny portion of the structural knowledge of any enterprise today.

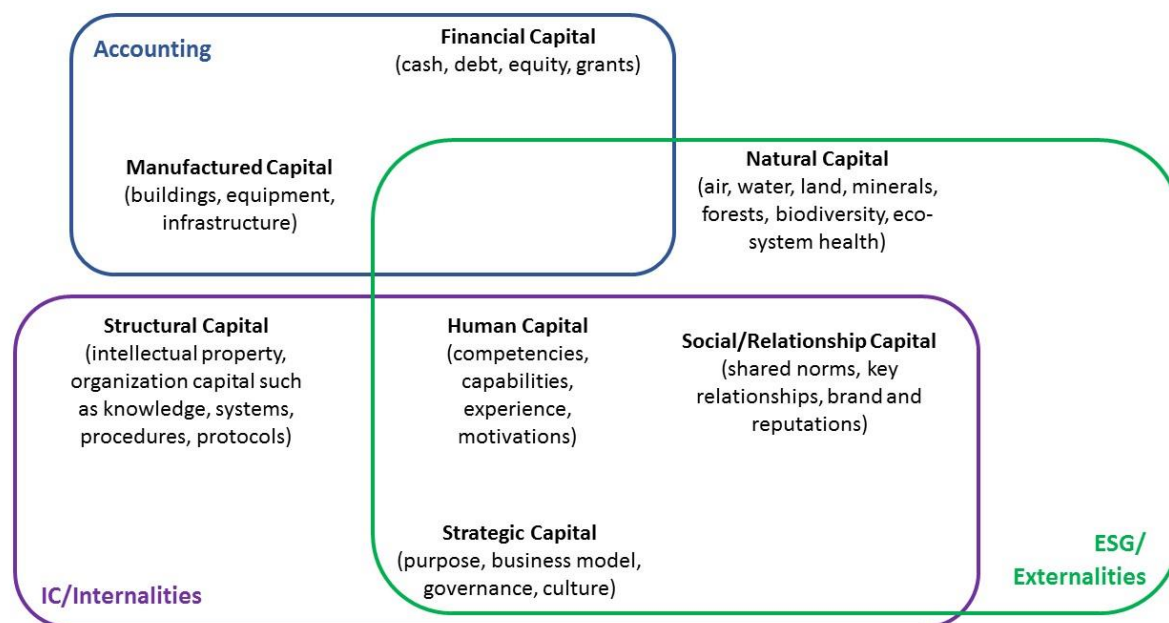
The second difference is “strategic capital” which is not included implicitly in the IIRC model although one can argue that it is part of the Framework’s definition of “business model.” However in my experience, it’s helpful to include this category because it explains the purpose of the rest of the capitals and the gravitational pull that keeps all the pieces together. This concept is outlined more clearly in Part 2 of this series.

One system

The integrated model assumes that the capitals are the major categories of resources that companies use to create value for shareholders and stakeholders.

The underlying assumption is that a multi-capital model will encourage more holistic reporting and thinking in businesses. That is, companies will try to make decisions that balance short-term gains today with the preservation/improvement of the underlying capitals that they will rely on for future profits and prosperity. It’s a powerful guide to long-term thinking.

One of the major challenges of the integrated model is that it is drawing on three distinct fields of study, each with their own purpose, language and frameworks.



Three perspectives

The multi-capital model unites three distinct fields of study and practice:

Accounting

Financial accounting is one of the basic sets of standards that underlies business and markets. Although the roots of accounting go back to merchants in 15th century Venice, modern accounting was born as industrialists grappled with the challenges of tracking the operation of and enormous investments in infrastructure such as railroads, factories and machinery of all kinds. These norms developed over time for internal use by companies and their investors. After the Great Depression in the U.S., public companies were required to begin reporting their financial information to the public markets.

Today, this system is a bedrock foundation of our financial system. But it is increasingly understood that financial accounting is failing to capture two important influences on corporate and societal success. The integrated model is endeavoring to include these two key influences, which I'm framing here as externalities and internalities.

ESG/Externalities

Accounting is an internally-focused tool. As such, it does not capture externalities, the external effects (costs and benefits) of corporate actions that have traditionally been considered outside the responsibility of the corporation. Examples are pollution of the environment, unsustainable use of natural resources, unfair labor practices or economic problems in local communities.

Traditional business thinking was that these effects were not the responsibility of corporations. However, there is an emerging consensus that corporations must indeed take on this kind of responsibility and the efforts to increase attention to external sustainability have made good progress. There are multiple standards for measuring and reporting on externalities such as the [GRI](#), [SASB](#) as well as countless third party analyses and metrics.

Accounting

Externalities



Collectively, these movements are called “sustainability” or often ESG (Environmental, Social and Governance). This progress aside, the battle has not yet been won. There is still much more to do. However, even when we do get to the point of having consistent ESG standards, the integrated picture will still be incomplete. That’s because of a less understood challenge in accounting and finance today: the failure to account for intangibles and internalities.

IC/Internalities

The concept of internalities is used less frequently in business but it’s very appropriate for where we are today. In a business context, internalities are a lot like externalities, that is, key effects (costs and benefits) of corporate actions which are not tracked in financial reporting.¹

The growth in importance of internalities has been spurred by the shift away from the Industrial Era. This era was sparked by the development of machines that automated the effort of humans and animals in daily life. Industrialization had widespread effects on how work was done and how it was measured. Today’s era is about a new kind of automation. This time, we’re automating our minds. Information technology has prompted enormous growth in infrastructure that is not visible in financials. This infrastructure is built by people working with computers building assets like data, processes, software, brands and patents. These assets are important to creating internalities such as quality, performance, efficiencies, creativity, collaboration, trust, purpose and culture.

Together, these internalities influence the organization’s scalability, internal sustainability and ability to innovate. Failure to consider these internalities can lead to decisions, for example, to lay off people to lower costs even though it may mean that future innovative capacity is crippled by the loss of core experience and knowledge. Or a failure to invest in systems and processes that would solve customer service problems or even compliance issues. Or encouraging behaviors and cultures that ultimately damage a company’s brand and reputation.

The study of internalities has been advanced by the IC field which studies the internal value creation of knowledge assets seen through the lens of three capitals:



human, relationship and structural. These kinds of capital were the topic of the book I co-authored in 2010, [Intangible Capital](#), is the focus of the Journal of Intellectual Capital and is the topic of several annual global conferences.

This field of study is less well-known at this point. But, as I hope to demonstrate in this paper, the study of intangibles is helpful to understanding the drivers of the need for integrated reporting.

THE DATA ON INTANGIBLES

The growing body of data emerging from the IC field shows that the level of investment in intangibles has been growing and this investment has made corporate value increasingly intangible. But there are still significant information gaps. Here's what we know.

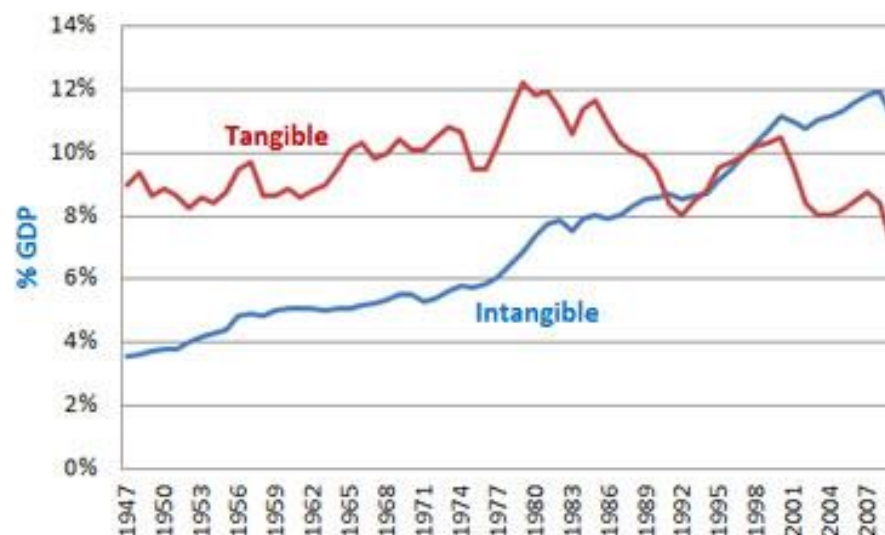
Investment rising

This graph from The Conference Board² shows the growth over time in investments in intangibles including:

- Computerized information: Software, and Databases
- Innovative property: R&D, broadly defined; Copyrights and licenses; and Designs
- Economic competencies: Marketing and branding and Strategic firm practices

These categories correspond roughly to intellectual, human and relationship categories in the multi-capital model. The graph shows that since World War II, U.S. investment in these three kinds of capital as a percentage of non-farm business output has risen steadily. Then roughly 30 years ago, intangible investment began exceeding tangible investment.

This analysis uses national economic data. The methodology is called "CHS" after its original authors, Carol Corrado, Chuck Hulten and Daniel Sichel. This



graph deals with just the U.S. but the methodology has been adapted by most major countries and there is comparable data for many other countries.

What happened with this investment? That's the next part of the story....

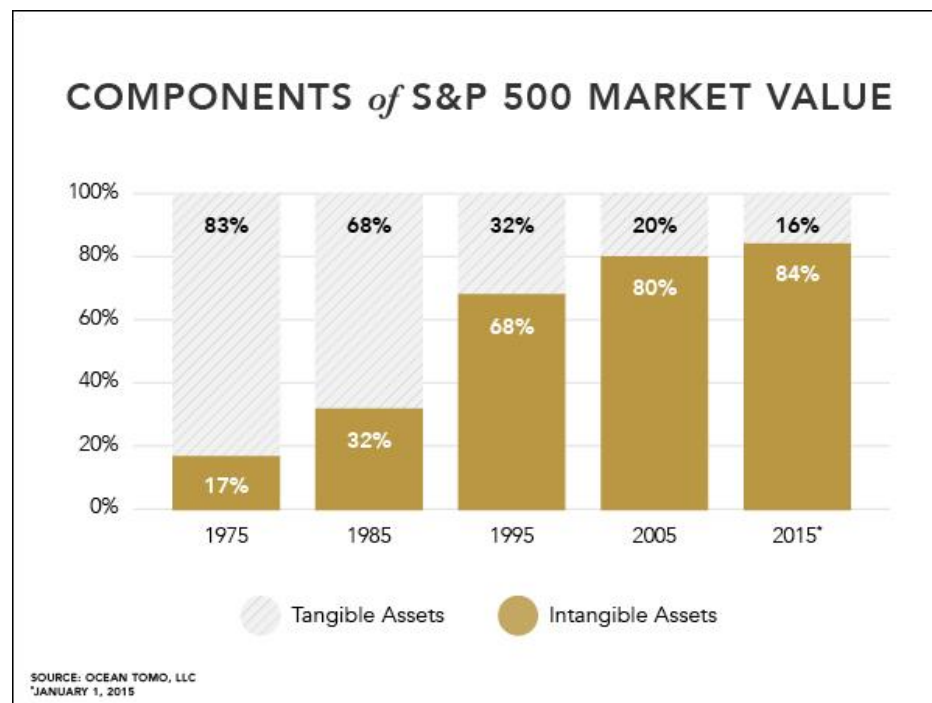
The intangibles accounting problem

It's clear from The Conference Board data that intangible investments rose steadily over time. But as explained earlier, these investments remain largely invisible in financial statements. So all the money seen in The Conference Board numbers has washed through income statements with no trail or history maintained about the accumulated investment. That's how we end up with this graph from [Ocean Tomo](#) which uses data from companies in the S&P 500. It compares their total corporate value with their tangible book value. The gap illustrates the intangible portion of corporate value. As you'll discover below, companies often carry some intangibles on their balance sheet. But the majority of intangibles are not recorded.

Does this graph mean that the market is "valuing" the intangibles in a company? Not directly. What's happening is the companies' ability to create value, grow revenues and generate profits is increasingly derived from capitals that aren't on the balance sheet.

It's easy to see the shift in value creation here. Until the early 1980's, the tangible assets of a company explained over 80% of corporate value. Today, it's the reverse. Key changes during this time include the introduction to corporations of personal computers by IBM in 1981, the growth of the internet in the 1990's, and now mass connectivity and big data. These technological changes mean that the intangibles trend is unlikely to reverse.

While this is a good introductory dataset for seeing the trend, it doesn't explain what these "intangibles" actually are. Luckily, we have a few other sources that begin to fill in the blanks.



The exception to the rule

There's one exception to the general practice of not recognizing intangibles on a balance sheet. It's when one company buys another company and needs to record the purchase on its financial statements—the full value, not just the tangible portion.

This graph shows data from [Houlihan Lokey](#) of purchase price accounting for 563 acquisitions by U.S. public companies in 2015. It shows 41% intangibles and 40% goodwill.

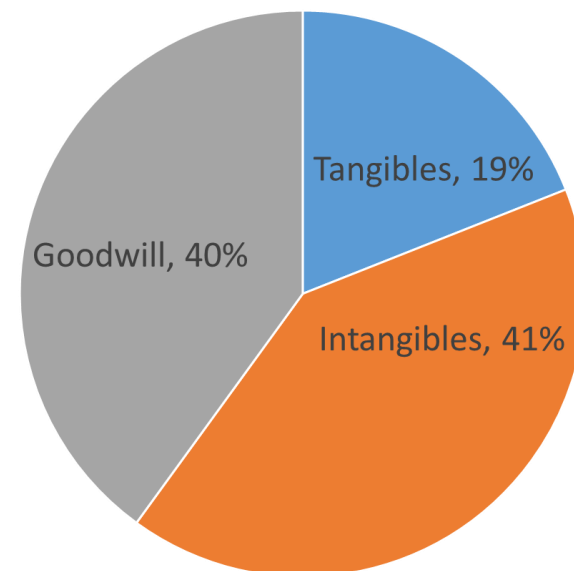
There are two important things to understand about this data. First of all, most of these new intangibles were not on the acquired company's balance sheet. The only reason they appear on the acquirer's balance sheet is the accountant's efforts to apply the purchase price to underlying value elements of the company. It's as if the value has magically appeared.

The second issue is goodwill. Even when accountants do have reason to account for intangibles, their existing tools still only help identify about half of the intangible value. The rest is booked to goodwill. That creates an information gap that leaves intangible value in the ephemeral category.

In case you're interested, here are the principal identified intangibles in the study:

- Developed technology (including patents)
- In-process research and development (IPR&D)
- Customer-related assets (including backlog, customer contracts, and customer relationships)
- Trademarks and trade names (including domain names)
- Other (including non-compete agreements, licenses, contracts, and core deposits, among others).

This list gives you a good feel for the most common U.S. accounting classifications. In case you want to dig deeper, here's a good explanation of the differences between [U.S. and international standards](#).



How large is the intangibles information gap?

Brand Finance conducts an annual study in cooperation with the Chartered Institute of Management Accountants (CIMA) called the Global Intangible Financial Tracker (GIFT). It uses a similar approach to Ocean Tomo, comparing intangibles with total corporate value. However, this report also breaks out disclosed intangible assets, goodwill and undisclosed value. The [2016 GIFT Study](#) covers:

More than 57,000 companies in 60+ jurisdictions. For the purpose of the study around 14,000 entities were excluded from the sample due to lack of disclosed information or consolidated reporting as part of a larger group. The total Enterprise value of corporates under the scope of the study was \$89 trillion of which \$46.8 trillion represented Net Tangible Assets (NTA), \$11.8 trillion Disclosed Intangible Assets including Goodwill and \$30.1 trillion 'Undisclosed Value'

These figures put the global average intangible levels (disclosed and undisclosed) at around 47% of total enterprise value, much lower than the U.S. but still an extraordinary demonstration of the shift to a post-industrial economy across the world. The sheer size of the combined \$41.9 trillion for all intangibles is striking. To put this figure in context, World Bank figures show [GDP](#) of the U.S at \$18 trillion and for the EU at \$17 trillion. The value of all U.S. [public companies](#) is roughly \$25 trillion.

All this is to say that intangibles are large and growing. And there's a large intangible information gap. This gap means that there is a fundamental weakness in the information available about just about every company today. This affects how well companies make decisions internally and how well stakeholders, ranging from customers, to investors and employees, understand the company's performance and outlook. How to fill this gap? I believe that the integrated model provides some clear answers.

According to Brand Finance global corporate intangibles total \$41.9 trillion, larger than the combined GDP of the U.S. and E.U.



AN INTEGRATED APPROACH TO THE INTANGIBLE INFORMATION GAP

The data cited above focuses on what I would call accounting intangibles, that is, the money spent on building and/or operating three of the capitals (structural, human and relationship). This line of analysis would leave one to expect that better accounting for the “intangible” capitals would fill the intangible information gap seen in the various data above.

But the more I work with the integrated model, the more I believe that this is too limited a view. It’s not enough to talk about tangible and intangible capitals. All of the capitals can be measured through accounting and they are also the source of internalities and externalities, we need to expand our view of intangibles and the capitals.

The table on the next page highlights the varied characteristics of each of the capitals using four categories:

- Accounting tangibles – Capital flows and stocks that are directly measured using internal accounting data and are capitalized as fixed assets.
- Accounting intangibles – Capital flows and stocks that can be directly measured using internal accounting data but are not (or only rarely) capitalized as fixed assets even though they have long-term value.
- Internality intangibles – Capital flows and stocks that are not measured using internal accounting data but affect internal aspects of the value creation ecosystem.
- Externality intangibles – Capital flows and stocks that are not measured using internal accounting data but affect the company’s external value creation ecosystem.

All of the capitals can be measured by accounting and also as internalities and externalities. A truly integrated view takes into account all three perspectives.



CAPITALS	ACCOUNTING	INTERNALITIES	EXTERNALITIES
Financial	All financial assets of a company.	Discipline, transparency, confidence	Transparency, clarity, concrete
Manufactured	Investments and operating costs for buildings and equipment	Quality and design of production systems. Design and usability of physical plant (pleasant and efficient place to work?)	Footprint in relevant communities
Structural	Investments in creation of digital assets (data, software, systems, processes, networks), designs and brands. Operating costs to support these systems.	Process performance, efficiencies, effectiveness, scalability. Design quality. Potential for intellectual property creation/protection.	Efficiencies, effectiveness and innovation in societal and environmental issues
Human	Investments in training. Operating costs for recruitment, salaries and benefits.	Competencies, engagement, creativity, collaboration	Diversity, wage equity, employment
Relationship	Revenues Investments to build long-term relationships. Includes supplier audits, brand building, integrated data systems. Operating costs to maintain/ support this infrastructure.	Strength of relationships. Levels of trust, sharing and collaboration.	Ability to improve the operations of customers, to support goals of stakeholders, to improve quality of life in communities
Natural	Investments in land, natural resource rights, environmentally- sustainable infrastructure. Operating costs for use of natural resources and waste management	Operational improvements and efficiencies.	Usage of natural resources. By-products and waste from operations. Overall effect on the environment.
Strategic	Income Statement, Balance Sheet, Valuation	Purpose, Value Proposition, Culture, Governance and Innovation	License to Operate, Reputation, Prosperity

LEGEND

Accounting Tangibles

Accounting Intangibles

Internality Intangibles

Externality Intangibles



In the table, the tangible capitals, in blue, are a small part of the overall picture. Tangible assets include financial assets, traditional tangible assets like buildings and equipment, as well as owned natural resources like land or oil rights. But even these tangible assets have related internalities and externalities. The rest of the squares in the table are intangible. They are all highlighted in shades of green because they are all assets with long lives. Financial intangibles are highlighted in light green, internalities are a darker green and externalities are highlighted in the darkest green.

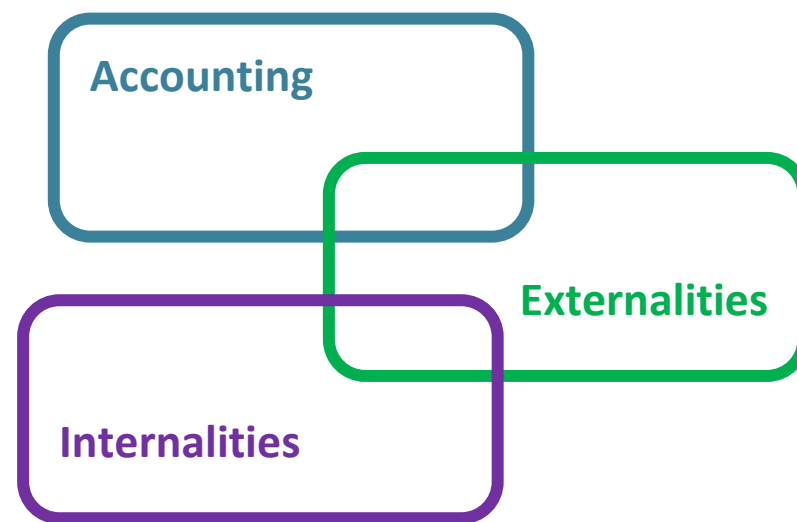
Three Perspectives on Intangibility

What's the thinking behind this table? Let's take a look at the capitals one at a time. You'll see that each capital can be understood from all three perspectives: accounting, internalities and externalities.

Financial Capital – This capital is a tangible asset denominated in monetary terms. But the management of financial capital also has internal effects in terms of discipline, transparency and confidence. It also provides external transparency and clarity.

Manufactured Capital – From an accounting perspective, this capital a tangible asset so it's visible on the balance sheet. But if you take the example of a building, you can see that the quality of its design can be very important to making the building a pleasant and efficient place to work (internalities). And the footprint of a building can have a significant positive or negative effect on its neighboring community and environment (externalities).

Structural Capital – As we saw above, companies make significant investments in structural knowledge but these investments are measured as costs in accounting and rarely capitalized on the balance sheet. That means that most of the investments in data, software and systems over the past 35 years were not tracked as long-term assets. But they have had great influence internally on corporate performance and scalability. Externally, structural capital is key to innovation in the social and natural ecosystems.



Human Capital - In many ways, human capital is very much an accounting concept. Every company incurs costs for recruitment, salaries and benefits and makes investments in training (although none of it is capitalized). From an internality perspective, human capital is a source of competencies, knowledge, creativity and collaboration. From an externality perspective, human capital is understood through diversity, equity and employment.

Relationship Capital – Relationship capital gets similar accounting treatment to human capital. Investments in long-term relationships are not capitalized and are only measured as costs. The contribution to value creation of the relationships with customers, suppliers, stakeholders and shareholders are internalities. The effects of these relationships on others are externalities. The ESG focus bring in social issues and communities as part of these externalities (the S in ESG).

Natural Capital – Natural capital can be both tangible and intangible from an accounting point of view. It's possible to own land (tangible) and natural resource rights (accounting intangible). The major focus on natural capital, however, is on the externalities in terms of use of natural resources, production of waste and overall effect on the environment (the E in ESG). The internalities associated with this capital include the operational improvements and efficiencies generated from sustainability efforts.

Strategic Capital – As explained in the first section, strategic capital is necessary (in my view) for tying the other capitals together. From an accounting perspective, strategic capital is measured through the financial statements, the sum total of the overall operations. From an internality perspective, it is embodied in purpose, value proposition, culture and innovation. This is also where I would classify governance (the G in ESG).

This approach makes it easier to appreciate that all the capitals have intangible characteristics from an accounting, internality and externality perspective. It also begins to suggest (if not quantify) how such a large portion of corporate value has moved off the balance sheet and is now intangible.

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Connectivity

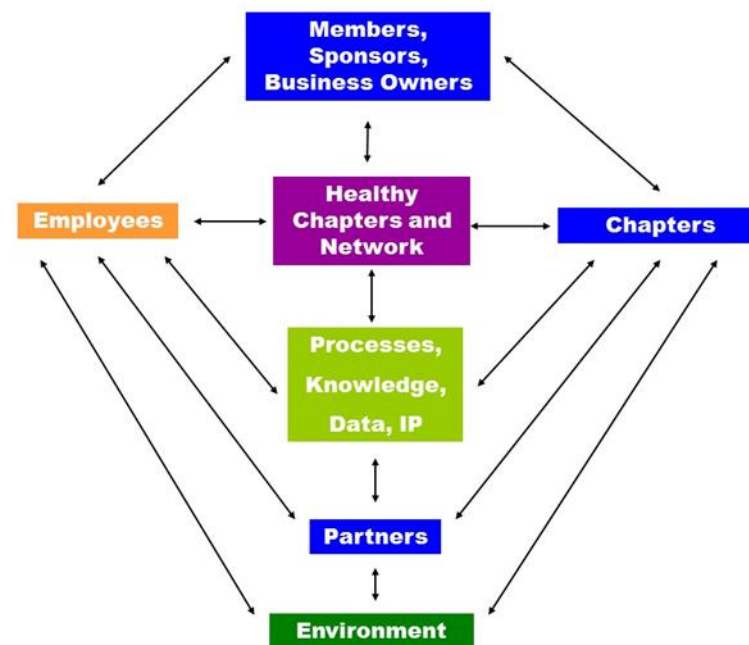
The Perspectives table also makes it easier to see the connections among the capitals. In the above examples, the quality of a factory design can affect an employee's contribution to the overall value creation of the company through work performance and satisfaction. But new efficiencies in production systems might lower the labor requirements leading to lower levels of employment in the neighboring community.

Understanding these value flows gets complicated fast. To increase revenues, you have to attract customers and good people. In exchange, you have to have a compelling purpose and value proposition. To solve social and environmental problems, you need to drive innovation. This requires you to hire good people, support them with a good culture, systems and, sometimes, external resources. To lower your carbon dioxide emissions, you need to make changes in your physical plant but also your processes, your culture and your people. Value is exchanged continuously.

Most companies still use simple value creation graphics to explain these flows. This example is from the companion piece to this paper called *A Practical Approach to Closing the Intangible Information Gap*.

The concept of value flows has had its own field of study for quite a while. It's a powerful set of ideas. I can actually remember the airplane trip when I opened Verna Allee's 2002 book [The Future of Knowledge](#). In it, Verna described how intangible and tangible value flows in networks. Her work and that of many others led to the formation of the [Value Delivery Modelling Language™](#) (VDML™) managed by Object Management Group® (OMG®), an international, open membership, not-for-profit technology standards consortium.

There is actually a new software built using VDML called [VDMBee](#) that supports the modelling and measurement of value flows. I've been working with the company to integrate the [multi-capital framework](#) into their platform. We'll be testing this in 2017.



CONCLUSION

Two of the major fields contributing to the integrated movement are Accounting and ESG. ESG has helped increase attention on externalities. This paper tried to make the case that true integration must also consider internalities and the work of the IC field.

In the journey toward integration, accounting is part of the problem. Today, it contains no mechanism for tracking long term investments in human, relationship and most structural capital. But accounting can also be part of the solution. Financial records about intangibles spending have the potential to help explain how companies are spending their money and make decisions that increase and/or decrease different capitals in their value creation ecosystems. A simple solution for this would be to track all intangible capital expenditures through management accounting (more on this in Part 2).

But financial data is never going to completely fill the intangible information gap. There are many internalities and externalities that are not measurable in dollars. Yet they need to be mapped and measured. To achieve a fully-integrated single value creation model, we need to connect the dots among all seven capitals from all three perspectives.

Part 2 of this paper on Integrated Value Creation focuses on implementation and practice. It includes a simple process to identify, measure and map value creation. It also includes a case study of the application of this process in a small association as well as numerous examples from public company integrated reports.

[Read Part 2 Now!](#)

Please note that additional briefing papers are available on the [Smarter-Companies website](#).

Let me know if you want to explore how to apply these ideas in your own situation, Mary Adams, adams@smarter-companies.com, 781-729-9650



¹ While the concept of an externality is already in common use for general economics and business today, the use of the concept of an internality is more common in behavioral economics where it is defined as the (usually ignored) long-term consequence of an individual's behavior such as smoking. I first heard the term used by a head of sustainability to talk about the next frontier for her company's thinking about the long-term sustainability of its operations.

² This table was provided to me directly by The Conference Board. They do maintain an open site with much of their intangibles research here: <https://www.conference-board.org/data/intangibles/>

