

Integrated reporting

Elevating value



Building a better
working world

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We recommend that organizations take into account the guidance of the International Integrated Reporting Council (IIRC) when carrying out an integrated report. This paper gives relevant background for organizations to be able to understand the journey of integrated reporting so far, the theory behind how it will operate and some details on frameworks, guidelines and even regulatory requirements that are emerging around the world. In addition, we offer our view of how organizations can utilize KPIs and monetization, which goes beyond the guidance of the IIRC framework.

For another version of this paper, which includes practical tips on how organizations can implement integrated reporting, strategy and thinking into their processes, please see our document *Integrated reporting: tips for organizations on elevating value*.

The IIRC has released a framework for integrated reporting. The full version of this, which is mentioned within this paper, can be found at www.theiirc.org.



1

Introduction: an evolving view of value

In the last 35 years, the market value of organizations has slowly shifted from a price based largely on tangible assets to greater emphasis on intangible assets. The concept of value has fundamentally changed, and with it the dynamics of the global economy.

To create value over time, today's organizations need to actively manage a wider range of resources. Intangible assets such as intellectual capital, research and development, brand value, natural and human capital have become as important as tangible assets in many industries. However, these intangible assets are not universally assessed in current financial reporting frameworks even though they often represent a substantial portion of market value.

A range of issues combined with intangible assets influence competitiveness. Examples include: regulation or deregulation, technology innovation, finite resources and consumer sovereignty (the growing power of the consumer), and compliance and legislation. Now, more than ever, creating sustainable value for organizations depends on two things:

- **Adapting** to change and the challenges and opportunities in their environments
- **Effectively managing intangible assets**, which can represent a substantial portion of market value

In this paper we offer our vision on integrated reporting and its role in value creation. We are confident it will inform organizations that want to take their reporting to the next level, as well as help them articulate their unique value creation stories. These stories will ultimately help to attract investors who demand clear performance analysis to assess current and future prospects.

1.1 What is integrated reporting?

Integrated reporting is a concept that has been created to better articulate the broader range of measures that contribute to long-term value and the role organizations play in society.

Central to this is the proposition that value is increasingly shaped by factors additional to financial performance, such as reliance on the environment, social reputation, human capital skills and others. This value creation concept is the backbone

of integrated reporting and, we believe, is the direction for the future of corporate reporting. In addition to financial capital, integrated reporting examines five additional capitals that should guide an organization's decision-making and long-term success – its value creation in the broadest sense. (Please see Chapter 3.2 for details.)

While integrated reports benefit a broad range of stakeholders, they're principally aimed at long-term investors. Integrated reporting starts from the position that any value created as a result of a sustainable strategy – regardless of whether it becomes a tangible or intangible asset – will translate, at least partially, into performance. Market value will therefore be impacted.

Critical to integrated reporting is the concept of sustainable value creation

Today, an organization creates value not only for its shareholders but also for the society as a whole by means of a sustainable strategy. This concept requires organizations to factor decisions, trade-offs and sacrifices into their business model. For example, for an organization to reduce its dependence on natural capital, it may have to sacrifice financial capital to invest in the human capital capable of achieving this goal.

An organization may face the choice between protecting its financial capital in the near term and increasing its profit potential in the longer term. These decisions, if important, should be set out in an integrated report and defined in the organization's value creation objectives. This approach goes beyond the value reflected in the annual financial statements and includes the creation of intangible value and the impact of an organization's activity on society as a whole. It also includes a measurement, or at least a description, of how these impacts influence long-term shareholder value.



Sustainable organizations create value by combining a broad range of resources controlled by the organization or third parties. They are increasingly expected to generate positive outcomes for society that go beyond returns for their shareholders or investors – outcomes that can be instrumental in improving an organization's long-term financial performance. Understanding this co-creation and shared value process is fundamental to integrated reporting. Other considerations include:

- 1** An organization's value creation potential depends on its ability to identify all of the resources available to it, whether tangible or intangible, owned by the organization or third parties, and to align them with its corporate strategy

- 2** Any value created, including that which benefits society as a whole, has the potential to impact on the organization's value and profitability

- 3** An organization that communicates its strategy to the market and quantifies this broader contribution may well be stimulating value creation in itself. However, to increase stakeholder confidence the information must be credible. (This will be explained further in Chapter 2.3.)

The chart below shows that the only layer of value currently measured consistently by organizations is financial capital – usually through the annual report and accounts. This value is translated into dividends for shareholders or stock price gains.

The second layer encompasses shared value that benefits stakeholders directly related to the organization (employees, customers, suppliers, public treasury, etc.). Shared value depends extensively on factors such as employee performance, operating permits and consumer confidence.

The third layer describes the value that an organization generates for society at large, even if it's not directly linked to its business purpose. These externalities, as they are known, may be either positive or negative. An integrated report is broader than traditional approaches in terms of scope and time horizon. It should tell each organization's unique value creation story for each of these areas and include how:

- ▶ It creates value and for whom

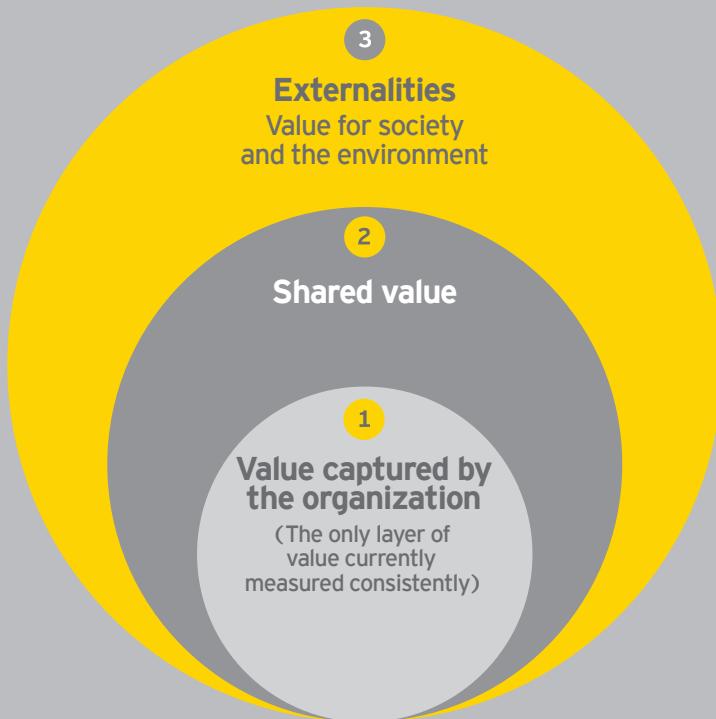
- ▶ It measures and quantifies the layers of value

- ▶ It identifies the value created at each level and how it may affect future performance

1.2 Connectivity and integrated thinking

To tell a comprehensive value creation story, integrated reporting requires organizations to identify the interdependency between all elements – internal and external – that materially affect their ability to create value over time. Seeing this connectivity requires integrated thinking as opposed to "silo thinking." All the operating and functional units of an organization, as well as the capitals that it uses to create value, must be considered. This leads to integrated decision-making and actions. The integrated report is the product of the processes of connectivity and integrated thinking in the organization. Integrated reporting is therefore not just about the report, but about the process of the organization's unique approach to value creation. To translate integrated thinking into integrated reporting the organization should convey a holistic view of strategy, governance, performance and prospects. The integrated report should also bridge time horizons. Therefore integrated reporting can be used as a governance tool for performance-oriented management.

Layers of value



2

Changing corporate reporting

The economy is facing a new value paradigm. These changes, however, are not reflected in the way we measure or report value. Traditional corporate reporting models have failed to adapt to an uncertain economy and account for the increase in intangible assets. Traditional metrics for measuring value and economic progress no longer provide a complete picture.

A good example of this is gross domestic product (GDP), the current yardstick for measuring economic growth and, indirectly, prosperity. However, GDP fails to take into account increasingly important factors such as environmental sustainability or social inclusion levels. There's now growing cross-border consensus on the need to enhance GDP measurements with additional data and indicators.

Corporate financial information faces similar shortfalls. It fails to reflect all the factors that may have a significant impact on value creation. It too must be revised.

To create value, organizations increasingly rely not just on their resources but the scarce resources belonging to society. Therefore, the value creation process is based on the principle of "shared costs." All economic activity consumes, to some extent, resources that belong to society. Consequently, the value created by an organization should be shared between its owners and society.

If the "shared cost" is less than the "shared value," the value created by the organization will show a net positive balance. On the other hand, if the shared cost is more than the shared value, this will show a net negative balance. In private organizations, assuming that the ultimate measure of the success of a competitive strategy is growth in shareholder value, the equation becomes more complex. The key is to determine the extent to which shareholder value creation depends on a contribution by society as a whole – and whether that contribution is sustainable in the long term. In Section 4, from page 24, we elaborate on this theory and provide examples.

With organizations having the ability to create value beyond that captured by financial statements, there's a need to find new ways to measure and communicate value creation.

2.1 Limits of the current corporate reporting model

Over the past 40 years, organizations have been disclosing an increasing amount of information to satisfy the demands of stakeholders. Specifically, they have offered complementary information to providers of financial capital who increasingly view the snapshot reflected by financial statements and sustainability reports as inadequate.

Research performed by ACCA¹ concluded that investors say:

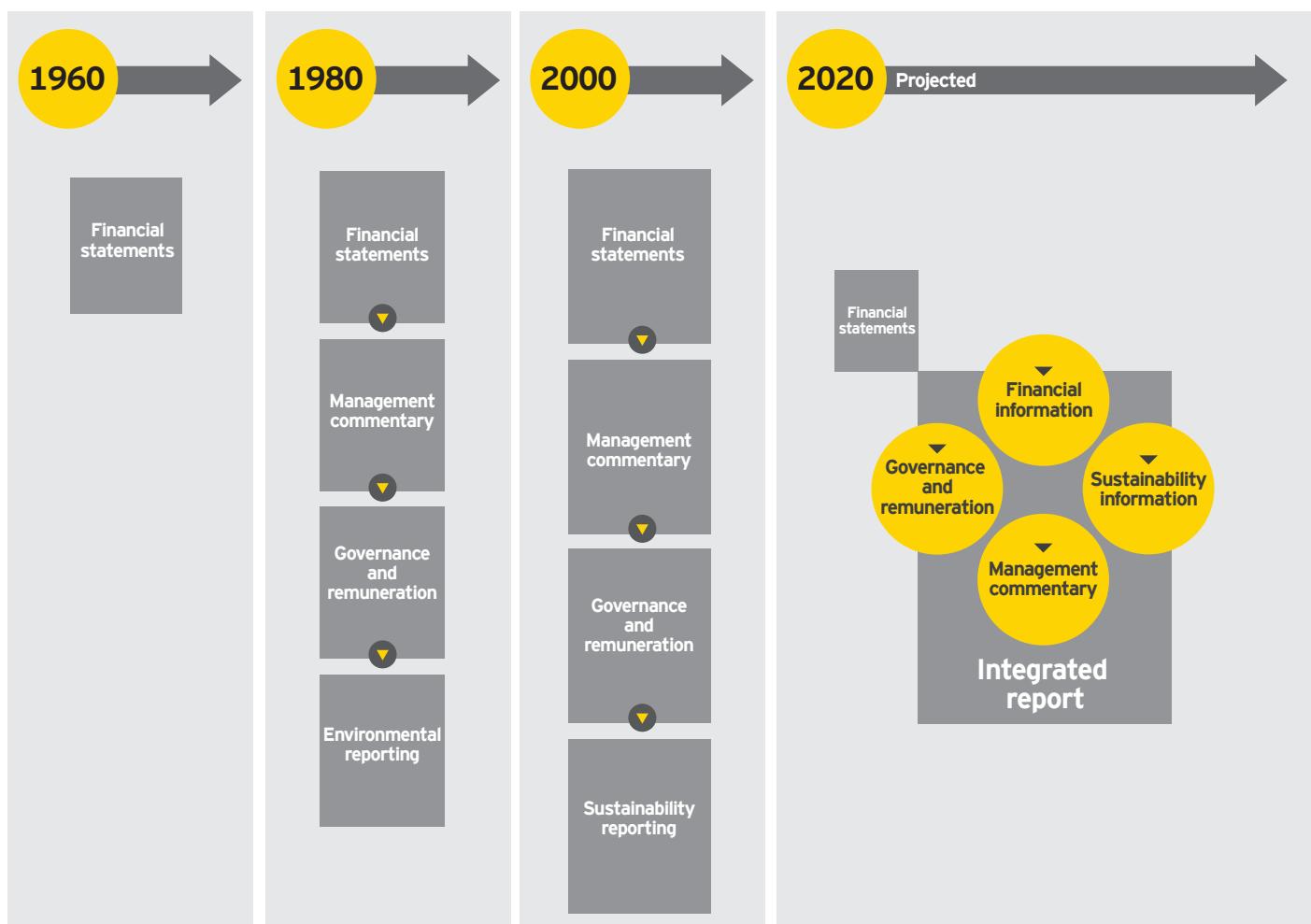
- ▶ A link is missing between current reporting, business strategy and risk, and we do not believe that sufficient information is provided to assess financial health
- ▶ Current non-financial reporting is not sufficiently relevant, and non-financial information should be better integrated with financial information
- ▶ Qualitative policy statements are important to assess financial materiality, but quantitative key performance indicators (KPIs) are viewed as essential
- ▶ Accountability mechanisms should be part of non-financial reporting, either through new board oversight mechanisms, third-party assurance and/or shareholder approval at annual general meetings

The information needed to evaluate an organization's ability to create value sustainably over time cannot be gleaned from the prevailing corporate reporting model. A number of arguments support this assertion:

- ▶ Organizations are publishing a growing variety of increasingly extensive reports. However, the information provided in them is disjointed. They're often generated by different departments within the organization and are products of silo thinking instead of integrated thinking

- ▶ The complexity of financial reporting standards requires increasing technical knowledge
- ▶ The current economic, social and environmental crises we face (e.g., recession, the income gap and climate change) are forcing us to think differently about the world and business
- ▶ The lack of a conceptual and regulatory framework for non-financial reports means that inconsistencies occur. Therefore, stakeholders may find it difficult to compare reports on many benchmarks

Evolution of corporate reporting*



Source: Adapted from IIRC, *Towards Integrated Reporting: Communicating Value in the 21st Century*, September 2011

*In the future, integrated reporting could eventually replace existing corporate reports. Organizations should be able to decide the way in which it will be presented – for instance, as an overarching document linking to various other reports, or as a single stand-alone document covering all material aspects.

2.2 Toward integrated reporting

- ▶ Financial reports fail to reflect an organization's ability to create value in the short, medium and long term through efficient management of its strategic resources

- ▶ An organization's value is decreasingly derived from the tangible assets on its balance sheet and increasingly from its intangibles. The weight of tangible to intangible assets has inverted over the last three decades as shown below

These arguments illustrate how the current reporting framework falls short of stakeholders' needs and expectations and is insufficient for investment decision-making purposes.

Markets move on information. The more forward-looking and detailed information organizations provide, the more efficiently markets operate. Therefore, organizations need to explain their value creation goals from a new perspective: a view that accounts for both intangible and tangible assets and quantifies, whenever possible, the value they create from a broader economic, social and environmental perspective. The chart on page 7 shows that volatility in valuation, which can overvalue or undervalue an organization, can be lowered by increasing the amount of information available to stakeholders. The ultimate goal is to enable investors to make more efficient and effective decisions and bring an organization's market value closer to its intrinsic value. Integrated reporting does just that. Leading organizations are adopting the concept.

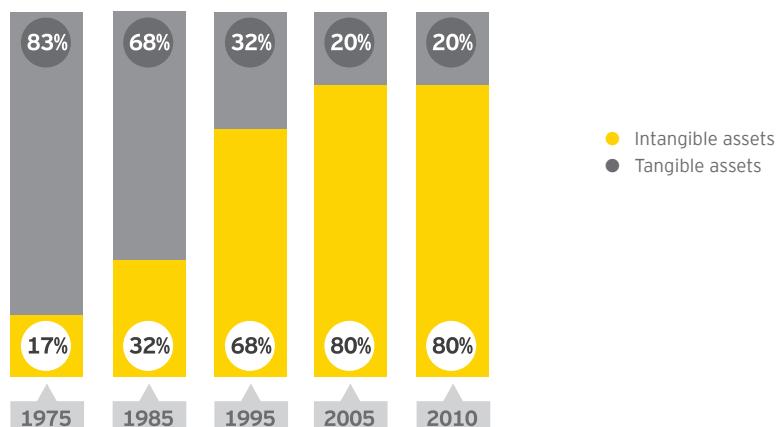
Perspectives on integrated reporting

- ▶ "An integrated report is a concise communication about how an organization's strategy, governance, performance and prospects lead to the creation of value over the short, medium and long-term."²

- ▶ "An integrated report is a holistic and integrated representation of the organization's performance in terms of its finance and its sustainability."³

- ▶ "Integrated reporting builds on the practice of financial reporting, and environmental, social and governance – or ESG – reporting, and equips organizations to strategically manage their operations, brand, and reputation to stakeholders and be better prepared to manage any risk that may compromise the long-term sustainability of the business."⁴

Increasing value of intangible assets
Components of S&P 500 market value



Source: Ocean Tomo, LLC, "Ocean Tomo's Annual Study of Intangible Asset Market Value – 2010," 4 April 2011

² IIRC framework, "What is integrated reporting?"

³ Institute of Directors Southern Africa, "King Code of governance for South Africa 2009," 2009

⁴ Professor Mervyn King, Press Release "Formation of the International Integrated Reporting Committee (IIRC)," 2 August 2010

2.3 Background

The concept of integrated reporting was introduced in South Africa in 2009 through King III, the code of corporate governance. The Johannesburg Stock Exchange adopted King III, and all listed companies are now required to "apply or explain" the King III principles, of which integrated reporting is one.

Regulatory requirements around the world and some listing requirements in different parts of the world are heading in the same direction. Requirements are emerging to increasingly disclose non-financial performance, such as:

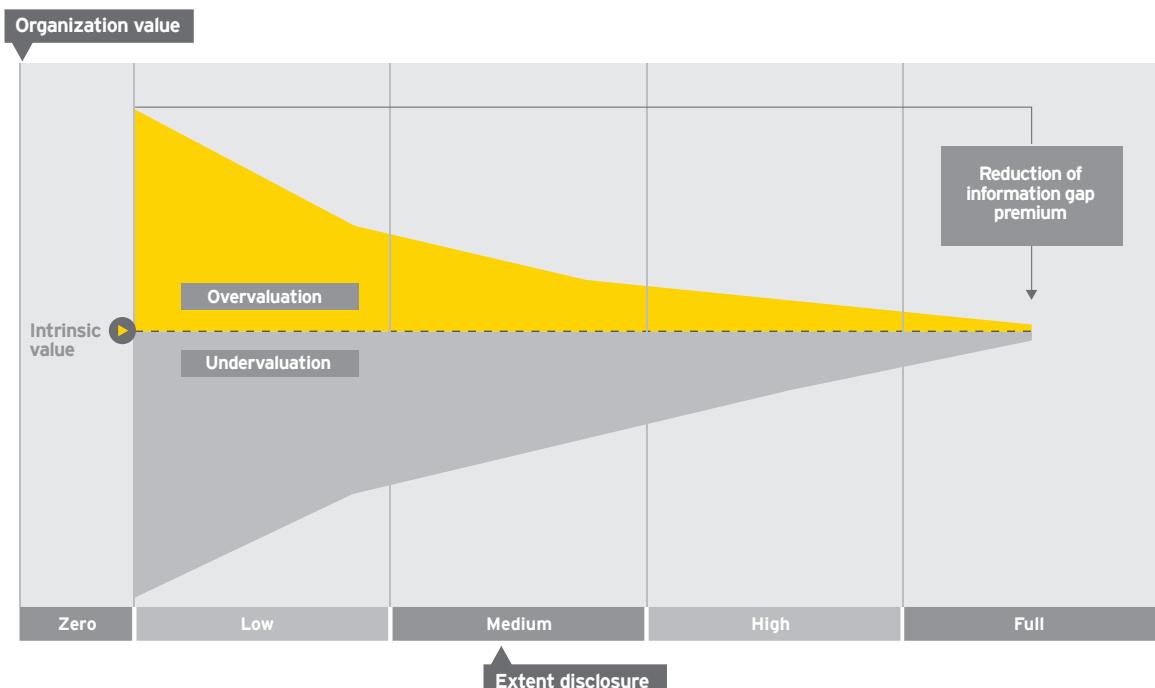
- ▶ **In Germany**, German Accounting Standard 15 (GAS 15) includes disclosure requirements with respect to context, KPIs, risks and opportunities, forward-looking statements and corporate governance
- ▶ **In France**, Grenelle II stipulates the inclusion of externally assured non-financial information in annual reports
- ▶ **In Spain**, a regulator's taskforce is working on proposals for a new management report format

▶ **In Brazil**, the São Paulo Stock Exchange requires listed companies to report non-financial KPIs on a "comply or explain" basis

▶ **In the UK**, the Companies Act 2006 (strategic report and director's report) extends the scope of mandatory non-financial reporting obligations for listed companies

The IIRC, set up at the end of 2010, aims to create the globally accepted integrated reporting framework. Ultimately, an integrated report should explain the reporting entity's interrelated financial, environmental, social and corporate governance information. It should be presented in a clear, concise, consistent and comparable manner. And disclosure should be retrospective and prospective to better match investors' needs. By doing so, organizations could improve their ability to access capital.

Increased disclosure improves investors' estimates of the organization's intrinsic value



Source: M. Rikanovic, "Corporate Disclosure Strategy and the Cost of Capital – An empirical study of large listed German corporations," based on the work of E.F. Fama, 30 June 2005

3

Main aspects of the integrated report

Integrated reporting is a management and communication tool for understanding and measuring how organizations create value now and in the future. The goal is not to provide more information, but better information. It's the information that investors are increasingly looking for.

In keeping with the IIRC Framework, an integrated report should address the following questions:

- ▶ **Organizational overview and operating context:** What does the organization do, and what are the circumstances under which it operates?
- ▶ **Governance:** What's the organization's governance structure, and how does it support the organization's ability to create value in the short, medium and long term?
- ▶ **Business model:** What is the organization's business model, and to what extent is it a resilient one?
- ▶ **Risks and opportunities:** What are the key opportunities and risks that the organization faces; how do they affect the organization's ability to create value in the short, medium and long term; and how is the organization tackling them?
- ▶ **Strategy and resource allocation:** Where does the organization want to go, and how does it intend on getting there?
- ▶ **Performance:** How has the organization performed against its strategy, and what are the key outcomes in terms of the capitals?
- ▶ **Outlook:** What challenges and uncertainties is the organization likely to encounter in pursuing its strategy, and what are the potential implications for its business model and its future performance and outcomes?
- ▶ **Basis of presentation:** How did the organization determine material matters on their characteristics, like KPIs, as presented in the integrated report?

A number of organizations were already publishing integrated reports before the launch of the IIRC Framework in December 2013. These pioneers incorporate many of the concepts established in the IIRC Framework and clearly define the foundations of how they create value. Included among them are:

- ▶ **The Crown Estate (UK)**
- ▶ **SAP (Germany)**
- ▶ **Novo Nordisk (Denmark)**
- ▶ **Port of Rotterdam Authority (the Netherlands)**
- ▶ **Natura (Brazil)**

The Global Reporting Initiative (GRI) conducted a survey⁵ to assess current practices in relation to integrated reporting and concluded that:

- ▶ Large private multinationals are driving the year-on-year rise in the publication of self-declared integrated reports around the world.
- ▶ Countries leading the integrated reporting trend include South Africa, the Netherlands, Brazil, Australia and Finland.
- ▶ Globally, the financial sector self-declares more integrated reports than any other sector, followed by the utilities, energy and mining sectors.
- ▶ Integrated reporting is still a minority practice. Only one out of five of the survey reports is self-declared as an integrated report.
- ▶ About one-third of these reports combine sustainability and financial information together.

3.1 The business model in an integrated report

- ▶ About half of all self-declared integrated reports are two separate publications – an annual report and a sustainability report – published together under one cover, with minimal cross-connection
- ▶ The rest of the reports are sustainability reports but self-declared as an integrated report without showing a clear link between sustainability and financial performance
- ▶ Over 70% of the reports surveyed exceed 100 pages

To date, broad acceptance of integrated reporting has been hindered. The delay in universal progress is caused by a lack of consensus among companies, industries and even countries as to what an integrated report should contain. Also, a debate is ongoing as to whether it should replace existing corporate reports. The IIRC Framework could provide greater clarity and align the concept of an integrated report for the vast majority.

The business model is the vehicle that defines and executes an organization's strategy and maps out the process by which an organization creates sustainable value over time. It should assess an organization's long-term viability, value proposition and business strategy. It should enhance the entity's future resilience. According to the IIRC Framework, the business model is based on the theory of multiple capitals. This states that, in the new economy, an organization can only build and sustain value if it manages the full range of input capitals efficiently and responsibly. The resources it uses to build this value include:

- ▶ Tangible items such as financial capital and manufactured capital
- ▶ Intangible elements such as relationships with the community, human capital and intellectual capital
- ▶ Other inputs or resources such as ecosystem services derived from natural capital; organizations can draw on these capitals for free or in exchange for payment

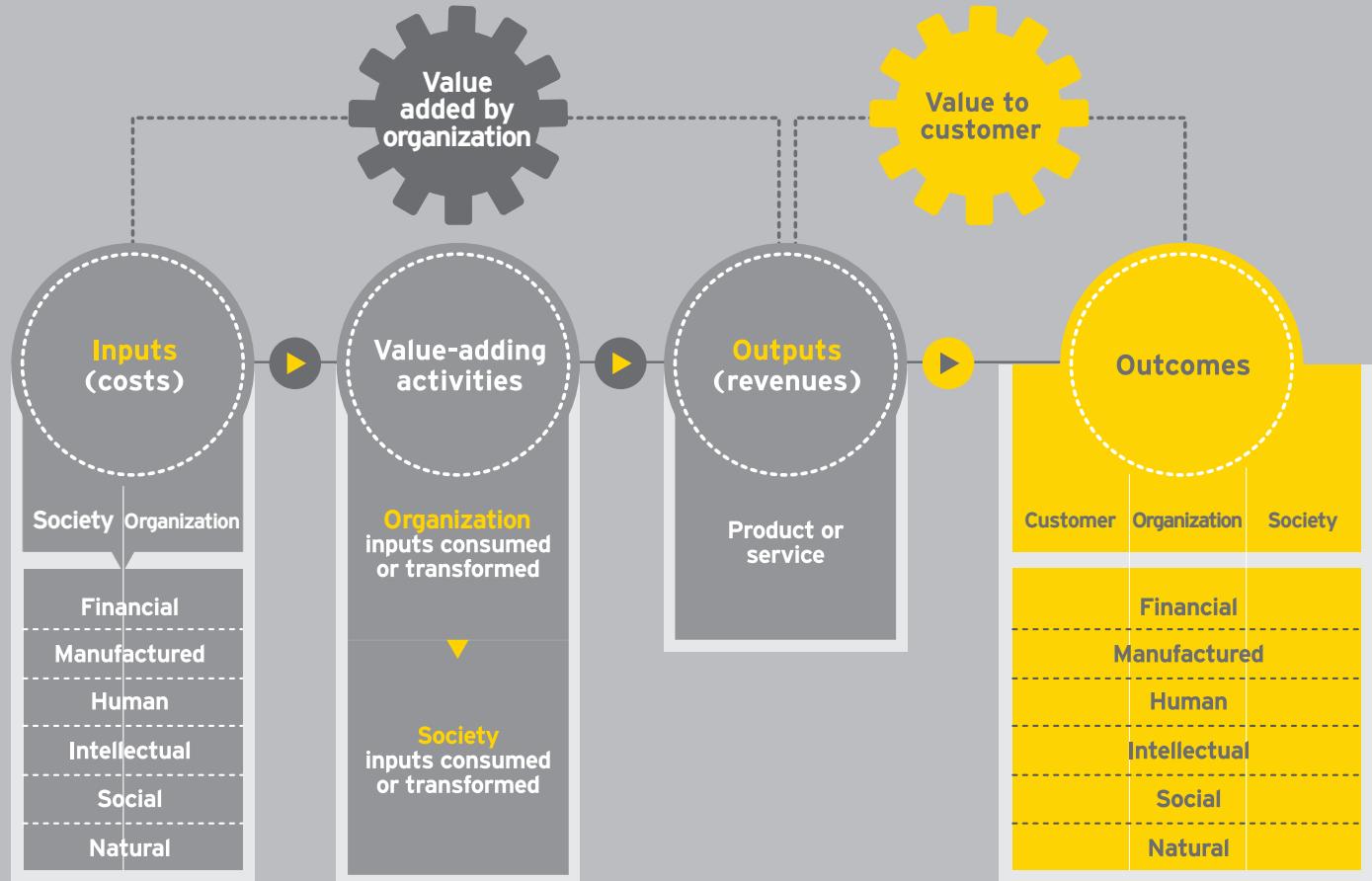
The business model should identify the key inputs that contribute to value creation. It should also show how these are managed, the key value-adding activities of the organization and the potential outcome in terms of value creation over the short, medium and long term. Within the business model, value creation encompasses the products and services produced by the organization (including any by-products) as well as the external factors which increase or decrease the value of the capitals used and affected by it. Value creation or destruction occurs through an increase or decrease in the value of the organization's tangible and intangible assets and in the creation of positive or negative impacts for the community (externalities) that can, in turn, feed back to the organization's value.

When describing the business model in an integrated report the following series of questions should be considered:

- ▶ How does the organization define value?
- ▶ What are the organization's mission and vision?
- ▶ What's the organization's environment?
- ▶ How does the organization define strategy, and what resources does it use?
- ▶ What are the main opportunities and challenges faced by the organization?
- ▶ What indicators are meaningful in terms of measuring the extent to which the organization achieves its stated value creation goals?

- ▶ What are the inputs, i.e, the resources or capitals on which the organization depends? They can be internal or external (e.g., funding model, infrastructure reliance, people, intellectual property, raw materials consumed, relationships or dependence on natural capital).
- ▶ What are the outputs? The products and services produced by the organization.
- ▶ What are the outcomes? Performance in terms of increasing or decreasing the value of the capitals as a result of product or service production. These outcomes may be internal or external (e.g., revenue and cash flow, customer satisfaction, tax payments, brand loyalty, and social and environmental impacts).
- ▶ What are the value-adding activities? The key elements of the organization's strategy and the related initiatives designed to lead to value creation (e.g., strategic investments, innovation, planning, design, production, service level agreements, relationship management, differentiation factors).

The business model



Source: Adapted from IIRC, "Interaction of business model with internal and external capitals", March 2013

How should an organization define its mission and vision, and the external factors that shape its business model?

The business model, viewed as a web of processes devoted to the creation of value in the short, medium and long term, needs to be aligned with an organization's mission, vision and operating circumstances.

The **mission** sets out an organization's overarching purpose and guides an organization's management and employees in decision-making. It answers the questions of what an organization does and how it creates value. Once created, it should provide the framework for designing an organization's strategy and defining its target customers, products or services, and unique value proposition.

SAP's integrated report for 2012 includes a good example of mission formulation. It relates SAP's mission to the role the organization plays in society as an entity that creates value:

"Our mission is to help every customer become a best-run business. We do this by delivering new technology innovations that we believe address today's and tomorrow's challenges without disrupting our customers' business operations."

Vision reflects what the organization aspires to in the future.

The Port of Rotterdam Authority formulated the following vision for its Business Plan 2011–2015:

"The Port of Rotterdam Authority is fully committed to the continued development of Rotterdam's port and industrial complex so it can become the most efficient, safe, and sustainable in the world. The Port of Rotterdam Authority is creating value for customers by developing chains, networks, and clusters, both in Europe and in emerging markets worldwide. As an enterprising port developer, the Port of Rotterdam Authority is the partner for world-class customers in petro-chemicals, energy, transport, and logistics. In this way the Port of Rotterdam Authority is enhancing the competitiveness of the Netherlands."

The operating context and external factors should define the environment in which the organization interacts. These include:

- ▶ The macroeconomic situation
- ▶ The availability of natural resources
- ▶ The availability of social capital
- ▶ Market circumstances
- ▶ The competitive landscape
- ▶ Technology
- ▶ Supply chain
- ▶ Labor conditions
- ▶ The regulatory environment

An organization needs to continually monitor and analyze these factors when defining and fine-tuning its business model. It's important that management takes the lead in providing required governance and oversight structures, since the integrated reporting concept of value stems from the notion that the interaction between an organization and its operating environment has become more intense and mutually dependent.

Anglo American plc includes socioeconomic indicators in its operating circumstances and defines how these indicators impact its corporate strategies and values. It includes economic growth indicators such as GDP for its various markets, and it tracks changing demand trends in a global environment marked by crisis.

Aegon, in its 2012 annual report, outlined the trends and new realities of its business in the macroeconomic context, defining their implications and indicating the risks and opportunities implied.

"Trends and new realities described are:

- ▶ An aging planet
- ▶ An uncertain economy
- ▶ Crisis in the Eurozone
- ▶ The way products are bought and sold is changing
- ▶ Winning trust
- ▶ A new working environment"

3.2 The multiple capitals model: beyond financial capital

Sustainable development requires a balance between economic progress, social advances and environmental protection, which is the foundation of the new value creation vision intrinsic to integrated reporting. This balance is increasingly important because organizations draw from multiple capitals or resources that interact with each other to form a competitive strategy and unique value proposition. This “multiple capitals approach” is the cornerstone of the economic system and development model in the new economy.

The approach provides a new framework for guiding decision-making that is underpinned by a series of principles:

- ▶ The level of sustainability in an organization’s strategy and business model shapes its future performance
- ▶ An organization’s business model and strategy should be designed to maintain and protect all stocks of capital over time
- ▶ The organization should analyze the impact of its activities on each of its capitals and minimize any unsustainable dependencies
- ▶ Any impact deriving from an organization’s activity, internal or external, has the potential to affect its future financial performance

The capitals store value that's needed by organizations to create sustainable profit and prosperity for society. These values can be transformed, increased or decreased through the activities and outputs of the organization. The IIRC Framework identifies six capitals: natural, social and relationship, human, intellectual, manufactured, and financial capital. The categorization is flexible, and the IIRC Framework allows organizations to adopt other classification structures. For reporting purposes, an organization should only identify the individual capitals that materially contribute to or affect the value creation process and the long-term viability of its business model.

There are different ways to classify the various forms of capital used by organizations in the value creation process. Access to the capitals may be controlled by the organization (such as financial resources, equipment, management skills and the intangibles associated with brands and reputation)

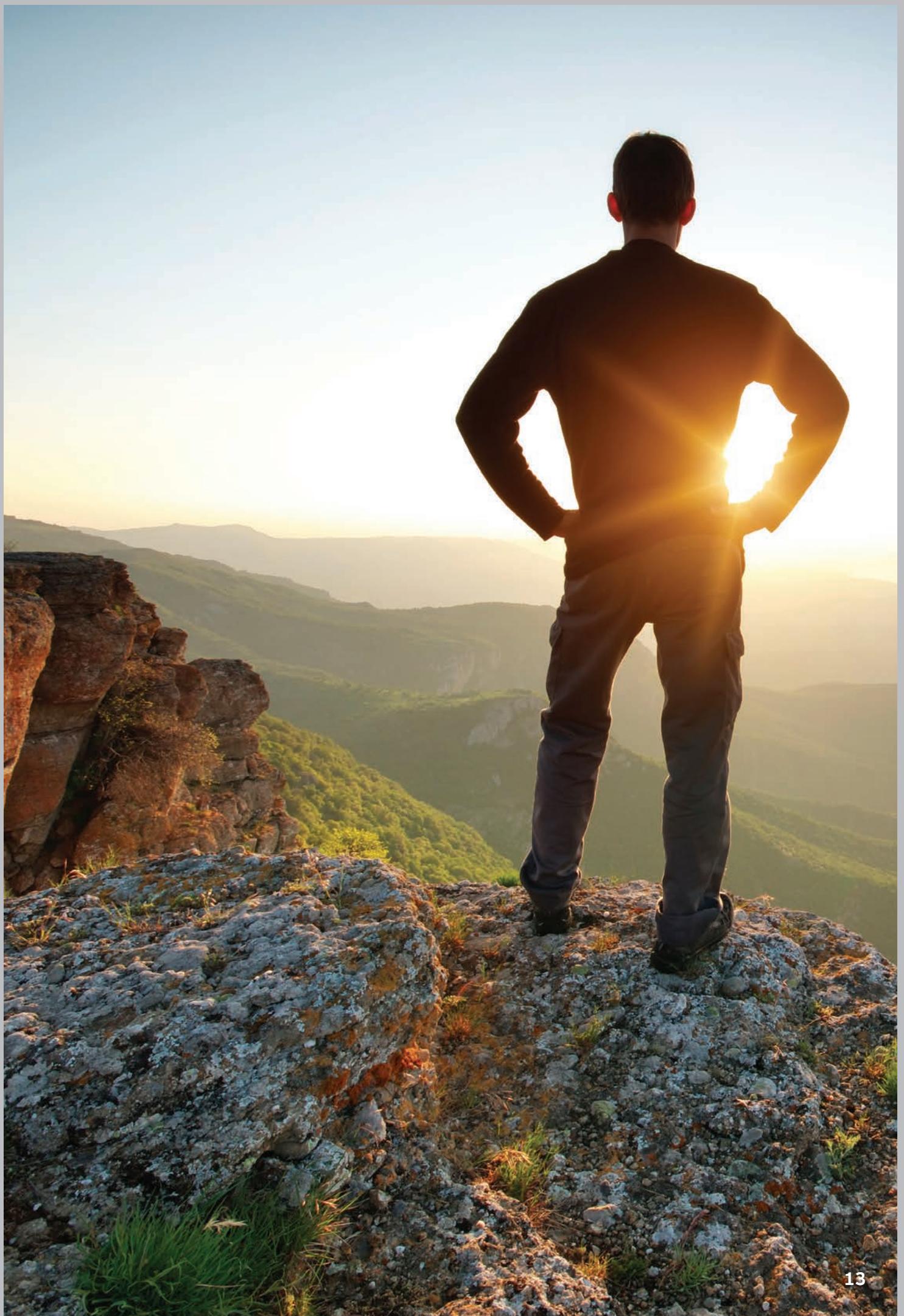
or by society and local communities (environmental services, a talented workforce or key transport infrastructure). An organization may have access to these third-party capitals without having to incur any direct costs, or it may have to consume other capitals, such as financial capital, before earning the right to use them.

Capitals may be classified as tangible or intangible. Intangible assets are defined as identifiable, non-monetary assets without physical substance. The organization controls and holds these assets for use in the production or supply of goods or services, for rental to others, or for administrative purposes. The tangible or intangible assets are purchased or generated by the organization. They may even be owned by third parties. Prevailing accounting regulations seriously limit the ability to recognize internally generated intangible assets on the balance sheet. As a result, their valuations are “back stage” in financial statements. Integrated reporting aims to change that by giving intangibles and externalities a place in corporate reporting.

AstraZeneca's 2012 report highlights and states the company's dependence on the use of capitals in order to successfully deliver its strategic goals.

“The resources, capabilities and skills we have in the business and how we use them to ensure a focus on:

- ▶ **Research and development:** the discovery and development of innovative, differentiated and commercially attractive medicines that make a real difference to the health of patients
- ▶ **Sales and marketing:** focused on the need of our customers – patients, physicians and payers – and undertaken the right way
- ▶ **Supply and manufacturing:** a reliable supply and manufacturing operation that ensures our medicines are where they need to be when they are needed
- ▶ **People:** a talented and diverse workforce with the right capabilities operating in a high-performance culture”





The new capitals

- **Natural capital:** serves as the basis and glue for the entire economic and social system. It provides resources that often cannot be replaced. And it's essential for the functioning of the economy as a whole. Resources include water or fossil fuels, renewable natural resources such as solar energy or agricultural crops, and the capacity of the world's carbon sinks – i.e., the air, forests and oceans – to neutralize or sequester the waste generated by economic activity. When it comes to determining whether natural capital is material to an organization, relevant factors must be brought to bear. These include the level of reliance on natural resources, the environmental impact of its productive process, and what the organization has to do to operate within the limits imposed by the environment.
- **Social and relationship capital:** the stock of resources created by the relationships between an organization and all its stakeholders. These relationships include ties to the community, government relations, customers and supply chain partners. Operating licenses, dependence on the public sector or an unusual supply chain may also be factors
- **Intellectual capital:** encompasses the intangibles associated with brand and reputation that are critical to the organization. It also includes resources such as patents, copyrights, intellectual property and organizational systems, procedures and protocols. These can provide significant competitive advantages. They can also have disadvantages, such as the negative brand equity attributed to major polluters or ill-reputed shareholders
- **Human capital:** refers to the skills and know-how of an organization's professionals as well as their commitment and motivation and their ability to lead, cooperate or innovate. The success of an organization is tied to proper management of its teams and care for their motivation and well-being. Excessive employee turnover or inadequate remuneration policies can damage reputations and impair an organization's ability to create value
- **Financial capital:** is the traditional yardstick of an organization's performance. It includes funds obtained through financing or generated by means of the organization's productivity. It's the pool of funds available to the organization for use in the production of goods or the provision of services, including debt and equity

Financial capital interacts extensively with the other capitals. Organizations need to understand and reflect this interdependence in their integrated reports. It's important to show financial capital is converted into other forms of capital – assigning value to the latter – and explain how these other forms of capital will generate financial returns over the short, medium and long term

- **Manufactured capital:** mainly comprises physical infrastructure such as buildings or technology equipment and tools. Manufactured capital may be owned by the organization or by third parties, e.g., ports and other public infrastructure. They contribute to an organization's productive activity. It follows that their efficient management can reduce the use of resources and drive innovation that leads to greater flexibility and sustainability

How do the various capitals contribute to the value creation strategy?

The capitals available to the organization are increased, decreased or transformed as a result of its value-adding activities. The connectivity and interdependence among the various capitals or inputs – specifically their influence on the organization's long-term financial performance – should be communicated in an integrated report.

Moreover, not only do the capitals interact with each other, but they are also influenced by external factors. These include the economic climate, technological progress, social changes and environmental issues. Viewed from this perspective, an organization's ability to mitigate risks, adapt to change and interact with its shifting surroundings is key. What's more, the capitals can become an internally generated intangible asset.

To understand how an organization uses its capitals, how they relate to each other and the influence of external factors, it's vital to define the strategy, and a series of KPIs, to measure the strategy's progress.

3.3 Strategy and key performance indicators

Strategy formulation should describe the process and tools earmarked for the creation of value for shareholders and other stakeholders, specifically customers, suppliers, employees and society as a whole. The value created for the community is the result of the production of positive and negative externalities. When the market is aware of the externalities generated, the latter can also translate into an increase or decrease of an organization's value. Strategy must clearly set out the differential value proposition for the customer and the community as a whole.

The strategy must address questions such as:

-
- What does the organization do to create value for its customers, the providers of financial capital and other stakeholders?
 - What outcomes does the organization strive for?
 - What capitals does the organization rely on?
 - How will the organization position itself in the value chain and in its operating markets?
-

The strategy should mirror and articulate a balance between two things: first, short-term financial performance; second, the sustainable creation of value in the medium and long term. It's important to distinguish the time horizons framing decisions regarding the allocation or consumption of the capitals. An organization's strategy should also reflect the choices needed when it comes to consuming resources. Often, the use of one capital can deplete its value yet drive an increase in the value of other capitals over time.

The strategy should pinpoint the management processes and systems to mobilize and use all the resources (including external resources) within the organization's reach as efficiently as possible. References to the value creation chain that go beyond elements strictly controlled or owned by the organization can enhance the strategic direction of the organization.

The value of intangibles depends on the extent to which they link with the organization's objectives – or in other words, value creation through connectivity. Any increase in their value may eventually materialize by improving financial performance through interrelated links. This alignment and these interactions are key since the measurement of the value of an intangible can be cost-based, but it can also rely on other performance indicators.

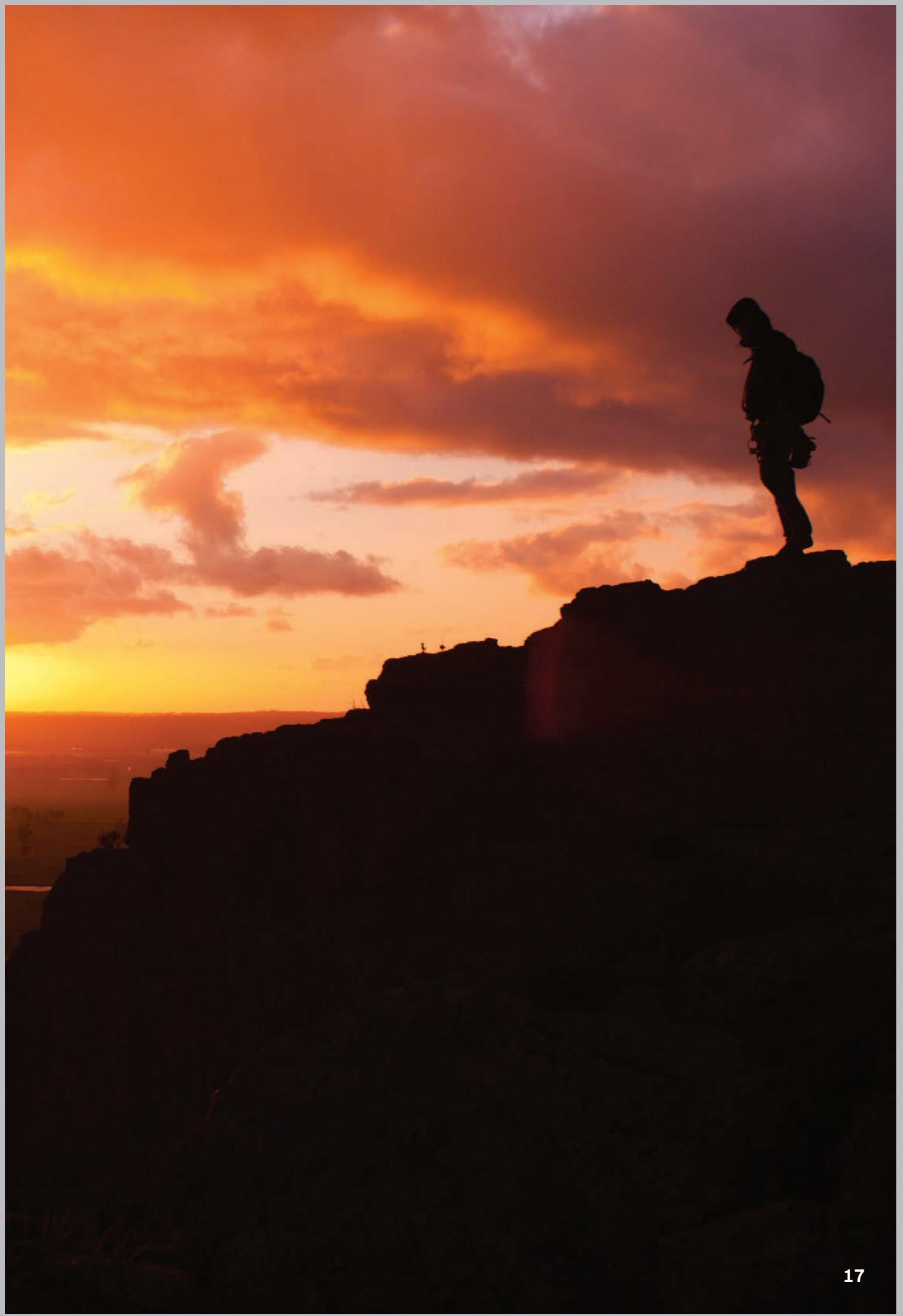
Intangible assets have a value potential that depends on how the organization defines its strategy and how those assets contribute to the organization's value creation goals. An intangible asset unaligned with the organization's strategy may have no value.

The success of a strategy depends, above all, on execution. This requires embracing a core tenet: it's only possible to manage that which can be measured. In a new economic environment where the ability to adapt to changing environments and intangibles is a focus, this principle requires specific value creation measurement metrics.

This is where we believe KPIs can be useful in addition to the narrative portion of the integrated report. KPIs measure financial and non-financial performance against targets and long-term value creation goals. They can also indicate what the organization's outcomes are in terms of tangible and intangible value as well as value for society.

KPIs can be used to measure performance and outcomes resulting from the use of tangible and intangible assets as well as capitals the organization doesn't own. They relate to the organization's critical value drivers and track the organization's performance in the short, medium and long term. With correct KPIs the management team can focus on monitoring material matters, and investors can assess value creation. Creating KPIs enables organizations to understand how they can minimize negative externalities and maximize positive ones. Ultimately this will support the performance of their intangible assets and by extension their value.

It's important to show how measurable indicators (e.g., employee turnover, energy efficiency, media coverage) impact the organization's tangible and intangible assets (such as brand and customer relationships). Why? Because it directly influences shareholder value. For example, take KPIs related to waste reduction generated in manufacturing. The reduction of waste may indirectly measure the creation of external value through enhanced environmental performance. The improvement could result in an improved brand image. This in turn enhances customer loyalty and, by extension, customer relations (an intangible asset).





Finally, communication is a crucial component of strategy and the value creation story. Naturally, it's vital that the entire organization is aligned with the organization's strategic targets. However, it's also true that the market will only tend to recognize an organization's intrinsic value to the extent that it receives sufficient information. Moreover, reporting how an organization creates intangible value and a value for society may create additional intangible value as long as the communication is credible and consistent. Integrated reports should disclose the measurement methods used by management to calculate KPIs. This information is relevant to enable comparisons between organizations and provide a clear understanding of the organization's performance.

Selecting sources of KPIs

The IIRC Framework does not list specific indicators to be included in an integrated report. However, there are readily available sources for selecting KPIs in line with the broad concept of value creation. These KPIs are not only financial metrics but also ESG indicators. They have or are being developed by organizations such as the Global Reporting Initiative,

Connecting the dots



Source: Doughty Centre for Corporate Responsibility, Cranfield School of Management, "Sustainable Value EABIS Research Project: Corporate Responsibility, Market Valuation and Measuring the Financial and Non-Financial Performance of the Firm", September 2009

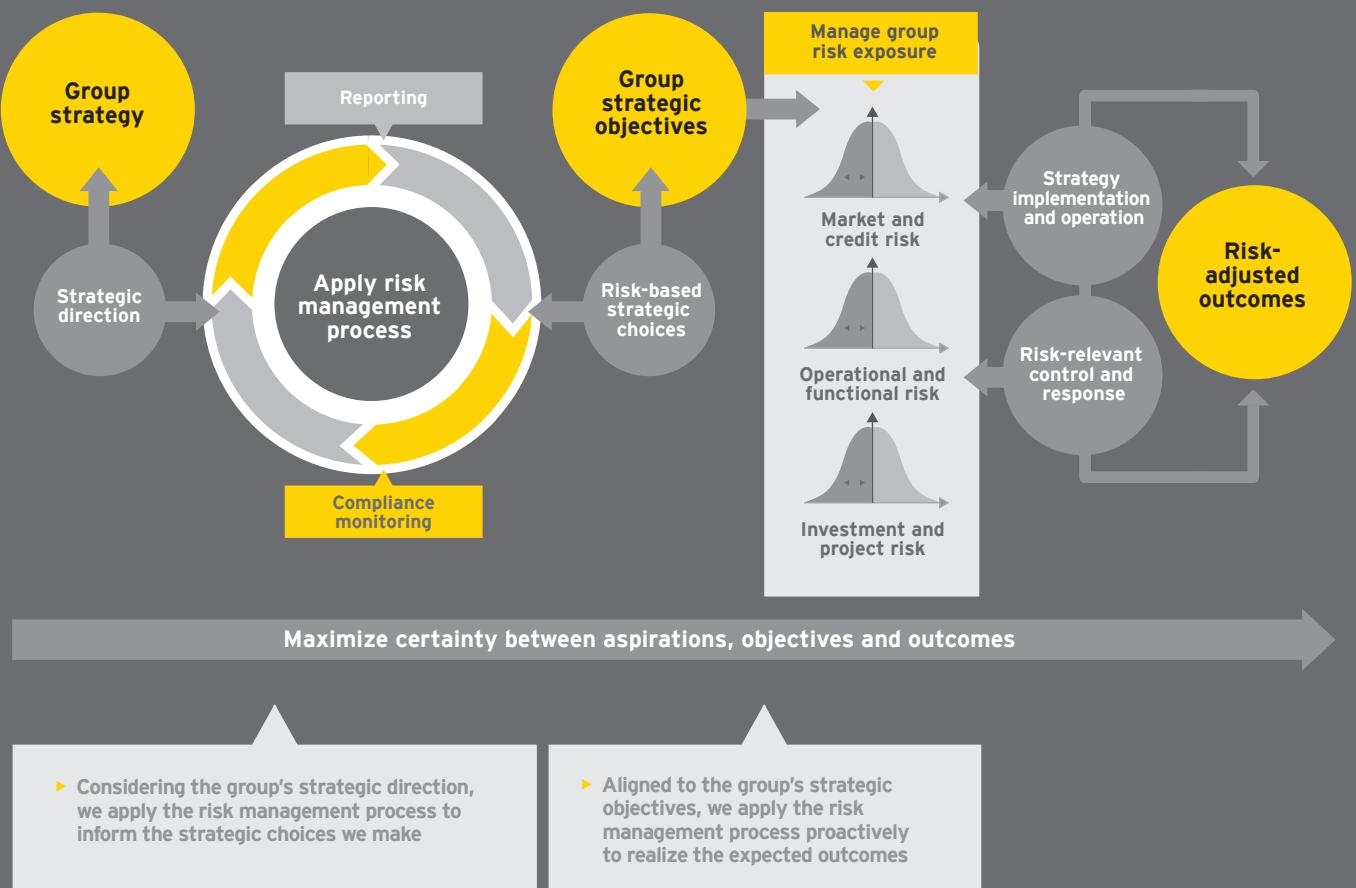
the European Academy of Business in Society (EABIS) and the Sustainability Accounting Standards Board (SASB).

In September 2010, the DVFA (Deutsche Vereinigung für Finanzanalyse und Asset Management/ German Association for Financial Analysis and Asset Management), together with the European Federation of Financial Analysts Societies (EFFAS), jointly published a paper outlining the ground rules for integrating ESG considerations into corporate reports. The document includes an extensive list of KPIs for each of the 114 subsectors presented.

These same principles underpin the Global Reporting Initiative's sustainability reporting guidelines that are designed to enhance the quality, relevance, reliability and comparability of the information disclosed in corporate sustainability reports.

Designing or implementing processes and systems to generate input for KPIs requires special attention, especially for non-financial KPIs as they tend to be new to most organizations. Showing connectivity through KPIs often requires links between systems that have not been linked to date. Creating solid processes and systems to get the right information on KPIs requires time and commitment from senior management.

Risk and opportunity management



Source: Adapted from Sasol, "Annual integrated report - better together... we deliver," 30 June 2013

3.4 Risk and opportunity management

Integrated reporting takes a broader approach to risk and opportunity management than traditional frameworks. As a consequence, a strategy that includes the identification and mitigation of risks against the integrated reporting six capitals has a direct impact on performance. It also has an impact on reducing the gap between its market and intrinsic values.

Risks can be placed into four major categories according to the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management model: strategic, financial, operational and compliance. Risks related to natural resources such as scarcity and risks envisioned for the future fall into the category of strategic and operational risks.

Enterprise risk management is seen as important to guaranteeing the viability of any corporate strategy and, by extension, the value creation process. Material risks that could have a significant impact on the execution of the organization's strategy and its value creation goals should be incorporated into the decision-making process with the aim of reducing uncertainty with respect to achievement of operating results.

Empirical studies show that organizations with advanced risk management systems create more value in terms of revenue, operating profits and results against equity. Using a global, quantitative survey based on 576 interviews with companies around the world, EY assessed the maturity level of risk management practices and then determined

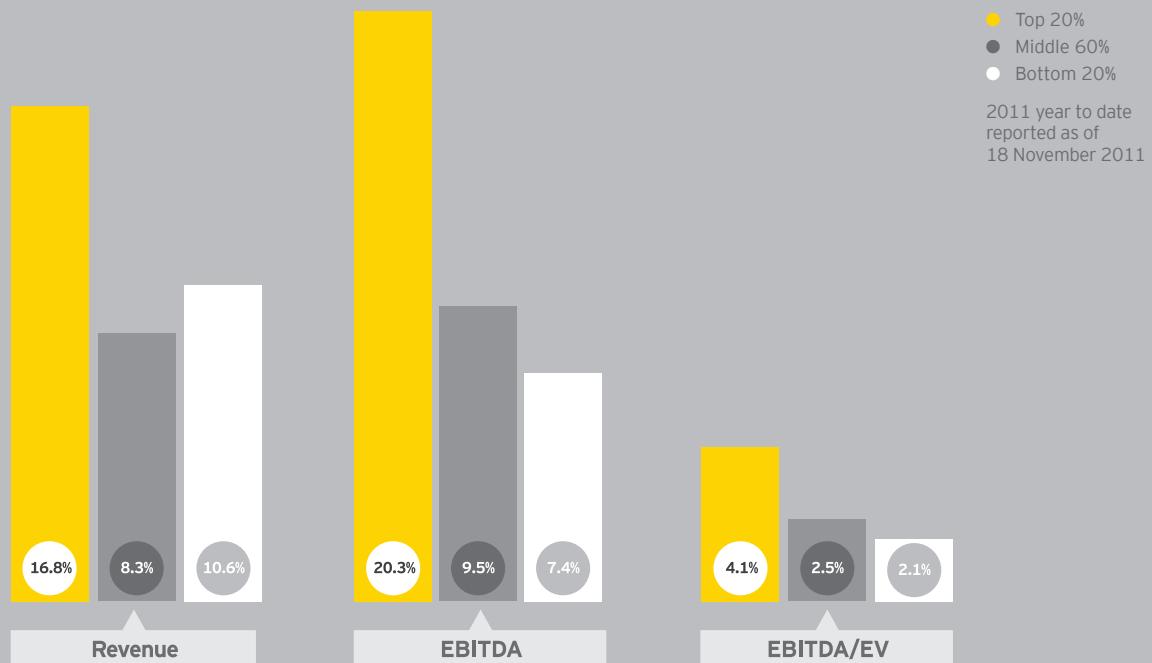
a positive relationship between risk management maturity and financial performance.

With risk management a clear-cut value driver, it's important to communicate it properly to the organization's various stakeholders and relate it to its corporate strategy. Investors, regulators, shareholders and suppliers, among other stakeholders, are increasingly calling on organizations to enhance their risk management disclosures. However, there's a recurring discussion regarding how much risk information should be disclosed to the market in terms of risk identification and corporate strategic response, and how this information can affect an organization's competitive advantage.

Control over reporting and communication of risk management information can help maximize value creation. Internally, it's important that the organization understands and is familiar with existing risks and stringently applies the related controls. This process should be overseen by its board of directors and audit and control committee. Externally, it's vital that third parties understand the key characteristics of the risk management model and how the organization responds to the most material risks.

Decisions regarding what should be communicated, and how, need to be handled by management. And they must weigh the advisability of disclosing absolute figures/metrics versus the use of alternatives such as the percentage achievement of stated key risk indicators (KRIs).

Compound annual growth rates 2004-2011 by risk maturity level



Source: EY, "Turning risk into results: how leading companies use risk management to fuel better performance," 2012

3.5 Materiality defined

Bearing in mind the characteristics of an integrated report, a proper materiality assessment is needed to ensure that:

- ▶ The report is focused on those factors and information that significantly impact the long-term financial performance of the organization
- ▶ The report is concise and meaningful

We believe that a matter is material if it's of such significance that it could substantively influence the assessments and decisions of the organization's highest governing body or the providers of capital. Creating sustainable value for the organization's shareholders is the ultimate factor that will influence the materiality assessment. This analysis needs to factor in the needs, interests and expectations of its core stakeholders.

Therefore, the materiality concept in the context of an integrated report differs from the traditional definitions used in financial and sustainability reporting frameworks. Materiality in integrated reporting spans the entire strategy of the organization, not just the current financial or sustainability reporting frameworks. The latest GRI guidelines encourage a strict approach on determining what is material in a sustainability report and provide a useful starting point for beginning a materiality analysis for an integrated report.⁶

According to the IIRC Framework the providers of financial capital are the target audience of an integrated report. But they are not the only stakeholders with a vested interest in assessing the organization's value creation potential. For a reader of an integrated report to make such an assessment, the organization should publish the material financial, social, economic and environmental inputs that allow it to create value and that reveal the organization's ability to respond to a changing environment. Other stakeholders' views, besides investors', should therefore be included in the decision-making process on what is material for the organization so long as they, in turn, have a financial impact. In addition, meeting certain stakeholders' expectations with regards to specific forms of capital may impact the organization's value and therefore its long-term financials (see case studies in Appendix i).

The process of determining what is material and would be disclosed in an integrated report should be based on the following criteria:

- ▶ Relevance: matters that have already impacted the organization's strategy, business model or strategic capitals, or may do so in the future

▶ Significance: an assessment of a matter's significance requires evaluating the magnitude of impact (for matters that have occurred, currently exist or will occur with certainty) and the probability of occurrence (for matters where there's uncertainty about whether it will occur)

▶ Prioritization: people charged with the organization's governance need to prioritize the material matters based on their relevance and significance

Determining materiality in an integrated report requires the use of the above criteria or instance in a four-step model as depicted on the next page (see page 23).

To pinpoint the material issues requiring disclosure, an organization needs to start with a broad list of issues related to the various capitals. This list is filtered down as a function of:

- ▶ Internal factors: bearing in mind the ultimate goal of value creation and the risks emerging from the enterprise risk management system
- ▶ External factors: the needs, interests and expectations of stakeholders – society, sector stakeholders or government bodies – by prioritizing these matters

This will determine the material matters that influence an organization's ability to create value in the short, medium and long term. Both the material matters and the process to define these will need to be disclosed in its integrated report.

In its integrated report for 2012, The Crown Estate defined the process followed to identify its material matters. It described its internal and external factors, listing opportunity and risk management, stakeholder relations and key company principles and policies as its key internal factors and industry-wide issues, legislation and norms, and the issues raised through sector organizations and panels as its external factors. The Crown Estate concluded that its most material issues are its sustained and profitable growth; optimization of the portfolio for long-term total return; attraction, nurturing and retention of best talent; attraction of suitable commercial partners; health and safety; maintaining effective stewardship; reputation and successful "placemaking"; creating amenity value; the effect of climate change; the availability of natural resources; customer focus; organizational and management structure; the health of the UK economy; and government policy.



The steps toward materiality



4

Measuring value creation

Value is created or destroyed by an organization when it uses and affects the various capitals. The capitals store value. And, although changes in these stores are not reflected in traditional corporate reports, they have the potential to generate future cash flows for the organization. Changes in the value of stores translate into increased tangible and intangible asset valuations and into externalities.

Externalities mean an organization's impact – positive or negative – on society as a whole. Generally, they're not reflected in the organization's financial reporting. They only show up on balance sheets to the extent they affect the capitals owned by the organization. Whereas stakeholders (including providers of financial capital) are increasingly considering internal and external non-financial factors when assessing an organization's long-term prospects. More effective capital allocation decisions can also lead to better long-term investment returns.

When externalities are positive, they can become a source of competitive advantage and financial return in the longer term, which can have a place on balance sheets. In fact, an organization can turn the production of positive externalities into an intangible asset or a driver for increasing the value of existing intangibles. For this to happen, an organization has to do three things: identify the externalities, estimate their value and communicate both to the market.

Annual environmental costs for the global economy in 2008 and projections for 2050

Environmental Impact	External costs in 2008 (US\$ billions)	External costs relative to global GDP in 2008	Projected external costs in 2050 (US\$ billions)	Projected external costs relative to global GDP in 2050
Greenhouse gas (GHG) emissions	4,530	7.54%	20,809	12.93%
Water abstraction	1,226	2.04%	4,702	2.92%
Pollution (SO _x , NO _x , PM, VOCs, mercury)	546	0.91%	1,926	1.20%
General waste	197	0.33%	635	0.39%
Natural resources ► Fish ► Timber	54 42	0.09% 0.07%	287 256	0.18% 0.16%
Other ecosystem services, pollutants and waste	N/A	N/A	N/A	N/A
Total	6,596	10.97%	28,615	17.78%

Source: Trucost Plc, PRI Association and UNEP Finance initiative: "Universal Ownership: Why environmental externalities matter to institutional investors," 2011

Externalities can be positive or negative depending on the nature of their impact. They can affect the economy in general (economic externalities), society (social externalities) or the environment (environmental externalities). For instance, the production of renewable energy may reduce a nation's dependence on foreign energy (economic externalities), create green jobs (social) and protect natural capital by reducing greenhouse gas emissions (environmental).

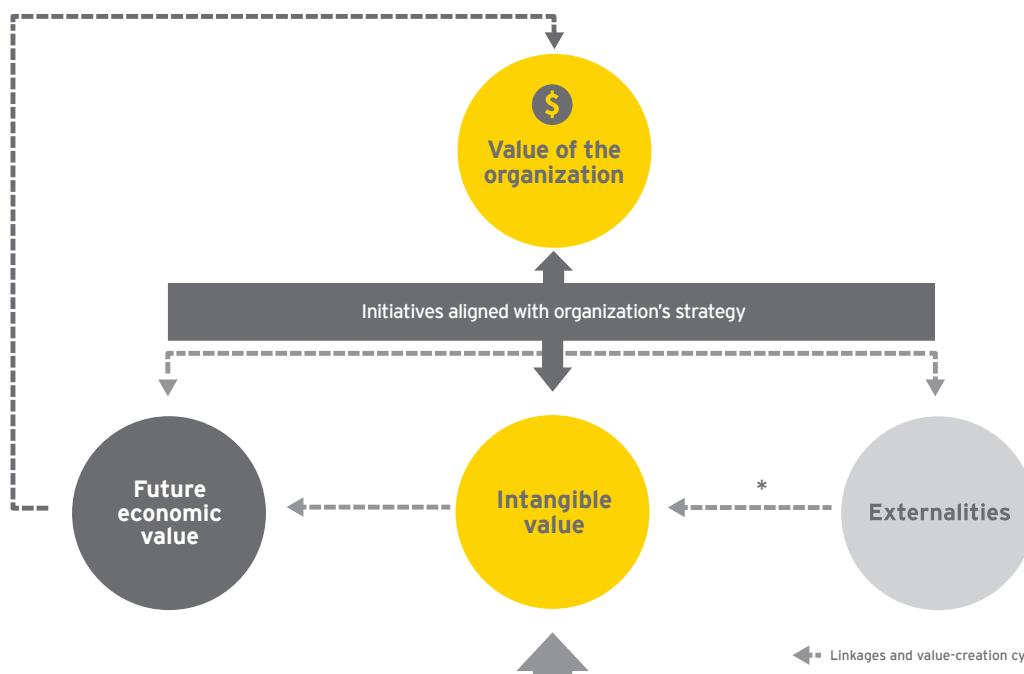
With natural capital increasingly scarce, environmental externalities are becoming a key economic issue. Their significance was clearly illustrated by environmental data experts, Trucost. Trucost estimated that the environmental costs caused by human activity on a global scale were around US\$6.6 trillion, or 10.97% of world GDP, in 2008. By 2050, the figure could reach 17.78% of global GDP.

4.1 Interaction between financial performance, intangible value and externalities

Integrated reports enable organizations to tell their unique value creation stories. To do that, they need to identify and measure the intangible value and the externalities they generate as a result of their business. Organizations also need to assess to what degree the externalities produced may also influence intangible value. Some practical examples of this are shown in Appendix i.

More importantly, organizations need to be able to describe the ability of both intangible assets and externalities to generate future cash flows. These can be measured using consistent and generally accepted criteria and methodology, the most common of which are listed in Appendix iii. Determining that value and communicating it is imperative to creating additional value. The process of communication can impact market value and can bring it closer to the intrinsic value of the organization, as seen in the graphic on page 7.

Interaction between financial performance, intangible value and externalities



► The value of the organization is in part defined by intangible value. Therefore, correct communication of this value is also important.

4.2 Explaining the gap between net book value, market value and intrinsic value

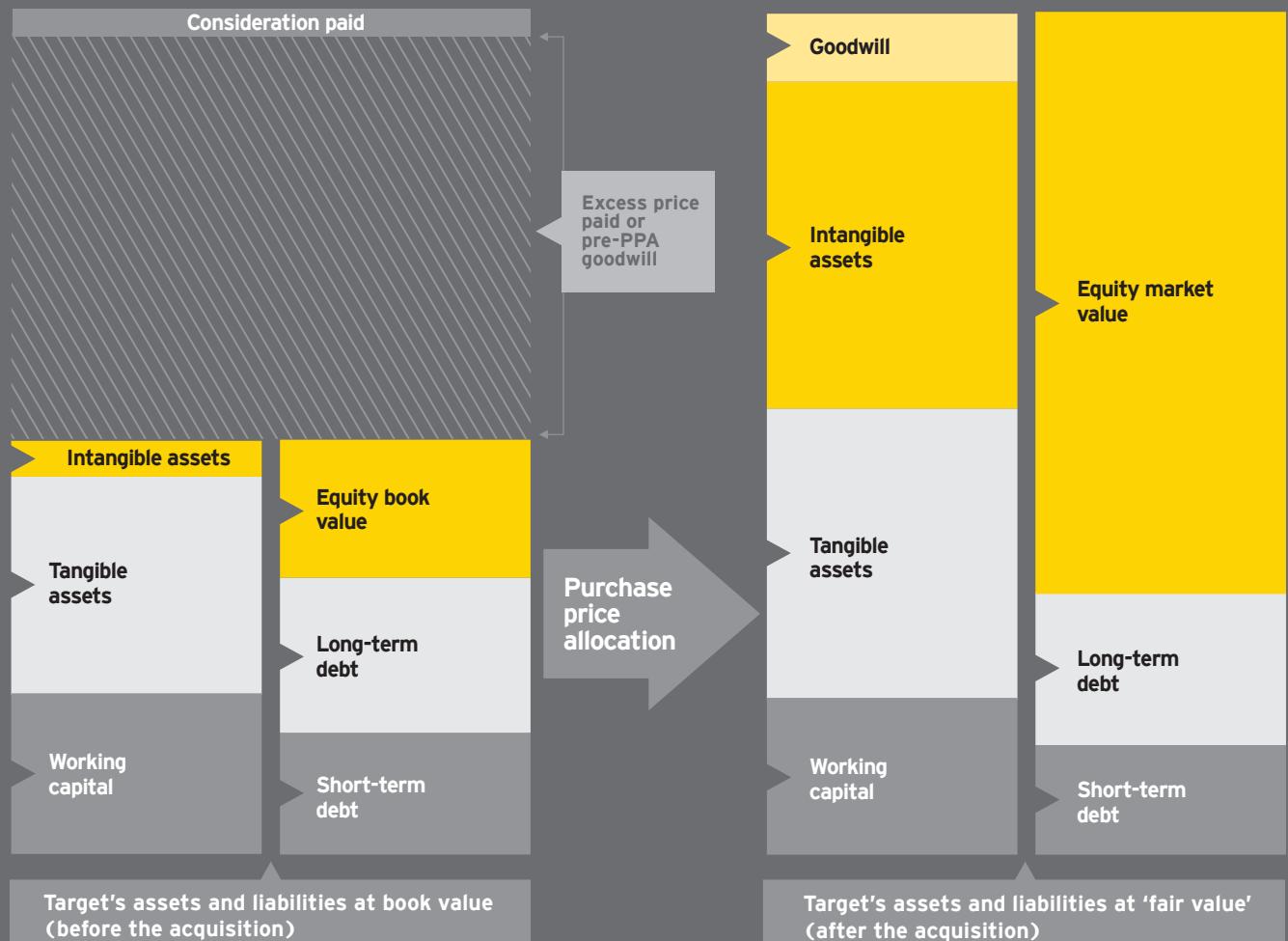
All investment decisions are preceded by an exhaustive analysis of financial and non-financial information focused on a single question: what monetary value will an investment generate or destroy?

In the case of listed companies, a company's market capitalization should be a good proxy for its value. However, the information currently available to investors doesn't tell the full story. This may generate a gap between intrinsic value, market capitalization and book value.

As illustrated in the graphs on page 27, the gap between market value and book value is explained by the fact that investors, through the markets, sense and acknowledge the existence of unrecognized intangible assets and externalities. The market value also differs from an organization's intrinsic value, which is its target value. In a perfect and fully transparent market where participants had access to the same information, intrinsic value would coincide with its market capitalization. Integrated reporting helps to reduce the gap between intrinsic and market values by identifying intangible assets and externalities and assessing their monetary value.



Purchase price allocation



Fair value as defined by International Financial Reporting Standards (IFRS) 13.

4.2.1 Monetization of intangibles

Measuring the contribution of intangibles to future cash flows is fundamental to integrated reporting and will help explain the gaps between book, intrinsic and market equity value. Under current financial reporting standards, organizations are required to recognize (and if material disclose) intangible assets acquired in a business combination as part of the purchase price allocation (PPA) process. Consequently, the intangible assets are only measured once for this purpose.

However, organizations would be free to go further in their integrated report and disclose the change in value of an intangible as a result of any sustainable growth strategy or a specific initiative, making it convenient in certain cases to communicate the value of intangibles in an integrated report.

Appendix i includes case studies showing how intangible asset value can be measured and the valuation methodologies used:

- ▶ Measurement of the increase in brand value as a result of a corporate social responsibility initiative
- ▶ Measurement of the increase in the value of customer relationships at a major organization from an environmental initiative

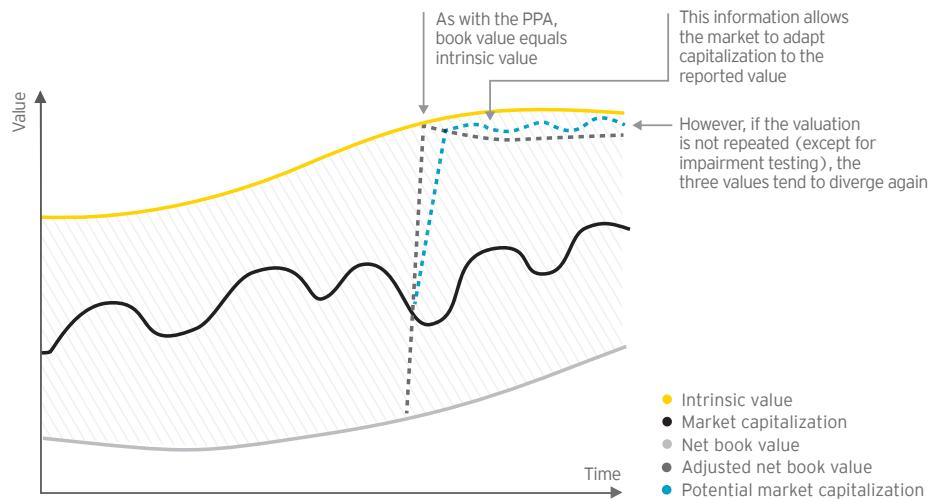
- ▶ Measurement of the increase in the value of an organization's human capital as a result of a career development and retention effort

In practice, it can be difficult to measure the impact of isolated initiatives on the value of an organization's intangible assets and, by extension, on its overall value. It's possible that, at the time of measuring the impact of a specific strategic action, there were influences from other initiatives, positive or negative, that may have occurred in the same timeframe.

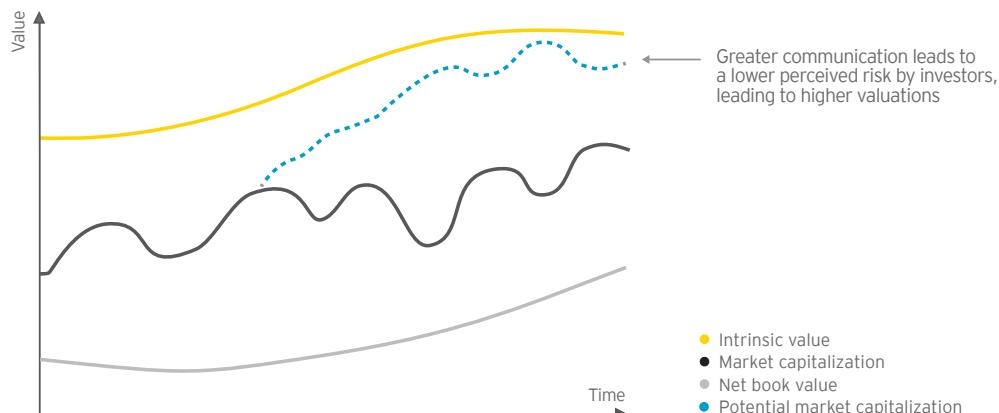
However, the process of identifying and measuring intangible assets and communicating the outcome to the market helps investors to:

- ▶ Recognize, to a greater extent, the cash flows that the organization is capable of generating in the future
- ▶ Associate the generation of these cash flows with the various intangible assets that create value on a sustainable basis
- ▶ Perceive reduced investment risk

Valuing an organization's intangible assets



The effect of greater communication on market capitalization



4.2.2 Monetization of externalities

A wide variety of externalities can be produced as a consequence of business activity. The first hurdle lies with acknowledging or identifying their existence. When the externality is destroying society's value (e.g., global warming, air pollution, urban congestion or biodiversity loss), the organization's challenge is how to mitigate the impact and develop a "profit and loss" approach – identifying mitigation costs and comparing them with the value to society of implementing mitigation actions. Having done that, the organization can communicate its efforts to the market. This may in turn contribute to protecting or increasing the value of its intangible assets or decrease the importance of hidden intangible liabilities. When activities generate positive externalities, this gives a good opportunity to effectively communicate the increasing value of the intangible assets to the market.

Acciona and EDP, producers of renewable energy, have developed a methodology to monetize the value of renewable energy generation in a number of economies including France, Spain, the UK and the US. The scope of the work includes the contribution of renewable energy in terms of EDP's growth, green jobs, energy security, CO₂ emission reduction and the economic value of energy security. The main goal of this exercise is to protect their license to operate and public policy support in certain markets.

Formula E Holdings has developed a methodological approach to calculate the impact of the company's activity in accelerating the development of the electric vehicle market globally. This exercise allows the organization to estimate the monetary impact of its role in mitigating global warming or improving air quality in large cities, for example. By providing this value, sponsors are able to gauge the strength of the positive environmental attributes they are seeking to attach their own brands to, thus making the company more attractive for sponsors, and therefore for investors.

Until recently, most of these indicators were mainly tracked for internal purposes. Their oversight was assigned to the business areas with the power to influence performance. However, to boost the organization's credibility among stakeholders, it's increasingly important to communicate them appropriately, transparently and frequently, both within the organization and externally. Communicating how the organization defines its KPIs, their significance to the strategic objectives and how they're tracked and calculated will help stakeholders better appreciate the organization's performance, situation and prospects.

Appendix ii provides some additional examples on monetizing externalities.

4.3 Impact of externalities on the value of intangibles

As previously mentioned, to completely unlock its intrinsic value, an organization needs to convert its positive externalities and the actions to mitigate negative impacts into intangible value.

Potential approaches to estimate the impact of the externalities produced by an organization on the value of intangibles include:

- ▶ The ability to relate the externalities generated with the share price performance
- ▶ The generation of customer loyalty or brand equity by means of enhanced consumer perception thanks to the reputation earned by an organization when it generates positive externalities or reduces negative ones

- ▶ Access to more favorable valuations in bidding for operating licenses or public tenders, paving the way for operating cost savings within the organization as well as geographic and sales growth
- ▶ The sharing of savings along the supply chain when suppliers manage to enhance their performance
- ▶ Reduced risk of energy dependence and natural capital depletion/scarcity
- ▶ Reduced compliance costs vis-à-vis future regulations and access to new market niches

The graphic below shows how externalities can be measured to demonstrate higher revenues, improved productivity and cost savings.

Enterprise value



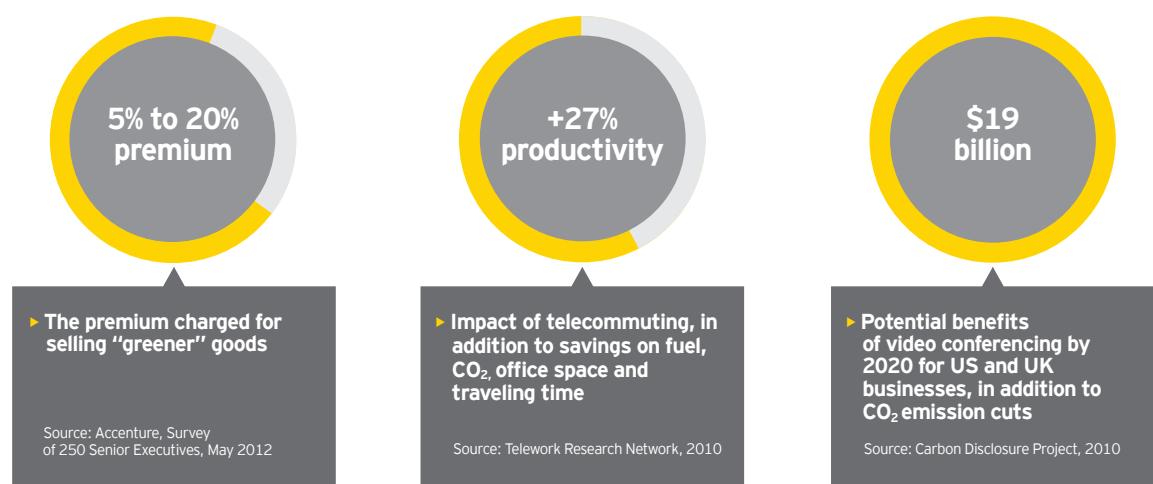
4.4 The value of measuring value

Measuring value creation is not so much a theoretical discussion anymore. There is a clear trend toward organizations displaying their value in new ways. However, we recognize that there are challenges organizations must first overcome to effectively measure and monetize their value. To start with, there are many techniques, but no consensus, on how to measure and monetize key impacts particularly natural and social capital. This lack of a global monetization guideline therefore limits consistency and comparability of monetized outcomes between organizations. There is however a number of movements aiming to create more globally accepted frameworks for this type of information. For example, the Natural Capital Coalition is trying to form a standard for valuing natural capital in business. Secondly monetizing externalities poses a challenge as it's heavily based on assumptions. That is why organizations should be transparent in explaining their assumptions and what kind of limitations they have in terms of access to data. Another challenge arises with financial reporting requirements in major financial centers. In some regions, there may be limitations on what can be disclosed in terms of monetized value within an integrated report. The IIRC should continue discussions with regulators about these limitations. Finally, revealing excessive detail regarding monetized value can be seen as a risk, especially

since some organizations currently also benefit from investors not understanding their full (negative) impact on certain externalities. This is a challenge we believe could be overcome by either reporting improvements or require organizations to communicate negative externalities.

Despite these challenges, we support moving toward a more holistic picture of an organization's value, including measuring and monetizing it. Most importantly, monetization clearly demonstrates the extent of the positive or negative impacts on each of the capitals caused by the value-adding activities of the business model. It also assists in the strategic decision-making process of ensuring that growth in one's value capital doesn't depend (at least excessively) on the destruction of another capital's value. Ultimately, it also serves to provide stakeholders with a clear and concise answer to their recurring question: "what's in this for me?"

Quantifying externalities



Appendix i

Monetization of intangibles in practice: case studies

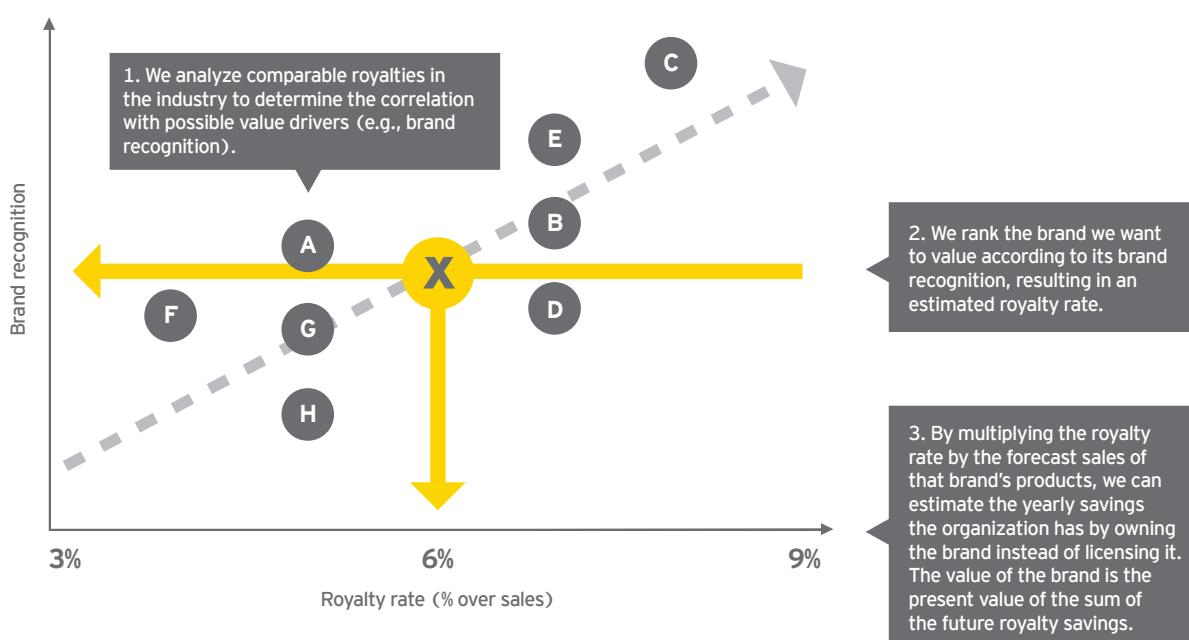
► Case study 1:

Increase in brand equity due to higher brand recognition as a result of a corporate social responsibility (CSR) initiative

The “relief from royalty” method, the most commonly used brand valuation approach, is based on the premise that the owner of a brand obtains a benefit from holding it instead of having to pay a royalty for the use of a third-party brand. Brand value is thus the present value of the stream of future royalty savings. To estimate the stream of royalties, royalty rates are analyzed for comparable industry brands or trademarks.

The royalty charged for the use of a brand tends to be correlated to that brand's main value drivers. In the example below we see how higher brand recognition on the part of the general public leads to higher royalty charges for its use by third parties and, therefore, higher brand value.

Relief from royalty method

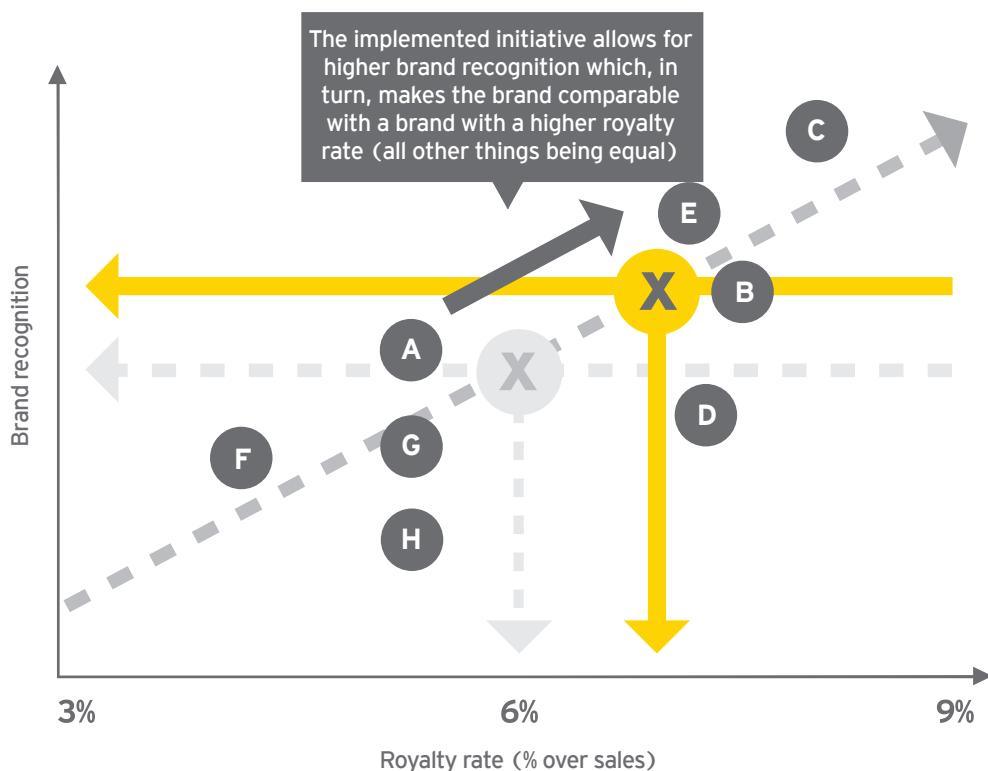


A-H are comparable brands to the brand being valued

In this case, the organization championed a merit-based foreign university scholarship program that proved highly popular among young university-goers and their families and peers. The initiative garnered widespread media coverage and was quickly associated with the sponsoring firm's brand.

A year after the initiative, the organization measured its brand positioning in an independent ranking of brands. Recognition levels were used as the KPI. According to the independent study, the organization's brand had climbed from 28th to 10th place. In a fresh valuation of the brand in the wake of the CSR initiative, the royalty used to calculate the organization's "relief from royalties" was higher than the rate used in the valuation exercise performed prior to the initiative. This suggests that, all other things being equal, the organization's brand has increased in value.

Measuring the value creation in the brand



A-H are comparable brands to the brand being valued

► Case study 2:

Increase in the value of an organization's customer relationships thanks to an environmental initiative

The "multi-period excess earnings" method is the most common and widely accepted approach to valuing the intangible assets deriving from customer portfolios. It consists of estimating the present value of the "excess earnings" attributable to the customer portfolio over the useful life of the asset.

Excess earnings can be defined as the difference between:

- The after-tax cash flows attributable to the customer base in existence on the acquisition date
- The cost implied by the capital invested in all the other assets (tangibles, intangibles and working capital) used to maintain the customer relationship

The value of the resultant intangible asset corresponds to the present value of this excess of earnings over the useful life of the asset. The higher the risk of the cash flows, the lower their present value.

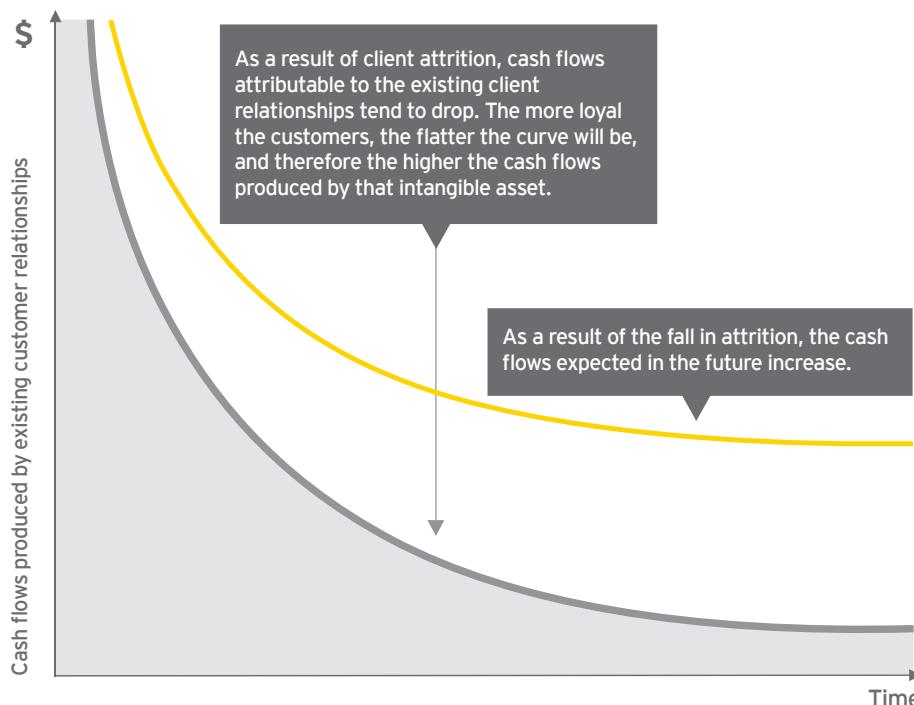
For example, client relationships based on long-term contracts will have a higher value than those with no contract base.

In this example, the organization undertook an initiative that delivered a 25% reduction in the volume of GHG emissions generated in the production of its core product. The organization communicated this environmental achievement to the media. It highlighted that the initiative made its core product the most environmentally friendly of its class.

Following the initiative and media campaign, the organization measured customer relationship. Customer loyalty was used as the KPI. The survey results showed that 45% of those polled claimed that they would continue to use the organization's product even "if there were a similar product on the market that cost up to 15% less."

With this initiative, the organization managed to reduce the natural attrition rate of its customer base, thereby increasing the value of this intangible asset. In this example, an initiative aimed at mitigating negative externalities has turned into an increase in the organization's intangible value through the communication process.

Measuring value creation in customer relationships



► Case study 3:

Increase in the value of an organization's human capital as a result of a career development and retention effort program

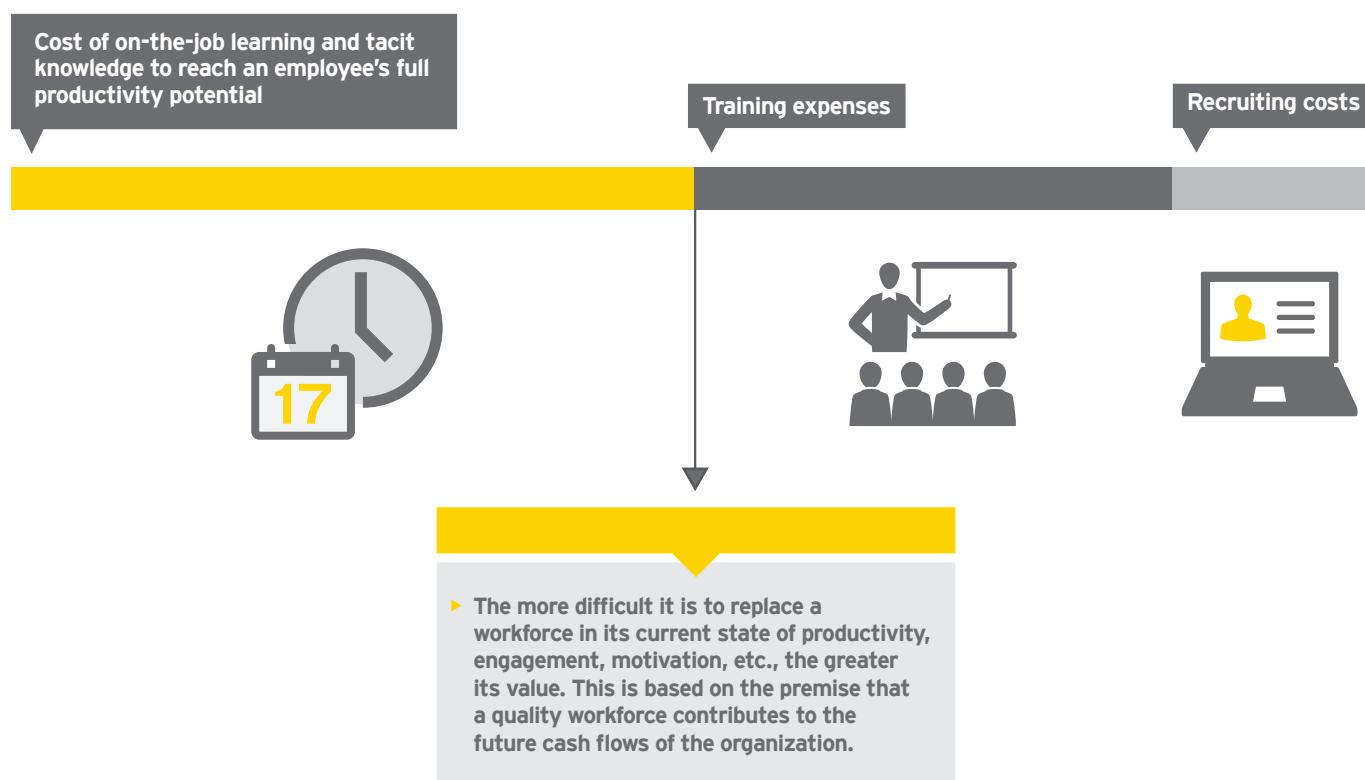
The most widely used method for valuing human capital as an intangible asset is to measure its replacement cost. To do so, it's necessary to estimate all of the costs the organization would have to incur in order to substitute its existing employees, including recruiting, hiring and training costs, among others.

Often, the most significant cost item is the time elapsing (measured in terms of wages) between the time a new employee starts on the job and the moment they attain the required level of know-how and expertise.

A highly specialized workforce, requiring specific training, will be more valuable than a workforce without any such specialist know-how. This is reflected in the higher required training costs. Similarly, an organization whose workforce's most valuable contribution is its experience will require a longer period of time (therefore higher costs) to replace if these experienced people move on.

The value of the intangible asset in this case is the sum of all of the costs needed to replace the organization's human resources as a whole.

Human capital opportunity cost



In the case at hand, an organization sustaining an annual employee turnover rate of over 30% (a KPI measured regularly) set in motion a raft of measures designed to enhance employee career development and retention. When this KPI was remeasured three years after the initiative, its annual turnover rate had fallen to 19%. Moreover, the internal promotion of the organization's employees had given them a command of the organization's products and markets that surpassed that of any competitor.

In the year after the organization announced the decline in its turnover rate, it was acquired by a private equity firm that mentioned in the press that "the quality of the organization's human resources was the highest of any of the organizations we looked at. We are fully confident that, with their experience and motivation, we will manage to bring the organization to the global leadership position it deserves."

This concept is depicted in the chart below:

Measuring value creation in the workforce



Appendix ii

Externality valuation in practice

Business case

Valuing human capital

Monetizing the effects of changes
in social KPIs

The organization's need

To support its HR strategy, a large multinational wanted to know the monetary impact of social changes in the organization. For instance, it wanted to place a value on changes in employee engagement and retention.

EY's approach

The approach consisted of two phases:

- 1.** Identifying and quantifying interactions around social KPIs
- 2.** Monetizing changes in KPIs (e.g., what is the \$ effect of a 1% increase in employee retention?)

Phase 1

- ▶ Qualitative analysis of forces around KPIs
- ▶ Quantification of impact of organization's initiatives on KPIs
- ▶ Analysis of quantifiable effects of KPIs (e.g., productivity)

Phase 2

- ▶ Cost analysis of organization's initiatives: how much needs to be spent to improve the KPI by X%?
- ▶ Effect analysis of changes in a KPI (e.g., productivity rises by X%, what does this mean in terms of revenue?)

Value from our approach

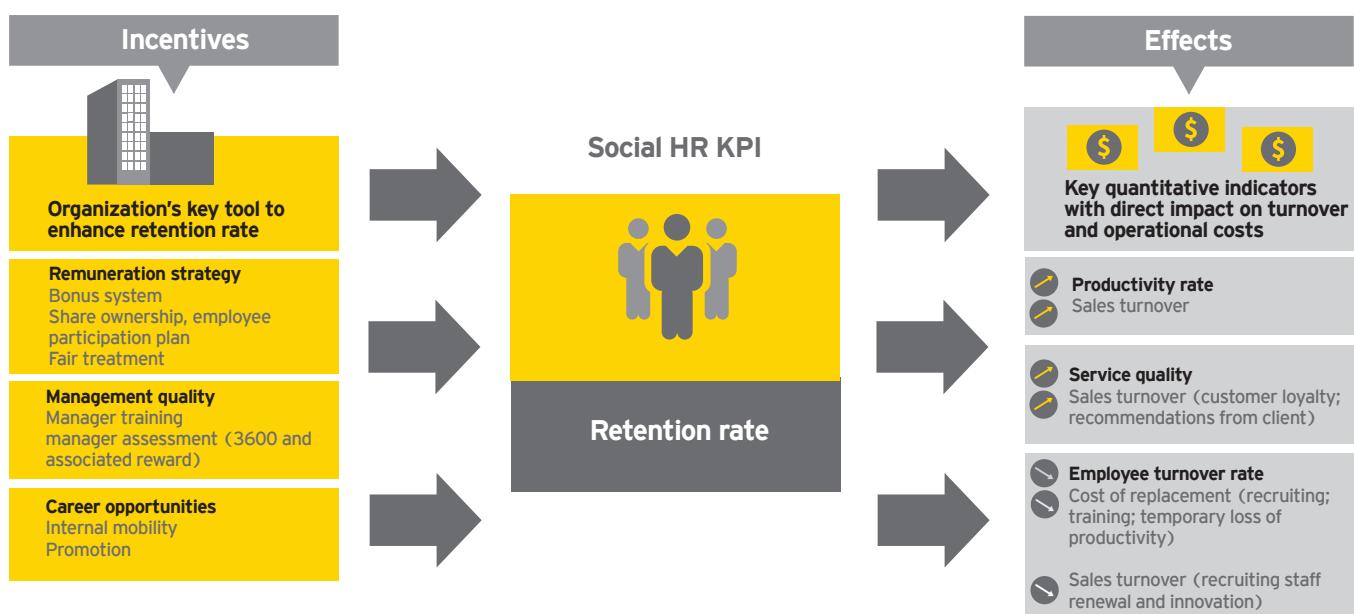
- ▶ **Ability to leverage available literature** on social performance
- ▶ **Innovative use of available HR data** from the organization to identify trends and interactions
- ▶ **Validation of hypotheses** through working groups and interviews at every level of the organization

We used quantitative methods to measure interactions around KPIs, e.g., the relationship between staff engagement and their productivity.

This approach allows:

- ▶ Quantification of the links between predictors and outcome variables
- ▶ Measuring if the links are statistically significant
- ▶ Identification of the nature of the relationship (linear, exponential, etc.)

Illustration of qualitative analysis of interactions around a given KPI



Business case

Eco-premium of green products

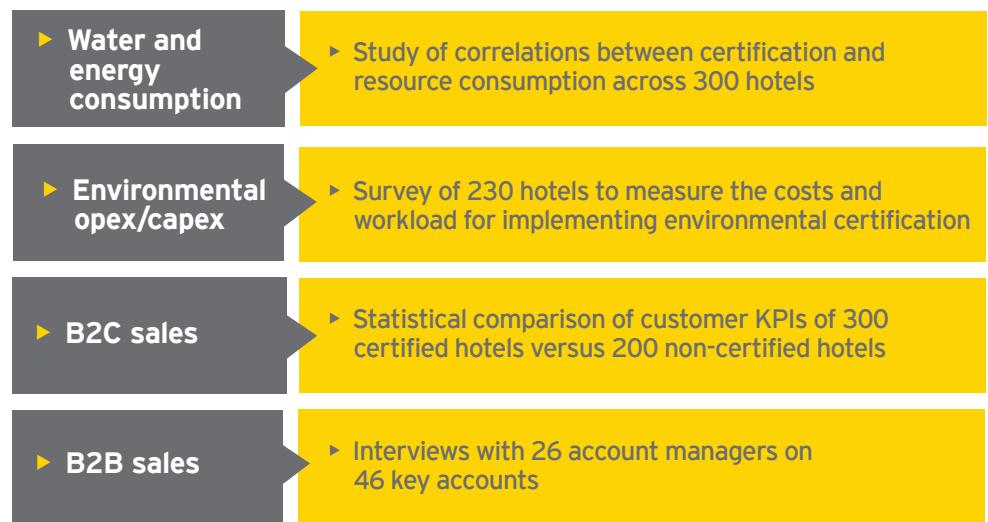
Demonstrating the benefits of environmental certification

The organization's need

An international hotel chain wanted to know the costs and benefits of ISO 14001 environmental certification of its hotels. In particular, to what extent does certification attract customers and increase sales?

EY's approach

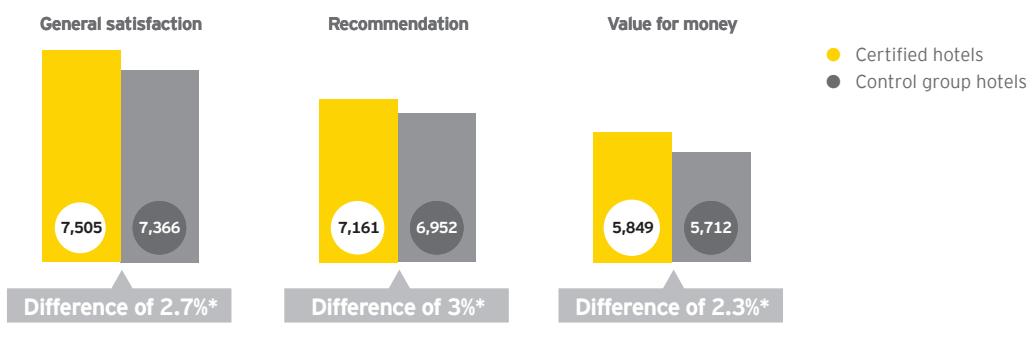
Four studies were conducted in parallel to evaluate the impact of ISO 14001 certification:



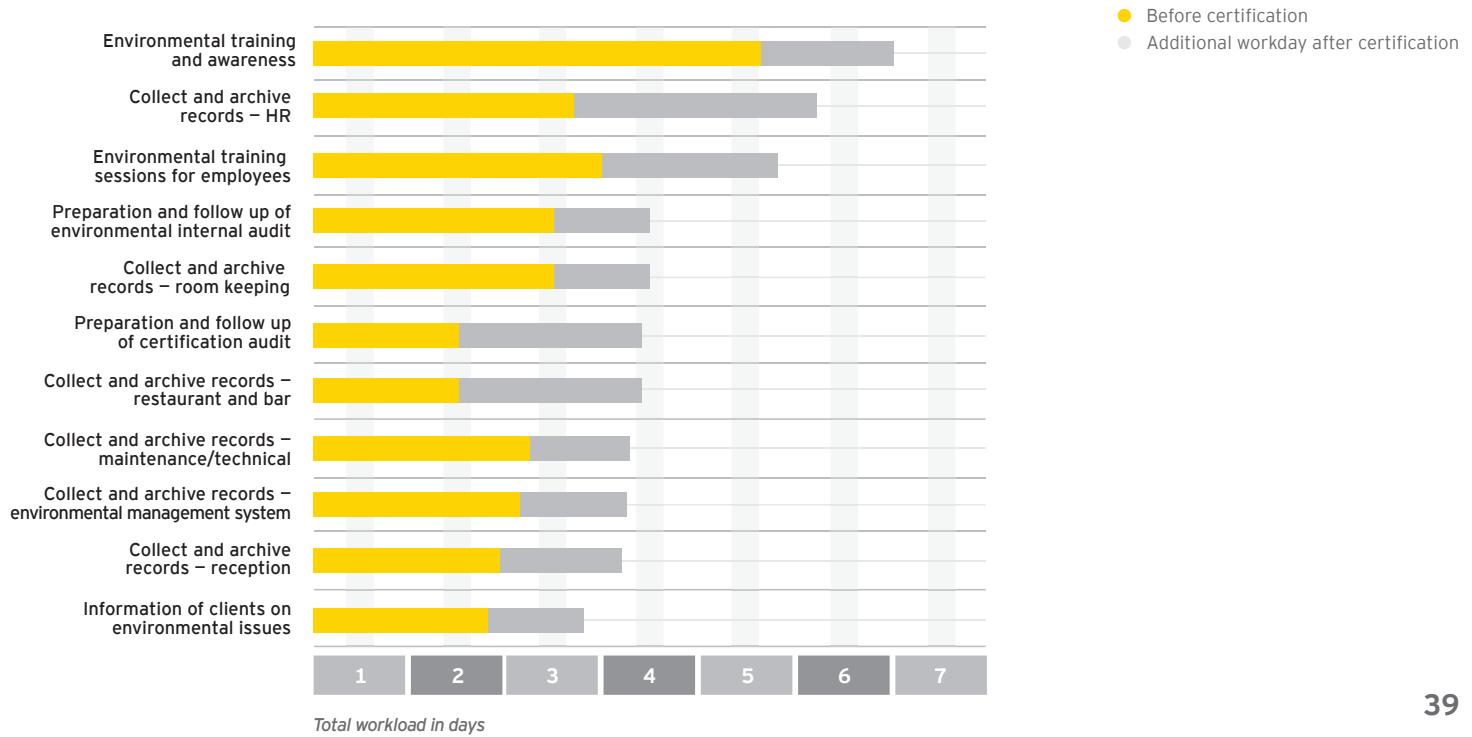
Value from our approach

- ▶ **Demonstration of the impact of ISO 14001 certification:** reduction of water and energy consumption, increase of B2B sales, B2C customer satisfaction
- ▶ **ROI estimation** of ISO 14001 certification
- ▶ **Recommendations** for environmental management systems

B2C customer satisfaction:
certified versus non-certified
hotels five years after certification



Estimation of workload for
implementing certification



Business case

Valuing environmental risk and resilience

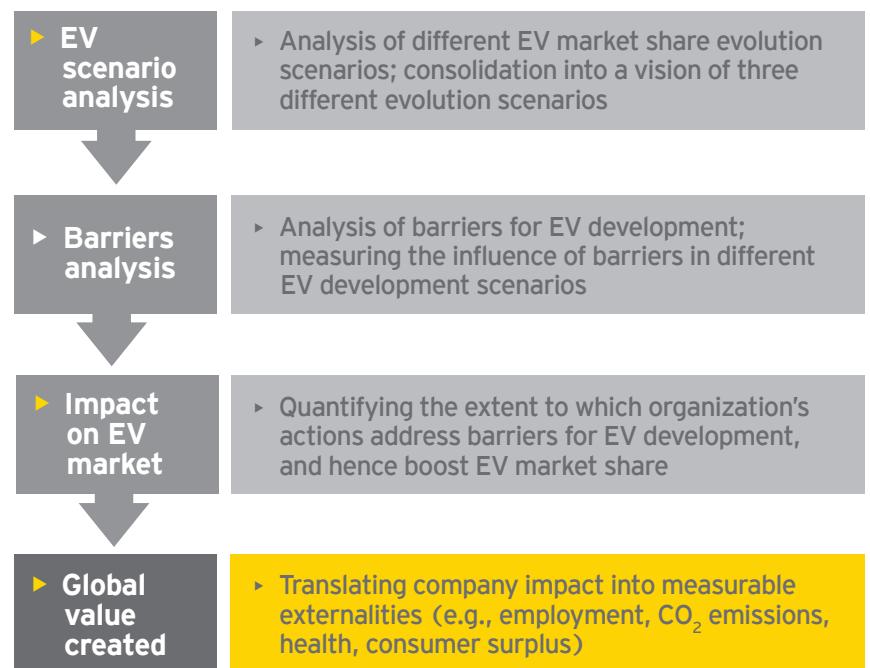
Measuring business sensitivity to environmental factors

The organization's need

The organizer of an electric racing competition in Europe wanted to measure the potential "sustainability value" generated, through supporting the electric vehicle (EV) market.

EY's approach

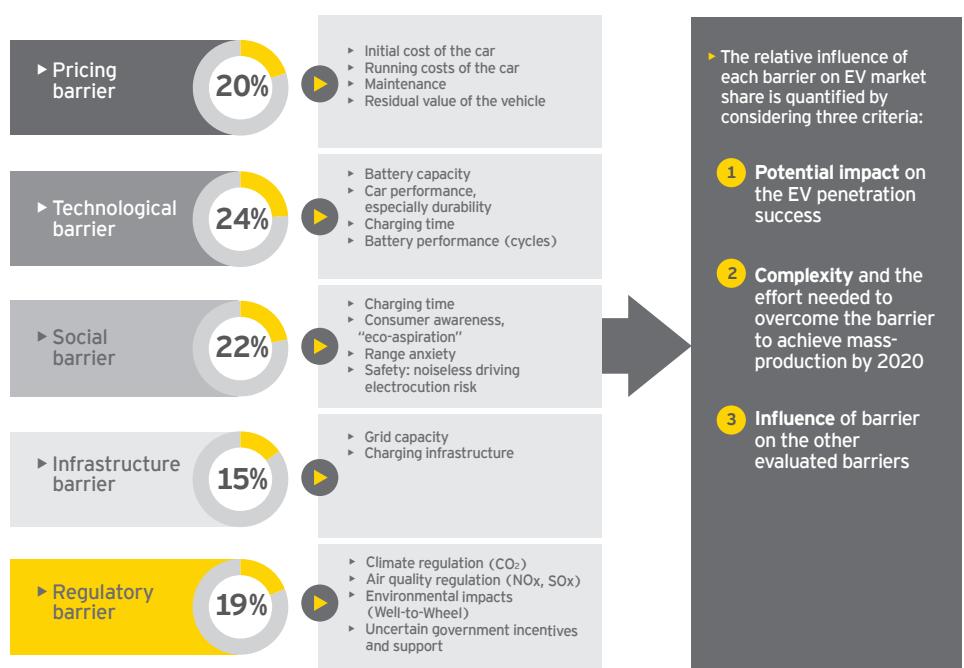
A four-stage approach for estimating the organization's potential boost to the EV market and translating this contribution into positive externalities.



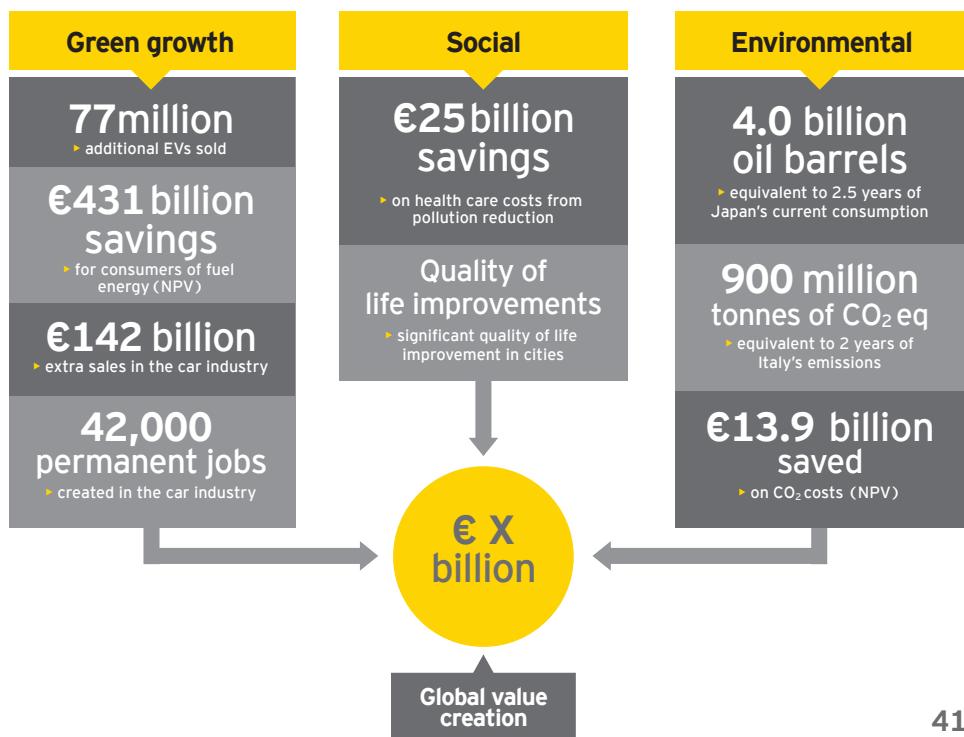
Value from our approach

- ▶ **New perspective on EV market** and organization's role
- ▶ **Estimation of organization's potential sustainability value** (fuel savings, health, employment, CO₂ emissions, etc.)
- ▶ **Strategic recommendations** for organization to reach its sustainability impact objectives through its actions

Understanding of EV market barriers and their relative strength



The organization's "extended value" measured by its economic, social and environmental externalities



Business case

Valuing externalities

Measuring the potential externalities of renewable energy policies

The organization's need

The organization wanted insight into the external costs and benefits of renewable energy policy measures that are not yet accounted for in the decision-making process (job creation, GDP, energy security).

EY's approach

Wind technology was selected as the reference renewable energy source and was compared to Combined Cycle Gas Turbine (CCGT). For six countries and the entire EU27, the following work was done:

Micro-analysis:
up-front price of each source of energy

- ▶ Estimation of capex, opex, fuel cost and CO₂ costs
- ▶ Calculation of the levelized cost of energy in € per kWh

Macroeconomic analysis:
economic benefits of each source

- ▶ Computation of the turnover, global value added and jobs created
- ▶ Direct, indirect and induced economical effects
- ▶ Additional effects (security of supply, wind integration costs, etc.)

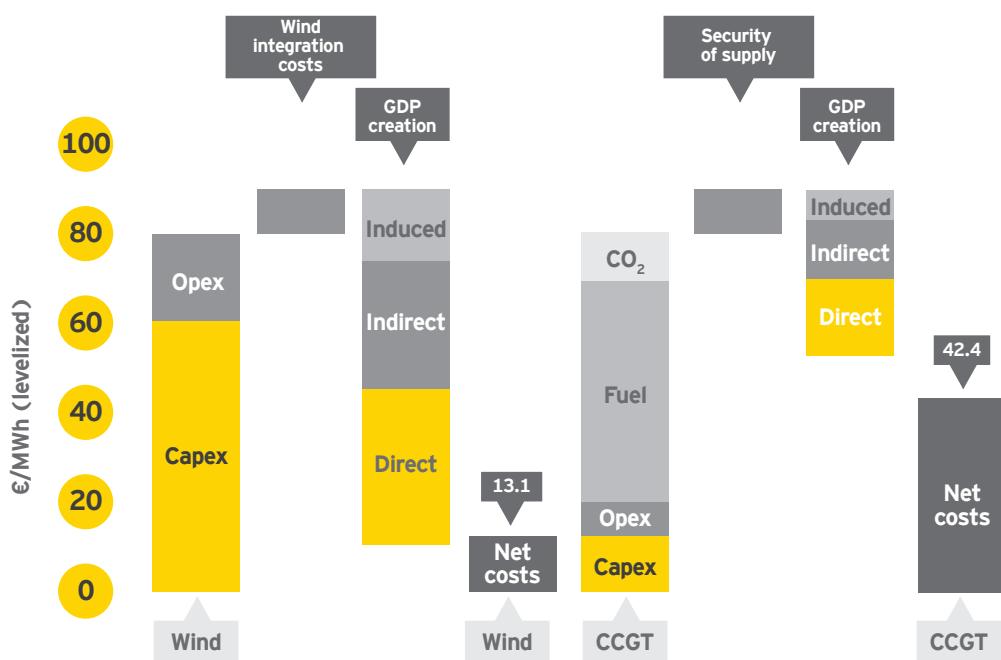
Bibliographic analysis

Impact of wind power on electricity spot prices

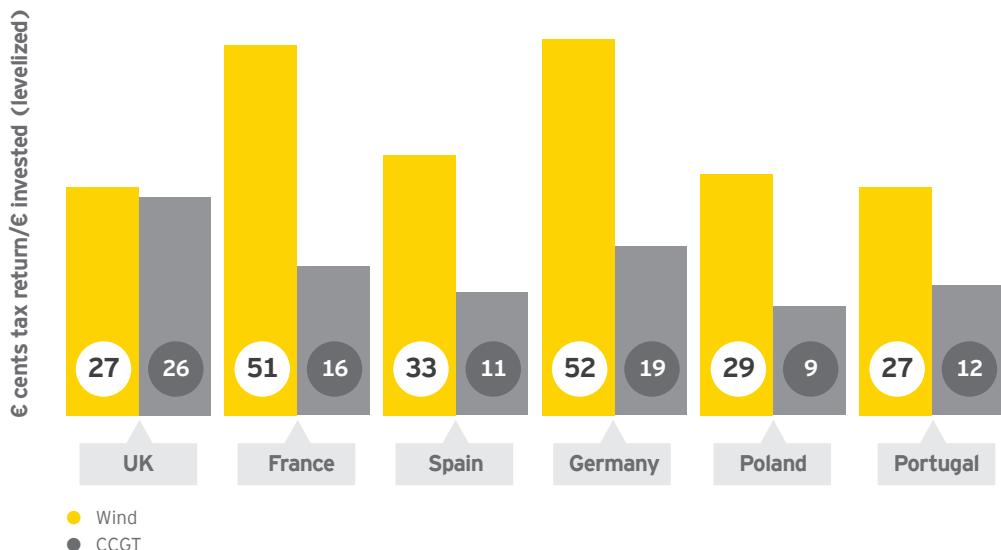
Value from our approach

- **Insight into socioeconomic effects** of wind energy for several EU countries
- **Analysis of the contribution** of windpower to energy security for several EU countries
- **Comparison of net costs** when integrating all external costs
- **Calculation of impact** of wind energy on electricity cost

Comparison of levelized cost of energy, including environmental and social costs and benefits



Analysis of tax revenues in different countries



Business case

Valuing environmental risk and resilience

Measuring customer sensitivity of business to environmental factors

The organization's need

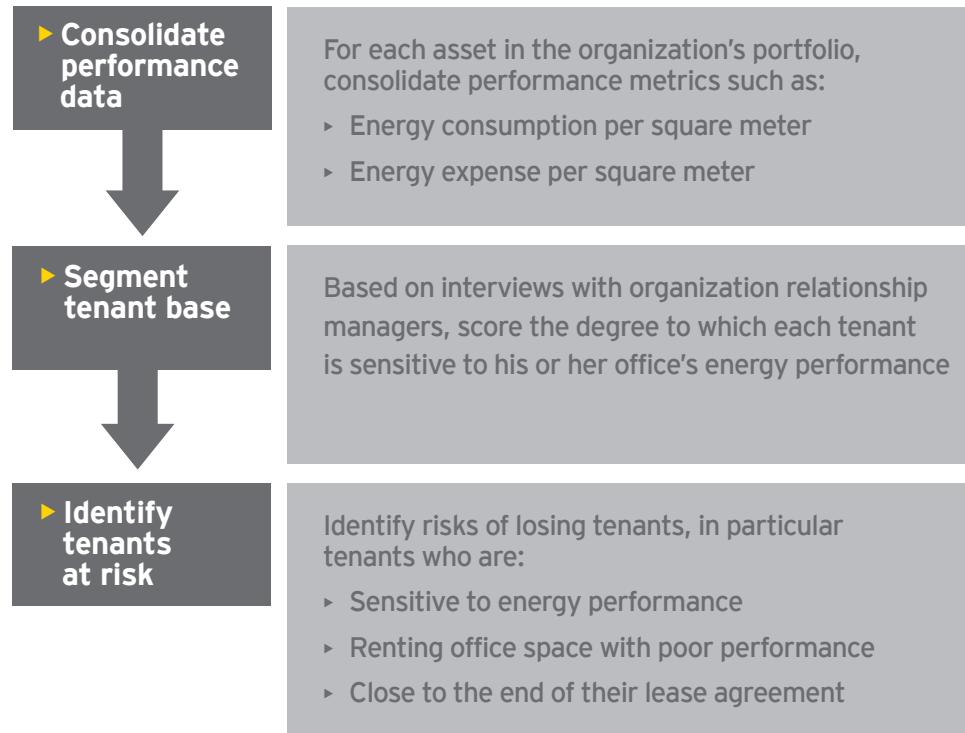
A real estate owner, primarily renting offices, wanted to:

- ▶ **Segment its customer base (tenants)** according to sensitivity to energy performance
- ▶ **Measure the risk of losing tenants** due to poor energy performance

EY's approach

EY developed a three-step approach:

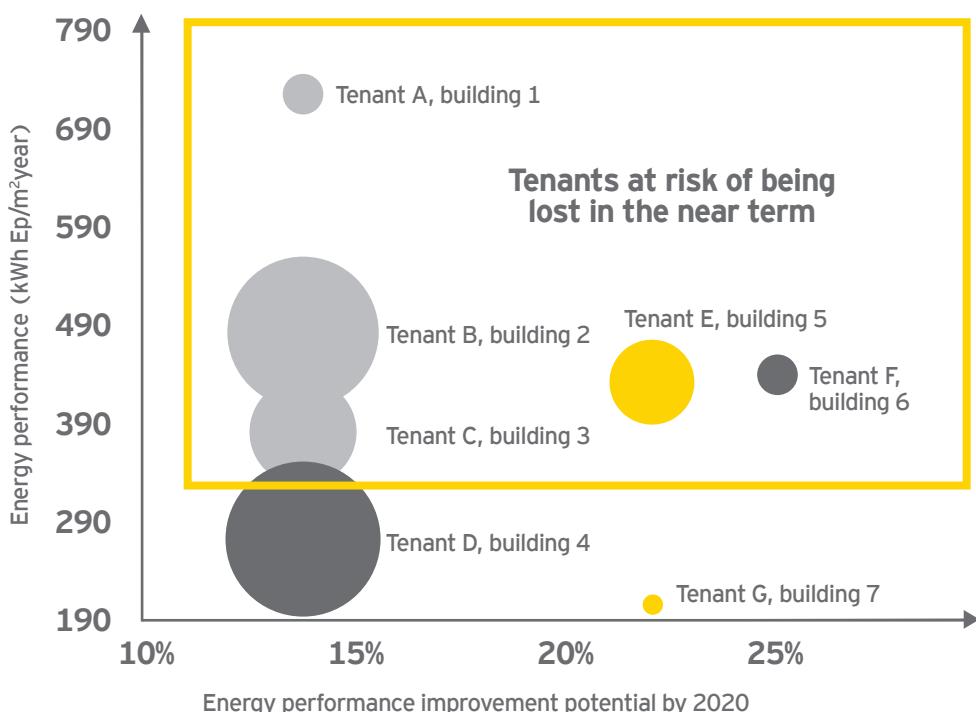
1. Consolidate available data and establish energy efficiency metrics for each building in the asset base
2. Develop a scoring system for segmenting tenants according to their sensitivity to energy performance
3. Identify tenants who are at most risk of cancelling or abandoning the contract



Value from our approach

- **Identification of segments of customers sensitive to energy efficiency** and valuation of the risk faced by the organization of having office space with poor energy performance
- **Integration into B2B marketing strategy** of energy performance and tenant sensitivity to energy performance

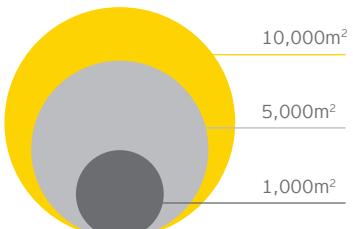
Identifying tenants at risk of cancelling or abandoning the contract (early adopters who are most sensitive to energy efficiency, but working in offices with poor energy performance)



End of lease agreement

- Within 2 years
- Within 3 years
- Within 4 years

Surface



Business case

Valuing impact on reputation

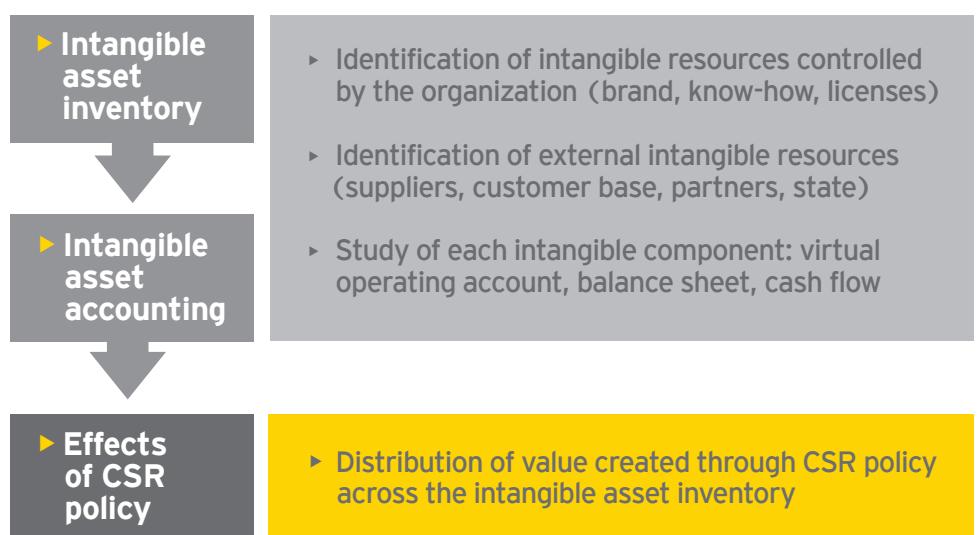
Measuring the impact of CSR policy on intangible capital

The organization's need

The organization wanted to study the sustainable value of its CSR policy and measure the extent to which CSR has enhanced its intangible capital: licenses, technologies, brand reputation, processes, know-how, customer base, partnerships, suppliers, etc.

EY's approach

Our approach consisted of delineating the organization's intangible asset inventory and connecting the benefits of CSR policy with shared value creation and intangible asset appreciation.

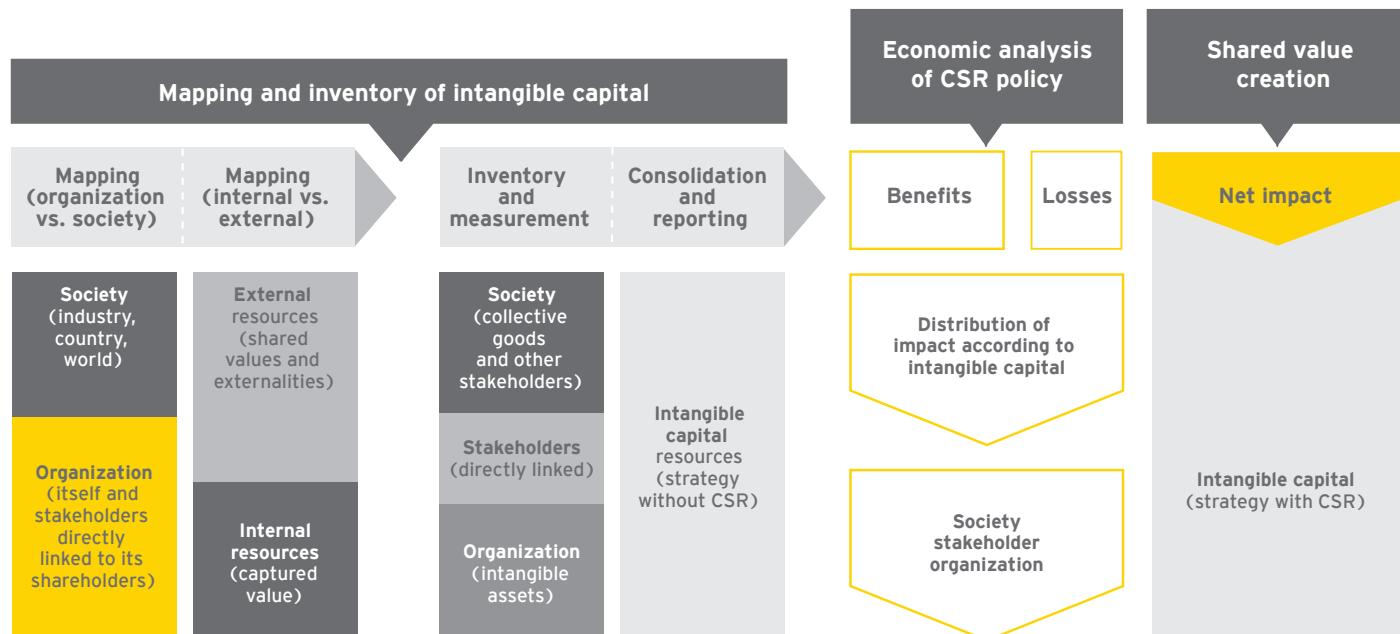


Value from our approach

- **Vision of value added through CSR policy** and the impact on enhancement of intangible assets
- **A multidisciplinary team** combining CSR advisory, HR, stakeholder consultation and quantitative modeling to achieve the best results

This is underpinned by a SWOT analysis. The analysis included an estimate of the monetized changes in value of intangible assets as mentioned in the SWOT analysis.

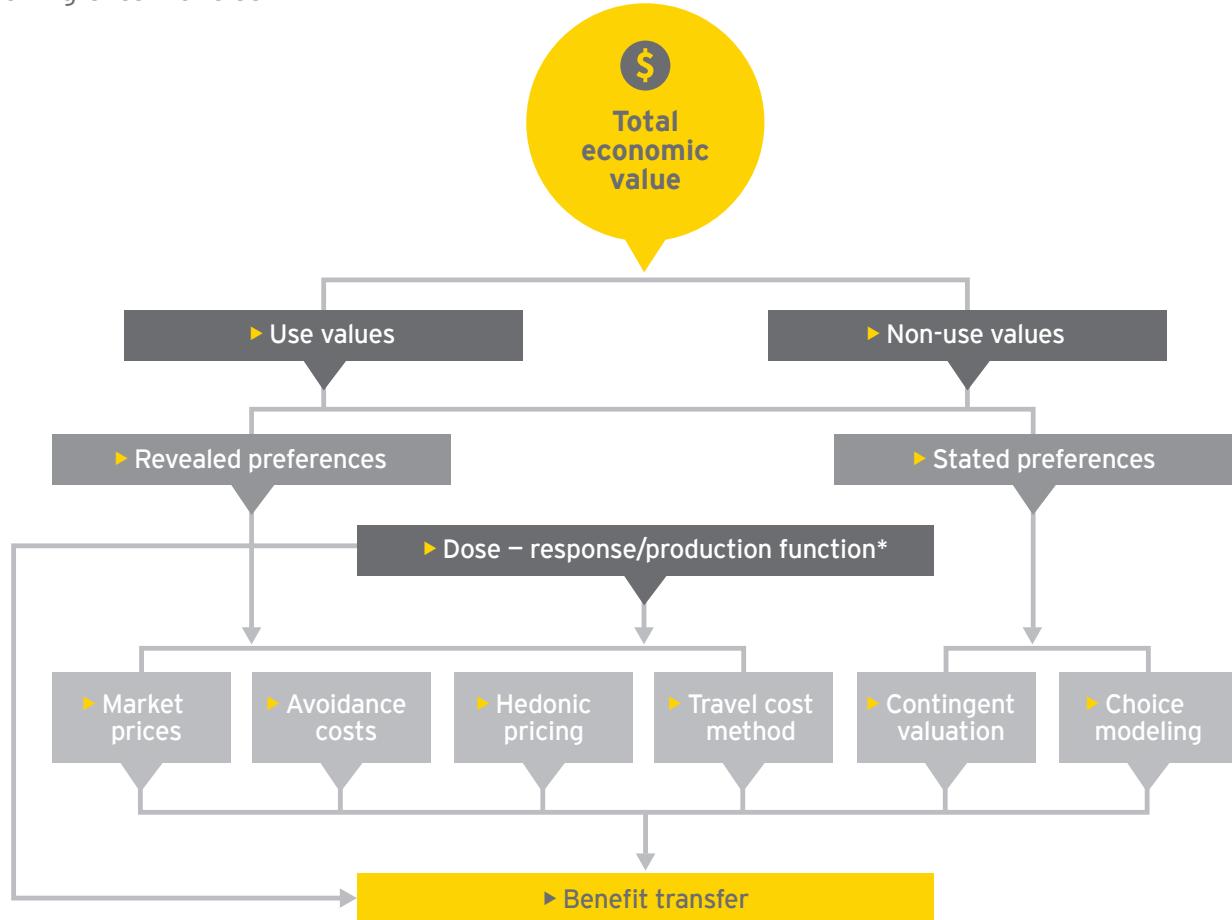
Economic analysis of CSR policy, intangible capital and shared value creation



Appendix iii

Methods of economic valuation of externalities

Main valuation techniques used in measuring externalities



Source: Pearce, Atkinson, Mourato, "Main valuation techniques," Cost-benefit analysis and the environment: Recent developments: The Stages of a Practical cost-benefit analysis, February 2006

*Dose response/production function approach is not a valuation technique per se, but it is an important element of several of the valuation approaches (e.g., dose response function may be used to establish the link between air pollution and health effects).

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The industry and countries in which you operate as well as your extended business relationships introduce specific challenges, responsibilities and opportunities.

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