

Technology for Integrated Reporting

A CFO guide for driving multi-capital thinking

“Successful business thinking, management and reporting today depends on broader information sets and quicker, more sophisticated ways of analysing the material information required for decision-making.

“In modern companies, this requires the application of technology to transition from the largely financial models of management practice and corporate reporting to an integrated view that supports business resilience.”

Jyoti Banerjee, <IR> Technology Initiative, IIRC

Introduction

Why we need technology to support next-generation reporting and management

This Guide, developed by the participants in the <IR> Technology Initiative, offers practical assistance for Chief Financial Officers (CFOs) seeking to craft technology capabilities that support and enable next-generation business management and reporting practice. Today's business problems are daunting to address, but there are companies already doing practical things to change the way they work, and introduce a new information culture into their organizations. The purpose of this document is to introduce CFOs to these issues, and provide straightforward, practical ways to navigate this fast-changing landscape¹.

Today's business environment is changing at a phenomenal rate. Technology has played a key role in driving some of that change, particularly through disruptive business models, the use of big data, and the speed of business interactions. But it also enables businesses to understand, assess and act on the wider issues that drive superior performance.

For years, businesses have been held back by markets focused on the short-term, a lack of longer-term thinking and a shortage of information on the true sources of reliable value creation in a company over time – things like innovation, brand equity, customer loyalty, and key stakeholder relationships. Fortunately, there is a tool to help businesses understand, manage and communicate about the sources of value creation: Integrated Reporting <IR> brings together material information about an organization's performance across all relevant resource areas or 'capitals' in ways that enable better informed management within the business and enhanced communication outside it.

This sort of next-generation approach to business thinking, management and reporting depends on broader information sets and quicker, more sophisticated ways of analysing the material information required for decision-making. In modern companies, it requires the application of technology to the transition from the current model of management practice and corporate reporting (largely financials only) to an integrated view.

Jyoti Banerjee, <IR> Technology Initiative, IIRC

¹ There is a companion document, *The Technology Blueprint for Integrated Reporting*, which is aimed at chief information officers (CIOs) who need to implement an integrated information architecture.

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The <IR> Technology Initiative

The information challenge is increasing all the time. Already, corporations have to produce regulatory financial information and prescribed environmental, social and governance (ESG) disclosures, while many add corporate social responsibility (CSR) and sustainability reporting to this list. Integrated Reporting, or <IR> for short, is a high level approach that connects the material elements of all that information and helps to identify any missing pieces, to ensure concise, decision-relevant reporting that enables strategic, integrated thinking.

The <IR> Technology Initiative is a multi-year programme of the International Integrated Reporting Council (IIRC) that seeks to build a deep understanding of how technology can be applied to help progressive report preparers and users to achieve their goals, and to consider how the evolution of corporate reporting is impacting – and being impacted by – technology.

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For more information on the <IR> Technology Initiative, please email techinitiative@theiirc.org or visit the website: <http://integratedreporting.org/ir-networks/ir-technology-initiative/>

Chapter 1: The case for integrated thinking – and the enabling role of technology

The role of the CFO is increasingly strategic. For decades the CFO has operated as the financial gatekeeper of the company. The role of the CFO has focused on governance, compliance and control, seeking to optimize the efficiency of the organization and to manage financial complexity. Four important developments in the global business environment are beginning to change this situation.

1. Calls for long-termism

Investor communication has traditionally focused on the short-term financial performance articulated in annual reports for shareholders. However, demand is now growing from shareholders and stakeholders such as BlackRock CEO Larry Fink² for the board to additionally articulate a clear strategy for longer-term value creation, as well as the metrics to support it. Providers of financial capital increasingly believe that a longer-term perspective helps them to understand short-term financial results in the right context.

2. Visibility of multi-capital information

The increasing importance of information beyond just the financial is broadening the scope of financial and regulatory reporting for which the CFO is responsible. It is also broadening the CFO's role in decision-useful disclosure, as the CFO increasingly becomes a partner with the CEO in executing strategy. This is reflected in a growing number of regulatory requirements around the world. From 2018, for example, all large European enterprises will have to disclose material multi-capital information to their stakeholders. Further, a broader range of metrics (beyond the purely financial) are increasingly used by investors in making their resource allocation decisions: witness the nearly \$20 trillion of investments made worldwide in 2014 that incorporated multi-capital information into investor strategies.³

3. Exponential growth of data

A new understanding of the role of data in driving better, smarter, real-time decisions is changing the way businesses compete and operate. This data may be from inside the organization or outside of it, it may be structured or unstructured, online or mobile. Companies that invest in and successfully drive value from their data will enjoy a performance advantage over their peers. The challenge for CFOs is to enable a structured approach to decision-making through data-driven insights, enhancing the position of the CFO as the one delivering corporate truth.

² Footnote source: Larry Fink letter to S&P CEOs February 2016, <https://www.blackrock.com/corporate/en-gb/literature/press-release/ldf-corp-gov-2016.pdf>

³ US SIF and Eurosif data from 2014

4. Disruption driven by new business models

New business models are transforming the global business landscape and reshaping entire industries. The majority of the opportunities for these models are emerging from new and innovative ways of applying technology to traditional business practices. In this volatile environment, the key for the CFO is getting ahead, and staying ahead of disruption. CFOs need sharper tools to enable them to do this, because the rate of change will only accelerate.

The role of Integrated Reporting <IR>

There are individual solutions available to each of these developments in the business landscape. For example, some companies are exploring analytic solutions across their complex and fragmented information landscapes. Others are seeking new ways to track and report on metrics for non-financial capitals. The investments required to implement these compartmentalised approaches can be prohibitively expensive, and yet not scale effectively.

<IR> (which includes integrated thinking and reporting) is led by the International Integrated Reporting Council (IIRC) – a broad coalition including business, investors, standard setters, stock exchanges and NGOs aiming to drive an evolution in corporate reporting. The International <IR> Framework is providing a way for companies to think, plan and report on the business, supported by an integrated information architecture. <IR> is helping businesses to think holistically about their strategy and plans, make informed decisions and manage key risks to build investor and stakeholder confidence and improve future performance.

An integrated report is the most visible outcome of integrated thinking within the business. It encapsulates, in a concise and integrated way, how an organization's strategy, governance, performance and prospects lead to the creation of value over the short, medium and long-term. This process of integrated thinking drives communication by the organization internally and externally.

“Integrated thinking is the active consideration by an organization of the relationships between its various operating and functional units and the capitals that the organization uses or affects. Integrated thinking leads to integrated decision-making and actions that consider the creation of value over the short, medium and long term.”

The International <IR> Framework

At the core of <IR> is an understanding of how the organization is performing to create value over time across all the resources and capitals that are material to its business, such as: financial, manufactured, natural, social & relationship, human and intellectual capitals.

In an increasingly complex and interconnected world, there is an increasing blizzard of information generated by businesses and by others. It can be overwhelming and confusing - most people don't have time to make sense of it. The <IR> Framework provides a structure to help organizations focus on the strategic and relevant information. Technology has a critical role in supporting the integrated thinking and the reporting processes to make sure that both management information and external reporting are fit for purpose.

The rest of this Guide explores the business issues related to deploying technology to support integrated thinking and reporting. The focus is on exploring the questions and issues that CFOs should discuss with their information managers and technology specialists to create the right environment. The objective of this partnership is a smart information architecture that can be implemented across the organization, enabling the integrated thinking and reporting required to improve understanding of how value is created.

The bottom line:

- The role of the CFO is becoming increasingly strategic, driven by a disruptive global business environment where longer-term perspectives and broader information needs are changing reporting and disclosure requirements.
- Integrated thinking and reporting, or <IR>, has global momentum as is being embraced by companies to help them deal with this rapidly changing landscape.
- <IR> unites information across multiple capitals and over time, enabling a company to communicate its value creation story to stakeholders in a more holistic and effective way.
- Businesses and their stakeholders need broader, more relevant and mature information to be resilient and this creates challenges that require the CFO to collaborate with the CIO.

Why technology matters to <IR>

Technology has played a key role in disclosure since the early adoption of information technology for business reporting in the 1980s. To date, the emphasis of applying new technology has largely been on improving the cost, speed and quality of financial reporting. As a result, corporations have made significant investments in systems designed to process and safely store static, single-use information. These legacy systems continue to serve their intended purpose for traditional financial reporting.

The modern business landscape poses a new set of challenges. Telling the story of how an organization creates value over time, and across multiple capitals beyond the financials, requires connected, rapidly changing information to flow into management reporting, analysis and decision-making. The data underpinning the value creation story needs to be collected, integrated and processed in the right way.

The big shift in the role of technology in reporting

Given this context, there is a significant difference between the technology required to support traditional reporting, and the technology required to enable integrated thinking and reporting and reporting processes, as the following chart illustrates.

Comparing a traditional information management approach to <IR>

Domain	Traditional approach	Integrated thinking and reporting
Overall	Traditional reporting is a reflection on the company's financial performance that is not fully connected to strategy, operations and some organizational controls.	Integrated Reporting is the outcome of integrated thinking , made possible by financial and other material information that is connected across the company's reporting, strategy, operations and controls.
Strategy	The strategy planning process is disconnected from reporting: both are led by separate departments, and financial information is prioritized.	<IR> drives integrated decision-making across the organization: it is made possible through collaboration, and resulting insight informs strategy planning.
Operations	Information is siloed within the company's departments and systems: multi-capital information (beyond the financial) is often unstructured, with limited visibility across the organization.	<IR> information is connected across the company's departments and systems: connectivity is enabled and managed across multiple capitals and time horizons.
Reporting	Reporting is largely backward-looking and focused on financial performance: disclosure is within a short-term context and communicated with static tools.	<IR> tells the story of how the company creates value over time: the strategy of the company factors in multiple capitals and is backed up by relevant metrics and narrative.
Controls	Reporting is governed by well-established systems and rules for financial information: financial data is sourced with a consistently high level of quality and assurance and any data on other capitals is collected ad-hoc.	The quality and integrity of <IR> is governed across all information: organizations focus on improving the quality of data across all material capitals, giving wider access to this information throughout the company.

The impact on information consumption

It is important to note that this shift transforms not only how information is produced by organizations, but also how information is consumed by external stakeholders. Vast amounts of information about a company's performance are now available through online sources, from social media to data terminals and ranking organizations. This creates numerous challenges for readers of this information, because unlike an integrated report, data from outside the company is often presented out of context.

While this Guide focuses on the *production* of corporate reporting information and on the essential role of the CFO in driving this information inside and outside the organization, CFOs also have to think about how their valuable information will be *consumed* by external stakeholders, particularly investors⁴. One way to help the consumer of such corporate information is to use the

⁴ For a discussion of the use of Integrated Reporting in driving new ways to think about the consumption of annual report information, see *Contextual reporting connects the Integrated Report to company data*,

integrated report as the source of strategy, business context and material information. A report from the Federation of European Accountants on the future of corporate reporting refers to 'Core and More' reporting – this makes sense when the Integrated Report operates as the 'Core', and the so-called 'More' information is interpreted and contextualized in the 'Core' report, with links to more detailed information elsewhere, as appropriate.

The bottom line

- The role of technology in reporting is undergoing a big shift, driven by the need for integrated thinking across a company's strategy, operations, controls and disclosure.
- Whereas traditional annual reporting is backward-looking and limited to financial performance, <IR> tells a company's holistic value creation story across the short, medium and longer terms, requiring more interactive and visual tools for disclosure.
- <IR> enables a company to transcend data 'silos', improving 'connectivity' of information throughout the organization and across multiple capitals and time horizons.
- The quality and integrity of <IR> requires governance of both financial and broader information, a challenge given the ad-hoc collection of information on some resources that are material to businesses.

available on <http://integratedreporting.org/news/contextual-reporting-connects-the-integrated-report-to-company-data/>.

Chapter 2: Considerations for your partnership with the Chief Information Officer (CIO)

Engaging the CIO in <IR>

Mastering the big shift in technology for reporting requires the CFO to take a leading role, in partnership with the CIO and related stakeholders. The scope and depth of <IR> means this partnership needs to extend across the organization's controls, operations, strategy and reporting, the domains identified in the table on page 9.

Four key questions across those domains, as illustrated by the real examples below, can help guide this engagement between the business and technology functions of the organization.

Controls

Objective: The quality and integrity of <IR> is governed across multi-capital information

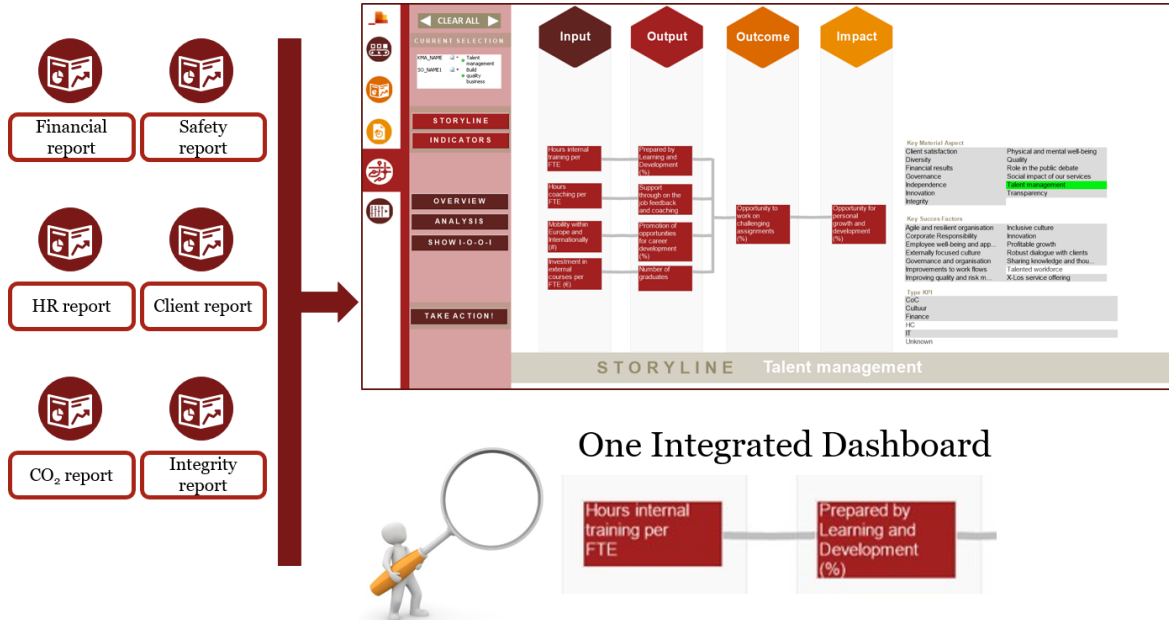
1. **Do our information systems cover all the information (across multiple capitals and time horizons) we need to run our business?**

The broader range of information required by management today means companies need to take stock of what kind of information they currently have access to, and where the gaps are. SAP, a German software company, had reported on its financial performance for over thirty years when the company started down the path of <IR>. In SAP's first integrated report, twelve issues were determined to be material to its performance. Notably, eight of these issues were related to resources other than financial capital – for example, relating to employee satisfaction, environmental impacts and customer engagement.

Some of this information already existed inside the company, but was not being widely shared or reported. Other types of information had to be sourced from nothing. In some instances, processes had to be put in place to capture the information that had not been tracked before.

PwC Netherlands, a professional services firm, seeks to represent the working of its internal organization using a management dashboard that reflects its own understanding of the key drivers of value creation. This dashboard, shown on page 12, is used by management to inform their business decisions. The tool links KPIs that deal with all the material issues facing the organization.

An integrated dashboard presents all management information via a concise overview that shows the connectivity across KPIs



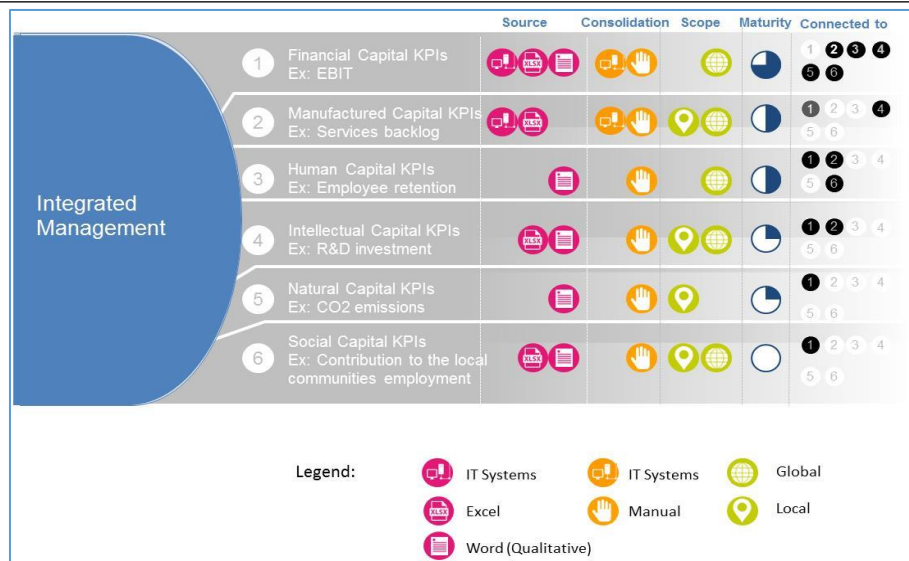
Source: PwC Netherlands

2. What is the maturity of the new information we are seeking to track?

Modern enterprises have become sophisticated in the way they track financial information in the business: the processes used for tracking the flow of financial information are deeply supported by technology, and are well understood when it comes to auditing the veracity of that information. As a business starts tracking new multi-capital information that it never tracked before, it soon discovers that none of that sophistication extends to these other sources of information.

Information supporting the different capitals may come from a variety of sources, at differing time intervals, and at differing levels of granularity. Indra, a Spanish systems integrator, uses the chart opposite to assess the maturity of the information it tracks, analyzing information such as how close the

Indra analyses the sources of information for each of its integrated KPIs in order to assess the maturity of the data



source data is from a transaction system, how the information is consolidated, and what its scope is. As a result, even as it starts using information from multiple capitals, it can assess what it needs to do to improve the quality of that data.

Some organizations, such as SAB Miller, Interserve and the Crown Estate, have used the Insight service from PwC to help them assess the maturity of their corporate information.

Operations

Objective: Information is connected across the company's departments and systems

3. Is our data stuck in silos obscuring the connectivity that exists across the information landscape?

Given the relative newness of <IR>, further research is needed on the impact of <IR> - integrated thinking and reporting – in terms of driving superior performance in the long-term. However, research does already show that multi-capital thinking and reporting has a material positive impact on financial performance. The evidence shows that so-called 'high-sustainability' companies significantly outperform their counterparts over the long-term, both in terms of stock market and accounting performance.⁵

Internally, companies are increasingly making these kinds of connections between financial performance and performance in areas such as human and intellectual capital. This connectivity, or integrated thinking, is essential in the modern business landscape.

Unfortunately, the data enabling these connections is often stuck in silos: while it may be visible to those operating inside a certain function, the lack of visibility outside that function reduces the insight that connectivity can bring. The concomitant challenge is to make sure that the insights from properly connected information is not buried under a data deluge. That is why it is important to identify the material drivers of value creation and then understand the connectivity across these material issues.

Strategy and reporting

Objective: <IR> drives integrated decision-making across the organization and tells the story of how the company creates value over time, across multiple capitals

4. How can we harness the power of big data and improved disclosure to analyse our performance before our investors and stakeholders do?

Investors are accessing a growing range of tools to support their investment allocation decisions. In 2014, according to data from US SIF and Eurosif, over \$20 trillion was invested in strategies that used multi-capital metrics as part of the investment decision. In Europe, this represented 59% of the assets under management, with the US showing a lower percentage.

As investors continue to use this kind of multi-capital information to their advantage, companies also have to learn to be proactive about using it to identify and leverage their own drivers of value creation. In 2015, investment management firm Arabesque Partners and researchers from

⁵ For more information on the Harvard Business School study, see http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1964011

Oxford University released the findings of their analysis of more than 200 sustainability studies and reports.

- 90% of the studies showed that sound sustainability standards lower a company's cost of capital
- Nearly 90% concluded that solid 'ESG' practices drive improvements in operational performance
- 80% of the studies discovered that good sustainability practices influence stock price.⁶

Improving the maturity and reliability of multi-capital information will take a combination of good processes and the application of technology.

The starting point

<IR> is a journey during which a company builds maturity in thinking in an integrated way about the range of information that is material to value creation. This means that evolving a company's information systems to support the shift to integrated thinking does not require transformation overnight. As the company's use of integrated thinking and reporting matures, so should the information architecture enabling it.

Understanding what is already in place

Every modern enterprise already has an information architecture in place. Some will have an architecture that supports a move to integrated thinking and reporting. It is likely, however, that businesses will need to further develop the information architecture as few already have all the required elements in place.

In practice, achieving the right information architecture for today's business challenges is made more complicated by a number of problems that most companies face when taking stock of their current systems:

- **Scattered landscape** - Technology today can be disjointed and not-(well)-connected when it comes to the six capitals. Additional databases to link siloed information can often lead to confusion and complexity.
- **Lack of proper definitions** - At the moment we lack agreed / standardised rules when it comes to assessing and reporting multi-capital information (compared to financial rules and standards). We need a common understanding of definitions (what exactly do we include or exclude in employee headcount?) and measurement standards (should energy consumption be measured via usage or in monetary units of purchased energy?)
- **Data granularity** - Financial data has often a much finer granularity than, say, natural capital KPIs (such as energy consumed). For example, we might know the cost price of any given product component in a Bill of Materials, whereas we might only know the total consumption of energy at business unit level.
- **Period mismatch** – The cadence a company uses for measurement of one stock of capital to that used for another type of capital varies. Human capital is only assessed a few times a year, during exams, tests and assessments, whereas financial or manufactured capital stock levels are usually measured on a daily basis.

⁶ G.L. Clark, A. Feiner, and M. Viehs, "From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance," March 2015, www.arabesque.com.

The next section addresses the key enablers to help overcome these problems in the process of migrating to a new information architecture for integrated thinking and reporting.

The bottom line

- There is a significant opportunity for the CFO to provide the leadership required to put in place the processes, data and systems that enable meaningful understanding of how value is created and destroyed.
- CFOs and CIOs need to collaborate across strategy, reporting, operations and controls to understand: the scope and maturity of the material information, how to overcome any data siloes, and what to do to harness the big data and other tools that their investors may already be using in their own external analysis.
- Companies will face challenges in migrating to an effective information architecture because information on human, social, intellectual and natural capital is often defined, processed and governed differently to information on financial or manufactured capital.

Migrating to a new information architecture

Thinking across the different capitals employed by modern organizations is clearly critical for informed strategy and resilient business models but it is a challenge for more complex businesses – an evolutionary approach to the transformation is often needed. Every company's information architecture needs to be able to support its progression in strategic thinking and integrated decision making over time. Without the relevant information, reporting will either be irrelevant or fictional.

An information architecture to support the business cycle

We have observed that the most important drivers for change are:

- Getting better internal **insight** on the drivers of value creation
- Achieving full **accountability** for all the material capitals over the short, medium and long term
- **Complying** with legislative and regulatory requirements
- Responding to the need for **transparency** and **connectivity** across the value chain
- Bringing clarity to the company's **strategy for value creation** and perspectives on the impact of external change on this strategy, which drives **better business results** and ultimately helps to attract and retain investors.

This is vital to agree upon as it underlines the importance of well-defined processes and supportive technology. The table below from Fronesis, a UK advisory service, contrasts current practice with the new approach needed in a value-driven context

An outline of the process steps needed for Integrated thinking and reporting

	Integrated thinking cycle	Typical Current Status	Modern requirement
1	Strategy planning	<ul style="list-style-type: none"> Reporting and strategy process often divorced (“backward looking reporting does not inform forward-looking strategy”) 	<ul style="list-style-type: none"> Strategy, performance and outlook are linked together
2	Selection of information	Characteristics: <ul style="list-style-type: none"> Financial Internal Structured formats Fixed reporting timeframes 	Characteristics: <ul style="list-style-type: none"> Non-Financial External Unstructured formats Multiple time frames / ranges
3	Validation of information	<ul style="list-style-type: none"> Governed by precise rules and processes 	<ul style="list-style-type: none"> Governed by algorithms and assumptions (e.g. data-mining, text analytics, pattern recognition,...)
4	Analysis capabilities to support materiality requirements	<ul style="list-style-type: none"> Tools are in place to analyze structured information Data analysis by organizational structure, such as: <ul style="list-style-type: none"> Organizational silos Regions Legal entities 	<ul style="list-style-type: none"> Tools are in place to analyze unstructured information Data analysis by multiple categories, such as: <ul style="list-style-type: none"> Capitals Strategic objectives Time frames
5	Internal publishing and decision making	<ul style="list-style-type: none"> Management processes closely tied to financial performance 	<ul style="list-style-type: none"> Management processes tied to results across multiple capitals
6	External publishing and decision making	<ul style="list-style-type: none"> Limited external audience, shareholders, regulators Mainly “read only” usage 	<ul style="list-style-type: none"> Wider external audience including public and various interest groups Interactive use

Source: Fronesys

Key enablers to migration over time: the virtuous cycle

Three elements are crucial to evolving the information architecture over time to support integrated thinking and reporting:

- Establishing the integrated thinking approach**

This means tracking how the organization is developing its understanding of value creation, assessing what information is needed to support these value propositions, and using this information to inform resource allocation plans. Analysing all information to appropriate standards, using tools to visualise relationships, and engaging with stakeholders are all key to doing this.
- Operationalizing the integrated thinking approach**

This means aligning business processes (and their corresponding information systems) with the way value is created across multiple capitals. Having the right information available is not enough to make an enterprise ‘integrated’ because value creation

processes need to be operationalized. Defining and embedding integrated performance indicators and tracking performance against them through integrated dashboards, are key to doing this.

- **Disclosing the integrated thinking approach**

This means carrying out a statistical analysis of information relating to multiple capitals from a historical perspective as well as examining future trends. To do this, organizations need to collect information that allows relationships, correlations and/or causations between the different drivers of value to be identified. Key to doing this analysis and using it to inform decision-making will be aligning the information gathering with integrated thinking processes, and engaging with people who are impacted by this.

Together these components, like integrated thinking itself, form a process of continuous development of the information architecture. Each component reflects how an organization can continually progress its understanding and use of integrated thinking and reporting.

In this section of the Guide, we have considered the kind of content that an information architecture needs to support in an organization that is adopting <IR>, and explored the challenges of migrating an existing information system to meet the new business requirements. In the next section, we will explore what the CFO can do to help make this information architecture a reality.

The bottom line

- Current IT systems are often not fit for purpose for today's business, given the importance of sourcing, connecting and managing information on multiple capitals and across short, medium and longer term time horizons.
- <IR> is a process of integrated thinking and reporting that evolves over time and therefore leads to an underlying information architecture that continuously improves, forming a virtuous cycle as a company establishes, operationalizes and discloses its understanding of value creation.

Chapter 3: Next steps for <IR> adoption

What the CFO can do to enable technology for decision-useful business information

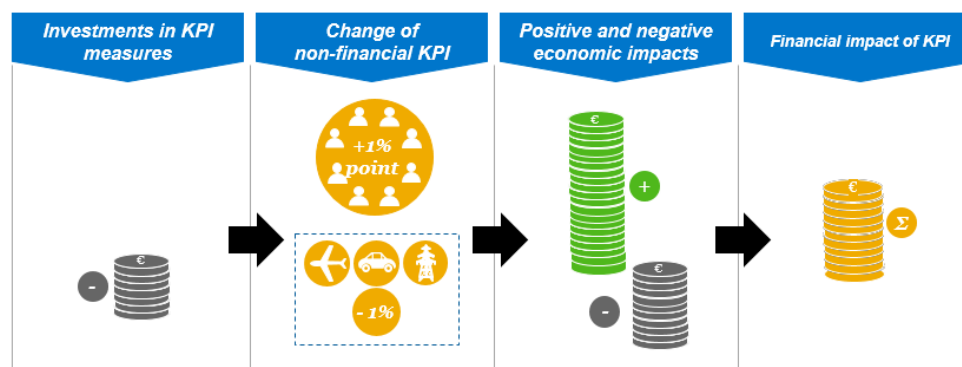
There are a number of concrete actions CFOs can take to ensure the foundations are laid for the right kind of information architecture to evolve along the company's <IR> journey.

Step One - Promote a culture of analysis

It is unlikely that most companies can immediately determine the financial impact of indicators across all material capitals. Many start by developing a strong understanding of the correlation between indicators: identifying whether a change in a particular KPI has a positive or negative economic impact. These correlations are often logical. Employee retention has an impact on profit, for example, and so does customer satisfaction, while employee trust in management has an impact on employee retention.

The company can build on these correlations to identify opportunities to calculate financial impacts of broad set of performance indicators, starting with a selection of metrics that point to material drivers of value creation. This requires more advanced analysis of data to model the pathway impacts. Once a foundation for this type of analysis is created, levers can be identified that impact changes to the indicators, ultimately impacting the bottom line. The chart below shows how this process can work over time.

An example process to understand KPI interdependence.

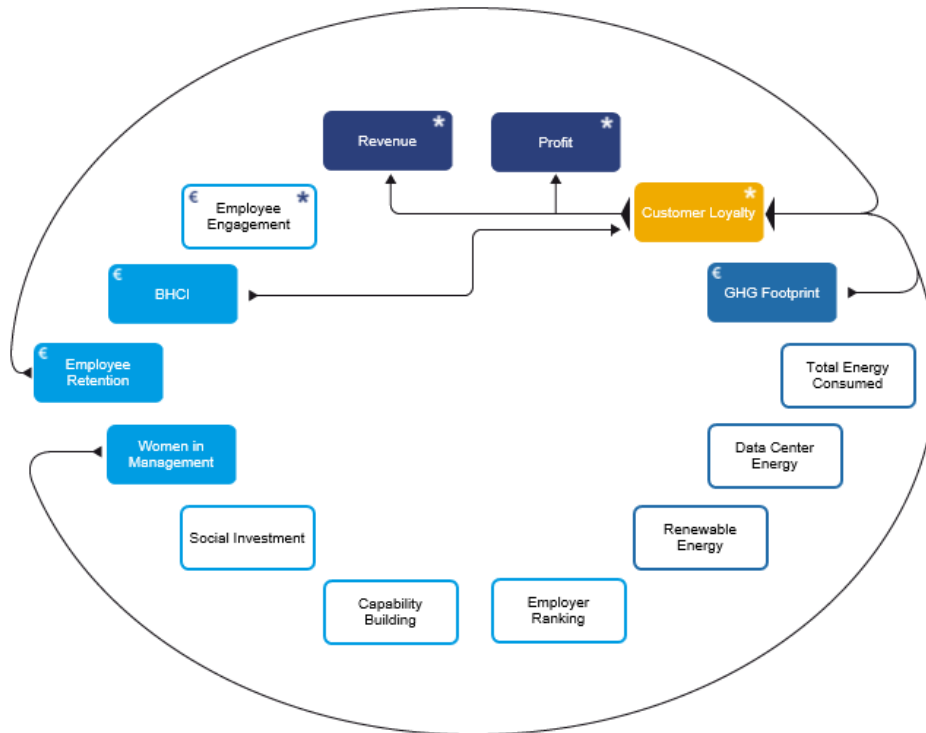


Source: SAP

The diagram on the next page (19) shows an impact analysis for the 'customer loyalty' KPI as used by SAP. The diagram illustrates the material issues that impact this indicator, and those that are impacted by the indicator. This analysis helps organizations understand their business more deeply. Various stakeholder groups, especially shareholders, are increasingly looking to companies to illustrate this level of understanding around material impacts.

Example of an impact model demonstrating connectivity across capitals

★ Our corporate objectives € Impact on operating profit ■ Economic indicators ■ Social indicators ■ Environmental indicators



Source: SAP Integrated Report 2013

The role of the CFO:

- Collaborate with issue owners across the organization to analyse the interdependence between key indicators across the capitals that are relevant to your business
- Foster communication between the various owners of information, using groups dedicated to integrated thinking in your existing collaboration spaces
- Enable investment in the tools required to analyze the impact of material KPIs beyond just the financial and lead the process of analysis with key internal stakeholders

Step Two - Gauge the company's data management maturity

Organizations must trust their data in order to understand their business and reduce the risks of misleading stakeholders with reporting. This trust can be built by assessing the maturity of data available for a KPI. The assessment needs to cover multiple dimensions, including the type of systems used to generate the information and the reliability of its conversion from raw data into a KPI metric. The diagram below (page 20) illustrates the way Indra, a Spanish technology company, visualises the maturity of KPI definitions as well as the systems and processes used to collect, consolidate and report this information.

Companies can use this approach to identify areas for improvement, both in performance and in the systems used to collect data. This mapping can also inform decision-making on which KPIs to focus on based on the resources available, because it reveals the level of effort required to achieve a thorough understanding of each KPI.

Assessing the maturity of multi-capital data sources

#	KPI	Clear Definition	Quantifiable?	Required effort & data research
1	Ecological Indicators	Yes	Yes due to clear and operational definition	Low/moderate Core data available
2	Employee Retention	Yes	Yes due to clear definition	Low/moderate Review & adjustment (if applicable)
3	Business Health Culture (BHC)	Yes	Yes due to clear and operational definition	Moderate Core data available
4	Employee Engagement (EE)	Yes	Yes due to clear and operational definition	Moderate Core data available
5	Women in Management	Yes	Yes due to clear definition	High due to complex cause-effect relation
6	Employer Ranking	No	Difficult because information about candidates' attitudes seems hardly quantifiable	Very high due to behavioral impacts which mainly effects candidates
7	Capability Building	No	Difficult due to clear and operational definition	High due to definition deficiency
8	Social Investment	No	External effects quantifiable (e.g. iooi methodology), internal effects hardly quantifiable	Very high due to external impacts

Timeline
 =Focus =Out of scope in phase II

Source: Indra

The role of the CFO:

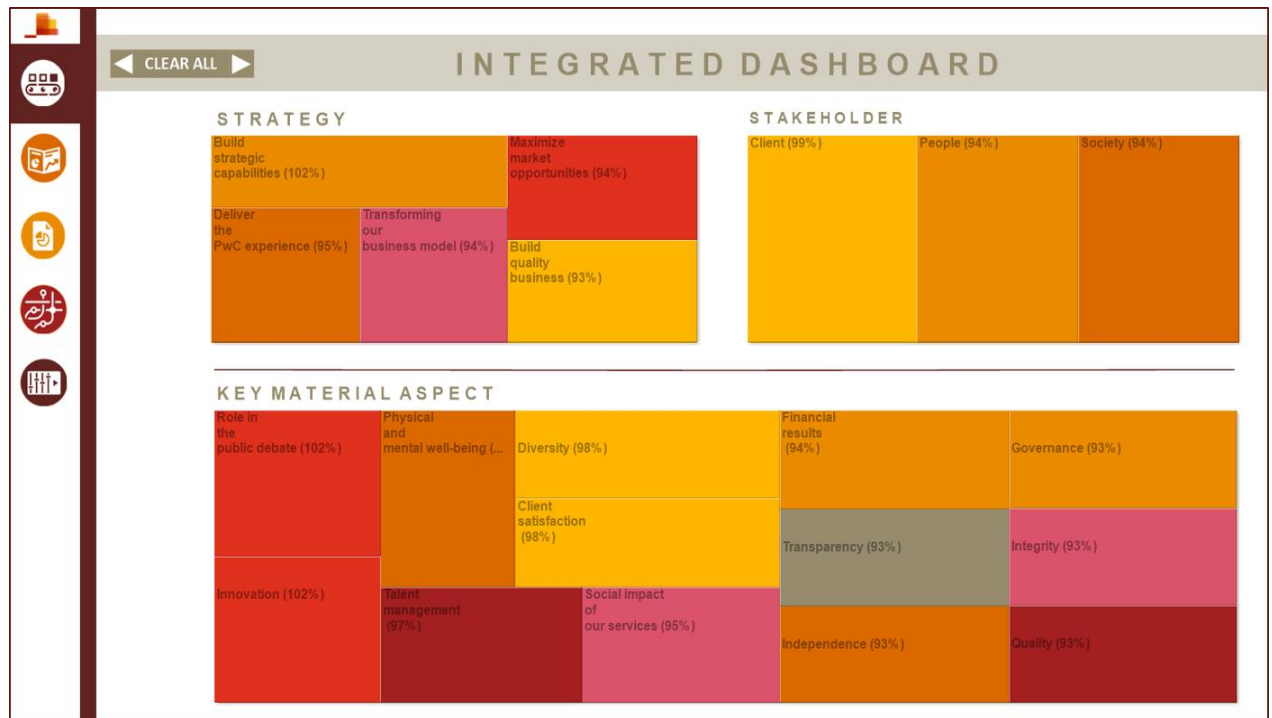
- Work with the chief information officer to enable a comprehensive assessment of data maturity, aligned as closely as possible with the standard expected for financial information
- Support internal stakeholders to balance the expected progress in the quality of reporting at each stage in the company’s journey with investment in the right level of internal resources, time and effort required to source material information

Step Three - Make <IR> insight visible and useful for decision-making

Many companies avoid providing any transparency on information that is not fully vetted or complete. However, transparency is a key tool for advancing integrated thinking and reporting. Making insight visible across the organization encourages employees and managers alike to understand the impacts of their decisions in a more integrated way.

Leading companies provide internal sustainability or integrated dashboards that are regularly updated and allow employees to explore information in more detail. The dashboard on page 21 illustrates PwC’s way of thinking about the approach needed to develop an integrated dashboard.

Example of an integrated dashboard



Source: PwC Netherlands

The role of the CFO:

- Provide leadership to make information more transparent across the organization by including a broader set of material information, and any associated impacts, on management and company-wide dashboards.
- Continue to highlight what needs more clarity where information and analysis is lacking, and promote the role of issue owners in finding it.

Step Four - Build on integrated thinking and reporting best practices

As the migration challenges presented earlier in this Guide demonstrate, creating the information architecture to enable integrated thinking is a process that evolves over time. The first objective must be to find ways to enhance existing systems and refine existing business processes with minimal impact. At the same time, the company can use this process to identify information gaps, assess data maturity and build a roadmap to improve information management and analysis.

Companies that already have internal collaboration portals, executive dashboards, or processes in place to build a sustainability report can extend these capabilities first, whilst working on the cultural issues relating to information transparency in a multi-capital environment.

The role of the CFO:

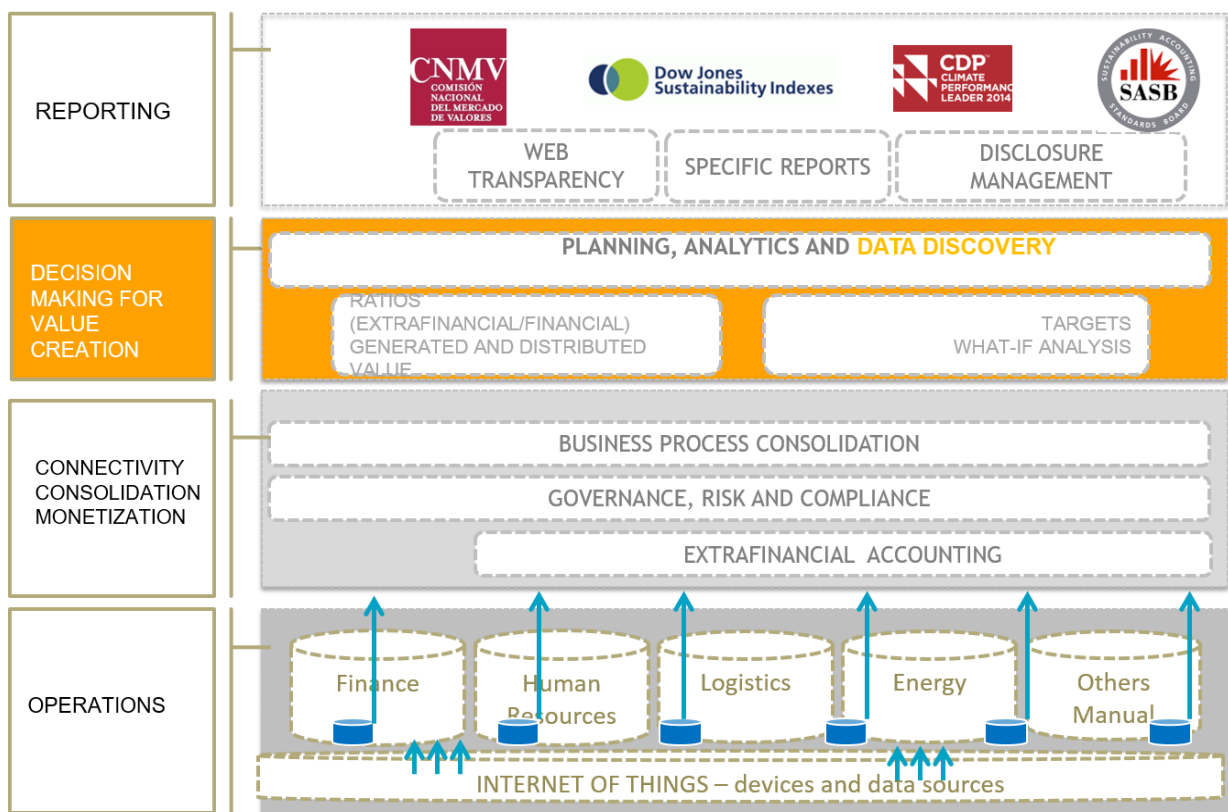
- Identify and embed best practices in bringing rigor to legacy systems and processes for collection, consolidation and disclosure of multi-capital information.
- Work with the CIO and key data owners to build a roadmap for improving data maturity, connectivity and decision-making that can help to optimize value creation.

Step Five - Aim for an integrated information architecture

By catalysing the creation of a single information architecture across the enterprise, CFOs have the opportunity to drive understanding of value creation and how to influence it in the organization: cutting through the silos so that the right people are connected to the information they need.

The diagram below shows how Indra has progressed on this journey to create such a system, which it refers to as the Indra <IR> Lab. By using a single information architecture to tie together processes relating to analysis, planning, operations and disclosure, the company has created a laboratory where information from multiple capitals can be analysed, set in context against the company’s plans and strategies, and then reported against, internally and externally.

Example of an information architecture to achieve integrated thinking



Source: Indra

Conclusion

Technology enables the creation of an information architecture that supports management and investor decision-making. Such an architecture is needed because the modern business landscape poses a new set of challenges: telling the story of how an organization creates value over time, and across multiple capitals beyond just the financials, requires connected, rapidly-changing information to flow into management reporting, analysis and decision-making.

The data underpinning the value creation story needs to be collected, integrated and processed in the right way.

The CFO owns these issues in the organization, and it is the CFO's responsibility to make sure that the right enabling architecture is put in place to take forward the management of multiple capitals across multiple periods of time.

<IR> Networks

Organizations looking to progress with <IR> can participate in <IR> Networks to engage with peers on leading practices, implementation challenges and technical projects.

To find out more, visit www.integratedreporting.org/ir-networks/ email: info@theiirc.org or call the IIRC on +44 207 504 2574.

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