



Nederlandse
Beroepsorganisatie
van Accountants



CAPITALS

BACKGROUND PAPER FOR <IR>

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The Technical Task Force of the International Integrated Reporting Council (IIRC) established a Technical Collaboration Group (TCG) to prepare this Background Paper for <IR>. The TCG was coordinated by the lead organizations with input from participants from a range of disciplines and countries. This paper reflects the collective views of TCG participants, not necessarily those of their organizations or the IIRC.

The IIRC considered interim findings from the TCG when preparing the Prototype Framework released in November 2012, and is further considering this paper in developing a Consultation Draft of the International Integrated Reporting (<IR>) Framework. This paper provides background information that will assist stakeholders when responding to the Consultation Draft.

The IIRC gratefully acknowledges the contributions made by the following in the drafting of this Background Paper for <IR>:

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1. Executive summary

This Background Paper for <IR> explores the concept of multiple capitals being adopted by the International Integrated Reporting Council (IIRC).

1.2 The capitals identified by the IIRC are: financial capital, manufactured capital, intellectual capital, human capital, social and relationship capital, and natural capital. Together they represent stores of value that are the basis of an organization's value creation.

1.3 The background to adoption of the capitals model in IIRC publications is explained in Section 2. Section 2 also explains the scope of this Background Paper for <IR>, and discusses use of the terminology "capitals" versus "resources and relationships" and the fact that reporting on multiple capitals is a relatively new and evolving field.

1.4 Section 3 provides an overview of the capitals concept. All organizations increase, decrease or transform capitals through activities. While most organizations rely on all capitals to an extent, some dependencies will be relatively minor or so indirect that they are immaterial for reporting purposes.

1.4 Whether or not the capitals an organization uses or affects are owned by that organization, their availability, quality and affordability can affect the long term viability of an organization's business model and, therefore, its ability to create value over time. This is particularly the case with respect to capitals that are in limited supply and are non-renewable.

1.5 Quantitative indicators, such as key performance indicators and in some cases, monetized metrics, can be very important in explaining an organization's uses of, and effects on, various capitals. Nonetheless, it is not an objective of <IR> to measure all the capitals or movements in them. Many uses of, and effects on, the capitals are best (and in some cases can only be) reported on in the form of narrative, rather than through metrics.

1.6 Section 4 considers the role of the capitals model in the Integrated Reporting (<IR>) Framework (the Framework), noting that at this stage, the categorization and descriptions adopted by the IIRC are not intended to be the only option available to preparers of integrated reports. Nonetheless, because of the central role of the capitals in the Framework, it is important that its categorization, and the descriptions it adopts, are soundly based. Therefore, this section summarizes the treatment of the capitals and their interrelationships in the academic and professional literature, and summarizes responses to the IIRC's 2011 Discussion Paper. It concludes with proposals for improving the categorization and descriptions adopted by the IIRC.

1.7 Section 5 reviews current reporting practice with respect to the capitals. It discusses how the capitals relate to financial reporting, both in terms of recognition on the face of the financial statements, and disclosures in notes and management commentary. It also discusses sustainability and other forms of reporting, and highlights practical experiences from the IIRC Pilot Programme.

1.8 Section 6 touches on a range of other issues and areas for future development. For example, it offers practical examples of KPIs currently being used to report on various capitals, and an illustration of how to use the capitals model in conjunction with stakeholder analysis when determining the reporting boundary. It also discusses the issue of aggregation of capitals and notes that, apart from efforts to monetize various capitals, there appears to be no reasonable way to aggregate measures with respect to the full range of capitals, or even the various components within any particular capital.

2. Introduction

2.1 The IIRC's September 2011 Discussion Paper, "Towards Integrated Reporting – Communicating Value in the 21st Century"¹ noted that *"Integrated Reporting results in a broader explanation of performance than traditional reporting. It makes visible an organization's use of and dependence on different resources and relationships or 'capitals' (financial, manufactured, human, intellectual, natural and social), and the organization's access to and impact on them. Reporting this information is critical to:*

- *a meaningful assessment of the long-term viability of the organization's business model and strategy;*
- *meeting the information needs of investors and other stakeholders; and*
- *ultimately, the effective allocation of scarce resources."*

2.2 In response to the 2011 Discussion Paper, only 2% of respondents said they did not find the concept of multiple capitals helpful, while 76% agreed, or agreed with qualification, that it is helpful².

2.3 The concept of multiple capitals has therefore been retained in the Prototype Framework³ issued in November 2012, and is expected to be retained in the Consultation Draft to be issued in April 2013.

2.4 A description of each of the capitals is included in Section 4C of this Background Paper for <IR>.

2A Focus of this Background Paper for <IR>

2.5 The purpose of this Background Paper for <IR> is to explore the application of the capitals concept to Integrated Reporting <IR>. Its primary focus is the examination, in Section 4, of the categorization and descriptions of the various capitals used in the Prototype Framework, which will both inform further development of the Framework and provide practical insights to reporters and others on how to apply the capitals concept.

2.6 The Paper has been prepared using the collective knowledge of a small project team comprising practitioners, academics and IIRC staff, with invaluable input provided by a small, broadly-based steering group.

2.7 There are boundaries to this Background Paper for <IR>. Efforts were primarily directed towards making the application of the capitals concept as understandable and practical as possible in terms of how the individual capitals are categorized and described and how they relate to current reporting practice. That required a strict focus on the capitals themselves. The impacts of a number of other issues that are briefly touched on in Section 6 were, therefore, not explored in great detail.

2B Terminology

2.8 The term "capitals" as used in this Background Paper for <IR> refers broadly to any store of value that an organization can use in the production of goods or services.

2.9 The 2011 Discussion Paper used the term "capitals". The capitals are sometimes also referred to as "resources and relationships". Some respondents to the 2011 Discussion Paper found use of the term "capital" to be pejorative (e.g., "Human beings, human communities and ecosystems are not merely forms of capital provided to companies in order to be drawn down or built up") or too linked with financial concepts (e.g. "the challenge with 'multiple capitals' is its association with economic thinking and the danger of falling back into framing corporate reporting in terms of an economic conceptual framework").

2.10 Use of the term "capitals" versus "resources and relationships" was considered and, while acknowledging the concerns noted in the previous paragraph, continued use of "capitals" is supported. Using the term "capitals" emphasizes the role of the various capitals as stores of value that can be built up or run down over time, but which must be maintained if they are to continue to produce a flow of benefits in the future.

¹ <http://www.theiirc.org/resources-2/framework-development/discussion-paper/>

² 22% of respondents did not answer this question. A summary of responses is available at: www.theiirc.org/wp-content/uploads/2013/03/The-Capitals-Summary-of-comments-on-the-2011-Discussion-Paper's-coverage-of-the-capitals.pdf

³ <http://www.theiirc.org/resources-2/framework-development/prototype-of-the-international-ir-framework/>

2C Experience

2.11 The concept of explicitly considering multiple capitals when reporting is relatively new. Report preparers are still experimenting with how to categorize and define the capitals for their own circumstances, as well as the appropriate narrative and metrics to report. Report users are also exploring what information they will find most useful, how they would like it delivered, and in what form. While this Background Paper for <IR> is soundly based on an analysis of academic research and practice to date, it is clear that reporting on the capitals is set to evolve considerably over the coming years, in part through the IIRC Pilot Programme⁴. This Paper aims to help that evolution, and makes no claim to be the definitive final word on the subject of capitals.

3. Overview of the capitals

3A The stock and flow of capitals

3.1 All organizations depend on various forms of capital for their success. These capitals are stores of value that, in one form or another, become inputs to the organization's business model. They are also increased, decreased or transformed through the activities of the organization in that they are enhanced, consumed, modified or otherwise affected by those activities. For example, an organization's financial capital is increased when it makes a profit and its human capital is increased when employees become better trained.

3.2 This Background Paper for <IR> explores the six categories of capital identified by the IIRC, which are depicted in Figure 1. Together, these capitals are the basis of an organization's value creation. As shown, the capitals are not entirely independent. The exact nature of their interaction is a function of organizational focus and beliefs. While most organizations rely on all capitals to an extent, some dependencies will be relatively minor or so indirect that they are immaterial for reporting purposes.

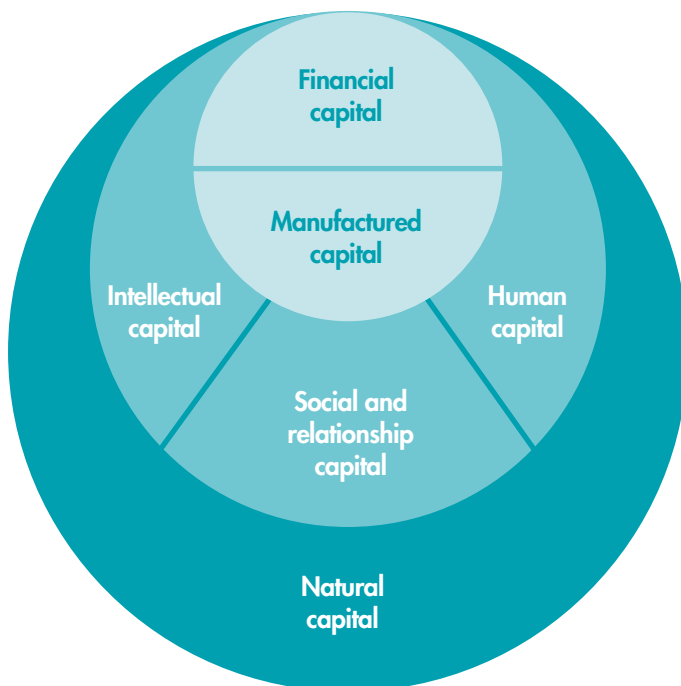


Figure 1: This diagram is one way to depict the capitals. Financial and manufactured capitals are the ones organizations most commonly report on. <IR> takes a broader view by also considering intellectual, social and relationship, and human capitals (all of which are linked to the activities of humans) and natural capital (which provides the environment in which the other capitals sit).⁵

⁴ <http://www.theiirc.org/companies-and-investors/>

⁵ This figure is an adaptation of the Forum for the Future's diagram of its Five Capitals Model at <http://www.forumforthefuture.org/project/five-capitals/overview>.

A sample of other diagrams is available at www.theiirc.org/wp-content/uploads/2013/03/The-Capitals-Visuals-of-alternative-models-of-capitals-.pdf

3.3 The total stock, or inventory, of capitals is not fixed over time. There is a constant flow between and within the capitals as they are increased, decreased or transformed. To demonstrate, using the example above where human capital is increased when employees become better trained, the training is likely to have come at a cost to the employer organization. In this case, therefore, the immediate effect is to both increase the organization's human capital and decrease its financial capital. In effect, from the organization's point of view, financial capital has been transformed into human capital. Such increases, decreases and transformations are happening constantly. Ordinarily, an organization expects that the cumulative result of these flows will be added value accruing to the organization (contributed to, in this case, through increased efficiency/effectiveness of the trained employees offsetting, over time, the immediate decrease in financial capital). Although this example is relatively simple and has been described only from the organization's point of view,⁶ it demonstrates that the capitals are interrelated and constantly in a state of flow and transformation, albeit at different rates and with different net outcomes.

3.4 Many activities cause flows and transformations that are far more complex than the above example, and involve a broader mix of capitals. Furthermore, there is often a mix of components within a capital (e.g., the use of water and fertilizers to grow crops that are fed to livestock). Some activities can cause a net increase to the overall stock of capitals, while others cause a net decrease.⁷ In many cases, it depends on whose perspective is taken whether an activity has caused an increase or a decrease, as different parties will value the same effect on a capital differently (such as in the example above, where the employer's and the employees' perception of the value of training is likely to differ). The perspective on value that is relevant to <IR> is discussed in the Prototype Framework.

3B Measurement

3.5 Quantitative indicators, such as key performance indicators (KPIs) and in some cases monetized metrics, can be very important in explaining an organization's uses of and effects on various capitals. Nonetheless, it is important to point out at the outset that it would not be practicable to expect organizations to attempt to quantify all capitals. It is not, therefore, an objective of <IR> to measure all the capitals or movements in them. Many uses of and effects on the capitals are best (and in some cases can only be) reported on in the form of narrative rather than through metrics.

3C Ownership of the capitals

3.6 Not all capitals an organization uses or affects are owned by the organization. They may be owned by others, or may not be owned at all in a legal sense (e.g., access to unpolluted air). This point is relevant to the categorization and descriptions of the capitals as discussed in this Background Paper for <IR>, and is also relevant to the concept of value used for <IR> as discussed in the Prototype Framework.

3D Availability, quality and affordability of the capitals

3.7 The extent to which organizations, collectively or individually, are building up or running down the various capitals can have an important effect on the availability, quality and affordability of those capitals, particularly with respect to capitals that are in limited supply and are non-renewable. This can affect the long term viability of an organization's business model and, therefore, its ability to create value over time. Disclosures about the capitals should therefore include the factors that affect the availability, quality and affordability of relevant capitals and the organization's expectations of its ability to produce flows from them to meet future demand.

3.8 While systems of financial reporting have inherent within them a concept of "capital maintenance",⁸ there is no such well-defined concept for <IR> when it comes to accounting for the capitals. Nonetheless, reporting on the implications for the organization of the availability, quality and affordability of various capitals (e.g., the opportunities and risks they pose for the organization and its strategies for dealing with them) is an important part of <IR> and is embedded in the Prototype Framework's Content Elements as noted in paragraph 4.5.

⁶ Other relevant points of view include the increase to the trainer's financial capital due to the payment received from the employer, and the increase to social capital that may occur if employees use newly acquired skills to contribute to community organizations.

⁷ Although organizations aim to create value overall, this may involve the destruction or depletion of value stored in some capitals. In this Background Paper for <IR>, unless otherwise stated, the term "value creation" includes instances when the overall stock, or inventory, of capitals is decreased (i.e., when value is effectively destroyed or depleted).

⁸ See, for example, paragraphs 4.57–4.65 of IASB "Conceptual Framework for Financial Reporting 2010" <http://www.ifrs.org/News/Press-Releases/Documents/ConceptualFW2010vb.pdf>

4. Categorization and descriptions of the capitals

4A The role of the capitals model in the Framework

4.1 The Prototype Framework does not require that the categorization it adopts also be adopted by all organizations preparing an integrated report. While it is likely that organizations will often find adopting the capitals terminology to be an appropriate way to structure or articulate disclosures in their integrated report, the inclusion of the capitals model in the Framework is not intended to serve as the only possible model that can be reported against. Rather, the primary reasons for including the capitals model in the Framework are for it to serve:

- As a benchmark for ensuring that organizations consider all the forms of capital that they use and affect (e.g. when describing their business model).
- As part of the theoretical underpinning for the concept of value, which is central to <IR>. As explained in the Prototype Framework, the concept of value focuses on increases and decreases in the capitals.

4.2 It would be impracticable, and indeed unnecessary, for the Framework to attempt to define every possible stock of value exclusively and exhaustively, and in a way that attempts to cover all organizational strategies and business models. The role of an integrated report is to tell the organization's unique value creation story; this requires flexibility and should not be unduly bound by definitions of capitals that may not cater appropriately for the organization's particular approach to value creation. For example, relationships with stakeholders, which are of growing significance to the ability of organizations to create value over time, are included in the Prototype Framework's description of social and relationship capital.⁹ Some organizations could, however, think of relationships as a separate capital, as part of human or intellectual capital, or as inherent in, and therefore cutting across and linking, a number of the individual capitals. Similarly, the intangibles associated with brand and reputation (part of intellectual capital in the Prototype Framework), could be considered separate capitals, part of other capitals or cutting across a number of individual capitals.

4.3 Regardless of how individual organizations categorize or define the capitals for their own purposes, all should consider the categories identified in the Framework as a benchmark to ensure that they do not overlook a material capital that they use or affect.

Disclosure in an integrated report

4.4 Reporting on the capitals is embedded in the Content Elements of the Prototype Framework. For example:

- Consideration of the availability, quality and affordability of the capitals is included in the Content Element *Organizational overview and operating context*
- How the organization's culture and ethical values are reflected in its use of and effects on the capitals, and how the links between the organization's strategy and its use of and effects on financial and other capitals are used to arrive at performance-based compensation are included in the Content Element *Governance*
- Opportunities and risks relating to the continued availability, quality and affordability of relevant capitals are included in the Content Element *Opportunities and risks*
- How the organization's strategy and resource allocation plans affect key capitals and risk management arrangements related to them are included in the Content Element *Strategy and resource allocation*
- A description of relevant capitals is inherent in the description required by the Content Element *Business model*
- Demonstrating the connectivity of financial performance with performance and outcomes regarding the other capitals is included in the Content Element *Performance and outcomes*
- The implications for future performance and outcomes of the availability, quality and affordability of capitals the organization uses, and why they are, or may be, important to the organization's ability to create value over time are included in the Content Element *Future outlook*.

⁹ The label "social capital" used in the 2011 Discussion Paper was changed to "social and relationship capital" in the Prototype Framework. This recognized the significant role of stakeholder relationships in organizational success and was consistent with interim findings of this project.

4B Meaning of the various capitals and their interrelationships

Research methodology and additional references

4.5 The following sections identify a number of extracts from academic and professional literature that define and discuss each of the capitals considered by the IIRC. They also summarize responses to the IIRC's 2011 Discussion Paper.¹⁰

4.6 The research methodology employed for the development of this Background Paper for <IR>, and more complete references to sources considered, are provided in the document "Methods of literature review and sources".¹¹ Each capital has been examined from a multidisciplinary perspective, although one discipline often predominates.

Financial capital

4.7 Financial capital is broadly understood as the pool of funds available to an organization. This includes both debt and equity finance. This description of financial capital focuses on the source of funds, rather than its application which results in the acquisition of manufactured or other forms of capital.

4.8 Interrelationships of financial capital and other capitals include:

- Financial capital is a medium of exchange that releases its value through conversion into other forms of capital.
- While not all capitals can be purchased, much of the literature on the other capitals considers the way in which things that were previously regarded as non-monetary variables, in a business sense, have increasingly come to be monetized and commoditized such that a significant proportion of what is now regarded as financial capital in fact relates to derivatives fundamentally based on other forms of capital (e.g., carbon and water).

Manufactured capital

4.9 Manufactured capital is seen as human-created, production-oriented equipment and tools. A distinction is drawn between inventory (as a short term asset) and plant and equipment (tangible capital). Although the identification of these items is generally agreed, their accounting treatment, particularly in terms of valuation, depreciation and taxation, is more contentious.

4.10 The following quote from the Sigma Project¹² offers a helpful summary of what manufactured capital is and why it is important, but it is worth clarifying that the concept as used in this Background Paper for <IR> extends beyond manufactured capital that is "owned, leased or controlled by an organisation" to include public infrastructure, such as road networks, available to the organization. "Manufactured capital refers to material goods and infrastructure owned, leased or controlled by an organisation that contribute to production or service provision, but do not become embodied in its output. Examples include: tools, technology, machines, buildings and all forms of infrastructure ... Manufactured capital is important for the sustainable development of an organisation in two ways. Firstly, the efficient use of manufactured capital enables an organisation to be flexible, responsive to market or societal needs, innovative and faster in getting its products and services to market. Secondly, manufactured capital and technology can reduce resource use and focus more on human creativity, thus enhancing both efficiency and sustainable development."

4.11 Although the literature's distinction between "manufactured" and "manufacturing" capital is relatively minor, it does offer a boundary between ecological economics (manufactured capital) and the wider discipline of economics (manufacturing capital). The generalist economics definition of manufactured capital may be slightly narrower; many of its formulations refer to the manufacturing industry specifically, despite the fact that manufactured capital is used across all industry sectors. One area of specialized use is in national accounts, where information is collected about aggregate stocks and flows of capital equipment and capital goods. This, however, is little more than a macro/micro level issue of compiling the data.

¹⁰ www.theiirc.org/wp-content/uploads/2013/03/The-Capitals-Summary-of-comments-on-the-2011-Discussion-Paper-s-coverage-of-the-capitals.pdf

¹¹ The references cited throughout the Background Paper for <IR> are illustrative only. The "Methods of literature review and sources" should be consulted for a complete list of references used – www.theiirc.org/wp-content/uploads/2013/03/The-Capital-Methods-of-literature-review-and-sources.pdf.

¹² <http://www.projectsigma.co.uk/Guidelines/Principles/Capitals/ManufacturedCapital.asp>

4.12 One respondent to the IIRC's 2011 Discussion Paper argued that manufactured capital might be interpreted as referring only to factory output, and another argued that, as defined, manufactured capital is captured in financial reporting as tangible assets and intellectual capital as intangible. The latter respondent argued that if manufactured and intellectual capitals are to be wider, this needs to be clarified and understood by preparers and other stakeholders.

4.13 Interrelationships of manufactured capital and other capitals include:

- Although manufactured capitals owned by an organization typically appear in the financial statements, it is not financial capital. Rather, manufactured capital is dependent upon the flow of financial capital to allow resources to be deployed to build it.
- Manufactured capital can embody significant elements of intellectual property (e.g., equipment manufactured using patented technology), which is a component of intellectual capital.
- Another term often used in place of manufactured capital is "tangible capital", e.g., plant and equipment.

Intellectual capital

4.14 A 2006 report to the European Commission by the High Level Expert Group on RICARDIS¹³ presents some in-depth perspectives on the concept of intellectual capital, with a particular focus on SMEs involved in research and development (R&D). The report recognizes that, together, intellectual capital and knowledge management have garnered interest in corporate and academic settings. Key findings are detailed below:

- Intellectual capital is a key element in an organization's future earning potential, with a tight link and contingency between investment in R&D, innovation, human resources and external relationships, which can determine the organization's competitive advantage.
- Statements on intellectual capital help provide clarity on the way in which an organization creates competitive advantage by providing a narrative which explains issues such as value chain positioning and the business model for value creation.
- Intellectual capital covers issues that are central to the organization's future (as opposed to historic costs that are focused on by traditional accounting), requiring consideration of a much wider range of intangibles when accounting for it.
- It is primarily about the internal reporting, management and control of a business and is necessary for management to communicate to external investors about the organization.
- Identifying, measuring and reporting on intellectual capital is particularly important for organizations involved in R&D, innovation and future prospects to communicate to investors about the value of their work, and why it will result in future success.
- Intellectual capital can be considered as both the product of R&D activities, and as the enabler for creating greater value from R&D. It creates shareholder value by combining material, financial and human resources.
- For intangibles to become part of the intellectual capital of an organization, they have to be durably and effectively internalized and/or appropriated by it.

4.15 RICARDIS notes investors find it particularly difficult to assess investments in organizations involved in R&D and innovation due to the perceived commercial sensitivity of information disclosed, the long term character of such investments, and a lack of understanding of the innovative nature of the research undertaken by organizations.

4.16 Guthrie, Ricceri and Dumay 2012 offer the following definition of Intellectual Capital Accounting (ICA): "ICA is an accounting, reporting and management technology of relevance to organizations to understand and manage knowledge resources. It can account and report on the size and development of knowledge resources such as employee competencies, customer relations, financial relationships and communication and information

¹³ 'RICARDIS: Reporting Intellectual Capital to Augment Research, Development and Innovation in SMEs', http://ec.europa.eu/invest-in-research/pdf/download_en/2006-2977_web1.pdf (EC, 2006). See also The PRISM Report (2003 Edited by Clark Eustace) by the European Commission, Information Society Technologies Program, Report no.2.

technologies.” Additionally, the analysis highlights that ICA research is mostly limited to specialist intellectual capital journals and is mostly examined as an abstract concept rather than how it is applied at an organizational level (see for example <http://www.sciencedirect.com/science/article/pii/S0890838912000200>).

4.17 It is worth noting that intellectual property is a component of intellectual capital, but that the two terms are not synonymous. Intellectual property is that part of intellectual capital over which the organization has specific legal rights (such as patents). Intellectual capital on the other hand includes broader knowledge-based intangibles over which specific legal rights may not exist.

4.18 Gowthorpe 2009 offers a further perspective: “The notion of intellectual ‘capital’, as it has been developed so far, is criticized ... as an incomplete terminology that emphasizes only certain aspects of intellectual assets, failing to take into account the ‘dark side’ of the asset base, intellectual liabilities or intellectual contingent liabilities.” The dark side may include, for example, unethical or duplicitous behaviour not included in existing classifications methods (see for example <http://www.sciencedirect.com/science/article/pii/S1045235408001184>). Arguably such ethical classification could be useful to socially responsible investors.

4.19 A few respondents to the IIRC’s 2011 Discussion Paper noted the overlap with human, social and relationship and intellectual capital. As noted on paragraphs 4.21-4.23, intellectual capital is often seen as a composite capital.

4.20 Interrelationships of intellectual capital and other capitals include:

- The concept of ICA developed from earlier financial reporting conceptions of goodwill accounting and intangibles accounting, and these concepts remain closely related (Petty and Guthrie, 2000).
- There is debate about the relationship between intellectual capital, human capital, social and relationship capital – see paragraphs 4.21-4.23.

Categorization of intellectual capital, human capital, and social and relationship capital

4.21 As noted in the previous paragraph, there is debate about the relationship between intellectual capital, human capital, and social and relationship capital. In particular, there is a relatively common definition of intellectual capital that identifies it as having three components:

- Human capital (similar to human capital as described in the Prototype Framework)
- Organizational, or structural, capital (including the processes, procedures and shared tacit knowledge developed within an organization, which was not fully recognized in the Prototype Framework. It is proposed in Section 4C that this be included as part of intellectual capital)
- Relational capital (similar to social and relationship capital as described in the Prototype Framework).

4.22 The Technical Collaboration Group discussed at some length whether this definition should be adopted by the IIRC. It concluded that bringing together three capitals into one would not help understanding of the capitals model as it would unnecessarily complicate the model (making it a two-tiered model), and would downplay aspects of human capital and social and relationship capital that are not immediately associated with intellectual or knowledge factors, such as an organization’s social licence to operate. The Group also concluded, however, that some modification to the description of intellectual capital would be appropriate (in particular recognition of “organizational capital” as a component of intellectual capital – see section 4C). The IIRC may also like to take a further step in this direction and consider renaming intellectual capital as “organizational capital”.

4.23 Perhaps the simplest way to differentiate between human capital, social and relationship capital, and intellectual capital as used by the IIRC is to view them from the point of view of the “carrier” of each:

- For human capital, the carrier is the individual person
- For social and relationship capital, the carrier is intra/extra-organizational networks
- For intellectual capital, the carrier is the organization.

Clearly, these capitals are related and interdependent; however, a clear distinction can be made that is fruitful for the purpose of the Framework.

Human capital

4.24 The term human capital is widely used by social theorists, economists and management theorists. Although there are nuances between definitions, there is broad consensus within the literature about the meaning of human capital.

Human Capital

- Is “generally understood to consist of the individual’s capabilities, and the knowledge, skills and experience of the company’s employees and managers, as they are relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge, skills, and experience through individual learning”. (Dess & Picken, 2000: 8)
- Embodies competencies (tacit and implicit knowledge and attitudes, including skills acquired through formal education, childhood education and on the job training), and capabilities (sum of expertise and capacity: ability to carry out an organizational activity) and talent. (‘Rethinking capital: the larger lessons of the financial crisis’, Forum for the Future (2009) page 14 at http://www.social-banking.org/fileadmin/isb/Artikel_und_Studien/Rethinking_Capital_June09_Forum_for_the_future.pdf)
- Is a competitive intangible asset and there has been a shift towards recognition that intangible resources more so than tangible resources drive value. (Stiles, 2003: 3).

Intellectual capital

4.25 Unlike a “physical” capital, human capital is embodied in individuals who “own”¹⁴ their human capital and can facilitate the creation of different forms of well-being (Stiglitz, et al 2011: 273). “Because of this range of payoffs, and of its links to a variety of other fields (such as health, paid work and caring), the concept of human capital enters contemporary debates in a variety of forms: as a driver of economic growth and innovation; as an investment to secure greater access to jobs, higher income and lower poverty; and as one of the assets that should be preserved and developed – on par with natural capital and other types of resources – to secure sustainable development”. (Stiglitz, et al 2011: 273). Leadership is a key concept discussed with respect to the development of human capital. Forum for the Future’s Five Capitals Model (www.forumforthefuture.org/project/five-capitals/overview) also includes joy, passion, empathy and spirituality in its definition of human capital.

4.26 In relation to human capital management, the term human capital may be used to refer to relationships between individuals working inside the firm (employees) and the firm, as well as relationships between the firm and individual stakeholders outside it (e.g. individuals within communities the firm impacts, and human rights of individuals within the supply chain – for whom risk should be mitigated).

4.27 Comments on the proposed definition of human capital in the IIRC’s 2011 Discussion Paper, though few, were generally supportive. In particular, there was agreement that human capital lies within the organization’s control, by virtue of its ability to select, manage and develop employees. One respondent commented on the need to measure leadership, while another suggested including the ability to innovate and the ability and agility of people to react and adapt to such things as changing markets, and resource availability. One response noted that any major change in human capital in a particular industry results in value addition or deterioration for many companies.

4.28 Feedback was also received expressing the view that the role of labour in the production process cannot be reduced to “human capital” noting that according to the ILO’s Declaration of Philadelphia (1944) “labour is not a commodity” is a fundamental proposition that underpins international labour standards. In the same vein, labour cannot only be considered an asset or “capital”.

¹⁴ Note that this prevents valuing human capital as an organizational asset since organizations do not have property rights with respect to individuals.

4.29 Interrelationships of human capital and other capitals include:

- Human capital is seen to be complementary with other intangible capitals such as intellectual capital and social and relationship capital
- As intangible assets seldom affect financial performance directly but instead work through complex chains of cause and effect (Kaplan & Norton 2004: 22), human capital is dependent on other forms of capital to be fully realized
- As individuals “own” their human capital, there must be desire by the individual, or a certain relationship between the individual and organization, for individuals to invest their human capital in the firm and for an organization to realize the benefit (Kulvisaechna & Stiles 2003: 5)
- There is debate about the relationship between intellectual capital, human capital, and social and relationship capital – see paragraphs 4.21-4.23.

Social and relationship capital¹⁵

4.30 Formulated in the field of sociology and popularized by Robert D. Putnam, the term “social capital” is now commonly used in management literature¹⁶. Under some interpretations, social and relationship capital may include relationships within an organization, as well as those between an organization and its external stakeholders, depending on where social boundaries are drawn (see paragraphs 4.21-4.23).

4.31 Aspects of social and relationship capital in a business context relevant to <IR> include: the strength/efficacy of supply chain relationships (e.g., establishing quality expectations, just-in-time delivery systems, and recycling programmes), community acceptance, government relations, relationships with competitors (e.g., coming together to develop industry standards), and customer loyalty. It is only by building relationships that an organization can retain its social licence to operate.

Social and Relationship Capital

- “Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors” (Coleman 1988: 90)
- “Social capital comes about in the relations among persons that facilitate action” (Coleman 1988: 100)
- “An important form of social capital is the potential for information that inheres in social relations” (Coleman 1988: 104).

Further definitions elaborate on the individual and group qualities developed within relationships:

- The OECD defines social capital as “networks together with shared norms, values and understandings that facilitate co-operation within or among groups”. (www.oecd.org/insights/37966934.pdf)
- For Fukuyama, social capital is “the ability of people to work together for common purposes in groups and organizations” (Fukuyama, 1995: 10) and that strong social capital is essential for strong democracy and economic growth.

¹⁵ The label “social capital” used in the 2011 Discussion Paper was changed to “social and relationship capital” in the Prototype Framework. This recognized the significant role of stakeholder relationships in organizational success and was consistent with interim findings of this project.

¹⁶ Notably, organizations often use the term “reputational capital” when discussing social relationships. Alternatively, investors often refer to social capital.

4.32 Boundaries drawn when referring to social and relationship capital formation and/or social licence to operate include legal/regulatory compliance by geographical location (national, regional, international), market, cultural group, and disciplinary interest. For example, in terms of investor analysis, a soft proxy for the licence to operate concept may include:

- Heavily regulated industries (e.g., power, telecoms, airlines, banks/insurance, and pharmaceuticals) where the licence to operate is a tangible factor in rate reviews and regulatory approvals.
- Consumer industries (e.g., automobiles, apparel, and discretionary goods such as cosmetics, jewellery, luxury goods) that are often monitored by customers in diverse markets with strong environmental, social governance priorities.
- Global companies in industries where growth by acquisition is common (e.g., oil and gas and infrastructure) and where regulatory compliance, reputation, labour relations and risk management are important to the licence to operate.

Many of these companies go to the lengths they do on ESG reporting or performance because their home or target markets believe that it has value.

4.33 A common feature of social and relationship capital is the trust upon which it is built:

- In his essay “Bowling Alone: America’s Declining Social Capital” (1995), Putnam identifies trust as a key measure of social capital. He regards social capital as “features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit”. (Putnam 1995: 67)
- Different definitions have been much debated, but there is now a convergence toward a favoured definition: “the associated norms of reciprocity and trustworthiness”. (Stiglitz, et al.: 182)
- Economists often argue that capital involves making some form of sacrifice in the present – like studying in school, rather than playing outside – to produce gains in the future. (Keeley, 2008: 105) As such, they sometimes have trouble considering social and relationship capital as a form of capital, as no obvious sacrifice is made.
- According to Nahapiet & Ghoshal (1998), trust and cooperation have a two-way interaction: “Trust lubricates cooperation, and cooperation itself breeds trust.” They find that without trust, “No matter how knowledgeable employees are, if they believe they are working in a hostile, low-trust environment, they will hoard information, avoid collaboration and display very low levels of creativity”.

4.34 Responses to the IIRC’s 2011 Discussion Paper on social and relationship capital, though limited, referenced components such as reputation, social licence to operate, collective well-being, “cultural” or “heritage” capital and stakeholder-based carrying capacity.

4.35 Interrelationships of social and relationship capital and other capitals include:

- Social and relationship capital is seen to complement other intangible capitals, including human and intellectual capitals as described in this Background Paper for <IR>, and what are sometimes called organizational, information and knowledge capitals. To avoid confusion between the capitals, care should be taken to draw explicit boundaries. See paragraphs 4.21-4.23
- Other intangible capitals frequently rely on social and relationship capital to be realized
- Human and social and relationship capitals are “clearly linked in a kind of virtuous circle, with education tending to increase social capital and at the same time social capital tending to increase educational performance.” (Putnam 2004).

Natural capital

4.36 There is a broad consensus in the literature that natural capital includes resources, such as timber, fish, water, minerals, etc., which can be used by humans to provide a return. In addition to these resources, there are a number of processes from which humans benefit that are provided by nature, which some sources define as “ecosystem services”.

Natural Capital

- "The concept of natural capital, often understood as any stock of natural resources or environmental assets that provides a flow of useful goods or services, now and in the future". (Brand 2009: 608)
- "Natural capital is a metaphor to indicate the importance of elements of nature (e.g., minerals, ecosystems and ecosystem processes) to human society. Natural ecosystems are defined by a number of environmental characteristics that in turn determine the ecosystems' capacity to provide goods and services." (Ekins, et al 2003: 169)
- "Natural capital may thus be defined as any stock of natural resources or environmental assets (such as soil, water, atmosphere, ecosystems) which provide a flow of useful goods or services, now and in the future". (De Groot, et al 2003: 188)

Other sources include:

- "Natural capital are natural assets in their role of providing natural resource inputs and environmental services for economic production". (OECD, <http://stats.oecd.org/glossary/detail.asp?ID=1730>)
- "Technically, natural capital is the stock of natural ecosystems that yields a flow of valuable ecosystem goods or services". (TEEB, <http://bankofnaturalcapital.com/category/natural-capital>)
- "Natural Capital is the environmental stock or resources of Earth that provide goods, flows and ecological services required to support life". (Global Development Research Centre, www.gdrc.org/sustdev/concepts/26-nat-capital.html)
- "Natural capital includes the land, water, atmosphere, and the many natural resources they contain, including ecological systems with living (biotic) and non-living (abiotic) components". (Encyclopaedia of Earth, www.eoearth.org/article/Earth,_Inc._Shareholder_Report:_Natural_Capital)

4.37 Some of the definitions in the boxed text distinguish different types of natural resources (biotic/abiotic, living/non-living, organic/non-organic). This may assist organizations in determining which parts of natural capital they have greatest dependence and impact on.

4.38 Interrelationships of natural capital and other capitals include:

- A number of sources not only considered natural capital's relationship to the other capitals, but as a fundamental basis for them: "Pointing out that human societies feed on natural capital withdrawal and use different kinds of ecosystem services, [Odum, 1988] and [Odum, 1996] identified natural capital and ecosystem services as the real source of wealth, in spite of the common belief that only labor and economic capital were such a source." (Ulgiati, et al 2010: 779)¹⁷
- "Natural capital is the basis not only of production but of life itself". (Forum for the Future (2009) at http://www.social-banking.org/fileadmin/isb/Artikel_und_Studien/Rethinking_Capital_June09_Forum_for_the_future.pdf)
- "Human wellbeing arises from the use of a combination of types of capital: social capital, human capital and built capital; but these are all based on natural capital". (Houses of Parliament, [http://www.lwec.org.uk/sites/default/files/postpn_376-natural-capital-accounting\[2\].pdf](http://www.lwec.org.uk/sites/default/files/postpn_376-natural-capital-accounting[2].pdf))

¹⁷ It is interesting to note that, at least for the Dutch, some aspects of natural capital (such as 'polderland' or reclaimed land) were for a large part created by application of other capitals.

4C Summary, and proposed categorization and descriptions of the capitals

IIRC's Prototype Framework	Suggested alternative	Notes on description	Additional notes
<p>Financial capital: The pool of funds that is:</p> <ul style="list-style-type: none"> • available to the organization for use in the production of goods or the provision of services • obtained through financing, such as debt, equity or grants, or generated through operations or investments. 	<ul style="list-style-type: none"> • Financial capital: The pool of funds that is: • available to an organization for use in the production of goods or the provision of services • obtained through financing, such as debt, equity or grants, or generated through operations or investments. 	<p>Definition is simply and easily recognizable.</p> <p>Financial capital has an impact on the co-development and maintenance of capitals with other organizations in the supply and value chain.</p>	<ul style="list-style-type: none"> • Some view that financial capital can incorporate aspects of intellectual capital, in particular "intellectual property, such as patents, copyrights, software and organizational systems, procedures and protocols". However, the description of financial capital focuses on the source of funds (e.g., debt or equity) rather than its application, which may be in the form of intellectual property, or in other forms of capital (e.g., manufactured capital).
<p>Manufactured capital: Manufactured physical objects (as distinct from natural physical objects) that are available to the organization for use in the production of goods or the provision of services, including:</p> <ul style="list-style-type: none"> • buildings • equipment • infrastructure (such as roads, ports, bridges and waste and water treatment plants). 	<p>Manufactured capital: Manufactured physical objects (as distinct from natural physical objects) that are available to an organization for use in the production of goods or the provision of services, including:</p> <ul style="list-style-type: none"> • buildings • equipment • infrastructure (such as roads, ports, bridges and waste and water treatment plants) <p>Manufactured capital is often created by one or more other organizations, but also includes assets manufactured by the reporting organization when they are retained for its own use.</p>	<p>Definition is generally agreed across the literature studied.</p> <p>There is a view that "manufacturing capital" (as it appears in literature) may be a clearer term to use (so as to highlight that this capital is not the actual produced, or manufactured, output of an organization) but the goods that facilitate production, or manufacturing, some of which may be produced by the organization using them.</p>	

IIRC's Prototype Framework	Suggested alternative	Notes on description	Additional notes
<p>Intellectual capital: Intangibles that provide competitive advantage, including:</p> <ul style="list-style-type: none"> • intellectual property, such as patents, copyrights, software and organizational systems, procedures and protocols • the intangibles that are associated with the brand and reputation that an organization has developed. 	<p>Intellectual capital: Organizational, knowledge-based intangibles, including:</p> <ul style="list-style-type: none"> • intellectual property, such as patents, copyrights, software, rights and licences • "organizational capital" such as tacit knowledge, systems, procedures and protocols • intangibles associated with the brand and reputation that an organization has developed. 	<p>Some intangibles, such as some legally enforceable rights and licences, may not be strictly "knowledge-based" but are part of intellectual property and so would be included here as intellectual capital.</p> <p>Intellectual capital can be defined as specified in the Prototype Framework's categorization, but attention needs to be given to considering the boundaries with Human capital and Social and relationship capital. This is discussed in paragraphs 4.17-4.19 in terms of the "carrier" of each capital.</p>	<ul style="list-style-type: none"> • Some consider that the inclusion of intellectual capital is not necessary. • Some view intellectual capital as a composite of other capitals, as discussed in paragraphs 4.17-4.19.
<p>Human capital: People's skills and experience, and their capacity and motivations to innovate, including their:</p> <ul style="list-style-type: none"> • alignment with and support of the organization's governance framework and ethical values such as its recognition of human rights • ability to understand and implement an organization's strategy • loyalties and motivations for improving processes, goods and services, including their ability to lead and to collaborate. 	<p>Human capital: People's competencies, capabilities and experience, and their motivations to innovate, including their:</p> <ul style="list-style-type: none"> • alignment with and support for an organization's governance framework and risk management approach, and ethical values such as recognition of human rights • ability to understand, develop and implement an organization's strategy • loyalties and motivations for improving processes, goods and services, including their ability to lead, manage and collaborate. 	<p>Slight change of wording of "skills" to "competencies and capabilities" to align with the literature – clarifying the distinction between knowledge and ability to carry out an activity. Added reference to risk tolerance.</p>	<ul style="list-style-type: none"> • Competencies are: tacit and implicit knowledge and attitudes, including skills acquired through formal education and on the job training. • Capabilities are the sum of expertise and ability to carry out an organizational activity. • Organizational culture per se is not part of human capital (it is included in social and relationship capital), but plays an important role in the ability of an organization to add value through human capital development.

IIRC's Prototype Framework	Suggested alternative	Notes on description	Additional notes
<p>Social and relationship capital: The institutions and relationships established within and between each community, group of stakeholders and other networks to enhance individual and collective well-being. Social and relationship capital includes:</p> <ul style="list-style-type: none"> • common values and behaviours • key relationships, and the trust and loyalty that an organization has developed and strives to build and protect with customers, suppliers and business partners • an organization's social licence to operate. 	<p>Social and relationship capital: The institutions and relationships established within and between each community, group of stakeholders and other networks (and an ability to share information) to enhance individual and collective well-being. Social and relationship capital includes:</p> <ul style="list-style-type: none"> • shared norms, and common values and behaviours • key relationships, and the trust and willingness to engage that an organization has developed and strives to build and protect with customers, suppliers, business partners, and other external stakeholders • an organization's social licence to operate. 	<p>Definition is generally appropriate.</p>	<ul style="list-style-type: none"> • There are different views on where social and relationship capital boundaries are drawn. • Some view that social and relationship capital incorporates the relationship attribute of a network within an organization (as well as external to it) and thus may overlap with dimensions of intellectual capital, which includes "organizational capital". The boundary drawn in this Background Paper for <IR> is that social and relationship capital excludes networks within the organization. This is discussed in paragraphs 4.17-4.19 in terms of the "carrier" of each capital.
<p>Natural capital: Natural capital is an input to the production of goods or the provision of services. An organization's activities also impact, positively or negatively, on natural capital. It includes:</p> <ul style="list-style-type: none"> • water, land, minerals and forests • biodiversity and ecosystem health. 	<p>Natural capital: All renewable and non-renewable environmental stocks that provide goods and services that support the current and future prosperity of an organization. It includes:</p> <ul style="list-style-type: none"> • air, water, land, forests and minerals • biodiversity and ecosystem health. 	<p>Indicates that both current and future organizational prosperity fundamentally depend on natural capital, which is essential to the provision of goods and services.</p>	<ul style="list-style-type: none"> • The definition of natural capital as renewable or non-renewable is dependent upon the stock under consideration at a given point in time, its estimated use and replenishment levels, e.g., fish may fall into either definition depending upon the fish stock considered. • Natural capital may also be defined as biotic (living/organic) and abiotic (non-living/inorganic). These definitions are often used in preference to renewable and non-renewable for natural capital such as fish which would always be defined as biotic.

5. Current reporting practice

5.1 This section draws on a review by members of the project team of the most recent reports of approximately 50% of the IIRC's Pilot Programme business participants¹⁸, as well as a more general consideration of reporting practices.

5.2 While reporting practice with respect to some capitals is quite mature, it is less developed with respect to others, as is, significantly, practice when it comes to reporting on the interrelationships between various capitals (or components of various capitals). Reporting on these relationships is of particular importance to <IR> and is in line with the Guiding Principle Connectivity of information.

5A Financial capital and manufactured capital in financial reporting

5.3 Collectively, financial capital and manufactured capital have been seen as the sole components of the term "capital". This is inherent in the distinction between "land, labour and capital" as the traditional factors of production. Consistent with this traditional view of capital, financial capital and manufactured capital that is owned by the organization have long been reported in financial reports.

5.4 The main components of financial reports are the financial statements, which are primarily quantitative in nature. Qualitative reporting on financial and manufactured capitals has increased over time, with additional note disclosures and the introduction of management commentary (see paragraph 5.8).

5B Other capitals in financial reporting

Recognition on the face of the financial statements

5.5 Not all capitals that an organization uses or affects are owned by the organization. They may be owned by others, or may not be owned at all in a legal sense (e.g., access to unpolluted air). Typically, only those components of capitals that are owned by an organization are recognized on the face of its financial statements. Some components of capitals other than financial and manufactured capitals are, however, recognised in financial statements when they meet the definition of a financial statement element (e.g., asset, liability, income, or expense) and the recognition and measurement criteria of the relevant financial reporting framework.

5.6 For example, the International Accounting Standards Board's (IASB)¹⁹ definition of an asset is "a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity". The IASB provides for an asset to be "recognised in the balance sheet when it is probable that the future economic benefits will flow to the entity and the asset has a cost or value that can be measured reliably". The IASB acknowledges that "a number of different measurement bases are employed to different degrees and in varying combinations in financial statements", including historical cost, current cost, realizable (settlement) value and present value.

5.7 Increasing recognition of other capitals on the face of the financial statements applies mainly:

- through the increasing recognition of "intangibles" in financial statements
- by the internalization of factors previously treated as externalities, through mechanisms such as emissions trading schemes and carbon taxes, which confer specific rights or responsibilities that have a direct financial impact on the organization.

¹⁸ The participants selected were based on sector and geographical diversity. A list of participants whose reports were reviewed is available at www.theiirc.org/wp-content/uploads/2013/03/The-Capitals-Organizations-selected-for-review.pdf

¹⁹ See, for example, paragraphs 4.2–4.56 of IASB "Conceptual Framework for Financial Reporting 2010" www.ifrs.org/News/Press-Releases/Documents/ConceptualFW2010vb.pdf

Notes and management commentary

5.8 Aspects of other capitals are also increasingly being included in other aspects of financial reporting as it seeks to provide a more comprehensive explanation of an entity's financial position, financial performance and cash flow, in particular:

- in the notes to the financial statements
- through the management commentary (also known as management discussion and analysis, business review or narrative reporting), which "provides a context within which to interpret the financial position, financial performance and cash flows of an entity. It also provides management with an opportunity to explain its objectives and its strategies for achieving those objectives".²⁰

5C Natural capital, social and relationship capital and human capital

Sustainability reporting

5.9 The development of sustainability reporting over recent years has seen an increase in reporting with respect to natural capital, social and relationship capital and some aspects of human capital. Sustainability reporting is commonly considered to be the practice of reporting on an organization's impacts on the environment (which equates generally to natural capital), society (which equates generally to social and relationship capital and to aspects of human capital), and the economy.

5.10 It is a common misconception that the economic aspect of sustainability reporting equates to traditional financial reporting, in terms of balance sheets and profit and loss statements. In fact, the former is intended to reflect an organization's impact on the economy in which it operates, while the latter reflects the organization's own financial health.

5.11 Aspects of natural, social and relationship, and human capitals often feature in sustainability reports, both quantitatively and qualitatively. For example, the Global Reporting Initiative's "Sustainability Reporting Guidelines" include the following aspects:²¹

Natural	<ul style="list-style-type: none">• Materials• Energy• Water• Biodiversity• Emissions, effluents, and waste
Social and relationship	<ul style="list-style-type: none">• Community• Corruption• Anti-competitive behavior• Customer health, safety and privacy• Human rights such as non-discrimination, freedom of association, and indigenous rights
Human	<ul style="list-style-type: none">• Employee turnover• Labor/management relations• Occupational health and safety• Training and education• Diversity and equal opportunity

²⁰ IFRS Practice Statement "Management Commentary" <http://www.ifrs.org/CurrentProjects/IASB-Projects/Management-Commentary/IFRS-Practice-Statement/Documents/Managementcommentarypracticestatement8December.pdf>

²¹ www.globalreporting.org/reporting/latest-guidelines/g3-1-guidelines/Pages/default.aspx

Differences between <IR> and sustainability reporting

5.12 While experience in sustainability reporting may prove invaluable to some on their journey toward <IR>, there are key differences between the two forms of reporting, particularly in the context of the capitals. It is worth noting that sustainability reporting:

- targets a wider stakeholder audience than does <IR>, which focuses primarily on providers of financial capital, particularly those with a long term view
- focuses on impacts on the environment, society and the economy, rather than on the effects of the capitals on value creation over time, as in <IR>.

As such, sustainability reporting is less likely to focus on the connectivity between various capitals or the strategic relevance of the capitals to value creation, and is more likely to include many disclosures that would not be material for inclusion in an integrated report.

5.13 For <IR>, an organization's impact on various capitals is ordinarily material only if it:

- significantly affects the availability, quality and affordability of capitals upon which the organization depends
- affects stakeholders' perceptions of the organization in such a way that it has a significant business consequence (e.g., strengthens/weakens customer demand, or affects the organization's licence to operate)
- has some other strategic relevance.

Other forms of reporting

5.14 Reporting on aspects of natural, social and relationship, and human capital is also becoming more prevalent in:

- legislative and regulatory regimes, such as the Grenelle Act in France and the National Greenhouse and Energy Reporting System in Australia
- listing regimes, such as implementation of the principles of King III (King Code of Governance Principles) for companies listed on the Johannesburg Stock Exchange in South Africa
- voluntary regimes, such as the United Nations Global Compact and the Carbon Disclosure Project.

5D Intellectual capital

5.15 Despite the fact that "Intellectual capital is a key element in an organization's future earning potential", as mentioned in paragraph 4.14, it is the capital for which reporting is perhaps the least common.

5.15 It is generally acknowledged that financial accounting rules are conservative regarding the recognition of intangibles, and therefore intellectual capital, in the financial statements. For example, with the exception of some development costs, international standards do not allow the capitalization of internally generated intangibles. The US standard is even more conservative, with development costs being taken immediately to the income statement.²²

²² As noted in the IIRC's Pilot Programme 2012 Yearbook, Capturing the experiences of global businesses and investors, "Bob Laux, Director, Accounting and Reporting, explained that Microsoft has thousands of patents likely to be worth more than its US\$50-60 billion in financial capital. However, accounting rules such as U.S. GAAP veer on the conservative side in terms of the amount of intellectual capital that can be capitalized rather than expensed. ... Microsoft's balance sheet currently accounts for less than half of the company's market value. Its financial statements show virtually none of its intangible assets. Laux suggested that the focus of companies that largely depend on human and intellectual capital is actually more on financial and manufactured capital in reporting. This reflects a legacy of resistance to change in U.S. businesses that have implemented reporting infrastructure designed for a manufacturing economy."

5.16 It is, however, becoming more common for organizations to include discussion and/or metrics regarding intellectual capital either in that part of the annual report not governed by financial accounting rules or in a separate stand-alone report. For example, the Spanish banking group Bankinter²³ devotes a significant portion of its annual report to intellectual capital. The genesis of this type of reporting was in the second half of the 1990s when a number of companies, initially located in Scandinavian countries,²⁴ started developing new forms of reporting to measure (mainly in non-financial terms) and report their “hidden” wealth and major source of value creation (i.e., intangibles/intellectual capital). The concept of intellectual capital used in this form of reporting is ordinarily that discussed in paragraphs 4.21-4.23, and therefore indicators are almost invariably divided up into three main categories: human, organizational (or structural), and relational. This form of intellectual capital reporting has also been encouraged by various governments including Denmark, Japan, Germany and France. Several national and international organizations, including the OECD, European Commission, and the United Nations, have published studies on this subject.²⁵ In some countries, this form of reporting has taken distinct twists, as in Japan (Intellectual Assets-based Management and Reporting) and Germany (Wissensbilanz – literally, knowledge report)²⁶.

5.17 While KPIs are being developed for intellectual capital,²⁷ the IIRC’s Pilot Programme 2012 Yearbook *Capturing the experiences of global businesses and investors*²⁸ notes that “Intellectual capital needs to be measured more rigorously.” In this context, it is worth mentioning in particular the efforts of WICI, the World Intellectual Capital Initiative, which is taking an industry-based approach to the development of indicators.²⁹

5.18 Another development over recent years has been the advent of Intellectual Capital Accounting (mentioned in paragraph 4.16).

5E Other experiences from the IIRC Pilot Programme

5.19 The review of Pilot Programme participants’ reports undertaken for development of this Background Paper for <IR> revealed a number of instances, particularly in South Africa, where organizations are starting to “integrate” consideration of the capitals, for example:

- The *2011 Indra Annual Report*³⁰ focuses on the added value of both financial and non-financial capitals. The company provides a diagrammatic overview of the interrelationships between the different capitals, which is unique amongst the reports analysed.
- The *2012 Strate Annual Report*³¹ discloses a value added statement that contains the wealth created and the wealth distribution categorized by personnel expenditure (human), finance costs (financial) and government (social and relationship). Based upon this statement, the value-added ratios, revenue per employee, and wealth created per employee are disclosed.
- The *2012 Transnet Integrated Report*³² uses an interesting model of economic, social, and environmental dividends the company delivered. Symbols are used throughout the report to focus on strategic areas and dividends, which are often paired, implying that the dividends result from the strategic focus areas. As such, Transnet implicitly shows the capital model, explaining how the company adds value through the capitals.

²³ Pages 33-41 of the 2011 Annual Report at https://docs.bankinter.com/stf/web_corporativa/informacion_financiera/info_financiera/memoria/2011/informe_anual_2011.pdf

²⁴ The most well-known of them was Skandia, see for example http://www.valuebasedmanagement.net/methods_skandianavigator.html

²⁵ See, for example, “Study on the Measurement of Intangible Assets and Associated Reporting Practices” at http://ec.europa.eu/enterprise/newsroom/ct/itemdetail.cfm?displayType=library&lang=pt&tpa_id=0&item_id=2775 and “Guidelines for Managing and Reporting on Intangibles (Intellectual Capital Report)” at http://ec.europa.eu/research/social-sciences/projects/073_en.html

²⁶ See, for example, http://www.academy.fraunhofer.de/en/technology_innovation/intellectual_capital_statement.html

²⁷ See, for example, “Intellectual capital – defining key performance indicators for organizational knowledge assets” Marr, Schiuma and Neely www.som.cranfield.ac.uk/som/dinamic-content/research/cbp/2004,%20IC%20-%20defining%20KPIs%20for%20org%20KA.pdf

²⁸ http://www.theiirc.org/wp-content/uploads/Yearbook_2012/sources/indexPop.htm

²⁹ <http://www.wici-global.com/kpis>

³⁰ <http://www.indracompany.com/en/accionistas/memoria-y-cuentas-anales>

³¹ <http://www.strate.co.za/aboutstrate/financial%20statements/strateintegratedreport2011.pdf>

³² http://overendstudio.co.za/online_reports/transnet_ar2012/index.php

5.20 As noted in the IIRC's Pilot Programme 2012 Yearbook "Many businesses in the Pilot Programme are initially strengthening measurements of corporate KPIs in relation to the capitals, as part of understanding their significance to businesses", with some "developing innovative approaches to strengthen accountability for capitals to meet investors' needs for more comparable, meaningful information".

5.21 Some of the key observations regarding the capitals in the 2012 Yearbook are:

- Investors want companies to put capitals into a strategic context. Many investors would like disclosures on capitals to be supplemented by qualitative information that explains their material relevance to the valuation of the company and outlines the company's strategy and action plan for improving performance over time
- Intellectual and human capitals are the lifeblood of knowledge-based companies where there is a need to link them with financial capital
- Environmental and social events can have a direct financial bearing on companies in the near term, so it is worth explaining wider trends that could have material consequences, despite uncertainties
- One of the initial challenges is to create or strengthen internal systems to capture data on issues such as carbon emissions and employee turnover and to establish who is responsible for data management
- Several companies in the Pilot Programme are shifting responsibility for collecting more than financial data for reporting purposes to financial functions in order to improve integration of information
- Industry-specific and local issues can drive the key performance indicators selected to assess dependence and effects on the capitals and inform decision-making
- <IR> involves reporting on capitals that are strategically important, so commentary outlining why metrics are selected can be useful to understand their business implications
- Using a handful of the most important indicators and proxies to capture risk can minimize complexity, whereas quantifying the secondary environmental and social impacts of providing products and services can be complex and difficult
- Some companies are investigating how natural capital is valued, including how traditional business frameworks account for the impact and dependency on biodiversity and ecosystem services. Understanding these related risks and opportunities can be critical to the sustainability of business and the broader economy.

6. Other issues and areas for further development

6A Investors' information needs

6.1 As noted in paragraph 5.21, a key observation regarding the capitals in the 2012 Yearbook was that "Investors want companies to put capitals into a strategic context. Many investors would like disclosures on capitals to be supplemented by qualitative information that explains their material relevance to the valuation of the company and outlines the company's strategy and action plan for improving performance over time".

6.2 The IIRC is considering a research project to examine report users' information needs, focusing on the commonality and differences between the needs of investors, as providers of financial capital, and the needs of broader stakeholders, to understand how much difference there is in practice and how information needs vary within and between stakeholder groups.

6.3 It is suggested that this research specifically include the question of investors' needs with respect to information about the various capitals.

6B Metrics

6.4 As noted in paragraph 3.5, quantitative indicators, such as KPIs and in some cases monetized metrics, can be very important in explaining an organization's uses of and effects on various capitals. This is particularly true where KPIs are themselves "integrated" in that they display the relationships between two or more capitals. Examples of some of the KPIs observed in the review of Pilot Programme participants are included in the following table.

Natural	<ul style="list-style-type: none"> • CO2 emissions • Energy consumption per energy source • Amount of waste • Environmental accidents • Recycled waste • Environmental protection investments • Animals purchased for trials
Human	<ul style="list-style-type: none"> • Number of employees • Diversity • Total investment in training • Employees in corporate e-learning • Average age • Average training days per employee • Employee survey results • Injuries per million working hours • Rate of absenteeism • Severance rate • Minimum wage ratio
Social and relationship	<ul style="list-style-type: none"> • "Great place to work" ranking • Number of volunteers • Claims/lawsuits • Involvement in social actions • Involvement in cultural projects • Customer satisfaction index • Provision for social projects • "Social investment" (money spent on philanthropy)
Intellectual	<ul style="list-style-type: none"> • Number of patent applications filed • Money spend on R&D • Number of tests with new technology • Brand awareness • Others might include: <ul style="list-style-type: none"> • number of new products developed • expenditure on organizational change/process development • expenditure on software development for internal systems • sales generated by R&D-derived products

6.5 Notwithstanding the importance of such metrics, it is not considered necessary for the Framework to prescribe specific metrics or measurement methods to be used in an integrated report. Rather, it is believed that the IIRC should aim to complement, rather than duplicate, such material developed by established reporting standard setters and industry bodies. Nonetheless, in order to promote consistency and rigour, the IIRC should consider:

- referencing, in the Framework or elsewhere, examples of metrics and measurement methods developed by others (see, for example, the references cited in the footnotes to paragraph 4.28 of the Prototype Framework); and
- developing a database of metrics, including examples for individual capitals and, more importantly, examples that show the relationships between two or more capitals.

6C Complexity and trade-offs

6.6 It is not considered necessary for the Framework to require, and it would not be practicable to expect, that <IR> will be able to explain all the complex relationships between all the various capitals that would be necessary to reflect a complete, aggregated picture of an organization's overall effect on the world's stock of all the capitals. It is important, however, that the material factors that influence value creation over time are either quantified or reported on in narrative form, or both.

6.7 Organizations should report on material trade-offs:

- between capitals or between components of a capital (e.g., creating employment, which increases human capital, through an activity that negatively affects the environment and therefore decreases natural capital)
- over time (e.g., choosing a course of action when it is likely that a different course would result in a greater capital increment but not until a later period)
- between capitals owned by the organization and those owned by others or not owned at all.

6D Aggregation

6.8 When developing this Background Paper for <IR> the project team considered whether:

- an *organization's* use, stock or impacts on a capital or capitals can be aggregated
- *collective* use, stock or impacts on a capital or capitals can be aggregated globally or by sector, country or region.

6.9 It seems that any meaningful form of aggregation for a single capital, either at the organizational level or across organizations, would require a consistent and standardized:

- definition of the capital
- indicators for measuring use, stock or impacts with respect to that capital
- measurement methods for the indicators.

6.10 Perhaps the easiest capital for which this could be achieved is financial capital because it has a common unit of measurement, i.e. monetary currency (albeit that there are many different currencies in the world). There are reasonably well-developed systems for aggregating measurements of financial capital at both the organization level (e.g., financial reporting standards) and collective level (e.g., national statistics, gross domestic product, and national price indexes). Attempts to harmonize such measures globally can, however, be problematic (e.g., the difficulties experienced by the International Accounting Standards Board and the US Financial Accounting Standards Board with respect to financial reporting standards are well known).³³

6.11 For some aspects of some other capitals there are also efforts to standardize definitions, indicators and measurement methods for use by individual organizations (e.g., the Global Reporting Initiative's "Sustainability Reporting Guidelines", as mentioned above, has indicators for numerous aspects of various capitals, and the Carbon Disclosure Standards Board's "Climate Change Reporting Framework" with respect to emissions³⁴).

³³ See, e.g., www.journalofaccountancy.com/News/20137119.htm

6.12 Apart from efforts to monetize various capitals, there appears to be no reasonable way to aggregate measures of an organization's use, stock or impacts with respect to the full range of capitals, or even the various components within any particular capital, because of the lack of a common unit of measurement. This difficulty is also apparent at the collective level. While efforts to aggregate capitals at the collective level are no doubt helpful for many purposes, including national and international policy-setting with respect to non-renewable resources, it does not seem to be within the ambit of <IR> to consider aggregation of capitals across organizations. To do so would require standardization to a degree that is largely contradictory to the primary thrust of <IR>, which is to enable each organization to tell its own value creation story.

6E Reporting boundary

6.13 The reporting boundary for <IR> is dealt with in paragraphs 5.12-5.16 of the Prototype Framework. Under that guidance, the boundary of an integrated report is determined by reference to opportunities, risks and impacts that have a material effect on the ability of the financial reporting entity to create value over time, whether they are attributable to, or associated with, the financial reporting entity directly, or indirectly through other entities/stakeholders. The columns of the following table align with the entities/stakeholder groups identified in the diagram at paragraph 5.14 of the Prototype Framework. The table provides examples of links between capitals and stakeholders to illustrate how an organization can use the capitals model in conjunction with stakeholder analysis when determining its reporting boundary.

³⁴ www.cdsb.net/climate-change-reporting-framework/

	Financial reporting entity	Employees	Suppliers	Local community	Customers	Other stakeholders
Financial	An organization's financial statements measure the stock and flow of its financial capital	Remuneration of employees is reflected in financial results	Payments to suppliers are reflected in financial results	Organizations may fund community activities	Receipts from customers are reflected in financial results	In some cases, an organization's effect on capitals owned by society are internalized (e.g., through emissions trading schemes)
Manufactured	Manufactured capital owned by the entity is reflected in the financial statements			An organization's use of infrastructure (e.g., roads, can affect the local community)		Physical infrastructure supplied by government (e.g., water treatment plants, is often critical to a business)
Intellectual	Some intellectual property is reflected in financial statements	Employees are a key contributor to intellectual capital	An organization may be heavily dependent on the intellectual capital of particular suppliers (e.g., the organization may be reliant on external technology)		How an organization deploys its intellectual capital may be a key reason why some customers do business with it	
Human	Remuneration of employees is reflected in financial results	Employees are the primary source of human capital	An organization may be able to influence labour practices (e.g., occupational health and safety, child labour, and freedom of association) in its supply chain		Customers may be attracted to an organization by well-trained staff or may react adversely to poor practices (e.g., with respect to occupational health and safety)	
Social and relationship		Employees often invest time and the skills developed through paid work to enhance social and relationship capital through, for example, volunteer work	Key relationships, and the trust and loyalty that an organization has developed and strives to build and protect with suppliers are part of social and relationship capital	The local community is often an important source of social and relationship capital, an organization may be a dominant player in the local community (e.g. in many mining towns)	Key relationships, and the trust and loyalty that an organization has developed and strives to build and protect with customers are part of social and relationship capital	Society at large determines whether an organization retains its social licence to operate
Natural	An organization may be required to internalize environmental costs that were previously externalized (e.g., through emissions trading schemes)		In many cases, an organization's use or effect on natural capital is in sourcing raw materials through the supply chain	An organization's activities can affect natural capital valued by the local community (e.g., pollution emitted by a factory)	Products bought by customers may have material effects on natural capital (e.g., Scope 3 emissions for a car manufacturer)	

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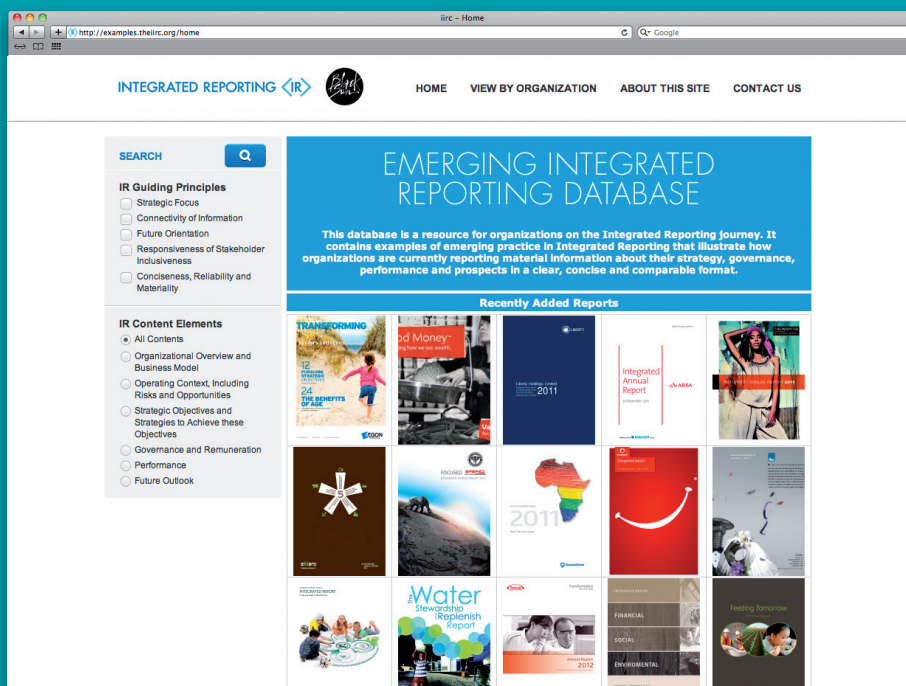
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