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BIG INNOVATION CENTRE

# Intangible Asset Reporting

## Defining Britain's Real Treasures

Intangible Gold project

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# Executive Summary

## Intangible Asset Reporting - Defining Britain's real treasures

Intangible assets have become the most significant driver of economic growth and business models alike. The purpose of this report is to assess the multiple definitions of intangibles and develop a workable synthesis of how they can best be defined and measured in order better to analyse and understand them. First we review the five dominant classifications:

1. **Statutory Reporting** (accounting standards and taxation). This definition of intangible assets is the narrowest and refers to those assets which can be separated out from other assets and purchased or sold on the open market. This definition is the one used by the Financial Reporting Council (FRC) which sets the reporting regulations for UK listed firms. It includes software applications and databases, patents, copyrights and trademarks but excludes most forms of Research and Development.

2. **Economic Reporting**. Economists use a broader definition which includes all intangible asset investments which deliver a return beyond the current financial year. They include all the statutory assets cited above including data and ICT, but also innovative property plus Research and Development and "economic competencies', which includes investment in business model, networks and skills. The OECD developed this definition.

3. **Intellectual Capital Reporting.** This definition is broader still because it includes people and their contributions to the performance of the firm. Human, social and relationship capital are added to the list of intangible assets even though these are not includable in any formal accounting definition.

4. **Management Reporting.** This definition is focused more on the strategy of the firm and how it intends to achieve its managerial objectives. As such it is more encompassing and extensive than the other definitions because it includes all types of assets (both tangible and intangible) and operating expenditure, exemplified by the 'balanced scorecard' approach to capturing all elements that contribute to company performance. This is part of a growing interest in better understanding how a company's strategy contributes to performance.

5. **Corporate Social Responsibility (CSR) Reporting.** This is the broadest definition of all and goes well beyond management reporting. Firms have felt the need to respond to challenges to their licence to operate because of the environmental consequences of company behaviour, in particular on their contribution to climate change and decarbonisation, and their impact on employment and wider society

The **Intangible Gold Project's** definition of Intangible Assets is a mixture of above, and we believe that it can satisfy all stakeholder criteria. An intangible within a company is an asset if it:

- Creates financial and/or non-financial benefits (such as increased productivity, innovation, purpose, revenue, etc.);
- Can be traded' in the marketplace; and/or
- Can be controlled' by any stakeholder internal or external to the organization.

We suggest that these three criteria should form the basis for the prototyping of an Intangible Asset Reporting scheme and data analytics tools for practical use by stakeholders. Importantly the resulting definition, using these criteria, is both consistent with the OECD categorisation and works in operational terms very effectively.

This approach highlights several 'layers' of reporting that a company may have to consider in respect of its intangible contributors. The text underlined shows the nature of the data obtained (whether investment or expenditure or other).

Since all five reporting schemes mentioned above are devised to serve their particular ends, none of these approaches provides a comprehensive overview of the drivers of company performance and value that can aid management decision making or external stakeholder assessment. Integrated Reporting arguably intents to provide a framework within which companies may choose to operate, rather than a clear set of definitions.

Additionally, to these layers may now be added a further dimension of complexity in transfer pricing, courtesy of OECD's recently introduced guidelines to tackle Base Erosion and Profit Shifting (BEPS). These, too, do not provide certainty regarding the assets that should be taken into account in each case.

We lean towards the Economic Reporting approach to intangible asset classification which is both consistent with these criteria and offers the most systematic, encompassing framework for intangible reporting to which the other methodologies can contribute. We urge the British Standards Institution to co-develop this approach. This will build on and complement international efforts to create a Common Reporting Standard, incorporating better intangible reporting. It will also work with the grain of the BEPS initiative by the OECD, seeking to close down the estimated $100-$240bn of global lost tax in particular by moving intangible assets into low tax jurisdictions. To be operational this will require an operational definition of intangibles.

In the next phase of Big Innovation Centre's work in this sphere, we propose the creation of a digital platform in which companies report intangible asset data (using the agreed common framework and common definitions), so that different stakeholders can use these for various purposes, including strategic management, tax accounting, productivity measurement, or for

intellectual capital research. In order to achieve this, we propose ‘diagnostic tools’ that assist companies and stakeholders in recognising intangibles as assets, quantifying the investment made in them, understanding their financial and non-financial returns, and meeting their various reporting obligations.

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# Reporting Frameworks

Since the earliest days of discussion on Intellectual Capital and Intangible Assets, there have been proposals as to how firms should report and value them for operating management, Boards of Directors, national financial authorities (e.g. HMRC in the UK) and investors (both public and private).

The five reporting frameworks are:

1. **Statutory Reporting** (accounting standards and taxation)
2. **Economic reporting**
3. **Intellectual Capital Reporting**
4. **Management Reporting**
5. **Corporate Social Responsibility (CSR) Reporting**

These frameworks are of various scopes and use. In the centre of Figure 1 below is the **Statutory Reporting** definition of 'Intangible Assets'. These are the definitions which appear in statutory annual reports, which in the UK are governed by the Financial Reporting Council, shown on the outer edge of the chart. These statutory reports are relied on by shareholders, governments, employees, customer and suppliers (often collectively known as 'stakeholders') for their view of the firm.

The **Economic Reporting** used by economists and public agencies like the OECD and national statistical offices takes a broader view than that of the accountants, concerned with capturing any expenditure which has an impact on the firm's performance beyond the current financial year. Their definition roughly doubles the value of intangible assets.

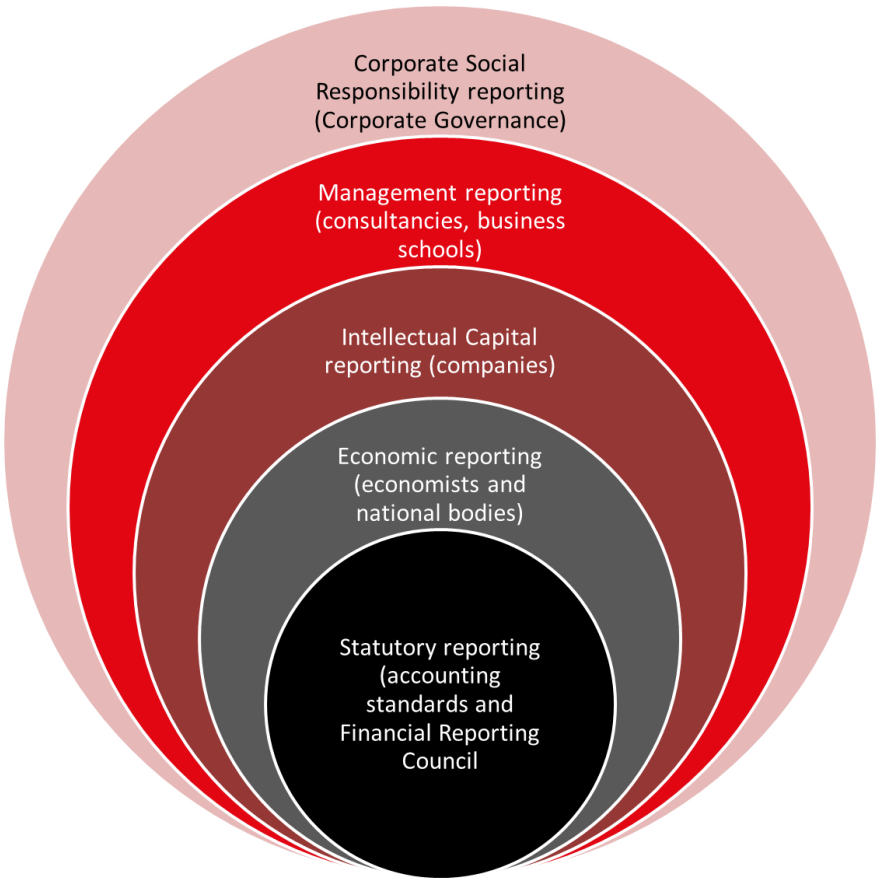
The third view, **Intellectual Capital Reporting**, is broader still. It looks at all the activities of the firm so that, for example, in the service industries, which now account for 80% of GDP, most of the expenditure is for employees and managers rather than tangible assets and materials. These expenditures are categorised as 'Intellectual Capital' and are much larger again than intangible assets as defined by economists.

**Management Reporting** is concerned with the strategy of the firm and in understanding how the company creates and sustains value. It sits within the widely adopted 'business-school' view of the enterprise and its environment.

The final view is **Corporate Social Responsibility**, which looks at the impact the company makes on the natural environment and how sustainably it uses its human resources (both within the firm and within its entire supply chain) and how sustainably it uses natural resources (like energy and raw materials).

Figure 1 below illustrates these different dimensions of reporting and the sub-sections 1 to 5 explain them in more detail.

**Figure 1. Intangible asset reporting layers**






1. **Statutory Reporting** (accounting standards, taxation, and Financial Reporting Council IAS 38) - Data focus is on intangibles which can be **separated** out from other assets (identifiable), **controlled**, **purchased or sold** on the open market, and where there exist direct **future economic benefits**.
2. **Economic Reporting** (national economic bodies, such as the Office for National Statistics applying economic reporting to productivity measures) – Data focus is on intangible **investments**.
3. **Intellectual Capital Reporting** (company approaches) – Data focus is on intangible **contributions** to the performance of the firm.
4. **Management Reporting** (management consultancies & business schools' approach) – Data focus is on **operating expenditures** related to how the firm intends to achieve its strategy (market share, P&L, earnings per share, etc.) and managerial objectives.
5. **Corporate Social Responsibility Reporting (CSR)** (corporate governance) – Data focus is on intangible **behaviour** affecting societal issues beyond the firm.

These five frameworks are not mutually exclusive; rather they should be viewed as different perspectives on intangible assets and intellectual capital where the chosen scheme is the one that best meets the needs of the user. For example, a tax authority like HMRC will be interested in the financial reporting view. HMRC will wish to know how much tax is due on the firms' profits (or losses). In order to calculate the company's profits, the firm will have made deductions in respect to the depreciation of assets recorded on its balance sheet. These deductions will directly affect the tax liabilities, so it is essential that they are correct and in accordance with agreed accounting standards, which should themselves be accepted by HMRC. As stated in the IFRS Conceptual Foundations[1] (2016, p22):

> *'The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity.'*

Thus, if Statutory Reporting is extended to treat intangible assets as tangible assets, putting them on the same fiscal footing, they are likely to attract comparable fiscal advantages – with significant implications for the tax base.

In contrast, economists are more interested in economic aggregates that have an impact on aggregate economic outputs than narrower financial accounting measures. Economists thus look at the productivity of firms in each sector from two perspectives: labour productivity and multi-factor productivity. The former looks at total output (units at market price) divided by total input (labour hours). The latter looks at the effect that investment in both tangible and intangible assets have on productivity. Given the growing role of intangibles, this has led to important debates about what constitutes productivity.

Managers are much more focused on what we would call forward indicators such as revenue and profit growth. Managers review the investments required to sustain this growth and how it is to be funded (e.g. retained earnings, corporate bonds, and shareholder's equity). They review the firm's strategy against competitors and the needs of their customers to ensure that the investment mix reinforces the strategy. All of these require better understanding of the role played by intangibles.

Lastly, stakeholders who may include governments, employees and customers, as well as investors, have the broadest interests of all. The **Intellectual Capital Reporting** movement has focused on many of these issues, and many of their concerns are now being taken forward by Integrated Reporting Framework, which includes some of the **Corporate Social Responsibility** initiatives.

[1] International Financial Reporting Standards (IFRS) Foundation (2015) Conceptual Framework for Financial Reporting, London, UK

# 1. Statutory Reporting

Financial reporting is based on internationally approved standards (IAS 38 and others). These standards operate within conceptual frameworks, the latest version of which was published in 2015. This conceptual framework sits above the standards and provides the overall architecture for the global financial reporting system (IFRS, 2015). The detailed reporting requirements have already been covered in the earlier section.

In the UK Statutory Reporting is supervised by the Financial Reporting Council (FRC) who operates under the 2006 Act. The following quotation from the 2015-16 Report [2] sets out their priorities:

> *'Whilst the primary audience for the annual report and accounts remains existing shareholders, the FRC recognises the validity of wider stakeholder interest in corporate reporting. Companies need to recognise that the concerns of stakeholders will have a bearing on their reputation and could materially affect their profitability and the interests of shareholders. It is worth noting that shareholders themselves are looking for more disclosure in relation to public interest matters. For example, FRC discussions with shareholders show a growing appetite for more disclosure on climate-related matters and an improved dialogue with companies on culture. High-quality dialogue relies on robust information. A clear description of the company's culture, values and behaviour expectations with an assessment of how they are measured can provide a valuable basis for a deeper conversation. In addition, the FRC encourages companies to consider how they might report concisely on how their directors have discharged their duty to have regard to other stakeholders, as required by section 172 of the Companies Act 2006.'*

It is noteworthy that the FRC has recently initiated a review of corporate culture[3] and its impact on firm performance which was published in July 2016. In their submission to the Business, Energy and Industrial Strategy Committee[4] in October 2016 they made the following statement:

> *'Section 172 is effectively enforceable only by shareholders. The FRC's view is that there is a need to explore mechanisms which will enable this section to deliver its purpose more effectively. Current corporate responsibility and sustainability reporting does not deal adequately with these matters. There is a lack of information about how the matters referred to are taken into account by directors in promoting the success of the company. There is also insufficient communication about the implementation of*

[2] Financial Reporting Council RFC (2016) Annual Review of Corporate Reporting 2015-16. London UK
[3] Financial Reporting Council FRC (2016) Corporate Culture and the Role of the Board. London UK
[4] Financial Reporting Council FRC (2016) Response to the BEIS Select Committee Corporate Governance Inquiry, London UK

*company strategy on apportioning funds to other important matters such as tax, dividends, directors' remuneration and capital allocation.'*

It is clear from the above that Statutory Reporting is beginning to engage with the challenges of intangibles and corporate social and environmental responsibility. One of the aims of this report is to accelerate and intensify that engagement.

## Taxonomy and Definitions

The definitions derive from the work of the international accounting standards bodies: the International Accounting Standards Board (IASB) and the US national standards setter the Financial Accounting Standards Board (FASB). These organisations are responsible for guiding professional accountants and issuing standards for relevant topics. For intangible assets the relevant standards are the IAS38[5] which deals with Intangible Assets and the IAS3[6] which deals with business combinations, basically accounting in circumstances of merger or acquisition.

The FRC uses the same definitions. It is based on two documents: accounting standards, in this case, IAS38[7] and the Conceptual Framework[8]. Both documents have long histories and are ratified by the IASB and FASB. It is important to understand the purpose of financial reporting as this sets the context within which the standards are to be interpreted:

> *'Financial statements provide information about an entity's assets, liabilities, equity, income and expenses that is useful to users of financial statements in assessing the prospects for future net cash flows to the entity and in assessing management's stewardship of the entity's resources'.* Conceptual Framework p16.

The accounting standard which deals with Intangible Assets is IAS38. This standard has a long history:

> *'In April 2001 the International Accounting Standards Board (the Board) adopted IAS 38 Intangible Assets, which had originally been issued by the International Accounting Standards Committee in September 1998. That Standard had replaced IAS 9 Research and Development Costs, which had been issued in 1993, which itself replaced an earlier version called' Accounting for Research and Development Activities that had been issued in July 1978.'*

[5] IFRS Foundation (2015) IAS 38 Intangible Assets, London, UK
[6] IFRS Foundation (2015) IAS 3 Business Combinations, London, UK
[7] ibid
[8] IFRS Foundation (2015) IASB Conceptual Framework Basis for Conclusions on the Exposure Draft: Conceptual Framework for Financial Reporting, London, UK

*'The Board revised IAS 38 in March 2004 as part of the first phase of its Business Combinations project. In January 2008 the Board amended IAS 38 again as part of the second phase of its Business Combinations project. In May 2014 the Board amended IAS 38 to clarify when the use of a revenue-based amortisation method is appropriate. IAS38 p. A1269'.*

The definition of intangible assets in IAS38 is documented Box 1 below.

**Box 1: Current Accounting Standard Definition of Intangible Assets**

**The current accounting standard definition of Intangible Assets (also called IAS38) by International Accounting Standards Board[9]**

*'Entities frequently expend resources, or incur liabilities, on the acquisition, development, maintenance or enhancement of* ***intangible resources*** *such as scientific or technical knowledge, design and implementation of new processes or systems, licences, intellectual property, market knowledge and trademarks (including brand names and publishing titles). Common examples of items encompassed by these broad headings are computer software, patents, copyrights, motion picture films, customer lists, mortgage servicing rights, fishing licences, import quotas, franchises,* ***customer or supplier relationships, customer loyalty, market share and marketing rights****.*

*Not all the items described in the paragraph above meet the definition of an intangible asset, i.e.* ***identifiability, control over a resource and existence of future economic benefits****. If an item within the scope of this Standard does not meet the definition of an intangible asset, expenditure to acquire it or generate it internally is recognised as an expense when it is incurred. However, if the item is acquired in a business combination, it forms part of the goodwill recognised at the acquisition date.*

*The definition of an intangible asset requires an intangible asset to be* ***identifiable*** *to distinguish it from goodwill. Goodwill recognised in a business combination is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognised. The future economic benefits may result from synergy between the identifiable assets acquired or from assets that, individually, do not qualify for recognition in the financial statements.*

*An asset is identifiable if it either is* ***separable****, i.e. is capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable asset or liability, regardless of whether the entity intends to do so; or arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.*

*An entity* ***controls*** *an asset if the entity has the power to obtain the future economic benefits flowing from the underlying resource and to restrict the access of others to those benefits. The capacity of an*

[9] IFRS Foundation (2016) IAS Standard 38 – Intangible Assets, London, UK

*entity to control the future economic benefits from an intangible asset would normally stem from legal rights that are enforceable in a court of law. In the absence of legal rights, it is more difficult to demonstrate control. However, legal enforceability of a right is not a necessary condition for control because an entity may be able to control the future economic benefits in some other way.*

*Market and technical knowledge may give rise to future economic benefits. An entity controls those benefits if, for example, the knowledge is protected by legal rights such as copyrights, a restraint of trade agreement (where permitted) or by a legal duty on employees to maintain confidentiality.*

*An entity may have a team of skilled staff and may be able to identify incremental staff skills leading to future economic benefits from training. The entity may also expect that the staff will continue to make their skills available to the entity. However, an entity usually has insufficient control over the expected future economic benefits arising from a team of skilled staff and from training for these items to meet the definition of an intangible asset. For a similar reason, specific management or technical talent is unlikely to meet the definition of an intangible asset, unless it is protected by legal rights to use it and to obtain the future economic benefits expected from it, and it also meets the other parts of the definition.*

*An entity may have a portfolio of customers or a market share and expect that, because of its efforts in building customer relationships and loyalty, the customers will continue to trade with the entity. However, in the absence of legal rights to protect, or other ways to control, the relationships with customers or the loyalty of the customers to the entity, the entity usually has insufficient control over the expected economic benefits from customer relationships and loyalty for such items (e.g. portfolio of customers, market shares, customer relationships and customer loyalty) to meet the definition of intangible assets. In the absence of legal rights to protect customer relationships, exchange transactions for the same or similar non-contractual customer relationships (other than as part of a business combination) provide evidence that the entity is nonetheless able to control the expected future economic benefits flowing from the customer relationships. Because such exchange transactions also provide evidence that the customer relationships are separable, those customer relationships meet the definition of an intangible asset.*

*The future economic benefits flowing from an intangible asset may include revenue from the sale of products or services, cost savings, or other benefits resulting from the use of the asset by the entity. For example, the use of intellectual property in a production process may reduce future production costs rather than increase future revenues.'*

## 2. Economic Reporting

The Organisation for Economic Cooperation and Development (OECD) has maintained a long-term interest in the measurement and reporting of intangible assets and published their first survey in 1987. This was followed by the publication of their statistical framework in 1998 (Young, 2008)[10]. However, the most widely used definition is that developed by the US economists Corrado, Hulten and Sichel (2006)[11] who have worked, and continue to work, with the OECD for the past twenty years. In addition to their work on intangible assets, the OECD has made significant contributions to the study of research and development (the Frascati manual) and innovation (the Oslo manual). The OECD's latest work focuses on the taxation of intangible assets as part of the Base Erosion and Profit Shifting (BEPS) project,[12] which is fully documented in a later section.

### Taxonomy and Definitions

Corrado, Hulten and Sichel grouped Intangible Assets into three categories[13], which they then expanded into nine distinct types of Intangible Asset as shown in Table 1 below.

**Table 1. Economic Reporting on Intangible Investment – The Broad Categories**

| Asset Definition | Asset Type or Intangible Investment Category |
|---|---|
| **Computerised information:** Knowledge embedded in computer programs and computerised databases. | 1. Computerised software<br>2. Computerised databases |
| **Innovative property:** Knowledge acquired through scientific R&D and non-scientific inventive and creative activities. | 1. Science and Engineering R&D (costs of new products and new production processes, usually leading to a patent or licence<br>2. Mineral exploration (spending for the acquisition of new reserves)<br>3. Copyright and license costs (spending for the development of entertainment and artistic originals, usually leading to a copyright or license)<br>4. Other product development, design, and research expenses (not necessarily resulting in a patent or copyright) |
| **Economic competencies**: Knowledge embedded in firm-specific human and structural resources, including brand names. Each of these three categories is then expanded to include the detailed definitions | 1. Brand equity (advertising expenditures and market research for the development of brands and trademarks)<br>2. Firm-specific human capital (costs of developing workforce skills i.e. on-the-job training and tuition payments for job-related education)<br>3. Organisational structure (costs of organisational change and development; company formation expenses) |

[10] Young, A. (1998) Towards an Interim Statistical Framework: Selecting the Core Components of Intangible Investment. OECD, Paris, France
[11] Corrado, C., Hulten, C., and Sichel, D. (2006) Intangible Capital and Economic Growth, Finance and Economics Discussion Series, Division of Research & Statistics and Monetary Affairs, Federal Reserve Board, Washington DC, USA.
[12] OECD (2013) Addressing Base Erosion and Profit Shifting, OECD, Paris, France
[13] Ibid page 23

One of the key points about the economists' definitions is that they include all 'investments' (as opposed to outputs) which deliver a return beyond the current financial year. Whilst Computerized Information and Innovative Property are mostly included in the accountants' definitions; Economic Competencies are not. In the UK study by Haskel et al (2014)[14] the total value of Economic Competencies was almost identical to the value of Computerised Information and Innovative Property. The data is shown in Table 2 below.

Table 2 also shows that the ratio of the value of intangible assets to tangible assets has changed very dramatically since 1990. In 1990 tangible assets were valued at £85bn against £47.4bn for intangibles. In 2014 tangible assets were valued at £121.3bn against £132.6bn for intangibles.

**Table 2. Billion £ Intangible Investment in the UK (Economic Reporting)**

| Asset / Year – £bn investment* | 1990 | 1995 | 2000 | 2005 | 2010 | 2014 |
|---|---|---|---|---|---|---|
| Purchased Software | 2.6 | 5.3 | 7.3 | 9.6 | 10.0 | 15.5 |
| Own-Account Software | 4.9 | 5.9 | 9.8 | 10.9 | 12.3 | 12.7 |
| ***Total Software*** | ***7.4*** | ***11.3*** | ***17.2*** | ***20.6*** | ***22.3*** | ***28.2*** |
| | | | | | | |
| R&D | 8.2 | 9.2 | 11.8 | 13.4 | 16.3 | 19.0 |
| Design | 6.4 | 6.6 | 9.2 | 11.9 | 13.0 | 14.2 |
| Non-scientific R&D | 0.2 | 0.3 | 0.4 | 0.3 | 0.9 | 0.4 |
| Mineral Exploration | 1.7 | 1.1 | 0.4 | 0.4 | 1.0 | 1.1 |
| Financial Innovation | 0.3 | 0.4 | 0.6 | 0.8 | 1.3 | 1.7 |
| Artistic Originals | 2.7 | 4.2 | 5.4 | 5.4 | 5.1 | 5.2 |
| ***Total Innovative Property*** | ***19.4*** | ***21.8*** | ***27.8*** | ***32.2*** | ***37.6*** | ***41.5*** |
| | | | | | | |
| Advertising | 3.8 | 5.4 | 8.6 | 8.9 | 10.3 | 11.1 |
| Market Research | 1.0 | 1.3 | 1.7 | 2.9 | 3.2 | 4.0 |
| *Total Branding* | *4.8* | *6.7* | *10.3* | *11.7* | *13.6* | *15.1* |
| Own-Account Organisational Capital | 2.9 | 4.9 | 8.9 | 11.8 | 14.6 | 16.2 |
| Purchased Organisational Capital | 1.0 | 1.6 | 4.1 | 6.0 | 4.3 | 5.4 |
| *Total Organisational Capital* | *3.9* | *6.6* | *13.0* | *17.7* | *18.9* | *21.6* |
| Training | 11.8 | 14.4 | 19.9 | 25.2 | 27.4 | 26.2 |
| ***Total Economic Competencies*** | ***20.5*** | ***27.7*** | ***43.1*** | ***54.7*** | ***59.8*** | ***62.9*** |
| **TOTAL INTANGIBLES** | **47.4** | **60.8** | **88.0** | **107.4** | **119.7** | **132.6** |
| | | | | | | |
| Buildings | 41.2 | 22.3 | 36.7 | 39.7 | 49.6 | 67.0 |
| Plant & Machinery (excl IT) | 29.0 | 30.0 | 38.7 | 46.2 | 30.1 | 38.2 |
| Vehicles | 8.7 | 9.9 | 9.7 | 10.4 | 13.0 | 8.9 |
| IT Hardware | 4.7 | 5.7 | 7.2 | 5.7 | 5.1 | 6.9 |
| Telecom | 1.4 | 2.9 | 1.7 | 1.0 | 0.9 | 0.3 |
| **TOTAL TANGIBLES** | **85.0** | **70.7** | **93.9** | **103.1** | **98.8** | **121.3** |

** Data are investment figures, in £bns, current prices: italicized data are sub-totals for broader asset definitions*

[14] Goodridge,P., Haskel, J,. and Wallis, G. (2014) UK Investment in Intangible Assets: Report for NESTA. Working Paper 14/02. NESTA, London, UK

## 3. Intellectual Capital Reporting

The best-known implementation of Intellectual Capital (IC) reporting was that developed by Edvinsson and colleagues at Skandia, which is referred to as the Skandia Navigator. (Edvinsson, 1997[15]).

**Box 2: Skandia Navigator**

Below is the summary of the main indicators for an Intellectual Capital (IC) reporting approach that was developed by Edvinsson and colleagues at Skandia, which is referred to as the Skandia Navigator. (Edvinsson, 1997[16]):

- **Stakeholder Relationships**:

These include relationship indicators such as number/quality of partnering agreements; number/quality of distribution agreements; number/quality of licensing agreements; public opinion survey; market share; length of relationship; partner satisfaction index; customer retention.

- **Human Resources:**

Demographics indicators, for example, number of employees; number of employees in alliances; average years of service with company; average age of employees; full-time permanent employees as

Competence indicators include, for example, percentage of total employment; employees working at home/total employees; number of women managers; employees with high qualifications; people with PhD and/or master's degree/total employees; average years of service with the company; number of years in specific professions; definition of a competence map, etc.

Attitude indicators comprise, for example, average level of happiness (measured with Likert-type scale for ranking qualitative responses); savings from implemented suggestions from employees; number of new solutions, products and processes suggested; qualitative descriptions of employees (commitment, loyalty, entrepreneurial spirit, enthusiasm); motivation and behaviour indicators.

Human resource management practices indicators are also considered, for instance, training expenses/employees; employee turnover; time in training; expenses for employee development activities (social and personal); indicators about activities to motivate employees; indicators about recruitment practices.

- **Physical infrastructure:**

Scalability/capacity measures; facilities/equipment versus plan; time to execute server updates; system integration; use of knowledge-sharing facilities.

[15] Edvinsson op. cit.
[16] Edvinsson op. cit.

- **Culture:**

Management philosophy; number of internal disputes and complaints; qualitative measures about employee satisfaction; feedback; values; behaviour; motivation; commitment; loyalty; opinion survey.

- **Practices and routines:**

Process quality; number of codified processes; networking practices; norms; database availability; intranet use.

- **Intellectual property:**

Revenues from patents; number of patents and registered designs; value of copyrights; value of patents versus R&D spend; trademarks; brand recognition.

However, other relevant advances have been done in the field; we describe them below.

## Taxonomy and Definitions

The Intellectual Capital (IC) movement began in the 1990s but became widely publicised in 1997 with three influential books. Thomas Stewart (1997) wrote for Fortune magazine and published several articles and interviews on the subject of Intangible Capital starting in the early 1990s. These were summarised in his book *Intellectual Capital, the New Wealth of Organisations*[17]. Much of the groundwork for the IC movement was further developed from empirical work in Sweden led by Leif Edvinsson at Skandia[18]. It is worth exploring this reporting application in some depth because it remains the high-water mark of IC Reporting. The summaries of the main categories reported in the Navigator are found in Appendix 1 and taken from the paper Starovic and Marr (2014) who wrote a summary of intangibles reporting for the Chartered Institute of Management Accountants (CIMA).

The third contributor, Karl Erik Sveiby was also Swedish and had worked with various large firms, WM Data (a large ICT services company) being the best known. The IC movement continues to attract scholars, many of whom publish in the Journal of Intellectual Capital founded in 2001.

Edvinsson and Sveiby, whilst using different terminology to each other, came up with a working definition of intellectual capital which is divided into three parts: Human Capital (its people), Structural Capital (its organisation and knowledge) and Customer Capital. Of these three the economists look at only one, Structural Capital, and the accountants only consider that part of Structural Capital that can be traded on open markets which removes about half of it! One of

[17] Stewart, T. A. (1997) Intellectual Capital – the New Wealth of Organizations, Doubleday New York, NY, USA
[18] Edvinsson, L. and Malone, M. S. (1997) Intellectual capital: realizing your company's true value by finding its hidden brainpower. HarperCollins, New York, NY, USA

the difficulties with these earliest definitions of IC is that whilst they acknowledge that the firm can not own Human Capital, it is classed as capital. This usage of the term 'capital' extends it well beyond its conventional usage by economists from Marx onwards who define capital (K) as assets which can be owned by firms and bought and sold on the market. In contrast to capital, labour cannot be owned (except as slave labour) it can only ever be 'rented' by employers. The same criticism applies to Customer Capitalm as it too cannot be owned by the firm, although brands and customer lists can.

In 2015, Ferenhof[19] (see below quote) and colleagues published the results of an extensive empirical survey of the definitions of intellectual capital found in the academic literature. They reviewed the literature for a ten-year period (2004-2014) but took into account the earlier formulations from Stewart, Edvinsson and Sveiby. The authors selected 83 published articles (over half of which were published in the Journal of Intellectual Capital) and from these assembled what they called a 'meta-model' of intellectual capital. This meta-model provides a complementary taxonomy to that proposed by the economists and accountants. Before documenting the taxonomy it is worth looking at the challenges faced in constructing it.

> *'In the extant literature, different approaches about how IC may be classified and measured are available (e.g. Stewart, 1997; Sveiby, 1997; Brooking, 1996; Lev, 2001; Bounfour, 2003). However, despite the number of activities from both academics and practitioners, one important hurdle was detected in the past: the lack of a common language (Grasenick and Low, 2004). One explanation for this situation is certainly the divergent viewpoints of different interest groups or disciplines, or between considerations of strategy and measurement. The former is concerned with optimizing the management of knowledge resources in the company to improve performance, whereas the latter focuses on establishing standards for organizational accounting to provide stakeholders with a more comprehensive and comprehensible picture of IC expressed in terms of traditional monetary data (Petty and Guthrie, 2000). Besides these two perspectives, other research strands dealing with IC, such as human resource management, information and communication technologies, knowledge management, and sociology, can be found as well (Marr and Adams, 2004; Diefenbach, 2006), which definitely complicates the dialogue in the field. Therefore, the question is what has happened regarding this situation over the years? Has a standard IC measurement established itself? Or do we continue to see a situation in which different interest groups or disciplines come up with new proposals without taking into consideration the ones already present?'*

[19] Ferenhof, H. I., Durst, S. Bialecki, M. Z. and Selig, P. M. (2015) Intellectual Capital Dimensions: State of the Art in 2014. Journal of Intellectual Capital, Vol 16, No 1 pp 58-100

Figure 2 below shows the Intellectual Capital meta model developed by Ferenhof and colleagues[20].

**Figure 2: Intellectual Capital Meta Model *(an interpretation of Ferenhof p91)***

| INTELLECTUAL CAPITAL | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Human Capital** | | | | **Relational Capital** | | **Social Capital** | |
| Motivational | Interpersonal relationship | Knowledge, skills and attitudes | Agility | Customer capital | Business capital | Social Actions | Social Interactions |

| **Structural Capital** | | | |
|---|---|---|---|
| Innovation capital | Process capital | Technological capital | Organizational capital |

Note that in this taxonomy, Customer Capital, *as originally defined* by Edvinsson, has been divided by Ferenhof into Relationship Capital and Social Capital; but the essential point remains that only Structural Capital (shown in light red in Figure 2) can be treated as an intangible asset based upon their definition. These definitions have, not surprisingly, lead to difficulties in measurement. These have also been well documented in the academic literature. One study (Chiucci, 2013)[21] recorded the measurement and reporting of Intellectual Capital in three Italian firms. These were longitudinal studies, which were supported by senior management in each business. Chiucci's conclusions were that 'the implementation of the IC measurement and reporting system was demanding, lengthy and time-consuming in practice'. Furthermore, while the narratives of IC were a powerful tool to increase awareness and knowledge of IC the resulting reports were not used beyond the researchers and reporters. The expectation of managers had been that the IC reports would be forward looking, and help to guide managerial decision-making but they gradually became backwards looking. Lastly the term 'Intellectual Capital' itself may have been ambiguous and not easily understood by participants. John Dumay (Dumay 2016) [22] is an Australian based long-standing academic researcher into IC. He summarises that:

> *'From promising beginnings at Skandia in 1994 I can no longer find any evidence of listed companies reporting their IC. IC reporting started well, but soon Corporate Social Responsibility (CSR) and sustainability reporting took over and have become the mainstays of voluntary reporting internationally. Now Integrated Reporting (IR) seeks to become the ''corporate reporting norm'* (p.168).

[20] Ibid page 91
[21] Chiucci, M.S. (2013) Measuring and reporting intellectual capital. Journal of Intellectual Capital, Vol. 14, No. 3 pp.395-413
[22] Dumay, J. C. (2016) A critical reflection on the future of intellectual capital: from reporting to disclosure. Journal of Intellectual Capital, Vol. 17, No. 1 pp. 168-184

## 4. Management Reporting

Michael Porter first defined this type of reporting[23] in 1981. It has since evolved into a scorecard model. A seminal paper for management reporting is the one published by Kaplan and Norton[24] in the Harvard Business Review (Kaplan & Norton, 1992). In it, they introduced the idea of the 'balanced scorecard' as a means of providing management with a comprehensive view of firm performance. The scorecard provided four perspectives for the company's performance:

- **Financial:** to succeed financially how should we appear to our shareholders?
- **Customer:** to achieve our vision how should we appear to our customers?
- **Learning and Growth:** to achieve our vision how will we sustain our ability to change and improve?
- **Internal Business Process:** to satisfy our shareholders and customers what business processes must we excel at?

For each scorecard, the same four parameters were used: Objectives; Measures; Targets; Initiatives. The scorecard connects all four perspectives with each other and with the firm's Vision and Strategy set by top management and the Board. Kaplan reviewed the history of the balanced scorecard (Kaplan, 2010[25]) and made a number of points relating to the recording and valuation of intangible assets. He observed that the value created from intangible assets is indirect; that their value depends on organisational context and strategy and that many intangible assets seldom add value by themselves. In other words, they have to be bundled with other assets (both tangible and intangible). Most of these points will be familiar.

Kaplan and Norton continued to develop and refine their framework first by introducing the 'strategy map' which links intangible assets and critical processes to the value proposition and customer and financial outcomes (op. cit. p.22). Subsequent work with HR professionals focused on how to link the measurement of human resources to the strategic objectives. Kaplan and his colleagues continue to further develop the framework by including dynamic capabilities and causal relationships.

[23] Porter, M. (1981) Competitive Advantage, Harvard Business School Press, Cambridge, MA, USA
[24] Kaplan, R.S. and Norton, D.P (1992) The Balanced Scorecard – Measures that drive performance. Harvard Business Review, January-February 1992, Cambridge, MA, USA
[25] Kaplan, R.S. (2010) Conceptual Foundations of the Balanced Scorecard. Working Paper 10-074, Harvard Business School, Cambridge, MA, USA

## 5. Corporate Social Responsibility (CSR) Reporting

Corporate Social Responsibility (CSR) and Sustainability standards have become increasingly important. The sustainability standards are driven by environmental concerns, which include (but are not limited to) global warming, global supplies of clean water, impact of pesticides, removal of forests and natural habitats and reductions in biodiversity. CSR focuses also on the behaviour of firms and how they treat their workforce both domestically and through the entire supply chain. The Dow Jones Sustainability Indices are one of the best established[26] and the methodology for these is developed by a Swiss investment firm, RobecoSAM:

> *'This year, 864 companies participated in the RobecoSAM Corporate Sustainability Assessment, a reflection of another strong year of growth in Corporate Sustainability and reporting. In addition, we assessed 981 companies based on publicly available information. The 2015 methodology was updated to reflect emerging sustainability challenges that companies face and that are considered to be critical for their long-term success. For example, how are corporate governance systems and executive remuneration tied to long-term value creation? Are companies effectively measuring the amount of money spent on investments into environmental improvements and measuring the payback of these investments in terms of cost savings? Last year, we celebrated the 15th anniversary of the Dow Jones Sustainability Indices, the leading global benchmark for corporate sustainability.' (p.4)*

The Global Responsibility Index (GRI) also publishes a set of standards[27] (GRI 2016), which vary depending on the topic (the numbers in brackets indicate the number of specific standards for each area):

- GRI 100 Universal Standards (3)
- GRI 200 Economic Standards (6)
- GRI 300 Environmental Standards (8)
- GRI 400 Social Standards (19)

In the UK, Business in the Community, a registered charity sponsored by the Prince's Trust publishes the Corporate Responsibility Index[28] (CR2016 p. 4). They explore six themes:

1. Megatrends converting assessment into action
2. Building a Culture based on Vision and Values

[26] RobecoSAM (2015) Corporate Sustainability Assessment. Zurich, Switzerland, page 4
[27] Global Reporting Initiative, GRI. (2016) Consolidated Set of GRI Sustainability Reporting Standards. GRI Amsterdam, the Netherlands
[28] Business in the Community (2016) Corporate Responsibility Index, London, UK

3. Trusting our Leaders
4. Strengthening the Supply Chain
5. Sustainability – Cost or Investment
6. Measuring the Value of Responsible Business

The International Integrated Reporting Framework[29] was first published in 2013 by the International Integrated Reporting Council (IIRC) based in the UK. According to the IIRC website:

> *'The International Integrated Reporting Council (IIRC) is a global coalition of regulators, investors, companies, standard setters, the accounting profession and NGOs. Together, this coalition shares the view that communication about value creation should be the next step in the evolution of corporate reporting. The International <IR> Framework has been developed to meet this need and provide a foundation for the future.[30]'*

All of these efforts are built with the aim to continue enhancing good corporate governance practices, which enable a purposeful company environment for the measurement of intangible performance.

## Taxonomy and Definitions

The six capitals and their definitions (IIRC 2013, pp 10-11) are listed in Table 3.

[29] International Integrated Reporting Council (IIRC) (2013). Integrated Reporting Framework, London, UK
[30] International Integrated Reporting Council (IIRC) (2013). Integrated Reporting Framework, London, UK

**Table 3. The six capitals of the Global Responsibility Index (GRI)**

| Capital | Definition |
|---|---|
| 1. Financial Capital | The pool of funds that is:<br>• Available to an organisation for use in the production of goods or the provision of services.<br>• Obtained through financing, such as debt, equity or grants, or generated through operations or investments. |
| 2. Manufactured Capital | Manufactured physical objects (as distinct from natural physical objects) that are available to an organisation for use in the production of goods or the provision of services including:<br>• Buildings<br>• Equipment infrastructure (such as roads, ports, bridges, and waste and water treatment plants)<br><br>Manufactured Capital is often created by other organisations, but includes assets manufactured by the reporting organisation for sale or when they are retained for its own use. |
| 3. Intellectual Capital | Organisational, knowledge-based intangibles including:<br>• Intellectual property, such as patents, copyrights, software, rights and licences<br>• 'Organisational capital' such as tacit knowledge, systems, procedures and protocols |
| 4. Human Capital | People's competencies, capabilities and experience, and their motivations to innovate, including their:<br>• Alignment with and support for an organisation's governance framework, risk management approach, and ethical values.<br>• Ability to understand, develop and implement an organisation's strategy.<br>• Loyalties and motivations for improving processes, goods and services, including their capacity to lead, manage and collaborate. |
| 5. Social and Relationship Capital | The institutions and the relationships within and between communities, groups of stakeholders and other networks, and the ability to share information to enhance individual and collective well-being. Social and Relationship capital includes:<br>• Shared norms, and common values and behaviours.<br>• Key stakeholder relationships, and the trust and willingness to engage that an organisation has developed and strives to build and protect with external stakeholders.<br>• Intangibles associated with the brand and reputation that an organisation has developed.<br>• An organisation's social licence to operate. |
| 6. Natural Capital | All renewable and non- renewable environmental resources and processes that provide goods or services that support the past, current or future prosperity of an organisation. It includes:<br>• Air, water, land, minerals and forests<br>• Biodiversity and ecosystem health |

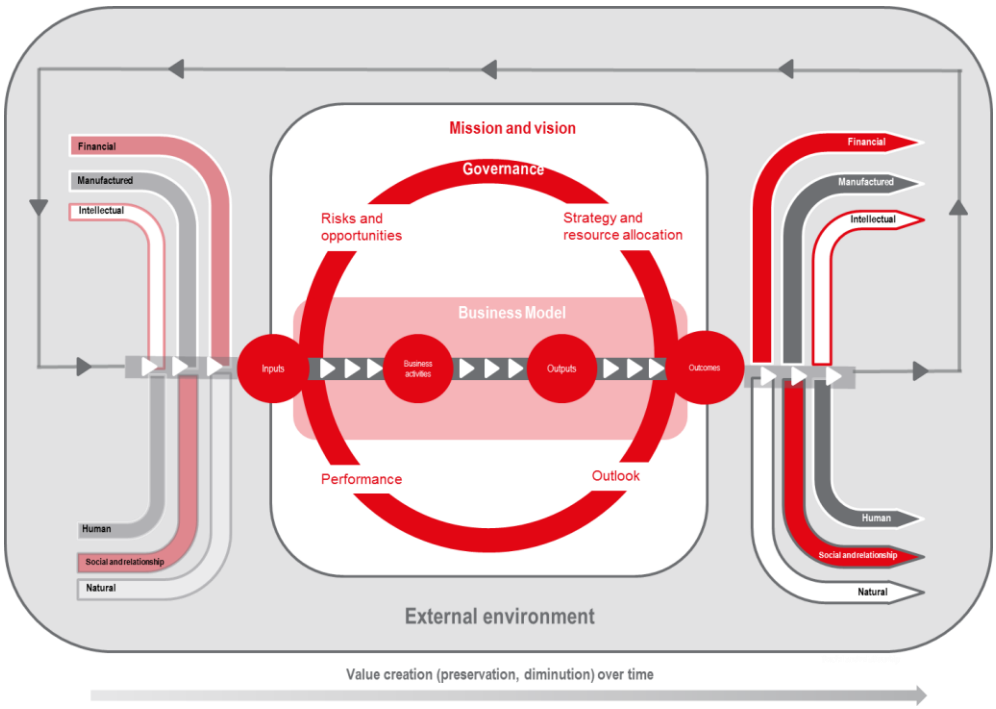
Several of the capitals defined by the IIRC bear a close resemblance to the Ferenhof[31] and Corrado, Hulten and Sichel[32] categories discussed earlier with the addition of Financial,

[31] Op. cit.
[32] Op. cit.

Manufactured and Natural Capital. They can, therefore, be seen as a continuation and broadening of the Intellectual Capital movement and the work of the economists. The IIRC chart below describes the value creation process and shows the six capitals as both inputs and outputs. It is noteworthy that intangible assets affect five out of the six capitals and the business model. The business model drives the transformation from inputs to outputs as explained below:

> *'At the core of the organization is the business model, which draws on various capitals as inputs and through its business activities, converts them into outputs (products, services, by-products and waste). The organization's activities and its outputs lead to outcomes in terms of the effects on the capitals.'* (Paragraph 2.23 page 13)

**Figure 3. Conversions of Capital Input through Business Activities to Output (products, services, by-products and waste)*[33]**




**This is a schematic illustration based upon the original.*

It is this approach to reporting that John Dumay, cited earlier, regards as becoming the corporate reporting norm.

The International Integrated Reporting Framework provides a scheme within which companies may choose to operate, rather than a clear set of definitions of intangible assets.

[33] International Integrated Reporting Council (IIRC) (2013). Integrated Reporting Framework, pp. 13. London, UK

# Current Policy Incentivised Initiatives

The issues of intangible asset reporting are urgent with respect to investment, tax and international standardisation. They are addressed in turn below.

## 1. Finance for Productive Investment Reporting

The Bank of England (2016) published a paper on understanding and measuring the finance for productive investment[34] which sets out the definition of productive investment:

> *'Spending that has the potential to expand the capacity of the economy, by adding to capital, knowledge and technology. Technology is productive as long as the expected social return is greater than the expected social cost of capital. Investment encompasses spending on tangible forms of capital (such as, machinery and new buildings) and intangible forms (such as, innovation and skills).'* (Page 3)

The paper distinguishes between productive investment and non-investment, defining non-investment as transactions which involve a transfer of existing stock of assets (like the sale of an existing house).

Two important research questions arise from the above: do non-investments crowd out productive investments, and does the long-run shift of productive investment towards intangible assets, which lack suitable forms of collateral, contribute to investments shortfalls? The paper then sets out the data which it believes is required to measure productive investment and finance for productive investment:

[34] Bank of England (2016) Understanding and measuring finance for Productive Investment, London, UK

**Table 4. Data and Measurements for Productive Investment (Based on Bank of England (2016)[35], p.4)**

| Definitions | Measurement |
|---|---|
| **Data to measure productive investment** | 1. Marginal expected rate of return on new investment;<br>2. Cost of funds;<br>3. Required rate of return on new investment (firm investment hurdle rates);<br>4. Investment and capital stock (particularly for small companies); |
| **Data to measure finance for productive investment:** | 5. Uses of internal funds;<br>6. Uses of external finance;<br>7. Marginal expected rates of return from other financial activities, for example, mergers and acquisitions, and leveraged buyouts;<br>8. Quantitative data on non-price terms of lending for investment (for example collateral);<br>9. Factors holding back investment (risk tolerance, regulation, taxation, etc.) |

There are very clear linkages between the reporting frameworks for intangible assets, Intellectual Capital and Corporate Social Responsibility documented earlier and the set of measurements proposed by the Bank. These linkages will be explored in depth in future work. For example, economists measure investment in ‘’Economic Competencies’’, but accounting conventions do not classify these as intangible assets. Given that roughly half of all UK intangible investments fall into this category this must be considered as a severe constraint on ‘Productive Investment’ which needs to be explored further.

[35] Bank of England (2016) Understanding and measuring finance for Productive Investment, London, UK

## 2. Base Erosion and Profit Shifting (BEPS) Reporting

Firms, even the very largest multinationals, have head offices and stock market listings which are within the jurisdiction of one or more sovereign states. When they trade in some 200 independent countries and territories they must also obey the laws of each sovereign state. One of the key engagements between the firm and the sovereign states in which it resides and with which it trades is the payment of taxes. These taxes may include taxes on employment, sales, premises used (industrial, office and retail) and on profits.

But as we have seen, the digital knowledge-based economy is very different from the old economy. Digital economy firms have very high levels of intellectual capital, of which some percentage will be capitalised as intangible assets. These businesses benefit from the increasing returns to scale and first mover advantages, and have, within a very small number of years, overtaken the largest companies in the old economy like automobile manufacturers and energy suppliers. Unlike tangible assets, intangible assets have neither mass nor location; they are both weightless and stateless. This means that they can be transferred from one tax jurisdiction to another at the speed of the internet.

This fact is well understood by the OECD whose international perspective is uniquely qualified to provide insight in this area. The OECD's agenda is driven by the needs of its national members. Since the 2008 financial crisis and the rise in sovereign debt due to the recession which followed, OECD's national members have been increasingly concerned with the loss of potential tax revenues at a time of rising government spending and deficits.

In 2013 the OECD published the first report on the subject titled 'Addressing Base Erosion and Profit Shifting'';  the abstract is set out below.

> *'Base erosion constitutes a serious risk to tax revenues, tax sovereignty and tax fairness for many countries. While there are many ways in which domestic tax bases can be eroded, a significant source of base erosion is profit shifting. This report presents the studies and data available regarding the existence and magnitude of base erosion and profit shifting (BEPS), and contains an overview of global developments that have an impact on corporate tax matters and identifies the key principles that underlie the taxation of cross-border activities, as well as the BEPS opportunities these principles may create. The report concludes that current rules provide opportunities to associate more profits with legal constructs and intangible rights and obligations, and to legally shift risk intra-group, with the result of reducing the share of profits associated with substantive operations. The report recommends the development of an action plan to address BEPS issues in a comprehensive manner.''*[36]

[36] OECD (2013) Addressing Base Erosion and Profit Shifting, OECD, Paris, France

The connection between the OECD's work on intangible assets and the BEPS initiative is that a large part of the assets focused on by BEPS is intangible, which, because of their very nature, can be moved between jurisdictions to gain tax advantages for the asset. However, the OECD pointed out that these advantages may result in disadvantages to member tax jurisdictions. Between 2013 and 2015 when BEPS was announced working, parties were established to develop and review the complete BEPS package and its 15 Actions. (See below Box 3)

In March 2016 the OECD published the Inclusive Framework for BEPS Implementation[37]. This document summarised the 15 BEPS actions and the call for the first BEPS Framework meeting (Kyoto 30 June- 1 July 2016). Below is a short excerpt on the background and drivers for the project:

> *'The international tax landscape has changed dramatically in recent years.* ***With political support of G20 leaders****, the international community has taken joint action to increase transparency and exchange of information in tax matters, and to address weaknesses of the international tax system that create opportunities for BEPS. The internationally agreed standards of transparency and exchange of information in the tax area have put an end to the era of bank secrecy. With over 130 countries and jurisdictions currently participating, the Global Forum on Transparency and Exchange of Information for Tax Purposes has ensured consistent and effective implementation of international transparency standards since its establishment in 2009.*
>
> *At the same time, the financial crisis and aggressive tax planning by multinational enterprises (MNEs) have put BEPS high on the political agenda.* ***With a conservatively estimated annual revenue loss of USD 100 to 240 billion, the stakes are high for governments around the world. The impact of BEPS on developing countries, as a percentage of tax revenues, is estimated to be even higher than in developed countries****. Therefore, in September 2013, G20 Leaders endorsed an ambitious and comprehensive plan, developed with OECD members, to* ***restore confidence in the international tax system and to ensure that profits are taxed where economic activities take place and value is created****.''*[38]

The OECD provides an overview of the exchange of information between multinational enterprises (MNE's) and Tax Jurisdictions in OECD and G20 countries. This infrastructure forms the basis for the Common Reporting Standard known as CRS. This movement is explained further in the next section. Box 3 (OCED's BEPS Package) comprises the actions 1 to 15 the OECD has taken to fight back on Base Erosion and Profit Shifting.

[37] OECD (2016) Background Brief: Inclusive Framework for BEPS Implementation, OECD, Paris, France
[38] OECD (2016) Inclusive Framework for BEPS Implementation, OECD, pp.2, Paris, France

## Box 3: OECD BEPS Package

**OECD BEPS Package**

**Action 1:** Addresses the tax challenges of the digital economy and identifies the main difficulties that the digital economy poses for the application of existing international tax rules. The Report develops detailed options to address these difficulties, taking a holistic approach and considering both direct and indirect taxation.

**Action 2:** The work on neutralising the effects of hybrid mismatch arrangements develops model treaty provisions and recommendations regarding the design of domestic rules to neutralise the effect (e.g. double non-taxation, double deduction, long-term deferral) of hybrid instruments and entities.

**Action 3:** Work to strengthen the rules for controlled foreign corporations develops recommendations regarding the design of controlled foreign company rules.

**Action 4:** Work on limiting base erosion via interest deductions and other financial payments, develops recommendations regarding best practices in the design of rules to prevent base erosion through the use of interest expense, for example through the use of related-party and third-party debt to achieve excessive interest deductions or to finance the production of exempt or deferred income, and other financial payments that are economically equivalent to interest payments.

**Action 5:** The work to counter harmful tax practices more effectively, taking into account transparency and substance, revamps the work on harmful tax practices with a priority on improving transparency, including compulsory spontaneous exchange on rulings related to preferential regimes, and on requiring substantial activity for any preferential regime.

**Action 6:** The work on preventing treaty abuse develops model treaty provisions and recommendations regarding the design of domestic rules to prevent the granting of treaty benefits in inappropriate circumstances.

**Action 7:** The work on preventing the artificial avoidance of permanent establishment status develops changes to the definition of permanent establishment to prevent the artificial avoidance of permanent establishment status in relation to BEPS, including through the use of commissionaire arrangements and the specific activity exemptions.

**Actions 8 – 10:** Work to assure that transfer pricing outcomes are in line with value creation including work on (i) intangibles by developing rules to prevent BEPS by moving intangibles among group members, (ii) risks and capital by developing rules to prevent BEPS by transferring risks among, or allocating excessive capital to, group members, and (iii) other high-risk transactions develops rules to prevent BEPS by engaging in transactions which would not, or would only very rarely, occur between third parties.

**Action 11:** The work to establish methodologies to collect and analyse data on BEPS and the actions to address it, develops recommendations regarding indicators of the scale and economic impact of BEPS and ensure that tools are available to monitor and evaluate the effectiveness and economic impact of the actions taken to address BEPS on an ongoing basis.

**Action 12:** The work on requiring taxpayers to disclose their aggressive tax planning arrangements develops recommendations regarding the design of mandatory disclosure rules for aggressive or abusive transactions, arrangements, or structures, taking into consideration the administrative costs for tax administrations and business and drawing on experiences of the increasing number of countries that have such rules.

**Action 13:** The work to re-examine transfer pricing documentation develops rules regarding transfer pricing documentation to enhance transparency for tax administration, taking into consideration the compliance costs for business.

**Action 14:** The work on making dispute resolution mechanisms more effective develops solutions to address obstacles that prevent countries from solving treaty-related disputes under MAP, including the absence of arbitration provisions in most treaties and the fact that access to MAP and arbitration may be denied in certain cases.

**Action 15:** The work on developing a multilateral instrument to modify bilateral tax treaties provides an analysis of the tax and public international law issues related to the development of a multilateral instrument to enable countries to implement measures developed in the course of the work on BEPS and amend bilateral tax treaties.

## 3. Automatic Exchange of Information (AEO) and a Common Reporting Standard (CRS)

The OECD has put substantial emphasis on the development of an international **Common Reporting Standard (CRS)**[39] through different means of convening the stakeholders of the intangible ecosystem. The idea is to convert the Economic Reporting across the globalised economy and to implement a peer review process to ensure that the new standards fit the needs of the various stakeholders. Table 6 describes the history of the activities towards a CRS. It is this on that we propose to build.

**Table 6. Activities towards Common Reporting Standard (CRS)**

| Time | Events towards a Common Reporting Standard (CRS) |
|---|---|
| **1997 - The Early Days** | For many years, the OECD has taken a leading role in developing policy and technical solutions for the exchange of information. For more than a decade, countries have been relying on the OECD Standard Magnetic Format (SMF) for exchanging tax information. |
| **2003** | Since the adoption of the EU Savings Directive in 2003 as the first multinational automatic exchange of information programme, a lot of progress has been made regarding increasing international co-operation in tax matters and global tax transparency. |
| **2010** | With the adoption of the Foreign Account Tax Compliance Act (FATCA) by the United States Congress in 2010 and against the background of the global financial crisis, a significant political momentum for putting in place a global automatic exchange standard developed. |
| **2012** | In this year the five major European countries (the United Kingdom, France, Spain, Italy and Germany) agreed with the United States on a reciprocal exchange of FATCA information under Intergovernmental Agreements (IGAs) concluded between the United States and each of the five countries. In the same year, the OECD presented a report on the automatic exchange of tax information, highlighting a broad range of existing programmes and recommending future action. The report was endorsed by the G20 at their Los Cabos Summit. |
| **2013** | Developing and Committing to the Common Reporting Standard (CRS) At the same time, the G20 showed an increased interest in putting in place a global AEOI standard, which in September 2013 leads to a formal request to the OECD to develop a common reporting standard. |

[39] OECD (2014) Standard for Automatic Exchange of Financial Account Information in Tax Matters, OECD, Paris, France

| | |
|---|---|
| **2014 - CRS Schema** | By February 2014, the OECD agreed on the text of the Common Reporting Standard, which was shortly followed by a commitment by 44 'early adopter' jurisdictions to implement the CRS, as well as a ministerial declaration by OECD members and 14 other jurisdictions to the same end. In June 2014 the full CRS, including the commentaries and the XML Schema, was approved by the OECD and was subsequently endorsed by the G20 in September 2014. With the CRS being developed, the Global Forum initiated a commitment process among its members. As a result of that process, 94 jurisdictions are now committed to implementing the CRS by 2017 or 2018 and ensuring the effective automatic sharing of information with their respective relevant exchange partners. In December 2014, the EU adopted the text of the Standard by amending the Directive on Administrative Cooperation (DAC2). |
| **2014 - The International Framework** | A further major step in putting in place the international legal framework was taken with the signing of the CRS Multilateral Competent Authority Agreement (CRS MCAA) in October 2014, which operationalises the automatic exchange of information under the CRS on the basis of the Multilateral Convention on Mutual Administrative Assistance in Tax Matters. Currently, over 60 jurisdictions have signed the CRS MCAA |
| **2014 - Implementing the CRS** | In addition to the international legal framework, domestic implementation of the CRS in the committed jurisdictions is now progressively becoming a reality. A first major milestone in this respect was the approval of the amended EU Directive on Administrative Cooperation (DAC2) in December 2014. |
| **2015 - CRS Handbook** | Simultaneously, both the OECD and the Global Forum are playing an active role in ensuring a timely and uniform implementation of the CRS across the globe. In that respect, a series of workshops for government officials are being organised throughout 2015, technical implementation assistance is provided to a broad range of jurisdictions, and several pilot projects for implementing the CRS are underway. In addition, the OECD has published the first edition of the CRS Implementation Handbook in August 2015, which provides a practical guide to implementing the CRS to both government officials and financial institutions and includes a comparison between the CRS and FATCA, as well as a regularly updated list of Frequently Asked Questions. |
| **2016 and beyond** | At present, the Global Forum is undertaking a review of the confidentiality rules and practices in place in committed jurisdictions, as to ensure that the automatic exchange of CRS information takes place in a secure environment. |
| **Today's monitoring of the CRS** | With the implementation of the CRS being underway, the Global Forum is now taking up work for putting in place a peer review process for the purpose of monitoring the effectiveness of the automatic exchange of information in jurisdictions, once the CRS has been implemented. |

# Intangible Gold Project: A proposed next step in the definition and reporting of intangible assets

## 1. Overview

The table below consolidates all the different reporting dimensions of intangibles. The challenge for governments is that while all these aspects are important and relevant, there is no single framework which covers them all and is internationally accepted. The great attraction of the accounting standards framework is that it is global, which means that one country can be compared with another and one multinational firm with another. There is also the statutory issue that is set out in the UK legislation which governs corporate reporting (and similar statutes in other countries). The primary purpose of corporate reporting is to inform investors of the state and prospects of the firm, and the current accounting framework is inadequate.

The challenges to improving this framework are common to all firms, with the added issue of the cost and time that it would take to collect the data required by better intangible reporting. However, the fact is that some multinational firms participate willingly in Dow Jones Sustainability reporting, others in the Global Reporting Initiative and yet others in Integrated Reporting. There are also participants in the UK focused on Corporate Responsibility Index. There is some momentum on which to build.

Furthermore, although the development of a Common Reporting Standard (CRS) has its roots in economic reporting (‘Economists Intangible Capital’) we would encourage all stakeholders and intangible asset reporting groups to find ways to engage with the development of international standards, either through the OECD peer review process or through direct engagement. In a similar vein, the OECD has recently reached out to collaborate with initiatives external to their work, especially to avoid Base Erosion and Profit Shitting (BEPS). As the table below shows, it is the Economic Reporting approach at the base of the Common Reporting Standard that is the most comprehensive, and which we believe should be at the centre of the drive for improvement.

## Table 7. Overview: Reporting plates used by different stakeholders

*X means that the asset in question is reported (although the nature of measurement is very different as summarised in Figure 1)*

| Intangible Gold | Description | Statutory Reporting / Accountants | Economists Intangible Capital | Companies Intellectual Capital | Corporate Social Responsibility Index: 6 assets** |
|---|---|---|---|---|---|
| **Computerized Information** | Computerised software | X | X | | |
| | Computerised databases | X | X | | |
| **Innovative property *(or Innovation and Technology Capital)*** | Science and Engineering R&D (costs of new products and new production processes, usually leading to a patent or licence | | X | X | X (3) |
| | Mineral exploration (spending for the acquisition of new reserves) | X | X | X | |
| | Copyright and license costs (spending for the development of entertainment and artistic originals, usually leading to a copyright or license) | X | X | X | X (3) |
| | Other product development, design, and research expenses (not necessarily leading to a patent or copyright) | | X | X | X (3) |
| **Economic competencies *(or Process and Organizational Capital)*** | Brand equity (advertising expenditures and market research for the development of brands and trademarks) | | X | X | |
| | Firm-specific human capital (costs of developing workforce skills i.e. on-the-job training and tuition payments for job-related education) | | X | X | |
| | Organisational structure (costs of organisational change and development; company formation expenses) | | X | X | |
| **Structural Capital** | Structural capital is the 'stuff' that is responsible for keeping the organisation running. It covers tangible and intangible assets and is grounded using third order constructs, e.g. innovation capital, process capital, technological capital and organisational capital (covered under Innovative Property and Economic competencies) | | X | X | |
| **Human Capital** | Human capital is considered the most important asset. It is responsible for executing the other capitals. It is established by the following third-order constructs, motivation, interpersonal skills, knowledge, skills and attitudes<br>• Motivational<br>• Interpersonal relations<br>• Knowledge, Skills, Attitudes<br>• Agility | | | X | X(4) |
| **Relational Capital** | Eventually relational capital embodies all the organisation's relationships with customers, suppliers and other critical stakeholders<br>• Customer Capital<br>• Business Capital | | | X | X(5) |
| **Social Capital** | Social Capital also addresses relationships, but in contrast to relational capital, it addresses society as a whole. Social Capital is determined by the third order constructs social activities and social interactions<br>• Social Actions<br>• Social Interactions | | | X | X(5) |
| **Financial Capital** | Monetary capital | | | | X(1) |
| **Manufactured Capital** | Tangible assets accounting | | | | X(2) |
| **Natural Capital** | Dow Jones and Global Responsibility Index | | | | X(6) |

**Note: Grey shadow means this is not part of Intangible Gold Project definition (see Box 3 below)*
***Note: Asset number fits the category in 'Corporate Social Responsibility (CSR) Reporting', Section 5.*

The importance of 'control', 'identifiable' and 'separable' as categories for the accounting definition of intangible assets by the International Accounting Standards Board (defined in IAS38 above) is striking. The issue of 'control' is an important element regarding understanding the production of, and the value creation from, intangible assets for the company.

Importantly we consider that this definition automatically calls for a stakeholder approach to both intangible asset management and policy, as argued in a Think Piece by the Intangible Gold Project[40] of the Big Innovation Centre. Essentially a company is driven forward by the interactions between the stakeholders of the organisation (employees, managers, shareholders, investors, suppliers, customers, communities). Thus necessarily because stakeholders are entitled to influence the distribution of value arising from assets which they have co-produced, a company can only claim control of those assets to the extent the consent to such control has been gained from stakeholders.

When developing a reporting scheme for intangible assets we have adopted a stakeholder approach focusing on the use and usefulness of intangible data reporting for business managers, investors, and government. We set out the resulting definition in Box 4 below.

**Box 4. Definition of Intangible Assets**

**Intangible Gold Project**
**Definition of Intangible Assets**

An intangible within a company is an asset if it:

- Creates ***'financial and/or non-financial benefits'*** (such as increased productivity, innovation, purpose, revenue, etc.);
- Can be ***'traded'*** in the marketplace; and/or
- Can be ***'controlled'*** by any stakeholder internal or external to the organisation.

This must be the underlying assumption when subsequently prototyping an intangible asset management reporting scheme and data analytics tools for practical use by the stakeholders.

There is now a partial recognition in law of the stakeholders of the company. The Companies Act 2006 extended the general duties of Directors with a requirement to consider the interests of stakeholders.[41]

[40] . Intangible Gold Project: Think Piece. A Dynamic Model of Intangible Assets Creation in Companies and Stakeholder Value, Big Innovation Centre, December 2016
[41] A Guide to Directors' Responsibilities under the Companies Act 2006. http://www.accaglobal.com/content/dam/acca/global/PDF-technical/business-law/tech-tp-cdd.pdf

The Resource Based View (RBV) of the firm also makes an important contribution in this context of assets being tradable or controllable. Kristandl and Bontis (2007) use the resource-based view of the company to construct a definition of intangibles. The resource-based theory attempts to explain why some firms are more successful than others given they all have access to similar markets, technology and financial resources. RBV identifies four resource attributes which are known by the 'VRIN' acronym.

- **V**aluable: resources must be able to create superior value for customers.
- **R**are: resources must be heterogeneously distributed and not easily access by competitors.
- **I**nimitable: resources should be hard to copy.
- **N**on-substitutable: they should be difficult for competitors to substitute.

They apply these resource attributes to the firm using a series of filters. First resources are divided into VRIN and non-VRIN. All those resources which are non-VRIN can be easily purchased on the open market by any firm, and these clearly fit with the accounting definition of both tangible and intangible assets. The remaining VRIN assets are those which are unique to the company and from which the firm derives its superior value.

A large body of literature supports the RBV view which focuses on how intangible assets are created within the firm. Much of the work on the impact of ICT and complementary factors like organisational redesign and workforce training was conducted at MIT by Erik Brynjolfsson[42] and colleagues beginning in the mid-1990s. In parallel, MIT conducted two additional research work streams, one focused on longitudinal case studies led by Michael Scott Morton[43], the other on complementary assets and dynamic capabilities by David Teece.

With respect to measurements, the importance of the Economic Reporting classifications is that they have been widely adopted by economists and national income accounting organisations in the OECD countries, including the Office for National Statistics. It offers the most systematic, encompassing framework for intangible reporting to which the other methodologies can contribute. We urge the British Standards Institution to co-develop this approach for the UK, building on and complementing the international efforts to create a Common Reporting Standard, **incorporating better intangible reporting**. This will also work with the grain of the BEPS initiative by the OECD, seeking to close down the estimated $100-

[42] Brynjolffsson, E. and Hitt, L.M. (2003). Computing Productivity: Firm-Level Evidence. The Review of Economics and Statistics, Vol. 85, No. 4 (Nov., 2003), pp. 793-808
[43] Hughes, A. and Scott Morton, M.S. (2006). The Power of Complementary Assets. MIT Sloan Management Review, Summer 2006

$240bn of global lost tax in particular by moving intangible assets into low tax jurisdictions. To be operational, this will require an operational definition of intangibles.

We also propose the creation of a digital platform in which companies report intangible asset data (using the agreed common framework and common definitions), so different stakeholders can use the data for various purposes - whether it is for the strategic management of the companies, accounting for tax, productivity measurement, or for intellectual capital research. For this, we need 'diagnostic tools' aimed at assisting companies and stakeholders in recognising intangibles as assets, quantifying the investment made in them, understanding their financial and non-financial returns, and meeting their various reporting obligations.

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