

Valuing knowledge: Is it worth It?

By Dr. David J. Skyrme

One of the most challenging issues in the field of knowledge management is that of measurement. How valuable is knowledge? How can you justify investment in this new 'fad' of knowledge management? In fact, of all the key dimensions of knowledge management, that of measurement shows the largest gap between organizational aspirations and what is achieved in practice. This article outlines the nature of this challenge, provides an overview of some of the methods being used, and discusses the role of the information professional.

INTELLECTUAL CAPITAL

Traditional accounting practice records financial transactions and assesses the value of tangible assets (such as plant and machinery, raw materials). Such measures are historic and say little about the true underlying value of the business. For example, in mid 1997 the average ratio of market value (the value ascribed to a company by the stock market) to book value (the asset value as shown in the company accounts) for companies constituting the Dow Jones Industrial Index was over five (5). This ratio typically exceeds ten (10) for information or knowledge intensive companies such as software companies or bio-technology companies. This difference is largely made up of intellectual capital - those intangible assets that have real value, but which are not recorded in company accounts. These intangibles include patents, trade-marks, know-how, reputation etc.

Intellectual Capital and a variety of prescriptions for measuring it are discussed in a few books published in the past. A common starting point of each method is the categorization of different forms of intellectual capital. One of the most cited models divides intellectual capital into three categories:

- Human Capital - organizational competencies, know-how etc.
- Structural Capital - "what is left in the organization when people go home"; the processes and databases of the organization
- Customer Capital - more identifiable items such as trademarks, licences, franchises etc. but also the less definable, such as customer relationships.

Such a model forms the basis for developing an intellectual capital measurement system.

MEANINGFUL MEASURES

The hard work comes in identifying suitable factors to measure within the categories chosen. Their premise is the oft cited management adage that "what you can measure you can manage". Therefore, if you can visualize and measure intellectual capital, you are more likely to be able to exploit it in the marketplace. There is no shortage of ideas for measurement indicators. Some are absolute measures, such as the number of person-days spent on customer visits. Others are relative, such as the percentage



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of workforce with a given education level, while yet others are more complex indicators, such as a leadership index.

Among popular indicators in all systems are customer satisfaction and the proportion of revenues generated by products less than three years old. Some of the more interesting measures are Sveiby's 'rookie ratio' (what proportion of our employees have been in their job for less than one year) and his 'customers who increase our competency'.

MEASUREMENT SYSTEMS

These different categories of measure are brought together into an overall measurement system. The purpose of such a system is to focus manager's attention on just a few important variables that they can influence and that underpin corporate strategy and value creation. Hence, from a wide range of intellectual capital indicators available, each business unit or manager may typically concentrate on just four or five in each category.

The Balanced Business Scorecard (BBS) is perhaps the most widely used performance measurement system that takes account of non-financial measures. Proponents of intellectual capital measurement systems, while agreeing that the BBS includes indicators of intellectual capital, argue that it does so incidentally, rather than as its core focus. In an analysis of characteristics of the emerging intangible economy, Trend Monitor International suggests that measurement systems need to focus on intangibles (not tangibles), the future (not the past), and shift from reductionist/additive measures (as used by accountants) to combinatorial measures. The last year or so has seen a new breed of measurement systems which start to employ these principles and where intellectual capital (IC) is centre stage:

The Skandia Navigator and its associated Value Creation Model. It uses a visual metaphor of a house whose roof represents the financial assets needed for survival and whose foundations, representing innovation and renewal, are essential for long-term prosperity.

The Intangible Assets Monitor of Karl Erik Sveiby. Its categories are competence, internal structure and external structure. A particularly useful facet of this model is a further

subdivision into indicators of efficiency, stability and growth/renewal.

The IC-Index™, developed by the Roos brothers and colleagues and now marketed by Intellectual Capital Services. Its unique characteristic is that it focuses on the change and flows of intellectual capital, even where it is difficult to ascribe absolute value.

Inclusive Valuation Methodology (IVMTM), developed by Philip M'Pherson. Users create hierarchies of intangibles to which they assign weightings and value ratings (from 0 to 1) according to strategic priorities. Through combinatorial mathematics, a computer model determines an overall value rating and can test for areas of high sensitivity or risk.

Developers of each of these methods say that the real benefits of their methods, come through the interactive process of developing and selecting measures. This ensures a better understanding of the role of intellectual capital through dialogue and learning, as well as ownership of the resultant measures.

THE INFORMATION PERSPECTIVE

How does information feature in such systems? In a narrow sense it is part of the structural capital of an organization, and in particular the information that is fed into business and strategic decision making processes. In a different sense information underpins the working of intellectual capital measurement, since it is the recording and flow of information that makes such measurement systems work. Not unsurprisingly, financial analysts are often involved in this process, since it needs the skills of recording, aggregating and auditing, similar to those used in accounting. However, in the broadest sense, information

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underpins the management of all types of intellectual capital. The information that typically has high importance, as indicated by various surveys includes:

- Customer information - Who buys? Why do they buy? What are their existing and emergent needs? (Customer information invariably comes out top in surveys)
- Information on best practices - core processes within the company; world-wide external best practice; benchmark surveys
- Market information - trends, sizes, forecasts, expert analyses
- Sources of know-how and competence - internal experts, external sources
- Products and services - company's own products, functions and benefits, suppliers, reference material, external products and services
- Competitors - strategies, products, key people
- Wider environment - regulatory, legal, social trends, economic, technology etc.

Much of this information is regularly collected and collated by corporate libraries. Knowledge management programs often start with two of these, viz. knowledge bases of expertise and best practices. But, other than responding to demand, how should priorities for sourcing and managing such information be set? This is where intellectual capital systems practice can offer guidance:

1. Categorize information according to the type of intellectual capital to which it adds value e.g. expertise databases support human capital, best practice information adds to structural capital and customer information is a component of customer capital.
2. Ascribe cost and value measures. Valuing information, as with other forms of intellectual capital is an imprecise art. The Hawley Report suggests three ways of valuing: according to market value (e.g. as a tradable asset), the impact of its loss (e.g. replacement value, damage to reputation etc.), and its impact on the business (either in terms of cost reduction potential or revenue generation). M'Pherson in his IVMTM distinguishes intrinsic value (e.g. information as an asset or tradable commodity) from its extrinsic value (its contribution to the business). He considers also value measures of explicit content (its quality, originality etc.) and information processes and systems (accessibility, usability etc.).
3. Develop some simple model of how information flows add value. Most IC models indicate that value is added by flows

between categories, For example, human capital, dispersed among a few individuals gains value when converted into business processes or databases (structural capital) that are made widely accessible.

Those familiar with information resources management (IRM) will notice similarities with some of its techniques, such as information audits (or inventories). What the IC perspective adds is a way of aligning with wider measurement systems in the business. As with all such systems, the tricky part is to gain an overall perspective of drivers of value, rather than get bogged down in too much detail.

IMPLICATIONS

As companies embark on knowledge management programs, they are starting to realize, (sometimes belatedly it has to be said), that information professionals have an important contribution to make. Knowledge management consultants are frequently asked "Do you think information specialists might add some value?" The knowledge managers have the budget, the information specialists have some key skills that they need to succeed. There is therefore a strong case for partnership and for information professionals to make clear their added value to the business through knowledge management initiatives.

CONCLUSION

Knowledge management and the measurement of intellectual capital are becoming 'hot buttons' in a growing number of organizations. The information professional and information centre have an important part to play. As a minimum they should familiarize themselves with the concepts of intellectual capital and how it is measured and managed, so that they can articulate their contribution.

A word of caution is necessary however. It is too easy to fall into the trap of measuring everything, adding armies of accountants, analysts and auditors, who count everything they can see (the tangibles). Just as many company reports and accounts are largely 'fictional', since they do not take account of the intellectual capital of a company, so an information centre must not focus just on what they can see, the expenditure on reports, database services, number of enquiries answered etc., but on the intangibles not immediately apparent. One of the IC frameworks mentioned above should help in this focus.

COMMENTS

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