

Accounting for Knowledge

Measuring our intellectual assets helps us manage them effectively. As Dr. Nick Bontis explains, how you measure those assets has to come from within.

By Anne Papmehl, *CMA Management* (March 2004)



Since Thomas Stewart's groundbreaking *Brainpower* article (Fortune, 1991), intellectual capital (IC) has become the pre-eminent economic resource. Despite its strategic importance, IC is a highly under-leveraged asset in Canadian organizations. Moreover, it's disappearing at alarming rates. The Saratoga Institute, part of the human resources research and consulting arm of PriceWaterhouseCoopers, in San Jose, California, reports that standard voluntary turnover across all industries in Canada is 15%, with the involuntary turnover rates (death, disability or firing) at 5% – a total of

one in five units of human capital being lost annually.

From an IC perspective, this means “we are getting 20% systemically stupider each year by virtue of people walking out the door,” says Dr. Nick Bontis, director of the Institute for Intellectual Capital Research, a private consulting firm and associate professor of strategy at the Michael G. DeGroote School of Business at McMaster University, Hamilton, Ontario.

A more startling revelation is the reason for this mass exodus: “We're finding from exit interviews that the number one reason why knowledge workers leave is because they feel their talent was never fully leveraged, that they're only using about 2% of what they could actually offer.”

What can be done to improve these statistics? If there is any truth to the ‘what gets measured gets managed’ dictum, then a closer look at knowledge measurement indicators might yield some answers. This is challenging. Traditional accounting and measurement systems are designed for tangibles such as the cost of labour and materials, not intangibles like knowledge. And while a number of IC measures – such as Tobin's q or calculating the difference between market value and book equity – draw some connections between IC and stock price, “they're not going to help you fix your firm,” states Bontis.

What can help, says Bontis, is for organizations to dig deeply and come up with their own quantitative and qualitative metrics and proxies that reflect their intellectual capital along its three established constructs – human capital, structural capital and relational capital. Bringing together objective and subjective criteria from both the human resources and information technology side can help organizations to zero in on their individual knowledge management (KM)

weaknesses and take corrective steps accordingly. In many cases, the simplest and cheapest measures yield the highest ROI.

Measuring human capital

Human capital refers to the knowledge, experiences and talent of an organization's employees. One of the easiest ways to track it is through turnover benchmarking. However, few firms take advantage of it, something Bontis considers a lost opportunity. "By publishing turnover figures accurately and frequently, say on a monthly basis, the HR people can gain a pulse on their internal turnover rates as well as compare one jurisdiction with another." In addition, this metric can be used to do cross-sectional comparisons externally by looking at the turnover rates among the competition. For instance, how do the turnover rates of Bank A compare to those of Bank B, C or D?

A qualitative complement to turnover benchmarking is exit interviews, another underutilized practice, according to Bontis. "About 1% of Canadian organizations have formalized exit interview processes," he says, adding that among the few firms that do, many carry them out internally. "That's an invalid methodology in my opinion because an employee cannot be frank with someone who's inside the firm."

When carried out by an external third party, exit interviews can yield a wealth of information, somewhat akin to a huge R&D investment, says Bontis, noting the irony of companies spending fortunes on competitive intelligence research and CRM data mining while failing to leverage some of the most important and easily accessible information from the employees leaving the firm.

Training and development is an equally simple and important measure of human capital, says Bontis. The calculation is made by dividing the entire T&D investment by the number of full time equivalent (FTE) employees. "This is important to calculate because it enables the firm to gauge whether they're over or under investing in T&D."

A vital element to the T&D equation is to determine how much learning resulted from the firm's investment, something few HR managers can tell you. The reason, says Bontis, is "follow up ROI is rarely done. Typically, a firm gives each employee a certain amount of T&D entitlement per year – say \$1,500. The employee shops around, takes a course for \$700 in Toronto and attends a conference in Montreal for \$800, and blows the entire \$1,500. What's the first thing people do when they come back from a conference? Put the binder on the shelf beside the binders from all the other conferences they went to. And the second thing? Fill out the HR reimbursement form."

One way to undo this T&D bottleneck, suggests Bontis, is to require employees to crystallize the best learnings into a 15-minute presentation for each day of attendance at a course or conference which they would give to ten or twelve of their interested colleagues. "Only after those colleagues have absorbed the information, reviewed your presentation and allotted you a score of 8 out of 10 or higher, would be entitled to your HR reimbursement."

While some might criticize this as an extra bureaucratic step, Bontis argues, “some bureaucratic steps actually help to generate ROI and this is one of them.” Besides, he believes it would also stop the bleeding of T&D dollars of people who use up the budget before year-end because regulations prohibit carry-over to the next year. Similar initiatives such as lunch and learn seminars, informal debriefings with colleagues or Friday information sessions can also help achieve a higher ROI on T&D investments.

Structural capital measures

Structural capital represents the process of using technology and structures to enhance knowledge flow, such as databases, files, manuals and management systems. While some forms of structural capital enable knowledge flow, other forms can impede it if not used carefully. For example, heavy investment in Internet technology of the mid- to late- '90s has resulted in some productivity slowdowns with employees surfing the net on work time or being inundated with e-mails. Bontis sees the Intranet as a far more effective structural capital investment.

Of the few companies that made the Intranet leap, the vast majority report increased functionality, reduction of duplication and search costs, and the avoidance of countless reinventions of the wheel. The Intranet Corporate Yellow Pages is one example. While some might view it as a glorified telephone directory, Bontis points out that its utility extends beyond the ability to retrieve an individual's name, phone number and title. It can serve to obtain a description of employee competencies, listings of projects currently being undertaken and background information on someone's education and talent.

Another example of efficient structural capital is a Central Document Repository, for similar reasons, notes Bontis. “Instead of having silos and islands of hard drive in everybody's office that no one can find, have them save the documents on the centralized server, where you can have multiple people working on documents simultaneously.”

Relational capital measures

Relational capital refers to the knowledge, which is embedded in the value chain – in relationships with suppliers, customers and any other external entity. With communication being a central element to any kind of relationship, the study of communication patterns within and among various stakeholder groups is one obvious way to assess a firm's relational capital.

One of the methods Bontis has been using for this is the e-flow audit. “We might look at 30 days worth of e-mail traffic in an organization. We track each message's origin (from) and destination (to), so that the to/from becomes a type of binary vector, which can be aggregated and mapped on to the organizational chart.” This can be used to determine the volume and velocity of e-mails, which can in turn be used to analyze how information flows within the organization. For instance, the visual representation might reveal too much vertical e-flow and not enough horizontal e-flow. From this diagnosis, the company can take measures to close the communication gaps. The same methodology can be used externally, when

examining the communication flow of sales people with customers or the purchasing department communicating with suppliers.

Socialization, while not a formal knowledge metric, is a significant catalyst to knowledge flow and exchange. In recent years, this is becoming increasingly difficult to manifest. With the real estate space crunch, both public and private sector organizations are finding it necessary to absorb many of the common areas like kitchens, cafeterias and water cooler space into their office space. As a result, it becomes harder for workers to meet informally and exchange knowledge.

“I often joke that the one remaining legislated social group are the smokers who congregate in front of your building,” says Bontis. “If you want to know what’s going on from a knowledge perspective in your firm, the best thing to do is pretend you’re a smoker and go listen to the folks outside.” Joking aside, if corporations wish to improve their knowledge flow, they must recognize the socialization connection to knowledge transfer and ensure that employees have informal chances to come together, exchange ideas and have some down time to reflect on and absorb new learnings.

Knowledge hoarding is a common relational capital problem. While Bontis sees this more prevalent in Western cultures, where the emphasis is on the individual rather than the group, it can also be a corporate cultural phenomenon. “If there’s hoarding at the lower levels, chances are there’s hoarding also taking place with senior management,” he says. A way around it, he says, is to have leadership that fosters a culture of knowledge sharing, since most employees tend to be boss watchers and take their cues from the top. About 25 per cent of U.S. FORTUNE 500 companies now employ chief knowledge officers (CKOs) to encourage a knowledge sharing culture. Estimates are that less than one percent Canadian companies trading on the TSX currently have one, but such a person or enthusiastic equivalent could be beneficial in helping the firm reduce or eliminate knowledge hoarding.

Ultimately, the organization must determine whether its knowledge measures are improving its KM. Because so many factors come into play with, it can be difficult to establish cause and effect. A rise in stock price coupled with a rise in human capital spending does not necessarily equate to improved KM. “I think that management’s over-reliance on statistics have led many firms to draw unreliable conclusions in that regard,” says Bontis. “A lot of organizations have tendencies to draw strong conclusions from co-relations, but co-relations only establish an associative relationship between two items, not causality.”

New methodologies called “structural equation models” or “causal models,” are now being studied and used with greater reliability in the KM field. “The value is that you are no longer guessing whether your knowledge management is improving or getting worse,” says Bontis. “Causal models allow you to delineate specifically what type of interventions you need within your individual organization and focus on which levers make good ROI.” Causal modeling brings together a roster of metrics from various areas, including intellectual capital, knowledge management, human resources, information technology and leadership capabilities. The models study how these various elements collectively

and individually link to financial performance outcomes. (For more information visit www.bontis.com/ic/publication/JICBONTISFITZ-enz.pdf.)

Ultimately, the value of intellectual capital measures resides in the results achieved, not in the amount of money invested. Organizations have to decide which knowledge metrics will get them the best ROI. With the writing on the wall clearly stating that Canadian companies need to do a better job, it behooves both private and public sector organizations to take action.