

Measuring Intellectual Capital: Experiences and Reconsiderations

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1. Intellectual Capital Management

In recent years, the management of intellectual capital has attracted a lot of attention by researchers and practitioners. Theoretical models of intellectual capital management (ICM) have been presented (e.g. [Ro97]), and companies and research institutions have published intellectual capital reports. Intellectual capital is usually referred to as the part of a company's resources that does not appear on a financial balance sheet [St99]. These intangible assets include employees' knowledge and competences, the company's relationships with customers and suppliers, as well as organisational structure and processes. All of these invisible resources can be the source of value creation, and they are becoming increasingly important as the economy becomes more knowledge-based.

Many companies have long started to realize the necessity to measure what is so difficult to grasp, be it for external reporting purposes or in order to receive data for a more effective operational or strategic decision making. And knowledge management advocates have stressed the importance of ICM initiatives as a way to assess whether a company is reaching its knowledge goals [Pr00]. However, accounts of success stories that show companies establishing a sustainable measurement system with a lasting impact are rare and cautious voices have been raised [NB00]. It also seems that several companies that used to publish intellectual capital reports have stopped doing so.

In this paper, I discuss some of my conjectures of why measurement initiatives in organisations pertaining to ICM fail, the most important being that they start out with inappropriate assumptions that make successful implementation in the organisation less likely. My conjectures are directly derived from three case studies conducted to implement instruments for measuring intellectual capital. Successes and challenges we encountered lead me to reconsider our initial assumptions on measurement in organisations suggesting ways in which such measurement initiatives can be improved.

¹ The Know-Center is a Competence Center funded within the Austrian K plus Competence Centers Program (www.kplus.at) under the auspices of the Austrian Ministry of Transport, Innovation and Technology.

2. Implementing ICM: A Methodology

A goal of the three case studies we conducted was to make visible the intangible assets of three small to medium sized companies. We aimed to pilot the implementation of an instrument that would give top-management a better understanding of the companies hidden values and a tool for communicating these values internally and externally. Based on a literature review, we developed a procedure for implementing an ICM instrument in small to medium sized companies. Following the suggestions (e.g. [Ro97]), the procedure prescribes a top down approach that derives indicators from the strategic model of the firm. Figure 1 shows the four phases described by our methodology.

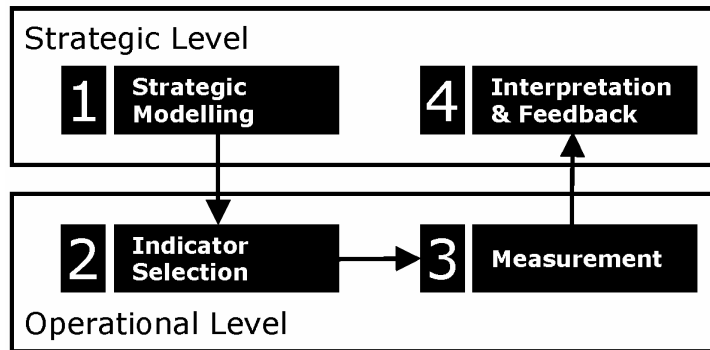


Figure 1: A methodology for implementing ICM

In the *strategic modelling phase*, top management created a model containing business goals and key success factors in a mutual workshop setting. We mapped existing conceptions that the top management team used to make decisions about their business into a common model. This model was communicated to operational management who then *generated and selected indicators* to make the theoretical concepts measurable. In the *measurement phase*, data was then collected for the chosen indicators. After a measurement cycle had been completed, the data was analysed, presented to top management and interpreted in light of the strategic model.

Experiences we gained from the case studies showed that many benefits were realised that we had not expected. Communication between top and middle management about strategic priorities and how to operationalise them, for example, was seen as a positive side effect of the project. Initiating measurement routines on an operational level and training managers in result-oriented thinking were also found to benefit the firms. On the other hand, we faced challenges that we also had not expected. The process did not run in such a linear fashion as depicted in Figure 1, but instead we encountered a lot of feedback loops between the phases. We also encountered resistance by employees and managers, especially so in the measurement phase, where the highest amount of effort was required. Preconceptions about the validity of the measures and the usefulness of the results lead some to question the approach. The consequence was that a significant amount of communication and negotiation was required from the project team.

3. A Constructivist Reconceptualisation

Being confronted with these challenges, two options remain. The first one is to stick with the original methodology, but to add to it as many hints and tricks, best practices and lessons learned (like an accompanying communication strategy, better documentation or employee incentives) in order to “smoothen out” potential problems. The second option would involve more fundamental changes to the original methodology. Instead of providing “bug fixes”, it would mean questioning the assumptions the methodology is based on, and thereby coming up with a different methodology based on a set of alternative assumptions. In essence, this would involve questioning the “organisational epistemology”, that is the way an organisation gains knowledge from the world.

Our initial assumptions of the way in which an organisation gains knowledge about its intellectual capital were guided by a positivistic view that [Pu83] characterises as being concerned with “knowledge generated through systematic, comparative, replicative, scientific study of the empirical world” leading to “generalizable propositions that give insight and/or have predictive powers when applied to phenomena other than those on which they are based.” As a result, our approach saw the role of the project team as that of scientists standing outside the investigated system (the organisation) and looking for a model describing relationships in the “real” world, from which hypotheses about the functioning of the system could be derived. Data collection would then relate the model to the real world in order to validate or refute the hypotheses and draw conclusions about the future behaviour of the system and opportunities to change it.

This way of measuring intellectual capital follows directly from an empirical measurement perspective in the social sciences, and has been criticised because “knowledge” as the object of measurement depends on the context and the person holding that knowledge [Re02]. Therefore, I propose a constructivist view of how organisations gain knowledge about their intellectual capital as an alternative conception. The researchers would then be considered as being part of the system themselves, and, together with the other organisational members, being in a constant process of constructing the reality of the organisation.

In the process of creating the strategic model, for example, the top management team arrived at the model through an interactive process. The team constructed their reality in a mutual interaction and arrived at a shared “cognitive map” of the business. A criterion for the validity of this model is not how well it reflects reality, but how useful it is for understanding phenomena in the organisation and for making decisions that lead to favourable outcomes (a “pragmatist viewpoint” in the terminology of [Su83]). The measurement part would not be concerned with collecting objective data about the real world, but would instead relate to a reciprocal assignment of common meaning to the theoretical concepts on one hand and empirical phenomena on the other. It would also provide the organisation with the opportunity for questioning the decisions being made, thereby learning from the feedback their actions generate.

When accepting this view of intellectual capital management as a viable alternative, the “problems” encountered in the case studies make much more sense. The communication necessary to support the process can then be seen as an essential part of the process, in which the members of the organisation construct their reality in a mutual discourse. The feedback loops then are not a derivation from the natural path, but are in fact preconditions of this constructive process. Moreover, it can be expected that because the approach is so interactive and more actively involves members of the organisation, it would lead to more meaningful results that are better accepted by the participating employees and therefore better embedded in the organisation.

Practical implications that a constructivist view might have on the implementation of measurement systems pertaining to ICM could be seen in implying

- different kinds of personal competencies of the process owners for successfully managing the interaction process, such as interviewing or facilitating workshops;
- a stronger reliance on bottom-up approaches, like Organisational Development initiatives (e.g. the Survey-Feedback-Method described in [RMR95]), and local interpretation of the results [Re02];
- the usefulness of cognitive mapping approaches, especially those that facilitate the sharing of mental models in a group setting (e.g. [RLT01]);
- inadequacy of predefined catalogues of indicators that are often called for in practical applications.

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