# Interdisciplinary research for value-creation

by Marne de Vries

Organisations of today realise that they need to move away from balance sheet accounting systems as the primary tool of management. Intangible assets, such as knowledge, skills and process assets, may be worth much more than their physical assets and require effective management to gain a competitive advantage.
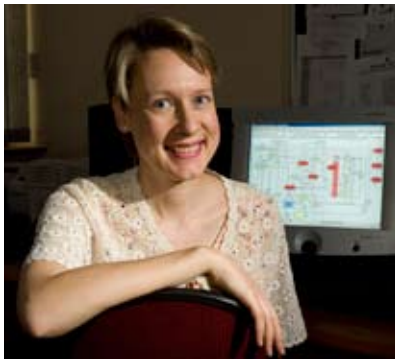
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Many organisations however still overemphasise achieving short-term financial results. They over-invest in short-term fixes and under-invest in long-term value creation, especially in intangible assets that generate future growth. Kaplan and Norton [7] provided a new measurement approach to balance financial measurements with three additional perspectives: customer, internal processes, as well as learning and growth.

The learning and growth perspective includes human, information and organisational capital. Learning and growth objectives usually describe how the organisation's intangible assets should be enhanced for continually improving the critical internal processes. According to Kaplan and Norton [7], the intangible assets should be integrated with each other and aligned with the objectives for internal processes to create real value.

Management programs also fall within the learning and growth perspective. These programs describe how the organisation's intangible assets (information, organisation and human capital) should be enhanced for improving the critical internal processes. Integration of these management programs are thus required to create real value. This, however, implies an interdisciplinary approach to integrate the different management areas. Unfortunately very few universities actively promote interdisciplinary research. According to Currie and

Galliers [5] delineation of business and management into distinct subject classifications (or disciplines) could stifle creativity and innovation in research by imposing intellectual and practical constraints.

As an example, many models for process-improvement (PI), knowledge management (KM) and people capability management (PCM) - part of human resource management - currently exist. Though the intricate interaction between the domains of PI, KM and PCM is clear in current models, a fully integrated model does not exist. A study was conducted to demonstrate the integration possibilities of PI, KM and PCM using an integrated model.

A foundation for integration

The study explored the capabilities of current models (especially maturity models) of integrating the process-orientation perspective with KM and PCM. A new model was defined in terms of the existing models, identifying possible overlaps and deficiencies, while applying the existing models to the project management context of management consultancy organisations. The model was also partially validated at a management consultancy organisation.

Maturity models and audit models

Maturity models stem from Watts Humphrey's philosophy that organisations have to eliminate implementation problems in a specific order if they were to create an environment conducive to continuous improvement [6]. Organisations perform best if "they focus their process improvement efforts on a manageable number of process areas that requires increasingly sophisticated effort as the organisation improves" [4].

Maturity models provide an evolutionary path, increasing process maturity in stages. These stages are ordered, so that each stage provides a foundation for improvements in the next stage [3]. A roadmap is thus provided for continuous process improvement and is not intended to provide a quick solution for projects in trouble [3].
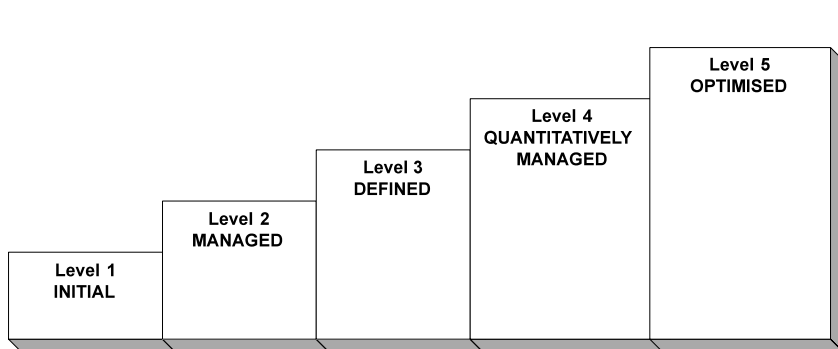
→ *1. Maturity levels for CMMI [4]*

Maturity models could have different representations: staged or continuous. The staged model contains maturity levels and is used to deduct a single maturity rating for the *complete organisation*, which allows comparisons among organisations. The continuous model contains capability levels that could be applied to *single process areas*. This mode is used to define improvement objectives for specific process areas in accordance and parallel to strategic business objectives.

Figure 1 illustrates the different maturity levels that are used in the staged representation of the integrated capability maturity model, called CMMI.

Literature revealed numerous maturity models within the domains of systems engineering, software engineering, integrated product and process development, supplier sourcing, knowledge management and workforce management. Maturity models could hence be used as a vehicle to demonstrate the integration possibilities between PI (for a selected set of process areas), KM and PCM.

## Knowledge management in management consultancy organisations

The need to manage knowledge increases proportionately with the service intensity of companies. Service-oriented, knowledge-intensive companies also share common characteristics: their "products" are intangible (not consisting of goods); their "production process" is non-standardised and relies on team-work; most of their employees are educated and creative; their customers are treated individually and the "products" are tailored to their clients' requirements [2].

Management consulting firms (a sub-set of service-oriented companies) share all the above-mentioned characteristics. It is not surprising that consultancy firms consider KM to be a core and strategic approach for gaining a competitive advantage. Global management consulting industries are often considered as the prime example of knowledge-intensive firms [12].
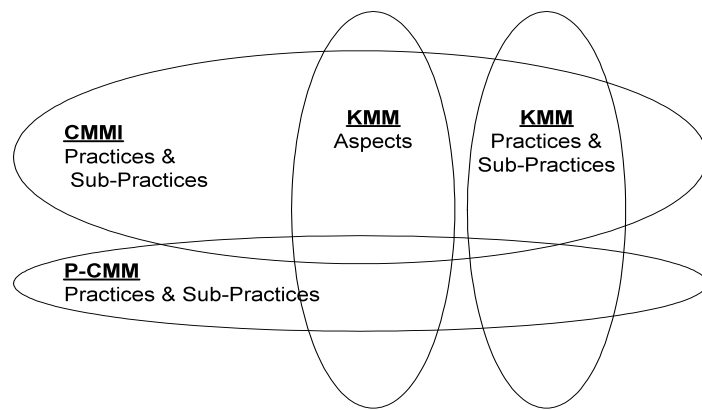
→ *2. Context for analysing model overlaps and deficiencies*

→ *3. Conceptual blended model*
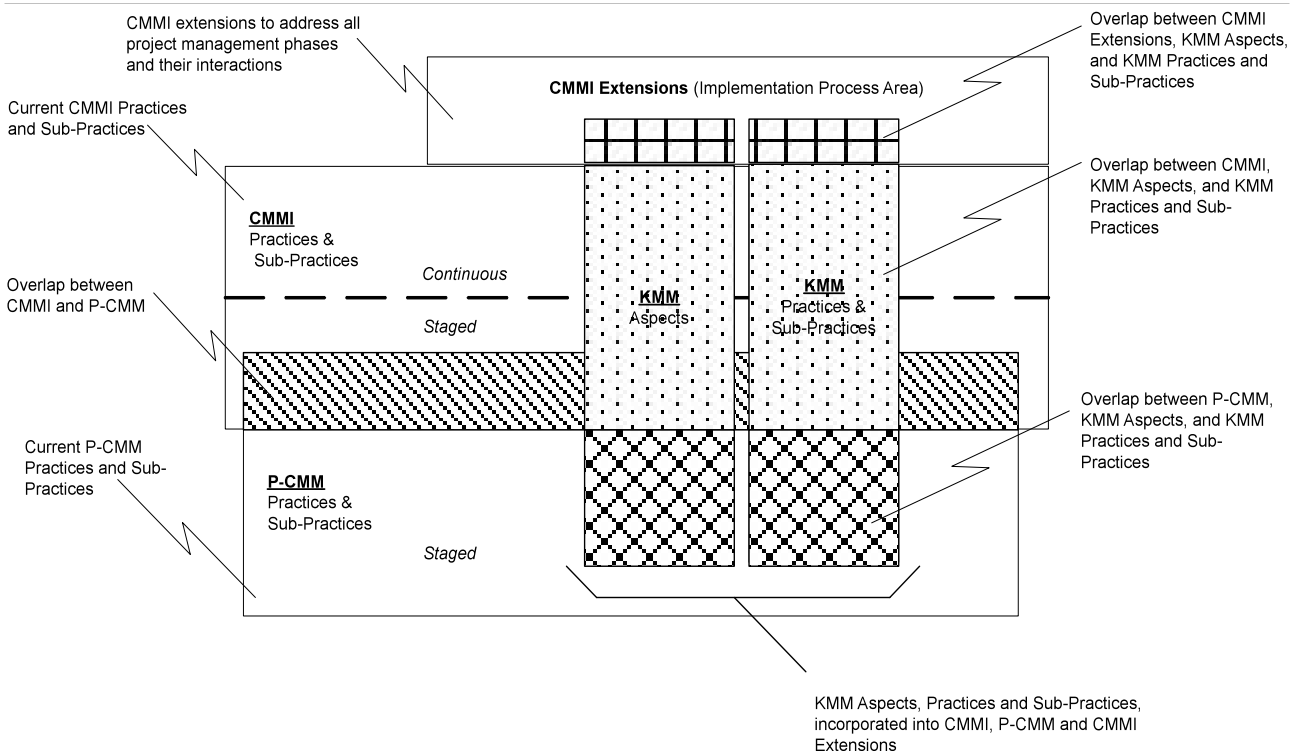
Requirement for a blended model

An empirical study [9] investigated the use of KM systems in the 500 largest German companies and the top 50 banking and insurance companies. They found that process orientation was not focused in most of the KM activities in these organisations, despite the fact that most organisations had already implemented process management programmes in the past. In addition, many companies fail to integrate the various types of processes, including operational, behavioural (communication and individual learning), and managerial processes [1]. These companies usually focus their attention on individual operational processes, consequently delivering sub-optimal results.

An integrated framework was consequently proposed, synthesising various maturity models into a single model to address the interrelationships and interactivity of closely-related management areas (PI, KM, and PCM). The aim was to improve the effectiveness of the current stand-alone domain models by utilising their synergistic capabilities. The framework was then used to develop an integrated PI / KM / PCM maturity model that applied to management consultancy organisations.

The blended model was constructed by using model components of the following existing reconcilable models:

Process Improvement, using CMMI: Capability Maturity Model Integration [4].

People Capability Management, using P-CMM: People Capability Maturity Model [6].

Knowledge Management, using (a) Knowledge Management Framework Assessment Model of KPMG [10]; (b) Siemens Knowledge Management Maturity Model [11]; and (c) KMM from Infosys Technologies [8].

Figure 2 portrays a framework for analysis.

A blended model

A model construction process was followed to identify processes, goals and practices from various maturity models, analysing and extending these to address all project management phases that are present in management consultancy organisations.

The model incorporated the following:
1. The interaction of CMMI and P-CMM process areas, overlapping processes, as well as embedded KM practices.
2. A discussion of process areas, goals and practices and how they demonstrate KM and PCM practices for management consultation organisations.
3. Defining process-overlaps between CMMI and P-CMM and KM models.
4. Demonstrating how CMMI process areas address various project management phases, defining additional process areas, practices, and informative components to address current model deficiencies.
5. Re-defining five maturity level definitions in terms of a combined PI / KM / PCM model.

The construction process produced the conceptual model that is depicted in Figure 3.

Conclusions

The study supported the main endeavour of any industrial engineering venture, namely improving organisational performance. The study demonstrated the integration possibilities of the following domains: PI / KM / PCM. A preliminary literature study confirmed the necessity of integrating PI / KM / PCM efforts to leverage organisational performance. The study thus followed an interdisciplinary approach to integrate different management areas with each other.

Various maturity models (from PI, KM and PCM domains) were investigated and evaluated for suitability in management consultancy organisations.

Deficiencies were identified and a new, blended model was designed and constructed, which combined current maturity models and their required extensions.

The blended model was partially validated at a management consultancy organisation. Results were obtained, which highlighted organisational process areas that require immediate practice and KM improvement efforts.

This article has been adapted from the Master's Dissertation by Marne de Vries, "A new process improvement approach for management consultancy organisations", available online: http://upetd.up.ac.za/thesis/available/etd-04042007-150033/. ⊖

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