

# A THEORETICAL MODEL FOR DEVELOPING CORE CAPABILITIES FROM AN INTELLECTUAL CAPITAL PERSPECTIVE (PART 1)

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## ABSTRACT

One of the basic assumptions associated with the theoretical model as described in this article is that an organisation (a system) can acquire capabilities through intentional strategic and operational initiatives. This intentional capability-building process also implies that the organisation intends to use these capabilities in a constructive way to increase competitive advantage for the firm.

## OPSOMMING

Een van die basiese aannames wat geassosieer word met die teoretiese model wat in hierdie artikel beskryf word, is dat 'n organisasie ('n stelsel) vermoëns deur doelgerigte strategiese en operasionele inisiatiewe kan bekom. Hierdie voorgename vermoë-skeppingsproses, veronderstel ook dat die onderneming daarop ingestel is om hierdie vermoëns op 'n konstruktiewe wyse te benut om die mededingende voordeel van die organisasie te verhoog.

The creation of conducive and attractive conditions for enhancing a firm's capability-building process is central to the theoretical model as described in this article. The key building blocks that create favourable conditions for the development of organisational capabilities from an Intellectual Capital perspective are defined in the theoretical model and consist of the following five constructs:

- A Strategic Architecture that provides guidance on the strategic intent, focus and boundaries of the organisation.
- An Intellectual Capital Framework that creates a basis for a normative, strategic and operational view to stimulate ideas on how to make intellectual capital a practical reality and to utilise these insights in the development of the organisation's core capabilities.
- A Core Capability Framework that reflects the content and processes related to the identification, description, evaluation and assumptions associated with the firm's core capabilities. The Core Capability Framework also facilitates the integration of the concepts "core capabilities" and "intellectual capital".
- An Operationalisation Framework to leverage core capabilities from an Intellectual Capital perspective in a pragmatic way to realise tangible competitive benefits not only from individual capabilities, but also through the conscious collective use of bundles of capabilities.
- A change enablement process that stimulates knowledge flows between the above key constructs of the conceptual model. This creates the basis for cognitive and emotional leverages to increase the potential of an organisation to successfully implement a strategic approach to the management of core capabilities from an Intellectual Capital perspective.

Raising the awareness and capacity of the organisation on the above five constructs creates the basis for an increase in the potential to make positive progress on this strategic journey of discovery to manage the growth of intellectual capital in a holistic way by focusing on core capabilities.

### Content of the Theoretical Model (Part one)

A theoretical model for the development of core capabilities from an intellectual capital perspective is presented as a two-part article series. In part one the key constructs associated with an intellectual capital perspective is described. This overview is offered as an intellectual capital framework consisting of three interrelated views, namely normative, strategic and operational.

In the second article in this series the other key concepts that define the conceptual model are described. The relationships between the different constructs, key assumptions, boundaries and propositions about the theoretical model are also explored.

## BACKGROUND

The theoretical model presented in this article explores two key concepts, namely Organisational Core Capabilities and Intellectual Capital. Organisational capabilities will be described from the perspective of the Dynamic Capability Strategy School. It considers strategic management as a collective learning process aimed at developing distinctive capabilities that are difficult to imitate. The Dynamic Capability School includes the Resource-Based Theory (RBT) perspective on capabilities as well as the Core Competence View (Elfring & Volberda, 2001a; 2001b). Intellectual Capital represents another viewpoint and perspective on how resources in an organisation can be leveraged to create competitive advantage. Intellectual Capital is seen as organised knowledge that can be used to produce wealth (Stewart, 1997).

Sullivan (2000) and Roos, Roos, Dragonetti and Edvinsson (1997) showed (see table 1 and figure 1) that intellectual capital management can be approached from two separate, but related, streams of thought:

- A strategic value creation paradigm where the focus is primarily on the creation, development and leveraging of the firm's knowledge through activities such as organisational learning, conversations and innovation.
- A value extraction and measurement paradigm where the focus is on the realisation of direct economic value from a firm's unique combination of intellectual capital and tangible resources.

The theoretical model as described here was primarily developed and conceptualised from a strategic value creation paradigm. This implies that the focus of the model is on the establishment, growth and leveraging of strategic benefits for a firm by focusing on core capabilities, utilising the perspectives embodied in the intellectual capital paradigm. The measurement of intellectual capital is part of this process, but not the primary starting point or initial focus. The theoretical model aims to contribute towards the creation and development of an integrated framework and process for developing organisational capabilities from an Intellectual Capital perspective for competitive benefits. Companies that adopt a strategic approach to managing their intellectual capital do so because they see an

opportunity to enhance their market positions relative to organisations that continue to manage such capital opportunistically. Klein (1998: 2) says, *If indeed knowledge is power, then harnessing it and channelling it make better sense than simply letting the sparks fly.* The conceptual model for growing intellectual capital through core capabilities represents an integrated perspective where the focus is not only on the parts of the framework or system, but also on the relationships between the key elements.

**TABLE 1**  
**TWO VIEWS ON INTELLECTUAL CAPITAL**  
**(BASED ON SULLIVAN, 2000)**

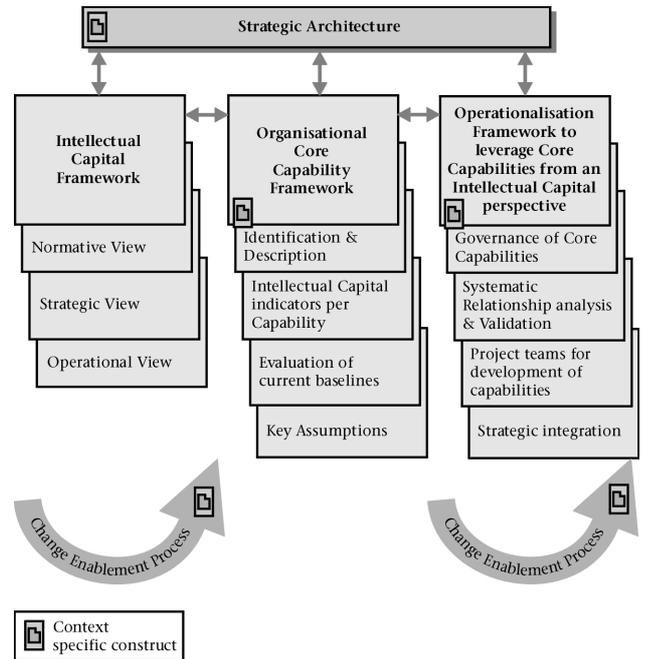
Perspective	Knowledge-based View	Economic-based View
Core Focus	Value Creation	Value Extraction
Purpose	To increase employee knowledge in order to create new or improved innovations for commercialisation	To leverage company innovation in order to maximise profits and/or improve strategic position
Focus of Management attention	People as Human Capital	Structural capital or Intellectual assets (ideas on paper)
Activities	<ul style="list-style-type: none"> <li>• Training and education</li> <li>• Knowledge management and knowledge transfer</li> <li>• Innovation management</li> <li>• Organisation design</li> <li>• Organisational development</li> <li>• Customer and supplier relationships</li> <li>• Culture and organisational values</li> </ul>	<ul style="list-style-type: none"> <li>• Creation of codified knowledge by the firm's human capital</li> <li>• Establish valuations, decision processes, databases, screening and culling conversion mechanisms and asset management systems and capabilities</li> <li>• Intellectual assets</li> <li>• Intellectual property</li> </ul>
Conceptual underpinnings	<ul style="list-style-type: none"> <li>• Psychology</li> <li>• Education</li> <li>• Sociology</li> <li>• Religion</li> </ul>	<ul style="list-style-type: none"> <li>• Economics</li> <li>• Finance</li> <li>• Law</li> <li>• Strategy</li> </ul>

- The assumptions associated with the theory.
- A description of the boundaries within which the theory is expected to apply.
- A set of logical deductions or propositions about the theory.

**Identification and Description of Key Constructs (What)**

The theoretical model consists of the following five key interrelated elements (see figure 2):

- Intellectual Capital Framework.
- Strategic Architecture.
- Organisational Core Capability Framework (Core Capability Architecture).
- Operationalisation Framework for leveraging core capabilities from an Intellectual Capital perspective.
- Change enablement processes.



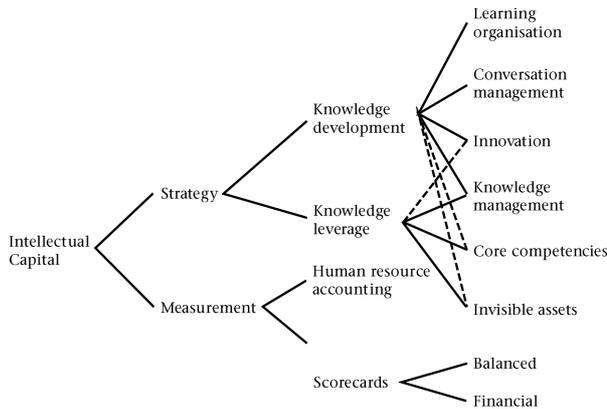
**Figure 2: Conceptual Model for the Development of Core Capabilities from an Intellectual Capital perspective.**

*Intellectual Capital Framework*

The content of the **Intellectual Capital Framework** emerged as a result of the application of an action research process (see Ungerer, 2004 for a detail description of this process and a contextual orientation). The Intellectual Capital Framework of the theoretical model consists of three perspectives (see figure 3):

- A **Normative view**, which answers the questions “What is Intellectual Capital, and why is it important?” and “In what way should we think about Intellectual Capital?” It describes the context and business case for intellectual capital.
- A **Strategic view** that answers the question: “How should we organise to build and sustain intellectual capital?” The strategic view reflects the main drivers of intellectual capital. It also describes the organisational culture that will support the virtuous growth of intellectual capital in a firm.
- An **Operational view**, which answers the question “How shall we proceed from here to make it a practical reality for all in a firm?” This view reflects virtuous intellectual capital routines individuals could pursue.

The key function of this framework is to create a basis for viewing intellectual capital in a firm and to stimulate ideas on how to make it a practical reality for all by indicating guidelines on optimising intellectual capital. The Intellectual Capital Framework is also the basis for the Intellectual Capital perspective for developing organisational core capabilities. In the following section the content of this framework is described.



**Figure1: Conceptual roots of Intellectual Capital (Roos et al., 1997).**

The description of the conceptual model for the growth of intellectual capital through the development of core capabilities is presented in the format of “What”, “How”, “Why”, “Who”, “Where” and “When” as described by Whetton (1989). The following content aspects (based on Dubin, 1976; Mouton, 2001; Whetton, 1989) are addressed in the theory description:

- The identification and description of key concepts.
- The identification of the relationships and interactions among these concepts.

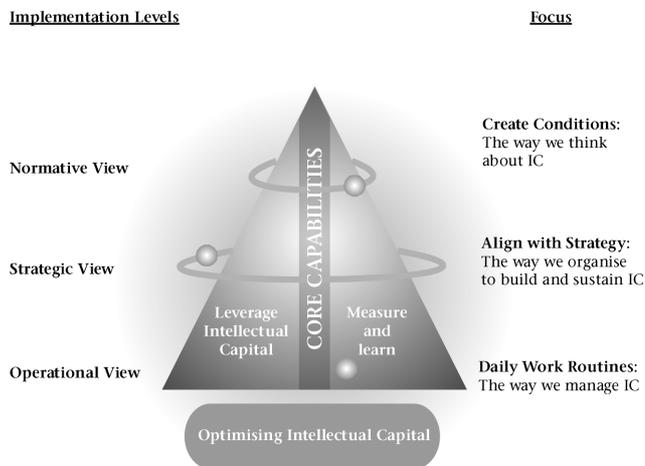


Figure 3: Intellectual Capital Framework as part of the Conceptual Model.

#### Normative View of the Intellectual Capital Framework

The information age has radically changed what creates value in organisations. Within this wave or era, there is a clear emergence of “intangible aspects” – such as “service” – rather than tangible aspects (such as physical products), as the things that unlock value in the economy. Intangible aspects (knowledge, intellectual assets, key organisational processes, brand, customer loyalty, etc.) have become progressively important to organisations and it is acknowledged that future sustainable business performance increasingly depends on an organisation’s ability to leverage the hidden value of intangible assets (Davis, 1996; Davis & Meyer, 1999; Davis & Meyer 2000; Edvinsson, 2002; Lev, 2001; Stewart, 1997;). Intellectual capital management has become a key process to unlock this hidden value (Bontis, 1998; Brennan & Connell, 2000; Edvinsson, 2002; Harrison et al., 2001; Klein, 1998; Roos & Roos, 1997; Roos et al., 1997; Stewart, 2001; Sullivan, 2000; Sveiby, 1997).

From a normative perspective, intellectual capital is seen as **the** future source and driving force of wealth in the information- and knowledge-centric economy. Intellectual capital growth is the key to growing the gap between market capitalisation and the wealth that can be delivered by intangible assets. Intellectual capital is also the source for innovation, strategic differentiation and sustainable competitiveness. This view represents a departure from the traditional where organisations only concentrated on the growth of financial capital – growth in the ‘bottom line’. The Intellectual Capital Framework suggests that there is more to manage than just the finances. Value is created through the collaboration of different types of capital. All the organisation’s types of capital should be actively managed - as each contributes to wealth creation.

Intellectual capital is defined in terms of four elements that – through their unique combination – constitute the total concept (Bontis, 1998; Brookings, 1996; Edvinsson & Malone, 1997; Stewart, 1997; Sveiby, 1997):

- **Human Capital:** comprises the unique combination of skills, knowledge and know-how, experience, competences, attitudes and cultural mindsets of the *people* in the business.
- **Structural Capital:** represents the strategies, processes, systems, procedures, organisational culture (*the way we do things around here*), and intellectual property (including patents and copyrights) that the organisation possesses.
- **Customer (or relationship) Capital:** includes aspects such as brand equity, market share, customer base and customer information, customer and community relations, customer access points, and trade agreements.
- **Financial Capital:** is created through the *unique combination* of the above three Capitals (and the capabilities required to be successful), within the specific context that the organisation operates.

The systemic relationships or interplay between the four elements of intellectual capital are reflected in figure 4.

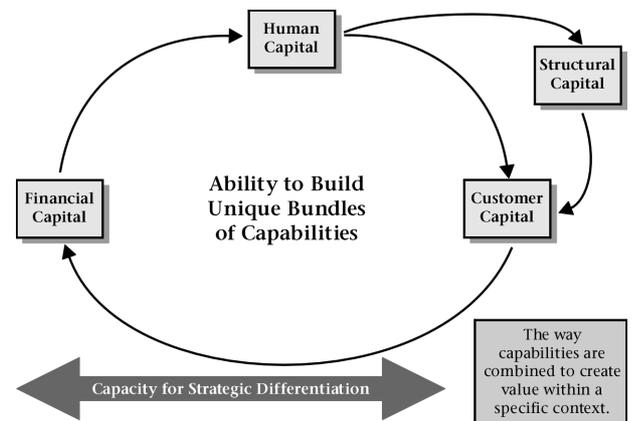


Figure 4: Systemic View of core elements of Intellectual Capital.

The above systemic view<sup>1</sup> on intellectual capital shows that human capital is a prerequisite and root cause for creating customer and structural capital. Human capital is however not equal to intellectual capital. Human capital is a necessary condition, but is not sufficient on its own to create sustainable business value. There is a logical flow of enabling; if you have human capital you can build structural and customer capital, which result in financial capital. An organisation needs appropriately talented people who can delight their customers before customer capital can truly emerge. But human capital needs tools; therefore people need access to the infrastructure of structural capital to leverage their efforts in creating customer capital. A growth in customer capital is created through the individual and collective effects of human- and structural capital respectively. A growth in customer capital leads to a growth in financial capital over time, so if the organisation’s customer capital/relationship capital is strong and built on the enabling foundations of human and structural capital, it provides the basis for a positive change in the organisation’s financial capital. In turn, financial capital provides the means for employing people – who are at the centre of human capital – to unlock value in the organisation. In conclusion: intellectual capital is created through the interaction and explicit bundling of human, structural and customer capital to increase the value of financial capital.

A growth in intellectual capital is, however, not only dependent on the interaction of the above four core elements. To achieve strategic differentiation a company needs to bundle its core capabilities<sup>2</sup> in unique combinations, given a specific context. Contextual factors include the type of industry, the firm’s Strategic Architecture<sup>3</sup> and the firm’s internal ability to mobilise organisational efforts and energy to execute its intent.

The business rationale for engaging on the subject of intellectual capital is reflected in the following business case description. The systemic idea of a business case for the development of intellectual capital is reflected in figure 5.

The logic of the business case for intellectual capital from a systems thinking perspective is as follows:

- Differentiation is the basis for increased competitiveness. The lower the imitability of offerings (ability to copy), the higher the potential for differentiation.
- A high differentiation potential is directly dependent on a robust innovation capacity.
- Innovation is enabled by access to a superior stock of intellectual capital.

1 A study of Bontis and Fitz-enz (2002) confirmed these basic relationships between the four variables of elements of intellectual capital. 2 The term core capability is described as part of the strategic view on intellectual capital. 3 The concept Strategic Architecture is described in part two of this article series as a key construct of the theoretical model.



knowledge-centric company has only two fundamental sources of value:

- the innovations that can be commercialised; and
- the complementary business assets of the firm that are applied to the commercialisation of its innovations.

The organisational culture that supports the growth of intellectual capital is a performance-based culture. This culture is rooted in practices that foster co-operative teamwork, co-creation and mutual support. A performance-based culture encourages the ability to apply regulated flexibility to ensure the application of robust processes and discipline. Regulated flexibility creates the combined conditions of discipline and flexibility for innovation and value creation to happen. This assists with the unique bundling of capabilities, which contributes to a performance culture and financial success. A performance culture is essential to sustain innovation and consistent financial performance over time.

#### *Operational View of the Intellectual Capital Framework*

This view explores different intellectual capital practices that focus on individuals. At its core, the operational view attempts to find answers to the question: "How could an individual think differently about her or his work life and work experience in a firm to contribute positively to the growth of intellectual capital?" The guidelines are presented in the three views – normative, strategic, and operational – on the level of the individual with the focus on daily work routines. Individuals in a firm can use these guidelines to enable thinking, strategising and operationalising about the implications of an intellectual capital paradigm.

At the **normative individual** level, a mindset of *ownership, commitment* and *connectedness* is required.

- Ownership: This represents a mindset where people in the firm – individually and collectively – work and act as co-owners. Thinking about the firm from the perspective of an owner is quite different to thinking about it as "just another employee" – people start to recognise that each and everyone is critically responsible for unlocking and growing value.
- Commitment: The "inseparable twin" of ownership is another vital part in growing intellectual capital. Without commitment, people are present at work, without being engaged. Commitment is, therefore, about people understanding what is expected of them – and then delivering more than expected. It's about engaging fully in an organisational role – and about walking the proverbial 'extra mile' to delight customers and co-owners. If everyone in the firm does that, then generating the "bigger result" – growing intellectual capital – becomes an everyday reality.
- Connected: The worldview of the information age is: *We are connected and must cooperate* (Maynard & Mehrrens, 1996: 38). This thinking supports a systemic approach and accepts the notion of holism and interconnectedness. Such a mindset also facilitates natural co-operation between people and entities to focus outcomes on the mutual interest of all parties concerned.

At the **strategic individual** level the concept of value is paramount: Each co-owner must create a personal understanding of this concept by asking (and answering) a number of questions:

- The first question is, *what is value for my organisation?* If people do not know what value is for the organisation, how will they know when value increases or decreases?
- Secondly, *how is value created?* Knowing how it is created enable individuals to focus their energy on the things that will create the most value.
- Thirdly, the question is *how do I contribute to creating value?* This brings the concept of value to an individual and personal level. It focuses on what an *individual does*, rather than on what she or he allows to happen.

- The next question, *what is the value chain of my contribution?* This explores the way in which an individual contributes – are my efforts adding value, or am I consuming more than I add?

Creating an own understanding of value enables people in a firm to participate and lead each other in two aspects:

- Everyone in the firm has to **create new knowledge by sharing** (and learning from) best practices with people working in the same field or being involved with related subject matter. Knowledge is not something that can be "given" to someone – individuals take all the inputs they receive from others and the environment, add their own understanding given the environment that they work in, and then create the knowledge that they need for application within their own particular local situation. For this process, individuals or teams need the inputs from others who have been confronted by the same challenges. In this way individuals and teams can learn to improve on what was "best practice" in other circumstances by adapting the best practice solutions to local, unique circumstances without regarding the solution input as a recipe for exact duplication.
- The second thing individuals can do – that actually feeds the previous aspect – is to **actively network internally and externally**. This will bring them into contact with a diversity of new ideas and practices that will broaden their thinking. It will enable them to apply innovative solutions when facing new challenges with a diverse repertoire of actions.

At the **operational individual** level, the new knowledge that individuals receive through either creating it themselves, or through learning from best practice, will help them to deliver *world-class benchmarked performance*. This needs to be a natural process where, irrespective of geography, seniority or role type, everybody will actively seek opportunities for innovation every day in everything that they do. This is the heart and spirit of the philosophy of continuous improvement. It is not only about revolutionary transformation in a role, but also about making small enhancements every day to improve the firm's offering to customers.

This concludes the description of the constructs associated with the Intellectual Capital Framework. The four other elements of the theoretical model for the development of core capabilities from an Intellectual Capital perspective will be described in the second article.

## CONCLUSION

In this first part of a two-part series on a conceptual model for the development of core capabilities from an intellectual capital perspective the key constructs associated with the term "intellectual capital" were described and presented in an integrated framework. The Intellectual Capital Framework as described is a platform for viewing intellectual capital from a normative, strategic and operational perspective. These multiple perspectives stimulate ideas on how to make this concept a practical reality in an organisation.

The other key concepts associated with the theoretical model that will be explored in part two of this article series.

## REFERENCE

- Ackoff, R.L. (1993). From Mechanistic to Social Systemic Thinking. In L. Johnson (Eds.), *Innovations in Management Series* (1-12). Boston: Pegasus Communications.
- Amit, R.H. & Schoemaker, P.J.H. (1993). Strategic Assets and Organisational Rents. *Strategic Management Journal*, 14 (1): 33 – 46.

- Barney, J.B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17 (1): 99-120.
- Beer, M. & Nohria, N. (2000). Cracking the code of change. *Harvard Business Review*, 78 (3): 133-141.
- Bontis, N. (1998). Intellectual Capital: An exploratory study that develops measures and models. *Management Decision*, 36 (2): 63-76.
- Bontis, N. (1999). Managing organisational knowledge by diagnosing intellectual capital: Framing and advancing the state of the field. *International Journal of Technology*, 18 (5): 433-462.
- Bontis, N., Dragonetti, N.C., Jacobsen, K. & Roos, G. (1999). The Knowledge Toolbox: A Review of the Tools Available to Measure and Manage Intangible Resources. *European Management Journal*, 17 (4): 391-402.
- Bontis, N. & Fitz-enz, J. (2002). Intellectual capital ROI: a causal map of human capital antecedents and consequents. *Journal of Intellectual Capital*, 3 (3): 223-247.
- Brennan, N. & Connell, B. (2000). Intellectual capital: current issues and policy implications. *Journal of Intellectual Capital*, 1 (3): 206-240.
- Brookings, A. (1996). *Intellectual capital: Core asset for the third millennium enterprise*. New York: Thomas Business Press.
- Collins, D.J. & Montgomery, C.A. (1995). Competing on resources: strategy in the 1990's. *Harvard Business Review*, 73 (4): 118-128.
- Davis, S. (1996). *Future Perfect*. Reading, Massachusetts: Addison-Wesley.
- Davis, S. & Meyer, C. (1999). *Blur - The Speed of change in the connected economy*. New York: Warner Books.
- Davis, S. & Meyer, C. (2000). *Future Wealth*. Boston, MA: Harvard Business School Press.
- Dawson, R. (2000). Knowledge capabilities as the focus of organisational development and strategy. *Journal of Knowledge Management*, 4 (4): 320-327.
- Demarest, M. (1997). Understanding knowledge management. *Long Range Planning*, 30 (3): 374-384.
- Dubin, R. (1976). Theory building in applied areas. In M.D. Dunnette (Ed.), *Handbook of industrial and organisational psychology* (17-39). New York: Wiley.
- Edvinsson, L. (2002). *Corporate Longitude*. London: Prentice Hall.
- Edvinsson, L. & Malone, M.S. (1997). *Intellectual Capital*. London: Harper Business.
- Elfring, T. & Volberda, H.A. (2001a). Schools of Thought in Strategic Management: Fragmentation, Integration or Synthesis. In H.W. Volberda & T. Elfring (Eds.), *Rethinking Strategy* (1-25). London: Sage Publications.
- Elfring, T. & Volberda, H.A. (2001b). Multiple futures of strategy synthesis: Shifting boundaries, Dynamic capabilities and Strategic configurations. In H.W. Volberda & T. Elfring (Eds.), *Rethinking Strategy* (246-285). London: Sage Publications.
- Grant, R.M. (1991). The resource-based theory of competitive advantage: Implications for strategy formulation. *California Management Review*, 33 (3): 114-135.
- Hamel, G. (1994). The Concept of Core Competence. In G. Hamel and A. Heene (Eds.), *Competence based Competition* (11-33). Chichester: John Wiley.
- Hamel, G. (2000). *Leading the revolution*. Boston, MA: Harvard Business School Press.
- Hamel, G. & Prahalad, C.K. (1994). *Competing for the Future*. Boston, MA: Harvard Business School Press.
- Harrison, S. & Sullivan, P.H. (2000). Profiting from intellectual capital. *Journal of Intellectual Capital*, 1 (1): 33-46.
- Harrison, S., Sullivan, P.H. & Castagna, M.J. (2001). Intellectual capital best practices. In B. Lev, *Intangibles. Management, Measurement and Reporting* (155-165). Washington: Brooking Institution Press.
- King, W.R. (1995). Creating a strategic capability architecture. *Information Systems Management*, 12 (1): 67-71.
- Klein, D.A. (Eds.). (1998). *The strategic management of intellectual capital*. Boston: Butterworth-Heinemann.
- Kotter, J.P. (1995). Leading change: Why transformation efforts fail. *Harvard Business Review*, 73 (2): 59-67.
- Kotter, J.P. & Cohen, D.S. (2002). *The heart of change: Real-life stories of how people change their organisations*. Boston, MA: Harvard Business School Publishing.
- Lev, B. (2001). *Intangibles. Management, Measurement and Reporting*. Washington: Brooking Institution Press.
- Long, C. & Vickers-Koch, M. (1995). Using core capabilities to create competitive advantage. *Organisational Dynamics*, 24: 6-22.
- Luecke, R. (2003). *Managing change and transitions*. Boston, MA: Harvard Business School Press.
- Maynard, H.B. & Mehrrens, S.E. (1996). *The Fourth Wave*. San Francisco: Berrett-Koehler Publishing.
- Mouton, J. (2001). *How to succeed in your Master's and Doctoral studies*. Pretoria: Van Schaik Publisher.
- Naisbitt, J. & Aburdene, P. (1985). *Re-inventing the Corporation*. New York: Warner Books.
- Prahalad, C.K. & Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review*, 68:79-93.
- Roos, G. & Roos, J. (1997). Measuring your company's intellectual performance. *Long Range Planning*, 30 (3): 413-426.
- Roos, J., Roos, G. Dragonetti, N.C. & Edvinsson, L. (1997). *Intellectual Capital: Navigating the New Business Landscape*. London: Macmillan Press.
- Sanchez, R. (2001). Building Blocks for Strategy Theory: Resources, Dynamic Capabilities and Competences. In H.W. Volberda & T. Elfring (Eds.), *Rethinking Strategy* (143-157). London: Sage Publications.
- Schaffer, R.H. & Thomson, H.A. (1992). Successful change programs begin with results. *Harvard Business Review*, 70 (1): 80-89
- Schein, E.H. (1988). *Organizational Psychology*, 3<sup>rd</sup> ed. Englewood Cliffs, N.J.: Prentice-Hall.
- Snowden, D.J. (2000). Liberating knowledge. In J. Reeves (Editor), *Liberating knowledge* (6-19). London: Caspian Publishing.
- Snowden, D.J. (2002). Complex acts of knowing: Paradox and descriptive self-awareness. *Journal of Knowledge Management*, 6 (2) May.
- Stacey, R. A. (1992). *Managing the unknowable: Strategic boundaries between order and chaos in organisations*. San Francisco: Jossey-Bass.
- Stacey, R. A. (2001). *Complex responsive processes in organisations*. London: Routledge.
- Stalk, G., Evans, P. & Shulman, L. E. (1992). Competing on Capabilities: The new rules of Corporate Strategy. *Harvard Business Review*, 70 (2): 57 - 69.
- Stewart, T.A. (1997). *Intellectual Capital*. New York: Double Day.
- Stewart, T. A. (2001). *The wealth of knowledge*. London: Nicholas Brealey.
- Sullivan, P.H. (2000). *Value-driven intellectual capital. How to convert intangible corporate assets into market value*. New York: John Wiley.
- Sveiby, K.E. (1997). *The New Organisational Wealth*. San Francisco: Berrett-Koehler.
- Teece, D.J., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18 (7): 509-533.
- Ungerer, M. (2004). *Developing core capabilities in a financial services firm: An intellectual capital perspective*. Unpublished doctoral thesis. Johannesburg, Rand Afrikaans University (RAU).
- Wheatley, M. J. (1994). *Leadership and the New Science*. San Francisco: Berrett-Koehler.
- Wheatley, M.J. & Kellner-Rogers, M. (1996). Self organisation: The irresistible future of organising. *Strategy and Leadership*, July-August: 18-24.
- Wheatley, M.J. & Kellner-Rogers, M. (1998). Bringing life to organisational change. *Journal of Strategic Performance Management*, April-May: 5-13.
- Whetten, D.A. (1989). What constitutes a theoretical contribution? *Academy of Management Review*, 14 (4): 490-495.