

**A Theoretical Model for Developing Core Capabilities from an
Intellectual Capital Perspective**

by

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A Theoretical Model for Developing Core Capabilities from an Intellectual Capital Perspective

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.

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

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.

[Insert table 1 here]

[Insert figure 1 here]

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.

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.
- 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.

[Insert figure 2 here]

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.

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[Insert figure 3 here]

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.

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.

[Insert figure 4 here]

The above systemic view¹ 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 capabilities² in unique combinations, given a specific context.

¹ A study of Bontis and Fitz-enz (2002) confirmed these basic relationships between the four variables or elements of intellectual capital. Bontis and Fitz-enz reflect financial capital as business performance in their intellectual capital causal map.

² The term core capability is described as part of the strategic view on intellectual capital.

Contextual factors include the type of industry, the firm's Strategic Architecture³ 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.

[Insert figure 5 here]

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.
- To attract, build and retain intellectual capital requires a positive organisational image.
- Image and position in the market remains dependent on positive and sustainable financial performance.
- The image of the organisation is also dependent on the reputation of leadership.
- The goal is growth in all capitals (financial-, human-, structural- and customer capital).

Strategic View of the Intellectual Capital Framework

The strategic view describes how an organisation can organise the building and sustaining of intellectual capital. Focusing the strategic energy in an organisation on the main drivers of intellectual capital does this. From a systemic analysis of the ideal

³The concept Strategic Architecture is described later in this article as a key construct of the theoretical model.

future view on intellectual capital (Ungerer, 2004), four main drivers of intellectual capital, on a strategic level, were synthesised. These were:

- **Organisational Image.** The image of an organisation – the way it is perceived by people – is an attractor for employees, customers, investors and alliance partners. If a firm is seen to be successful:
 - o people would want to associate themselves with the organisation, prompting talented employees to want to work for the organisation;
 - o lucrative customers bring their business to the firm;
 - o investors want to invest and buy the company's shares, and
 - o alliance partners want to be associated with the organisation.

A positive image – built on a solid base of business performance – is one of the cornerstones for creating a cycle of “success breeding success”. The leadership of a firm creates the context for people to achieve success and is an important component that forms the image of an organisation.

- **Core Capabilities.** An organisation needs to be very clear on the capabilities it wants to cultivate to achieve not only immediate success in the marketplace, but also long term sustainability. Clarity on which organisational capabilities will be required to achieve strategic and operational success contributes positively to strategic focus. This creates the basis for continuous organisational learning, feedback and proactive strategic re-positioning.

Organisational capabilities are repeatable patterns of action utilised by assets to create, produce and/or offer products to the market. Capabilities are regarded as an important special category of intangible assets because they determine the way a firm uses its tangible and intangible assets (Sanchez, 2001). Capabilities are *a firm's capacity to deploy resources, usually in combination, using organisational processes, to affect a desired goal* (Amit and Schoemaker, 1993: 35). *A capability is, in essence, a routine, or a number of interacting routines* (Grant, 1991: 122). An attribute of organisational capabilities is that they are collective and cross-functional (Stalk et al., 1992). Core capabilities are the most critical and most distinctive resources a firm possesses, and the most difficult to copy when

effectively linked with appropriate strategic targets in a value chain that begins and ends with the firm's key stakeholders (Long & Vickers – Koch, 1995). The effective deployment of core capabilities raises the barriers of imitation and substitution and creates competitive advantages for a firm. The roots for sustainable success are the capabilities – the requisite abilities and routines – an organisation possesses, cherishes and grows. Clarity with regard to the core capabilities a company require for success is an important building block to create a focus approach for the development of intellectual capital.

Intellectual capital growth, from a strategic perspective, is however not only about the core capabilities an organisation possesses, but also about the access a firm has to the capabilities of alliance partners. This creates the basis for an extended enterprise where the repertoire of capabilities a firm can leverage includes both owned and non-owned.

- **Knowledge Management.** Given the context of the information age where knowledge has become the pre-eminent economic resource (Ackoff, 1993; Naisbitt & Aburdene, 1985; Stewart, 1997), organisations need a knowledge management capacity to enable knowledge flows related to human-, structural-, customer and financial capital. Knowledge-centric organisations need to unleash the knowledge that is locked up inside them. They frequently innovate their processes and practices but fail to capture the knowledge that they gain in the process, thereby continuing to reinvent the proverbial wheel. Knowledge management is a planned, structured approach to manage knowledge as an organisational asset throughout its lifecycle (create, gather, share, leverage) to enhance the organisation's ability, speed and effectiveness in delivering products and services for the benefit of clients, in line with its business strategy and business processes. It is a holistic solution incorporating a variety of perspectives, namely process, people and culture, structure and technology perspectives, all of which carry virtually equal weighting in managing knowledge. Knowledge management takes place on three levels, namely the individual level, team level and organisational level (Dawson, 2000; Demarest, 1997; Snowden,

2000; Snowden, 2002). A strategic knowledge management capacity increases the flow and stock of intellectual capital in a firm and is stated by various experts (Bontis, 1998; Bontis, 1999; Bontis & Fitz-enz, 2002; Stewart, 1997; Snowden, 2002; Roos & Roos, 1997; Roos et al., 1997) as an integral part of the dynamics related to intellectual capital. *The increased importance of knowledge does not simply add an additional variable to the production process of goods: it changes substantially the rules of the game* (Bontis et al., 1999: 392).

- ***Innovation capacity.*** Closely linked to the other three drivers of Intellectual capital is the capacity to innovate. A robust company-wide innovation process is part of the required structural capital infrastructure to increase the knowledge extraction ability of a firm. A culture of innovation as “the way we do things around here” supports and enhances differentiation and value creation. Innovation represents the fire that ignites the creative potential embedded in the firm’s human capital. This capacity enables an organisation to continue providing the products and services that delight its customers in unexpected ways. Organisations without this capacity will always be an “also ran” in the marketplace, having to feed off those firms that keep on creating new offerings. It is therefore a key contributor to the creation and reinforcement of a progressive organisational image. Sullivan (2000) supports the above view when he states that a knowledge-centric company has only two fundamental sources of value:
 - o the innovations that can be commercialised; and
 - o 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 next.

Strategic Architecture

The second core concept of the theoretical model (see figure 2) is "Strategic Architecture". This concept is informed from both the literature related to the Dynamic Capability School on strategy and the best practices associated with management of intellectual capital.

Elfring and Volberda (2001a: 20) describe the Dynamic Capability School on strategy as: *a collective learning process aimed at developing distinctive capabilities that are difficult to imitate*. The theory of capability-based competition is rooted in the concepts of "resources", "dynamic capabilities" and "core competence" (Sanchez, 2001). Superior performance is based on developing a competitively distinct set of internal capabilities (what the firm does well) and deploying them with a well-conceived strategy in the competitive environment (what the market demands and what competitors offer). This is the essence of competing on resources and capabilities (Collins & Montgomery, 1995). Hamel and Prahalad (1994) say that firms will be successful in the future if they focus on the creation of new competitive space for themselves, rather than focusing only on existing competitive opportunities.

Roos and Roos (1997) emphasise that intellectual capital management must be rooted in the strategy (business vision, mission) of the firm. Intellectual capital is a consequence of strategy. Sullivan (2000) indicates that strategic alignment involves focusing the firm's intellectual capital resources on the activities that will mobilise the enterprise towards the realisation of its strategy and vision.

Hamel and Prahalad (1994) introduce the concept of a "strategic architecture" that identifies *what we must be doing right now to intercept the future* (Hamel & Prahalad, 1994: 121). They state that a Strategic Architecture aims to achieve the following:

- It is the link between today and tomorrow. It strives to link short term actions to long term strategies.
- It indicates what capabilities the firm must begin developing or start to acquire right now to achieve strategic success over time.
- It indicates what customer groups, channels and new developments must be targeted to achieve strategic success.
- It provides the logic for product and market diversification by answering how this contributes to competence building and market dominance.
- It enables decision making about resource allocation priorities. It helps employees to understand the logic of allocation priorities and disciplines senior management to maintain consistency.

The Strategic Architecture of the firm is an approach to a broad plan of opportunity, representing the potential highway to the future. The merits of specific routes only emerge once an organisation has moved forward on this strategy journey.

The Strategic Architecture of a firm identifies and reflects what it must focus on to achieve strategic success. Included in the Strategic Architecture is an indication of the capabilities the organisation requires to ensure the achievement of its strategic intent.

The Strategic Architecture of a firm can include the following elements:

- Vision and mission description to highlight what the firm intends to achieve, given a chosen strategic landscape in which it wants to compete. This also gives an indication of the boundaries of the firm's strategic positioning.

- The values of the firm as an indication of the behavioural patterns that are encouraged and supported.
- Core descriptions related to:
 - o The profit model of the business, answering the question *how will we make profit?*
 - o The business model of the business, answering the question *how do we organise to make profit?*
 - o The control points the business wants to focus on to leverage key competitive advantages for the firm. The question that drives this view is *how do we protect our profit streams?*
 - o The core capabilities the firm utilises for building unique bundles of capabilities to create strategic differentiation in the chosen market space. This answers the question *what abilities do we need to achieve our strategic intent?*
 - o The primary mental models that inform the above components of the firm's Strategic Architecture. This answers the question *what assumptions do we use as point of depart?*

The above elements represent the core dimensions of the Strategic Architecture of a firm and are reflected in figure 6. The development of this content is context specific and unique for each firm. The content is developed from a Dynamic Capability-Based strategy paradigm where firm-specific resources are utilised to exploit opportunities or to neutralise threats from the external competitive environment (Barney, 1991; Elfring & Volberda, 2001a; Long & Vickers-Koch, 1995; Stalk et al., 1992; Teece et al., 1997). The Strategic Architecture creates the context for the next building block, the Core Capability Framework.

[Insert figure 6 here]

Organisational Core Capability Framework

The third key component of the theoretical model is the “Organisational Core Capability Framework”. This relates to the concept core capabilities as described in both the strategic view of the Intellectual Capital Framework and the Strategic Architecture, but expand the shared understanding and meaning associated with the actual content constructs implied in the firm’s selected core capabilities.

The core capabilities as identified in the Strategic Architecture of the firm require further clarification and meaning expansion. The Core Capability Framework or Architecture of the firm creates the space to facilitate this meaning creation and sensemaking process. The Core Capability Framework creates a rich shared meaning on the key constructs associated with each chosen core capability and forms a reference point for directing current and future strategic behaviour.

The Capability Architecture represents a flexible, adaptable, and continuously-improving infrastructure of organisational capabilities, which forms the basis for a firm's competitiveness (King, 1995). The Core Capability Framework consists of content and processes related to the identification, description and evaluation of core capabilities, as well as key assumptions related to organisational core capabilities. A well-defined strategic Capability Architecture contributes to the enhancement and development of organisational capabilities aimed at the leveraging of competitive benefits for the firm.

The "core" in core capabilities refers to those activities that actually contribute to long-term corporate success and identifies those capabilities that lie at the centre, rather than the periphery, of competitive prosperity (Hamel, 1994). All core capabilities of a firm are not at the same level of maturity (especially in the beginning phases) and represent a mix of well-established capabilities and new capabilities the company requires to be successful. This implies that all the core capabilities will not necessarily pass the criteria of multiple customer value, uniqueness or leveragability (Prahalad & Hamel, 1990; Hamel, 1994; Hamel, 2000) in the initial stage, but the intent is to develop them to levels where they meet these criteria.

The Core Capability Framework also facilitates the integration of the concepts "core capabilities" and "intellectual capital". The Intellectual Capital perspective on resources is utilised as an intervening variable for expanding the view on the organisation's core capabilities. In this way the core capabilities of a firm are illuminated in a specific way to increase the diversity of perspectives by using multiple lenses, based on the perspectives associated with intellectual capital. This enables a more informed, richer and more expanded view on the capabilities of an organisation. This approach also contributes to a focused development process for core capabilities through the

identification of human-, structural- and customer capital indicators per core capability. This process of utilising the intellectual capital paradigm as a lens for expanding the views on the firm's core capabilities is reflected in figure 7.

[Insert figure 7 here]

A Core Capability Framework consists of the following key elements:

- A description of key concepts associated with the identified core capabilities. These descriptions should give meaning to the core intent the firm has with each capability and should inform strategic decision-making.
- Intellectual capital indicators per core capability. Human-, structural- and customer capital indicators are developed from a future ideal position for each identified core capability. This means that these intellectual capital indicators are future orientated and describe an ideal position for each capability in terms of indicators for human-, structural- and customer capital respectively. The selected core capabilities of the firm, as reflected in the Strategic Architecture, are described in an envisaged end-state format using the three core components of intellectual capital as category holders and applying indicators as a descriptor mechanism.
These intellectual capital indicators per core capability are objects of measurement and are defined in terms that are not as quantifiable (black and white) as normal quantitative measures (Brennan & Connell, 2000; Harrison & Sullivan, 2000; Roos et al., 1997). Intellectual capital indicators contribute to knowledge around the question: *How will we know over time if we are growing and expanding the creation and contributions of these different core capabilities?* Intellectual capital indicators are more qualitatively orientated, but can include specific relevant quantitative indicators. Intellectual capital indicators reflect the position and status of a firm at a specific point in time and are aimed at internal management rather than external stakeholders (Sullivan, 2000).
- The development of a current core capability baseline for the firm to indicate the level of entrenchment. This is achieved through the measurement of the current status in the firm by utilising the intellectual capital indicators per capability. This enables the reflection of current evidence of intellectual

capital per capability (or lack of it) against the stated ideal indicators. This information can be utilised in investment prioritisation decisions related to core capabilities and in continuous management of intellectual capital with a focus on growth. This action reflects the measurement part of the Intellectual Capital Framework and can also be combined with other quantitative measurements related to intellectual capital such as single aggregate measures or measures aimed at the individual components of intellectual capital to reflect a variety of relevant measurements (see the approaches of Roos, et al, 1997; Stewart, 1997; Stewart, 2001; Sullivan, 2000).

- A description of the key assumptions associated with the core capabilities of the firm. Assumptions make visible the underlying thoughts associated with the capabilities and represent an additional source of insight and sensemaking. Assumption surfacing is a neutral way to identify prevailing mental models, risks and opportunities associated with the firm's core capabilities. *We are not paying enough attention to the irregular, disorderly chance nature of the game. We do this because it is easier and more comfortable than feeling about in the dark for explanations that describe the world in terms of disorder, irregularity, unpredictability and chance* (Stacey, 1992: 21).



Operationalisation Framework for leveraging Core Capabilities from an Intellectual Capital perspective

Clarity on the content of the firm's core capabilities, and the expansion of this view by utilising an intellectual capital perspective, create the readiness and energy in an organisation to progress to the next construct in the theoretical model. This represents the operationalisation phase of the development of core capabilities from an intellectual paradigm.

The key content of the Operationalisation Framework for leveraging core capabilities by utilising an intellectual capital view is as follows:

- The development and management of core capabilities is not a once-off project with a start and end date. It is a continuous organisational learning process that requires sponsorship by the leadership in the firm. A governance structure for the on-going management of core capabilities in a

firm facilitates this need for involving leadership in a constructive way. A governance structure in the form of an intellectual capital review board, with senior management representation under the leadership of the CEO of the firm, creates the strategic attention and organisational processes for the leveraging of core capabilities from an Intellectual Capital perspective. The key functions of an intellectual capital review board are:

- Creating conditions in the firm that are conducive to growing intellectual capital by focusing on core capabilities. Stacey (1992) indicates that new strategic directions emerge from the chaos of challenge and contradictions through a process of real-time learning and interaction. The role of executives is to create favourable conditions for, and to participate in these learning interactions. This creates the basis for piecemeal interventions at leverage points in the system.
 - Providing the required mandates and resources for the development and maintenance of the firm's core capabilities.
 - Providing strategic leadership, direction and focus for the tactical leveraging of core capabilities to improve the strategic differentiation potential of the firm.
 - Promoting and communicating the key concepts related to the growth of intellectual capital by focusing on core capabilities to reinforce the message in a visible and vocal way. These messages focus on answering the "why" question and help employees to create their own meaning towards increasing individual self-reference capacity (Wheatley, 1994).
 - Reviewing progress related to the entrenchment and leveraging of the firm's core capabilities on a regular basis.
- The Core Capability Framework represents a static view of a firm's core capabilities. The development of dynamic systemic relationship views per core capability, as well as between the different capabilities, stimulates ideas on the leveraging and bundling of core capabilities as value-added processes. Validating the relevance of the core capabilities is part of this process of developing "rich pictures" of the relationships between the different core capabilities.

- A firm's core capabilities have not all reached the same level of maturity. This implies that development activities related to human-, structural- and customer capital for those core capabilities that require further attention need to be initiated and monitored. The baseline information per capability as reflected in the Core Capability Framework is an important input in this operationalisation process. Project teams, with a mandate from the intellectual capital review board, focus on the ongoing implementation, development and leveraging of a firm's core capabilities and create momentum for operationalising the concepts by making them a practical reality. Learning groups of employees in self-organising networks that engage in dialogue, conflict and open testing of assumptions are vital for strategic success (Stacey, 1992).
- Growing intellectual capital through core capabilities is in essence a strategic activity. Strategic integration on an enterprise-wide level is achieved through the Strategic Architecture of the firm, which reflects the core capabilities the enterprise requires to achieve its strategic ideals. This strategic logic needs to be repeated on the next operating level in the firm – usually in the form of strategic business units (SBU's). Strategic integration on an SBU level implies answering the following questions:
 - o *Which of the firm's core capabilities can make a direct contribution to the achievement of our strategic goals?* This answer creates the basis for two further areas of investigation and integration.
 - o *What strategic gap closing initiatives should we engage on to leverage these core capabilities to our benefit?*
 - o *What are the implications of these core capabilities from a human-, structural- and customer capital perspective?*

These conversations in SBU's create the basis for local meaning to emerge and for self-organising processes (Stacey, 1992; Stacey, 2001; Wheatley & Kellner-Rogers, 1996) to dynamically reinforce the envisaged and required changes related to the growth of intellectual capital by focusing on core capabilities.

The above elements represent the key constructs associated with the Operationalisation Framework. The final construct of the theoretical model is the “change enablement process”.

Change Enablement Processes

The creation of movement and exchange between the above four key constructs (Intellectual Capital Framework, Strategic Architecture, Core Capability Architecture and Operationalisation Framework) of the conceptual model for growing intellectual capital by focusing on core capabilities is dependent on a change enablement process.

The change enablement process perspective that supports the development of core capabilities from an intellectual capital view is based on a delicate blend of two different, but complementary, approaches to change:

- A systematic, well-planned and orderly change process for executing mainly pre-determined activities. This represents a logical, rational approach to change where the focus is on the achievement of set targets, primarily through the sequential execution of parts in a whole. This approach utilises the guidelines and action-steps as reflected by Beer and Nohria (2000), Kotter (1995), Kotter and Cohen (2002), Luecke (2003), and Schaffer and Thomson (1992).
- An organic, systemic change process based on self-organising principles where an organisation, as a system, evolves from one state of functioning to another (new) state. This is a natural process of change where the inherent forces and energies in a system are utilised to produce the required adaptation. The organisation is viewed as a complex adaptive system. The work of Stacey (1992; 2001), Wheatley (1994), and Wheatley and Kellner-Rogers (1996; 1998) informs this view of the change enablement process.

The following assumptions related to planned change, as identified by Schein (1988), create the context for the change enablement process to guide the development of core capabilities for a firm from an Intellectual Capital perspective:

- Change not only involves learning something new, but also unlearning something already existing. Some of the challenges that the change process should address are:

- The development of mindsets that is aligned with a knowledge-centric organisational paradigm where knowledge is the currency of the future; and
- The unlearning of toxic mental models associated with the industrial age and a mechanistic worldview. Stacey (1992: 21) confirms this need when he states that: *Today most of us are trying to explain a messy, opportunistic global competition game using mental models that focus on order, stability, cohesion, consistency and equilibrium.*
- No change will happen in the absence of a motivation to change. If such motivation to change does not already exist, the creation of that motivation is often the most difficult part of the change process. The Intellectual Capital Framework and the Strategic Architecture of a firm create the basis to define a desired future state that solicits natural tension when this is compared to the current reality. Systems will seek tension-releasing mechanisms to reduce the existing gap. Releasing this tension through gap-closing activities, aimed at the creation of a Core Capability Architecture and the associated operationalisation efforts, enable movement and change resulting in new strategic positions for a firm. This process requires a unique blend of both planned and self-organising change activities.
- Change involves attitudes, values and self-images. The unlearning of prevalent responses in these areas is initially inherently painful and threatening. The guidelines as reflected in the normative-, strategic- and operational perspective of the Intellectual Capital Framework, the Strategic Architecture, and the Core Capability Framework of the firm are all valuable sources of information to guide new behaviour. Information is the nutrient of self-organising systems and feeds the system (Wheatley & Kellner-Rogers, 1996).
- Change is a multi-stage cycle that is negotiated per stage. The implementation of the conceptual model on growing intellectual capital by focusing on core capabilities in a firm is a multi-stage approach that facilitates the gradual entrenchment of the concepts and processes associated with the model.

The purpose of the change enablement process is to create cognitive and emotional leverages that will enhance the potential of an organisation to successfully implement the conceptual model of this study.

In the next part of this article the relationships between the key constructs of the theoretical model is explored as well as the key assumptions, the boundaries and the propositions about the model.

Relationships between Constructs (How)

This part answers the question *how are the constructs in the conceptual model related?*

The representation reflected in figure 2 is also relevant here.

The development of core capabilities from an Intellectual Capital perspective is an iterative process where the key constructs of the conceptual model dynamically relate to each other. This iterative flow of information forms and informs the content related to the key constructs of the model as the development process unfolds over time. This means that in the initial phases of application and population of the model, the content embodied in the constructs can change due to the emergence of new insights.

The primary relationships between the key constructs of the theoretical model are as follows:

- The Strategic Architecture creates the context for all the other architectures or frameworks in the theoretical model. The Strategic Architecture defines the boundaries and competitive space within which a firm wants to excel. This influences the type of capabilities the company requires. The Strategic Architecture also signals some clues on what the focus and contribution of these core capabilities should be.
- The Intellectual Capital Framework informs the description of the chosen core capabilities in the Core Capability Architecture through human-, structural- and customer indicators per core capability. This link ensures that the firm's core capabilities are viewed from an intellectual capital paradigm. This insight about the expanded meaning of the different core capabilities also informs the Core Capability Framework and the Strategic Architecture.

- The Core Capability Framework informs the operationalisation of the firm's core capabilities. The content as developed in the Core Capability Architecture is utilised as basis for the operationalisation process. As the operationalisation process progresses over time these insights as feedback loops can influence the descriptions and key concepts associated with the firm's core capabilities.
- A change enablement process supports and facilitates the creation of content, meaning and alignment on the key constructs of the theoretical model.

Key Assumptions (Why)

This part answers the question *what are the underlying dynamics that justify the selection of the key constructs and their relationships?* Assumptions represent statements related to the theoretical model whose certainty is either doubtful or not yet proven as a judgement of fact. Key assumptions will be highlighted to explain the rationale of the theoretical model.

The key assumptions related to the theoretical model on the development of core capabilities from an Intellectual Capital perspective are as follows:

- It is useful to conceptualise an organisation's core capabilities from an Intellectual Capital perspective.
- The intellectual capital paradigm is an appropriate mental model for the information age.
- The intellectual capital paradigm can be utilised as a perspective for informing management decision making on strategy for a firm. The Intellectual Capital Framework as a construct in the theoretical model with normative, strategic and operational elements represents the key aspects of the intellectual capital paradigm. It creates the basis for informing decisions on core capabilities in both the Strategic Architecture and the Core Capability Framework of the conceptual model.
- The Intellectual Capital Framework as presented in the conceptual model represents a relatively generic description of the concepts associated with the intellectual capital paradigm and is at least applicable to the financial services sector, given the context in which the model was developed.

- A strategic approach to the management of intellectual capital starts with a view on the core capabilities the business requires to achieve its strategic ideas and ideals.
- It is possible for the leadership of a firm to identify and select the appropriate core capabilities that will enhance and support the achievement of the firm's strategic intent. The Strategic Architecture of the firm creates a context for the deployment of the selected core capabilities.
- The intellectual capital school of thought creates the opportunity for identifying appropriate intellectual capital indicators for a firm's core capabilities. This intellectual capital view on core capabilities advances the basis of a useful and consistent taxonomy. An intellectual capital view generates multiple perspectives on a capability that are useful for the development, entrenchment, measurement and leveraging of core capabilities over time.

Boundaries of the theory (Where)

The boundaries of the theory specify the limits for application of the theoretical model and refer to temporal and contextual factors that influence the generalisability of the theory (Dubin, 1976; Whetton, 1989).

Some elements of the theoretical model for the development of core capabilities from an Intellectual Capital perspective as described in this article are context sensitive. The following constructs are specifically context dependent as indicated in figure 2:

- Strategic Architecture.
- Organisational Core Capability Framework.
- Operationalisation Framework.
- Change enablement process.

The Intellectual Capital Framework as reflected in the theoretical model is visualised as being a relatively generic approach to intellectual capital and represents insights, models, metaphors, and measures appropriate for the information age and the new realities associated with knowledge economics.

The intent of the theoretical model is to provide guidance to companies on how to grow their intellectual capital by focusing on core capabilities. The model is a conceptual reference map for mobilising this strategic sensemaking process. It requires a unique application process for a firm, given the firm's history, strategy and readiness to embark on this journey.

Propositions about the Model

Propositions are logical deductions about the theoretical model and should be read in conjunction with the assumptions covered already.

The following ten propositions are logically consistent with the theoretical model as described:

- Intellectual capital is a multi-dimensional construct and consists of three inter-related elements: human-, structural- and customer capital. The cumulative and reinforcing effect contribute to the growth in the value of financial capital (see figure 4).
- The relationships between the above capitals imply that:
 - o Human capital is not equal to intellectual capital.
 - o Human capital is the root cause for the growth of intellectual capital.
 - o Human capital is a necessary, but not sufficient condition to explain the cause and growth of intellectual capital.
 - o Human capital causes a change in the level of structural- and customer capital in a firm.
- Customers are the reason for the existence of a business from a customer-centric strategic positioning viewpoint. Customer capital growth is dependent on both human- and structural capital, but accumulates and reflects unique value in the form of brand value, customer and other stakeholder relationships.
- The value of the intellectual capital of a firm is dependent on the available innovation capacity. Access to intellectual capital (owned and non-owned) increases the innovation potential of a firm, but is dependent on the image of the enterprise. Organisational image is informed by the financial performance of the firm and the reputation of leadership (see figure 5).
- The main drivers of intellectual capital from a strategic perspective are:

- A positive organisational image.
 - Clarity on the core capabilities a firm needs to achieve its strategic intent.
 - A knowledge management capacity to enable knowledge flows related to human-, structural-, customer- and financial capital.
 - Innovation capacities supported by a performance culture and innovation structural capital in the form of a robust innovation funnel and process to extract and capture innovative ideas.
- Capabilities are organisational resources, practices and routines that are utilised in business processes to create value-added outputs for the business. Core capabilities represent strategically valuable tangible and intangible resources the business requires to achieve differentiation and competitive prosperity. The more a firm can combine these core capabilities in a value chain, the less imitable the products and services and the higher the differentiated strategic positioning and competitiveness of the company.
 - Organisations can enlarge their strategic and operational understanding of core capabilities when they describe it from an Intellectual Capital perspective. This implies that the firm's core capabilities are described to reflect the appropriate human-, structural- and customer capital indicators. These intellectual capital indicators are future-orientated benchmarks per core capability of what will be visible over time if there is an increase in the value of the intellectual capital. This enables the measurement of change in the value of intellectual capital over time through the application of a consistent intellectual capital taxonomy.
 - The Strategic Architecture of the firm influences the development of a position on the required core capabilities and intellectual capital indicators per capability. This means that the Strategic Architecture of a firm needs to be available as an input to the process to develop core capabilities from an intellectual capital view. A Dynamic Capability-Based strategy approach informs the firm's Strategic Architecture.
 - The development of core capabilities by applying an intellectual paradigm is a long-term strategic process. A change management process is required to facilitate this journey in a firm.

- The growth of intellectual capital through core capabilities is dependent on the unique virtuous interaction of all the key components (Intellectual Capital Framework, Strategic Architecture, organisational Core Capability Framework, Operationalisation Framework and change enablement processes) of the theoretical model (figure 2).

Summary

In this article a conceptual model for the development of organisational core capabilities from an intellectual capital perspective has been described. An action research process was deployed to guide the emergence of the content of the model. The model consists of five key constructs:

- Intellectual Capital Framework.
- Strategic Architecture.
- Organisational Core Capability Framework.
- Operationalisation Framework.
- Change enablement processes.

The relationships between the constructs of the theory, key assumptions, boundaries and propositions of the conceptual model were described.

Table1: 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"> • Training and education • Knowledge management and knowledge transfer • Innovation management • Organisation design • Organisational development • Customer and supplier relationships • Culture and organisational values 	<ul style="list-style-type: none"> • Creation of codified knowledge by the firm's human capital • Establish valuations, decision processes, databases, screening and culling conversion mechanisms and asset management systems and capabilities • Intellectual assets • Intellectual property
Conceptual underpinnings	<ul style="list-style-type: none"> • Psychology • Education • Sociology • Religion 	<ul style="list-style-type: none"> • Economics • Finance • Law • Strategy

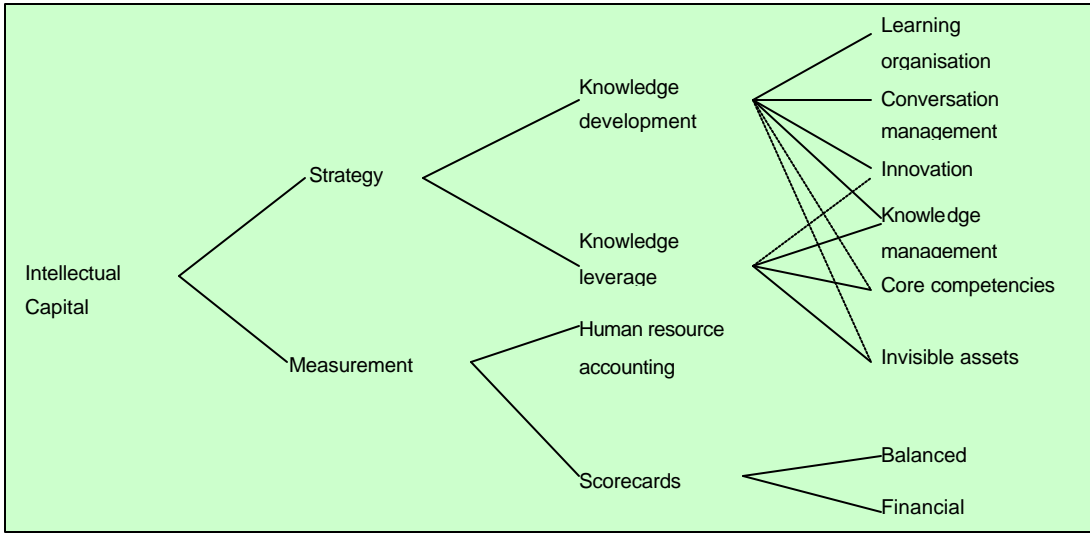


Figure1: Conceptual roots of Intellectual Capital (Roos et al., 1997).



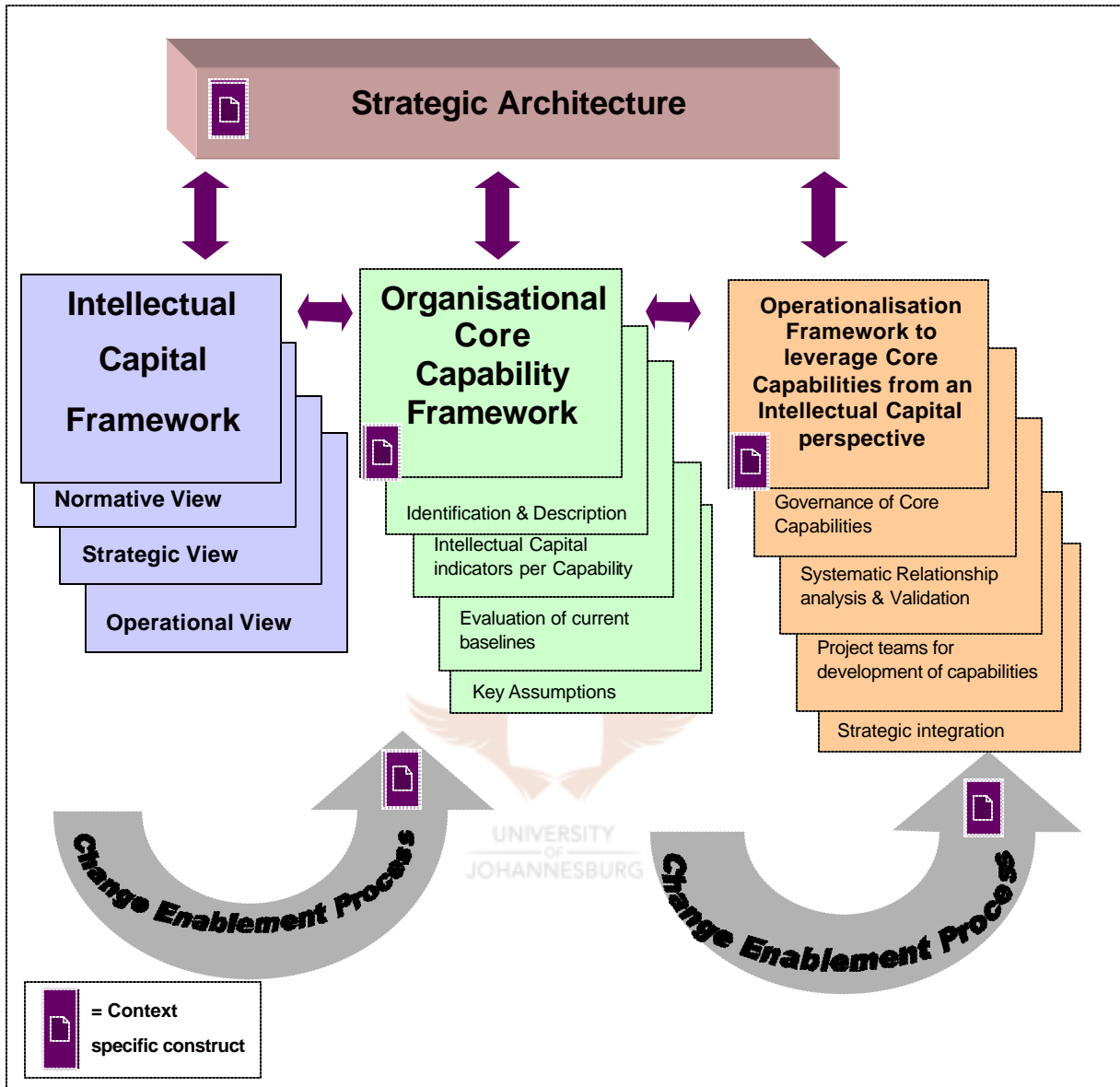


Figure 2: Conceptual Model for the Development of Core Capabilities from an Intellectual Capital perspective.

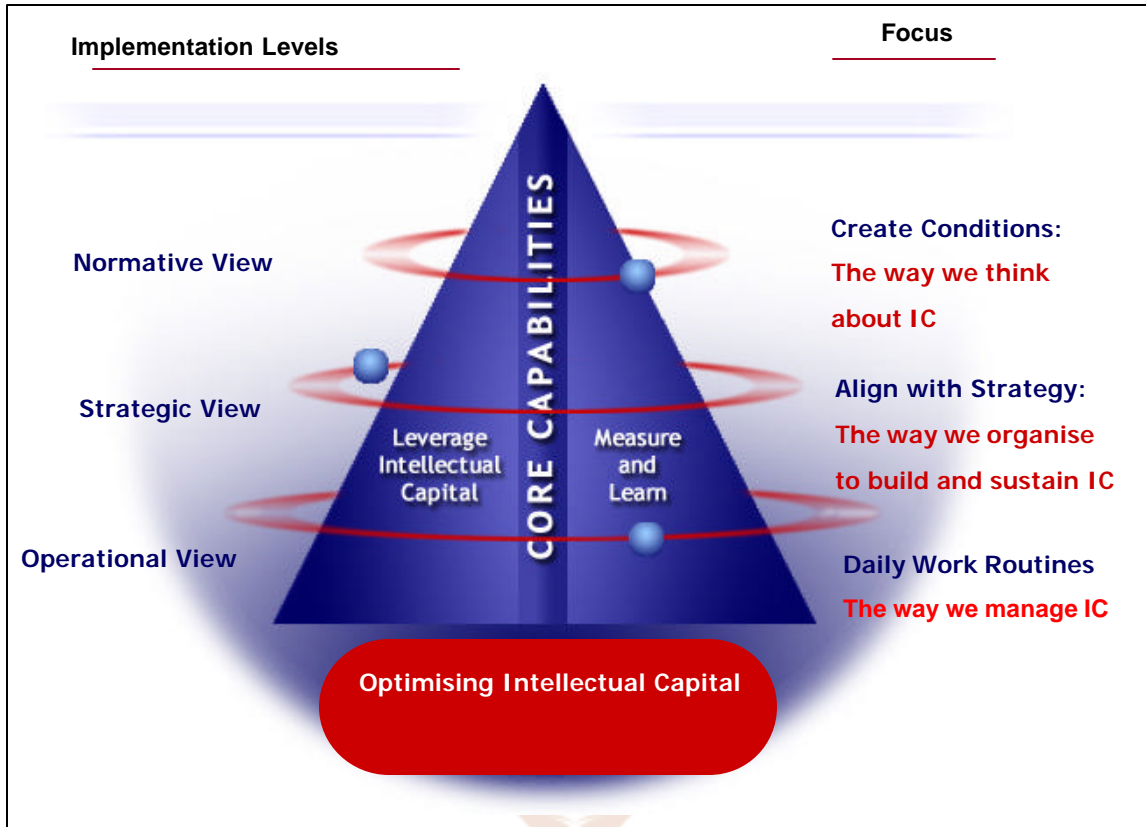


Figure 3: Intellectual Capital Framework as part of the Conceptual Model.

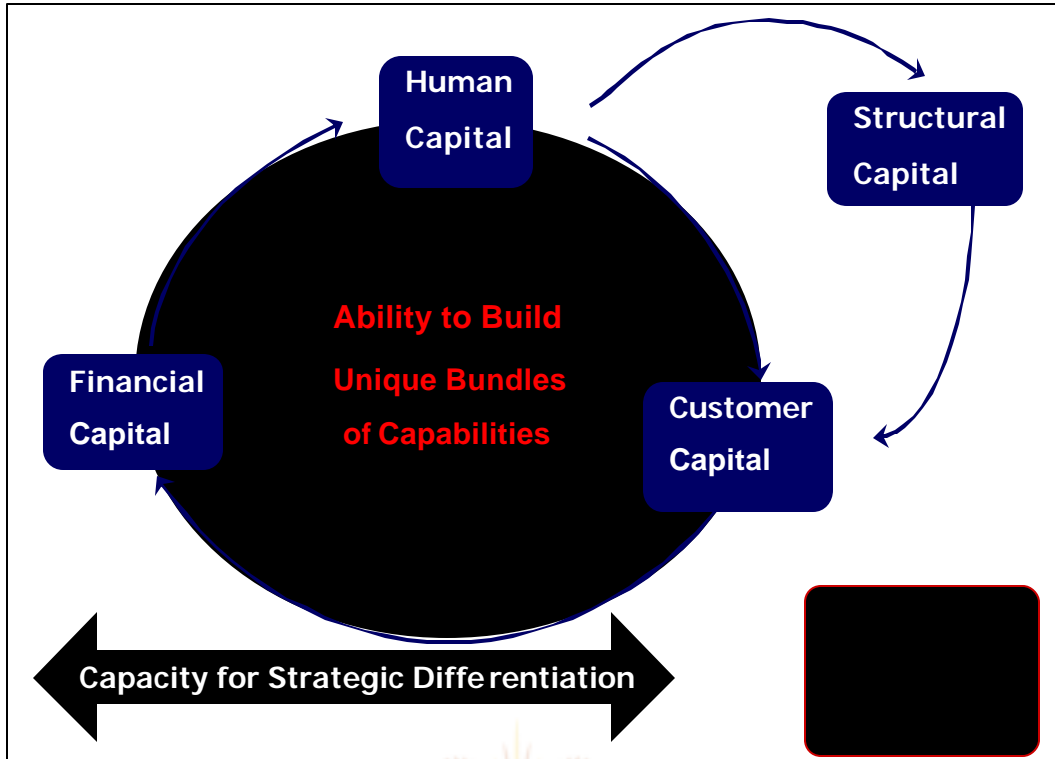
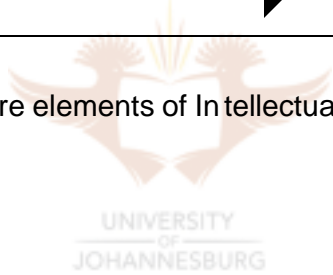


Figure 4: Systemic View of core elements of Intellectual Capital.



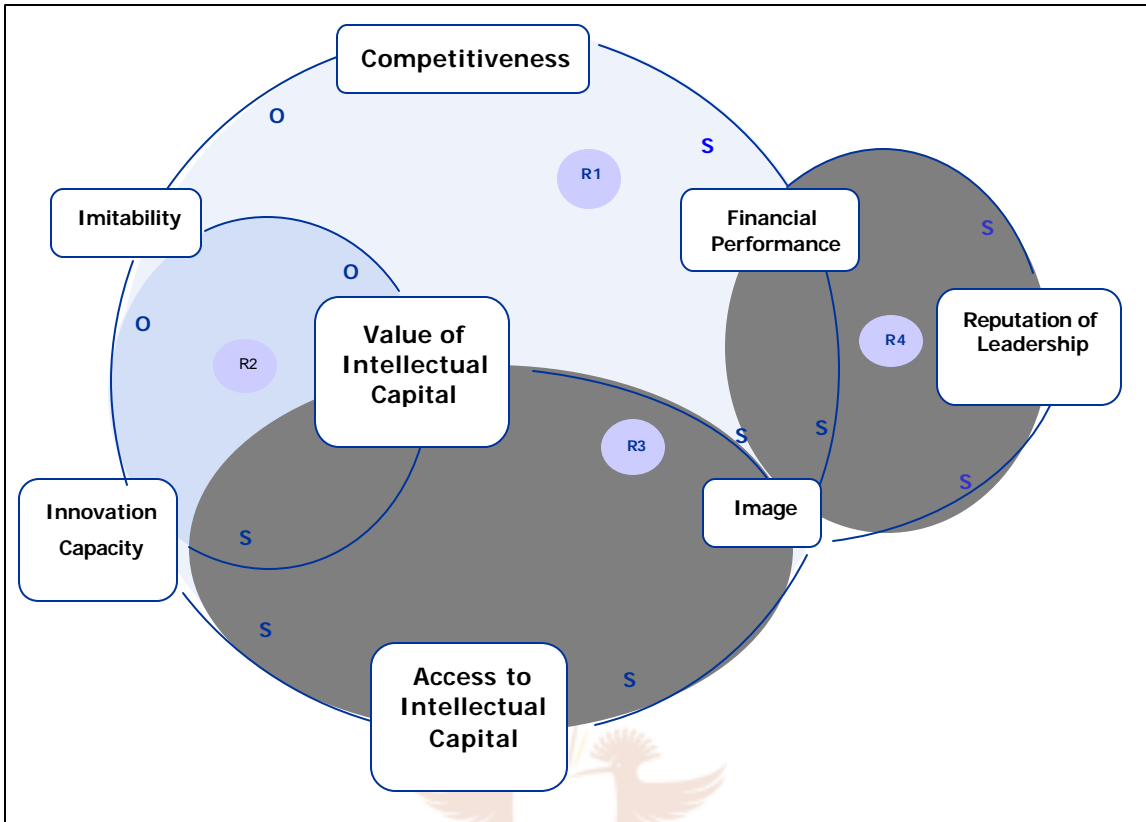


Figure 5: The Business Case for Intellectual Capital.

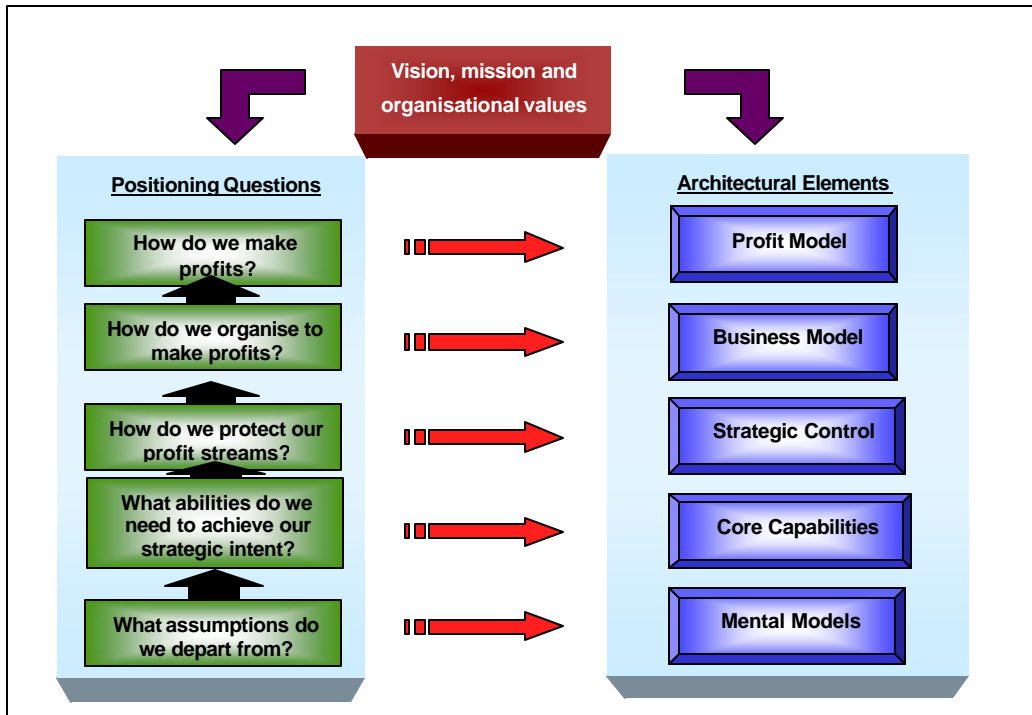


Figure 6: Core elements of a Strategic Architecture



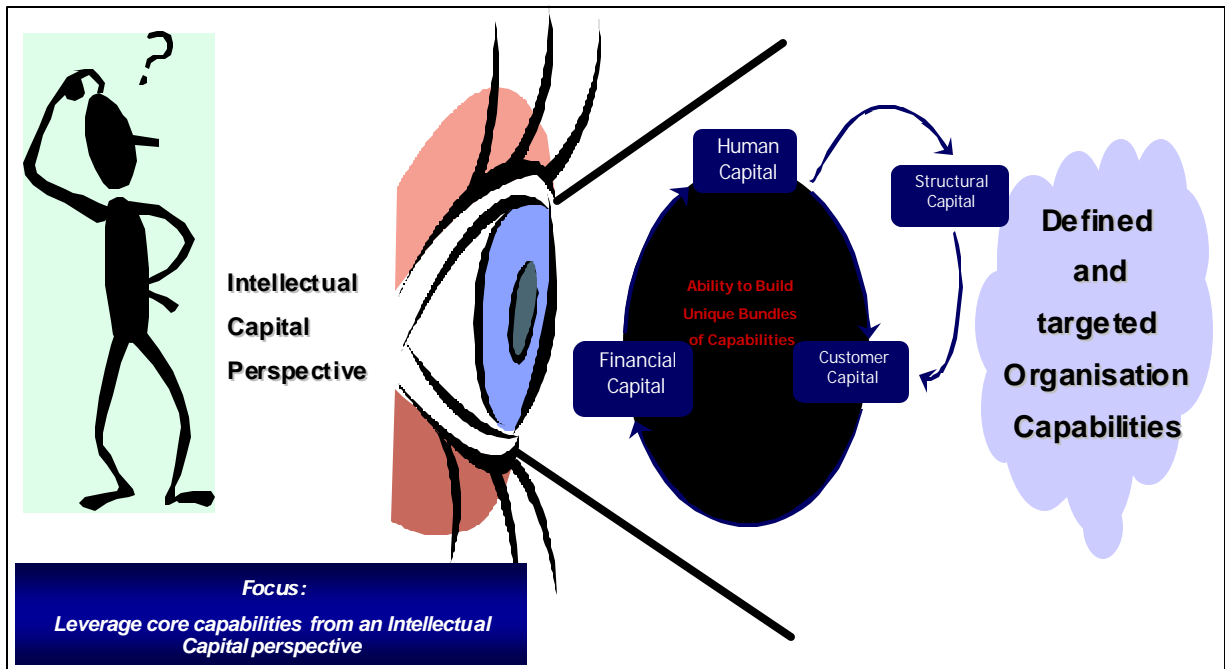


Figure 7: A View on Leveraging Core Capabilities from an Intellectual Capital perspective.



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