PRINCIPLES AND STRATEGIES FOR THE EFFECTIVE MANAGEMENT OF KNOWLEDGE

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ABSTRACT

In the latter part of the nineties, Davenport (1998) emphasised that although many companies were beginning to feel that knowledge was their most valued asset, only a few had actively begun to manage knowledge efficiently and effectively, especially on a daily basis. One can contend that this statement by Davenport is still applicable today. Companies are still struggling to get to grips with knowledge management. Fortunately, since Davenport made this statement, a lot of work has been done on knowledge management. This article builds on the work of authors such as Zack, Davenport, Earl, Snyman and Kruger and others, and argues that not only should knowledge be governed by strategy before detailed knowledge management plans can be made, but more importantly that sound knowledge management practice should be based on predetermined principles and strategies. Arguing from this perspective, this article not only emphasises the strategic link between knowledge management and strategy, but also focuses on determining whether or not there are any principles and strategies available that operate from a knowledge management perspective, to guide strategists in their efforts to manage knowledge effectively.

1. Introduction

Even though knowledge means different things to different people, knowledgeable reasoning continues to play a crucial and enabling role in the formulation of winning strategies. In this context Zack (1999) argues that the ability to exploit intangible assets should become far more decisive than the ability to invest and manage physical assets. In agreement with this, Laudon and Laudon (2004:315) claim that: 'knowledge assets are as important for competitive advantage and survival, if not more important, than physical and financial assets'. While it is easy to state that knowledge must be incorporated into strategy, according to Davenport (1998), Earl (2001) and von Krogh, Nonaka and Aben. (2001), it is not obvious how this should be done, or even how this resource should be managed. As an example, Earl (2001) maintains that although organisations accept that knowledge can enhance performance, they often do not know where to start to manage knowledge. In agreement with that opinion, von Krogh et al. (2001), contend that although strategic managers know perfectly well how to manage tangible assets, they battle to analyse knowledge and allocate resources according to knowledge activities. Earl (2001) is therefore of the opinion that the difficulty of managing knowledge can be attributed to the fact that, as in the case of knowledge itself, knowledge management is extremely difficult to define. Darroch and McNaughton (2002) attribute this phenomenon to managers not agreeing on what knowledge management really entails and/or to the complex nature of knowledge. Darroch and McNaughton (2002:11) therefore stress that: 'until a definition (for knowledge and knowledge management) is widely accepted, measuring knowledge management and identifying its effects on outcomes such as innovation and a firm's performance will be hard to determine'.

However, whatever the turmoil, owing to the strategic significance of knowledge, the exponential need to find and improve on ways to create, locate, manage and ensure that the power of knowledge is leveraged and shared throughout the organisation, is not the only challenge that strategists must confront. There is also an increased responsibility to bring good governance and accountability to the management of knowledge.

The aim of this article is therefore to determine whether or not there are any principles and strategies available in literature, from a knowledge management perspective, to guide strategists in the quest to manage knowledge effectively. In order to supply a strategic perspective on the line of reasoning followed throughout this article, all issues discussed, will be meticulously brought into relation with business strategy formulation. Special emphasis will be placed on

- defining knowledge management
- conceptualising knowledge management as regard to strategy formulation

- identifying and describing principles involved in knowledge management
- identifying and defining strategies to govern knowledge management.

The main thrust of this article will not only be to identify principles and strategies that are pertinent to the effective management of knowledge, but also to relate these entities to one another, thus to determine whether or not there is a chronological sequence of events that must take place if knowledge management is to be institutionalised successfully.

2. Methodology

In order to identify principles and strategies that are pertinent to the effective management of knowledge, a qualitative research approach was followed. Relevant literature was studied and analysed with the intention not only to identify nuggets of gold that need to be addressed in the quest to manage knowledge effectively, but also specifically to identifying whether or not there is a chronological sequence to the institutionalisation of such entities.

The line of reasoning followed throughout the article will be that, although no single approach could cover all the essential aspects involved, certain principles and strategies are of such importance and of such a holistic nature, that they can be considered critical to the establishment of knowledge management and a knowledge management culture in most organisations. It should be noted that it is not the authors' intention to propose that these principles and strategies are all-inclusive, nor of such a holistic nature that they will hold true in all circumstances and scenarios. Owing to differences in organisational profiles and competitive environments, these entities should be seen as a baseline, one that still needs to be scrutinised and adapted to suit the specific needs of the organisation.

3. Definition of Knowledge Management

Quoting the words of Roffe (1999:224): 'Knowing the strengths and weaknesses of a particular management tool is one challenge, but its practical application inevitably involves another, in the shape of change of one form or another. Such change in turn creates a new set of problems that too often seem unique to the individual, the department, or the organisation. In reality, someone else has already solved the problem and the real complications are in finding, and then gaining access, to the solution'. This dilemma has spawned yet another tool: knowledge management. Knowledge management is thus a managerial tool and, according to Zack (1999:125), 'the primary focus of these efforts (in knowledge management) has been on developing new

applications of information technology to support the digital capture, storage, retrieval and distribution of an organisation's explicitly documented knowledge'. In elaborating on this argument, Zack (1999) stresses that only a small number of organisations are even attempting to managing tacit knowledge.[1]

Using descriptive and inductive research, Earl (2001), in analysing the classification and typology of 'schools' of knowledge management, differs somewhat from Zack (1999), coming to the conclusion that knowledge management is not just another information technology (IT) application. Possibly this is due to the explosion in efforts to manage tacit knowledge, in particular, since 1999. Earl (2001:218) argues that: 'knowledge management endeavours are (for now) concerned with both explicit and tacit knowledge and both internal and external knowledge' going on to say (perhaps referring back to Zack's earlier proposition) that 'some also encompass what some may see as information systems'. Ndlela and du Toit (2001), possibly taking cognisance of the shift in emphasis with regard to knowledge management, argue that in managing knowledge, a holistic and integrated approach should be followed. In a similar fashion, in providing a more holistic view of knowledge management, Darroch and McNaughton (2001:211) contend that: 'Knowledge management is the management function that creates or locates knowledge, manages the flow of knowledge within the organisation and ensures that the knowledge is used effectively and efficiently for the long-term benefit of the organisation.' In agreement with this, Laudon and Laudon (2004:315) argue that knowledge management increases the ability of organisations to learn both externally as well as internally, and define knowledge management as: 'the set of processes developed in an organisation to create, gather, store, transfer and apply knowledge'.

In essence, what all these authors are saying is that knowledge management is becoming more than the processes that drive it, more than the technology that institutionalises it, more than the people who govern it. Knowledge management is becoming the custodian of the evolution of organisational learning. To emphasise this shift from knowledge management being primarily vested in information and communication technology (ICT) management to knowledge management being a managerial entity in its own right, we need to return to a statement made by Henczel in the year 2000. According to her (2000:210), 'the challenge for today's information professional is to identify the information that is needed to optimize the achievement of organisational objectives, who it is needed by, how it will be used, its sources and how it flows through the organisation and between the organisation and its external environment'. No more than four years down the road, Henczel's statement can easily be amended to read: 'the challenge for today's *professional* (all professionals) is to identify the *knowledge* that is needed to optimize the achievement of organisational objectives, who it is

needed by, how it will be used, its sources and how it flows through the organisation and between the organisation and its external environment'. Arguably, this statement is more appropriate today than it was in 2000, primarily because of the realisation that it is knowledge and not IT that drives business strategy.

4.   Knowledge management in relation to business strategy

Further illustrating the above-mentioned point, Zack (1999), in researching the knowledge management practice of more than 25 firms with regard to which knowledge management efforts are appropriate and what knowledge should be managed and developed, came to the conclusion that it is knowledge as a resource, and not ICT, that drives strategy. In a similar manner, Tiwana (2000) started to challenge claims made by IT prophets and practitioners, and proposed that it is knowledge and not IT that drives strategy.[2] Zack (1999:126), however, stresses that even though knowledge drives strategy, 'the most important context for guiding knowledge management is the firm's strategy'. Of interest is the fact that Zack (2001) later revisited this statement, writing that 'a firm's business strategy should reflect the role of knowledge in helping the firm to compete,' going on to say 'once the role between strategy and knowledge is defined, then other aspects of strategic management such as resources allocation, organisation design, product development and market segmentation can be configured to bolster knowledge strengths, reduce knowledge weaknesses, etc.' In essence this revised statement by Zack (2001) emphasises that in their effort to formulate winning strategies, strategists should not only take note of the enabling role knowledge plays in strategy formulation, but should also acknowledge the filtering role that strategy plays in the allocation of resources needed to manage knowledge effectively. It is our belief that it is this interdependency between knowledge and strategy, and strategy and knowledge management that is the cornerstone on which all knowledge management endeavours should rest. In agreement with this, Snyman and Kruger (2004:17) maintain that: 'The successful management of an organisation's resources in the next century will thus be determined to a greater extent by the organisation's ability to combine knowledge management with a thorough understanding of principles involved in business strategy formulation to guide the development of information resources for the firm. Only when combined with direction setting (setting a vision, architecture and a technology plan) and excellent management of the intellectual assets, can an organisation perform most effectively.'

In analysing all the different perspectives with regard to strategy formulation from a business point of view, as well as a knowledge management point of

view, Snyman and Kruger (2004), came to the conclusion that business strategies and knowledge management strategies should feed upon each other and need to work interdependently. This statement echoes the line of reasoning followed by authors such as Bater (1999), and Zack (1999). As an example, Bater (1999:38), states that: 'a knowledge management strategy needs to ensure that the destination is consistent with corporate ambitions, that the techniques, technologies, resources, roles, skills, culture etc. are aligned with, i.e. *support,* business objectives'. Unfortunately, according to Zack (1999), even if the link between knowledge management and strategy is widely acknowledged, it is for the most part still being ignored by business. Possibly (as argued earlier), this could be due to the complexity of knowledge and knowledge management. In a similar fashion, Laudon and Laudon (2004) emphasise that there is as yet no solution to the problem of integrating knowledge management and strategy. They maintain that this is possibly due to the difficulty of managing and aligning processes and interactions between information technology and social elements in organisations.

5.   Principles of Knowledge Management

If this interdependency between knowledge and strategy, and strategy and knowledge management is the cornerstone on which all knowledge management endeavours rest, how then, and where, do we start with a knowledge management programme? Arguably, if knowledge drives strategy, and strategy drives knowledge management, then in order to launch any knowledge management programme, we need to return to a point before knowledge management. We need to return to strategy and specifically to what gives strategy governance.

According to Pearce and Robinson (2000), policy bestows governance on strategy, and policy is seen as being nothing more than guidelines on how to manage strategic issues, principles pertinent and/or non-negotiable with regard to strategy formulation. Arguably, knowledge management being dependent on strategy dictates that we could follow the same methodology. Therefore, before embarking on programmes to manage knowledge, we should first determine what the critical principles surrounding knowledge management are, and in identifying these principles, decide on the playing field within which we are going to practise knowledge management. Analogous to this proposition, Davenport (1998), in contemplating the value knowledge management adds to an organisation, proposed that companies should refrain from embarking on detailed knowledge management tactics, and as a point of departure should rather focus on high-level knowledge management principles. 'When an organisation decides what principles (issues) it agrees upon with regard to knowledge management, it can then

create detailed approaches and plans based upon these principles' (Davenport 1998). It would seem that, for organisations starting to embark on knowledge management ventures, this proposition by Davenport is still of great significance.

What is being proposed by Davenport (1998) is that before trying to institutionalise knowledge management practice, or even before trying to relate knowledge management to business strategy, organisations should, as a point of departure, ensure that the following are in place:

- There must be a conscious decision to invest in knowledge management.
- It must be agreed upon that knowledge management must be an efficient and effective process; all endeavours in knowledge management must lead to growth and profitability.
- In must be accepted that there is going to be a need for hybrid knowledge management environments technology and people.
- High-ranking knowledge champions, people who know the organisation's politics should be identified.
- A working knowledge management function with a high-ranking officer leading this function should be established.
- There must be a conscious decision that only knowledge that is of strategic value will be mapped.
- A knowledge dictionary with the ability to link technical terms to terms used by knowledge requesters should be developed.
- A conscious decision to judge people according to their ability to share knowledge should be taken.
- A decision to improve knowledge work processes constantly should be made.
- There must be a conscious drive to get all employees involved in knowledge-sharing exercises.
- The focus of knowledge management should be on quality, not quantity.
- There should be a knowledge contract between the company and the employees

In contrast to Davenport, Mitre (cited by Taylor Small & Tatalias 2000), view knowledge management from a two-dimensional perspective. According to Mitre, the first dimension consists of knowledge exchange, knowledge capture, knowledge reuse and knowledge internalisation, for example activities critical to the creation of knowledge. However, Mitre is of the opinion that this dimension is built on a second, higher-order dimension, consisting of elements that enable or influence knowledge creation activities. According to Mitre, these elements include

- *strategy:* the alignment of corporate and knowledge management strategies.

- *measurement:* the measures and metrics captured to determine whether knowledge management improvement is occurring or if a benefit is being derived.
- *content:* the corporate knowledge base that is captured electronically.
- *process:* the processes that knowledge workers use to achieve the organisation's mission and goals.
- *technology:* the information technology that facilitates the identification, creation and diffusion of knowledge among organisational elements within and across enterprises, for instance an enterprise portal.
- *culture:* the environment and context in which knowledge management processes must occur (Taylor Small & Tatalias 2000:2).

Mitre (cited by Taylor Small & Tatalias 2000) also argues that there should be well-defined policy or guidelines that set the playing field for the institutionalisation of knowledge management.

Although at a much higher conceptual level than the principles proposed by Davenport (1998) and elements proposed by Mitre (cited by Taylor Small & Tatalias 2000), all address fundamental knowledge management ideas (principles).

Earl (2001), drawing on both descriptive and inductive research, in proposing a typology of different 'schools' of knowledge management, in a sense also address fundamental knowledge management principles.[3] According to Earl (2001), technocratic schools address the idea (principle) that specialist knowledge should be validated, mapped, captured, codified, controlled and updated in knowledge bases. Earl, like Davenport (1998), is of the opinion that without ICT, these schools would not be feasible. In order to facilitate the dissemination of knowledge, Earl also proposes the use of knowledge dictionaries. Furthermore, in agreement with Davenport (1998), Earl feels that a prerequisite for the success of these schools, is the ability and willingness to reward contributions to knowledge bases, as well as a continuous drive to improve knowledge processes. In contrast to technocratic schools, Earl (2001) argues that economic schools place more emphasis on exploitation of knowledge and less on exploration of knowledge. According to Earl (1998), the emphasis in these schools is placed on protecting and exploiting knowledge assets to produce return on investments. Earl (1998) is therefore of the opinion that the ability to aggressively manage the property value of knowledge, and the ability to manage intellectual assets as routine processes can be seen as success factors in these schools.

In contrast to technocratic and economic schools, Earl (2001:218–229) argues that behavioural schools promote the breaking down of knowledge barriers, and he emphasises that connectivity between knowledge workers should be

increased, thus advocating the bundling of groups of people with common interests, problems and expertise (in organisational structures and networks), with a common goal to share knowledge. According to Earl (2001), a subsection of the behavioural school (the strategic school) is essentially concerned with raising consciousness about the value of knowledge as a strategic resource, and considers knowledge management to be the essence of competitive strategy. However, Earl (2001:216) stresses that: 'no claims are made that any school outperforms others'. Viewed holistically, what Earl (2001) proposes is similar to the propositions made by Davenport and Mitre. For example, in order to manage knowledge in an effective and efficient manner, attention needs to be devoted to certain principles found to be pertinent to the efficient and effective management of knowledge.

In agreement with this line of thought, Gartner (cited by Logan 2001) emphasises that certain factors are prerequisites for the successful implementation of knowledge management processes. According to Gartner (cited in Logan 2001:2), before attempting to embark on a knowledge management program, cognisance should be taken of the following:

- 'Knowledge management must be linked to the strategic direction of the organisation.
- Knowledge management requires an organisational culture and discipline that promotes and supports knowledge sharing, collaboration across and among employees/business units, and a drive toward innovation.
- Knowledge management must be enabled by robust business and human processes.
- Knowledge management depends on a compelling technology environment to automate the processes and to support collaboration and the knowledge management discipline.
- Knowledge management requires an extended-enterprise scale and scope of processes, people and content; additionally, this expanded-enterprise view must support both formal and informal relationships.'

To sum up, as far as their fields of study overlap, the principles proposed by Davenport, the elements proposed by Mitre, the 'schools' proposed by Earl, and the success factors proposed by Gartner address the same issues and concerns.[4] What these authors are trying to emphasise is that before any endeavours in knowledge management can commence, organisations should not only explicitly state that knowledge is of strategic importance, but more importantly there should first be a conscious drive to establish a culture conducive to knowledge management in the organisation. The line of reasoning also corresponds to an argument put forward by Ndlela and du Toit (2001:152). These authors maintain that 'people are the key component of knowledge management; hence the type of culture existing in the enterprise is

crucial to the success of knowledge management'. In essence, by deciding on and addressing these principles, organisations will be presented with an organisational environment conducive to nurturing knowledge. Ndlela and du Toit (2001), however, warn that establishing a knowledge-friendly culture will be extremely difficult to achieve. How then do organisations set about institutionalising such a culture?

Von Krogh et al. (2001), using Unilever as a case study,[5] maintain that in order to make any knowledge management endeavour succeed, top management must, as a point of departure, concede that the management and development of knowledge and creativity is of strategic importance, that is, set the stage for the formulation of a knowledge vision. Snyman and Kruger (2004), in relating the knowledge vision to knowledge principles, give this notion even more clarity when they argue that certain principles not only form the basis for developing an organisational knowledge vision, but in order to encapsulate these principles (to institutionalise a knowledge culture), organisations should embark on the formulation of a knowledge policy. According to these authors, this policy should consist of high-order guidelines (principles) on how the organisation is going to capture, access, reuse, qualify, account for, exchange, secure and protect knowledge resources, as well as address issues concerning confidentiality, privacy, cost and value, ownership/ intellectual property, and misuse of information and knowledge.

In agreement with the notion of Pearce and Robinson (2000) that policy should govern strategy, Snyman and Kruger (2004) argue that the knowledge policy should be non-negotiable in terms of objectives, targets and actions (for achieving knowledge excellence), and as such should provide governance not only in the formulation of knowledge management strategies, but also as regards the business strategy. Arguably, all these notions relate to the proposition that before embarking on programs to manage knowledge, organisations should first determine what the critical principles surrounding knowledge management are, and in identifying these principles, formulate policy to guide and govern the institutionalisation of knowledge management (refer to Figure 1).

Even though the idea of relating knowledge to the organisation's vision (i.e., to create a knowledge vision), might be a step in the right direction, and even if policies are put in place to assist in the management of knowledge, arguable, deciding on principles alone cannot in itself guarantee that knowledge will lead to organisational growth and profitability. Authors such as Davenport (1998); Zack (1999); Mitre (cited by Taylor Small & Tatalias 2000); Gartner (cited by Logan 2001); and Snyman and Kruger (2004) all argue that for knowledge to have real value, it must also be brought into relation with where the company is headed in future, that is, the future vision
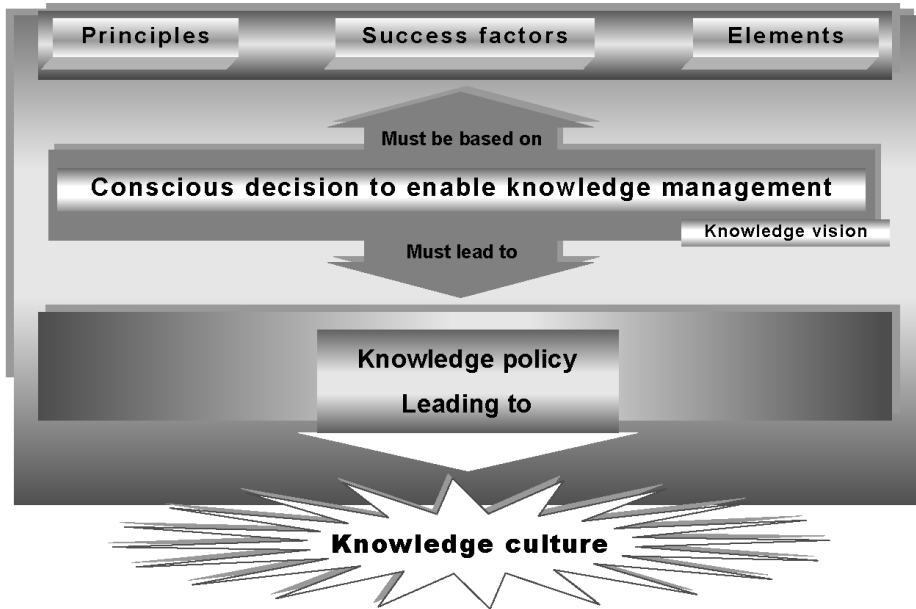
of the company. This statement is in agreement with an earlier proposition by Manville and Foote (1996) to the effect that knowledge-based strategies begin with strategy and not knowledge.[6] 'If a company does not have fundamentals (strategic guidelines) in place, all the corporate learning, information technology, knowledge databases will be of no use. A company needs to know the kind of value it intends to provide and to whom.' What Manville and Foote (1996) propose is similar to the proposition that knowledge management should be governed (or filtered) by strategy before detailed knowledge management plans can be made. To clarify this point: what has been proposed thus far is that the knowledge vision and knowledge policy should be derived from knowledge principles (elements, success factors) found to be pertinent to the effective management of knowledge. If these principles are identified and addressed in an effective and efficient manner, it is our opinion that it will be possible to establish a culture conducive to knowledge management within the organisation. Stated differently, it will set the stage for the successful institutionalisation of knowledge management. However, as argued, for knowledge management to be successful these principles must be institutionalised in an effective and efficient manner. Organisations therefore need to prioritise principles, possibly first addressing

those principles that have the biggest and fastest impact on establishing a knowledge culture, and/or addressing issues that can answer strategic knowledge requirements, as a first priority. Cognisance should be taken of the fact that the knowledge vision and policy by no means determine or even focus on the incision points (within the organisation) where knowledge is specifically needed. In order to achieve this, knowledge principles must be aligned with the specific knowledge requirements of the organisation. Arguably, this resides within strategy formulation. Of interest is the fact that Mitre (cited by Taylor Small & Tatalias 2000), Earl (2001) and Gartner (cited by Logan 2001) all identified the alignment of corporate and knowledge management strategies as the number one success factor (principle) in all knowledge management endeavours. Quoting the words of Tiwana (2000:103) 'Knowledge drives strategy, and strategy drives knowledge management. Without a clearly articulated link between knowledge management and business strategy, even the world's best knowledge management system will deliver zilch.' As argued earlier, after deciding upon knowledge principles, and after setting policy in place to assist in addressing these principles, in order to provide guidance with regard to prioritising, deciding upon, and taking action to institutionalise these principles, organisations need to return to the strategic management process.

6. Strategies to govern efficient and effective knowledge management

In agreement with the above-mentioned statement, Zack (2001) maintains that the conscious and continuous drive towards establishing a knowledge culture should culminate (as a point of departure) in the formulation of strategy oriented toward understanding what strategic knowledge is, and why it is strategic.

Zack (1999), in explaining the link between strategy and knowledge, contends that a strengths, weaknesses, opportunity and threat (SWOT) analysis can provide a basis for describing a knowledge strategy. He argues that a firm must first draw a synthesis between what it is actually doing (and what it is capable of doing), and compare this with what must be done in order to remain competitive. In a similar manner, Earl (2001) argues that a grounded way of discovering where knowledge management initiatives must be aimed is to analyse performance gaps in the business. Snyman and Kruger (2004), building on the work of the authors mentioned above, are therefore of the opinion that in institutionalising knowledge management emphasis should be placed on determining the quantity and the quality of knowledge resources, both implicit and explicit, and also the strengths and weaknesses of the organisation's knowledge management and knowledge management structure.

According to Snyman and Kruger (2004), this constitutes a knowledge audit, and if this audit is conducted in an effective and efficient manner, it should provide strategists with a clear picture of the 'As Is' knowledge profile of the organisation. Analogous to the earlier proposition by Zack (1999) and Earl (2001), that firms need to compare their actual knowledge with the knowledge required to execute their intended business strategies, Snyman and Kruger (2004) propose that after assessment of the 'As Is' (knowledge) profile, strategists need to determine whether or not this profile is adequate to ensure the achievement of the organisation's primary goals and strategies[7]. Zack (1999), Earl (2001) and Snyman and Kruger (2004), all feel that this type of analysis will reveal strategic knowledge gaps and set the stage for the development of a knowledge strategy (refer to Figure 2).
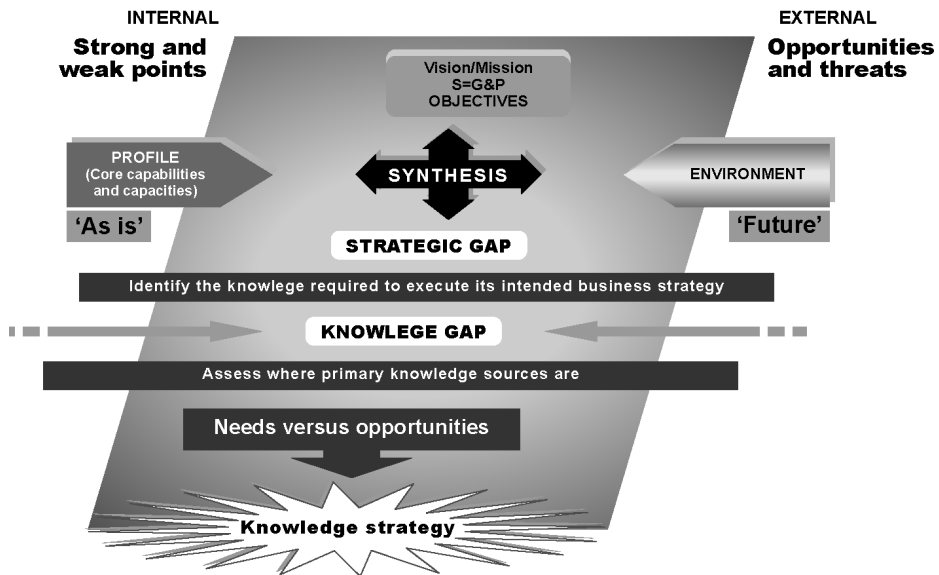

FIGURE 2 ────────────────────────────────

Formulation of a knowledge strategy
Source: Adapted from Zach (1999), Bater (1999),
Snyman and Kruger (2004)

In order to formulate such a strategy, Zack (1999) maintains that strategists need to determine whether primary sources of knowledge are internal or external to the firm. Zack is of the opinion that assessment of knowledge resources (internal and external) presents strategists with a 'need versus opportunity' scenario, or as argued previously, a knowledge gap. According to Zack (1999:135), 'together these characteristics help a firm describe and evaluate its current and desired knowledge strategy'. The line of reasoning

followed by Zack (1999), and Snyman and Kruger (2004), is similar to a proposition by Henczel (2000). Henczel (2000) proposes that three audits are needed to move an organisation from information management to knowledge management,[8] and argues that the first step in developing a knowledge management strategy is to identify where knowledge exists and where it is needed to support decisions and actions.

6.1 A WORD OF CAUTION

Zack (2001) warns that knowledge strategy should not be confused with knowledge management strategies. According to Zack (2001), assessing where knowledge sources are situated; what constitutes an organisation's knowledge resources; what knowledge is strategically needed; and what opportunities knowledge represents, implies a notion of knowledge-based strategy, that is competitive business strategy built around a firm's intellectual resources and capabilities (formulating strategy based on available knowledge). In contrast to these (high-order) strategies, Zack (2001) is of the opinion that knowledge management strategies define the processes and infrastructure for knowledge management, that is, strategies to further aid in the institutionalisation of knowledgde management principles. For example, 'Once a firm identifies opportunities, threats, strengths and weaknesses related to its intellectual resources and capabilities, then actions it may take to manage gaps or surpluses (e.g. recruiting for particular skills, building online documentary repositories, establishing communities of practice, acquiring firms, licensing technologies, etc) are guided by knowledge management strategies' (Zack 2001).

In order to bridge the strategic knowledge gap, Zack (1999) argues that strategists can either increase knowledge in a particular area, or leverage existing but under-exploited knowledge resources. Earl (2001) argues that the line of reasoning followed by Zack in formulating a knowledge strategy, unfortunately only addresses the exploring of knowledge to support business strategy. Earl proposes that once performance gaps and knowledge opportunities have been identified, a realistic conceptualisation emerges, enabling strategists to formulate a 'new knowledge business vision'. Earl, however, stresses that the intent of the reasoning followed by Zack (and himself), is to ensure that knowledge management initiatives are linked to business strategy i.e. strategy (via the knowledge strategy) acting as a filter in the quest to efficiently and effectively institute knowledge management principles (refer to Figure 3).

Adopting a similar approach, von Krogh et al (2001:427), building on the work of Zack, propose that 'leveraging knowledge throughout the organisation; expanding knowledge further based on existing expertise; appropriating
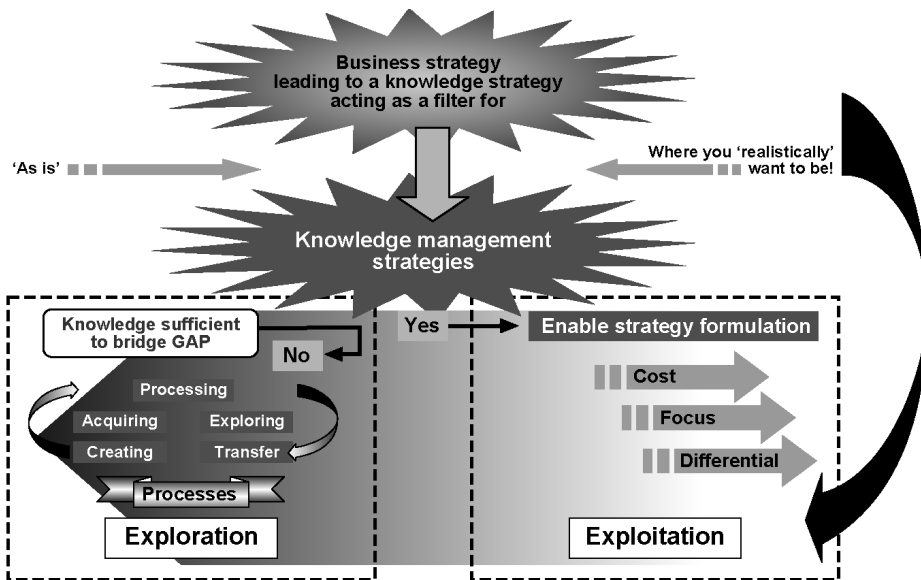
FIGURE 3 —————————————————————————————

FORMULATION OF KNOWLEDGE MANAGEMENT STRATEGIES
SOURCE: ADAPTED FROM ZACK 1999,
PEARCE AND ROBINSON (2000), VON KROGH ET AL (2001),
LADEN AND LAUDON (2004)

knowledge from partners and other organisations; and developing completely new expertise by probing new technology or markets', are all strategies that organisations can use to manage knowledge. Leveraging knowledge throughout the organisation echoes Zack's (1999) proposition about leveraging existing internal knowledge resources. Appropriating knowledge from partners and other organisations and developing completely new expertise by probing new technology or markets, relates to Zack's notion of increasing knowledge in a particular area. Analogous to these propositions, Earl (2001:230) proposes that in order to 'operationalize the knowledge strategy intent', organisations should examine possible knowledge management initiatives. These initiatives should lead to the formulation of knowledge management strategies and programme, with resources allocated to it, and plans to execute it (Earl 2001).

Of interest is the fact that Earl (2001) contends that different knowledge management initiatives relate to the different knowledge management schools. Earl also argues that the critical success factors (principles) highlighted in these different school's taxonomies (as discussed earlier), must be used as guidelines in formulating knowledge management strategies.

76

This statement by Earl is of great importance. Arguably, by emphasising that critical success factors (knowledge principals) should be used as guidelines for knowledge management strategies, Earl not only underlines the importance of identifying knowledge principles, but also clarifies the notion of a knowledge management timeline. Without doubt, knowledge principles should be known and decided upon before they can be used as guidelines for knowledge management strategies, and as argued by Zack (1999), the institutionalisation of these strategies should be governed and filtered by the knowledge strategy as deduced from the business strategy. Therefore, Earl's statement (2001) is in agreement with the line of reasoning followed thus far: that all endeavours in knowledge management should be guided by certain predetermined knowledge management principles – principles that bestow governance on knowledge management.

Read in context, what Zack, Earl and von Krogh et al. are proposing is not only ways of formulating knowledge management strategies, but in fact also a re-look at the way strategy is formulated. Not only is emphasis placed on managing knowledge within the organisation's domain, but also on the fact that knowledge should be managed even beyond the sphere of the organisation. Referring to the institutionalisation of knowledge management strategies, Zack (1999:133) maintains that: 'not only will a high level of knowledge processing be necessary, but due to the environment changing rapidly, organisations may need to create new knowledge just to remain competitive, e.g. be a knowledge explorer, creator or acquirer'. In similar vein, von Krogh et al (2001:421) propose that: 'the two core processes of knowledge creation and transfer are central to the execution of these [knowledge management] strategies, as are the company's domains of knowledge'.

As a point of clarification, determining and assessing the 'knowledge gaps' are what Bater (1998), Zack (1999), Earl (2001) and Snyman and Kruger (2004) refer to as 'knowledge strategies'. In contrast, strategies to further explore, acquire, transfer, capture, codify, share, distribute and create knowledge are managerial strategies aimed at institutionalising knowledge management principles, or stated differently, strategies to grow the organisation's knowledge culture. The strategies proposed by von Krogh et al. (2001) and the knowledge management programmes proposed by Earl (2001), are therefore similar to the knowledge management strategies proposed by Zack (1999). In order to illustrate that knowledge management strategies are in fact strategies for institutionalising knowledge management principles, let us return to an earlier statement by Mitre (cited by Taylor Small & Tatalias, 2000). Mitre is of the opinion that knowledge management can be seen from a two-dimensional point of view. According to Mitre, the first dimension consists of activities that are critical to knowledge creation, e.g.

knowledge management strategies to exchange, capture, reuse and internalise knowledge. Mitre contends that this dimension is built on a second, higher-order dimension, consisting of elements (knowledge principles) that enable or influence knowledge creation activities. In order to institutionalise these issues, Mitre proposes that organisations embark on first-dimension activities (or at a conceptual level – strategies), emphasising that knowledge management strategies are in fact the very strategies that institutionalise knowledge management principles.

Although it might seem that there is considerable disagreement on the specific terms/phrases used to identify the managerial activities needed to institutio-nalise knowledge management strategies (strategies to explore, create, acquire, transfer, capture, codify, share, distribute, etc), Laudon and Laudon (2004), argue that all these activities can be categorised as either addressing the creation of knowledge, or aimed at the processing of knowledge. However, without doubt, whatever process is followed in order to institutionalise knowledge management successfully, knowledge management strategies will need to adhere to guidelines supplied by knowledge management principles, (as encapsulated within policy), and governance supplied by business strategy (as encapsulated within a knowledge strategy).

7. Conclusion

In this article it is argued that knowledge drives strategy and strategy drives knowledge management. It is proposed that before organisations try to determine the interdependency between knowledge, knowledge management and strategy, they should first determine if there is any principles deemed to be important to the efficient and effective management of knowledge within the organisational setting. Therefore, in order to supply strategists with a holistic view of such principles, literature was analysed in a qualitative, comparative manner. It was found that insofar as their fields of study overlap, the principles proposed by Davenport, the elements proposed by Mitre, the 'schools' proposed by Earl and the success factors proposed by Gartner address the same principles and concerns. Thus, in order to set the stage for the successful institutionalisation of knowledge management, it is proposed that before organisations embark on formal knowledge management initiatives, they should as a point of departure assess and decide upon knowledge management principles, principles proven to lead to the vesting of a knowledge culture. In order to ensure uniformity in purpose in institutionalising these principles, it is proposed that not only should principles be encapsulated within policy, but also that the strategic manage-ment process (strategic requirements for knowledge leading to a knowledge strategy) be used to determining the priority of principles, i.e. strategy acting

as a filter in deciding the allocation of resources to successfully institutionalise principles.

In relating these entities to one another, it is held firm that there is a chronological sequence of events that need to take place if knowledge management is to be institutionalised successfully. A sequence of events where principles lead to policy, and policy in turn guide strategy to successfully institutionalise structure, structure to answer in the requirements set by principles.

Notes
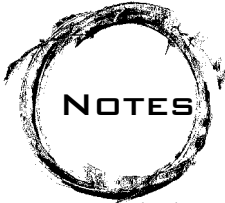
1. 'Tacit knowledge is highly personal. It is hard to formalize and, therefore, difficult to communicate to others' (Nonaka, 1998:27). 'It consists of the lessons learned by doing a job and it is made up of gathered experience and understanding' (Henczel, 2000:213).

2. It should be noted that both Zack (1999) and Tiwana (2000) are referring to knowledge as a resource, and not knowledge management as a business function, driving strategy.

3. Knowledge management classifications proposed by Earl (2001:218–229):

  * *Technocratic:* based on information and management technologies.
  * *Economic:* commercial in orientation, explicitly creating revenue streams from the exploitation of knowledge and intellectual capital.
  * *Behavioural:* stimulating and orchestrating managers and management to be proactive in the creation, sharing, and use of knowledge as a resource (Earl 2001).

4. It should be noted that this argument relates to a holistic approach, and as such the principles identified are not applicable to all organizations, under all circumstances. At best these principles supply guidelines with regard to what needs to be addressed in order to manage knowledge successfully. Even though these principles be used as a baseline, organisations still need to decide which ones are applicable (and even add new ones) taking into account their unique circumstances and environment.

5. *Unilever:* A Multinational, fast-moving consumer goods company.

6. Care should be taken not to confuse knowledge-based strategies with the organisation's knowledge strategy, or even knowledge management strategies. Knowledge-based strategies are business strategies based on knowledgeable reasoning. These strategies are governed by high-order strategy and policy. Primarily these strategies are the organisation's generic strategies (cost, focus,

differentiation), directed towards achieving the organisation's ultimate goals. Not all knowledge-based strategies are knowledge management strategies, but all knowledge management strategies should be knowledge-based strategies

7. 'In order to excel in strategy formulation, businesses should as a point of departure determine how the competitive environment of the organisation could change in future and how the organisation, through knowledgeable reasoning, could transform competitive forces in order to create a favourable future' (Snyman and Kruger, 2004:13).

8. *Needs analysis:* 'A process by which information users are asked precisely what information resources or services they need to perform their jobs. *Information audit:* 'Goes one step further in not only finding out what information resources and services people need to do their jobs, but how these information resources and services are actually used.' *Knowledge audit:* 'Is conducted to identify an organization's knowledge assets, how they are produced and by whom' (Henczel, 2000:214–215).

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