

# **Strategic Information Management**

*What, how, and why now?*

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## **Abstract**

The unprecedented access to information and increasingly complex and rapidly evolving environments organizations face today have presented a gap in literature that addresses how organizations should strategically manage information and respond to their environment to ensure competitive advantages and improved business performance. The paper introduces the concept of strategic information management to address this gap and provide researchers and managers alike with an approach that effectively incorporates and synthesise the wide range of existing perspectives and dimensions in a new and integrated manner. Through a literature review, the paper develops a conceptualisation of strategic information management that clarifies existing concepts and provides new insight. It is suggested that the main contribution involves a shift in perspective from the resource- and content-based view on information and strategy to the practice-based view, as well as a shift from the rational approach to the behavioural approach. Furthermore, the paper suggests an adjusted process model to provide a comprehensive framework that captures the key perspectives and practices of strategic information management. The paper does not provide a complete and all-embracing conceptualisation of strategic information management but takes the first steps towards a comprehensive understanding.

## **1 Introduction**

Information describes the current age (McKinney & Yoos, 2010), and organizations have unprecedented access to information from a wide range of sources. However, for organizations to benefit from the massive amounts of information available to them, they must know how to successfully manage it. Information management has therefore gained increasing recognition as a key concern for researchers and managers trying to understand and manage the new conditions they are subject to.

The task of managing information is made increasingly difficult by the constantly changing environment in which organizations operate. Choo (2002) proposes that one of the greatest challenges organizations face today is to understand how the environment is changing, which implications these changes have, and how the organization can best respond to the new conditions.

Information can be seen as both the reason behind and proposed solution to the increasingly complex and rapidly changing environment that has brought about these new conditions. At the centre of this perspective is information technology, which is seen as a key enabler and source of the information that shapes today's society and business context. The continuous development of

new innovations introduces new threats and opportunities for organizations to strategically address and manage. Even organizations operating in more traditional sectors are forced to react to the technological innovations and new sources of information to deal with competition and customers (Broady-Preston & Hayward, 1998). That means that all organizations must to some extent re-adjust their strategies in respond to the demands from the environment.

Mendelson & Pillai (1999) suggest that for organizations to succeed in dynamic, information-rich environments, they must 1) decentralise decision-making to enable quick responses to new information, 2) develop practices that promote information absorption and diffusion to ensure the availability of up-to-date, information to decision-makers, 3) develop inter-organizational networks to help control information overload by focusing on core activities and outsourcing. The authors use the term 'Information Age organization' to describe an organization that follows these suggested practices.

The Information Age organization suggests that information can lead to strategic adjustments. Promoted especially by technological advancements and the new sources of information they introduce, information is often referred to as a key strategic resource for organizations that can lead to competitive advantages and improved business performance. However, to reap the potential benefits of this strategic resource, organizations must successfully manage it. In the information age environment that characterises today's reality, information management has become a key concern for strategy and strategic management in organizations.

There has been created a link between information management and strategy and a requirement to align the two approaches. This has introduced a new domain of research that investigates the interrelation between information and strategic management.

### **1.1 Research focus**

The field of strategic management have been subject to massive amounts of research throughout the years and continues to have a key position in research and organizations alike (Mintzberg, Ahlstrand, & Lampel, 1998). Researchers continue to search for new perspectives on the key considerations in managing the success of the enterprise (Broady-Preston & Hayward, 1998).

This paper suggests a new perspective on strategic management, a concept that combines information management and its potential competitive capability with the notion of strategic

management to address the implications it has on organizational strategy. The concept is accordingly termed 'strategic information management' (SIM).

The basis for developing an approach that combines strategic and information management in a new way originates from the proposition that the existing approaches and perspectives within the field do not sufficiently address the current and future dimensions and implications information management has on organizations. There is a need for an integrated approach, an approach that encompasses the existing understandings and perspectives as well as emerging ones, and combines and incorporates them in a way that can provide new insight.

Through a literature review, this paper will outline and examine the existing contributions to the field of strategic information management, as it is understood now, and analyse these in respect to the development of a new, integrated concept of strategic information management. Fundamental assumptions, dimensions, and perspectives will be addressed, compared, and related to uncover possibilities and implications for an emerging concept of SIM.

While there is an extensive variety of research focusing on information management and its relation to the organizational strategy, there is a perceived gap in literature in regards to a coherent and holistic approach that can incorporate a wider range of perspectives and dimensions relevant in today's business context. This paper will attempt to address that gap through a new, unifying perspective on strategic information management that can provide researchers and managers with a new approach and framework that addresses the strategic issues related to information management.

## **1.2 Research question**

The purpose of this paper is to develop a conceptualisation of strategic information management by identifying and analysing its key aspects and perspectives through a literature review.

Consequently, this paper will ask and address the following questions: why is there a need for a new conceptualisation of strategic information management and what should and could such a conceptualisation entail?

The paper will investigate which disparate and insufficient tendencies there are in existing approaches to support the claim that there is a need for a unifying concept that integrates these factors and more. Furthermore, the paper will explore the ways in which the concept can provide researchers and managers with a new framework for addressing the strategic issues related to information management.

The conceptualisation that is at the centre of this paper will address what strategic information management is, how it works, and why it is relevant for researchers and organizations now.

## **2 Conceptual framework**

### **2.1 Defining strategic information management – and why it is so challenging**

Before we can venture on to understanding, analysing, discussing, yes indeed developing the concept of strategic information management, we must first and foremost define what is meant by it. This can be a tedious, albeit essential first step in research. However, it is unfortunately often neglected or at least hastened through. It is perhaps because it can be rather complicated to define the key concepts such as information and strategy, that covers several fields and have a wide purpose and application. Whatever the reason, fuzzy definitions can resolve in confusion, misunderstandings. As McKinney & Yoos (2010) put it “[...]without defining what we are talking about, we can hardly know it.” (p. 329). How can we begin to understand something, manage it, even exploit it, if we do not even know what ‘it’ is? Thus, this section is devoted to defining the key concepts of the paper.

Strategic information management is made up of three individual concepts: strategy, information, and management, which are all key defining concepts on their own. These three are comprehensive, complex, and fundamental concepts that cover several fields and are responsible for massive amounts of research in their own right. Combining these concepts to the ‘new’ concept of strategic information management cannot be done without first understanding each element’s individual meaning and what it brings to the table. I will therefore begin by defining the three concepts individually, providing the conceptual framework and foundation of the following study. I will end the section by approaching a preliminary definition for strategic information management.

### **2.2 Strategy**

Strategy is a favoured term in most organizations and amongst managers and it is used to cover a wide range of content and activities. Likewise, it is an exceptionally studied subject amongst researchers and business schools. As mentioned, strategy is a comprehensive and complex concept used in many contexts and situations, and attempts to boil down its meaning often results in fuzzy definitions.

Mintzberg (1987 in Mintzberg, Ahlstrand & Lampel, 1998) recognises the complexity of the concept of strategy and thus argues for not only one definition. He suggests no less than five definitions of strategy, i.e. five different approaches to strategy, which together constitute a comprehensive definition. The result is the five Ps for strategy. These include strategy as a plan, pattern, position, perspective, and ploy. According to the author we need all five definitions to understand the concept of strategy, as they supplement and contrast each other in various ways. Accordingly, a strategist must be able to synthesise the various perspectives. An example can be made with the two first definitions. Strategy as a plan refers to the formulation of a guide or direction, a course of action for the future. Where the planning perspective looks ahead, strategy as a pattern looks at the consistency of past behaviour and evolves patterns from this. Both definitions are needed, as they are both valid. Organizations strategize by developing plans for their future and evolving patterns out of the past. Mintzberg et al. (1998) call the first approach intended strategies and the second realised strategies. Intended strategies that are fully realised are called deliberate strategies and those that are not are called unrealised strategies. Finally, the patterns that have become realised but was never clearly intended are called emergent strategies. Strategies are rarely, if ever, purely realised or purely emergent. “*Strategies, in other words, have to form as well as be formulated*” (Mintzberg et al., 1998, p. 11). This illustrates why both definitions are needed and how they compliment each other. One single, simple definition could not fully contain and explain this interplay. By recognising that strategies can be both deliberate and emergent, Mintzberg (1987 in Mintzberg et al., 1998) challenges the view that strategies are minutely formulated and implemented without deviating from the plan.

This kind of interplay can also be found in the two next definitions, strategy as a position and perspective. Where the first focuses on looking out, the latter looks in. Position is concerned with the organization’s position in the surrounding environment, and here strategy acts as the mediating force between the two. Strategy as a perspective deals with “*the grand vision of the enterprise*” (Mintzberg et al., 1998, p. 14), how the organization perceives the world. Strategy is here the “personality” of the organization and it is carried out through the intentions and actions of the members. Both strategy as position and perspective is compatible with strategy as a plan or a pattern, like they are compatible with each other. Strategies concerning changing position must ideally be consistent with the perspective and vice versa, and changing one is difficult without not also changing or at least considering the other.



Finally there is strategy as a ploy, which is a manoeuvre intended to outwit opponents or competitors. Like the others, this final definition can also incorporate one or more of the other definitions.

By highlighting not only one but five definitions and their interactions, Mintzberg (1987 in Mintzberg et al., 1998) attempts to capture the many nuances in strategy and the act of strategizing. It is not just about a plan of action. It can take many different shapes and forms, and most importantly have overlapping approaches. Thus, a strategist must be able to understand how these compliments each other and how to synthesise them, allow them to supplement and change each other. A strategy rarely stays the same throughout its lifetime, as it must adapt to the environment and context in which it is applied.

Mintzberg's (1987 in Mintzberg et al., 1998) approach to the definition of strategy by combining five different and interacting perspectives have acted as a source of inspiration in developing a conceptualisation of strategic information management where not necessarily one single perspective may define its meaning.

### **2.3 Management**

It is difficult to discuss a topic such as strategy without discussing it in the context of strategic management. Strategic management has for many years been recognised as an academic discipline in its own right, a whole field subject to massive amounts of research (Mintzberg et al., 1998).

Defining management and the more specific term strategic management is therefore the natural next step.

Management is a wide term, a buzzword even, and it is added behind key terms in numerous fields and areas as a method to clarify that the field is also concerned with managing the concept, not just understand it.

Management refers to the organization, control, and administration of a specific concept, i.e. the process of dealing with it. The management of an organization thus has the responsibility for and control of the company, and the process of managing said company include making decisions, dealing with issues etc. Understanding management in a functional manner suggest that management contains all leadership activities that determine the organization's goals, structures, and behaviours (Winter, et al., 2001).

Strategic management refers to the process of managing, organising, controlling, and making decisions regarding strategy. The field especially focuses on the different strategies companies deploy to reach their objectives and become successful in their industries, why some strategies fail and others succeed, how strategies are implemented, and numerous other topics. Strategic management is thus concerned with the complete lifecycle of strategy, from formulation to implementation and continuous adaption, as well as strategic decision-making and so on. A wide range of contents and activities within the organization thereby falls under this category.

## **2.4 Information**

As it is clear from the above, strategic management is a wide and extensive field with many possibilities and applications, many of which have already been researched extensively.

This is where the concept of information comes in. Adding the concept of information and its management to strategic information limits the wider scope of the field while opening up for a potentially new, underexplored area. But before we can dive deeper into the meaning of the combined concepts of strategy, information, and management, it is necessary to define the concept of information.

Information is a concept that has especially suffered under the lack of a clear definition by researchers in the field. As McKinney & Yoos (2010) note, information *“is almost always unspecified, a reflexive, all-purpose but in-discriminant solution to an unbounded variety of problems”* (p. 329). While information is often viewed as the golden solution to many problems and has been established as a critical strategic resource, it is often poorly understood and taken for granted. By defining the concept, it is possible to identify the underlying assumptions about information, as these can influence the result of research (McKinney & Yoos, 2010). The authors provide a taxonomy of information views, including the token, syntax, representation, and adaption view based on a review on existing research. This paper will adopt the adaption view on information.

From the adaption view, information comes from perception. Thus, *“information is any perceived difference that makes a difference to a subject”* (McKinney & Yoos, 2010, p. 336).

As many differences are overlooked or goes unnoticed, the subject can never be completely informed. Likewise, the subject is only informed about the differences he/she is currently noticing, and all information in this view is dependent on the subject's perception. Here, the adaption view

differentiates from many other views that see information as something that is universally true and not subject to interpretation. Information in the adaption view is subject to interpretation and dependent on the individual's perception. Being informed is therefore creative and dynamic, and all information is 'made up' by the subject. The perspective builds on subjectivist assumptions to explain how information is created by a system, e.g. a person or organization. Information is created when the system, i.e. subject perceives a difference in the environment that leads to the system adapting. The strength of this view especially lies in its generalizability and how it can deal with ambiguous and unpredictable environments (McKinney & Yoos, 2010). Furthermore, the adaption view of information offers a theoretical foundation that allows us to see information as something other, something more than a commodity. *"The adaption view sees information not as a ubiquitous commodity with a common interpretation but instead as the distinct creation by a particular user based on experience, interpretation, and knowledge"* (McKinney & Yoos, 2010, p. 339). From this perspective, information can play a crucial part in explaining how users make sense, interpret, and create information in their environments, which is a key concern for information management. The adaption view of information can thus help shed light on some issues and dimensions that other views cannot, which is why it is the one that is adopted in this paper.

## **2.5 Strategic information management**

So what happens when information and the management thereof is added to the field of strategic management? In what ways does this complex, yet significant, concept "disrupt" the traditional view on strategy and strategic management? Is it justifiable to for companies to focus specifically on the concept of information and its role in strategy? Is strategic information management worth the efforts it requires?

To even begin to answer these questions, it is necessary to first understand what strategic information management entails. However, as the purpose of this paper is to fully uncover and understand the concept, its role and potential implications for organizations, a completely satisfactory and comprehensive definition cannot be provided at this point. It is instead the goal of this paper to reach such a definition as well as a comprehensive understanding of its dimensions, related issues and possibilities. The definition will also address the current and future role in both organizations and companies. This section will instead attempt to outline what strategic information management is and what it is not based on the fundamental conceptual framework. This will help

delimit the field and the scope, sort out unrelated issues, and prepare for the journey ahead, where I will dive deeper into the field of strategic information management through a literature review.

The obvious aspect that differentiates strategic information management from its “mother field” is the term information. As McKinney & Yoos (2010) state, “*information describes the current age*” (p. 330), and information is of key importance in SIM and its definition. Information is what delimits the concept while at the same time being a vastly complex and wide concept itself. As if strategy and strategic management itself is not complicated enough with no clear one-size-fits-all guide or solution despite several decades of research, so is information a complex entity that can mean many things and nothing depending on the beholder. That is what the adaption view attempts to embrace with its definition of information as perception.

The fields of strategic and information management have been subject to countless transformations and readjustments due to new innovations, trends, possibilities, and perhaps most significantly: disruptive technologies, e.g. in the form of information technology. These changes are in many ways responsible for the introduction of the term strategic information management and the reason why it could and should be on researchers’ and organizations’ agenda. At any rate, it is the introduction and development of information technologies and systems that has prompted some researchers to begin to use the term strategic information management. Strategic information management can therefore be viewed and defined as understanding and dealing with challenges and strategies in managing information systems (Galliers & Leidner, 2003). From this perspective, SIM is a result of the emergence of information technology as a strategic issue and is mainly concerned with the “*many complex and inter-related issues associated with the management of information systems*” (Galliers & Leidner, 2003, xi).

However, this paper goes beyond viewing strategic information management as mainly the management of information systems and technology. In this paper, strategic information management is suggested to incorporate more than information systems in an attempt to encompass all nuances of information as a strategic issue. As the adaption view outlines, information is a complex concept that originates from perception. Information can thus result from more than information systems, and focusing strategic efforts solely on information technologies and systems can mean that important aspects are overlooked.

The hard part is of course to uncover how these important, yet elusive, aspects can be captured and included in an organization's strategic efforts and what they are. If information is dependent on the perception of the individual, then how can it be managed strategically? The following sections of this paper will attempt to address this and more in order to discover the approaches and perspectives that makes up the concept of strategic information management as well as ensure that it is on the agenda for both researchers and organizations.

### **3 Methodology**

To address and answer the research question, this paper have conducted a systematic literature review aimed at investigating and synthesising the existing research related to strategic information management. The approach creates a basic framework for an in-depth analysis of the literature, which will be conducted in the sections to come. According to Lee & Baskerville (2003), the literature review falls under type TT generalizability, i.e. generalising from concepts to theory, in this case the development of a new conceptualisation.

Before elaborating on the literature review process, I will shortly address the ontological position of this paper. Following the adoption of the adaption view on information, the paper will follow McKinney & Yoos' (2010) recognition that reality is subject to perception, i.e. the ontological position of subjectivism.

#### **3.1 The literature review process**

Prior to engaging in the actual literature review, a short scoping, exploratory study was conducted in order to create a foundation for the literature review, define and specify concepts, and determine the research question that the review should address (Costa, Soares, & de Sousa, 2016). The result of the preliminary, exploratory study can be seen in the research focus that outlines the emergence of information as a strategic issue, and the conceptual framework, where I define the key concepts that combined makes up strategic information management. The research focus, conceptual framework and research question can be seen as the foundation of the literature review and the following analysis. Consequently, the review focuses on literature on strategic information management and its role of information in organizations and strategy as well as its management.

The systematic literature review outlined by Denyer & Tranfield (2009 in Costa, Soares, & de Sousa, 2016) follows a five-step approach that has been applied in this literature review. The five

steps include 1) question formulation, 2) locating studies, 3) study selection and evaluation, 4) analysis and synthesis, 5) reporting and using the results.

The research question formulated for this review can be found in the section above and revolves around the identification, analysis, and conceptualisation of strategic information management.

Step two concerns the selection of databases and search engines and the definition of search criteria. The search process should help ensure the validity and reliability of the literature review (Soomro, Shah & Ahmed, 2016). The selected databases, publications, covered time period, and keywords used for the literature search helps address validity, while reliability was addressed through the preliminary, exploratory study developing a list of key search words (Soomro et al., 2016).

The selected databases include CBS Libsearch, Science Direct, EBSCOhost, and Google Scholar, as well as the course archive of the cand.merc.it study programme containing the syllabus of each course as well as the literature for the course.

The search process was initiated with a search focusing on the use of the term 'strategic information management' in the title and/or abstract and hereafter in the full text with no limitation as to time period or publications. That search process yielded very limited results, suggesting a need to adjust the search criteria to widen the field. The search was thus opened up to include literature that did not necessarily address all three concepts combined, but also combinations such as 'information management', 'strategic information', and 'information management strategy'. That led to a wider body of work that could be preliminarily scanned for tendencies to be subject for another search process. As a result thereof, I began investigating other combinations using the term 'information' in combination with concepts such as 'systems', 'technology', and 'strategy'. It is worth noting that it can easily be a difficult task to search for literature within the domain of information as it is, as already noted, a widely applied concept covering a large body of work, not all of which is relevant for this study.

In addition to the search of key words, the search engines' function suggesting 'recommended articles' based on some of the articles that was discovered through the key words search was used to find more literature within the same or similar focus areas.

A final approach that was applied was searching the cited works of particularly relevant literature to find additional literature within the domains and areas and creating a research foundation.

Combining the search engine approach with the 'recommended articles' and cited works, as well as literature from course syllabi provided a wider and more comprehensive body of works. However,

the drawback of this approach is that the validity of the review suffers, as a precise recollection of the approach cannot be produced in a comprehensive manner. Despite this, the review did yield a wide body of work that address a wide variety of topics, developed over more than three decades, and representing several publications and research methods.

Hereafter, the selection and evaluation process was initiated to exclude the literature that did not have relevance for this research.

I did not exclude literature based on a limited number of publications. As the conceptual framework indicates, strategic information management has ties with strategy, information, management, information management, and information technology amongst other. Limiting the focus could therefore exclude essential literature, so I took a more inclusive approach as irrelevant literature could always be rejected after preliminary elimination. The review covers all decades from the 1980's to today, as a limited focus on e.g. only the past decade would not provide the necessary evolutionary foundation to understand how and why the concept of strategic information management has developed and evolved throughout the years. Academic articles covering one or more of the emergent focus areas were included regardless of journal, research methodology, or geographic region (Soomro, Shah, & Ahmed, 2016). Instead, non-academic articles were excluded due to lack of methodological rigour.

Subsequently, the abstracts of the articles were read and reviewed and an additional number of papers were excluded due to irrelevance or inconsistency with the wider body of works. However, overall the approach was probably more inclusive than exclusive in the selection and evaluation process, as the conceptualisation of strategic information management cannot be constricted to only 'classic' information management, information technology, or business strategy research as all emergent aspects must be detected. The point of this paper is to develop a conceptualisation that includes and investigates possible new dimensions and being too exclusive could influence this objective.

Year	1985-1990	1991-2000	2001-2005	2006-2010	2010-2016
Number of articles (total: 68)	5	17	9	8	29

Table 3.1 – Number of articles divided after year of publication

In the fourth step, the selected literature was subject to more scrutiny in order to identify key issues and divide it into overall categories based on research focus and domain. The categorisation can be seen in the table below.

<b>Concept/topic</b>	<b>Literature</b>	<b>Number of articles (total: 68)</b>
Information technology	Galliers & Leidner (2003), Hyvönen (2007), Rivard, Raymond, & Verreault (2006), Rahimi, Møller, & Hvam (2016)	4
Information systems strategy (ISS)	Buhl, Fridgen, König, Röglinger, & Wagner (2012), Chan & Huff (1992), Chan, Huff, & Copeland (1998), Croteau & Bergeron (2001), Curry & Stancich (2000), Galliers & Leidner (2003), Hatten & Hatten (1997), Hayward (1987), Henfridsson & Lind (2014), Levy & Powell (2000), Levy, Powell, & Galliers (1999), Merali, Papadopoulos, & Nadkarni (2012), Ragu-Nathan, Ragu-Nathan, Tu, & Shi (2001), Reponen (1993), Richter & Trier (2014), Stein, Newell, Galliers, & Wagner (2013), Salmela & Spil (2002), Tozer (1986), Waema & Walsham (1990), Wang, Shi, Nevo, Li, & Chen (2015), Ward (2012)	21
Information management	Caudle (1996), Choo, et al. (2006), Choo (2002), Detlor (2010), Galbreath (2005), Galliers & Leidner (2003), Hicks (2007), Karim & Hussein (2008), Middleton (2007), Ogiela (2015), Winter, et al., (2001), Zárrega-Rodríguez & Álvarez (2014) Zijlker (1986)	13
Information use and behaviour	Akhbar, Chang, Yao, & Muñoz (2016), Calvo-Mora, Navarro-García, & Periañez-Cristobal (2015), Castrogiovanni, Ribeiro-Soriano, Mas-Tur, & Roig-Tierno (2016), Biron & Hanuka (2015), Brown & Starkey (1994), Choo, et al. (2006), Choo (2002), Choo (2013), Costa, Soares, & de Sousa (2016), Curry & Stancich (2000), Davenport, Eccles, & Prusak (1992), Galliers & Leidner (2003), Georgiou & Makri (2015), Kim & Adler (2015), Kruger & Johnson (2010), Mezghani, Exposito, & Drira, (2016), Nowacki & Bachnik (2016), Soomro, Shah, & Ahmed (2016) Sundqvist & Svärd (2016), Vick, Nagano, & Popadiuk (2015), Waema & Walsham (1990), Wang & Yang (2016)	22
Business strategy	Argote & Miron-Spektor (2011), Atkins (1994), Baets (1992), Broady-Preston & Hayward (1998), Choo (2002), Citroen (2011), Crossan & Berdrow (2003), Croteau & Bergeron (2001), du Toit (2016), Galbreath (2005), Galliers & Leidner (2003), Gavetti, Greve, Levinthal, & Ocasio (2012), Henfridsson & Lind (2014), Hidding (2001), Levy & Powell (2000), Littler, Aisthorpe, Hudson, & Keasey (2000), Mendelson & Pillai (1999), Mintzberg (1996), Mintzberg & McHugh (1985), Mintzberg, Ahlstrand, & Lampel (1998), Ragu-Nathan, Ragu-Nathan, Tu, & Shi (2001), Rahimi, Møller, & Hvam (2016), Rivard, Raymond, & Verreault (2006), Powell (1993), Soto-Acosta, Placer-Maruri, & Perez-Gonzalez (2016), Ward (2012)	26

Table 3.2 – Categorisation of reviewed literature

As it is evident from table 3.2, one of the research topics that occurred more frequently falls within the category of information systems strategy, while surprisingly few falls under information management. Furthermore, there are several papers that fall under more than one category,



indicating a tendency for researchers to combine and relate concepts and investigate their interaction and influences.

These tendencies and others will be investigated further following the fourth and fifth step.

### **3.2 Conceptualising strategic information management**

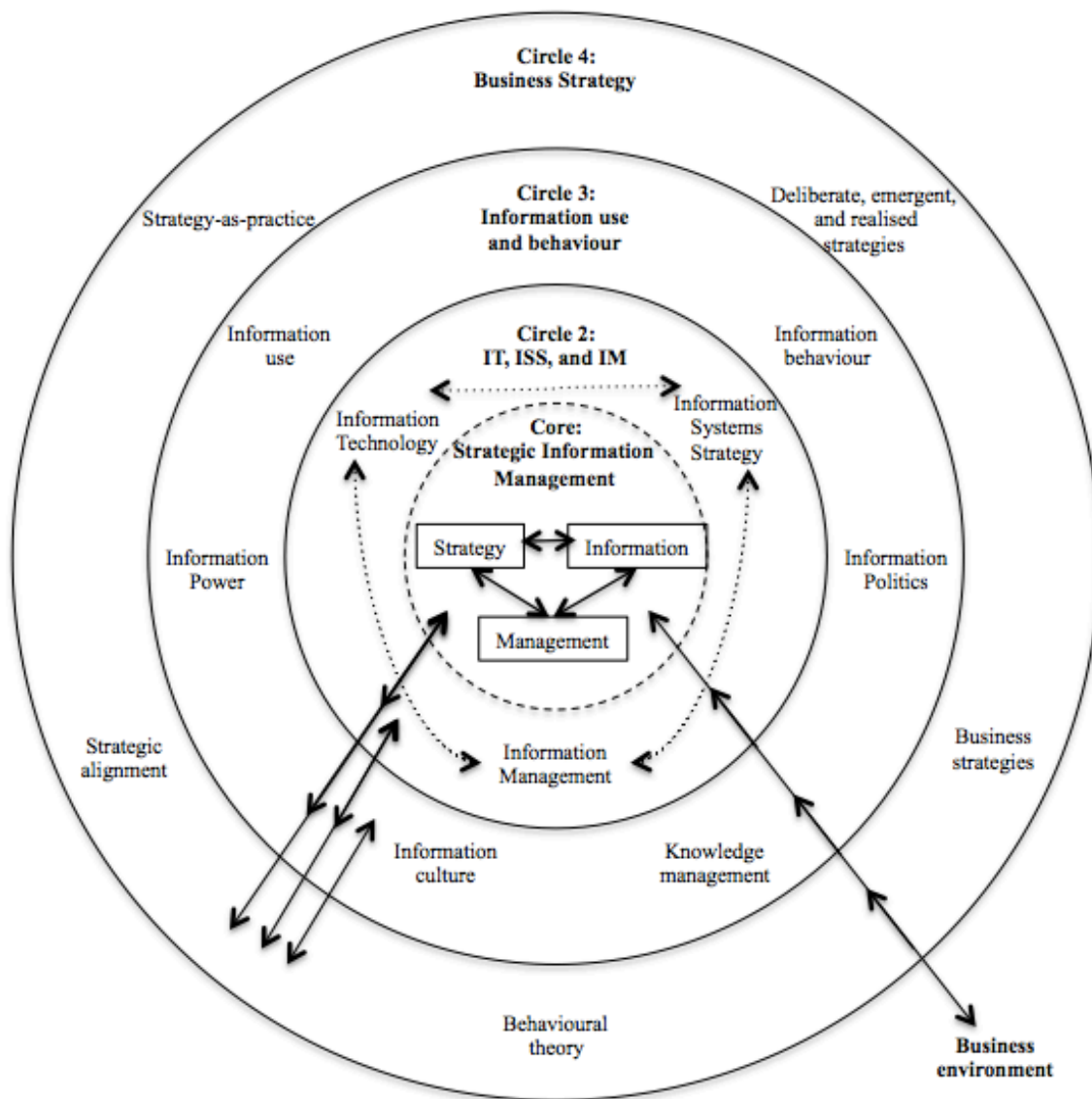
In addition to table 3.1 outlining how the literature is divided into the different categories, I will here attempt to synthesise them in a conceptualisation model.

As addressed above, the concept of strategic information management is both complex and difficult to define, even when focusing on one element at the time before combining them.

In one and the same time, SIM is a narrow aspect of the wider field of strategic management, as well as a wide and complex field in itself. As it will be increasingly clear throughout the paper, the concept can be defined, interpreted, and utilised in several ways depending on the researchers' understanding of SIM. Strategic information management is consequently conveyed in various ways with differing focal points, which can cause confusions and result in the development of an even fuzzier definition of the term than the starting point.

To help prevent confusion and to organise and guide this paper, I will provide a conceptualisation of strategic information management with reference to the emerging categories in table 3.1 and the dimensions identified in the literature review. The model is inspired by Galliers & Leidner's (2003) conceptualisation of the same term, which was revealed in the preliminary literature review and inspired the further evaluation and categorisation. Model 3.1 is a revised model adjusted according to this paper's definition, understanding, and approach, incorporating the results of the reviewed literature.

The model attempts to incorporate the various layers of the concept of strategic information management as well as outline the sections of this paper. It is intended as a method of presenting the multiple aspects of SIM that has been uncovered in the review, as well as their interrelations and interdependencies. Each layer or circle represents a key feature and the underlying perspectives of the strategic information management literature that was identified in the review.



Model 3.1 – Conceptualisation of strategic information management

The conceptualisation model presented in this paper differs from Galliers & Leidner's (2003) model in several ways. These differences reflect the adjusted view on strategic information management that is proposed in this paper in comparison to Galliers & Leidner's (2003) understanding.

The model differs first and foremost due to the fact that Galliers & Leidner's (2003) main focus appears to be on information systems (IS), taken from an information technology (IT) standpoint. The model thus addresses the emergence of information technology and systems as a strategic issue and the related strategic issues that occurs when managing these systems. While this perspective is both vast and complex, and plays a big role in the emergence of the field, this paper will adopt a more holistic approach to strategic information management.

The belief in this paper is that by limiting the focus mainly to the strategic management of information systems enabled by IT, crucial perspectives and insights can be lost or overlooked. Insights that can help organizations to success when embarking on their strategic information management venture.

Following the adaption view, this paper has the premise that information is not just something that is solely provided by information technology and information systems. The paper will therefore investigate if and how strategic information management goes beyond the management of an information systems strategy, and why. Thus, this paper views the strategic information management as more than managing information systems enabled by IT. That being said, it still plays a key role in the reviewed research and is therefore considered to be significant to the field, as reflected in the model. The reviewed literature revealed that information technology and systems cannot be avoided and ignored when studying strategic information management. Information technology in businesses is a crucial aspect of strategic information management research and plays a key role in its entry as a strategic field and how it has evolved (Galliers & Leidner, 2003). However, as reflected in the model, this paper will attempt to address information as a strategic issue in a way that goes beyond what is related to IT. That means that the conceptual model must incorporate some perhaps more intangible aspects in order to investigate how information from the adaption view, i.e. information as more than a commodity, influences strategic information management and the related issues and themes.

Another important aspect that prompts a revised conceptualisation from the one provided by Galliers & Leidner (2003), is that their model was lastly modified in 2003. That means that there is over a decade of research, new innovations, discoveries, and trends that have not necessarily been considered in the existing model.

By adjusting the conceptualisation based the literature review conduction here, new dimensions and perspectives can be included in the model, projecting a contemporary conceptualisation of the strategic information management.

This section will shortly outline the circles that make up the conceptualisation of strategic information management.

At the core of the model, the first circle, we find the concept of strategic information management and the three core elements that together make up this concept, i.e. strategy, information, and

management, and their interplay. These terms have already been introduced above, providing an overview and definition as a foundation for understanding strategic information management and how it is to be investigated in this paper.

Circle two represents the concepts of information technology, information systems strategy, and information management. They represent the bulk of the reviewed literature and are thus suggested to play a key role in the conceptualisation and integrated view of strategic information management. The three concepts all belong to research domains of their own as well as interacting in relation to each other and other dimensions such as strategy. The analysis of this circle will address each concept in turn and relate them to each other. Key aspects and implications will be identified in relation to strategic information management.

The third circle has been labelled information use and behaviour, but it covers a wide range of perspectives that researchers address and consider when investigating information management. In comparison to the other two circles, the contents of this circle do not have what could be viewed as their own research field, but are often considered as key dimension or aspects that influence e.g. information management or the use of information technologies. They are therefore relevant issues to consider when understanding the perspectives that fall under strategic information management.

Circle four revolves around business strategy to address the requirement suggested by many researchers of aligning information management-specific measures to the organizational strategy. Incorporating this to the other circles indicates how the aspects from these must be related to and seen in perspective of the overall organizational strategies and its approaches.

Outside the conceptualisation model's circles is the organizational surroundings and environment, as a strategy is the organization's plan for how to react to its surroundings and environment to ensure competitive advantage and success. Much of the reviewed literature address the influence that the external environment can have on information management and strategies, and it is therefore a part of the conceptualisation model.

The arrows of the conceptualisation model indicates the various interactions and interdependencies of the different components and shows how not one single concept can be seen alone when it comes

to its role for strategic information management. The model attempts to provide a holistic, integrated view on strategic information management that illustrates the many nuances and layers to consider in relation to each other and the overall concept. You cannot understand one without understanding how it interrelates to the other layers. With this model in mind, I will now embark on the fifth step in the literature review process, the analysis and synthesis of the reviewed literature.

## **4 Analysis**

### **4.1 Strategic information management**

At the core of the conceptualisation model we find the three individual concepts of strategy, information and management, which combined makes up the ‘new’ concept of strategic information management. These three have already been addressed above in the conceptual framework in order to establish the necessary foundation for the literature review. The conceptual framework and core of the model is intended to provide definitions and overview of the key concepts in order to provide the necessary foundation to investigate how these concepts can interact in relation to strategic information management. The core of the conceptualisation model is surrounded by a dotted line instead of a fully drawn line. This is to indicate that the contents of the core should not be seen isolated. By only reviewing the contents of the core of the model, a very limited and incomplete understanding of strategic information management would be reached, an understanding that in no way addresses the many nuances of the concept. However, the core do function as the foundation of the model and must therefore not be ignored either.

There are vast amounts of research on the individual fields of these three concepts, but an in depth review of each of these prior to the review of SIM is beyond the scope of this paper. Mintzberg et al. (1998) has for example written an entire book with the purpose of giving the reader “*a guided tour through the wilds of strategic management*”, and the authors do not hide the fact that their “safari” does in no way provide the complete and full image of the field. Therefore, this paper will not attempt to give the impression that it can or have provided a complete overview and outline of three so complex and intertwined fields either. The conceptual framework, however, aims to provide a necessary foundation and insight to the fields prior to embarking on a safari of its own, the strategic information management safari.

## **4.2 Information technology, information systems strategy, and information management**

It can be argued that the strategic information management ‘safari’, to continue with the analogy provided by Mintzberg et al. (1998), has not really begun before embarking on to this section that addresses the second circle of the conceptualisation model. However, you cannot go on a safari without the proper equipment and preparation. If you do, you might run into trouble from being unprepared and unequipped. Thus, the above sections have been the necessary preparation to help avoid getting lost in the wilds, when we now really embark on the journey to understand strategic information management.

At the second circle of the conceptualisation model, we find some key dimensions in strategic information management research. The circle encompasses the three terms of information technology, information systems strategy, and information management.

The topics in this second circle could very well be argued to become a part of the core of the conceptualisation, as they represent a large portion of the reviewed literature and as such must be assumed to have a great influence on strategic information management. However, to avoid confusion and illustrate the importance of “getting the proper equipment” in the form of clear definitions of the core elements, I have chosen to divide the contents of the two circles.

The following section will introduce, investigate, and review the literature done on the topics of information technology, information systems strategy, and information management.

When reviewing the literature on these topics and how strategic information management is conveyed, I will address the motivation behind the topics’ relation to the conceptualisation of strategic information management. I will address the assumptions made by the researchers and how they relate to the works of others as well as the other aspects of SIM. I will attempt to outline possible contradictions in the literature if relevant. Implications for strategic information management as a concept and for the organization will also be considered.

### **4.2.1 Information technology**

This paper has declared that it differs from e.g. Galliers & Leidner’s (2003) conceptualisation model of strategic information management by placing focus and emphasis on more and other factors than information technology. It can therefore seem a little curious why the proper kick-off to the analysis is with the topic of information technology and why the topic has such a prominent placement in the model.

While this paper wishes to expand the scope of the field and explore other perspectives and dimensions to strategic information management, it still recognises the key role IT plays and will continue to play. Furthermore, the review revealed that IT is either at the heart of much research or does at least play a key role in one way or the other, suggesting its substantial contribution to the concept. Understanding how and why researchers portrait and deal with IT in relation to SIM can therefore become a necessary prerequisite to be able to move on to the other aspects of the model. So for the further development of the analysis, it makes sense to start by outline and examine the role of IT in the literature prior to investigating other aspects, where many researchers in one way or the other incorporates IT to some extent. IT thereby has a continuous presence throughout the layers of the conceptualisation model and it is important to understand why.

While it is to be investigated and determined in this analysis whether strategic information management is more than ‘just’ the strategic management of IT, it is without a doubt a key aspect of it – both now and in the future. The massive impact of information technology cannot be denied or overlooked. The rapidly emerging and constantly evolving information technology has played a significant role in the evolution of the field, as is proven by its presence in much of the reviewed literature, despite not necessarily being addressed as the key focus area.

Whilst it is important to keep in mind that other dimensions has shaped and influenced the field as well (and will be duly addressed further on), one cannot ignore the part played by IT. Neither can researchers in the field, it seems. Galliers & Leidner (2003) begin their collection of research done on strategic information management with a chapter on the developments in the application of IT in business, attributing these developments to the emergence of information technology as a strategic issue. There is no doubt that “*developments in IT have caused revolutionary changes not only for individual organizations but for society in general*” (Galliers & Leidner’s 2003, p. 2). Several books and papers can and have been written on this topic, resulting in massive amounts of research that can be subject to review. IT’s entry and following domination on the way in which organizations are doing business have had a massive impact, resulting in the fact that much research fall under the topic in one way or the other. However, simply categorising all research dealing with information technology in one way or the other under this section will undermine the purpose of this paper and act as a possible impediment to the dimensions and perspectives that could arise. Instead I will attempt to dig a level deeper and address not just whether a piece of research has its focal point in IT, but instead address how it views IT and what meaning it is attributed.

This section will examine how IT is viewed and discussed in research and in which degree researchers consider IT to be the reason behind the rise of the field. I will attempt investigate how IT is conveyed in research and how much responsibility it is attributed, i.e. the role it plays in strategic information management. To put it simply, I will ask: does IT *enable* SIM or *is* it SIM? While the question is short, it is also complicated. Its meaning and implication can prove difficult to explain and investigate. What it is intended to explore is whether IT is seen as an instrument or tool in relation to strategic information management or the actual end result of (successful) SIM?

When reviewing literature within the field, IT and IT strategy is often a main focus point, however 'hidden' under another objective, as it e.g. can be seen with Galliers & Leidner's (2003) collection of research. Therefore it seems relevant to ask if researchers view the successful management of an IT system as the purpose and end result of SIM or as an enabler.

I wish to investigate if there is a tendency to equate information technology with information, i.e. if by successfully managing IT, they have successfully managed information.

#### *The emergence of information technology as a strategic issue*

Before I will commence on this rather complicated and possibly confusing investigation, I will begin by shortly addressing the emergence of information technology in business and what is meant by IT as a strategic issue. This should help establish IT in a strategic context and explain why and how it takes up so much space in literature and organizations. What is this IT everybody is researching, why is it so important for companies, and what does it have to do with strategic information management?

Galliers & Leidner (2003) provide a walk-through of the introduction, emergence, and development of information technology in business from the early days of data processing to management services and on to information processing. From being used mainly on the operational level for routine clerical tasks to the total takeover on all levels of the organization at present day, or rather the status of 2003. Much has happened since then, e.g. in regards to Web 2.0, big data, online collaboration etc. While, for obvious reasons, not including the developments of IT over the latest decade, Galliers & Leidner's (2003) introduction chapter still help understand how "*the role of IT has changed in business and how organizations have reacted to this change*" (p. 2). Similar to McKinney & Yoos' (2010) argument that you cannot begin to know and understand something without first defining it, Galliers & Leidner (2003) argue that outlining the evolution "*can serve as*



*a foundation for future progress, allowing organizations to avoid past mistakes and to build on their successes” (p. 2).*

Despite being relatively new to the business scene, IT has ever since its entry evolved rapidly and completely transformed the ways organizations operate, creating both new opportunities and threats. It is hard to imagine any organization operating without the use of information technology today and it has infiltrated all levels and aspects of the organization. That makes it all the more crucial to be able to effectively and strategically manage and exploit IT to improve business performance. IT has become a strategic issue as it has evolved from a data processing tool at the operational level to being a potential competitive advantage that can change a whole organization and even an industry (Galliers & Leidner, 2003). It has become increasingly clear for managers and organizations that the introduction and use of IT results in changes, possible competitive advantages, and improved performance. *“For this reason more and more companies started adopting a planned approach to their information systems”* (Galliers & Leidner, 2003, p. 19). Following this, researchers and practitioners detected the necessity to begin connecting business strategy with information systems strategy, as the one undeniably influence the other. Through demands for methods, approaches, theories, and processes to link these two successfully together, the field has developed and evolved along with the information technology. As the opportunities and impact of information technology has grown, so has the strategic issues related with it grown alongside it.

#### *The role of information technology in strategic information management*

The influence of information technology on organizations cannot be denied and this influence has only continued to grow ever since the first data processing computers were introduced for commercial use. It is almost impossible to keep up with the developments, as it is clear from Galliers & Leidner’s (2003) introduction. The edition I have reviewed is the third edition of their book, and the chapter has been updated with a postscript to bring the original article up to date. This postscript for example mentions the major development of the Internet and the World Wide Web and the possibilities these introduce including e-mail, websites, and electronic commerce. All things that are deeply incorporated in everything individuals and organizations do today and have lead to a whole new range of opportunities and challenges to be addressed and strategically managed. Even more new developments have risen since. In relation to IT development, a decade can easily seem like a century. However, that does not make “older” research irrelevant, it just makes it important to

include newer research in the review as well, as IT has evolved rapidly since the beginning and will undoubtedly continue to do so in the future.

ITs domination in organizations, research, and society is not to be ignored, and I will now attempt to establish the role it plays in strategic information management.

As mentioned in the beginning of this section, it is not an easy task. The question of whether IT *enables* SIM or actually *is* SIM in the eyes of the researchers is a complex one to explain and investigate. It is not certain that there exists a clear answer to it, but regardless it is relevant to investigate how IT is represented in the literature. As the field grows, so does the number of interpretations and definitions. Rahimi, Møller, & Hvam (2016) for example suggest that *“Information technology (IT) offers a wide range of opportunities to organizations for automating, informing, and transforming their business”* (p. 142), but many other perspectives and understandings of IT exists within literature creating fuzziness and confusion.

It is possible that there is a similar tendency with information technology as the one McKinney & Yoos (2010) address in their paper on defining information. Where McKinney & Yoos (2010) see a tendency for researchers using information as a ubiquitous label with unspecified meaning, so can be the case with IT in relation to SIM. A clear definition of information technology and its role is sometimes missing, perhaps because its meaning is taken for granted due to its dominance in all aspects of society, perhaps because it can be complex to uncover, or perhaps because a definition risk to be out-dated before it is even completed.

No matter the reason, it could appear that there is some uncertainty as to the role IT plays in the field of SIM. The lack of a clear definition can help explain why it seems that researchers sometimes treat IT and information as the same thing, which influence the understanding of SIM. Without a clear definition of both IT and information, it becomes unclear for both researchers and managers if IT provides information or if it is information.

It could be argued that the evolution and role of IT in business and research in some way can be compared or related to some of the ideas and notions behind McKinney & Yoos' (2010) taxonomy of information. The four views in the taxonomy could very well be related to the evolution and development of IT in a business and strategic context. The taxonomy has also been introduced in relation to IS research, so the link between information technology and the taxonomy definitely exists. That means that the tendencies McKinney & Yoos (2010) have identified and categorised in

their taxonomy could also be observable in relation to the way researchers view and convey IT. As information is often an unclear, unspecified, all-purpose solution to a wide range of problems so is the case with IT.

It is therefore possible that some of the characteristics and ideas from the taxonomy can also be observed in some ways in regards to information technology in strategic information management research.

Where information technology began with data processing at one level of the organization, the taxonomy starts with the token view where information is synonymous with data, which is referred to as tokens manipulated by processes (McKinney & Yoos, 2010).

As IT evolves and can be applied to other tasks to create more opportunities, we can move on in the taxonomy with the syntax view where information is the measurable relationship between tokens and used to reduce uncertainty. In both the token and syntax view, information “*is objective, independent of any particular observer*” (McKinney & Yoos, 2010, p. 332), and e.g. in the token view, data and information is used interchangeably.

If the idea behind these views were to be applied to the analysis of the role of information technology, it would suggest that some researchers might view IT as information and perhaps use the two interchangeably. Furthermore, it is possible that many assume that the output of IT is objective, independent, and universally true. So by focussing the organization’s strategic efforts on successfully managing IT, the job is done. Researchers with this viewpoint will probably see IT as the end result of successful SIM and not as an instrument.

However, as the taxonomy proposes two additional views, there are of course also other ways researchers can convey IT in relation to SIM. McKinney & Yoos (2010) provide the representation view, where information is meaning emerging from a sign of an object to an observer and of course the adaption view, which is the definition of information adopted in this paper and presented in depth above.

While McKinney & Yoos (2010) focus their taxonomy on the definition and understanding of information and not information technology, their findings and notions are relevant in this context of investigating whether IT enables SIM or is SIM. Similarly to information, there is confusion in the role IT plays in SIM, as we will see. This confusion can present a possible subject for further research, as it can be a potential pitfall for both researchers and managers to not clearly define what is meant by IT or to view information and IT as something objective, independent, and universally true, if the adaption view is to be followed. It can thus be problematic to think that SIM starts and

ends with IT, that IT is information. It is important, yes, very important indeed, and not to be overlooked, but it is not everything.

So to begin the analysis of the literature's handling of information technology, I will take departure in McKinney & Yoos' (2010) adaption view, the definition of information as perception adopted in this paper. According to the adaption view, IT does not have or provide information. According to the adaption view, if IT users struggle to find information in an IT system, it is because *"users are looking for information in the IT system instead of realizing that they must create it for themselves"* (McKinney & Yoos, 2010, pp. 338-339). According to the adaption view, IT is not information. IT does not provide information. The users create information themselves from the perceived differences, and without these there cannot exist information. So in the adaption view, the role of IT as the all-fixing solution to a problem is played down. A new IT system is not the all-fixing solution to an issue, if the system, e.g. the users, does not perceive a difference that makes a difference with neither the old nor the new system. Information does not exist in a vacuum in the information technology. The focus in this view is not with the IT in the sense that having well-functioning information technology does not ensure or guarantee successful strategic information management. IT is not the same as SIM in the adaption view. IT is not the end goal of successful SIM, it can at the most be seen as an instrument or tool, an enabler of some sort. So what does that mean for the existing research?

A clear indication and implication for both researchers and managers is that they are not to get too caught up with the strategic management of IT systems and thereby forget or ignore the other important aspects of the field. It is easy to get caught in a vacuum and emphasise the technological facts and features, focus strategic efforts on the meticulous planning of a new IT system and then become frustrated if it does not yield the expected results. The adaption view on information, and consequently information technology, can help explain why a, in theory, successful IT system does not yield the expected organizational success and improved performance. Maybe the issue does not necessarily lie in the IT. The users of the IT system do not perceive a difference that makes a difference. Then we can ask why. Why is the user not creating information instead of why is the IT not creating information? The IT does not provide information, the users create it when they adapt (McKinney & Yoos, 2010). It is important to understand that every system uses information for adaption. Not just organizations, but also databases, individuals, teams, industries, and societies,

and thus the adaption view should help researchers and managers widen their horizon in the field of SIM.

As the review will reveal, not all researchers have adopted the adaption view and some have the tendency to assign IT with a lot of power and attention, perhaps a little too much.

A, in many ways, conflicting view compared to the adaption view can be found in the contributions of Galliers & Leidner (2003). Their focus on information technology and systems has been addressed before in this paper and I will now attempt to elaborate on it in relation to the question of whether they view IT as an enabler of SIM or actual SIM and the adaption view.

The authors do not deny that strategic information management involves many complex and interrelated issues and manifold images, including but not limited to those involving information technology: *“The subject of strategic information management is diverse and complex. It is not simply concerned with technology – far from it in fact. The subject domain incorporates aspects of strategic management, globalization, the management of change and human/cultural issues which may not at first sight have been considered as being directly relevant in the world of information technology”* (Galliers & Leidner, 2003, xiii).

Still, there is a clear predominance of the concepts of information systems and information technology when glancing over the list of contents (Galliers & Leidner, 2003). Furthermore, by emphasising that most of the additional aspects are not some that one might usually have considered to belong in the field of IT, they again indicate that the main field and focus is not strategic information management but in fact information technology. Just with more nuances.

So already in the preface, there is a clear indication that IT plays a big part in the understanding of SIM in this collection of research.

*“As more coherent information was made available through the use of computers [...]”* (Galliers & Leidner, 2003, p. 3). Here, we move away from the adaption view and information as something that is something subjective and dynamic, created by the user and not the information technology. This indicates that there is definitely a more clear equation between information and IT, that IT is the source of information. In contrast to the adaption view, IT ‘has’ information and provides information to the user and the organization. In the adaption view, it is the user who creates the information through perception. Here, the IT creates information and makes it available for the users who then just have to *receive* it, rather than *perceive* it.

Research in the strategic information management field thus often actually focus on the strategic management IT ‘disguised’ under terms such as information management and information strategy. Smits, van der Poel & Ribbers (in Galliers & Leidner, 2003) seek to assess information strategies in insurance companies. Their definition of information strategy concentrates on *“the use and importance of information in an organization, starting with the planning of information (in the end influencing IT, as well as influenced by IT)”* (Galliers & Leidner, 2003, p. 65). No clear definition of information is supplied. However, the way the definition and research question is framed, it clearly indicates that IT and information influence each other, and can be planned as one entity. By strategically managing and planning IT, you also strategically manage information.

Information strategy often focuses on managing and utilising IT, as it can create a competitive advantage. A more precise term could possibly be IT strategy, because otherwise researchers equate IT and information, which can become problematic. Many of the authors making contributions to Galliers & Leidner (2003) share similar assumptions regarding IT and IS strategy. SIM thereby becomes mainly about successfully and strategically managing IT systems. By managing IT, you are well on your way to managing information – whatever information is. No matter what information is, it is provided by IT, so by strategically managing IT, managers are strategically managing information. There are some other aspects to consider, but main focus is on IT as the provider of useful information to help improve performance.

*“IT can record, synthesize, analyse and disseminate information quicker than at any other time in history. Data can be collected from different parts of the company and its external environment and brought together to provide relevant, timely, concise and precise information at all levels of the organization to help it become more efficient, effective and competitive”* (Galliers & Leidner, 2003, p. 1). How information should be managed and used to help the organization to become more efficient, effective, and competitive is not explicitly clarified in other words than its positive relationship with performance.

The contribution of IT to firm performance is a widely agreed upon relationship what has been researched extensively in many relations. Rivard, Raymond & Verreault (2006) provide an integrated model of the contribution of IT to performance using the resource-based view and competitive strategy. Wang et al. (2015) also dig into the research on IT’s influence on performance, and investigate the interaction effects on IT assets and IT management on firm performance and how this effect is moderated by environmental dynamism. They suggest that their findings *“provide insights into how firms should approach their investments in IT assets and IT*

*management under conditions of turbulent environments* (Wang et al., 2015, p. 591). Again the perspective is that investments and strategic focus on IT management leads to organizational performance. However, a dynamic environment is also proved to play a part here. This suggests that external factors can influence IT's influence on business performance, which in some ways indicate that more factors are at play, but more information is still lacking.

Hyvönen (2007) also highlights the positive relationship between organizational performance and information technology as investigated by several other researchers. *"In summary, there is a strongly held view that performance can be enhanced when advanced information technology is used in situations where the strategy involved a more dynamic, externally oriented, differentiation"* (Hyvönen, 2007, p. 348). Information technology is seen as a rich source of information that can improve performance measures for a company, especially when combined with strategy. However, the result of Hyvönen's (2007) research did not successfully prove that a fit between (customer-focused) strategy and information technology leads to enhanced performance, despite previous research proving the opposite. Why is not clear, but the researcher suggest it can be due to an ambiguous situation, alignment with strategy, and requirement of a too complex and expensive IT system that the desired benefits are not achievable (Hyvönen, 2007).

How and why IT leads to improved performance is as unclear as when it does not.

It appears that information goes through some sort of 'magical' process from being provided by information technology to improving the organization's performance. What happens between these two steps are not always clearly articulated, but many researchers seem to believe that by successfully managing the IT strategy, organizations can ensure that they perform better and more efficiently using the unspecified, all-purpose, indiscriminant solution known as information.

It appears that when IT is the main focus or motive behind the research, it does not necessarily mean that the researchers equate IT with strategic information management. However, there seem to be a tendency to focus a little too much on the IT aspect and thereby providing a very limited and constricted approach to strategic information management. It is not enough to have a clear strategy for the information technology itself.

What it is that happens with information from being provided by IT to enabling improved organizational performance? How can managers strategically manage that process if it is unclear

what even takes place? That is perhaps where the strategic information management really takes place?

I began this section by asking if IT *enables* SIM or actually *is* SIM according to the literature. The answer? Well, there is no clear agreement and common standpoint on the exact role of IT. IT is undoubtedly a key feature in the field and for the concept of strategic information management in today's business context. Most literature revolves around information technology in one way or another, making it impossible to avoid or ignore. But at the same time, IT and IT strategy should not be treated as the recipe for success.

Based on the reviewed literature, I conclude that IT is definitely *not* SIM, despite that some researchers can accidentally indicate it as a result of unclear definitions and overlooked aspects. Many researchers emphasise that (strategic) information management is not solely concerned with information technology, that it incorporates other important aspects that influence it as well. However, they sometimes neglect to elaborate or address these other aspects. It is evident with the 'magical' process in which undefined information provided by IT is transformed into improved organizational performance empowered by a clear information (i.e. IT) strategy. Researchers sometimes skip some crucial steps in this regard. These steps will hopefully become clear in the following sections. It appears that to ensure successful strategic information management, a balance must be reached between the focus on IT, which cannot be ignored in this digital day and age, and the remaining aspects and perspectives to be addressed. If too much focus is on developing and managing the ideal IT system in accordance to the organization's strategic goals, there is a risk of overlooking crucial aspects that can influence the success, despite having the perfect IT system. Researchers and managers must also investigate, understand, and manage the other perspectives that can influence the 'magical' process that occurs when information is transformed into something that can improve performance. Something that makes a difference.

However, this balance is not necessarily easy to reach. Still, the following section will attempt to address it and investigate the concept of strategic information management that incorporates and balances IT, strategy, management, information, and the other aspects in the best possible way.

#### 4.2.2 Information systems strategy

In close relation to information technology, this next section will address information systems strategy (ISS). Information technology and information systems often, if not nearly always, go hand



in hand in the literature. Research on information systems and the related strategic issues revolves around the use of information technology, as information systems (strategy) encompass information technology (strategy) (Galliers & Leidner, 2003). Galliers & Leidner (2003) point out that *“information systems of some form or another have been around since the beginning of time”* (p. 1), but the emergence of information technology has created new opportunities and understanding of the concept and made it more significant than ever for organizations.

Information systems strategy is a concept and topic that takes up a lot of space in the field of strategic information management research. It seems that researchers do not always differentiate between ISS and SIM, in the same ways as IT strategy also tends to become synonymous with one or both of these two concepts, as the above section indicates. One example is Galliers & Leidner (2003), who indicate that strategic information management is the challenges and strategies in managing information systems.

It is clear from my conceptualisation model that I do not share that perspective, nor do I find the three concepts synonymous. Instead I argue that ISS and IT are crucial and key aspects of strategic information management, but they are not one and the same thing. By having an information systems strategy, an organization has not addressed strategic information management to its full extent, but it can take them a long way according to the literature. As mentioned, the literature review yielded a wide range of literature on information systems and information systems strategy. I will begin this section by outlining and defining what IS strategy means according to the researchers and investigate whether they share a similar view. As was the case before, I will review the literature and analyse what the major question is and why it is important and relevant both for managers and for the field of strategic information management. I will outline the assumptions and relate it to other aspects of the field, both those that have been addressed and those to come. Furthermore I will address whether there are any clear and crucial contradictions in the literature. Finally I will highlight the possible implications IS strategy pose, both for SIM as a field but also for researchers and managers.

As I began this section by stating, information systems have in some version existed since long before the emergence of IT, although the term is now most commonly associated with information technology. An information system can be viewed as social systems (Waema & Walsham, 1990), and is a group of components that interact to produce information. Whereas some of the

components of this system are now enabled by IT, it is not a necessary prerequisite. McKinney & Yoos (2010) provide an example: *“information exists in rings inside a tree trunk before the tree is cut down and the rings are counted”* (p. 332). Here, no IT is present in the system, but information is still produced. Considering information systems as social systems stress the social dimension and the importance of context (Waema & Walsham, 1990). However, since the emergence of IT, most information system includes IT components and IT plays a key role in IS and ISS research. Thus, IT is also a key component and perspective in the definitions and understanding of information systems strategy (e.g. Ward, 2012, Ragu-Nathan et al., 2001, Croteau & Bergeron, 2001).

ISS can be considered as *“applications strategies that aim to align IS developments with business needs and seek competitive advantage from IT”*(Waema & Walsham, 1990, p. 29). Similar to the view of IT and its impacts on organizations, information system strategy can create competitive advantage and improved performance for the organization (e.g. Levy, Powell & Galliers, 1999, Hatten & Hatten, 1997).

Despite having been researched extensively, there is still issues and implications to understand and address within the field of IS strategy. As Chan, Huff & Copeland (1998) state: *“in order to properly execute, it helps to understand the organization's strategies - including its information systems (IS) strategy. This is more difficult than it first appears”* (p. 273). Hatten & Hatten highlight the need for both ISS and a clear understanding and application if it. A few, inexplicable ‘happy accidents’ of successful IS is not practical, satisfactory, or helpful for managers. The result of applied IS will most likely more often be unsuccessful if no understanding is reached. *“Whether explicitly articulated, or not as appears to be frequently the case, without an IS strategy, the achievements of the IS in any given organization are likely to be more a result of hap and circumstance than a carefully guided intentional objective”* (Galliers & Leidner, 2003, xi). Here, the importance of having an IS strategy is again emphasised, because without one success, improved performance, and competitive advantage might as well be a coincidence or lucky change and impossible to build on to in order to insure continuous success. This perspective is very relevant to the concept and notion of strategic information management and highlights the need for a conceptualisation.

There is a tendency in the literature to use the terms information technology and information systems interchangeably, which can potentially become problematic. Ragu-Nathan et al. (2001)

state that the confusion arises due to loose terminology in literature and with managers. It is stressed that information systems are the ends and IT is the means, and thus not one and the same thing. Accordingly, IT should be seen as a component, an important dimension of IS, but not as the same thing. Henfriedsson & Lind (2014) also distinguish between information technology and information systems.

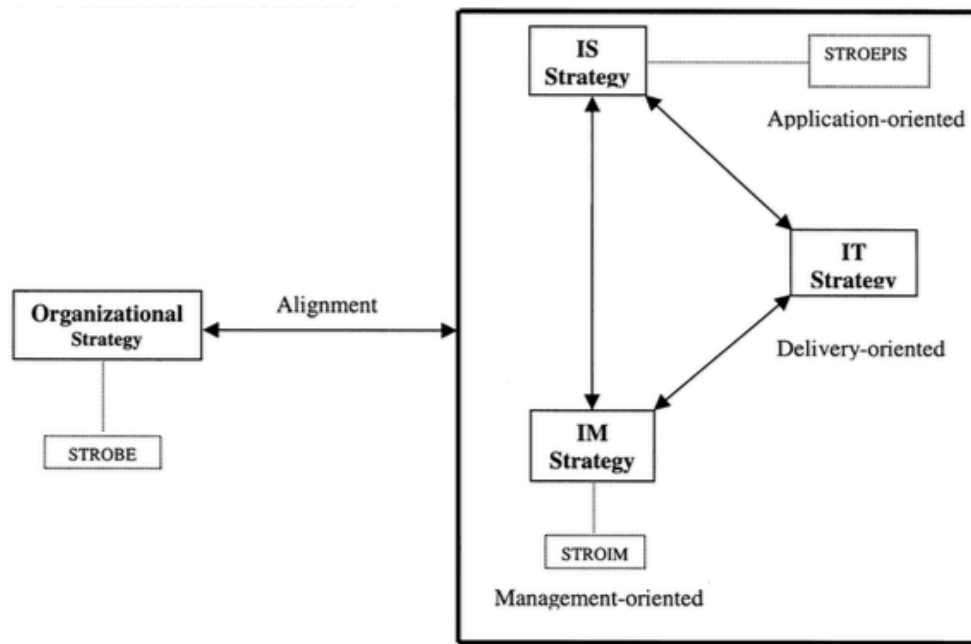
If IT and IS are used interchangeably, so is IT and IS strategy in theory. However, it is not the same thing. ISS apply a more holistic approach than IT strategy. IT strategy should be seen as a part of the more holistic ISS, like IT is a part of IS. As Reponen (1993) explains: *“Competitive advantage arises not only from the competitive applications of technology but also from a clear understanding, and the good management, of the whole information systems field. Advantage may be just as likely to accrue from the appropriate utilization of routine software as from technically advanced applications”* (p. 191). Here we see how ISS incorporates more components including IT and how it can be an accessory to success.

Galliers & Leidners (2003) suggest that information systems strategy is comprised of information strategy, information technology strategy, information management strategy, and change management strategy. Information systems strategy is furthermore viewed in relation to information system planning, which is the means by which an IS strategy is developed.

Ragu-Nathan et al. (2001) provides a similar comprehensive view of IS strategy. A three-level framework for information system strategy is presented, incorporating information management strategy, information systems strategy, and information technology strategy. These three levels that make up IS strategy relate to the alignment with the organizational strategy.

The model can be seen below, where the right part is the three levels of ISS and the left is the organizational strategy with which it must be aligned. The model thus attempts to conceptualise the alignment of IS goals and strategies with organizational goals and strategies.

These two approaches to information systems strategy is widely accepted in the literature, as well as the need for alignment with the organizational strategy. It is therefore a recognised model in the field.



Model 4.1.1 Three Levels of Information Systems Strategy (Ragu-Nathan et al., 2001, p. 268)

Having addressed the definition and meaning of IS strategy in literature and related it to the concept of IT, I will now address the other major subjects found in the review of the literature. For example, are the stages of growth a reoccurring approach in literature (e.g. Galliers & Leidner, 2003, Ward, 2012, and Hayward, 1987). The premise is that the organization passes through a number of identifiable growth phases in utilising and managing IT. These stages are used to identify the organization's level of maturity and the key issues that are associated with this stage in regards to further development. The approach is said to take a holistic view of information system management and strategy issues. Despite its wide application in the literature, I view it as being too static and fixed for strategic information management. Instead I will look for other insights from the field of IS strategy that can influence the understanding of SIM.

The review revealed a wide range of issues, theories, and tendencies within the topic of strategic information strategy. As mentioned, it is a widely researched field that e.g. has its own journal (Journal of Strategic Information System) and a massive amount of research has compiled over its four decades as a research topic. The literature review should reveal the perspectives and approaches that are relevant in relation to strategic information management. These will be addressed below

### *Information systems strategy: past, present, future?*

Information systems and information systems strategy research is infused by information technology as a key component. Its evolution is therefore strongly influenced by technological developments and innovations. Merali, Papadopoulos & Nadkarni (2012) provide a longitudinal review in order to analyse the evolutionary trajectory of ISS research from the 1980's to 2011. The premise is that by understanding the past and the dimensions of change, it allows for a better foundation to understand and predict the future. This mentality and purpose correspond with that of this paper, and the findings and method therefore provide insight.

The authors suggest the need for a paradigm shift in the research in order to address "*the increased turbulence, uncertainty and dynamism in the emerging competitive landscape*" (Merali, Papadopoulos & Nadkarni, 2012, p. 125). They find, based on reviewed literature and earlier adaptations, that the ISS research domain has the necessary adaptive capability to evolve gracefully to address this needed shift. As IS strategy is a key dimension of strategic information management, this adaptive capability to react and evolve to changes could influence the concept in a positive way. Furthermore, the notion of a paradigm shift to address and adapt to changes is a useful perspective for an integrated conceptualisation of SIM.

### *Information in ISS*

Information systems strategy is a large and established research domain and the number of contributions is substantial. The concept appeared the most often in the literature search and review process. This suggests that there are cases where researchers do not differentiate between the concept of information system strategy and strategic information management and use the terms interchangeably, as is the case with for example Galliers & Leidner (2003). It is relevant to ask if ISS is basically SIM, and that researchers just disagree on the terminology. Why is it that this paper suggests that ISS is mainly a component, a dimension, a perspective of strategic information management and not the same thing? While the review reveals that ISS has a key role in the meaning and understanding of SIM, it is not the same thing. Information system strategy research contributes and comprises useful insights, theories, and perspectives to the field of SIM. That does not mean that it is equivalent to SIM just because it is reoccurring and widely adopted. Similarly, information is a widely adopted concept, has own research domain while at the same time being a dimension, a component in others. ISS can both be a stand-alone concept as well as a part of SIM.

One of the reasons why it is such a reoccurring topic in the literature review is its combination of information, systems (technology), and strategy, and its more holistic approach compared to e.g. IT strategy. The role of information in regards to strategy and the organization is reflected upon in a more holistic way than within IT research. In some ways, ISS is a pioneer to the perspectives underlining strategic information management.

Stein et al. (2013) stress the importance of not to ‘black box’ the IT in regards to IS and IS strategy. Levy & Powell (2000) highlight the role of information in ISS, viewing it as the key to the development of the field and the whole basis of it. This perspective is similar to the one in this paper, where information is a key motivator to the development of SIM and the basis behind the need for it. Curry & Stancich (2000) elaborate further: *“It is also important to remember that, whilst information systems can contribute to an organisation's competitiveness, it is the information and the way it is used that sustains competitive edge”* (p. 165).

In ISS research, the role of information is more articulated than in much IT research, where information is something that is provided by the technology and contributes to improved performance through an implied and un-clarified process, what I have referred to as some sort of ‘magical’ process. Here we come a step closer, as researchers recognise that success is not only dependent on the technology or system, but the actual information and how it is used.

Thus, the literature review and the walk-through of the emerging topics slowly bring us one step closer to the magical process and to an integrated conceptualisation of strategic information management.

### *Information systems strategy alignment*

An aspect that is more explicitly and concretely addressed within the field of ISS is the link between ISS and business strategy and how it can be achieved. I will address the perspective of alignment in depth when the analysis reaches the fourth circle. However, I will shortly address the topic in relation to ISS research here in order to provide a foundation for why researchers and managers focus on alignment.

Alignment between the information systems strategy and the organizational strategy is a key perspective in the literature and most researchers address the dimension in one way or another. Most share a similar conceptualisation of the alignment, as the one modelled in Ragu-Nathan et al. (2001) above. Levy & Powell (2000) state that IS and business strategy is intertwined, and that ISS

should be an integral part of business planning, which is supported by e.g. Tozer (1986). If the strategies are not aligned, organizations risk that IS systems are developed in a piecemeal manner that does not contribute productively or improve performance.

Croteau & Bergeron (2001) suggest that it is not only the business strategy that shape the IS strategy, but that IS strategy can support and even shape the business strategy in return. It is thus an interdependent relationship where both parts influence and shape each other. This perspective is relevant to strategic information management, as it implies the importance of aligning SIM with business strategy, addressed further in the fourth circle of the conceptualisation, and how SIM can actually influence and shape business strategy. It highlights why the concept should be on researchers and managers' agenda.

Strategic alignment also ensure that the IS strategy does not operate in a vacuum in the organization. Ideally, IS strategy changes and evolves in response to the business environment (Levy & Powell, 2000), similar to a business strategy (Mintzberg, Ahlstrand, & Lampel, 1998).

If one strategy moves in one direction, the other should follow. Organizations cannot forget or neglect one or the other. Strategy alignment is continuous process, which brings me on to the next section.

### *Emergent IS strategies*

The statement above indicates that IS strategy is not static, it evolves and changes with both the aspects it embodies, e.g. IT, and the aspects it is intertwined with, e.g. business strategy or environment. In this section I will address a shift in perspective from strategy to strategizing, i.e. to view strategy as a continuous process, the process of strategizing. This shift in perspective can be seen in several of the reviewed papers and similarly to alignment, it is a subject I will address further in the fourth circle in relation to business strategy.

However, as the trend is particularly notable in IS strategy literature, I will begin by addressing it in this context prior to relating it to the field of business strategy.

The notion of IS strategy as a dynamic and continuous process is not a new one. In 1990, Waema & Walsham refer to the importance of considering IS strategy in a constantly changing context. As the ineffectiveness and potential dangers of static strategy was detected, it introduced the notion of dynamic and emergent information systems strategy formulation and implementation (Salmela & Spil, 2002). These authors propose a four cycles method to promote a continuous and dynamic IS strategy process and help managers avoid the static strategy.

Chan, Huff & Copeland (1998) provides the concept of realised information systems strategy, following the notion of differentiating between intended and realised strategy (Mintzberg et al., 1998). *"For IS researchers to have a complete understanding of an organization's IS strategy, it is useful to understand both the intended and the realized strategy, and to evaluate both what was planned and what actually happened"* (Chan et al., 1998, p. 274). In order to understand and assess the realised IS strategy, the authors propose an approach to help measure realised IS strategy by characterising and quantifying an organization's actual deployments and uses of information systems.

Henfriadsson & Lind (2014) also investigate IS strategizing and view the realised strategy as the result of both deliberate and emergent patterns of action. They thus distance their research from the idea that deliberate managerial planning is essential when using IS strategy to help improve performance. The authors' research represents the shift in interest from the strategy contents to the strategy process. The focus is moved from strategy, the resource, to strategizing, the process. The term strategy-as-practice is thus introduced as a result of the 'practice-turn' of the field, so instead of focusing on 'what', the researchers are investigating 'how'.

Henfriadsson & Lind (2014) deploys the strategy-as-practice perspective, and state that IS strategizing consists of both deliberate and emergent patterns of action and is viewed *"as a process of goal-oriented activity intended to realise a strategy for using IS in an organization"* (Henfriadsson & Lind, 2014, p. 12). The realised IS strategy does thereby not consist solely of deliberate patterns of actions or solely emergent patterns. They therefore criticise the classic idea of IS strategy alignment as deliberate managerial strategies are not the only contributors to the actual realised strategy. As e.g. disruptive and pervasive technologies and infrastructures are increasingly a part of the business environment, deliberate strategies towards alignment become impossible.

The authors offer a process model to the ISS domain to help explain the contextual conditions that initiate ISS contents production, the activity-based process, and the ISS outcome. I will address this model and the notions of Henfriadsson & Lind (2014) further in the section revolving business strategy.

The research suggests the practice-turn of the field and the benefits it can yield to view strategy-as-practice. Furthermore they address the idea of IS strategy as the result of both deliberate and emergent patterns of action. These notions provide useful insight to strategic information management that is assumed to also be subject to such patterns of actions. It suggests that strategic



management is a continuous process and the conceptualisation should not focus on a strategy but rather the strategizing process. Further implications and insights provided from this perspective will, as mentioned, be addressed further on.

### *Critical views on IS strategy research*

Despite its wide presence in the literature review, not all researchers are positive towards the results and proposed effects of information systems strategy research. The issues and critical aspects addressed by researchers can be helpful in the development and understanding of SIM. These critical points can point to gaps where the approach does not suffice or aspects that the perspective cannot help explain or investigate in its current state. It is possible that the integrated approach of strategic information management can address and explain something that IS strategy cannot.

Levy et al. (1999) and Levy & Powell (2000) for example address the issue that IS strategy is under-developed and under-researched in relation to small and medium sized enterprises (SMEs). They thus indicate a gap in literature that has not been successfully addressed. A reason for this is suggested to be the SMEs' limited view and investment opportunities in information systems. Focus on IS and ISS often arise from a specific identified need that requires immediate attention and not as the result of a long term, deliberate, and aligned IS strategy. The authors suggest that research focus is often on large organizations that face another range of issues, opportunities, and threats than the SMEs, despite having certain similarities. This implies that the concept of strategic information management cannot narrow its focus and potential application to only large organizations. Strategic information management is for all companies to consider, large and small, global and local, high technological and low technological etc. When developing and understanding the concept SIM, it is thus important to consider all organizational aspects and their practical implications.

Ward (2012) reflects upon the impact IS strategy research and results have had in organizations. He suggests that it has not, in fact, had the expected and intended impact for organizations as is implied in much research.

Buhl et al. (2012) follow a similar path and ask where the competitive advantage is in information systems strategy research. Research indicates that ISS leads to competitive advantage and improved performance and the results support that perspective. The authors adopt a critical view on IS

strategy research and ask “*whether results of SIS research actually enable those in industry who have the authority to shape strategy and organizations to create and sustain IS-supported competitive advantage*” (Buhl et al., 2012, p. 173). They point out that research results do not have the potential to create competitive advantage, as they seem to lose impact upon publication. The results do not constitute the foundation of competitive advantage. Rather the ISS research can inform managers and practitioners on ISS topics and not much beyond that. Buhl et al. (2012) suggest the use of boundary-spanners among ISS researchers to bridge the gap and collaborate and engage with actual managers in the industry to help create the competitive advantage they until now have only conducted research about.

Where Buhl et al. (2012) suggest the use of boundary-spanners to address the issues, I suggest strategic information management as a possible solution. Perhaps the integrated approach of SIM can address the crucial aspects that ISS does not manage to capture and in that way provide more useful results for managers who actually have to apply the practices to create competitive advantage.

#### *Information systems strategy and strategic information management*

IS strategy research uncover, address, and explore more layers than IT strategy. It provides a more holistic and well-rounded approach to some of the issues introduced in IT literature. Many researchers highlight the importance of not just accepting happy accidents and accidental success, but actually understanding why and how information system strategy can lead to improved performance and competitive advantage. However, IS strategy research also have the same tendency to imply that they can provide a recipe for success without necessarily fully addressing and explaining what this ‘magical’ process entail, where information systems (strategy) lead to competitive advantage. Still, they do provide more nuances and considerations than the section on information technology, which can be added to the conceptualisation of SIM.

Another tendency that is consistent with the topic of IT is the researchers’ tendency to equate ISS and SIM or use the two concepts interchangeably. As the literature review progress, it becomes clear that there is some confusion in regards to the terminology. Perhaps this confusion originates from a lack of definition of the concept of strategic information management, which has lead researchers to apply it to situations that e.g. incorporate strategy, information, and management. In reality, the researchers often actually just describe information systems strategy or the likes. This clearly indicates the need for a clear definition and conceptual framework for SIM to avoid

confusion in the future.

With this section on IS strategy, we are getting closer to understanding strategic information management, but we are not there yet. Many ideas and notions from ISS research can be applied and incorporated to SIM, making ISS a means to the end, i.e. SIM. That is not to undermine the many years of research and significant results in the field of ISS, but as the organizational and surrounding context evolves, so does the strategic and managerial issues. This has given rise to strategic information management, which incorporates notions from ISS and other dimensions to address these changes.

As we move on in the conceptualisation model, new perspectives, concepts, and notions will be considered, incorporated and combined in new ways in order to understand strategic information management.

#### 4.2.3 Information management

The analysis has now taken us to the third and final aspect of the second circle in the model. Here we find information management. Viewed with the naked eye, it is easy to conclude that this concept plays the leading part in strategic information management, as it makes up two thirds of the combined concept. However, as I have proved in the analysis above, it is important to proceed with caution in regards to concepts, their intended meaning, and their use in literature.

In this section I will review the research on the topic of information management. I will address the same aspects as above as well as relate the result from this section to the findings I have already addressed above. Finally, I will contemplate the role of information management as conveyed in literature in relation to strategic information management.

Information management is often referred to as the practise of getting the right information to the right people at the right time in order to enable well-informed decisions to be made and thus improve organizational performance (e.g. Galliers & Leidner, 2003, Choo, 2002). Furthermore, Choo et al. (2006) defines information management *"as the application of management principles to the process of acquisition, organization, control, dissemination, and use of information, and is ultimately concerned with the value, quality, and use of information to improve organizational performance"* (p. 492). It is a process-oriented definition, as it is concerned with the management

of the information processes of e.g. acquisition, organization, distribution, and use (Choo, 2002, Karim & Hussein, 2008, Detlor, 2010). Information management involves the management of all information processes in the information life cycle.

Researchers appear to agree on the perspective that the goal of information management is the management of all information processes to help the organization reach its competitive and strategic objectives (e.g. Detlor, 2010). Choo (2002) follows the idea that information management can lead to competitive advantage and improved performance.

The motive behind organizations' application and deployment of information management is often to enable managers to make quicker and better decisions. Here it is relevant to ask what is meant by 'better' decisions. Often that is more informed decisions, which in turn are expected to yield improved performance and the likes (Karim & Hussein, 2008). *"The goal of information management is to help people and organizations access, process and use information efficiently and effectively. Doing so helps organizations operate more competitively and strategically, and helps people better accomplish their tasks and become better informed"* (Detlor, 2010, p.103).

Information management is often investigated and understood in relation to information technologies. It is often IT that plays the important role as the tool enabling the right information to get to the right people at the right time, enabling 'better' decision making (Choo, 2002, Detlor, 2010). However, it is stressed that despite its crucial role, IT is not the primary entity that is being managed and should instead to be viewed as the medium. It is suggested that IT management should be an integral part of any information management plan and not the same thing.

Choo (2002) provides a framework that unifies the different components of information management: management of information technology, information processes, information resources, and information policies and standards. Each function is important, but the unified perspective provides a combined and more complete image of all relevant factors of information management. The unifying framework follows a similar line of thought as the three levels of IS framework above, as well as the purpose of this paper to provide a holistic conceptualisation model.

Within the information management literature, we see a similar tendency as with both IT and ISS with regards to the 'magical' process by which information becomes competitive advantages and improved performance. The field of information management does provide further notions to help

explain the process and combining the three approaches should help uncover more of the actual process.

*Information management in a strategic context – towards strategic information management*

An easy conclusion to this section and the paper as a whole could be that strategic information management is the application of strategic activities, practices, and perspectives to the existing field of information management. However, as I have and will argue, the concept encompasses a wider range of complex aspects, notions, and perspectives than that. Furthermore it is worth investigating if there is a need for a redefinition of what is meant by information management as well in order to achieve agreement across the field (Detlor, 2010).

Information management is often researched and referred to in a strategic context and as a strategic interest to organizations (e.g. Zijlker, 1986). What this precisely means is not always clear, other than that information management's end goal is reaching competitive advantage and improved performance, i.e. related to the business strategy (Karim & Hussein, 2008).

Winter et al. (2001) investigates strategic information management in hospitals, suggesting that it deals with the hospital's information processing as a whole. Its dependence to the overall business strategy and strategic goals is stressed, as these must be translated into a suitable information strategy. Thus, the authors distance themselves from many of the other views addressed in this review where strategic alignment goes both ways and both strategies are interdependent. Winter et al. (2001) suggest that the result of strategic information management planning activities is a strategic information management plan, which is a plot for planning, directing, and monitoring an organization's information system. This perspective on strategic information management does not correspond with the one in this paper. The perspective appears too static, limited of important aspects, and not applicable to a wider range of business context. The concept is thus not interpreted in the same manner as have and will be seen in this paper. However, it is still useful for this paper to help indicate what SIM is not and why strategic information management includes a re-evaluation of the existing definitions and approaches.

Karim & Hussein (2008) state that information management also involves the assessment of information needs and requirements within the organization. Understanding these needs is a crucial

prerequisite towards developing information strategy and the tools for effective information management.

Another approach within information management literature that attempts to explain how it can have positive effects on business performance is information capabilities, referring to the effective use and management of information (Zárraga-Rodríguez & Álvarez, 2014).

Marchand, Kettinger & Rollins' (2001, in Choo et al., 2006) propose three information capabilities that are combined to define an organization's Information Orientation that predicts business performance. The three capabilities are information technology practice, information management practices, and information behaviours and values. The organization needs to emphasize and be strong in all three capabilities to achieve improved performance. Again we see how researchers increasingly adopt an integrated approach to information management considering more aspects. The combination of these three capabilities results in the integrated approach and concept Information Orientation, "*a managerial perspective that facilitates the effective use and management of information such that it adds value to a company's strategic orientation*" (Zárraga-Rodríguez & Álvarez, 2014, p. 717).

It hereby appears that it is a combination of information capabilities can help organizations achieve superior business performance. The combined approach highlights how information management and the quest towards improved business performance can rarely be achieved by having a limited approach or focus. This perspective can definitely be transmitted to the understanding and approach of strategic information management, which seeks to combine several dimensions and perspectives to successfully address all relevant aspects within the field and avoid tunnel vision.

Another, alternative, approach to the field of information management in a strategic context is Hicks' (2007) application of lean thinking to information management. Here, a new approach and technique, at least in the IM field, is applied to perhaps uncover new insights and possibilities.

Lean thinking applied to information management can help specify value, identify value streams, make value flow, let the customer pull value, and pursue perfection in the information management context. Furthermore the approach helps identify and eliminate waste in the process. The notion of waste within the context of information management can include the additional actions and any inactivity that arise as a consequence of not providing the information consumer immediate access to an adequate amount of appropriate, accurate and up-to-date information. By applying the ideas of

e.g. lean thinking to another established field could help create new insight that would not have been reached otherwise. That signals that a combination of perspectives covering several fields can prove useful and provide new insight. It can be argued that that is the purpose of this review, to combine and understand perspectives from different domains in relation to each other in order to develop a new approach.

Choo et al. (2006) defines information strategy in the field of information management as follows: *“Information strategy addresses the question of ‘What do we want to do with information in this organization?’ It makes clear the intended link between information management and the ability of the organization to achieve its mission and goals. An organization’s information strategy is often expressed in the form of a set of basic principles.”* (p. 492). In this definition, a clear emphasis is on information and how the organization wishes to utilise information for strategic performance. A common approach to information in the field of information management is viewing information as a resource. The next section will address that approach.

#### *Information as a (strategic) resource*

There are several key aspects and dimensions within the field of information management, e.g. the central role of information technology, information policies, and information standards, but the most frequent dimension that was encountered in the literature review is the perspective of viewing information as a (strategic) resource.

Choo (2002) states *“information is the organization’s strategic resource”* (xiii). Detlor (2010) follows this perspective by stressing that the view and treatment of information as a strategic resource is fundamental to information management. The perspective is shared by a wide range of researchers, e.g. Caudle (1996) who ask how we best can manage our information resources, Reponen (1993) who suggests that IM strategy provides a set of guidelines for directing, implementing and supervising information resource management, Karim & Hussein (2008) who view IM as a discipline that analyses information as an organizational resource, as well as Ogiela (2015) and Galbreath (2005) amongst others.

But what does that mean for information management in relation to SIM? Is information management essentially the management of this one resource, i.e. information? Detlor (2010) seems to believe it is. Furthermore he suggests that information needs to be managed like any other critical organizational resource, e.g. people, equipment, and investments.

Choo (2002) does not completely agree with this perspective. Information is viewed as a strategic resource, but it not viewed to be 'just like any other'. *"Information is more than just another factor of production. Information is the resource that enables the effective combination and utilization of the other factors of production – it is, in effect, the meta-resource that coordinates the mobilization of the other assets in order for the organization to perform"* (xiii). Before information can become a strategic resource it must be transformed into knowledge that can guide action. The transformation of information is the end goal of information management (Choo, 2002).

So, there appears to be some disagreement as to which type of resource information is among researchers, but most of them share the overall view that it *is* a resource.

This perspective conflicts with the one that is adopted in this review. Following McKinney & Yoos' (2010) adaption view, information is viewed not as a resource but as perception. In this view it is stressed that information is not a commodity. Then the question is whether perception can be seen as a resource? Zijlker (1986) states *"every simplification whereby information is regarded as an ordinary resource is therefore bound to fail. Information flows in any intercourse between people; it is not, nor can it be, excessive"* (p. 212). This perspective corresponds well with the adaption view and implies that within strategic information management, information should not be viewed as a strategic resource as information cannot be restrained to just that, as it does not correspond with the definition of information.

#### *Towards strategic information management?*

Strategic information management is not understood or achieved by placing the idea of strategy in front of the existing dimensions and perspectives of information management. Despite its apparent close relation, it is not that simple. Strategic information management is more than the application of strategic managerial practices to the process-view of information management.

There are some significant implications associated with information management in the context of developing and understanding a conceptualisation of strategic information management. Similar to the sections above, there is a tendency to implying a 'magical' process that leads to improved performance and competitive advantage. In order to get closer to understanding the 'magic', I suggest shifting or adjusting some perspectives of IM in relation to strategic information management.

There is a need to move beyond resource management, to shift perspective from viewing information as a strategic resource to something that corresponds better with the adaption view.



That creates a whole new range of opportunities, issues, premises, and implications, which could hopefully help address and explain aspects that information management currently cannot. For example, how do you manage perception, when information is defined as such? Many researchers also refer to information quality (e.g. Karim & Hussein, 2008), but what is high quality information when it depends on perception?

While significant questions arise due to the shift, so do new possibilities to examine and explain them. By shifting perspective and focus, a new dimension and understanding of the emerging concept of strategic information management is created.

### *Information management, information systems strategy, and information technology*

It is relevant to further elaborate on an implication that has addressed in this section. There appears to be a tendency of misperception or confusion between some researchers in regards to the meaning and application of the three concepts I have addressed in the second circle of the conceptualisation model.

As seen in the reviewed literature within the fields of information technology and information systems strategy, and now also information management, the terms are at times used interchangeably or confused with each other. Since researchers sometimes introduce concepts without sufficient definitions, the tendency is promoted, which works as a self-fulfilling prophecy.

Middleton (2007) recognise the issue and states that the concept of information management is clouded by the many interpretations of the word. *“The term may be used to represent the management of IT, information systems management, or management information systems, and may also be confused with the more recent catchphrase knowledge management”* (Middleton, 2007, p. 12). Furthermore, the concepts constantly shift from standing alone to encompassing one another in some way, e.g. as seen in Ragu-Nathan et al. (2001) three-level framework where information management falls under the wider IS strategy.

Following in these lines, the role of information technology is not consistent in the reviewed research. Detlor (2010) addresses the confusion between information management and information technology and how they are often used indiscriminately to convey the same thing, same as with ISS. It thus becomes unclear what role information technology plays in the field, whether it is a means or an end or the same thing as e.g. information management or information systems strategy. Thereby it becomes unclear whether information management and IS strategy can even exist without IT or if they are dependent on it. It is probably not even possible to discuss information

management or information systems strategy without information technology, but a distinction must be kept in mind.

The implication of these fuzzy or absent definitions and distinctions is that researchers and managers do not know what they are researching or managing. Successful outcomes can thereby end up being circumstantial, happy accidents that no one really knows how were achieved.

Finally, it appears that researchers apply and misuse the concept of strategic information management in a similar manner as with the concepts of information management, information technology, and information systems strategy. Often the concept is used in a situation where one of the three others should be applied, other times it is used in the research title and then not really mentioned again. One thing is evident, a holistic, clarifying, clear definition is much needed. The following sections will attempt to bring us closer to this by introducing additional approaches.

### **4.3 Information use and behaviours**

The topics covered in the second circle represent a large portion of the reviewed literature. Each topic represents a research domain and concept in its own right with its own perspectives and approaches. However, the review also revealed a tendency to use these concepts interchangeably and to confuse them with each other, which can have significant implications for both researchers and managers, as it is not really known what is being studied.

Furthermore the review thus far suggest that there lacks clarification and understanding of how information technology, information systems strategy, and information management actually improve business performance and create competitive advantage in practice. I have addressed this as some sort of ‘magical’ process that is not explicitly clarified in the research. It can be part of the reason why the positive results presented in the literature indicating a link between e.g. IS strategy and competitive advantage is not transferred from the research to the actual organizations (Ward, 2012, Buhl et al., 2012).

This section will address some other dimensions and notions that have appeared in the literature and is thus worth considering when researching and discussing strategic information management. Perhaps these can help uncover what happens in the ‘magical’ process and possibly contribute to the understanding of strategic information management.

Waema & Walshan (1990), who investigate information systems strategy formulation, highlight that information systems can be viewed as social systems and the formulation of IS strategy is as

social process. The process does not only depend on the technological features but also e.g. context and interpretations. It is noted that *“a snapshot of IS strategy formulation would have provided very little understanding of its complex and dynamic nature”* (Waema & Walsham, 1990, p. 37). A holistic approach is therefore needed to reach the competitive advantage that all organizations seek. The holistic approach must recognise that the process evolves constantly, new factors emerge and change, and social factors influence the outcome. Understanding is reached by analysing just one specific point in the process as it constantly changes, e.g. due to socio-political processes.

The goal of this section is to identify and address new dimensions that have not yet been covered, but that can play a key part in strategic information management. These especially include the ‘softer’, but by no means any less complex, dimensions such as information use and behaviour, culture, and power.

By uncovering these, we are moving closer towards an integrated understanding of strategic information management, as each layer adds to the conceptualisation

#### 4.3.1 Information use and behaviours in information management

In this section I will address some of the factors that researchers suggest can influence the process of information management. These factors evolve and change constantly, indicating that managers working with strategic information management cannot just take a snapshot of these factors in the organizational context and apply them to SIM. The understanding of these factors must constantly be reviewed and adjusted. This section suggests that information technology should not be the only factor that managers and researchers consider in strategic information management.

Georgiou & Makri’s (2015) study falls under the topic of information behaviour research. They find that most research on information management focuses on how people find information and unfortunately fails in investigating what people do with the information once it has been received, i.e. information use. They suggest that it is under-researched because information use is a complex aspect of information behaviour. The complexity arises because information use *“introduces new constraints, such as the scope and boundaries of the information considered ‘useful,’ the availability, the authority and credibility of the information and any time constraints in making use of the information”* (Georgiou & Makri, 2015, p. 472). However, complexity does not make it irrelevant to consider, on the contrary, it makes it all the more relevant.

A holistic approach to information use and behaviour must consider all aspects and notions in order to be relevant to an integrated understanding of strategic information management. It is as impractical to only focus on users' information seeking behaviours, as it is to focus strategic endeavours solely on technological features of a system.

Users seek and find information in order to use it in some way, which in turn can shape future seeking. Applying the adaption view on information to this, information only exists when it makes a difference to the subject that leads to an adaption. That adaption could influence information seeking behaviour and so the spiral continues. Kim & Adler (2015) also find that perceived differences for the information user influence information behaviour. There is not one universal truth in information behaviour and use and while it makes the topic complex to understand, investigate, and manage, it can also help explain important aspects that other perspectives could not help explain. The adaption view explains why information is not universal. What is information for one person may not be for another, if that person does not perceive a difference that makes a difference. Once it has been established that information relies on, well *is*, perception, differences in information behaviour can begin to be understood better.

It is important to consider the notions in relation to each other rather than in isolation, as they are interdependent. It is therefore important to view information seeking in relation to information use and information behaviour in relation to the adaption view on information and so on. It is important, as it can help explain and uncover important factors that isolated perspectives do not consider.

#### 4.3.2 Information culture

The notion of information culture as an underlying aspect of information management is a topic that has received a lot of attention by researchers in the field. The information culture refers to "*the socially transmitted patterns of behaviours and values about the significance and use of information in an organization*" (Choo et al., 2006, p. 492). It is suggested that information culture is reflected in the organizational values, norms, and practices regarding information management and use and is deeply rooted in organizational culture and thus difficult to change. The notion of information culture falls under the more social perspective of information, as it is socially transmitted and thus provides another dimension than the often very technical perspective in literature.

Choo et al. (2006) propose six information behaviours to help understand an organization's information culture. These include information integrity, formality, control, sharing, transparency,

and proactiveness. Combined, these six behaviours are suggested to help create an image of an organization's information culture. A typology of information cultures has been developed to help analyse and understand an organization's information culture (Choo, 2013, Vick, Nagano, & Popadiuk, 2015).

Researchers indicate that an understanding of the information culture of an organization can help explain how information is viewed, used, and managed (Choo et al., 2006, Brown & Starkey, 1994, Sundqvist & Svärd, 2016).

If the adaption view is applied to this, information culture can influence perception, i.e. what users perceive to make a difference for them. Perception leads to adaption and differences in information culture might help explain why two users perceive a situation differently. Perception determines what is information according to the adaption view and information culture can help understand or predict this perception that could otherwise prove hard to identify. An understanding of the underlying information culture could therefore be a very useful insight in the strategic information management process.

However, understanding information culture is simple. As Sundqvist & Svärd (2016) point out, information culture *"is used as a generic concept to capture a complex field of relationships between phenomena difficult to pinpoint, as values, norms, atavistic ideas and behaviour etc."* (p. 14). Similar to the other concepts addressed in this paper, the authors state there is fuzziness adherent to the concept and its applications and approaches leading to confusion. Furthermore, information culture can be as hard to understand and analyse as the phenomenon it should help characterise, i.e. information management. So by analysing information culture in order to better understand and address information management, researchers risk running in to similar issues. How do you evaluate information culture? If it is assumed that there is a positive correlation between information culture and performance, it can become necessary to establish criteria of assessment, i.e. define good versus bad cultures (Sundqvist & Svärd, 2016). Such a scale can easily become too narrow or one-dimensional and unable to capture all characteristics relevant to understand and assess culture.

So, while information culture adds another important layer to understanding information use and management, it can also lead to issues if it is indicated that there is a recipe for a universally 'good' information culture. Information culture might appear to be the answer to the question of how to understand complicated dimensions such as information behaviour and how users and organizations view and manage information, but researchers and managers must proceed with caution. As it

revolves around such complex phenomena, it is to be expected that information culture itself cannot be boiled down to something easily observable, nor can it be evaluated on a scale from good to bad. Many complicated dimensions interplay with each other and it is worth noting that while information culture can help uncover users' perception, perception also shape information culture. Information culture could be seen as the foundation on which an organization builds its strategic information management, but it must be noted that there is no clear step-by-step guide for how such a culture should be developed, understood, and managed.

#### 4.3.3 Information power and politics

*"Information is not innocent"* (Davenport, Eccles, & Prusak, 1992). This is the statement Davenport et al. (1992) begin their literature on information politics with.

As the role of information in the organization continues to grow and evolve, information has gained political power (Davenport et al., 1992, Galliers & Leidner, 2003, Waema & Walsham, 1990, Curry & Stancich, 2000). According to Choo et al. (2006), *"information politics arises from the distribution of the power that information bestows and the governance modes for its management and use"* (pp. 492-493).

This introduces a new range of considerations has entered the organization, such as who owns information. Gatekeepers of information become powerful people (Galliers & Leidner, 2003), and information systems effectively have an influence on the distribution of power as a consequence of their impact on information and its distribution (Waema & Walsham, 1990). Some managers hold positions of power within the organization as a result. Information politics can also influence people's willingness to share information if they e.g. feel they will lose power or position as a result of it. This indicates that information cannot be viewed as something that is neutral, which corresponds well with the adaption view and perception. The potential political power of information can create ripple effects throughout the organization and influence the emerging strategic information management. It is therefore important for researchers and managers to consider the potential effects information politics can play in this context as well as the implications it can have on strategic information management.

#### 4.3.4 Knowledge management

The final aspect I will address in this section is the concept of knowledge management. Knowledge management has close ties with information management, as the two concepts are often seen in

relation to each other, where information management enables knowledge management (Kruger & Johnson, 2010). The definition of knowledge management is also closely related to and inspired by the definition and understanding of information management. There has been a growing interest in knowledge management as a strategic weapon to ensure a competitive advantage. Researchers claim that knowledge management plays a fundamental role in the success of an organization's activities and strategies (Castrogiovanni, Ribeiro-Soriano, Mas-Tur, & Roig-Tierno, 2016), and if it is not considered, important business opportunities might be missed.

Knowledge management is referred to in the context of culture, structure, and strategy, and its creation and use depend on the values and norms of the organization (Castrogiovanni et al., 2016, Biron & Hanuka, 2015). This perspective is obviously very similar to information management, and the two concepts also fall victim to the reoccurring tendency to use terms practically interchangeably. If they are considered separately in literature, a common classification is that data is transformed into information and information is in turn transformed into knowledge (Kruger & Johnson, 2010, Akhbar, Chang, Yao, & Muñoz, 2016).

It seems that researchers are beginning to move beyond information management towards knowledge management, however following very similar line of thought and mentality (Calvo-Mora, Navarro-García, & Periañez-Cristobal, 2015). Many of the same issues and challenges that are presented and investigated in the field of information management are applied in the field of knowledge management. The main difference is that it operates in a higher level, where knowledge is the result of applied information, information that has been transformed into knowledge, which is often tacit and difficult access and manage (Mezghani, Exposito, & Drira, 2016).

McKinney & Yoos (2010) view knowledge as the opposite of information. For information to be something that makes a difference, it has to be new to the users, which consequently means that it is not something you already know, creating new aspects consider in regards to knowledge management.

Considering the substantial amount of research that has been done within this field as well as the close relation to information management, it appears that knowledge management can relate to strategic information management. However, as knowledge management stems from information management more than the other way around, I would suggest researchers and managers to remain focus on information management and the related issues and challenges before shifting focus on towards knowledge and knowledge management. Successful management of information is a

necessary prerequisite to knowledge management, and it is important for organizations to effectively understand and manage their information before moving on to tackling knowledge. However, as knowledge is so closely related to information, the integrated model of strategic information management must consider it as well in order to have a holistic approach that are relevant for the future as well.

As this section reveals, there are many essential and more specific dimensions to information and its use to consider that goes beyond IS strategy and information management. These dimensions can all influence strategic information management and must therefore be integrated into the conceptualisation model to ensure that they are not overlooked.

Strategic information management will benefit from recognising and addressing these aspects, as they can have implications for the potential success or failure of its outcome. However, the complex nature of each phenomenon and their interdependencies make it impossible to provide a clear, one-size-fits-all recipe for successful strategic information management. It is important for researchers and managers to understand that that is not a realistic outcome of a holistic, comprehensive, integrated framework of strategic information management. Instead, it can help recognise the role of these factors and their interdependencies in order to understand how their specific organization should tackle strategic information management.

#### **4.4 Business strategy**

The fourth and final circle of the model that I will address in this analysis revolves around business strategy. Here the link between strategic information management and the organizational business strategy is considered and addressed. I have touched upon this dimension of the concept earlier on, but this section will elaborate on it further by addressing a number of issues and topics that was revealed in the literature review.

The concepts and topics outlined above are often put into perspective by researchers when they relate them to a wider strategic context. That is for example the case when researchers state that e.g. IS strategy or information management can result in competitive advantages, improved business performance, and fulfilled strategic goals. Here the specific information-focused perspectives are seen in a wider business context and their role and relevance for business managers and the organization as a whole is stressed. However, how these perspectives and dimensions more



specifically should be seen in relation to the wider strategic business context has not yet been addressed.

In this section I will address this gap by linking the phenomena that has been encompassed and integrated in the conceptualisation of strategic information management thus far with business strategy. I will attempt to examine how strategic information management should and could interact with business strategy, because they are not one and the same thing. Rather they influence, interact, and shape with each other. Consequently, this section will focus more on strategy and strategic management and practices than has been the case thus far.

#### 4.4.1 Deliberate and emergent strategies and strategy-as-practice

First and foremost I will build on the perspective that was addressed in the section on information systems strategy, viewing strategy-as-practice (Henfridsson & Lind, 2014), i.e. strategizing as a continuous process. It involves in a shift in focus from the strategy contents to the strategy process that could be very relevant for SIM.

Strategy-as-practice considers realised strategy to be the result of both deliberate and emergent patterns of action. This perspective is not specific to IS strategizing. Mintzberg et al. (1998) also introduce the notions of intended, emergent, and realised strategies, suggesting that interplay between deliberate and emergent strategies happens on all levels of strategizing. So to understand the realised strategy, researchers and managers must include not only the deliberate, planned strategy, but also the more unstructured and unplanned emergent patterns of actions that can arise as reactions to changes or unpredicted events. Strategy-as-practice encompass this phenomenon by not focusing on *what* strategic decisions are taken but instead on *how* a strategy emerges.

While many researchers focus on the deliberate strategy and adopts the content-based view rather than strategy-as-practice (Henfridsson & Lind, 2014), the perspective outlined above, where local initiatives triumph over carefully planned initiatives, have been addressed by e.g. Mintzberg & McHugh (1985), Mintzberg (1996), and Henfriedsson & Lind (2014).

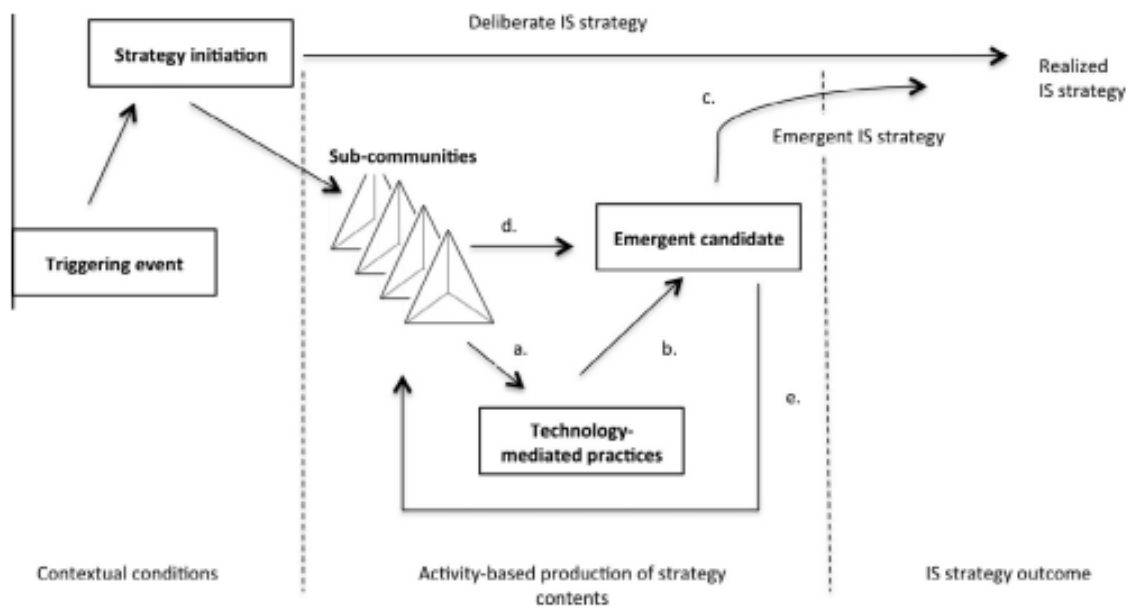
Henfriedsson & Lind (2014) focus their research specifically on IS strategizing. However, I will address their research and the resulting process model in this section, as I believe it can be applied to the concept of strategic information management as well. It could possibly be a useful tool to address and understand the interplay between SIM and the overall business strategy, as proposed by the conceptualisation.

Henfriadsson & Lind (2014) focus on the formation of emergent strategies that build on local practices. They investigate how multiple organizational sub-communities, i.e. a group of actors who share interests in a particular domain of activity in the organization, can realise the contents of a strategy. For that purpose they introduce the notion of activity systems to strategizing. Strategizing is seen as the goal-directed activity intended to realise the strategy, and it is seen as the interaction between the sub-community, the organizational community and the emergent strategy that was unintended at the initiation of the strategy. In shaping and realising the strategy, the actors in the activity system draw on the specific set of routines, norms, and beliefs of that sub-community and their particular practice, e.g. one that is technology-mediated. The actors thereby provide emergent strategic content that originates from their practices and a new range of actors can serve as strategy practitioners, actors who may not have a voice in the deliberate strategy formulation process.

This way, the realised strategy is not only the result of the deliberate decisions and plans made by a narrow number of managers. Instead it exploits diversity of perspective and incorporates the learning and actual experiences made after the original strategy was developed. By ‘inviting’ the actors of the sub-communities into the strategizing activity, an important group can suddenly contribute to the emergent strategy. According to Henfriadsson & Lind (2014), this can lead to new opportunities for collaboration between groups that normally would not collaborate and also create the provide a breeding ground for new innovations.

The activity model of the sub-communities, the notion of strategy-as-practice, and the interplay between deliberate and emergent patterns of action that result in the realised strategy have been captured in Henfriadsson & Lind’s (2014) process model. It can be seen in model 4.4.1.

The model incorporates the contextual conditions in which a triggering event leads to strategy initiation. Regardless of whether the initiation is reactive or proactive, it is a deliberate process most often undertaken by the top management of the organization. In the activity-based production of strategy contents, the strategy is acted upon and interpreted by the actors of the sub-community as they draw on their local resources and practices in appropriating it. This is a dynamic pattern of actions to realise the emergent candidate to contribute to the emergent strategy. The other sub-communities do not always support the candidate to contribute to the strategy and there is a feedback loop here between the sub-communities and their candidates. The strategy outcome is the realised strategy that synthesise the deliberate and emergent strategy.



Model 4.4.1 The Process Model (Henfridsson & Lind, 2014)

Henfridsson and Lind (2014) provide a clear summary of the process and how the outcome is reached:

*“Such an outcome can be appreciated by investigating the production of strategy contents by sub-communities. Essentially, the strategy is initiated as a result of some kind of triggering event perceived by managers with the power to formulate strategy. The initial strategy formulation serves as a call to the organizational community to enact the strategy, as well as producing the strategy contents that would develop the strategy further. As sub-communities approach the deliberate strategy, they draw on their technology-mediated practices. This might generate candidates for emergent strategy, which even if unsupported for the time being may be iterated over time on a local level. In some cases, joint problem spaces are created, as two-sub-communities recognize common grounds for activity that might feed contents into the strategy process”* (p 25).

While the process model is developed for IS strategizing, but I suggest that it can be applied to other aspects of strategizing as well, and that it is particularly relevant to strategic information management. A few alterations of the model are needed for it to be applicable to SIM. The ‘information systems’ strategy specific terms must be adjusted to merely strategy and strategizing. The idea of specifically technology-mediated practices can be adjusted to simply practices, thus incorporating a wider range of sub-community specific practices. The sub-communities must refer

to sub-communities within the organization as a whole and can include all types instead of IS specific communities and actors.

To apply the process model to the concept of strategic information management, a clear and fully developed understanding of what the concept integrates and means is of course a necessary prerequisite.

A triggering event, e.g. the finished development and understanding of the concept of strategic information management and its role to an organization, will lead to strategy initiation. Hereafter sub-communities, e.g. the organization's information systems and information management workers among others, will engage in the activity-based production of strategy content by drawing in their (technology-mediated) practices. This activity is influenced by their unique information behaviour and culture. Emergent candidates will arise and be subject to feedback among the communities. This process can result "*in the birth of new practices that span sub-communities*" (Henfriedsson & Lind, 2014, p. 25). Finally, the deliberate and emergent strategies, developed at several levels and communities within the organization, will result in a realised strategic information management strategy that has incorporated many of the perspectives of the conceptualisation model.

Furthermore, the process model can be applied to the overall business strategizing. In this process, actors working with strategic information management can be seen as belonging to their own sub-community that, along with many others, can interact and contribute to the emergent business strategies for the whole organization. The interaction and feedback between the sub-communities could potentially lead to the creation of new problem spaces or practices. As I have argued throughout, strategic information management is shaped by a variety of dimensions and perhaps this interaction could reveal new and undiscovered aspects and practices.

Thus, I conclude that the process model could not only explain the process of IS strategizing, but applied to both SIM and business strategizing it could potentially reveal new dimensions and practices for the field to consider.

#### 4.4.2 Strategic alignment

The topic of strategic alignment has been addressed previously in the section on information systems strategy. However, the review reveals that a bulk of the literature address this perspective,

not only in relation to IS strategy, but also e.g. information management or information technology. It stresses the importance of aligning the specific approach with the overall business strategy.

I have already addressed alignment in relation to information systems strategy as suggested by e.g. Ragu-Nathan et al. (2001), Levy & Powell (2000), Tozer (1986), and Croteau & Bergeron (2001). There is not much difference in the fundamental line of thought outlined earlier, whether it revolves around aligning IS strategy, IT strategy, or IM strategy etc. Consequently, it is assumed that the notion on strategy alignment is applicable to strategic information management in relation to business strategy as well.

Several other researchers, including Atkins (1994) and Rivard et al. (2006), address the issue in a similar way, highlighting the need to align e.g. IS strategy with business strategy to ensure competitive advantage and improved performance. Misalignment can lead to inconsistencies between the strategies and it can mean that one strategy undermines the other, leading to decreased organizational performance and thus making e.g. IS or IM a competitive burden (Ragu-Nathan et al., 2001). This indicates how the strategies can shape and influence each other.

In order to successfully align a specific strategy with the organizational strategy, an understanding of that strategy is needed. Therefore, researchers and managers must consider the organizational strategy when working with the specific strategies and perspectives that fall under that.

A conflicting, or at least challenging perspective is proposed by Baets (1992). He challenges how the link between IS strategy and business strategy is established in practice, arguing *“corporate strategy is either unknown or unadaptable once it is fixed. It argues, therefore, that ex post IS alignment will seldom be a success”* (p. 205)

Henfriedsson & Lind (2014) also challenge the notion of classic alignment as a consequence of the increasingly pervasive digital infrastructures in the organizations. Instead, they suggest the practice-turn and develop the process model addressed in the previous section. The practice-turn can be related not only to strategy and strategizing, but also the move away from alignment as a content view towards a practice approach with the process model. The model represent an updated take on alignment and takes it to a new level with a more holistic and integrated approach. Here alignment takes place in the activity-based production of strategy contents within sub-communities. It also incorporates Croteau & Bergeron’s (2001) notion that strategies influence each other and are interdependent.

It is thus suggested that the process model cannot only be used to investigate the interplay of deliberate, emergent, and realised strategy on several levels within the organization, it also provides an updated take on alignment. The revised model can thus prove to be a helpful tool for researchers and managers within the field of both strategic information management and strategic management, provided that they follow the shift from content-based to practice-based view. This shift is thus a key perspective in the conceptualisation model.

#### 4.4.3. Approaches to business strategy

There are many approaches to formulating and implementing a business strategy that provide the organization with a plan of action intended to ensure competitive advantage and improved performance.

Following the alignment approach, an understanding of an organization's business strategy and its implications are crucial to avoid misalignment of strategies and the risk of them mutually undermining each other (Ragu-Nathan et al., 2001).

There are many approaches organizations can apply towards strategy that can help guide them to competitive advantage and improved performance. A popular approach is the resource-based view of the firm that is built on the perspective that an organization's success is determined by the resources it owns and controls, often referred to as assets or capabilities (Mintzberg et al., 1998, Galbreath, 2005). It is this view that has led to the perspective of viewing information as a resource or capability, which I have addressed earlier. It shows how the strategic approaches to e.g. information management or information systems originate from theories of business strategy, emphasising their link and interdependencies. However, as mentioned in the section regarding information as a resource, I propose that strategic information management moves beyond resource management towards a practice perspective following Henfriesson & Lind (2014).

Business strategy as a whole could also benefit from the shift in focus. It could potentially be counterproductive if the strategic information management of the organization views information as more than a mere resource, while the organization and business strategy do not recognise and respect that dimension and its possible implications. Therefore a shift from the resource-based view in regards to information could lead to a redefinition or adjustment to the resource-based view of the organization.

As information is often at the basis of any decision and activity in the organization, an adjustment in how information is approached and viewed would mean an adjustment in all aspects of business

strategy. This could possibly be achieved through the perspective of organizational learning, which Crossan & Berdrow (2003) apply to the concept of strategic renewal. Organizational learning also follows the process perspective and is therefore compatible with the process model (Henfridsson & Lind, 2014) and the shift in perspective. The need for a bottom-up approach to strategy is also recognised by e.g. Littler, Aisthorpe, Hudson, & Keasey (2000) and Broady-Preston & Hayward (1998). They suggest that information guide strategy development and propose the tool of the balanced scorecard to bring together this information.

Generally it seems that researchers in a wider extent recognise the need for a bottom-up approach to strategy, viewing strategy-as-practice and a result of not only deliberate, but also emergent patterns of action. This perspective plays a key role in the proposed conceptualisation of strategic information management and it is thus important that it is recognised by researchers and managers at both the strategic information management level but also the organizational level.

#### 4.4.4 From a rational to a behavioural approach

Many researchers agree that information is a crucial factor in strategic decision-making activities. Citroen (2011) investigate the role of information in strategic decision-making by applying a rational approach. *“In a rational decision-making process, executives reach strategic decisions without a prejudiced opinion about the eventual decision and only after a structured process of careful consideration of circumstances, alternative lines of thought and consequences of the decision made”* (Citroen, 2011, p. 493).

However, this notion of the manager as a rational agent engaging in a rational decision-making process without prejudgement does not correspond with the approach towards strategic information management that have been developed thus far.

The rational approach is challenged by the behavioural theory of the firm (Cyert & March, 1963 in Gavetti, Greve, Levinthal, & Ocasio, 2012). It builds on Simon’s (1947 in Gavetti et al., 2012) notion of limits of rationality, i.e. cognitive limits, and the concept of bounded rationality, which conflicts with the idea of a rational agent. Bounded rationality leads to bounded flexibility, as not all options are considered when making decisions.

The behavioural theory of the firm is based on four relational concepts: 1) quasi-resolution of conflict, 2) uncertainty avoidance, 3) problemistic search, and 4) organizational learning (Gavetti et al., 2012).

Mendelson & Pillai (1999) apply the notion of bounded rationality to the concept of ‘Information Age’ organizations, suggesting that researchers in the field recognise its potential value to address issues in a different way than e.g. Citroen (2011) in the current business context.

Moving towards a behavioural approach to decision-making involves considering multiple actors with multiple objectives who interact in a negotiation process rather than following one optimal way. This can again be integrated into Henfriedsson & Lind’s (2014) process model, where the actors in the sub-communities interact in a feedback loop with other communities to support or reject emergent candidates that influence the realised strategy.

The nature of the negotiation process means that decisions are political. This corresponds with the suggestion that information is power and politics as addressed above.

Furthermore, the behavioural theory of the firm corresponds well with the adaption view of information. The notion of bounded rationality and its impact on the decision-making process fits with McKinney & Yoos’ (2010) viewpoint that state *“an individual can never be completely informed, as many differences go unnoticed”* (p. 337).

I therefore conclude that the idea of a rational actor who engages in rational decision-making does not correspond with the integrated concept of strategic information management I have promoted thus far. The process and practice of strategic information management and the actors involved cannot be seen as completely rational. That is a too naïve and idealistic perspective that is unlikely to be applicable to the actual situation. Instead we must apply the notions of the behavioural theory of the firm in order to understand and consider the actual situation.

The interdependencies and interactions between the dimensions of the conceptualisation model of strategic information management begin to take form now, particularly promoted by the shifts in perspectives and the adjusted process model.

#### 4.4.5 Environment

A final consideration I will address here is the environment in which the organization operates. The concept does not actually belong in the fourth circle of the conceptualisation model, as the environment surrounds and encompass it. However, I will address it in this section in close relation to business strategy.

It is widely agreed upon that strategy concerns both the organization and its environment, as the organization uses strategy to deal with the changing environment that surrounds them (Mintzberg et



al., 1998). The success of a strategy is thus also dependent upon the capability to respond to changes in the environment. The notion of the changing environment has a great impact on strategies and the process of strategizing. As environments change and destabilise, new opportunities and threats appear and the established strategy can become a liability (Mintzberg et al., 1998, Hidding, 2001). Mintzberg et al. (1998) state that that is why so much research on strategy focuses on change even though the concept of strategy is rooted in stability.

Wang et al. (2015) refer to organizations as open systems that can be influenced by environmental changes, and du Toit (2016) suggest that when organizations scan the environment, it enables them to react to uncertainties and improve their competitive position. It is therefore stated that effective strategic management can only be achieved if the organization conducts environmental scanning. The notion of environment scanning in some ways forms the basis for the significance of information management, which Choo (2002) refer to as the art of scanning the environment. As the environments in which the organizations operate are becoming increasingly complex and unpredictable, the potential value of information management thus increases (Soto-Acosta, Placer-Maruri, & Perez-Gonzalez, 2016).

The role of environment in the context of strategy and strategizing cannot be denied. The organization must be able to react to changes in the environment in order to achieve and maintain a competitive advantage. Mendelson & Pillai (1999) suggest that not only can the organization adapt to the changing environment, it can also sometimes change the environment itself.

The significant impact that environments have on organizations and strategies also means that there can be no one-size-fits-all strategy, as it not only depends on the organization but also the environment in which it operates. A dynamic and fast-changing environment will call for other strategic management practices than a more stable environment. In more dynamic environments, Mendelson & Pillai (1999) stress that that the processes of iteration, feedback, and 'learning by doing' play a more significant role. The notions of iteration, feedback, and 'learning by doing' again connect well with Henfriedsson & Lind's (2014) process model and the activities that take place in the production of strategy contents where the different sub-communities interact in the feedback loop.

I will conclude this section by proposing that the process model appears to be able to take a

potentially key position in the conceptualisation of strategic information management. The model successfully incorporates and integrates the perspectives and dimensions put forward not only in this section, but the others as well and provide a framework for understanding the process of strategic information management. I will discuss its potential role in an integrated conceptualisation of strategic information management further in the following section.

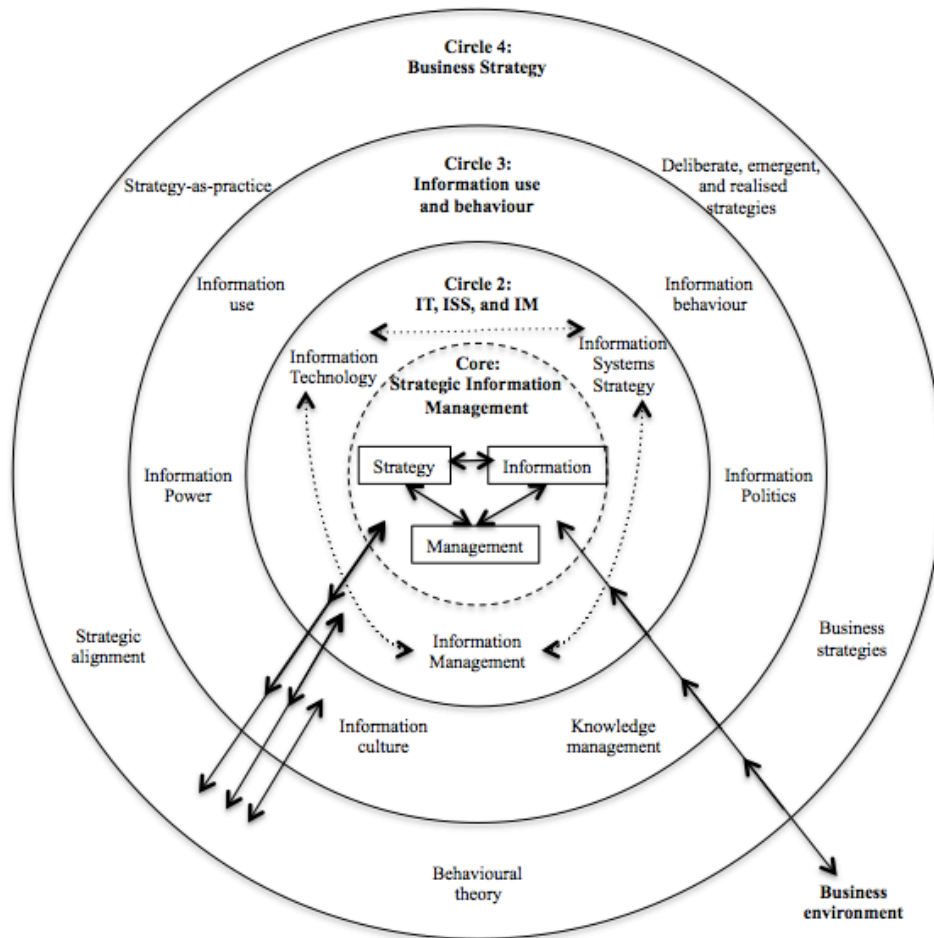
## **5 Discussion**

### **5.1 Strategic information management – what, how, and why now?**

The sections above have guided us through the results of the literature review and presented key concepts and perspectives that have the potential to shape and develop the concept of strategic information management. The real value lies not in the individual concept but in their interaction and how they mutually shape and influence each other as well as strategic information management. It is the art of synthesising the different views and perspectives that needs to be applied to reach a comprehensive and integrated understanding of strategic information management. As Mintzberg et al. (1998) state *“the field of strategic management needs to be opened up, not closed down; it needs reconciliation among its many different tendencies, not the isolation of each”* (ix). This perspective can also be applied to strategic information management. To reach an understanding of what strategic information management is, the concept must be opened up and all its perspectives and dimensions must be considered in relation to each other rather than zooming in on just one.

There is a tendency in literature to view or rather refer to strategic information management as what is essentially the same as e.g. information systems strategy, information management strategy, or information technology strategy. That leads to confusion as to what is really meant by strategic information management and questions its role as a new and integrated concept that encompass more perspectives. In order for the concept to really gain momentum, there is a need for clear definitions and distinctions of the various concepts to avoid confusion.

To help address what strategic information management is and how it works, I will again turn the conceptualisation model presented at the outset of this review. The model is intended to serve as a guide on the quest towards understanding SIM. It encompasses the various perspectives and dimensions introduced in this paper and outlines how they link together in the greater scheme of strategic information management.



Model 5.1 – Conceptualisation of strategic information management

At the core we find the three concepts that combined make up the term ‘strategic information management’. A clear understanding of these concepts lies at the centre of the conceptualisation. The additional circles and their ‘content’ cannot be addressed without contemplating the core and subsequent circles. However, at the other way around, the core cannot be seen in a strategic information management context without also considering the additional circles. They are mutually inclusive and one cannot be seen without the others, at least not in the context of SIM.

A key development that occurred through the addition of more and more dimensions was the practice turn. This shift in perspective can be the main contributor to strategic information management entry onto researchers and managers’ agenda. The shift from a content or resource-based approach to a practice-based approach introduced implications as well as new opportunities

and insight that can help explain phenomena that has not been addressed sufficiently previously. The shift in perspective could potentially contribute to further uncovering the ‘magical’ process in which information lead to competitive advantage and improved business performance. Furthermore, a shift in perspective can be what is needed for the positive results found by researchers to be reflected in the actual organizational context (Ward, 2012, Buhl et al., 2012).

The practice approach also support the adaption view on information in a higher degree than the resource-based view, and it introduces new ways as to how to understand and manage information as perception. The perspective thereby represents a key dimension that characterise the concept of strategic information management and distinguish it from other players in the field.

Additionally, it is suggested that strategic information management should incorporate yet another shift in perspective, i.e. the shift from a rational approach to a behavioural approach that recognise the effects bounded rationality can have on decision-making and strategizing.

I propose that it is especially these two shifts that characterise and distinguish the strategic information management concept, making it a force to be reckoned with. It could strongly influence strategic information management’s entry and possible domination to both the field of research and the organization. Without these perspectives, strategic information management could risk not being able to address and absorb its many dimensions and the issues it is intended to, making its potential relevance and influence non-existent.

Combined, these two shifts in perspective effectively tie the many dimensions together, making the conceptualisation of strategic information management a comprehensive and integrated approach that addresses a gap in practice where the existing concepts and approaches may not suffice.

Strategic information management is thus the integrated, practice-based, behavioural approach to strategizing information management and the dimensions it encompasses. How it works will be discussed later.

In addition to addressing what SIM is and how it works, I ask the question ‘why now?’. Why is strategic information management relevant to research and organizations now? As the literature review revealed, there already exists a wide range of strategies and approaches towards strategic management, both in terms of the overall business strategy and more specific strategies regarding e.g. information management. Why is that not sufficient? Why should researchers and more importantly managers care about one more?

The motivation and foundation of strategic information management originates from tendencies and

activities in both research and organizations. These indicated the need for a new or revised approach that addresses a perceived gap in understanding and approach.

It is suggested that the existing literature and research done in the field of information systems strategy and information management does not successfully address the new reality in which organizations operate. Information plays a continuously bigger and more crucial role for organizations, while becoming more complex to understand and manage within the current frameworks.

Researchers and managers need to recognise that there is a need for a new and contemporary understanding of information management that can help organizations tackle the new issues they face in the ever-changing environment. It seems that the current view of information as a strategic resource does not suffice and that managers have been equipped with an incomplete tool kit.

That indicates that there is a perceived request for a new approach, a new concept that encompasses both existing and new perspectives in a new, integrated way, adding further dimension and insight to the issue. A concept that takes a new point of view by seeing information not as a resource but as something more than that, despite the complex and difficult issues it might pose.

This is where the concept of strategic information management comes into play as a new approach to the range of issues companies face both now and in the future. The conceptualisation is thus introduced to provide managers with a more complete tool kit to help explain the issues and implications they face in a new, holistic way that could possibly yield new insight.

The alternative way of conceiving strategy, where focus is shifted from the content to the actual activity of strategizing, leads to a different focus. A point of view that addresses another range of dimensions, e.g. what people actually do in their work to strategize, how they adapt, learn, and negotiate the meaning of information throughout the process. Strategic information management attempts to understand and manage how micro-level information practices link to higher-level strategic practices in the organization by addressing the process in which they link together. A link that existing approaches on the field have not successfully been able to address and explain.

The concept does not provide readymade answers to all questions and issues that can arise when organizations attempt to strategically manage information, instead it provides organizations with the necessary equipment to address strategic information management in a new way.

## 5.2 What is strategic information management not?

Another useful way of discussing and understanding the concept of strategic information management is by asking what strategic information management is not. That question might bring us even closer to an understanding of the concept than simply asking what it is.

The literature review introduced one persistent issue that was present throughout the whole process. That issue is the lack of or fuzzy definitions that can lead to confusion and mix-ups. The insufficient and unclear definitions have fundamental implications for not only SIM, but also the existing research domains such as IS strategy, information management, and information technology.

There is a clear tendency within these domains to use the various concepts interchangeably and to address especially information and information technology as the unspecified, all-purpose solution to an infinite variety of problem. That is for example how information technology often becomes synonymous with IS and information management, as well as the unchallenged golden solution to all imaginable issues. However, this tendency has a wide range of implications in both literature and practice, and as McKinney & Yoos (2010) state: “*without defining what we are talking about, we can hardly know it*” (p. 329). An organization that has a clear IS strategy, does not necessarily have an information management strategy despite the fact that they might think so because they equate IS with IM.

Clear definitions and distinctions of the concepts are needed, both within the existing domains and in regards to strategic information management. An increased focus on terminology could potentially have significant impact on the understandings of findings.

The confusion between the concepts and what they actually entails suggests the need for a new, embracing approach that successfully encompasses all three concepts and how they relate, while still stressing their differences. I suggest that strategic information management has the potential to do just that. However, in order to be successful, it must be stressed what strategic information management is not. It is not information systems strategy, information management, or information management strategy, nor is it information technology. But at the same time it is all of them – and more. Strategic information management involves the art of synthesising them. Researchers focusing too much on one dimension risk limiting their reach and not benefitting from the strength that rise from the integrated nature of the concept.

It is also important to emphasise that the existing usage of the term ‘strategic information management’ in literature often does not correspond with what is suggested here. Mostly it is used as a synonym to e.g. IS or IM and is seldom defined, making its role no more than a buzzword that can draw attention to the research. Currently strategic information management is used in research with no particular purpose or resolution, and does not include the dimensions and perspectives introduced in this paper. Potential researchers in the field of strategic information management must thus proceed with caution to avoid confusion or a restricted understanding of what SIM actually entails.

Another thing that strategic information management is *not* is a readymade, one-size-fits-all solution for organizations to simply apply to their organization and be done with it. At the same time it is not a specific or narrow solution that is relevant for only one small percentage of all organizations. The approach is not only applicable for large-scale, global, innovative, or information-intensive organizations. Its approach is inclusive, not exclusive and can be adapted for all kinds of organizations.

It still has many unanswered questions and a lot of work ahead of it, but it can and will never be one overall, finished solution that can ensure competitive advantage and organizational success. Organizations must apply the approach and its perspectives and adjust them according to their individual reality.

### **5.3 The process model of strategic information management?**

For the concept of strategic information management to really gain momentum with researchers and organizations and become more accessible, it could benefit from a framework or a model that illustrates the approach in a more comprehensive manner.

I suggest that Henfriedsson & Lind’s (2014) process model is a relevant candidate for such a model. I have already addressed its components and how the authors’ IS strategizing-specific model can be adjusted to strategic information management. It successfully incorporates many perspectives and dimensions of the concept including strategy-as-practice, and it can help illustrate how micro-level information practices (e.g. taking place in sub-communities) link to higher-level strategic intentions in the organization and how they result in a realised strategy. Furthermore, its feedback loop

addresses the shift from a rational to a behavioural approach, where information and decision-making is political.

I therefore propose that the process model have the potential to become a key framework and illustration of the concept. Future research done in the field of strategic information management could thus benefit from using it as a starting point.

#### **5.4 A concept for the present and the future**

What does the future hold for strategic information management? First and foremost is of course its prospective entry into both researchers' and organizations' agenda and its recognition as a force to be reckoned with.

However, there are other important considerations to be made to 'prepare' the concept for the future and ensure that it is sustainable and does not lose value if the organizational context or environment changes. As we live in the 'information age' (McKinney & Yoos, 2010, Mendelson & Pillai, 1999), characteristics such as fast changing, dynamic, and information-rich describe most organizational environments. New digital innovations and solutions are constantly introduced, bringing with them new opportunities and treats and new ways of doing business. Strategic information management must be able to absorb these conditions in order to be relevant not only now, but in the future as well.

New digital innovations lead to digital business strategies that are increasingly information-driven. Organizations often operate in business contexts with no physical end products, making the pressure on strategic information management all the more significant. Issues arising from e.g. online collaborations where it is the consumers that produce the content and information (Parameswaran & Whinston, 2007, Aaltonen & Kallinikos, 2013) must be understood and addressed by strategic information management in order to make it relevant for the digital organizations. Again, it could be possible to turn to the process model where the notion of sub-communities can incorporate consumers as sources of unique information and practices as a part of the activity-based production of strategy contents.

Digital business strategies introduce new ways of doing business and bring with them a new approach and understanding to strategies and the process of strategizing. I suggest that the conceptualisation of strategic information management provides an approach that is not only applicable to more traditional organizations but also the growing proportion of companies that are



becoming increasingly digital and information-intensive. The behavioural approach to strategic information management provide the perspective of bounded rationality and assumptions of negotiation and politics that are very relevant for organizations to consider when relying on consumers as the source of information and content. Organizations can easily become very vulnerable and strategic information management can help organizations address the issues and considerations that are relevant in that context.

I thus propose that strategic information management is prepared for the future as well as the present. It is a relevant and sustainable concept for the ever-changing, information-driven environment that characterise the current age, as it successfully absorbs a wide range of issues from the more traditional to those that are specific to digital innovations.

### **5.5 Towards strategic information management**

In the quest to uncover and understand the concept of strategic information management, I have sought to explore and understand the various dimensions and topics that make up the field in the sections above. The quest has taken us far and wide, through topics and issues such as information technology, systems, and management, information behaviour and culture, strategic alignment, and the behavioural theory of the firm. Throughout the review, tendencies have been identified, perspectives have been explored, issues have surfaced, and the topics have been related to each other as well as the evolving concept of strategic information management that has slowly taken form. But we are not there yet.

Mintzberg et al. (1998) use the metaphor of seeing the entire beast by starting with understanding its parts. The beast is certainly more than just the sum of its parts, but to comprehend the whole it is necessary to understand the parts. A similar approach has been applied in this paper. The objective to uncover and understand the concept of strategic information management can only be achieved by first understanding its parts. However, as Mintzberg et al. (1998) complete their safari without having seen the whole beast, so will I end the quest towards a finished, complete, and integrated conceptualisation of strategic information management without actually having reached it. Nevertheless, the first and crucial steps towards it have now been taken, and as Mintzberg et al. (1998) remind us: *“we shall never find it, never really see it all. But we can certainly see it better”* (p. 373).

## **6 Implications**

The result of this literature review has suffered under a too inclusive and unstructured approach to the search process of the review. Too many irrelevant or non-essential articles were included in the final review, resulting in the danger of information overload and identification of irrelevant topics and issues. Furthermore, as the search and collection process combined a variety of approaches that makes it difficult to replicate to test the outcomes. As a result hereof, the validity and reliability of the research method suffered, negatively influencing the result of this study. However, despite the wide-ranging topics and focal points of the literature, relevant issues were identified and addressed, making this paper a relevant foundation for further research and development in the field of strategic information management.

## **7 Conclusion**

It has long been well known and recognised that organizations are in need of an organizational strategy, i.e. a plan to guide action and help organizations reach their goals, achieve competitive advantage, and improve business performance. It has since become acknowledged that other aspects of organizational practices and features might need a specific strategy as well to address the unique strategic issues they face. The specific strategy must be aligned with the business strategy to avoid potentially damaging inconsistencies.

This paper proposed a potential gap in literature and practice that combines information management with strategic considerations in a new way to address the wide range of issues and possibilities information and its management face. This gap was addressed by introducing the concept of strategic information management as a holistic and integrated approach. The purpose of the paper was to understand what strategic information management is, how it works, and why it is relevant.

To develop an understanding and conceptualisation of strategic information management, this paper conducted a literature review. The purpose of the review was to analyse and synthesise the different perspectives and dimensions of the existing literature as well as compare and contrast the fundamental assumptions, possibilities and implications. The review resulted in the development of an evolving, integrated, holistic approach of strategic information management that incorporates

existing perspectives while also introducing new ones that distinguish it from the existing approaches.

The resulting conceptualisation model encompasses and integrates the aspects that were identified in the literature review and highlights their interdependencies and interactions. The three concepts that combined makes up the concept of strategic information management can be found at the core of the model, as a clear definition of the terms is a crucial prerequisite for the research. Despite this, the review found a clear tendency to use the concept of information as an unspecified, all-purpose solution to an unbounded variety of problems. Other key concepts lacked definitions in research, resulting in confusion and mix-up with clear implications to the understanding of the different concepts that was consequently often used interchangeably. Thus, a key characteristic of this paper has been a clarification of key concepts to eliminate confusion in the future.

The main contribution of the literature review has been the conceptualisation of strategic information management as a holistic, integrated approach. The conceptualisation also resulted in a shift in perspectives from a resource and content-based to a practice-based approach to information and strategy, and from a rational to a behavioural view of the firm. The shifts in perspectives along with the incorporation of the adaption view of information have introduced and combined new dimensions that existing approaches has not addressed.

Furthermore, this paper has suggested the adjusted process model of Henfriedsson & Lind (2014) to provide a comprehensive framework that successfully captures the key perspectives and practices of the conceptualisation of strategic information management.

Combined, these aspects have been suggested to equip researchers and organization with a concept and a framework that can help them understand and apply strategic information management, both now and in the future.

It must be stressed that while this paper have developed a conceptualisation for strategic information management, it has not provided a finished, one-size-fits-all solution. It is suggested that there is still additional research to be done as well as testing the concept's application in a business setting. However, with this paper the first steps towards an integrated conceptualisation of strategic information management have been taken.

## 8 References

- Akhbar, F., Chang, V., Yao, Y., & Muñoz, V. M. (2016). Outlook on moving of computing services towards the data sources. *International Journal of Information Management*, 36, pp. 645-652
- Aaltonen, A., & Kallinikos, J. (2013). Coordination and Learning in Wikipedia: Revisiting the Dynamics of Exploitation and Exploration. *Research in the Sociology of Organizations*, 37, pp. 161-192
- Argote, L., & Miron-Spektor, E. (2011). Organizational Learning: From Experience to Knowledge. *Organization Science*, 22 (5), pp. 1123-1137
- Atkins, M. H. (1994). Information technology and information systems perspectives on business strategies. *Journal of Strategic Information Systems*, 3 (2), pp. 123-135
- Baets, W. (1992). Aligning information systems with business strategy. *Journal of Strategic Information Systems*, 1 (4), pp. 205-213
- Biron, M., & Hanuka, H. (2015). Comparing normative influences as determinants of knowledge continuity. *International Journal of Information Management*, 35, pp. 655-661
- Broady-Preston, J., & Hayward, T. E. (1998). An Assessment of the Relationship Between Marketing, Information and Strategy Formulation in the UK Retail Banking Sector. *International Journal of Information Management*, 18 (4), pp. 277-285
- Brown, J. S., & Starkey, K. (1994). The Effect of Organizational Culture on Communication and Information. *Journal of Management Studies*, 31 (6), pp. 807-828
- Buhl, H. U., Fridgen, G., König, W., Röglinger, M., & Wagner, C. (2012). Where's the competitive advantage in strategic information systems research? Making the case for boundary-spanning research based on the German business and information systems engineering tradition. *Journal of Strategic Information Systems*, 21, pp. 172-178

- Calvo-Mora, A., Navarro-García, A., & Periañez-Cristobal, R. (2015). Project to improve knowledge management and key business results through the EFQM excellence model. *International Journal of Project Management*, 33, pp. 1638-1651
- Castrogiovanni, G., Ribeiro-Soriano, D., Mas-Tur, A., & Roig-Tierno, N. (2016). Where to acquire knowledge: Adapting knowledge management to financial institutions. *Journal of Business Research*, 69, pp. 1812-1816
- Caudle, S. L. (1996). Strategic Information Resources Management: Fundamental Practices. *Government Information Quarterly*, 13 (1), pp. 83-97
- Chan, Y. E., & Huff, S. L. (1992). Strategy: an information systems research perspective. *IS Research Perspective*, 1 (4), pp. 191-204
- Chan, Y. E., Huff, S. L., & Copeland, D. G. (1998). Assessing realized information systems strategy. *Journal of Strategic Information Systems*, 6, pp. 273-298
- Choo, C. W. (2013). Information culture and organizational effectiveness. *International Journal of Information Management*, 33, pp. 775-779
- Choo, C. W. (2002). *Information Management for the Intelligent Organization: The Art of Scanning the Environment* (3rd edition). ASIS&T
- Choo, C. W., Furness, C., Paquette, S., van den Berg, H., Detlor, B., Bergeron, P., et al. (2006). Working with information: information management and culture in a professional services organization. *Journal of Information Science*, 32 (6), pp. 491-510
- Citroen, C. L. (2011). The role of information in strategic decision-making. *International Journal of Information Management*, 31, pp. 493-501
- Costa, E., Soares, A. L., & de Sousa, J. P. (2016). Information, knowledge and collaboration management in the internationalisation of SMEs: A systematic literature review. *International Journal of Information Management*, 36, pp. 557-569

- Crossan, M. M., & Berdrow, I. (2003). Organizational Learning and Strategic Renewal. *Strategic Management Journal*, 24, pp. 1087-1105
- Croteau, A. M., & Bergeron, F. (2001). An information technology trilogy: business strategy, technological deployment and organizational performance. *Journal of Strategic Information Systems*, 10, pp. 77-99
- Curry, A., & Stancich, L. (2000). The intranet - an intrinsic component of strategic information management? . *International Journal of Information Management*, 20, pp. 249-268
- Davenport, T. H., Eccles, R. G., & Prusak, L. (1992). Information Politics. *MIT Sloan Management Review*, 34 (1)
- Detlor, B. (2010). Information Management. *International Journal of Information Management*, 30, pp. 103-108
- du Toit, A. S. (2016). Using environmental scanning to collect strategic information: A South African survey. *International Journal of Information Management*, 36, pp. 16-24
- Galbreath, J. (2005). Which resources matter the most to firm success? An exploratory study of resource-based theory. *Technovation*, 25, pp. 979-987
- Galliers, R. D., & Leidner, D. E. (2003). *Strategic Information Management: Challenges and Strategies in Managing Information Systems* (3rd edition). Butterworth-Heinemann
- Gavetti, G., Greve, H. R., Levinthal, D. A., & Ocasio, W. (2012). The Behavioral Theory of the Firm: Assessment and Prospects. *The Academy of Management Annals*, 6 (1), pp. 1-40
- Georgiou, A., & Makri, S. (2015). How local government policy workers use information: An interview study and design recommendations. *International Journal of Information Management*, 35, pp. 472-489

- Hatten, M. L., & Hatten, K. J. (1997). Information Systems Strategy: Long Overdue and Still Not Here. *Long Range Planning* , 30 (2), pp. 254-266
- Hayward, R. G. (1987). Developing an Information Systems Strategy. *Long Range Planning* , 20 (2), pp. 100-113
- Henfridsson, O., & Lind, M. (2014). Information Systems Strategizing, Organizational Sub-communities, and the Emergence of a Sustainability Strategy . *Journal of Strategic Information Systems* , 23, pp. 11-28
- Hicks, B. J. (2007). Lean information management: Understanding and eliminating waste. *International Journal of Information Management* , 27, pp. 233-249
- Hidding, G. J. (2001). Sustaining strategic IT advantage in the information age: how strategy paradigms differ by speed. *Journal of Strategic Information Systems* , 10, pp. 201-222
- Hyvönen, J. (2007). Strategy, performance measurement techniques and information technology of the firm and their links to organizational performance. *Management Accounting Research* , 18, pp. 343–366
- Karim, N., & Hussein, R. (2008). Managers' perception of information management and the role of information and knowledge managers: The Malaysian perspectives. *International Journal of Information Management* , 28, pp. 114-127
- Kim, Y., & Adler, M. (2015). Social scientists' data sharing behaviors: Investigating the roles of individual motivations, institutional pressures, and data repositories. *International Journal of Information Management* , 35, pp. 408-418
- Kruger, C. J., & Johnson, R. D. (2010). Information management as an enabler of knowledge management maturity: A South African perspective. *International Journal of Information Management* , 30, pp. 57-67

- Lee, A. S., & Baskerville, R. L. (2003). Generalizing Generalizability in Information Systems Research. *14* (3), pp. 221-243
- Levy, M., & Powell, P. (2000). Information systems strategy for small and medium sized enterprises: an organisational perspective. *Journal of Strategic Information Systems* , 9, pp. 63-84
- Levy, M., Powell, P., & Galliers, R. (1999). Assessing information systems strategy development frameworks in SMEs. *Information & Management* , 36, pp. 247-261
- Littler, K., Aisthorpe, P., Hudson, R., & Keasey, K. (2000). A new approach to linking strategy formulation and strategy implementation: an example from the UK banking sector. *International Journal of Information Management* , 20, pp. 411-428
- McKinney, E. H., & Yoos, C. J. (2010). Information About Information: a Taxonomy of Views. *MIS Quarterly* , 34 (2), pp. 329-344
- Mendelson, H., & Pillai, R. R. (1999). Information Age organizations, dynamics and performance. *Journal of Economic Behavior & Organization* , 38, pp. 253-281
- Merali, Y., Papadopoulos, T., & Nadkarni, T. (2012). Information systems strategy: Past, present, future? *Journal of Strategic Information Systems* , 21, pp. 125-153
- Mezghani, E., Exposito, E., & Drira, K. (2016). A collaborative methodology for tacit knowledge management: Application to scientific research. *Future Generation Computer Systems* , 54, pp. 450-455
- Middleton, M. (2007). A framework for information management: Using case studies to test application. *International Journal of Information Management* , 27, pp. 9-21
- Mintzberg, H. (1996). The "Honda Effect" Revisited . *California Management Review* , 38 (4), pp. 78-91



Mintzberg, H., Ahlstrand, B., & Lampel, J. (1998). *Strategy Safari*. The Free Press

Mintzberg, H., & McHugh, A. (1985). Strategy Formation in an Adhocracy. *Administrative Science Quarterly*, 30, pp. 160-197

Nowacki, R., & Bachnik, K. (2016). Innovations within knowledge management. *Journal of Business Research*, 69, pp. 1577-1581

Ogiela, L. (2015). Advanced techniques for knowledge management and access to strategic information. *International Journal of Information Management*, 35, pp. 154-159

Parameswaran, M., & Whinston, A. B. (2007). Research Issues in Social Computing. *Journal of the Assumptions for Information Systems*, 8 (6), pp. 336-350

Powell, P. (1993). Causality in the alignment of information technology and business strategy. *Journal of Strategic Information Systems*, 2 (4), pp. 320-334

Ragu-Nathan, B., Ragu-Nathan, T. S., Tu, Q., & Shi, Z. (2001). Information management (IM) strategy: the construct and its measurement. *Journal of Strategic Information Systems*, 10, pp. 265-289

Rahimi, F., Møller, C., & Hvam, L. (2016). Business process management and IT management: The missing integration. *International Journal of Information Management*, 36, pp. 142-154

Reponen, T. (1993). Information Management Strategy - an Evolutionary Process. *Scandinavian Journal of Management*, 9 (3), pp. 189-209

Richter, A., & Trier, M. (2014). Discursive Implementation of Enterprise Social Systems: A Multi-Case Study of Facilitation Practices. *Working Paper*, pp. 1-16

Rivard, S., Raymond, L., & Verreault, D. (2006). Resource-based view and competitive strategy: An integrated model of the contribution of information technology to firm performance. *Journal of Strategic Information Systems* , 15, pp. 29-50

Salmela, H., & Spil, T. A. (2002). Dynamic and emergent information systems strategy formulation and implementation. *International Journal of Information Management* , 22, pp. 441-460

Soomro, Z. A., Shah, M. H., & Ahmed, J. (2016). Information security management needs more holistic approach: A literature review. *International Journal of Information Management* , 36, pp. 215-225

Soto-Acosta, P., Placer-Maruri, E., & Perez-Gonzalez, D. (2016). A case analysis of a product lifecycle information management framework for SMEs. *International Journal of Information Management* , 36, pp. 240-244

Stein, M., Newell, S., Galliers, R. D., & Wagner, E. L. (2013). Classification Systems, Their Digitilization and Consequences for Data-Driven Decision Making: Understanding Representational Quality . *The 34th International Conference on Information Systems*

Sundqvist, A., & Svärd, P. (2016). Information culture and records management: a suitable match? Conceptualizations of information culture and their application on records management. *International Journal of Information Management* , 36, pp. 9-15

Tozer, E. E. (1986). Developing Strategies for Management Information Systems. *Long Range Planning* , 19 (4), pp. 31-40

Vick, T. E., Nagano, M. S., & Popadiuk, S. (2015). Information culture and its influences in knowledge creation: Evidence from university teams engaged in collaborative innovation projects. *International Journal of Information Management* , 35, pp. 292-298

Waema, T. M., & Walsham, G. (1990). Information Systems Strategy Formulation. *Information & Management*, 18, pp. 29-39

Wang, M., & Yang, T. (2016). Investigating the success of knowledge management: An empirical study of small- and medium-sized enterprises. *Asia Pacific Management Review*, 21, pp. 79-91

Wang, Y., Shi, S., Nevo, S., Li, S., & Chen, Y. (2015). The interaction effect of IT assets and IT management on firm performance: A systems perspective. *International Journal of Information Management*, 35, pp. 580-593

Ward, J. M. (2012). Information systems strategy: Quo vadis? *Journal of Strategic Information Systems*, 21, pp. 165-171

Winter, A. F., Ammenwerth, E., Bott, O. J., Brigl, B., Buchauer, A., Gräber, S., et al. (2001). Strategic information management plans: the basis for systematic information management in hospitals. *International Journal of Medical Informatics*, 64, pp. 99-109

Zárraga-Rodríguez, M., & Álvarez, M. J. (2014). Does the EFQM model identify and reinforce information capability? . *Procedia - Social and Behavioral Sciences*, 109, pp. 716-721

Zijlker, A. W. (1986). Strategy of Information Management (?). *Information & Management*, 11, pp. 211-216