Interdependency of Culture, Strategy and Management Control Systems in an R&D Context

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Abstract

Organisational culture, strategy and management control systems have all been subjects of much discussion and many books and papers have been written on these topics. What is less well-established is how they interact with and influence one another, the investigation of which is the purpose of this thesis. Based on previous research, the authors develop a theoretical model based on aspects of organisational culture, strategy formulations and management control systems. This model is tested within the R & D department of Sandvik Coromant AB, a part of the Sandvik AB Group. This is conducted by means of deep interviews with key managers, as well as through a survey targeted at non-managerial personnel. The authors also review internal documentation. To complement more conventional methods, they investigate how material culture and materialities influence uphold and prohibit cultural development.

The findings indicate clear correlations between organisational culture, strategy and management control systems. This is also reflected and conserved in materialities and changes thereof. Due to the esteemed age of our case company, many cultural practices can be traced over a long period of time, being both the root cause of their present success, but potentially also a stumbling block for future organisational development. The findings also indicate that some strands within the culture of the case company may be at odds with one another, possibly resulting in interference with business operations. The theoretical model, which is best viewed as preliminary, could serve as point of departure for future research. It could be tested within additional organisations, resulting in a broader scope and a more generally applicable model. It could also be expanded to include market conditions and surrounding culture, regional or national, in order to add additional depth. Finally, the importance of leaders in shaping, changing and upholding organisational culture could be further explored, particularly in regards to the active use of materialities.

Key words: Organisational Culture, Business Strategy, Management Control Systems, Material Culture, Materialities, Interconnectivity, Sandvik Coromant AB,
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1. Introduction

This thesis aims to investigate how culture, strategy and management control systems interact with, and influence each other. Based on this, a theoretical model will be developed, which will be tested within the R&D department of Sandvik Coromant AB, a part of Sandvik AB, one of Sweden’s most dynamic and successful multinationals (see company presentation in appendix 1). Our findings will then be analyzed and cross-referenced with our theoretical model, a fine-tuning which will result in a point of departure for future research within organisational studies. Aside from tracing interaction at a theoretical level, our theoretical model also have an operational aspect and may be applied within different organisations to trace interconnectivity in a particular settings.

1.1 Background

Previous research has established clear links between organisational culture, strategic categories and management control system implementations (Schwartz & Davis 1981, Schein 1996, Schein 1999, Tucker & Thorne & Gurd 2006, Stix 2009). We aim to investigate how they are related to and affect one another, and in doing so we also aim to investigate one aspect of organisational culture that tend to be ignored in favour of more abstract ideas; material culture and the physical environment (Grassby 2005, p. 591). Within Western thought, symbolic meaning tend to be elevated above material utility and corporeality, in a hierarchy of meaning that may well date back to the earliest days of Western philosophy (Grassby 2005, p. 591). Western logic and philosophy rest primarily upon the principle of contradiction, the dilemma. According to this, it is impossible for the same attributes to belong and not to belong, at the same time, to the same subject, within the same relationship. However, there is only a contradiction between one statement and another, not between one thing and another (Faure 2004, p. 34). This dichotomy (and aforementioned hierarchy) was further strengthened during the Enlightenment, with its increased emphasis on rationality and ideas, as opposed to things (Foucault 2002, p.157). Our use of material studies is not a denial of the value of ideas and concepts as such, but rather an attempt to complement conventional research by providing an extra dimension to our analysis (Grassby 2005, p. 602). With organisational culture and materialities as our overarching framework, we will define categories of strategic formulations and corresponding management control systems, as well as trace interactions. Emphasis lies on organisational culture and more space will thus be allocated to culture and related topics, rather than to strategy formulations and management control systems. The resultant theoretical model will be tested and revised in a live setting. This will demand a certain degree of operationality from our theoretical model, but its main purpose is still to trace interdependency in order for it to serve as a point of departure for future research.

1.2 Problem discussion

As noted above, the basis for this study is organisational culture. The concept of culture is derived from the Latin word cultura, which means to cultivate. Culture is notoriously difficult to define and anthropological and sociological literature is rife with
various definitions (Giddens 1984, Schein 1996, Jarnegin & Slocum 2007). Simplified, culture can be described as humanity’s response to ever-changing physical and biological realities. It thus governs both our interactions with the environment, but also interactions among us and between groups. Common definitions offered by culture theorists includes notions of accepted behavioural norms, rules and rituals, as well as shared values, ideologies and beliefs, and, at an underlying level, shared understanding and meaning (Parker & Bradley 2000). Implicit and unconscious as it often is, culture nonetheless influence our perceptions, values and actions to a high degree (Sujuko & Hopper 2007). In business, marketing actively make use of differences in culture to reach and convince their target audiences. However, not all groups and collectives are true groups, and some may rather be thought of as serial collectives, structured around social practice and materialities (Sartre 2004).

Strategy and management control systems arise and are implemented within a cultural setting. Within this thesis we aim to trace this process and identify and describe the mechanisms of organisational culture, as well as different categories of strategy formulations and corresponding management control systems relevant to this context (Stix 2009). We will also use the Balanced Scorecard (Kaplan & Norton 1992) as a framework for management controls within the theoretical model.

Strategy aims to guide human efforts towards the attainment of stated organisational goals. As defined by Collins & Rukstad (2008) it can consist of objective, scope and advantage. As with culture, there are many definitions or formulations of strategy and strategic implementation (Porter 1996, Simpson 1998, Eisenhardt 1999, Eisenhardt 2001, Porter 2008, Collis & Rukstad 2008). Management control systems can be defined as mechanisms aiming to control and guide group member behaviour in order to ensure that desired actions are taken and undesired actions are refrained from (Merchant & van der Stede 2007).

1.3 Problem formulation and purpose

This thesis will focus on the interdependency of culture, strategy and management control systems. Based on previous research, we will formulate a theoretical model within the context of this research field. We will then test our model within the R & D department of Sandvik Coromant AB by conducting a field study. Based on our findings, we will further develop and modify our original model in order for it to serve as a valid and relevant point of departure for future research. Our research hypotheses are formulated based on conclusions drawn from extensive reviews of previous research. They are as follows:

H1: Organisational culture affects the choices of strategy formulation and management control system within Sandvik Coromant AB.

H2: Strategy formulations and management control systems are interrelated to organisational culture and can also, in a longer perspective, influence organisational culture within Sandvik Coromant AB.

1.4 De-limitations

We will focus on organisational culture, strategy and management control systems mainly relevant within an R & D context, as this is what we will study within our case
company. As noted above, culture and organisational culture is a vast topic and due
to the limited scope of a thesis, our main focus will be on shared values, material
culture, power and resistance, identification and issue of leadership, myths and
ethics. The field of strategy is equally vast and we will therefore limit ourselves to
describing and analysing types of strategy formulations rather than actual content of
any given strategy. Due to organisational culture, not all management controls are
equally applicable within all organisations. Our focus will thus mainly be on those
most relevant to Swedish corporate culture. Despite this, we will attempt to keep our
theoretical model as open and general as possible, in order for it to be of relevance in
most cultural settings. Due to the national background of the authors, as well as the
case company, there will however be a bias towards Swedish organisational culture.
Worth noting is that our field study is conducted within a single company. Our results
may therefore only be used to make generalisations valid for a general setting of
similar organisational contexts.

1.5 Thesis Structure

Chapter one contains introduction, background, problem formulation and de-
limitations. In chapter two, we describe and summarise previous research relevant to
our problem formulation. Chapter three describes our chosen research methods.
Chapter four outlines method used for analysis. Our findings are presented in chapter
five and our analysis in chapter six. The sixth and concluding chapter is tripartite. The
first part presents conclusions drawn from our etic approach. The second part
presents conclusions drawn from our emic approach and the final part overall
conclusions and suggestions for future research. At the end of this thesis are the
appendices, presenting additional material that may be of interest to readers.

2. Theory

"Human societies are often far more messier than our theories about them."

2.1 Culture

The concept of culture is notoriously difficult to accurately define and a number of
definitions abound. Culture theorists have suggested a number of definitions, ranging
from notions of accepted behavioural norms, rituals and rules, to shared ideologies
and myths, beliefs and values. They also point to underlying shared patterns of
understanding and meaning. Despite the variety outlined above, culture seems to be
largely centred around beliefs, ideologies and values, which taken together may offer
a reliable representation of the nebulous concept of culture (Linnenluecke & Griffiths
2010, p. 358).

Culture arises from humanity’s response to shifting challenges and opportunities in
a specific spatial and temporal context (Grassby 2005, p. 592). It structures and is
structured in turn by social practices repeated over time (Grassby 2005, p. 602).
Through repetitiousness, predictability arises. Thus the human habitat is structured
and transformed into “an island of regularity in a sea of randomness” (Bauman 1989,
p. 213). This is not to denote an absolute, unchanging entity. Homi K Bhabha
suggests that cultures are better viewed as specific temporal constellations,
consisting mainly of elements shared with other constellations (Bhabha 2004, p.52). This is akin to Jacques Derrida’s concept of difference. Derrida argues that the centre of a structure tend to be described in terms of presence, whereas in reality it is absent. Derrida uses the example of words, whose meanings are spread throughout the entire language, with each word reflecting other words (Derrida 1978, p.278-293). This line of thought is equally applicable to cultures and social collectives.

A cultural entity consists of numerous interdependent social collectives, which together forms a culture, ethnic group or national collective. These in turn refer to other collectives as per the discussion above. To apply this analogy within an organisational setting, the organisation can be viewed as consisting of different subgroups, each operating according to their own specific needs. Just as with culture and words, the centre is “absent” insofar as it is not fixed and it must continuously refer to the periphery for its identity and meaning.

When discussing how social collectives operate within any given culture, it may be helpful to use the concepts of holons and holonarchies, developed by Koestler (1983). A holon exists on an intermediate hierarchical level and may be considered both as a whole when viewed from below, and as a part when viewed from above. A social system, be it culture, ethnic group, or corporate organisation, may be compared to a living organism. It is composed of interrelated subsystems, each a separate part when viewed from the perspective of the whole, while at the same time being a distinct part of the whole. Koestler referred to this as sub-whole, which he in turn divides according to a descending order of complexity (such as organs into tissues, tissues into cells, cells into organelles etc.). Each part of the whole operates according to their set of rules, but is simultaneously subordinate to and part of a higher-level system (Kusumi et al. 1998, p.65). This may be a more fruitful perspective than to study parts of the whole by dissecting them (Burrel & Gibson 2011, p.115).

![Figure 2.1 Holon and Holonarchy, from Kusumi et al. (1998)](image-url)
2.1.1 Culture and Identity

“We are what we think. With our thought we create our world”

Culture and identity are closely related, even though culture is often more subconscious, while identity is often used in a more conscious way to define oneself and others (Sujuko & Hopper 2007, p. 230). Identification may be a more useful concept here, as an individual's self-image is more of a dynamic process than a static thing. One does not have a fixed, unchanging identity, but continuously identifies oneself in relation to others, as well as to situations (Eriksen 1996, p.51f). An individuals' self-image is often composed of different identities, each of which is relevant in a particular social context. These are in turn influenced by group memberships (i.e. nationality, ethnicity, religious persuasion, regionality as well as corporate membership) (Dutton et. al 1994, p.242, O’Toole & Were 2008, p. 630, Schein 1999, p.164). Thus, we can all be viewed as individual reflections of the social process, each from our own unique perspective (Mead 1976, p.149). It is worth noting here that culture is not to be viewed in purely deterministic terms, as individuals can and do choose to act contrary to cultural beliefs if they deem the cost worth it (Sujuko & Hopper 2007, p. 223-224).

2.1.2 Organisational Culture

Organisational culture can be described as a pattern of beliefs shared by the members of an organisation. These in turn produce norms that further shape the behaviour of both individuals and groups within the organisation (Schwartz & Davis 1981, p.33). Organisational culture structures day-to-day practices, as well as influence the goals, practices, values and attitudes within the organisation (Jarnegin & Slocum 2007, p. 290). Most successful organisations have a culture that allows them to create, implement and maintain their initial success. Everyday routines, as well as the past of the organisation, are ensconced in their culture and subcultures. Organisational culture thus exerts powerful influence over an organisation’s ability to carry out its objectives, particularly when the strategic direction is changing (Schwartz & Davis 1981, p.30-47). This can both support and hinder necessary organisational change.

No organisational culture exists in a vacuum, but is rather highly dependent on the surrounding cultural environment. An organisation that operates according to cultural norms that differ significantly from the surrounding cultural environment will likely be rejected by both society and its own group members (Jarnegin & Slocum 2007, p. 293). The organisation is thus not wholly separate from the world of friends and family. However, both realms are structured and guided by their own principles and occasionally some behaviours may be acceptable in one context but unacceptable in another. This is also true within an organisation, as cultural subgroups may exhibit differences in norms and values. This may lead to positive outcomes, such as esprit de corps or pride in one’s group membership, but also to cultural isolation from other departments within the same organisation as well as from overall society (Balch & Armstrong 2010, p.299). In severe cases it can result in corporate scandals.

Organisational culture arises from the surrounding social context, with a few cultural modifications specific to the organisation added. Just as culture in general arise in response to threats and opportunities in a particular spatial and temporal
context, so does organisational culture arise in response to threats and opportunities in the surrounding environment. It can thus be defined as being "composed of responses which have been accepted because they have met with success." This implies that the past (or at least interpretations of the past) is ensconced in present experiences and practices (Schwartz & Davis 1981, p.35). Nothing is created from nothing and everything refers to its past for continuity and legitimacy.

Despite this, the values, beliefs and personal norms of the organisation’s leaders do influence culture to a large extent. Choices made by management tend to reinforce culture, as well as enforce desired behavioural norms (Schwartz & Davis 1981, p.35). This can be both constructive and destructive and may foster or hinder change and innovation (Linnenluecke & Griffiths 2010, p. 358). Many leaders attempt to change organisational culture, as culture may act to constrain and hamper change. Indeed, most organisations find it difficult to implement strategies inconsistent with its culture. In order to make necessary cultural changes, management must develop an understanding of the how organisation’s culture works, including its strengths and weaknesses. This is particularly true if past leaders have created a neurotic organisation, in which conflict is embedded within the very culture itself (Schein 1996, p.61-63).

Organisational culture is not indestructible, although it is very resilient. If the change is fast and overwhelming enough, the ability of the original culture to suppress change will fail and culture will begin to crumble. On its ruins a new culture can then be created (Jarnegin & Slocum 2007, p. 289). However, management cannot change culture by simply eradicating neurotic or undesirable cultural elements. Rather, they must develop cultural strengths and let weaknesses atrophy and disintegrate over time. Thus, organisational cultural change generally cannot be affected by announcing changes or by instituting programs of “Corporate Culture 2.0”. A new culture cannot be created, although management can create a new organisation or implement new procedures. Culture will rather grow from collective experiences and develop into organisational culture over time (Schein 1996, p.64-66).

As with any culture, identity and self-image of group members play an important role. If the organisational culture corresponds to an individual’s self-image there will be strong identification with the organisation. The individual will then derive some or even most of his or her sense of self from being a member of the organisation. A positive identification thus allows a group member to “bask in the reflected glory” of the organisation (Dutton et. al 1994, p.239). On the other hand, if organisational culture conflicts with self-image, it may result in cognitive dissonance, which if it remains unresolved could lead to substandard performance, poor morale, high staff turnover and even sabotage and revenge (Balch & Armstrong 2010, p.299).

When deciding upon strategy and later, upon management controls, it is very important to consider organisational culture and identification, as this have direct bearing on their effectiveness. National culture may also affect organisational culture to a large extent as it is dependent on its surrounding cultural climate. Different cultures exhibit tendencies towards different traits and priorities. Some are more performance oriented, while others are more assertive, future oriented, time oriented, humane oriented, collective oriented, more gender egalitarian, uncertainty avoidant, or work oriented. They also exhibit differences in power distance, with overt use of power being more acceptable in some cultures than in others (Dubrin 2010, p.387).
2.1.3 Leadership, Myths and Power

As noted above, management can actively shape organisational culture, although most managers typically use tools such as policies and structures alone, neglecting the shaping of culture through rituals and myths. Together with policies, these may however create truly astounding results (Jarnegin & Slocum 2007, p. 291-292). Leaders generally affect organisational culture by establishing values and setting organisational missions. Based on this, business strategy is then developed. Values and missions serves as anchorage for myths, often used to establish a clear sense of “who we are and what we do”, thus defining the nature of the organisation. Organisational values in many ways forms the cultural DNA of the organisation, which is spread, communicated and internalised throughout the organisation, by means of myths, rituals and structural systems.

Most cultures are not intentionally created, but rather evolve over time, as noted above. Most managers allow culture to develop without any deliberate plan, rather than by actively shaping it (Jarnegin & Slocum 2007, p. 290). Although this is difficult, it is still possible, particularly through constructive use of organisational myths. Myths have been used since time immemorial, to help make sense of everyday life experiences by arranging it in the form of a narrative. In many ways, myths are an existential precondition for orientating ourselves in an ever changing world (Eriksen 1996, p. 86, Ricoeur 1984, p.74f). Mythological narratives and archetypes are also anchored in our individual unconscious, as discussed by Jung (2003) and are shared within particular cultural contexts. Through myths shared within a culture, people cease to be mere individuals and become capable of transcending their limited sense of self. This allows for a sense of community to arise. We all seek meaning in our lives and value-driven organisations capitalize on this by using myths, often creating a belief that group members are part of something “heroic” and worthwhile.

Myths and rituals thus serve to support the social order by integrating individuals into larger social structures. Rituals are here understood as the enactment of myths. Enacting rituals support and reinforce the mythology of the group and thus social order and culture (Jarnegin & Slocum 2007, p. 290-292). Furthermore, ritualisation creates ritualized agents, in which certain thought patterns and actions are internalized. The ritualized agent does not view these patterns or behaviours as enforced, as they are part of their self-image (Trainor 1997, p.137f). This applies to cultural controls, which will be discussed in greater detail below.

Within an organisation, storytelling is often instrumental in developing corporate mythology. Stories told serve both to communicate corporate vision (Jarnegin & Slocum 2007, p. 294), but also to demonstrate group values and summarize and symbolise what the organisation stands for and how it operates. These narratives record the core identity of the organisation and are thus key mechanisms for the perpetuation of culture.

Myths may come across as somewhat irrelevant in today’s world, but it is worth keeping in mind that the modern organisation is highly “imaginary” in character. Much of what is learned and communicated is done so through images and symbols rather than through direct experience. This lack of direct contact with and experience of the rest of the organisation can create an identity void. This can be manipulated and overcome by effective image management, allowing management to exploit the existential need for group identity by offering powerful myths to gather around, reducing uncertainty and anxiety. This is particularly important as modern work is often complex and individual contribution is frequently hard to connect to the end product (Balch & Armstrong 2010, p.297-299).
When discussing organisational culture we also have to address power. Foucault famously claimed that all human interactions are subjected to power and resistance. He also argued that power can only be endured provided it can mask a significant part of itself. Its success thus lies in relation to how well it can hide its own mechanisms (Foucault 1980, p.110). In light of this, myths and rituals are powerful tools in upholding cultural values and norms, as they often are internalised and thus not conceived of as coercive. Classifying individuals, i.e. by giving them an identity or role, can also serve as a method of control. However, as with all controls, it is only truly effective until it is revealed for what it is, which will likely result in tension and resistance (Foucault 1980, p.119).

2.1.4 Material Culture

Material culture is typically a subject of study within the disciplines of archaeology and anthropology and most of the literature we will make use of here reflect this. Just as business studies have used theories and methodologies from other disciplines, such as psychology, sociology and statistics, it can also benefit from anthropological and archaeological input, as these after all study human systems. Material culture can provide additional information about activities, relations and interactions between individuals, as well as between individuals and materialities (Cornell & Fahlander 2002). Sartre (2004) discusses social interaction as not only structured between individuals, but also as affected by materialities, which either can support or negate social action. Social interaction is thus embodied interaction between subjects and objects and cannot exist apart from materialities, as we are all embodies beings (Fahlander 2003, p.34, Cornell & Fahlander 2007, p.5, Oestigaard 2004, p.48). Thus, materialities must be viewed not only as a product of social life, but also as supporting, influencing and conserving it (Fahlander 2001, p.63).

The concept of materialities is not synonymous with 'material culture' even though they share some similarities. Studies of materiality focus more on the social significance of objects in the constitution of social relations. Material culture can be too much of a catch-all term, with a vague content and therefore of less value as an operative concept (Cornell & Fahlander 2007, p.5). Materialities include everything from artefacts, the landscape, layout and material of buildings and settlements, trees and vegetation, animals and bodies. It is important however not to exaggerate their importance. Some scholars tend to exaggerate their agency, almost equating them with human agents (Cornell & Fahlander 2007, p.6).

Material life is partly shaped by cultural imperatives as social reality has to be structured to be perceived and understood. When literal language fails, people express ideas through analogies or through materialities (Grassby 2005, p. 591). Through objects, we give form to, and understand ourselves and others, as well as abstractions, such as nations and organisations (Oestigaard 2004, p.29). These contain social information and can be interpreted as a form of indirect communication (Fahlander 2001, p.58). The interpretation of materialities is far from straightforward however, as the meaning of objects can vary based on social and regional context. It is also subjected to changes over time (Roth 2001, p.577).

A benefit of studying materialities is that it can bring to light issues of power, identity and status that may well have been otherwise unexplored. Individuals may reproduce social structures or may wish to change them. Social structures relating to status and power are reflected in both our homes and in our workplaces. Technological objects, such as machines, are also materialities and reflect both values and needs of a given
organisation but also those of a wider social system (O’Toole & Were 2008, p. 619-623).

The very basics of material life are the landscape. The individual is not only an object in the landscape, but also an integral part of it. Her sense of identity, as well as that of social systems and cultures is intrinsically tied to the landscape (Cornell & Fahlander 2001, p.117, Grassby 2005, p.591). By linking the physical world and the experience thereof to social systems, spatial experience becomes infused with power relations and is thereby a conflict ridden media, through which individuals act and are acted upon (Tilley 1994, p.11). Studies of the social aspects of the landscape are generally conducted according to one of two main lines: either through studies of the physical aspects of the landscape, according to its morphology, or along phenomenological lines of thought, in which the metaphysical, experienced and subjective traits of the landscape is highlighted (Fahlander 2001, p. 49-52).

Linked to the landscape, and an aspect of it, is space, which can be defined as the location "where people do things". Space includes both interior and exterior spatial arrangements. It refers to juxtaposition, distance and proximity and is highly pregnant with cultural and political implications (O’Toole & Were 2008, p. 616-617). Personal space is often associated with status, power and wealth. The higher the person’s status is within a group, the more private his or her space generally is. The power of individuals thus determines their capacity to protect their personal space from intrusion by others. The space of the powerful is often surrounded by various barriers. In contrast, people with high status often have the right to intrude on others of lower status (O’Toole & Were 2008, p. 619-620).

Related to space is place, a nexus of things and space within a given boundary. The landscape, space and place of a group are the primary catalysts for the cultural formation of said group. Here the multiplicity of individuals is subsumed by social dynamics into a shared place identity. Individuals now share a sense of meaning and perspectives.

Objects refer to the corporeal elements of place and material life and can be a building, its walls, and the pictures on said wall or a computer. Objects may reinforce cultural messages, which are perceived and interpreted, often implicitly. Objects and places are constructed for an operational purpose, but also create and communicate meaning (O’Toole & Were 2008, p. 618). They can also affect the social interaction within a group. One example is how power relations would be changed within a group if one group member suddenly pointed a gun at another.

Fusing all the elements above together, “buildings and monuments stand as testaments to the human ability to create order out of chaos”. In many ways, they embody structure as “a space inside which probabilities are not randomly distributed, some events are more likely to happen than others”. They can thus be built with the intention to control, provide predictability and efficiency within a specific space, separated from the outside. Some techniques have been outstanding in this regard, and here Fordism and McDonaldisation can be mentioned. Within buildings social ordering takes place. Organisations and the building that houses them, arise from organising, shaped by the economical, cultural and psychological structuring of everyday activities. Buildings function as nodes for repetitive action, owing to their inertness. The symbolic connection between buildings and organisations tend to reinforce a reified view of organisation as structured and fixed, often represented by iconic buildings (Dale & Burrell 2011, p.107-120).

How material objects are organised within a building also reveal much about power, hierarchies and identification. One example hereof is how individuals display objects
around their workspace that relates to relationships both inside and outside the workplace. Often, these objects are meaningful in regards to roles and relationships outside the workplace, as well as in regards to fulfilled or unfulfilled aspirations. They act to reinforce the individual’s perception of themselves or who they want to be (O’Toole & Were 2008, p. 626). The size and location of offices are also a powerful indication of hierarchy. The more powerful members of a group have larger offices, whereas the most powerless people have no place at all (O’Toole & Were 2008, p. 627-629).

2.2 Strategy

All strategies are about being different, in order to establish or maintain a competitive advantage. Inherent in a successful strategy is a certain degree of innovation, as merely copying the competition seldom results in any strategic advantage. In this chapter we will describe different types of strategy formulations that we have encountered in previous literature on the subject. We will refrain from discussing or analysing any actual content of strategy and will rather only focus on different types of strategy formulations. These can take many forms. Based on previous research, we have selected some basic types to represent different formulations. Companies sometimes use easily recognizable types of strategic formulation and sometimes a mix of different formats. Their strategies may thus be documented in manners that are not easily classified according to any of the formats we have chosen to focus on. When getting involved with strategy work, it is prudent to keep the comments by Simpson (1998) in mind. Simpson points out that most mission statements (and much strategic work) are very generic and mainly consist of “gibberish”. If the point of departure for a company’s strategy work is a blunt and unspecific mission statement or vision, it is better to take a step back and consider improving on this before putting in any serious effort. Aside from Simpson, Mankins & Steele (2005) also offers some food for thought. Their seven rules are appropriate to follow when operationalising strategy.

Below, we present a sample of available strategic formulations. When using our theoretical model (appendix 3) the described formats of strategies can either be used to classify organisational strategies, or serve as suggested strategy formulations if these are unexisting or of sub standard quality.

2.2.1 Strategy as Objective, Scope and Advantage

Collins & Rukstad (2008) presents one of the more basic strategy formulation and they frame strategy as consisting of three main parts;

- **Objective** – i.e. the single objective that will drive the business over the next five years.
- **Scope** – i.e. encourage initiative and experimentation, but clarify delimitations.
- **Advantage** – i.e. 1) The customer value proposition, 2) – The unique activities or complex of activities that allows the firm to deliver the customer value.

Their is a very open and general format, suitable for a wide range of company operations. The exception may be that in very turbulent markets the time aspect may be a limiting factor, as this type of strategy assumes that there is a business objective that will drive the business over the next five years or so. A benefit with this format is
that it is easy to comprehend for employees within different companies, as the formulation is based on clear, logical divisions in objective, scope and advantages.

2.2.2 Strategy as Simple Rules

For use in rapidly changing markets, Eisenhardt (2001) describe strategy as ideally consisting of simple rules. These may serve as a guiding strategy, enabling companies to nimbly seize fleeting opportunities. The motivation behind this view is that as businesses becomes increasingly complex, their strategy should be clear and simple. These simple rules are divided into:

- How-to rules
- Boundary rules
- Priority rules
- Timing rules
- Exit rules

Eisenhardt (2001) points out that it is important to have the right number of rules, as too many would constrict the flow and too few would result in chaos. These rules are based on experience, especially on past mistakes. It is important to follow these rules rigorously if they are to have desired effect. In this context, it is better to think evolution, rather than revolution, but the rules are not to be arbitrarily changed. The disadvantage with strategy as simple rules is that it does not really explain, in a traditional way, what the strategy is. If this type of strategy formulation is chosen, more emphasis should thus be placed on the overall business goals of the organisation.

2.2.3 Strategy related to Industry Structure

Porter (2008) describes strategy by referring to five competitive forces defining industrial structure. He argues that these forces will affect profitability in the medium and long run time perspectives. These five forces are:

- The threat of new entrants
- The bargaining power of buyers
- The threat of substitute products or services
- The bargaining power of suppliers
- The rivalry of existing competitors

By relating strategy to industry structure, the strategy formulation is market oriented. However, to be able to perform the necessary analysis will demand significant amounts of market research. The strategic implications noted by Porter (2008) note are the positioning of the company, possibilities to exploiting industry changes, as well as the possibility to shape the industry structure. The main obstacle when focusing on the five forces is that companies may end up with long and elaborate documents describing the industry structure, but must search elsewhere for complementary formats for necessary strategic actions. The five forces outlined above can also shape organisational culture, as this arise in response to the challenges and opportunities of the surrounding spatial and temporal setting.
2.2.4 Strategy as Performed by Patching

Patching is described by Eisenhardt (1999) as a strategic process in which executives remap businesses to capitalize on changing market conditions. A strong argument for this approach is that by dynamically adjusting businesses to changing opportunities, managers are more likely to focus on high potential business. The guiding principles behind patching are:

- Do it fast
- Develop multiple options, then make the right choice
- Take an organisational test drive
- Get the general manager right
- Script details (detail plan for the start-up)

Eisenhardt (1999) stipulates that a necessary precondition for patching is that the managers using patching view their organisations as temporary constellations. This is in line with the discussion of identification and culture as outlined above. As it is inherently impermanent and continuously changing, organisational structure must be as modular as possible, in everything from business level metrics to compensation packages etc. Eisenhardt also identifies differences in size between business units as a common stumbling block, as larger units become too powerful, thus compromising overall organisational goals. Managers who patch must keep their organisations focused on the right goals and opportunities and let strategy emerge from within individual businesses. This view of strategic work is, just as strategy as simple rules (Eisenhardt 2001), or the five forces (Porter 2008), highly focused on markets. The proactive focus of top executives lies in business opportunities and overall goals and strategy is evolving from these. One risk with patching is that if managers below top executives are weak when it comes to capabilities for strategy formulations, opportunities may pass before the organisation is able to exploit them.

2.2.5 Strategy as formed by a set of activities

Porter (1996) argues that operational effectiveness is not enough and that management tools have increasingly taken the place of strategy work. Porter argues that strategic positioning means performing different activities than rivals, or performing similar activities in different ways. Therefore activities are the basis of competitive advantage. Porter (1996) divides strategic positioning into the following three groups:

- **Variety based positioning** – Based on product or service varieties rather then customer segments. The company can serve a wide array of customers, but for most only with a subset of their needs.
- **Needs based positioning** – Focus is on all needs of a specific customer group.
- **Access based positioning** – Focuses on customers accessible in different ways.

The desired positioning strategy is created as a set of activities. Ideally, there is fit
between these activities, ensuring that they work efficiently together. There may also be trade-offs that are unavoidable as for example due to inconsistency in image or reputation, between activities, or due to limitations in internal coordination and control difficulties. Valuable fits enhance uniqueness of company operations. It is harder for a competitor to imitate a whole system of interlocking activities. The strategy can then be documented and communicated by the use of an activity system map where high order themes can be specially marked and all activities can be related to each other (Porter 1996).

The view of strategy as a set of activities is the most generic view we have found to date. It can be applied to any organisation, in any business or in any market. A possible limitation to its use may be found in very turbulent markets, where any activity system map may be rapidly outdated and in need of frequent and quick updates. This view also demands a lot from the managers responsible for strategy formulations. They need to be very knowledgeable about market conditions, as well as about internal operations. Also, this view does not give any guidelines to areas of content within the strategy.

2.2.6 Strategy and Organisational Culture

Whether a competitive advantage can be sustained depends on the possibility of duplication. Even so, no competitive advantage will last forever. According to Barney (1991), access to rare resources can lead to sustained advantages if firm resources are imperfectly imitable for some reasons. For example, the ability to obtain a resource may be dependant on unique historical conditions (Barney 1991). Historical conditions are parts of organisational culture. As noted above, cultures arises from surrounding historical and social contexts, typically based on threats and opportunities (Schwartz & Davis 1981, p.35). Due to this, organisational culture is part of the competitive advantage organisations seek to develop through the use of strategy work. Thus strategy is intrinsically tied to culture, as circumstances shape culture. Culture decides what is worthwhile to attain, as well as how to attain it. In light of this, strategy is highly influenced by culture, both national, regional and culture specific to the organisation.

2.3 Management Control Systems

The theoretical model used to define management control systems are mainly based Merchant & van der Stede (2007), in which management controls are divided into action-, results-, personal- and cultural controls. To complement the view of cultural controls we have also added patrimonial controls (Sujoko & Hopper 2007). The management controls can be framed within the format of the Balanced Score Card concept, the Tableau de Bord concept or a mix of both of them (Epstein & Manzoni 1998, Bourguignon et al. 2004). This approach also reflects views presented by Catasús et al. (2007) and Mundy (2010). Management control systems can be viewed as attempt to operationalise strategy. For optimum success, both strategy and resultant management control systems must be compatible with organisational culture. The controls outlined below are also to be viewed as a sample of different controls, rather than controls to be used within a specific company.
2.3.1 General Management Control Systems

The purpose of Management Control Systems is to control employee behaviour in order to ensure desired behaviour within an organisation. Effective management control implies that the management can be fairly sure that no major unpleasant surprises will occur. To approach something that could be described as perfect control would require a complete assurance that all parts of the control system are absolutely foolproof. It would also require that all employees always behaved in the appropriate way. As management systems are costly, it is rarely, if ever, a cost effective solution to try to implement perfect control. It may thus be worth the costs induced by not having perfect control, which is typically referred to as control loss.

When the control loss is smaller than the costs necessary to implement more or stronger controls, optimal control is achieved (Merchant & Van der Stede 2007, p.11).

As companies grow, either organically or by acquisitions, they usually increase the degree of formalisation of procedures for action accountability. They may also develop more elaborate systems for results controls (Merchant & Van der Stede 2007, p.226). A typical consequence of this is that organisations will rely more on written communications, which is time consuming. According to Henri Fayol (2008) the use of written communication often lead to an increase of misunderstandings, as well as to potential conflict, compared to when emphasis lies on oral communication. The cost of more elaborate control systems and the resultant increase in written communication should be consideration in light of increased efficiency. Only if the trade off between increased cost and increased likelihood of attainment of organisational goals balance each other should further controls be implemented.

There is a proverb that says “What gets measured gets done”. This is however questioned by Catasús et al. (2007), as they found that “mobilization” must also be taken into account. By mobilisation they mean the act of summoning attention, resources and strategies, resulting in action. The effect of management control systems can therefore be compromised if management mobilizes the organisation for actions other than those promoted by the control system. In our view, frequent use of mobilization might indicate that company strategies, the management control system or both are inadequate, insufficient or that the business climate of the company is changing too rapidly for established plans and systems.

2.3.2 Results Controls

“Surround yourself with the best people you can find, delegate authority, and don’t interfere.”

Ronald Reagan, MBA in a Book, 2009, p.46

Result controls can be very effective as they focus on results and not directly on controlling the actions of the employees. A major benefit with result controls is that it may enable effective control even when management are unclear about the best course of action, which is likely the case in a highly turbulent market. It also gives employees a higher degree of autonomy, which may lead to increasing motivation. This type of control may be necessary in creative environments or when circumstances are changing rapidly (Merchant & Van der Stede 2007, p.35). In this context, loose-tight combination of different controls may also enhance creativity and innovation further still (Dubrin 2010, p.375). On a less positive note, results controls puts higher demands on employee competence, ability, motivation, moral and ethics, without which they may not be very efficient.
2.3.3 Personal Controls

“Treat people as if they were what they ought to be and you help them to become what they are capable of being”


In many ways, personal controls are always present. It is a type of control that depends on it being internalised by employees, as per the process of identification outlined above. The employee, or ritualised agent (as described by Trainor 1997), merges his or her sense of self with that of the organisation and thus naturally strive to act in the best interest of the organisation. Each employee thus effectively control and motivate themselves. This type of control is very effective, as most people want to do a good job. A job well done gives them positive feelings of self-respect and satisfaction (Merchant & Van der Stede 2007, p.83, Jarnegin & Slocum 2007, p.300). Employees who are engaged in work they find strongly satisfying also require a minimum of leadership and control (DuBrin 2010, p.10). This is in line with what Drucker (1999) describes as the knowledge workers responsibility for their contributions.

2.3.4 Cultural Controls

“Competition between individuals sets one against the other and undermines morale, but competition between organisations builds morale and encourages creativity.”


In every organisation, culture exerts powerful influence over its ability to carry out its objectives (Schwartz & Davis 1981, p.47). An organisations rule of conduct is based on ideas on what the conduct is for. Means are thus shaped by its ends and these are based on the prevailing ideas of a society, that is; its culture (Redding & Witt 2010, p.16). According to Merchant & Van der Stede (2007) organisational culture is built on norms, values, shared traditions, beliefs, attitudes, ideologies and common ways of behaving, as outlined above. Culture is also persistent and tends to remain more or less intact, even though goals, strategies and sometimes even leaders change. Changing organisational culture takes time, awareness and effort, as noted above. Inherent in organisational culture is a certain coercive element which can be used to control subordinates, as they generally have the choice between adaptation to cultural expectations or exclusion from the group, i.e. loss of employment (Schein 1999, p.171). Cultural controls thus rely on a powerful form of group pressure, which is stronger the closer group members are to each other (Merchant & Van der Stede 2007). Many organisations attempt to deliberately shape their organisational culture by establishing codes of conduct or ethics, using statements of missions, vision, or shaping a management philosophy (Merchant & Van der Stede 2007, p.85). To provide rewards based on collective achievements is one method used to strengthen cultural control (Merchant & Van der Stede 2007, p.88). Cultural controls as part of a management control system is based on the same mechanisms as governs rest of society, albeit applied within an organisational setting. Breaking cultural norms generally result in ostracism and exclusion. A difference is that cultural controls are used to more explicit control group members.
Related to cultural controls are patrimonial controls. This form of control is commonly found in China and in societies influenced by Confucian teachings. Here, the owner or manager of a company is viewed as a father-like figure, who retain all or most of the authority, whereas the underlings are expected to be obedient and express unquestioning loyalty. Power is seldom delegated and if it is, it is mainly given to highly trusted employees (Efferin & Hopper 2007, p. 242-50). The leader is the absolute authority, but is also responsible for the well-being of the employees. A personal approach is favoured, sometimes at the expense of more formal controls. Patrimonial controls can lead to adaptability, goal congruence and obedient employees, but it can also produce nepotism, insufficient authority for “outsiders”, as well as a culture of secrecy, restricted promotion opportunities as well as risk- and conflict avoiding employees (Sujoko & Hopper 2007, p. 227).

2.3.5 Action Controls

“If you only have a hammer, you tend to see every problem as a nail.”

According to Merchant & van der Stede (2007, p.76), the most direct form of controls are action controls. These control employee behaviour directly and the can be formulated as preaction reviews, action accountability, behavioural constraints and redundancy. One benefit with action controls is that they often result in extensive documentation of past successful practices within an organisation. If employee actions would benefit from standardisation, employee effectiveness need to be ensured, or greater harmonization between employees and the organisation need to be enforced, action controls may be the natural choice (Merchant & van der Stede 2007, p.76). Due to its very nature, there are also obvious negative side effects to action controls. Many, if not most employees, tend to respond unfavourably towards them. As these controls are the most overt, they are also recognized as oppressive. In line with Foucault’s discussion of power, action controls are blatant expressions thereof and thus often create resistance (Foucault 1980, p.110). Independent and creative employees tend to react even more unfavourably than most and may even decide to seek employment where they can have greater freedom in how to achieve results and attain self actualization (Merchant & van der Stede 2007, p.223). Action controls are also difficult to implement in uncertain or rapidly changing conditions, as desired actions may not be readily apparent to management. Often, when managers are unable to effectively use action controls, they tend to rely on result controls instead (Merchant & van der Stede 2007, p. 724).

2.3.6 The Balanced Score Card

The most well known and popular combination of measurement systems is the Balanced Score Card (BSC), developed by Kaplan & Norton (1992). Their model is based on the use of four perspectives fused together: financial-, customer-, internal- and innovation and learning perspective. The financial perspective is likely a predominantly short term perspective, whereas the other perspectives are leading indicators of possible future performance (Merchant & van der Stede 2007, p.473). These assumptions have not been without criticism though. One major opponent is Nørreklint (2003), who argues that an actual, verified cause and effect relationship
between measures cannot be established. She further argues that the BSC model is not particularly helpful for strategy work, as technological development, competition and possible risks are not considered in the model.

2.3.7 The Tableau de Bord

“Tell me and I’ll forget, show me and I may remember, involve me and I’ll understand”


The Tableau de Bord is older than the BSC and may even have inspired the development of BSC (Bourguignon et al. 2004). It is somewhat similar to the BSC, although they differ in their underlying concept. Where the BSC is based on four predetermined perspectives, the Tableau de Bord relies on any perspective chosen by management (Bourguignon et al. 2004). Thus, the French approach does not assume any systematic links between measures and leading indicators. Also, according to Fernandez (2008), the Tableau de Bord does not exclude the addition of company external information, if this information needs to be included for strategic decisions. The Tableau de Bord therefore does not have the drawbacks that Nørreklint (2003) identified with the BSC.

To create a Tableau de Bord, one begins by looking at the most prominent organisational goals, as well as at the deployment measures and the following lower levels of goals and measures are conceived by interactions and negotiations between the involved management levels (Bourguignon et al. 2004). The idea is that each manager knows their own business and processes best and is thus able to best identify appropriate goals and measures. In this aspect the Tableau de Bord uses more of the gathered managerial competence that the BSC does. It forces each sub-unit to position itself within the context of the firm’s overall strategy and also towards the responsibilities for other sub-units. They must also identify their respective goals and performance indicators (Epstein & Manzoni 1998). This is compatible with the concept of holons and holonarchies outlined above, which each Holon operating according to its own rules.

As noted by Fernandez (2008); it is not sufficient to present documents to the director in nice colour schemes, if he or she does not understand and knows how to make sense of them in the decision making. Fernandez also points out that information for decision making should be gathered as directly as possible from the originating source. The originating source may, for example, be end-user demand of customers that is to be gathered close to the customers for production control purposes and not collected further down the chain of distributors. The Tableau de Bord is not a standardized tool in any way. It is better regarded as a personalized tool. As noted by Fernandez, a modern interpretation of Tableau de Bord regards it as an instrument to measure necessary performance in order to be able to make necessary decisions for all involved managers and employees within companies. This can be compared to the BSC which better reflects top managements need for performance measures. A possible drawback with the Tableau de Bord is that it takes more time, competence and effort to create. It may also be more subjected to bias towards the preferences of individual managers.
2.3.8 Management Controls and Strategy

“There is nothing as useless as doing efficiently that which should not be done at all”


Management controls and strategy are interrelated and strongly connected with one another. It is widely accepted that deciding what to achieve and how to go about achieving this is preferably done before spending efforts to design management control systems. For management control systems to work, they should be adapted to the company strategy. Management controls and strategy corresponds to the internal respectively external factors governing the organisation (Merchant & Van der Stede 2007, p.7). In many ways, they operate as two sides of the same coin. As global competition has increased during the last decades, much focus has turned towards efficiency and operational performance. If competitors have similar operations, a short sighted option is to simply try to outperform the competition. This may be appealing, as Dennis (2002) wisely notes; efficiency (doing things right) is easier to measure than effectiveness (doing the right things). This focus on efficiency effectively lessens the pressure on managers to devote themselves to discussing what are the right things to do, which is the very essence of strategy formulation. Based on previous research focusing on the connection between strategy and management controls, we will present a summary of their conclusions. Stix (2009) clearly connect some strategic capabilities to management controls. She also uses the BSC framework to capture the management control aspects.

Tucker et al. (2006) have formulated three propositions:

- The design of MCS is dependant on the strategic orientation of the company
- There is a match between particular strategic orientations and particular MCS designs which enhances performance
- The extent of influence that MCS have on both strategy formulation and strategy implementation varies depending on the way in which MCS are designed as well as in the way in which MCS are used

Tucker et al. (2006) also state that manager’s perceptions can be considered a mediating variable in relationship between MCS and strategy. This is in line with the views presented by Bourguignon et al. (2004), Epstein & Manzoni (1998) and Fernandez (2008), with regards to the Tableau de Bord. As there are no pre-packed systems of MCS and different types of strategy formulations, the manager’s perceptions and ideas is what in practice connects these two areas. Stix (2009) conclusions are statistical regressions that in fact measure this.

In general, Tucker et al. (2006) claims that the literature reveals two contrasting pictures of the interaction between strategy and MCS. On one hand strategies with a conservative orientation (defenders, harvesters and cost leadership) are best served by centralized control systems, specialized and formalized work procedures, as well as simple coordination mechanisms and attention to problems. Strategies characterized by entrepreneurial orientation (prospectors, builders and product differentiation) are linked to lack of standardized procedures, decentralized and results oriented evaluation, flexible structures and processes, as well as complex coordination of overlapping project teams and attention directing to avoid excess innovation.
2.3.9 Management Controls and Culture

“Make every decision as if you owned the entire company”

As with strategy, management controls must be compatible with culture. Culture is in itself a part of a management control system, as notes by Merchant & van der Stede (2007). This is further elaborated in their concept of cultural controls. Management control systems arise and operate in a cultural context, as they deal with human systems and the interaction between individuals. Sujuko & Hopper (2007) illuminate how different national cultures and ethnic identifications tend to give rise to differences in control systems, as some are more effective in some cultures than others. The deciding factor here is how well organisational practice and control systems correspond to surrounding cultural values and norms (Jarnegin & Slocum 2007, p.293).

2.3.10 Management Control Systems and Metrics

“Never mistake activity for achievement”

Any effective management control system need explicit or implicit metrics to function properly. These can be subjective, objective or relative. Evaluation criteria include congruence, controllability, precision, objectivity, timeliness, understandability and cost efficiency, which can be used to compare measures (Merchant & van der Stede 2007, p.436). Metrics must also be in line with the selected strategy and strategy formulation to be congruent with over all company goals. According to Merchant & van der Stede (2007, p. 475) more than 20 measures dilute the importance of each. It is thus important to carefully consider what to measure.

The most direct approach to frame these metrics is the use of the BSC perspectives. However, within an actual corporate setting, the use of Tableau de Bord may be superior, as it will be better adapted to the company and the preferences and experiences of the managers. However, as the Tableau de Bord has no predefined perspectives, general use of it as a frame for management controls and metrics may be more effectively accomplished with BSC. In our frame for management control metrics, we have chosen to use the four perspectives from the BSC (customer perspective, internal business process perspective, the learning and growth perspective and the financial perspective). We have also decided to add an environmental and ethical perspective to complement the BSC concept. For the BSC inspired frame work, with suggestions for metrics, see appendix 2.

3. Method

The present study will use both emic and etic approaches, something commonly used in ethnography and anthropology, but which may prove fruitful here as well, as culture and corporate culture serves as our overarching framework. The emic approach can be described as the insiders view and the etic as the outsider’s
observations of a cultural context (Sujoko & Hopper 2007). We have opted to use etic and emic approaches as this provides additional depth to our study, as well as help us to avoid misleading abstractions that may arise from an exclusive focus on metanarratives, which tend to mask the multiplicity of realities under a veil of simplified unity (Faure 2004, p.37).

Another reason for choosing the approach outlined has to do with the background of the authors. Anna has been employed by Sandvik Coromant AB since 1994, whereas Linus have no previous experience from Sandvik AB, but rather with cultural studies and archaeology. We aim to effectively make use of our disparate backgrounds as a source of strength when conducting both our research and our analysis. Our research problems mainly deal with strategy and management control systems, but these do not exist in a vacuum, but are rather affected by the surrounding corporate, local and national culture, as well as determined by ethics and leadership values (Jarnegin & Slocum 2007). This is in turn expressed and communicated through material culture and artefacts, the study of which will therefore be included in our study. In doing this, we hope to be able to move beyond the concrete data and more clearly define the nebulous concept of corporate culture (Grassby 2005, p. 592), as well as how it interrelates with strategy and management control systems.

3.1 Etic research approach

The etic approach outlined above pertains to a review of relevant literature such as course literature and scientific articles. These will be read, processed and categorized, as outlined in the theory section in chapter 2. With the use of the theories, relevant factors for describing organisational culture will be identified. Strategy will be analysed by finding as many appropriate types of strategy formulations as possible and to classify these into different categories (Stix 2009). The Balanced Scorecard (Kaplan & Norton 1992) and the Tableau de Bord (Bourguignon et al. 2004) will used to frame aspects of management control systems.

3.2 Emic research approach

Our emic approach consist of interviews, direct observation, participant observation, studies of material culture, archival documents, written reports and internal records (Yin 2009, p.110-112). As part of our emic approach, we will conduct in-depth interviews with the managers in the R & D top management team, up to and including the R & D manager. Our interview questions have mainly been geared towards uncovering the following:

- If there is a strong corporate culture in place
- If said culture influence strategic formulations and management control systems
- If management control systems and strategic formulations influence the organisational culture

The motivation for interviewing the managers is that leaders and managers are important in creating and upholding organisational culture. Their personal values and interpretations will likely influence their subordinates, as noted above. As managers,
they have also been longer with the organisation and are thus more socialised into its
culture. For our interview questions, see appendix 4.

We also used a questionnaire, which was sent to a sample of 30 operational staff
members. As the R & D department consists of several departments internally with
different types of operations, a few staff members were randomly chosen from each.
As they generally have worked for a shorter time within the company, they are thus
less exposed to its culture. As with the interviews, the aim is to unveil organisational
culture and its connections to strategy and management control systems. By
comparing the answers of the managers to those of the staff, we can see if they
share the same cultural values or not.

Studies of material culture will consist of studies of space, objects, positions of
objects and social interaction with and around them. This will be carried out primarily
through ocular viewing and will be documented by photography. The aim is to trace
implicit culture and hidden power structures, something that may influence
organisational behaviour and subsequently strategy and management control system
implementation. Our etic and emic findings will be analysed in light of previous
studies on the topic (i.e. Lassenius et al. 1998), as well as by contrasting the findings
from the different research methods with one another.

4. Empirical findings

Our aim with testing our theoretical model is to verify it in a real setting. Deviations
and unexpected findings will be taken into account for a final, modified model, which
will be presented at the end of this thesis, as well as in the final chapter. The findings
from our etic sources are presented in chapter 2 and include definitions and
presentations of culture, strategy and management control systems. Together etic
and emic findings constitute the foundation for our theoretical model (operationalised
in appendix 3).

4.1 Description of our theoretical model

Our theoretical model (appendix 3) was conceived to frame the extensive literature
and previous research presented in chapter 2 within our areas of interest;
organisational culture, strategy and management control systems. Also, our
secondary aim was to produce a model that can be of operational use within
organisations. This was necessary for us to be able to conduct our field study.

As organisational culture has the longest time perspective for modifications, our
theoretical model starts with identifying the culture of the organisation through use of
the factors presented (see appendix 3). Secondly, the strategy can be categorized by
the formats suggested in the model, but apart from that the actual content of the
strategy will have to be analysed, but that will be company specific. To judge if the
strategy is in line with the organisational culture, the theoretical framework of this
thesis can be used. If the strategy is not in line with the culture, then the strategy will
have to be modified as implementing a strategy that is inconsistent with the culture
will lead to outcomes below expectations. Then the management control system
needs to be analysed, or created if there is none to begin with. The balanced score
card inspired frame in appendix 2 could serve as a point of departure if needed. The
control system also needs to be in line with the culture, just as the strategy, and the
theoretical framework could also be used for this analysis. Finally, we recommend
that the organisational culture is analysed and if aspects are identified that could be modified to enable better organisational performance. These cultural modifications will then be more long term activities.

4.2 Interviews

Our original aim was for each interview to take one hour, but due to the interest our thesis subject arose, many R & D managers choose to spend more time elaborating on their answers. Some followed up at later dates to elaborate further more. When conducting the interviews, both authors interviewed them together. The reason for this was that Anna is a known and trusted insider, whereas Linus is an outsider. Linus handled the initial half of the interviews and Anna the later part. Both took notes as well as made recordings. The proceedings were summarized in written form, sent to the managers to double check so we did not misunderstand them. The final proceedings were summarized and resulted in a document nine pages long. Most of the answers were similar and a brief summary is presented below (appendix 5).

4.2.1 Summary of findings from interviews with R & D Management Team

There is an extremely strong and homogenous organisational culture that is represented by the managers. Only some individuals, with a shorter tenure within the management team, exhibited some minor deviations from the common values and norms. The core values of the organisation are loyalty and pride. Other strong values are innovation, experience, credibility, structure, service and predictability. There is also always a strong tendency for self critique present. The general view is that things can always be improved upon, even if they often are of world class standard or above. Unfortunately, the ambitions to change may be too ambitious. The will exists, but is often transformed into frustration as resources may be lacking together with clear and committed directions for change. Persistence is reportedly not always present and sometimes the organisation moves on to other activities before anything is really finished.

The organisational culture exhibits various patrimonial traits and all employees are very well taken care of by the organisation. If they face personal problems, all managers are willing to assist them and if needed call on extensive company resources for further help and support. There is also a willingness to adapt professional roles in case employees can no longer serve in their current capacities. In turn, cultural norms within the organisation expect loyalty to the company in return. Organisational core values are very much group oriented. Success is related to team achievements, or to a lesser degree, employee successes. There is also a very strong “consensus mentality”, resulting in operational decisions being taken together in management team groups.

A very strongly emphasised cultural value within the organisation is competence and expert knowledge. This is something that both employees and managers are very proud of and values above anything else. Ethical values within the organisation are also very strong. The overall organisational culture is very much internalised among the management team and they identify to a large extent with the organisation. As one manager phrased it, in many ways they “are” the company. If a corporate scandal were to occur, all managers would react very strongly and feel a strong sense of disappointment, betrayal and sadness. Some would even consider
quitting if this happened. The management team are themselves aware of cultural aspects and that these influence business operations, the positive outcome of mutual efforts, as well as the spirit and well-being of managers and employees. There is also a dawning interest in other cultures and differences in cultural values, as well as a growing awareness that this will be important for future business development. A more complete summary of answers and adherent initial conclusions is presented in appendix 5.

4.2.2 Summary of findings from Employee Survey

Pride is a strongly expressed value. More than 80% of the surveyed employees are proud or even very proud to work within the R & D organisation of Sandvik Coromant AB. Ethics are also considered very important. A staggering 100% of surveyed employees think the R & D department and Sandvik Coromant AB behaves ethically most often or always. A substantial majority would react very strongly is a corporate scandal would occur in the organisation. All employees know about Sandvik’s Code of Conduct and Fair Play. The top management have really succeeded in implementing these values.

Most surveyed employees themselves feel that they can be creative very often or often enough. However when it comes to attention and support of ideas, only 59% of employees feel that they get attention and support for their ideas often enough or very often. According to this small survey almost 60% of employees are willing to go on to learn new skills and competencies. However one must also acknowledge that almost 30% are not willing to change to another role at all. When is comes to the managerial decision process, more than 80% thinks it is either slow or very slow. Less than 20% thinks it is fast enough. All employees appear to be aware of differences in cultural values and identify cultural differences within different areas of the larger organisation.

When it comes to strategy, less than 20% of the surveyed employees think that the new 2015 company strategy will substantially affect their actions while the majority, almost 60%, think the strategy only will have some effects. Just as the managers, employees are directed mostly by collective decisions during meetings. The second most important factor is orders from their respective managers. Other gathered employee complaints from this survey include tardiness and excess bureaucracy, criticism of managers and top-heavy organisation, as well as a mentality of “not-invented-here”. The complete survey results are presented in Appendix 6.

4.3 Findings from study of Material Culture

Our study of material culture consisted of studies of space, objects, positions of objects and social interaction with and around them. It was carried out primarily through ocular viewing and was documented by photography. This study is best viewed as preliminary. To conduct a proper investigation of material culture would demand significantly more time, energy and resources, and lies outside the scope of this thesis.

4.3.1 Landscape

Our first step was to analyse the lay of the land, the landscape. This can be analysed both according to its morphology and its phenomenology, as the individual
is also a part of it. Her sense of identity, as well as the identity of social systems is intrinsically tied to the landscape (Grassby 2005, p.591).

The landscape around Sandvik is highly relevant to its organisational culture. Geographical advantage was the main reason why the site was originally chosen by the founder of Sandvik. As the company grew, so did the number of workers. In order to meet their needs, housing were provided, along with stores, hospitals, schools, churches and recreational facilities. In time, a small town arose based around the company and its operations. This is still reflected in many local place names, which are often derived from aspects of company operations, or named after important people within the company. A modern example of this is Göransson Arena, the biggest in house sporting facility in Sweden. This building was financed with capital resources from a Sandvik foundation and was named in honour of the founder of Sandvik AB. Wherever one moves about in the town of Sandviken, one is reminded about the presence of the company. Some buildings, particularly the corporate headquarters loom on a small height, domesticating the very landscape itself. The company’s buildings serve both as practical structures, but also as built bodies for the organisation (Hammarstrand 2007, p.140). Added to this is layer upon layer of personal meaning tied to the company and experiences thereof. As a result, local culture and Sandvik culture tend to fuse together. Ties to the land are strong and up until very recently, it was mandatory for C-suite managers within the company to live in Sandviken full-time.

4.3.2 Space

Space can be described as “where people do things” (O’Toole & Were 2008, p. 616). Space includes both interior and exterior spatial arrangements. It refers to juxtaposition, distance and proximity and is highly pregnant with cultural and political implications (O’Toole & Were 2008, p. 616-617). For example, personal space (or the lack of it) is often associated with status and power and vice versa. By establishing where and when objects are arranged in space, patterns of selection can be identified, as well as variation from norms (Grassby 2005, p.593).

Our study of space is limited to the Coromant head office and mainly to the interior space of said building. First of all, use of space is not homogenous and different floors and departments use space in different ways. Some departments have more space than others, although there is an overall lack of office space. Some departments have open office landscapes, some still adhere to traditional offices, and some are caught in between. The walkways are rather narrow and the overall impression is somewhat claustrophobic. The demonstration workshop for customer visits is somewhat more spacious. The largest rooms are the offices of the R & D managers, most of which have doors they can close if need be. There are also a number of rooms that can be described as “neutral” rooms, mainly designated for meetings.

Each floor plan has a designated space for employees to meet and drink coffee, the mandatory Swedish “fika-rum”. Central here is the coffee machine, around which sofas are arranged, allowing for people to socialise as a group or as groups. Individual space is generally lacking throughout the building. Each floor has a number of toilets, although it is interesting to note that there are significantly fewer female toilets than male. “Gendered spaces” tend towards the male and as one sign clarified, “Only for females”, indicating that even this limited “female” space is
occasionally “invaded” by more dominant males, revealing implicit gender power structures.

Fig 4.1: Note the colour difference on the floor. This room used to consist of smaller offices, before it was transformed into an open landscape recently.

4.3.3 Place

Based on landscape and space is place. It can be described as a mentally construed, individual experience of the lay of the land, superimposed on the bones of the land. In and around a place are demarcation lines, separating one place from another, as well as establishing “inside” and “outside”. Place is a nexus of things and space within a given boundary. In the case of Coromant Headquarters, place is demarcated by fences, walls and doors requiring authorisation to pass. Being authorised to move through the building implies that one is viewed as an insider, subtly shaping one’s sense of self. Within the place, objects are arranged, serving both as communicative and operational devices. Materialities reflect work habits, as well as the character of the occupational group represented within a particular locale (O’Toole & Were 2008, p. 623). Within the place, the multiplicity of individual actors is subsumed into a shared place identity. Individuals working in the place thus tend to share a sense of meaning and perspectives. In time, the “place-ness” of places can reach near mythical levels, either positively or negatively, and influence behaviour accordingly. An example of “place-ness” is the canteen. Linus heard many stories of how certain parts of the canteen once was the dominion of certain departments and some older workers once even had their own seats. Although this departmental seating is mainly a thing of the past, it can still be traced in the arrangements of seats and tables in the canteen. Today more and more tables are seating four people, thus allowing for more private conversations. This seems to mirror cultural developments within the organisation.
Fig 4.2: Departmental seating in the canteen.

Another important place, which has been consciously created in order to communicate Sandvik values, culture and history, is the museum. This is a small room with various items displayed behind glass panels, telling the story of Sandvik Coromant. The demonstration workshop for customer visits is another example of a constructed place, used to communicating company culture and values. This room is much larger and spread around it is a number of machines, most of which are actual machines used in production. Interspersed among the machine are various banners and screens communicating product benefits, as well as corporate values.

To illuminate the existential aspect and importance of place, Anna experienced a few years ago how the development workshop caught fire devastating most of the building as well as machines, tools and other equipments. No one was physically injured, but much was destroyed. This did create anxiety and suffering on part of the employees, many of whom had worked in that particular workshop for years and had come to identify with it. When it was destroyed, these employees lost a part of their personal history.

4.3.4 Objects

Objects refer to the material elements of place and material culture. Objects, particularly monuments and artefacts, can reinforce cultural messages, which are often perceived and interpreted implicitly. Most objects and places are constructed for utilitarian purposes but they also communicate meaning (O’Toole & Were 2008, p. 618). Certain objects make visible statements about hierarchy of value and carry social and personal value within a specific cultural context. Object mediate social interaction between individuals and bridge cultural boundaries as well as connect centres with peripheries. Objects can also convey cultural constraints and social fears (Grassby 2005, p.593).

In and around the Coromant headquarters are many objects, some displayed, some meant for public viewing, some for private remembrance and identity. The small museum presented above is a treasure trove of symbolic objects. These
originally had a mainly utilitarian function, but in time accumulated layers of historicity. They include old tools, posters, manuals, clothes or awards, all serving as symbols of the company’s past. They are thus consciously used in an attempt to explain corporate identity. As with any such collection, some objects and aspects of history will be illuminated, whereas others will be hidden.

![Fig.4.3: Corporate past in the Coromant Museum.](image)

Perhaps the most important objects in the building are the coffee machines. These structure social behaviour and interaction to a large extent. Around these dispensers of caffeine-laden ambrosia, employees frequently gather, often engaging in casual conversations or exchanging gossip. In a way, these objects serve as the social nexus of each floor. Their placement is not unimportant. As they are placed on each floor, it allows workers from the same department to meet with each other. This reinforces departmental subculture and the sense of group membership. However, it also results in the separation between departments.

As for objects of more personal nature, they are similar to those found in most offices. Pictures of loved ones, small trinkets and items are usually displayed around the work place, reminders of identities outside the work-place. Conversely, many utilitarian items are to be found reminding employees of their identities inside the work-place. Here coffee mugs, USB-sticks, calendars and other small items with the company’s logo are to be found.

### 4.3.5 Buildings

Structures and buildings help define the physical conditions of everyday life, as well as options for actions available to different individuals and groups. Both the interior and the exterior of a building reveal how people met basic human needs of food, shelter and warmth. They also communicate privacy and security (both personal and organisational) (Grassby 2005, p.593). Furniture inside a building reflects attitudes to the body and health of those who frequent the building. The arrangement of furniture creates a visual and spatial arrangement, wherein larger pieces of furniture serve as
anchors around which smaller or more insignificant pieces cluster. The arrangement of chairs and tables, walls and spaces creates zones of activity in which individuals interact or move. Layout determines whether interaction is facilitated or restricted and whether objects are displayed or hidden (Grassby 2005, p.594). As for the Coromant headquarters, it consists of two sections, one built in 1977 and one in 1981 (they are often referred to among employees as the 77 or the 81). Their architectural style is similar to what was prevalent in official buildings in Sweden at their time of construction, mirroring ideals in the surrounding society at the time. Due to the heavy security, the narrow walk ways, the lack of light and the architectural style, it reminds one of a prison or hospital building. The building is located in relatively proximity to the main office of Sandvik, signifying a connection, both practical and symbolic. Interestingly enough, it is located below the main office.

The interior of Coromant headquarters is currently under reconstruction. Originally, the idea was to crowd in more people, but then different departments decided they needed more space and begun to initiate open office landscapes. The interior of the building is heavy in security and it is impossible to move from one end of the building without security clearance. Besides serving a practical function, it also reinforces the “insider” identity of group members. The most public area of the building is the reception, which is also the poshest area, reflecting corporate image to outsiders. On the wall in the reception are three watches, one giving the time in Tokyo, one in Sandviken and one in New York. The Sandviken one is positioned in the middle, communicating the importance of the locale in the mind of the company.

4.3.6 Findings from study of internal documentation

Two specific aspects of the company internal documentation was studied, namely the R & D strategy and the R & D management control system. Due to the sensitive content of these documentations, the authors were not allowed to publish them within this thesis. However both authors had complete access to this documentation as Anna is an employee of the company and Linus were given access to the documents after signing a non-disclosure agreement.
The R & D strategy is formulated with input from the Sandvik Coromant AB company strategy as well as from the Sandvik Tooling AB R & D strategy. The formats of these strategies used as input are not exactly the same and the contents are also different. The end product, the Sandvik Coromant AB R & D strategy, is then written as an ordinary Word document, typically consisting of more than 40 pages. The contents are very relevant to the R & D operations, but due to the cumbersome format it is difficult to easily communicate the contents to the stakeholders.

The R & D management control system format is based on the Balanced Score Card. The dominant perspective, as judged by the number of metrics, is the internal processes view. These metrics are all of the results control type. Every year there is a goal process where managers set individual targets for their respective subordinates. Besides the Balanced Score Card used there are also manuals containing numerous action controls.

5. Analysis

This thesis aims to investigate the interdependency of culture, strategy and management control systems within an R & D Context. The amounts of previous research done in these areas are staggering and our first objective was to develop a reasonable theoretical model that would trace their interdependence. Having developed a preliminary theoretical model, we undertook a test of our model, which was conducted within the R & D department of Sandvik Coromant AB. During our test, we attempted to discern possible linkages and connections between the different fields by conducting deep interviews, doing a survey, and conducting a brief study of material culture. We also relied on direct, as well as participatory observation. This approach generated large amounts of relevant data, the summary of which have been presented in the previous chapter, as well as in the appendices.

As for the analysis of said data, we have used something akin to Grounded theory. Grounded theory is generated by continuous interplay between data collection and analysis and is to a large extent based on asking questions and making comparisons (Sujoko & Hopper 2007. p. 258). In doing so, guided by our hypothesis and basic assumptions, our theoretical model was built bottom-up, in order to try to avoid getting caught in predetermined categories (Hammarstrand 2007, p. 142). This procedure was adhered to both when defining our preliminary model, but also when analysing the findings. The use of Anna’s long term experience was co referenced with Linus view as an outsider of the organisation in order to use Anna's extensive experience, but minimize the risk of having too much company internal bias of the conclusions.

Our methodological process can be summarized as follows: etic claims (studies of previous research) were followed by an emic approach and subsequent analysis and cross reference of emic and etic data, which resulted in a reconciliation of emic and etic views.
Our strategies used for verifying our and analyse our hypothesis are:

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6. Conclusions and Implications

With this thesis, we set out to investigate the interdependency of culture, strategy and management control systems within an R&D context. In doing so we aimed to trace the interaction between layers of meaning, order and coordination (Reddings & Witt 2010, p.23); that is culture, strategy and management control systems. Our research hypotheses were formulated based on conclusions drawn from extensive reviews of previous research and were as follows:

H1: Organisational culture affects the choices of strategy formulation and management control system within Sandvik Coromant AB. This hypothesis was accepted and confirmed by our research.

H2: Strategy formulations and management control systems are interrelated to organisational culture and can also, in a longer perspective, influence organisational culture within Sandvik Coromant AB. This hypothesis was also accepted and confirmed by our research.

The points of departure for our hypotheses were generally applicable and clear interrelationships between organisational culture, strategy and management control systems could be confirmed. By applying our theoretical model within Sandvik Coromant AB, many illuminating insights arose and we increasingly saw how culture shape strategic formulations as well as management control systems, which can be understood as operationalised strategy. We also saw that repetitve actions, shaped by controls and strategy, can and do affect organisational culture. The findings from our field test will be discussed in greater detail below and conclusions and implications will be presented as well.

6.1 Conclusions from Previous Research

Our theoretical findings support the interdependence of organisational culture, strategy and management control systems. Organisational culture structures the day-to-day practices within the organisation, as well as influence goals, practices and attitudes within it (Jarnegin & Slocum 2007, p. 290). It creates a system of meaning, through which people existentially orient themselves in a chaotic world. Employees
act within the framework of culture and tend to invent stable structures and processes along the way. These may in time grow into institutions (Redding & Witt 2010, p.25).

Organisational culture does not exist in a vacuum, but is highly dependent on the surrounding social context. Just as the surrounding environment is continuously changing, so is the culture based on it. When there is a lack in adapting to the changes of the environment, it will likely lead to a cultural crisis or even a cultural failure. This may in turn result in organisational failure. Thus, culture is best viewed as a process, continuously redefining itself in response to the vicissitudes of life.

As noted, culture exerts powerful influence over an organisation's ability to carry out its objectives, particularly in regards to strategy work, and by extension management controls. Due to the clear linkages between strategy and culture, most organisations find it difficult indeed to implement strategies and control systems inconsistent with its culture.

Despite its seeming omnipotence, leaders can and do influence culture, even though they themselves are often shaped by it. In fact, their very promotions to leaders within organisations may be in response to their conformity to cultural values. Changing organisational culture is never easy and it demands awareness of how culture operates, as well as what is desirable and undesirable within the organisation's culture. Motivating and influencing group members through myths, rituals and the use of materialities can foster behaviour and result in recurring actions, which over time will shape organisational culture. If we follow this line of thought, it is thus possible to change organisational culture over time through subtly influencing and direct the mindsets and actions of employees. This is possible through the implementation of strategy and management control systems. This confirms the general aspects of our second hypothesis. It is important here not to deviate from wider socially acceptable norms when attempting to change organisational culture. Too overt use of power should also be avoided, as this tends to create resentment and resistance. It is also important to keep in mind that neither culture, strategies or control systems lasts forever. Firms may develop sustained advantages through being hard to imitate (Barney 1991), but all advantages rest on uncertain foundations, which are temporary at best.

Discussing the interdependency of organisational culture, strategy and management control systems is similar to the age-old philosophical conundrum of what came first, the chicken or the egg?

Strategic goals are shaped by cultural considerations, national, regional, as well as those specific to the organisation. Questions of why firms exists, what purpose they serve and how employees are to conduct themselves within the organisation varies significantly across cultures. The basic question “what is it all about?” can and is answered differently in different settings (Redding & Witt 2010, p.22). Strategy may help provide the answer and help guide, shape and uphold culture. As management control systems are operationalised strategy, they are naturally subjected to differences in implementation and effectiveness as well, but can also affect culture as they shape encourage or prohibit actions. It is clear from the above that interdependence exists and that culture, strategy and management control systems influence each other to a large extent, with influences flowing both ways.

The conclusions presented above are taken into account in the theoretical model presented by us (chapter 4.1 and appendix 3).
6.2 Conclusions from Field Test

6.2.1 Conclusions from Interviews with the Sandvik Coromant R & D Management Team

An extremely strong and homogenous organisational culture is present among the managers of Sandvik Coromant’s R & D management team. This culture is somewhat dual in nature and appears to be at odds with itself, at one hand supporting innovation and at the other predictability. This conflict reflects a possibly “neurotic” culture, with different aspects being dominant at different times. In our view, based on interviews and participant observation, the organisation has always had to balance these aspects. It must deliver new products in time for the market, but at the same time also spend resources on innovation. The impression of both authors is that predictability is currently the dominant aspect, perhaps to the detriment of innovation.

The often occurring tendency for self-critique within the company is present among the managers. This may be tough on members of the organisation, but a good value to keep, as the organisation aspires to keep the position as the leading company in their world market. There exists a strong will to improve operations, reflecting the aspect of innovation. Unfortunately this will is too often accompanied by an inability to transform, as there is always a lack of recourses, clear and committed directions for change, as well as a lack of persistence that makes the organisation move on to other activities before anything is really finished. This often causes frustration and a lack of commitment to new change programs.

From participant observation combined with direct observation we conclude that the managers are possibly not fully aware of the extreme homogeneity and strength of their organisational culture, compared to what could perhaps be found within similar organisations. The homogeneity gives strength to the cultural values that may both serve as an advantage, but in turn may also hinder adaptation to rapidly changing conditions or interfere with creativity and cultural diversity. Gender aspects are naturally a subtopic of the greater diversity issue.

As the R & D area has historically been an area that, until about two decades ago, employed almost no females, it is very much steeped with predominantly male values. As more and more women are being employed within the R & D area, this is changing, but the male oriented culture takes time to change. As a consequence, female employees have had to internalise many male values in order to be accepted and to be able to cooperate smoothly with male colleagues or managers. They generally seem to do so without thinking or reflecting about it, as they are generally highly motivated in their jobs and have made the active choice to pursue a career that is still considered unusual for women. This conclusion matches also Anna’s experiences very well. She was the second female engineer with a Master of Science degree to be employed at Sandvik Coromant AB at the company site in Sandviken. We have also informally interviewed some other female engineers about this and they do all share this type of experience. This implicit and subconscious conditioning reflects adaptation to prevalent cultural norms. On a positive note, much is done within the organisation to redress this gender imbalance. However, less effort is directed towards questions of diversity, which is not unimportant, as the company is currently expanding its operations all over the world.
Based on our interviews, there are patterns of a patrimonial culture. In light of corporate and town history, this aspect of organisational culture seems to have a long tradition, and have evolved over many long years. As a result of this, there is an enormous sense of loyalty towards the company. This could easily lead to corporate scandals if employees were encouraged to cut corners by their managers. Fortunately, strong ethics is also an important part of the Sandvik culture, which mitigates this risk significantly.

By analysing the interviews performed we can conclude that there is a strong emphasis on collectivism which also affects how decisions are made. Almost all decisions are taken in collectives such as for example management team meetings, steering groups, department meetings or project meetings. In this way collective knowledge and experiences ensure a proper course of action. The down side is that the decision making process is extremely slow and work intensive, something the top management team is very well aware of. Many employees are also critical of this. Also, the use of collective knowledge and experience reduces the demands by management teams on guidance from superiors in the organisation. With unclear or poorly communicated and analysed visions, missions and strategies, management teams somehow interpret the directions from above to goals, orders and directives to subordinates. For the R & D organisation, this effect is further influenced by the marketing- and sales focused top management of the company which, according to general views expressed in the interviews, take world class research and product development somewhat for granted.

Competence is a very strong cultural value according to the results from our field study. As with all very strong cultural values, this has both positive and negative implications. Within the R & D area competence is absolutely necessary for performing work. On the other hand, as competence is so much valued, it makes perhaps employees reluctant to engage in “internal job rotation”, as that would mean that they would have to start all over again and build up a new area of competence. This would also result in having to leave one’s current group, as well as loosing a part of one’s sense of self, which appear to be strongly connected to one’s level of competence.

The top management of the Sandvik Group has promoted ethical values effectively over a long period of time. All company decision makers and staff are expected to behave ethically and deviations would not go neither unnoticed, nor unpunished. However, the ethical values are much influenced by Western or Anglo-American values. These are often Christian or Post-Christian in nature and are not universal, as other cultures have other moral systems (King 1999, p.7). The present expansion of business to China and other Asian countries will represent a challenge when it comes to the definition of ethical values. Western culture is based on individuals whereas Eastern cultures are dominated by group values. Doing business in for example China will entail adaptations to other values of both ethics and leadership than these of Western culture.

6.2.2 Conclusions from Employee Survey

Pride, competence and ethical behaviour are all strong cultural values among the employees. For the R & D operations creativity is very important. Most surveyed employees themselves think that they can be very often creative, or often enough. The fears the interviewed managers expressed above may thus not be as well founded as they believe, although this can still be improved. 23 % of surveyed
employees think that they can not be creative enough at work. There is still creative potential that is not effectively used. However, when it comes to attention and supports for their ideas, only 59% thinks that they get support often enough or very often. This is probably not a bad result, but there is room for improvement here as well. This can possibly be connected to the diversity issue and the openness towards other ideas and cultural values.

As competence and expert knowledge is very highly valued within the company, we did expect this to possibly hold employees to their respective roles, as changing to a new role would imply taking time and effort to build new competencies. According to this small survey, almost 60 % are willing to go on to learn new skills and competencies. However one must also acknowledge that almost 30 % are not willing to change to another role at all. The results were not as bad as what the managers had expected, but there is room for improvement here as well.

Just as the R & D management team members feared, there is a widespread opinion that the decision process of the managers is too slow. Unclear mandates and a strong consensus culture may be parts of the explanations behind this.

All surveyed employees are aware of cultural values and differences in different departments. Employee expectations that the new company strategy will affect their actions are rather low. This may be due to lack of clear communication, which may be a result of strong cultural controls and “gut feeling” management. Much is implicit, rather than explicit, which is in line with cultural controls. The employees, just as the managers, are all a part of the consensus culture, something that affects both strategy formulations and implementation of management control systems.

6.2.3 Conclusions from Material Culture

Our study of material culture revealed a material reality strongly infused with culture values. This is reflected in the very landscape of the town of Sandviken, whose history is intimately tied to that of the company. In many ways, the identity of the people living and working in Sandviken are highly influenced by the organisation’s culture, even though the reverse is equally true. Within the organisation, there is a very strong sense of place, as most C-suite managers up until very recently had live full time in the town of Sandviken. There is thus a decidedly ancestral connection to the land, something that may lead to difficulties for “outsiders” to adapt.

The use of space within Coromant reflects organisational values, insofar as space is used in a seemingly “neutral” way. Managers do not have fancy offices, nor separate dinning areas. Most of them do have doors they can close, but not all. The only thing that sets them apart in terms of space is separate parking space, but that is exclusively for the top management of the company. This reflects an outward culture of consensus and equality. This is not to suggest that power is not present, just that it is adept at hiding itself. As noted above, the success of power stands in relation to its ability to hide its own mechanisms. In the words of Keyser Soze in the immortal thriller “the Usual Suspects” (1995): “The greatest trick the Devil pulled was to convince the world he didn’t exist”.

One example of subtle power structures is revealed in the use of space allocated to women. Sandvik and Coromant have traditionally been male dominated, although efforts are being made to change this. Even so, there are fewer women than men working at Coromant, especially in the higher echelons. This is reflected in space, as indicated by the examples of the toilets above.
Another way in which cultural values are expressed through use of space is the lack of private space. This may of course have a simple utilitarian explanation, but may also be a material result of a group- and consensus based culture, expressing itself in terms of absence. In terms of presence, the same value may be reinforced by the fika-room, in which individuals are submerged into the departmental group. This sense of community (which results in a we/them dichotomy) is further reinforced by the difficulty of unrestricted movement within the building. It effectively separates “insiders” from “outsiders”, people trusted by the company and people not trusted by the company. Access to different areas thus reflect degree of trust and mirrors the level of authority. Every time a passage card is swiped in order to pass through a door, the individual is unconsciously conditioned and the sense being a group member is strengthened. The opposite is also true. If a group member were suddenly denied access to areas he or she could previously visit, it would constitute a most explicit form of disciplinary action, as the group member would effectively be excluded from the group, something that is almost always painful.

Within Sandvik Coromant, there are many places with layers of history tied to them, based on group member memories. The material culture in some places reflects these memories, whether they have arisen naturally or been intentionally created. Here the small museum is a case in point. It is constructed to tell the history of both the Coromant headquarters, but also of the global entity of Coromant. The founding fathers and various important people are presented, along with tools, manuals and advertisement that reflect the company’s development over the years. Taken together it serves to create a mythological narrative. This is part of the official story and more subversive elements are hidden or avoided. One example hereof is the 1st of April pamphlets, which for many years spoofed official presentations in a very satirical way and are thus obviously not a part of the exhibition. Even so, it is still a part of living tradition and many older employees remember them and they still form a part of the overall myths.

As for objects, some of the more important ones are without doubt the coffee machines. Trivial as they may seem, they structure social behaviour among the Swedish staff, as the habit of drinking coffee (which is socially constructed) is strong. Their placements and the use of surrounding space influence social life to a high degree, as it shapes who interacts with whom and in what way. Other objects that support organisational culture are the many small utilitarian objects observed, from coffee mugs to pens and memory sticks. They may seem trivial, but each communicates organisational value in addition to being useful. If someone in contrast suddenly were to start using mugs belonging to the worst competitor, this would likely lead to jokes or could even ruffle some feathers. Materialities are thus not unimportant in the shaping, upholding and destruction of culture. The play of culture and meaning, power and resistance, takes place in a material arena and those with power can and often do shape and influence the material world in order to retain their control over culture and meaning. As strategy and management control systems are both linked and shaped by organisational culture, materialities affect their implementations as well.

6.2.4 Conclusions from study of internal documentation

Having two different strategies (the Sandvik Coromant AB strategy and the Sandvik Tooling AB R & D strategy) as inputs for creating the Sandvik Coromant AB R & D strategy may lead to difficulties if desired actions are inconsistent. The format of the
Sandvik Coromant AB R & D strategy can not be classified into any of the formats presented in the theoretical framework of this thesis. The massive amount of text makes it difficult to communicate to involved stakeholders, as well as to use for directing actions of mutual effort. According to discussions during interviews with the management team and with the use of Anna’s long term experience within the company, we conclude that the guiding function by the R & D strategy works by use of the extensive experience of the managers and their mutual efforts during management meetings. The outcomes of the operations have so far been acceptable by the top management of the company despite possible improvements that could be made.

The dominant type of management control within the R & D department is cultural controls, but this type of control is not documented in written form. In addition, we have also seen clear indications of the existence of patrimonial controls. These could very well have been the prerequisites for unethical behaviours to develop, but as the culture is infused with strong ethical values this is effectively prevented. The second type of management controls consists of numerous action controls documented in manuals. The use of results controls is relatively low. The positive effect of the use of results controls is that employees are freer to make their choices of actions, something that according to the theoretical framework presented will enable more creativity and better adaptability to new circumstances. Within an R & D department that has to invent new products for a developed market with tough competition, this is not unimportant. The Tableau de Bord can be of use in a setting like this, as the perspectives can be more freely chosen to match sub units within departments in a more appropriate way. This is in line with the Holon model presented above, where each unit operates according to its own conditions.

6.3 Concluding Discussions and Future Research

With this thesis we set out to investigate the interdependency of culture, strategy and management control systems within an R&D Context. Based on previous research and the resultant theoretical model, as well as a field test, we were able to analyze and fine tune our model and hopefully it will serve as a valid point of departure for future research.

6.3.1 Concluding discussions

“We are what we repeatedly do. Excellence, then, is not an act, but a habit.”

The findings of our both theoretical model and our field test supports both our hypotheses as outlined above. There is indeed a strong correlation between organisational culture, strategy and management control systems. Culture arises in response to changing circumstances and the same is true within our case company. Its history, its geographical setting and its market conditions have over time shaped its culture and thus its strategy formulations and control systems, the strongest of which is cultural controls. We also found that certain controls and strategies, mainly pertaining to areas of ethics and gender relations, have indeed shaped organisational culture. Culture shapes, but is also shaped as it is dependent on repetetive action to accumulate. If awareness is present and strong enough, culture can be actively
shaped. This will make the implementation of strategy and management control systems easier and more efficient.

Over a time span of 150 years, many cultural idiosyncrasies have been accumulated in layer upon layer of meaning within our case company. The origin of some social practices may have been lost in time, but they are still affecting action and performance today. Many are also expressed in materialities and organisational culture is thus literally built in stone.

Most successful organisations have a culture that allows them to create, implement and maintain their initial success (Schein 1996). This is certainly the case with Sandvik AB. As far as we can discern, the twin forces that have propelled it to prosperity are the same cultural forces as outlined above: innovation and predictability. However, what worked in the past may not necessarily work in the future and as such culture must continuously adapt itself to retain its meaning. This must also be reflected in strategy formulations, as well as in management controls, though these influence culture in turn by guiding and enforcing behaviour. Thus, the term cultural control takes on a new meaning. In light of this, we can also speak of a strategic culture, or a culture of strategy, or why not a culture of control, in addition to cultural controls. This play with words illuminate how closely related organisational culture, strategy and control systems are.

In the case of Sandvik Coromant AB, we have found that organisational culture affects strategy formulation and management control systems. Traditionally Sandvik Coromant managers were experienced individuals with lots of “gut-feeling”, that is individuals with a high degree of socialisation into the prevalent culture. Due to this, explicitly formulated strategies were not really necessary or motivated to spend time on. As all levels operations of are directed by collective decisions during meetings, mutual efforts are used to interpret imperfect information, pertaining mostly to orders and directives accompanied by very few real results controls to measure performance. Therefore the organisational culture have resulted in weak strategy work, packaged in various types of formats that in turn has not made an effective use of results controls possible. The dominant type of control is thus cultural controls and perhaps a “culture of control”. Our mappings of results from the field study are presented in appendix 7. Our field study supports our first research hypothesis that organisational culture affects the choices of strategy formulation and management control system within Sandvik Coromant AB.

It has been more difficult to find evidence or indications that strategy formulations and management control systems may influence the culture. What may lead us to believe that this is still possible is the example of use of rewards, either as formal parts of the management control system or as informal types of rewards, that encourages certain actions or behaviours. When these actions are repeated many times, individuals are socialised into cultural patterns, as noted above. A concrete example hereof is how gender relations have shifted over the years. Originally few women worked at Sandvik Coromant. This is still the case, but through training and education, management are becoming increasingly aware of this. Based on our observations, the number of female employee has risen over the years, something that may continue for years to come. This could constitute one concrete example of how strategies and controls can shape changes in culture.

When discussing a culture it is important to keep in mind that it is not an unchanging, fixed entity. Culture and identification are closely related and neither cultures nor individuals have fixed, unchanging identities, but continuously identifies themselves in relation to others (Eriksen 1996, p.51f). As culture arises in response
to circumstances and as different levels of an organisation faces different circumstances, the resultant culture will thus be slightly different across different departments within the same organisation. In light of this, it might be helpful to apply the concept of holonarchy in order to explain how the parts relate to the whole and vice versa, as well as account for, and accept that different parts of a whole are governed by different rules (Kusumi et al. 1998, p.65). This does not only refer to different parts within an organisation, but to all social systems. Though the company of Sandvik Coromant AB is a whole from the perspective of its departments, it is just another part viewed from a national perspective. This is in turn another part viewed from a global perspective.

6.3.2 Suggestions for Future Research

We have developed a theoretical model based on previous research and conducted a field test within the R & D organisation of a Swedish multinational. The aim of our model is for it to be generally applicable within a broad range of similar organisations. Based on our model and the test thereof within Sandvik Coromant AB, we arrive at certain findings, but these are not to be viewed as conclusive answers, more as a preliminary test of our model, both of its theoretical validity and operational usefulness.

Our model can be further refined by perhaps linking interview questions even more to the theoretical model. Also the model could be tested within several more organisations to investigate its validity as well as see how it performs in other organisational cultures within other national culture settings. This would result in a more generally applicable model. Another interesting approach would be to further link our theoretical model more to market conditions by investigating the connections between market conditions and surrounding culture, organisational culture, strategy and management control systems. A further field of inquiry is how leaders shape and in turn are shaped by organisational culture. Aspects of this are to be found in previous studies, but it would be interesting to see how leaders could use materialities in order to shape organisational culture, strategy and management control systems. It may also be helpful to keep in mind that differences between fields are not always fixed. When studying a subject, it is easy to submit to absolute descriptions. However, these tend to "kill" the objects of description, as all other possible interpretations are negated. Words are necessary, but it is important not to get stuck in them. To go back to Derrida’s discussion of difference, each word is merely a reflection of all words, just as are we all individual reflections of a wider social system, which is in turn reflected by other systems.
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Appendix 1: Case Company Presentation

(Source: The Sandvik Coromant AB intranet)

Sandvik AB

Sandvik AB is a multinational high-technology group with a presence in more than 130 countries around the world. In 2009 the number of employees was around 44,000 worldwide and sales amounted to 72 billion SEK. Sandvik’s operations are based on its unique expertise in material technology, as well as extensive insight and understanding of customer processes. This combination has lead to world leading positions in three primary areas;

Sandvik Tooling AB: Offering tools for metal cutting in cemented carbide and high-speed steel, as well as components in cemented carbide and other hard materials.

Sandvik Mining and Construction AB: Offering tools and equipment for the construction and mining industries.

Sandvik Materials Technology AB: Offering products in advanced stainless materials, titanium, special alloys, metallic and ceramic resistance materials and process systems.

Sandvik Tooling is primarily focused on tools and tooling systems for metal cutting. These products are sold under a number of international brands, such as Sandvik, Sandvik Coromant, Safety, Walter, Diamond Innovations, Dormer and Wolfram. The products are manufactured in cemented carbide and other hard materials such as synthetic diamond, cubic boron nitride, ceramics and high-speed steel. The objective is to increase customer productivity by providing products, services and application know-how.

History of Sandvik AB

The company was founded in Sandviken by Göran Fredrik Göransson in 1862, initially under the name of Högbo Stål & Jernverks AB. In 1858, Göransson had managed to succeed in his experiments with the English Bessemer-method, resulting in large scale production of high-quality steel. The first few years were hard and in 1866, Göransson went bankrupt. Two years later, he managed to restart the company, now under the name of Sandvikens Jernverks AB. This name remained unchanged until 1972, when then company changed name to Sandvik AB.

Almost from the start, many of the products became increasingly specialised and from the 1940s and onwards, Sandvik began to produce tools in hard metal. These tools were sold under the Coromant brand and were primarily used for cutting other metals.

Sandvik was highly successful in their marketing efforts and was one of the first steel producers to change their sales strategies. Previously, most steel producers were tied to various trading companies, who often bought all the products whole-sale and then resold it for a profit. Sandvik decided to do direct sales, a strategy that was soon to be copied by others in Denmark, Norway, England, Russia and Germany. Sandvik opened agencies in Norway, Denmark, England, Russia, Germany and France. During the first half of the 20th century, the company expanded and much of their operations were outsourced to other countries. Many companies are bought and in 1973, Sandvik bought Seco Tools and in the 1990s Tamrock, Bacho Tools and CTT-tools.
Already from the beginning, one of the core ideas of Sandvik was to produce exactly the products clients asked for. This idea dates back to the 1860s and necessitates a close cooperation with customers in order to produce what they really need. Today, more than 850 different types of steel are produced in Sandviken and products are delivered all over the world. The aim has long been to be world-leading in the respective business areas. Sandvik has become a worldwide multinational but the corporate headquarter is still located in Sandviken.

Company Description: Sandvik Coromant AB
Sandvik Coromant AB is a part of the Sandvik Tooling AB group. Sandvik Coromant AB has 8,000 employees and is represented in 130 countries. Distribution of products to customers is handled from three distribution centres (in the Netherlands, US and Singapore) and there are more than 25 productivity centres around the world to support sales and customers. The head office is situated in Sandviken Sweden. Production centres are located in several places around the world, but the main production plant is situated in Gimo, Sweden.

The R&D department of Sandvik Coromant AB
The main part of the R & D functions for Sandvik Coromant AB are situated in Sweden, either in Västberga (as a part of Sandvik Tooling AB) for cutting materials development or in Sandviken for development of inserts, tools and tool holding systems. The R & D function in Sandviken is called the CT department. Product and competence development work is process oriented and the processes are owned by a process owner. New products are launched twice a year at specific dates known to the whole organisation and the customers.

The motto for the R & D functions vision is: Inspired employees – superior solutions. Main strategical focal points include the fact that Coromant is a learning organisation. Knowledge development forms the basis for focused product development and new solutions are developed and introduced at the right time and with the right quality. Coromant is perceived as the world-leading actor within its business. Another strategic aim is to attract, keep and develop talents.
### Appendix 2: BSC inspired Frame for Management Control Metrics

#### MCS & Metrics

<table>
<thead>
<tr>
<th>BSC perspective based on Stie 2003 with modifications</th>
<th>Strategic capability based on Stie 2003</th>
<th>Ideas from Kent &amp; Young 2009 and House of_war &amp; victor Study 2007</th>
<th>Desk &amp; Drzych 2010</th>
<th>Based on case study Medtronic 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer perspective</td>
<td>Customer orientation</td>
<td>Product life cycle, Market potential, Market share, Relative market share</td>
<td>Results or customer surveys for new products</td>
<td></td>
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<td></td>
<td></td>
<td>Percent margin, Net marketing contribution, Marketing ROI, Relative brand awareness, Customer satisfaction</td>
<td>Deepsease time on complaints to IV &amp; D</td>
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<tr>
<td></td>
<td></td>
<td>Customer satisfaction, Customer complaints, Customer retention, Net promoter index, Customer loyalty, Lifetime value</td>
<td>Results of measurements according to quality standards</td>
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<td></td>
<td>Competitor orientation</td>
<td>Product benefits, Service benefits, Brand benefits, Cost of purchase, Customer value, Economic value</td>
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<tr>
<td>Internal business perspective process related</td>
<td>Competence exploration</td>
<td>Leadership for product and marketing strategy, R &amp; D</td>
<td>External invoicing per employee active in R &amp; D</td>
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<tr>
<td></td>
<td>Competence exploitation</td>
<td>Number of new product introductions</td>
<td>Percent of volume of sales from products introduced less than a certain number of years ago</td>
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<td></td>
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<td>Scoring on creativity tests such as by example CGS tests</td>
<td>Availability of resources for new product development, some check must exist if company should be able to catch fleeting opportunities (see Eisenhardt 2001)</td>
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<td></td>
<td>Other internal measures added by tool</td>
<td>Product defects, late deliveries, late payments, inventory turn over</td>
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<tr>
<td>Learning and development not added by Stie 2003</td>
<td>Learning (added by ov)</td>
<td></td>
<td>A &amp; E costs within specified limits or budget</td>
<td></td>
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<tr>
<td>Financial perspective</td>
<td>Financial competence</td>
<td>Sales revenue, Gross margin, Net profit before tax, Return on Assets, Return on Equity, Return on Capital, Earnings per Share</td>
<td>MPV of product projects to be launched over the next 1.5 years</td>
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<td></td>
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<td>Value of planned investments over the next 1.5 years</td>
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<td></td>
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<td>Value of planned investments over the next 1.5 years</td>
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<td></td>
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<td>Return on Investment</td>
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<td></td>
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<td>Gross Margin, Operating Margin, Net profit Margin, EBIT, EBITDA, Earnings per share, Cash flow (operating, investing and Financing activities), Earning capital ratio, Return on Equity</td>
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</tr>
<tr>
<td>Environmental and ethical perspective (added by ov, not according to the BSC perspective)</td>
<td>Environmental concern (added by ov)</td>
<td>New products must be friendly to the environment when used by customers</td>
<td>New products must be friendly to the environment when used by customers</td>
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<td></td>
<td>Ethical behaviour added by ov</td>
<td>Adherence to standards of behavior and financial reporting</td>
<td>Safety and ergonomic inspections on</td>
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<td></td>
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<td></td>
<td>Work environment aspects (e.g. health, diversity, inclusion, possible measures about these topics to employees)</td>
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</tbody>
</table>

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Appendix 3: Theoretical Model

Intended use of the theoretical model

1. Begin by describing the organisational culture.

   From the organisational strategy, described in any format best suited for the actual market and company, break down the content into activities to perform.

   By using the theory described in chapter 2, analyse if the activities are in line with organisational culture or not. If they are not in line with the culture, modify them and if needed also the strategy.

   Design the management control system. The proposed metrics in appendix 1 may serve as an inspiration.

   By using the theory described in chapter 2, analyse if the control system is in line with organisational culture. If it is not in line with the culture, modify it as needed.

2. Finally, analyse if the organisation would benefit from modifying the organisational culture.

   To change organisational culture demands sustained effort, awareness and a long term perspective. Culture can seldom be destroyed without great cost to the individual in the organisation. It is thus more fruitful to change undesired aspects culture by promoting desired aspects. Short term, it is more fruitful to adjust strategies and management control systems while having a long term plan for cultural modifications.

   Note: To change organisational culture demands sustained effort, awareness and a long term perspective. Culture can seldom be destroyed without great cost to the individual in the organisation. It is thus more fruitful to change undesired aspects culture by promoting desired aspects. Short term, it is more fruitful to adjust strategies and management control systems while having a long term plan for cultural modifications.

   Theoretical model

   Based on theory from chapter 2

<table>
<thead>
<tr>
<th>Organisational culture</th>
<th>1 - very low</th>
<th>2 - low</th>
<th>3 - average</th>
<th>4 - above average</th>
<th>5 - high</th>
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<tr>
<td>Identification with the organisation</td>
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<td>Shared values</td>
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<td>Strength of shared values</td>
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<td>Presence of material symbols (materialities with organisational logotypes or similar)</td>
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<td>Amount of power distance</td>
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<td>Presence of materialities supporting power distances</td>
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<td>Leadership orientation</td>
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<td>Empowerment of managers</td>
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<td>Empowerment of employees</td>
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<td>The culture supports learning</td>
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<td>The culture supports innovation</td>
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<td>Presence of creative spaces</td>
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<td>A culture that supports change</td>
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<td>Uncertainty avoidance</td>
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<td>The presence of formal power structures</td>
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<td>The presence of informal power structures</td>
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<td>The presence of organisational myths</td>
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<td>Cultural support of openness and market orientation</td>
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<td>Internal openness between departments</td>
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<td>Presence of spaces that enable interpersonal contacts</td>
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<td>Cultural diversity and equal opportunities</td>
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<td>Collectivism</td>
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<td>Individualism</td>
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<td>Performance oriented culture</td>
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<tr>
<td>Strategy</td>
<td>Objective, Scope, Advantage</td>
<td>Simple rules</td>
<td>The five competitive forces</td>
<td>Patching</td>
<td>Strategy as a set of activities</td>
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<tr>
<td>Clarity of formulated Vision and/or Mission statement</td>
<td>1 - very low</td>
<td>2 - low</td>
<td>3 - average</td>
<td>4 - above average</td>
<td>5 - high</td>
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<tr>
<td>Market volatility</td>
<td>MCS system</td>
<td>1 - very low</td>
<td>2 - low</td>
<td>3 - average</td>
<td>4 - above average</td>
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<tr>
<td>Use of action controls</td>
<td>Acceptance of action controls</td>
<td>Formal mandates of managers</td>
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<td>Use of results controls</td>
<td>Acceptance of results controls</td>
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<td>Use of personal controls</td>
<td>The existence of strong work ethics</td>
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<td>Use of cultural controls</td>
<td>Adherence to cultural controls</td>
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<td>Use of patrimonial controls</td>
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</tbody>
</table>
Appendix 4: Interview questions to R & D Managers

1) If you were to describe our corporate culture in three words, which words would you choose?
2) What are you most proud of within your R & D operations?
3) What does it take to get the operations ahead?
4) How do you avoid getting into trouble?
5) How do you deal with subordinates who act disloyally in regards to you and your decisions?
6) How do you deal with employees with personal problems, such as health problems or private issues?
7) How would you define professional success for you as a manager within R & D?
8) Can you describe the cultural differences between Sandviken, Gimo and Västberga (different locations and business units within the company)?
9) You are given a new job and all of your new employees are of the opposite sex in regards to you. How do you adapt to this?
10) What are the most common complaints employees within R & D department voice concerning our organisational culture?
11) If Sandvik or Coromant were involved in a big corporate scandal, how would you personally react then?
12) According to the scenario above, how would you deal with your employees?
13) In your role as manager, do you ever consider how materialities can contribute to creating culture or different behaviours?
14) Do you have a good and friendly contact with your colleagues within the R & D management team?
15) Do you know about Sandvik’s Code of Conduct and Fair Play?
16) How big effects will the new 2015 company strategy have on the R & D activities?
17) If you notice that the 2015 strategy does not have the wished for effect, how would you choose to act then?
18) What directs your actions as a manager the most?
19) By what means do you direct your subordinates?
Appendix 5: Conclusions from Interviews with the R & D Management Team

The complete transcripts as well as comprehensive summary of answers from the R & D management team are stored by the thesis authors. In this appendix only our short conclusions will be presented due to the sensitive nature of the findings.

1) If you were to describe our corporate culture in three words, which words would you choose?
The values of loyalty and pride are extremely deeply rooted within the organisational culture. Also there seems to be a very noticeable tendency for self critique, never to be content with anything even if these may be of world class performance.

2) What are you most proud of within your R & D operations?
There is a definite focus on competence and loyalty, which is similar to the answers on the question above. Much of the pride is focused on employees and our conclusion of this is also that the culture is group oriented with core values such as loyalty and competence.

3) What does it take to get the operations ahead?
There is a very clear demand on improved operational guidance and strategy work from most managers.

4) How do you avoid getting into trouble?
It seems that the culture is forgiving and sees mistakes a necessary form of learning. As long as you keep within the company rules (accessible through the intranet) you will do fine. This may though be a too pretty picture as we see a very strong organisational culture. If a manager or an employee would violate any cultural rules or values the organisation may become more unforgiving in our view. Due to the consensus culture, managers and decision makers may “hide” behind the group and never be truly accountable for their actions, as responsibilities are spread among group members. If a manager makes an important decision by themselves, he or she may encounter resistance and hostility and their decision and temerity may be seriously questioned.

5) How do you deal with subordinates who act disloyally in regards to you and your decisions?
The answer to this question is much according to the values of knowledge that they represent as initially they will look for the reason of the behaviour before any action is taken. Employees will always have a chance to explain themselves. The managers also take on a great deal of responsibility for being clear in their communication not to be misunderstood by subordinates.

6) How do you deal with employees with personal problems, such as health problems or private issues?
The company takes very good care of their employees. If the result from this question is combined with the one above we can clearly see the pattern of patrimonial controls on behalf of the company.

7) How would you define professional success for you as a manager within R & D?
Success is linked to the employee’s performances. This is also a strong indication of a group oriented culture. The managers have either embraced this group orientation completely or, if not, they have understood that this is the only culturally acceptable answer on this question. Based on participant observation by Anna from many years within the organisation we believe that the first explanation is most likely. The managers represent a strong group oriented culture.

8) Can you describe the cultural differences between Sandviken, Gimo and Västberga (different locations and business units within the company)?
Awareness of cultural aspects exists among the management team. Their own conclusions are that the cultural differences have been created by previous strong leaders in the organisations as
well as differences in what task are performed as well as how goals and results are measured and valued. Awareness is the first step that must be taken if one wishes to continue and evolve the culture to something that supports the business operations in a better way. Within the R & D department management team they are most likely ready to go on to the next step in determining what organisational culture they would like to have and as a final step making a long term plan for how to achieve this change.

9) You are given a new job and all of your new employees are of the opposite sex in regards to you. How do you adapt to this?

Conclusions:
The awareness about both gender and the broader diversity issues is good. There seem to be an understanding that being able to handle these issues in a good way will be successful strategy for the business. Even though the organisational culture is very strong and very homogenous there is an openness to other values and cultures that could prove to be very profitable. The next question is how to proceed when incorporating other values and cultures in the R & D operations. If this openness truly exists, how come the company is not more diverse at this point? What is holding this change back? Our only possible explanation is a culture of safety and security, where the well-known is often chosen above the unknown.

10) What are the most common complaints employees within R & D department voice concerning our organisational culture?
All managers are very aware of the main point of employee criticism which is a very slow process for making decisions. The main reason for this issue not to have been resolved is due to the fact that it is related to the organisational culture. To be able to fix this, the culture must evolve to something more appropriate for the current business climate with more rapid changes.

11) If Sandvik or Coromant were involved in a big corporate scandal, how would you personally react then?
The company culture and company values are very deeply internalised by the managers. In many ways they “are” the company.

12) According to the scenario above, how would you deal with your employees?
The understanding that a thing like this would affect the feelings of the employees and be very harmful to the company culture and values exists. There is a requirement on both managers and the top management to be ethical, truthful and open.

13) In your role as manager, do you ever consider how materialities can contribute to creating culture or different behaviours?
There is some awareness that materialities have an effect on cultures and behaviours, but obstacles such as for example of lack of spaces and the resistance from the line organisation make it difficult to realise the positive effects expected.

14) Do you have a good and friendly contact with your colleagues within the R & D management team?
Personal contacts are valued and some level of relation orientation exists. This is a prerequisite for the existence of strong and effective cultural controls.

15) Do you know about Sandvik’s Code of Conduct and Fair Play?
Ethical values and having a good conduct is considered very important. These are values very effectively promoted by the top management and the managers have internalised these values very much. Therefore the company culture is very much on based on these values.

16) How big effects will the new 2015 company strategy have on the R & D activities?
Our conclusion is that there is a lack of a proper strategy work process and this is replaced with group decisions among managers. This is also strengthened by the Swedish consensus mentality. We do believe, as the managers themselves also do, that the strategy work process needs to be improved, the goals clarified and also that not all decisions should be taken collectively in meetings. To be able to address this there is a need of change for some of the cultural values.
17) If you notice that the 2015 strategy does not have the wished for effect, how would you choose to act then?
The management team members do feel responsible for achieving the goals and actions of the strategy even if the strategy is not communicated explained and transferred to R & D activities. This feeling of responsibility is a good value in their company culture.

18) What directs your actions as a manager the most?
The company culture is extremely focused on collective decisions and a time consuming meeting culture. Frequent meetings serve through their very repetitiousness to reinforce and strengthen cultural unity by socializing individual subject into a group collective. This must be addressed if adaptation to rapid changes should be possible.

19) By what means do you direct your subordinates?
The managers basically direct their subordinates the way they are directed themselves. The company culture is extremely focused on collective decisions and a time consuming meeting culture. This must be addressed if adaptation to rapid changes should be possible.
Appendix 6: Results from employee survey

1. Are you proud of working in the CT organisation?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolutely not</td>
<td>0,0%</td>
</tr>
<tr>
<td>A little proud</td>
<td>17,6%</td>
</tr>
<tr>
<td>Fairly proud</td>
<td>76,5%</td>
</tr>
<tr>
<td>Very proud</td>
<td>5,9%</td>
</tr>
<tr>
<td>Respondents</td>
<td>17</td>
</tr>
</tbody>
</table>

2. Is it important for you to work within an organisation who’s ethical values you agree with?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolutely not</td>
<td>0,0%</td>
</tr>
<tr>
<td>A little important</td>
<td>11,8%</td>
</tr>
<tr>
<td>Fairly important</td>
<td>52,9%</td>
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<tr>
<td>Very important</td>
<td>35,3%</td>
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<tr>
<td>Respondents</td>
<td>17</td>
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</table>

3. Do you think that CT and Coromant behaves ethically and responsibly?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolutely not</td>
<td>0,0%</td>
</tr>
<tr>
<td>A little</td>
<td>0,0%</td>
</tr>
<tr>
<td>Most often</td>
<td>58,8%</td>
</tr>
<tr>
<td>Always</td>
<td>41,2%</td>
</tr>
<tr>
<td>Respondents</td>
<td>17</td>
</tr>
</tbody>
</table>
4. Do you experience that you can be creative and innovative in your work?

- Absolutely not: 0.0% (0)
- A little: 23.5% (4)
- Often enough: 52.9% (9)
- Very often: 23.5% (4)

5. Do you get attention and support for your ideas?

- Never: 0.0% (0)
- Sometimes: 41.2% (7)
- Often enough: 47.1% (8)
- Very often: 11.8% (2)

6. What motivation is most appealing if you have to change to another job?

- To learn something new, see and experience new things and to develop new talents: 58.8% (10)
- To surely be able to build upon the competence I already have: 11.8% (2)
- I do not want to have a new job but want to continue with what I know best today: 29.4% (5)
7. How do you experience the manager’s decision process?

- Very slow: 17.6% (3)
- Slow: 64.7% (11)
- Fast enough: 17.6% (3)
- Very fast: 0.0% (0)

8. Are there cultural differences between Sandviken, Gimo and Västberga?

- No differences: 0.0% (0)
- Small differences: 29.4% (5)
- Noticeable differences: 64.7% (11)
- Substantial differences: 5.9% (1)

9. Which are according to your meaning the most common complaints on our company culture?

Response

- "Not invented here! Vi tar inte vara på kompetens över produktområdesgränsmålen... Är inte ens intresserade.
- Att det ska vara så svårt att halsa på såfolket
- Byråkrati
- Förändringar är inte förankrade i organisationen innan de implementeras.
- Ingen välger fatta beslut längre.
- Jag har aldrig hört något klagomål
- Förändringar är inte förankrade i organisationen
- Samma grup personer byter chefsposter på samma nivå.
- Samma mellan ett lapp i verksamheten varje gång det sker ett byte.
- Svår att frihets
- Vår underlag
- Vet ej

Vi har blivit så stora så att vi har blivit briga. Vi tror att system i sig är en lösning på problem där det egentligen är människorna och brist på kunskaper som är problemen.
10. If Sandvik AB or Coromant had been noticed for participation in a bigger scandal, how would you personally have reacted then?

<table>
<thead>
<tr>
<th>Reaction</th>
<th>Percentage</th>
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<td>Not at all</td>
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<td>1</td>
</tr>
<tr>
<td>A little</td>
<td>5.9%</td>
<td>1</td>
</tr>
<tr>
<td>Some reaction</td>
<td>41.2%</td>
<td>7</td>
</tr>
<tr>
<td>Very strongly</td>
<td>47.1%</td>
<td>8</td>
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<tr>
<td>Respondents</td>
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<td>17</td>
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</table>

11. Do you have a friendly contact with your colleagues within your department?

<table>
<thead>
<tr>
<th>Contact Description</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
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<tr>
<td>I do not value personal contacts</td>
<td>5.9%</td>
<td>1</td>
</tr>
<tr>
<td>I have personal contacts with my colleagues, but only in work related issues</td>
<td>5.9%</td>
<td>1</td>
</tr>
<tr>
<td>I enjoy personal contacts with colleagues and discusses both work related issues as well as personal issues</td>
<td>58.8%</td>
<td>10</td>
</tr>
<tr>
<td>The days at work would be really boring without my colleagues who I also consider my friends.</td>
<td>29.4%</td>
<td>5</td>
</tr>
<tr>
<td>Respondents</td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

12. Do you know Sandvik’s Code of Conduct and Fair Play?

<table>
<thead>
<tr>
<th>Knowledge Description</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>I know that they exist, but I am not familiar to the content</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>I know that they exist and I know some parts of the content</td>
<td>76.5%</td>
<td>13</td>
</tr>
<tr>
<td>I know that they exist and I know the content</td>
<td>23.5%</td>
<td>4</td>
</tr>
<tr>
<td>Respondents</td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>
13. How much impression on the CT department’s activities do you think the new 2015 company strategy will make in your daily work?

- None: 11.8% (2 respondents)
- Some indirect effects: 11.8% (2 respondents)
- Some effects: 58.8% (10 respondents)
- Substantial effects: 17.6% (3 respondents)
- Do we have a new strategy? 0.0% (0 respondents)

14. What directs you professional actions the most (7 directs my actions least, 1 most)?

- Collective decisions during meetings: 35.3% 23.5% 23.5% 11.8% 0% 5.9% 0% 5.65
- Direct orders from my boss: 17.6% 35.3% 5.9% 5.9% 11.8% 11.8% 11.8% 4.59
- Documented goals and routines: 17.6% 5.9% 23.5% 11.8% 17.6% 17.6% 0% 4.35
- Ethics, this feels right: 5.9% 23.5% 11.8% 11.8% 5.9% 29.4% 11.8% 3.76
- Tradition (the way we usually do it): 11.8% 0% 11.8% 5.9% 47.1% 11.8% 11.8% 3.41
- Cost targets: 5.9% 11.8% 11.8% 11.8% 11.8% 29.4% 29.4% 3.29
- Dokumented strategies (Coromant strategy and CT strategy): 5.9% 0% 11.8% 29.4% 5.9% 11.8% 35.3% 2.94

Total: 41 respondents

Comment:
Kunskape och känslan styr mest över mitt jobb. Chefen lägger sig inte i utan det andra som styr. Så arbetar jag... Tyvärr är det inte kompatibel med kollegor på systeravdelningar som tex gör saker primärt baserat på tradition.
Appendix 7: The results from the R & D organisation of Sandvik Coromant AB described in the theoretical model

**Theoretical model**

The results from the R & D organisation

Based on theory from chapter 2

<table>
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<tr>
<th>Organisational culture</th>
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<th>2 - low</th>
<th>3 - average</th>
<th>4 - above average</th>
<th>5 - high</th>
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<tr>
<td>Identification with the organisation</td>
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<tr>
<td>Shared values</td>
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<td>Strength of shared values</td>
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<td>Presence of material symbols (materialities with organisational logotypes or similar)</td>
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<tr>
<td>Amount of power distance</td>
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<tr>
<td>Presence of materialities supporting power distances</td>
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<tr>
<td>Leadership orientation</td>
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<tr>
<td>Empowerment of managers</td>
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<tr>
<td>Empowerment of employees</td>
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<tr>
<td>The culture supports learning</td>
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<tr>
<td>The culture supports innovation</td>
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<td>Presence of creative spaces</td>
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<td>A culture that supports change</td>
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<td>Uncertainty avoidance</td>
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<td>The presence of formal power structures</td>
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<td>The presence of informal power structures</td>
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<td>The presence of organisational myths</td>
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<td>Cultural support of openness and market orientation</td>
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<td>Internal openness between departments</td>
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<td>Presence of spaces that enable interpersonal contacts</td>
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<th>The five competitive forces</th>
<th>Patching</th>
<th>Strategy as a set of activities</th>
<th>Other form of strategy formulations</th>
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<td>Eisenhardt 2001</td>
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<table>
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<tr>
<th>Clarity of formulated Vision and/or Mission statement</th>
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<th>2 - low</th>
<th>3 - average</th>
<th>4 - above average</th>
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<th>3 - average</th>
<th>4 - above average</th>
<th>5 - high</th>
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<tbody>
<tr>
<td>Use of action controls</td>
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<tr>
<td>Acceptance of action controls</td>
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<td>Formal mandates of managers</td>
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<td>Use of results controls</td>
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<td>Clearly defined targets</td>
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<td>Acceptance of results controls</td>
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<td>Use of cultural controls</td>
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<td>Adherence to cultural controls</td>
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<td>Use of patrimonial controls</td>
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### Appendix 8: Interviewee Respondents

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<th>Name</th>
<th>Function</th>
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<tbody>
<tr>
<td>Per Bejerstål</td>
<td>Manager CAD/CAM/CAE System and Support</td>
<td>6:th of May 2011</td>
</tr>
<tr>
<td>Bertil Isaksson</td>
<td>Manager Application Development</td>
<td>6:th of May 2011</td>
</tr>
<tr>
<td>Claes Jäderberg</td>
<td>Engineering Manager</td>
<td>9:th of May 2011</td>
</tr>
<tr>
<td>Stefan Magnusson</td>
<td>Human Resource Adviser</td>
<td>9:th of May 2011</td>
</tr>
<tr>
<td>Jan Axelsson</td>
<td>Manager Competence Centre</td>
<td>10:th of May 2011</td>
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<tr>
<td>Stefan Johansson</td>
<td>Process Owner</td>
<td>11:th of May 2011</td>
</tr>
<tr>
<td>Ingrid Reineck</td>
<td>R &amp; D Manager</td>
<td>11:th of May 2011</td>
</tr>
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