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STRATEGY CREATION AND DEPLOYMENT in a Global Company

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Abstract

This study examines people involvement within the strategy process from a global - local perspective. The global - local strategy process was studied in four cases; production, distribution, installed base and development project. The theoretical part draws attention to the local actors' involvement in the global - local strategy process. That viewpoint has received relatively little attention in strategy process literature. The focus is on understanding how local differences are taken into account in the global strategy e.g. the business environment, the specific competences or expertise local actors may have. In literature, Schneider and Barsoux (1997) discuss strategies for managing cultural differences. In this study their framework is applied providing three perspectives to study strategy process within a global-local environment: ignoring, minimizing or utilizing the local differences in the global strategy.

The strategy process is analyzed to identify and describe where strategy emanates from, by whom the strategy is deployed and how to successfully engage local actors to the global - local strategy process. The term "successfully" here means without failing to engage local actors to the global - local strategy process. The criteria for a successful engagement is that the local actor is able to impact the strategy creation and (or) strategy deployment at the local and (or) global level. To answer these questions, a combined participatory and a non-participatory research strategy using both deductive and inductive qualitative case study approaches was conducted. Interviews, archival data and observations were used as the main data collection methods. The analysis revealed that the best way to facilitate the strategy success within a global - local environment is to compile an approach to fit the different business conditions. The study analysis indicated four ways to facilitate strategy process within a global - local environment: a global strategy process, a combined global - local strategy process, an emergent strategy process and an agile strategy process.

In the strategy process research, the results deepen the understanding of how local actors are involved in the global - local strategy process. The study includes both successful and less successful strategy deployment findings. The successful cases clearly show the effect of a cross-organizational approach where both local and global actors' commitment and engagement are achieved. On the other hand, the negative results demonstrate a strong top-down, 'one-size-fits-all' approach where local differences and local voices are disregarded. The overall challenge is how to get the local voice heard at the global level in the strategy process. The study demonstrates that strategies may be developed also at the local level for both local and global deployment. To succeed, the locally initiated strategy requires strong global sponsorship. Also, the local initiative needs be tightly aligned with the business targets and bring true business benefits in order to get visibility, resourcing and funding allocated to the actions.

Keywords *strategy creation, strategy deployment, global – local strategy, local actor, boundary role, local voice*

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Tiivistelmä

Tutkimuksen tavoitteena on tunnistaa miten globaalin organisaation sisäiset toimijat osallistuvat strategiaprosessiin globaali-lokaali näkökulmasta. Globaali-lokaali strategiaprosessia tutkittiin neljässä tapaustutkimuksessa; tuotanto, jakelu, asennuskanta sekä kehitysprojekti. Tutkimuksen teoreettinen osuus tuo esiin paikallisten toimijoiden osallistumisen strategiaprosessiin. Tämä näkökulma on saanut suhteellisen vähän huomiota strategiaprosessikirjallisuudessa. Tutkimus keskittyy ymmärtämään kuinka paikalliset erot on huomioitu osana globaalin yrityksen strategiaa mm. toimintaympäristön, paikallisten ominaisuuksien tai paikallisen osaamisen kautta. Tutkimuksessa sovelletaan Schneider and Barsoux (1997) käsitteitä ja lähestymistapaa tutkia globaalin organisaation strategiaprosessia. Strategiaprosessia tutkitaan kolmesta eri näkökulmasta; sivuuttaen (ignore), minimoiden (minimize) tai hyödyntäen (utilize) paikallisia eroja osana globaalia strategiaa.

Strategiaprosessia analysoidaan vastaamalla kolmeen kysymykseen; mistä strategia syntyy, kuka/ketkä osallistuvat strategian toteuttamiseen ja miten paikalliset toimijat onnistuneesti sitoutetaan ja osallistutetaan globaali-lokaali strategiaprosessiin. Onnistunut sitouttaminen ja osallistuttaminen ovat tutkimuksen keskeisiä käsitteitä. Tutkimuksen tavoitteena on ymmärtää miten paikalliset toimijat vaikuttavat strategian luomiseen ja (tai) strategian toteuttamiseen globaalilla ja (tai) lokaalilla tasolla. Tutkimusmenetelmänä käytettiin yhdistettyä osallistuvaa ja ei-osallistuvaa tutkimusstrategiaa soveltaen deduktiivista ja induktiivista tapaustutkimusta. Tutkimusmateriaali kerättiin haastattelujen, tietokantojen ja havaintojen avulla. Tulokset osoittavat, että onnistunut strategia rakennetaan siten, että se soveltuu globaalin organisaation toimintaympäristöön. Tutkimus nostaa esiin neljä tyypillistä mallia toteuttaa globaalin organisaation strategiaprosessia: globaali strategiaprosessi, yhdistetty globaali-lokaali strategiaprosessi, emergentti strategiaprosessi ja ketterä strategiaprosessi.

Tämä strategiaprosessitutkimus syventää ymmärrystä miten paikalliset toimijat sitoutetaan ja osallistutetaan globaali-lokaali strategiaprosessiin. Tutkimuksen empiirinen aineisto sisältää sekä onnistuneita että vähemmän onnistuneita tapaustutkimuksia strategian toteuttamisesta globaalissa ympäristössä. Onnistuneissa tapaustutkimuksissa keskeiseksi nousee poikki-organisatoorinen lähestymistapa, mitä kautta sekä paikalliset että globaalit toimijat sitoutetaan ja osallistutetaan strategiaprosessiin. Vähemmän onnistuneet tapaustutkimukset tuovat vahvasti esiin ylhäältä alas johdetun mallin, jossa paikalliset erot ja paikallisten toimijoiden äänet sivuutetaan osana globaalin organisaation strategiaprosessia. Paikallisten toimijoiden ääni ja sen kuuluviin saaminen globaalilla tasolla nouseekin tutkimuksen keskeiseksi tulokseksi: *'haaste on kuinka paikallinen ääni saadaan kuuluviin globaalilla tasolla'*. Tutkimus tuo esiin, että strategioita voidaan kehittää paikallisesti sekä paikallisten että globaalien tarpeiden mukaisesti. Onnistumisen edellytys on, että paikallisesti kehitetyn strategian täytyy saada vahva globaali tuki ja olla vahvasti sidoksissa globaalin organisaation strategisiin tavoitteisiin. Näin varmistetaan, että paikallisesti suunniteltu strategia saa tarvittavaa näkyvyyttä, resursseja ja rahoitusta toteuttaakseen suunnitellun päämäärän.

Avainsanat strategian suunnitteleminen, strategian toteuttaminen, globaali-lokaali strategia, paikallinen toimija, raja toimija/rooli, paikallinen ääni

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What a journey this has been!

Strategy is my passion. Strategy process has interested me during my whole study and working life. It is about engaging people to achieve the set targets together.

I started my licentiate studies in the Department of Industrial Engineering and Management in Aalto University during 2001. The research process started during my work related international assignment in China. During that time I was able to observe how, in an international company, strategy process is aligned between different parts and levels of the organization. During the assignment in China, the definition of the research scope and main questions, and the academic context started to evolve to conduct this study.

For me, this research process has been a great journey, a true learning process. During this journey I have learned a lot, and learned to know great people. People, who have supported me, challenged me, trusted in me and been there. I needed you all to complete this chapter in my life. Thank you.

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1. Introduction 6
1.1. Research questions 8
2. Literature review 10
2.1. Definitions of Strategy 10
2.2. Strategy process 12
2.3. Strategy creation 13
2.4. Strategy deployment 17
2.5. Global – Local dimension in the strategy process 20
2.6. Summary 23
3. Research Methodology 25
3.1. Case study approach 25
3.2. Qualitative research 26
3.3. Participatory research 27
3.4. Research process 28
3.4.1. The case company 28
3.4.2. Selection of Cases 29
3.4.3. Selection of Interviewees 31
3.4.4. Interviews 33
3.4.5. Archival data 34
3.4.6. Observations 36
3.5. Role of the researcher 37
3.6. Data analysis 38
3.6.1. Execution of within case analysis 43
3.6.2. Cross-case analysis 44
3.7. Data Validation methods 45
3.8. Data reporting 47
4. Results 48
4.1. Production case 48
4.1.1. Strategy creation 50
4.1.2. Strategy deployment 51
4.1.3. Global – Local dimension of the strategy process 53
4.1.4. Summary 57
4.2. Distribution case 57
4.2.1. Strategy creation 58
4.2.2. Strategy deployment 61
4.2.3. Global – Local dimension of the strategy process 62
4.2.4. Summary 66
4.2.5. Distribution case paper 67
4.3. Installed base case 69
4.3.1. Strategy creation 70
4.3.2. Strategy deployment 72
4.3.3. Global – Local dimension of the strategy process 73
4.3.4. Summary 76
4.4. Development project case 77
4.4.1. Development project – 168H 79
4.4.2. Development project – BIRD 83
4.4.3. Development project – EAGLE 86
4.4.4. Development projects: summary 90
4.5. Global – Local strategy process 91
4.6. Comparison of the cases 92
5. Discussion 105
5.1. Contribution 106
5.2. Evaluation of the study 111
5.3. Managerial implications 114
5.4. Future Research 116
References 118
Appendix 1

1. INTRODUCTION

International companies rely on global strategies to succeed in today's world (Hout, Porter, and Rudden, 1982). The interest lies in how managers create, develop and implement global strategies. This question seems to be fundamental for strategic management, but there are still surprisingly few answers in strategy research (Regner, 1993).

In organizations, whether they are small, medium-sized or large, the challenge is how to involve employees in the strategy process (Hrebiniak, 1992, 2005). People involvement is increasingly emphasized in the strategy process literature (Hutzschenreuter and Kleindienst, 2006) from the location, position and role perspectives. Recently, attention has been paid to the local actors' involvement in strategy development (Regner, 1999, 2003; Burgelman and Grove, 2004; Parise, Cross and Davenport, 2006; Mäkelä, 2006). The local actor is defined to reside on the boundaries of an organization (Regner, 1999, 2003). Due to the local position, the actor is usually well connected with local networks outside of own company boundaries. The local actor's existence, knowledge and actions however tend to be overlooked at the global company level or they are not transparent to the headquarters (Maula, 1999; Regner, 1999, 2003; Parise, Cross and Davenport, 2006). In this study, the local actor is defined as the local employee working for a company. Despite the existing research, there seems to be a gap in the strategy process literature (Parise, Cross and Davenport, 2006). The gap is on how to successfully involve local actors inside the global company in the global – local strategy process (Regner, 1999, 2003). Regner (1999, 2003) uses the terms peripheral and global actors in his studies. In this study the term peripheral actor is replaced by the local actor. The local actor viewpoint is interesting from this study point of view, as this study focuses on differences in people involvement in the strategy process especially from the local and global point of view.

This study considers the presence and impact of local actors on the global – local strategy process. The global - local dimension to the strategy process has been explored from many different approaches such as cultural, geographical and head office versus subsidiary (Hofstede, 1994; Schneider and Barsoux, 1997; Regner, 1999). According to Yip (2004) global companies develop sophisticated and flexible strategies focusing on globalization. Marquis and Battilana (2009) state that as globalization proceeds, local differences become more visible and salient. Despite such viewpoints, Adler (2002) found that global companies mostly ignore the impact of local differences on the global strategy. Such local differences can be associated with the differences in the local business environments or ways of working practices; simply put: doing business locally.

In this study, the global – local dimension of the strategy process is used as an approach to study the impact of local actors on the strategy process within a global company. The global – local dimension of the strategy process is further defined to influence the strategy at various process steps, such as creation and deployment of the strategy. The focus is on understanding how local differences in strategy creation and deployment are taken into account in the global strategy. The differences in local actors e.g. in business environment, their specific competences or expertise, are linked to the direction of the strategy creation process, such as globally top-down versus locally bottom-up. To understand how local actors are involved with the strategy deployment people are brought into the analysis context for the strategy deployment process. The selected viewpoint is relevant in reference to the findings that strategies may also be created at the local level for deployment both locally and (or) globally (Kim and Mauborgne, 1993; Schneider and Barsoux, 1997, Regner, 2003). In this study, the emphasis is on how local employees within a global company are involved in the creation and deployment of the global strategy and on how differences in local actors e.g. in business environment, or their specific competences or expertise are taken into account. Schneider and

Barsoux (1997) are talking about strategies for managing cultural differences. In this study their framework is applied providing three perspectives to study strategy process within a global – local environment: ignoring, minimizing or utilizing the impact of local differences on the global strategy (Schneider and Barsoux, 1997).

Studying the global – local dimension of the strategy requires a research setting that allows analyses of various contexts. The case company offered the researcher an environment suitable for the purpose. The empirical research is focusing on the years 1999 – 2004. The study includes four four case studies from the case company.

The *production* case illustrates the production allocation of dedicated telecommunication network elements between two factories, Europe and Asia. The *distribution* case consists of six sub projects describing the change from regional distribution centers to the establishment of a hub[1] distribution model in three different continents. The *installed base* case reflects the initiation to improve the data accuracy while building network infrastructure. The *development project* case consists of three sub projects aiming to reduce inventories in the global demand supply network.

1.1. Research questions

This study elaborates on people involvement in the global – local strategy process. Burgelman et al. (2004) have identified the potential in involving local actors in the global – local strategy process. Adler (1992) and Regner (1999, 2003) on the other hand indicate that the potential remains underutilized as the local actor's existence and knowledge tend to be typically overlooked at the global level (Regner, 1993; Maula, 1999; Parise, Cross and Davenport, 2006).

[1] Hub is a central location for defined set of activities. In this study context hub is a material consolidation point. Key idea with the hub concept is the customer order configuration postponement near to the consumer/markets.

To understand these different viewpoints, this research applies the global – local strategy dimension by Schneider and Barsoux (1997) combined with Regner's (1999, 2003) approach to study the local actors' involvement in the strategy process. Schneider and Barsoux (1997) describe how global companies respond to the cultural differences from three different angles: ignoring, minimizing or utilizing the local characteristics. Three research questions are defined relevant (*Table 1*).

Table 1: Research questions and aim

Research Questions	Aim
1. Where does the strategy emanate from?	to understand the organizational direction (e.g. top-down vs. bottom-up) for the strategy creation process
2. By whom is the strategy deployed?	to understand the local actors' involvement in the global – local strategy deployment process
3. How to engage local actors to the global –local strategy process?	to understand the characteristics of how to successfully engage local actors to the strategy process

The first question is to deepen the understanding of the organizational direction (e.g. top-down vs. bottom-up) for the strategy creation process. The second question is to elaborate the local actors' involvement in the strategy deployment process from the location, position and role perspectives (Hutzschenreuter and Kleindienst, 2006). The location, the position and the role are important to understand as the local actors are connected to the global – local strategy process via roles or task definitions, careers and participation in the workflows (Regner, 1993; Maula, 1999). Finally, the aim is to find out how to engage local actors to the global - local strategy process. The research is empirical within one case company including four case studies and focusing on the years 1999 – 2004. The case company is Nokia. More specifically, the case study deals with the Nokia Networks strategy process.

2. LITERATURE REVIEW

2.1. Definitions of Strategy

Some authors describe strategy as a perspective, a position, a plan and/or a pattern to attain one or more targets of an enterprise (Chandler, 1962; Mintzberg, 1994). Other authors focus on the role of the strategy describing strategy as situational, transparent and measurable (Cooper and Edgett, 1999). Overall, the aim of strategy is to guide the business to define a set of differentiating capabilities. These capabilities enable a company to pursue the chosen competitive strategy over the long term (Hayes and Wheelwright, 1984). Further, the chosen strategy guides strategy deployment (Mintzberg and Waters, 1985; Hrebeniak, 1992). Strategies are also defined as emerging over time and observed after realization (Mintzberg, 1978). Eisenhardt and Sull (2001) describe that when business becomes complicated strategy should be simple[2]. Weick (1987) goes even further stating that too much focus on strategy may even harm an organization.

It can be stated that a good strategy needs coordination, networking and time. It needs to be based on a set of organizational values - a philosophy of doing business. Such a philosophy ties people together and gives meaning and purpose to their everyday working lives. Organizations' strategy and values have similar impact; they define how an organization ought to behave towards its own people, its customers, its suppliers and the community it serves (Eisenhardt and Sull, 2001).

Interest in strategy dates back far in history, often discussed in the context of war and the military. From the Greek strategos (commander of the army), to military maneuvers described in The Art of War and the personal maneuvers of Machiavelli's Prince, strategies

[2] Strategy as Simple Rules; Kathleen M. Eisenhardt, Donald N. Sull; Harvard Business Review; January 2001

have been devised to achieve national or personal gain. For organizations too, strategy is considered to be the means for achieving corporate objectives. (Porter, 1980)

During the 1960s (Chandler, Jr., 1962) companies faced increased competition pressure and limited resources. Strategy creation was mobilized to centralize and formalize processes. For some companies, strategy creation became a religious ritual, where corporate top management was trained to carry out SWOT[3] analyses in order to create the appropriate strategic alignment. Many strategic management tools were born - such as the Boston Consulting Group (BCG) matrices, which were called upon to analyze the market; in terms of growth and position and to assist in making strategic decisions as to where to attack, invest or divest. The language of SWOT analyses as well as ‘stars’, ‘question marks’, ‘cash cows’ and ‘dogs’ become part of the shared corporate jargon. (Porter, 1979)

Later models based on the economics of Industrial Organizations became popular and managers were off analyzing barriers to entry and exit, seeking other sources of competitive advantages (Porter, 1980). More recently the research has been focused on core competencies and strategic intent and the fit between strategy, structure and process. (Venkatraman, 1984; Pettigrew, 1992)

This study states that companies either purposely or subconsciously choose a certain strategy to follow (Hrebiniak, 1992). Also, strategy is defined as an action plan to attain one or more targets. In this study, strategy is approached as situational, transparent and measurable (Cooper and Edgett, 1999) which either directly or indirectly affects company performance (Farjoun, 2002). As Burgelman and Grove (2004) state, the company strategy resides in its strategic actions rather than in its strategic statements.

[3] SWOT = organizational strength, weaknesses and environmental opportunities and threats analysis

2.2. Strategy process

Strategy is approached from both the content and the process research perspectives (Mintzberg, 1990; Pettigrew, 1992; and Mintzberg et al, 1998; Regner, 1999). Traditionally, research on the content of the strategy describes the targets, but neglects to explain how to get there (Chakravarthy and White, 2001). Authors who represent the strategy process perspective (Burgelman, 1983; Pettigrew, 1990, 1992; Davenport, 1993; Van de Ven and Poole, 1995) emphasize the sequence of events and activities over time from the creation to the deployment of the strategy. Pettigrew (1990) discusses the change factors and power associated with the process. Burgelman (1983) brings the entrepreneurial and corporate venturing aspects to the process view whereas Davenport (1993) covers process innovativeness.

In this study, strategy is approached from a process perspective. Firstly, the process approach emphasizes the role of individuals who in turn influence strategy development (Regner, 1999, 2003; Burgelman and Grove, 2004; Hutzschenreuter and Kleindienst, 2006). Secondly, the process perspective provides a thorough view while analyzing the strategy influence on the overall business performance (Mintzberg and Waters, 1985; Hrebiniak, 1992). Finally, the global – local dimension to the strategy process considers that strategies can be created also at the local level for further deployment in other locations (Hofstede, 1994; Schneider and Barsoux, 1997; Regner, 1999). In this study, the global – local strategy is defined to include two sub processes, the creation and the deployment of the strategy. Even though the sub processes are illustrated as separate process steps they are defined as interdependent (Farjoun, 2002). Some authors (Pettigrew, 1985; Chakravarthy and Doz, 1992; Burgelmann, 1996; Grant, 2003) challenge the separation between strategy creation and strategy deployment as dependent sub processes. In this study strategy creation and strategy deployment are

approached as coevolving. Strategy creation affects deployment of the strategy, and the deployment of the strategy brings changes to strategy over time (Farjoun, 2002).

2.3. Strategy creation

The strategy creation process has been viewed in literature as formal (Chandler, 1962; Andrews, 1971), informal (Mintzberg and Waters, 1985; Farjoun, 2002) or as an attempt to combine both discipline and imagination (Szulanski and Amin, 2001; Grant, 2003; Farjoun, 2002). In this study the formal strategy process is defined to emphasize the sequence of events and activities over time from the creation to the deployment of the strategy (Burgelman, 1983; Pettigrew, 1990, 1992; Davenport, 1993; Van de Ven and Poole, 1995) whereas the more informal strategy process literature suggests that strategy may not be a result of formal planning but it can also emerge (Mintzberg and Waters, 1985). Derived from a more formal view, the following steps; *environmental scanning, strategic vision & mission, major objective & key strategies, major goals* (*Figure 1*) are associated with the strategy creation process (Chadler, 1962; Andrews, 1971; Porter, 1980; Burgelman, 1983; Mintzberg and Waters, 1985; Mintzberg, 1987; Pettigrew, 1990, 1992; Davenport, 1993; Van de Ven and Poole, 1995; Farjoun, 2002; Schilder, 2006).

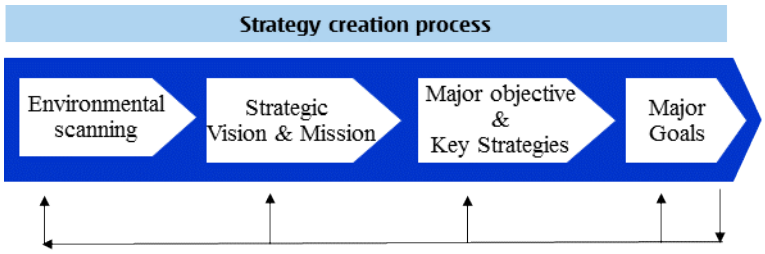
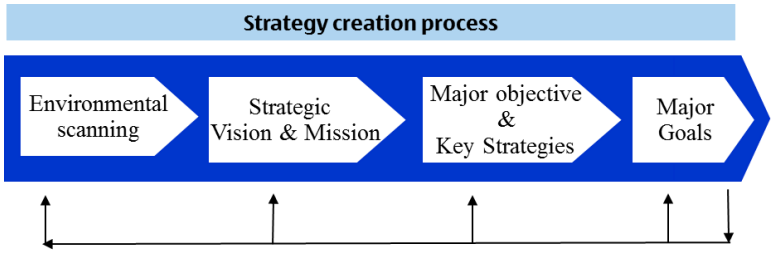


Figure 1: Steps of the strategy *creation* process (modified from (Chadler, 1962; Andrews, 1971; Porter, 1980; Burgelman, 1983; Mintzberg and Waters, 1985; Mintzberg, 1987; Pettigrew, 1990, 1992; Davenport, 1993; Van de Ven and Poole, 1995; Farjoun, 2002; Schilder, 2006)

Environmental scanning is defined as the starting point for the strategy creation process. The basic premise of environmental scanning is to find and define the strategic capabilities aligned with the business environment. The next step focuses on strategic *vision* and *mission* statements. The target is to define the key assumptions on why the organization exists and what it should be doing. The third step is to define the business opportunities by setting *objectives* and *key strategic initiatives.* Finally, *major goals* for the strategic objectives and initiatives are specified. Although the process appears systematic and rational, it is often characterized as iterative and evolving over time (Ackoff, 1970; Deresky, 2000; Mintzberg, 1987; Farjoun, 2002; Schilder, 2006).

Researchers in the strategy process field have identified several dimensions to describe strategy creation (McLellan and Kelly, 1980; Quinn, 1980; Bourgeois and Brodwin, 1984; Mintzberg, 1987). Pettigrew (1992) states that strategy creation focuses on the directional choices companies make. The approach chosen in this study is developed from various studies and defined as appropriate when studying the strategy creation process in a global company (Andrews, 1971; Mintzberg, 1987; Nonaka, 1988; Farjoun, 2002; Schilder, 2006), see *Figure 2*.



Strategy creation dimensions & values

Dimensions	Values
Direction	top-down vs. bottom-up
Authority	interactive vs. determinant
Level of Independence	independence vs. dependent
Circumstance	certain vs. uncertain
Temporal	opposite to present vs. equal to present

Figure 2: The strategy *creation* process (modified from (Chadler, 1962; Andrews, 1971; Porter, 1980; Burgelman, 1983; Mintzberg and Waters, 1985; Mintzberg, 1987; Pettigrew, 1990, 1992; Davenport, 1993; Van de Ven and Poole, 1995; Farjoun, 2002; Schilder, 2006)

Firstly, the *direction* dimension within the strategy creation process deals with the "*top-down*" (Nonaka, 1988) versus "*bottom-up*" (Bourgeois and Brodwin, 1984) approach. The top-down approach represents a centralized method with high rationality and low involvement in the strategy creation (Hart, 1992). The bottom-up approach recognizes a rather broad number of participants within the strategy creation process. In this approach, the proposed strategies are passed upward in an organization for approval and for aggregation toward a corporate level strategy.

Secondly, the *authority* dimension within the strategy creation process (Van de Ven, 1992) is related to the "*interactive*" (Ansoff, 1984; Hart, 1992) versus "*determinant*" (Porter, 1980) approach. The interactive strategy is under continuous planning mode with the emphasis on identifying new directions for the corporations, evaluating emerging threats, which new business to enter, which existing businesses to divest and what priorities to attach to the business. The *determinant* approach is defined as more dictating. Dictating in this context is referring to the underlying characteristics such as structural and business conditions

determinants (Porter, 1980). As a result, one unified strategy plan at the corporate level is created and disaggregated in the organization with the unwritten rule 'make it happen' (Porter, 1980).

Thirdly, the *level of independence* within the strategy creation process is related to "*autonomous"* versus "*dependent"* (Bower, 1970; Quinn, 1980; Burgelman, 1983) activities at both the corporate and business unit level. The *autonomous* approach suggests that strategy creation is done at the business unit level. A potential downside to the autonomous approach is that it might divert organizational efforts, and lead to conflicting and counterproductive functional actions (Andersen, 2000). By continuously promoting the independent actions and maintaining the high level of understanding of the corporate direction, the risk is minimized. The assumption of the *dependent* strategy creation process approach is that what has happened at the earlier point in time will affect later decisions and outcomes (Pettigrew, 1992).

Fourthly, the *circumstance* dimension within the strategy creation process deals with "*certain"* versus "*uncertain"* approach. Using this perspective strategic choices are assumed to be accurate or non-accurate according to the planned targets. The outcome of the change is observed after the given time frame (Pettigrew, 1992). Finally, the *temporal* dimension emphasizes that the future may be "*opposite to the present"* or "*equal to the present*" situation (Mintzberg, 1987).

To summarize, the strategy creation process (*Figure 2)* forms the first building block in the theoretical framework. The applied dimensions and related values are analyzed for each of the cases describing the organizational direction for the strategy creation process.

2.4. Strategy deployment

Strategy deployment is described in literature as a matter of operational details and tactical adjustments about how to achieve the set strategic targets (Hutzschenreuter and Kleindienst, 2006). Strategy deployment literature suggests that strategy may not be a result of formal planning but it can also emerge (Mintzberg and Waters, 1985). Even though strategy deployment is described in the literature as essential for the success of the strategy, its importance has also been overlooked (Hrebiniak, 2005; Hutzschenreuter and Kleindienst, 2006). Having a good strategy isn't enough to guarantee a successful cascading and deployment (Hrebeniak, 2005). Hrebiniak (1992, 2005) brings the people-oriented approach to the deployment process, and states that deployment problems may be caused due to people using their own logic in deployment. That logic may be in conflict with the company targets. Therefore how the strategy is cascaded from strategy creation to strategy deployment is critical for the overall strategy deployment success.

Firstly, the teams and/or individuals are defined as essential players while turning strategy into concrete *action plans* at various organizational locations (Hrebiniak and Joyce, 1984; Tichy, 1983; Juttner and Peck, 1998; Hrebiniak, 2005). Secondly, the strategic goals are cascaded in the organization to *individual deployment plans.* This is followed by *continuous improvement planning* according to the defined strategy (Patel and Hancock, 2005). Mintzberg and Waters (1985) state that strategy may not be a result of a guided plan but can also take its final form through *informal and spontaneous actions*. In this study, these four steps are considered as interdependent and characteristic for a formal, iterative and emergent strategy deployment process (Farjoun, 2002), *Figure 3*.

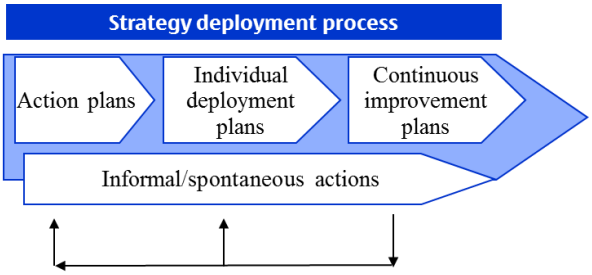


Figure 3: Steps of the strategy *deployment* process (modified from Chandler, 1962; Andrews, 1971; Porter, 1980; Thietart and Vivas, 1984; Mintzberg and Waters, 1985; Juttner and Peck, 1998; Hrebiniak, 1992, 2005; Patel and Hancock, 2005)

People involvement (Hrebiniak, 1992, 2005) is the central element in deployment analysis from the location, position and role perspectives (*Figure 4*). To analyze the relationships which bind the company to its environment and its actors (Aldrich and Herker, 1977; Porter, 1985; Regner, 1999; Maula, 1999), the theory of *boundary role person (BRP)* is utilized (Adams, 1976; Thietart and Vivas, 1984). The boundary actor acts as an interpreter across organizational subgroups. The organizational structure, the related governance model and the relationships are integrating the boundary actors into the strategy deployment process (Juttner and Peck, 1998).

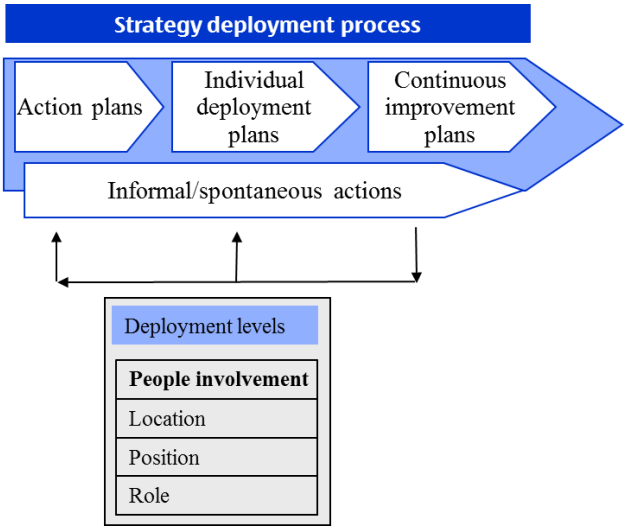


Figure 4: The strategy *deployment* process (modified from Chandler, 1962; Andrews, 1971; Porter, 1980; Thietart and Vivas, 1984; Mintzberg and Waters, 1985; Juttner and Peck, 1998; Hrebiniak, 1992, 2005; Patel and Hancock, 2005)

To analyze the people involvement within the strategy deployment process (*Figure 4*), the first task is to *locate* the actors involved in the strategy deployment process within an organization (Penrose, 1959; Chandler, 1962; Cross and Prusak, 2002). Secondly, the aim is to identify the organizational *position* of the persons involved in the strategy deployment process. The position is deemed especially interesting because BRPs do not traditionally have hierarchical authority at their disposal (Cleland and King, 1968). Moreover, BRPs may perform in a representative position through interaction within the network (Thibaut and Kelley, 1959, Organ, 1971). Thirdly, the target is to investigate the existence of the boundary *role* the persons involved in the strategy deployment process may have (Thusman, 1977).

It is additionally important to understand how different participants influence the global – local strategy process (Regner, 2003; Burgelman and Grove, 2004; Floyd, Roos, Jacobs and Kellermanns, 2005). The local voice concept is relevant in this context (Friedmann, 1992). The local voice is positioned in the periphery (Regner, 2003) of the global organization. A supporting organizational structure and the management are needed in order to successfully align the local voice to the global organization (Schein, 1985; Forssén, 2002). The leaders, the management or the founders of a global organization are generally the ones empowering the 'voice' of the regions and bringing existing local problems, issues and/or innovations forth in the global organization (Humes, 1993; Juttner and Peck, 1998; Forssén, 2002). If the local initiative is found to bring business benefits, a favorable form of actions can be achieved at the local level. The alignment success with the global strategy is dependent on how much the local activities contribute to the overall business strategy and the business performance. (Mintzberg, 1970; Humes, 1993; Juttner and Peck, 1998; Mintzberg 1999; Regner, 1999)

To summarize, the strategy deployment process (*Figure 4*) forms the second building block in the theoretical framework. The target is to increase understanding of who the strategy is deployed by. The case analysis focuses on defined deployment process steps and people involvement with the process (Thietart and Vivas, 1984; Juttner and Peck, 1998; Hrebiniak, 1992, 2005; Patel and Hancock, 2005).

2.5. Global – Local dimension in the strategy process

Strategy process diversity has been explored from many different approaches such as *cultural* (Hofstede, 1994), *geographical* (Humes, 1993; Schneider and Barsoux, 1997) and *head office* which describes the global entity versus *subsidiary* which describes the local entity (Ghoshal, 1986; Rugman and Bennett 1982; Regner, 1999). This diversified view further encourages the notion that strategies may also be developed at the local level for both local and global deployment (Kim and Mauborgne, 1993; Regner, 2003). Despite such viewpoints, Adler (2002) found that companies mostly ignore the impact of local contingencies on the global strategy process.

The global – local dimension of cultural differences provided by Schneider and Barsoux (1997) is applied in the study to describe how companies respond to the strategy process from three different perspectives: ignore, minimize or utilize the local differences, see *Figure 5*.

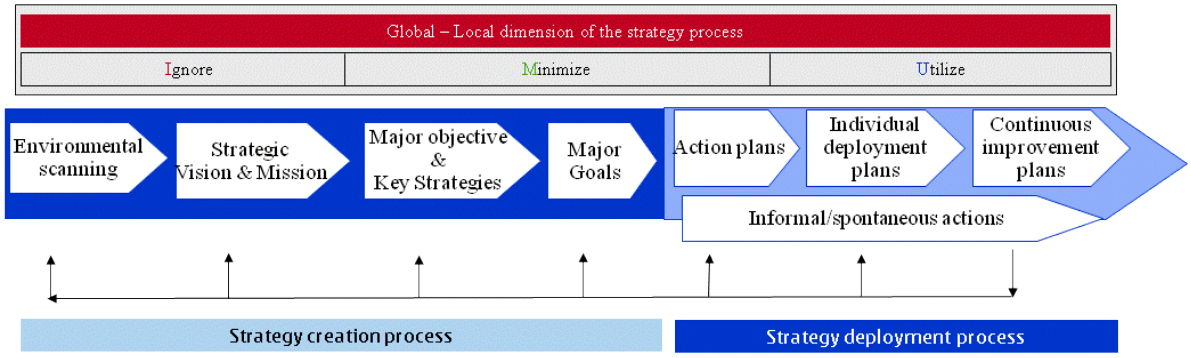


Figure 5: The global – local dimension of the strategy process (modified from Chandler, 1962; Mintzberg, 1970; Andrews, 1971; Porter, 1980; Burgelman, 1983; Thietart and Vivas, 1984; Mintzberg and Waters, 1985; Mintzberg, 1987; Friedmann, 1992; Pettigrew, 1990, 1992; Davenport, 1993; Humes, 1993; Schneider and Barsoux 1997; Juttner and Peck, 1998; Hrebiniak, 1992, 2005; Van de Ven and Poole, 1995; Mintzberg 1999; Farjoun, 2002; Regner, 1999, 2003; Patel and Hancock, 2005; Schilder, 2006)

According to Schneider and Barsoux (1997) the *ignore* approach assumes that processes, policies, leading styles and people are the same all over the world. The ignore approach flatly states that initiatives developed at headquarters can easily be deployed locally. The approach is defined efficient when initiatives around product quality, technology standards and company culture, shared beliefs and values are distributed throughout the organization (McGrath, 1997; Schneider and Barsoux, 1997; Kogut and Kulatikala, 2001; Adner, 2004). The *minimize* approach recognizes local differences, but mainly as a source of problems or threats to efficient and effective operations (Schneider and Barsoux, 1997). In the minimize approach there are three alternatives for its actual deployment. The first alternative describes the development of a corporate culture, where the target is to reduce the impact of local differences to the strategy creation and deployment. The second alternative isolates the different local characteristics in a headquarters-subsidiary relationship. The parent company determines what has to be done and the local subsidiary is then free to figure out how. Strategy formulation is centralized, while strategy deployment is seen as a local activity. The third alternative applies the regio-centric perspective. In this perspective the local subsidiaries are important. The local subsidiaries´ role is to improve coordination between local and global organizations of the company and to seek potential synergies between them (Schneider

and Barsoux, 1997). Finally, the *utilize* approach seeks out new constellations of business activities. The role and the importance of headquarters and subsidiaries (Barlett and Ghoshal, 1989) are redefined to discover organizational learning and innovation opportunities (McGrath, 1997; Schneider and Barsoux, 1997; Kogut and Kulatikala, 2001; Forssén, 2002; Adner, 2004). To summarize, understanding and utilizing the local differences and their relevance to do business locally is essential to global corporate survival over the long haul (Regner, 1999, 2003).

As a third building block the Ignore-Minimize-Utilize framework is applied for the global–local strategy process (*Figure 5*). The target is to gain understanding of how local differences are taken into account in a global strategy process. The global – local dimension also connects the local actor and the influence of the local voice into the analysis context (Mintzberg, 1970; Friedmann, 1992; Humes, 1993; Juttner and Peck, 1998; Mintzberg 1999; Regner, 1999, 2003). The applied local actor and local voice approach can be connected to the individual-centric perspective (Hutzschenreuter and Kleindienst, 2006) of the strategy process. The individual-centric perspective focuses on understanding how individuals are involved in the strategy process (Hutzschenreuter and Kleindienst, 2006). Within this study approach the individual-centric perspective (Hutzschenreuter and Kleindienst, 2006) appears well suited for understanding the actors' role in the global – local dimension of the strategy process (Regner, 1999; Burgelman and Grove, 2004; Parise, Cross and Davenport, 2006; Mäkelä, 2006). Findings in the global – local strategy process studies (Regner, 1999, 2003[4]) indicate actors' participation in the process by position and by influence (Floyd and Wooldridge, 1997; Floyd, Roos, Jacobs and Kellermanns, 2005). In this study, the applied individual-centric perspective distinguishes between *local actors* and central actors (Aldrich

[4] Regner (1999, 2003) is using terms central actor and peripheral actor. Regner's definition for the peripheral actor is used to the local actor definition in this study. The local actor resides on the boundaries of an organization. Due to the local position, the actor is usually well connected with external networks.

and Herker, 1977; Barlett and Ghoshal, 1986; Roth and Morrison, 1992; Regner, 2003[5]). The local actor resides on or near the boundaries of an organization. Due to the local position, the actor is usually well connected with external networks. The actor's existence, knowledge and influence however tend to be overlooked at the global level (Parise et al., 2006).

2.6. Summary

The strategy process is the focus of the theoretical framework. *Figure 6* illustrates the theoretical framework, *the global – local strategy creation and deployment process.*

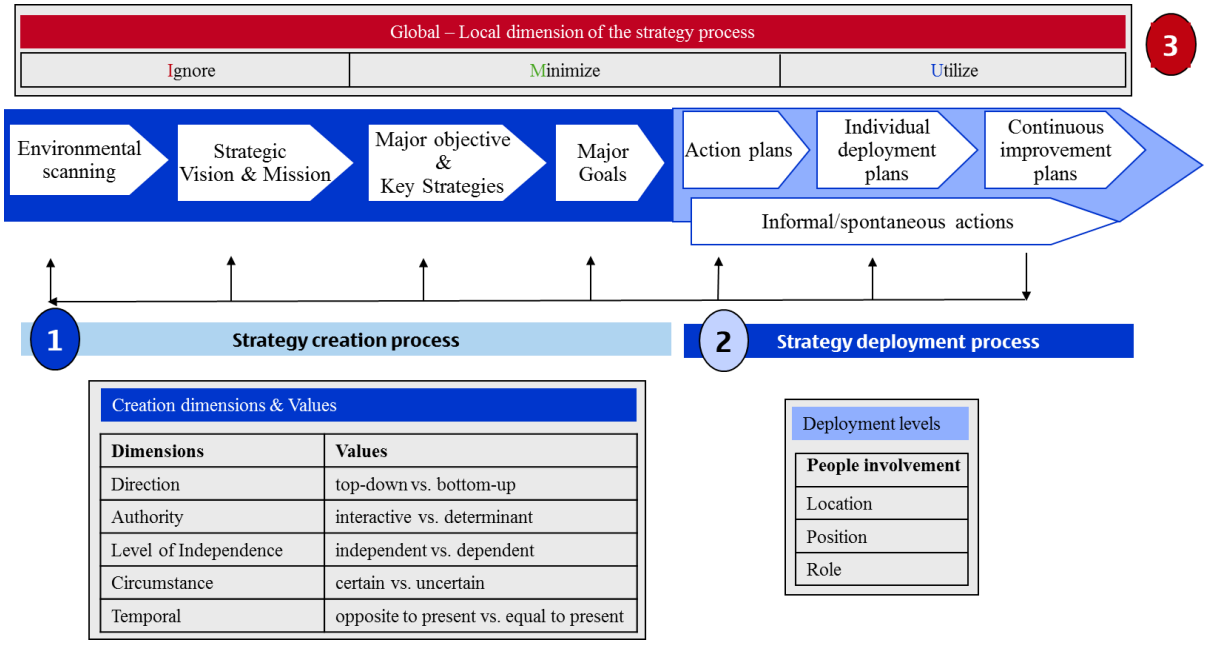


Figure 6: The global – local strategy creation and deployment process (modified from Chandler, 1962; Mintzberg, 1970; Andrews, 1971; Porter, 1980; Burgelman, 1983; Thietart and Vivas, 1984; Mintzberg and Waters, 1985; Mintzberg, 1987; Friedmann, 1992; Pettigrew, 1990, 1992; Davenport, 1993; Humes, 1993; Schneider and Barsoux 1997; Juttner and Peck, 1998; Hrebiniak, 1992, 2005; Van de Ven and Poole, 1995; Mintzberg 1999; Farjoun, 2002; Regner, 1999, 2003; Patel and Hancock, 2005; Schilder, 2006)

The strategy process includes two main phases: strategy creation and strategy deployment. Strategy creation and strategy deployment are approached as coevolving (Farjoun, 2002). The creation and the deployment of the strategy bring changes to the strategic direction and content over time (Farjoun, 2002). The strategy process is analyzed from three different viewpoints that make up this study. The three different viewpoints are called building blocks. The first building block is the s*trategy creation* process. The aim of the strategy creation process analysis is finding out where strategy emanates from. Different strategy creation process steps and values are investigated. The second building block is the *strategy deployment* process. Strategy deployment process analyses different process steps and people involvement with the strategy. The target is to understand by whom the strategy is deployed. The third building block is the *global – local dimension of the strategy process*. The impact of local characteristics on the *global – local dimension* of the strategy process is analyzed with the Ignore-Minimize-Utilize framework. The global – local dimension of the strategy process also brings the local actor and the usage of the local voice into the strategy process analysis. As a result, the characteristics of a successful approach on how to engage local actors in the global – local strategy process are discovered.

3. RESEARCH METHODOLOGY

This study adopts a combined participatory and non-participatory research strategy (Stake, 1995; Coughlan and Brannick, 2001) using both deductive and inductive qualitative (Eisenhardt, 1989; Gable, 1994; Stake, 1995; Yin, 1981, 2003) case (Yin, 1984; Eisenhardt, 1989; Stake, 1995) study approaches.

Interviews, archival data and observations are utilized as the main data collection methods. For three of the case studies participatory research strategy was applied and for one of the cases the non-participatory research strategy was applied. For all the cases, the data were collected by interviews of the case company employees combined with an archival data analysis. The observations also played a key role for the participatory research case data analysis. The research approach is described below.

3.1. Case study approach

The case study approach focuses on understanding the complexity (Eisenhardt, 1989) of a single case or multiple cases at the various analysis levels (Yin, 1984; Eisenhardt, 1989; Stake, 1995). The case study approach is defined as the preferred strategy (Yin, 1989) to retain meaningful characteristics of real life events. Such real life events are e.g. organizational and managerial processes, change processes and international relations. The strength of case study lies on the ability to deal with a variety of data collection methods, such as archives, documents, artefacts, interviews and observations (Yin, 1989; Eisenhardt, 1989; Van de Ven and Huber, 1990). The most important advantage of a case study approach is the use of different sources of evidence and a process of triangulation (Yin, 1989; Stake, 1995).

Criticism (Eisenhardt, 1989) towards the case study approach is the lack of rigor in case study research guidelines and used methods for documentation (Yin, 1994). Simultaneously, the case study method is claimed to provide little basis for scientific generalization, especially within the single case study (Yin, 1994). Nowadays, the case study method is extensively in use (Yin, 1994; Dubois and Gadde, 2002). Despite the criticism, the case study provides a unique method for presenting dependencies between the different variables and relationships (Yin, 2003). As the researcher is interactively utilizing empirical observations and theory, the case study method is found to expand the understanding of both theory and empirical phenomena (Dubois and Gadde, 2002). Moreover, the usage of multiple data sources such as documentations, archival records, interviews and observations strengthens the case study (Yin, 2003) findings. As a result, the data will be less prone to criticism including the use of single sources, inaccurate interview techniques or biased documents (Yin, 2003).

Systematic combining of various methods and approaches is positioned in relation to induction and deduction. Deductive approach is based on the current theoretical knowledge to produce new knowledge for the real environment (Olkkonen, 1993). The inductive approach is to build knowledge accumulation as a result of an emergent process (Olkkonen, 1993). The interplay between the theory and empirical observations is used in this study. This selection is motivated with the overall target of this study, i.e. to increase the understanding of the global – local strategy process in a global company.

3.2. Qualitative research

Central to the qualitative research is the data itself. The data is usually collected by interviews. The interviews are then transcribed and analyzed (Eskola & Suoranta, 1998). When the qualitative research approach is used, the collected quantitative data is analyzed qualitatively. The participatory approach at field research is characteristic to qualitative

research (Eskola & Suoranta, 1998). The participatory approach is also linked to the role of the researcher (Eskola & Suoranta, 1998). The qualitative approach often includes several case studies and is applicable for research of organizational and/or management studies (Dubois and Gadde, 2002).

In this study, the qualitative research approach is applied. The researcher has a central role in data collection through participation in the cases studied. All data is transcribed and analyzed qualitatively. The research data also includes some numeric data. In this study, the numeric data is the case study business performance material that was discussed during the interviews (*Appendix 8*). The combination of data sources was seen as important as it may reveal relationships that otherwise would not have been identified (Patton, 1990; Pettigrew, 1990).

3.3. Participatory research

The nature of this study is on understanding the reality where the researcher has an active and participative role. The participatory research is found suitable for the study. The participatory research is defined as an appropriate approach to understand, diagnose and learn from the problem in a real-life context (Stake, 1995). The approach is used to search for meaning and to give the voice to the people (Neilimo and Näsi, 1980; Coughlan and Brannick, 2001).

In this research the focus was on analyzing where strategy emanated from, by whom the strategy is deployed and to build an understanding of how to engage the local actors to the global – local strategy process. The level of participation by the researcher varied between the cases studied. Participatory research was applied in production, distribution and development project cases. In the production case, the researcher had a dedicated role within the case company when production technology was transferred from Finland to Asia. In the

distribution case, the researcher had an active role facilitating the global strategy deployment in different geographical hub locations. The researcher was not actively involved with the development project case, but had participatory observer role on how projects were progressing against the set targets. These observations were gathered during day to day work, during team meetings and information sharing sessions where the projects' progress were shared to the wider audience. Participatory observation is a widely used methodology in many disciplines, particularly, cultural anthropology, but also sociology, communication studies, and social psychology (Douglas, 1976). Its aim is to gain a close and intimate familiarity with a given group of individuals in their natural environment, usually over an extended period of time (Douglas, 1976). Non-participatory approach was used in the installed base case. The non-participatory approach means that the researcher is not involved with the case. As a result thereof, the data collection does not include observations, but was done based on interviews and archival data analysis.

3.4. Research process

The selected research methodology is described in this chapter (Neilimo and Näsi, 1980; Yin, 1981, 2003; Yin, 1984; Eisenhardt, 1989; Eskola & Suoranta, 1998; Patton, 1990; Pettigrew, 1990; Olkkonen, 1993; Gable, 1994; Stake, 1995; Coughlan and Brannick, 2001). In this study, three main data collection methods; *interviews*, *archival data* and *observations* are utilized.

3.4.1. The case company

The data were gathered at the case company, Nokia. Nokia was established in 1865. Nokia has developed from its roots as a paper, rubber and cables making company to one of the world's leading mobile communications companies. At the time of the study (1999 – 2004),

Nokia consisted of two major business groups: Nokia Networks (NET) and Nokia Mobile Phones (NMP). The case study concentrates on Nokia Networks. Nokia Networks is a global provider of network infrastructure, communications and networks service platforms and services to operators and service providers. More specifically, the case study is about the Nokia Networks strategy process. The cases represent Nokia Networks Delivery Operations strategy. Nokia Networks Delivery Operations offered the case environment suitable for the global – local strategy process analyses.

3.4.2. Selection of Cases

According to Yin (1994), cases in a multiple case study need to be carefully selected. A case study may be about a single case or multiple cases. It is possible to generalize from single cases but multiple case studies can strengthen or broaden such generalizations (Yin, 1989). Yin (1989) distinguishes between *literal replication*, where the cases are designed to corroborate each other and *theoretical replication*, where the cases are designed to cover different theoretical conditions. In the latter case, one might expect different results but for predictable reasons. For this study, the decision was made to select multiple cases from one case company. The cases were selected in cooperation with the Nokia Networks Delivery Operations organization.

The first case selection criterion was that the selected cases represent both the *global and local dimensions of the strategy creation and deployment* process of Nokia Networks Delivery Operations strategy. The case selection was done in phases. First the production case and distribution cases were selected as the cases. The production case is about the production allocation between two locations, Europe and Asia. The distribution case is about building a global distribution network including multiple hubs in different locations. The

analysis of the production and distribution cases influenced the study process, such as case selection and analysis approach. More specifically, the researcher started to seek a locally initiated case that has strategic relevance also at the global level. The snowball approach (Patton, 1990) was utilized to find a suitable case. The snowball approach means that the researcher utilizes recommendations from information-rich sources to locate suitable cases (Patton, 1990). For this study the recommendation was received from the head of the distribution operations. The recommended case was selected as the third case study. The third case is called an installed base case. The installed base case is defined as an emergent strategy (Mintzberg, 1987). The installed base strategic initiative was originally initiated locally and 'outside' of the formal strategy process (Mintzberg and Waters, 1985; Mintzberg, 1987; Burgelman and Grove, 2004). The third case was seen as an important element in this research to deepen the understanding of the impact of local relevance on the global strategy. Additionally the interest was to find out what the local people's involvement in the strategy process at the local level was and how well the local voice is heard at the global level. The fourth case study, the development project case was selected to this study as a common nominator with the other cases -*'to radically reduce inventories in the whole chain'*. The whole chain refers here to the end-to-end delivery process view. The four case studies equals to four change initiatives consisting of totally eleven sub cases (see *Table 2*). The common nominator for all the four case studies is the strategic target 'to radically reduce inventories in the whole chain'. The whole chain refers here to the end-to-end delivery process view.

Table 2: Four Case studies and eleven sub projects

Case study (= change initiative)	**Sub projects**	**Total amount of sub projects**
1. Production Case	Factory (A) in relation to Factory (E)	1 sub project
2. Distribution Case	European region (R, M, V), Sout American region (J), North American region (D), Asian region (S)	6 sub projects
3. Installed Base Case	C1	1 sub project
4. Development Project Case	168H, BIRD, EAGLE	3 sub projects
Totally 4 case studies	Totally 11 sub projects	

In addition, the case selection criterion was linked to the applied *participatory and non-participatory research* approaches. Access to the case company was easy and flexible through the participatory approach. Also the personnel at the case company were very forthcoming. Their attitude allowed the researcher to make use of strategy-related information, documents and various archives despite data sensitivity concerns.

3.4.3. Selection of Interviewees

The selection of interviewees was done by the researcher in co-operation with the case company, see *Table 3*.

Table 3: The interview population for the cases

CASE 1: Production case			
global/local position	**number of interviewees**	**hierarchical position**	**Interviewee focus**
global	4	top management	strategy process
global	4	middle management	strategy process, quality statistics, Financials
Local	2	top management	strategy process
Local	2	middle management	strategy process, quality statistics, Financials
Local	2	operative people	strategy process (deployment)
Total	**14**		
CASE 2: Distribution case			
global/local position	**number of interviewees**	**hierarchical position**	**Interviewee focus**
global	5	top management	strategy process
global	6	middle management	strategy process, quality statistics, financials
Local	3	top management	strategy process
Local	6	middle management	strategy process, quality statistics, financials
Local	2	operative people	strategy process (deployment)
Total	**22**		
CASE 3: Installed base case			
global/local position	**number of interviewees**	**hierarchical position**	**Interviewee focus**
global	3	top management	strategy process
global	1	middle management	strategy process, quality statistics, Financials
Local	1	top management	strategy process
Total	**5**		
CASE 4: Development project case			
global/local position	**number of interviewees**	**hierarchical position**	**Interviewee focus**
global	4	top management	168H, BIRD, strategy process
global	1	middle management	strategy process, quality statistics
Local	3	middle management	EAGLE, strategy process
Local	1	operative people	strategy process
Total	**9**		
TOTAL	**50**	Interviews	
TOTAL	**30**	Interviewees (10 women, 20 men)	

In all the cases, the criteria for the interviewee selection were to include people from all sub projects (see *Table 1*) and from different locations, reflecting the global – local dimension of the study. Approximately 50% of the interviewees were from global and 50% from the local organizations. This was defined as an important selection criterion so that different

viewpoints would be revealed. Additional criteria for the interviewee selection were to include people with different hierarchical position and gender. Interviews were conducted in English or in Finnish depending on the interviewee's nationality, and were translated from Finnish for the data analysis by the author. The total interviewee amount does not add up with the sum of the case interviews. Altogether 30 people were interviewed and 50 interviews were conducted. Some of the people at global level were representatives in all the cases. Therefore the total amount of interviewed people does not add up with the sum of the case interviews. Some of the people were for example linked to the case company strategy process and interviewed more than once providing valuable insights to various cases. Approximately 30% of the interviewees were women. A detailed list of interviewees is presented in *Appendix 1*.

3.4.4. Interviews

All interviews were conducted by the researcher. Three interviews were conducted as telephone interviews and the majority, 47 interviews were conducted face-to-face. The interviews were semi-structured to encourage free discussion about the themes of the study (*Appendix 4*). The case studies resulted in 80 pages of interview data. The duration of each interview was approximately two hours. At the beginning of each interview, the purpose and the confidentiality of the interviewee and data were discussed. The interview questions were formulated to gain understanding on the organizational direction (e.g. top-down versus bottom-up) for the strategy creation process, the local actors' involvement in the global – local strategy deployment process and on the characteristics of a successful approach to engage local actors to the strategy process (see *Table 1*).

The interviews were written in shorthand for further transcription. The transcripts were later sent to the interviewees for review and approval.

3.4.5. Archival data

The documents of the case company such as audit records, standard operating procedures, manuals, process descriptions, agreements and annual reports were studied for the archival data. In addition two customer satisfaction surveys were utilized as the data sources. Updated strategy plans and corresponding strategy communication materials to the employees were produced 6 times during the research. In addition to long term strategy plans, 12 short term plans were carried out. Both short and long term strategy plans were used as archival data. The case company internal data included both published, company confidential and confidential material and surveys. The case company's internal data dealt with the data related to the strategy process of the case company. For example the joint venture contract was one of the key documents that were used as the source of information for the production case. From there the joint venture agreement steps such as technology transfer, value added activities, export as well as research and development investments were utilized for the production case archival data. Both the strategy plans and performance archival data were taken from the company database. Firstly the data was gathered and analyzed against the theoretical framework (*Figure 6*). Secondly during the interviews the performance data was discussed in terms of what kind of targets were set for the cases, how the progress of the set targets was followed, how the progress was communicated inside the case company and with the key stakeholders as well as how well the set targets were achieved. Strategy process data and performance data were stored at the case company's database due to the sensitivity of the data.

Also, the case company's Intranet was used to search case related data for further analysis. Such data included structural changes, internal announcements, term definitions and other strategy process related documentation.

In addition to the case company's internal material, external data sources were used as archival data. The external sources were newspapers and articles. The selection criterion for the external sources was that they include topical information about the case company and for example the global - local strategy process. The researcher used search words such as *Nokia, Nokia Network, global – local strategy, strategy creation, strategy deployment, local actor, boundary role, local voice.* After an interesting external source was found the content was studied by the researcher and the research related words and sentences were highlighted. Both the internal and the external data sources were categorized according to the theoretical framework (*Figure 6*). The external source data were used together with the internal archival data sources when the analysis was carried out.

Having comprehensive knowledge of the studied phenomenon was considered essential. As explained above, the archival data gathering was done by studying the material and analyzing the data against the theoretical framework (*Figure 6*). The researcher repeatedly studied the archival data used in order to ensure that the right facts were selected and utilized for the study. The selection criteria were related to the case study research questions and the theoretical framework (*Figure 6*). One example of such data was the distribution case strategy and action plan documentation for the different hubs. From the documentation it was discovered that the different hub strategies followed the case company strategy process including both strategy creation and strategy deployment steps. The detailed hub action plans however differed from each other focusing on a certain location or a customer. Similarly the interviews conducted confirmed that these differences exist, i.e. the way the strategy was

deployed varied between the different hubs. The archival data analysis - with the observations and interviews - was done in order to understand how well the archival data sources support the studied context overall and within the case company environment. A detailed list of data sources is presented in Appendix 3 and 3.1.

3.4.6. Observations

In addition to conducting interviews observations were utilized in three of the case studies; production case, distribution case and development projects case studies. During the study timeframe the researcher was employed by the case company and able to carry out observations. One concrete example was that the researcher had a role in facilitating the creation of a strategic action plan for one of the cases. The aim was to follow-up the case company's strategy process and the templates and timelines therein. After the action plans were created the researcher was able to read the action plans, compare the action plans with each other and observe whether the action plans were in line with the global strategy. In addition, the researcher made observations to see who were involved with the creation of the action plans versus with the actual deployment of these plans. In addition to the observations the researcher collected data through interviews and through informal discussions.

Due to the long research time period it is difficult to provide an exact trajectory of all the utilized observed data. What is suggested for this kind of studies (Kotro, 2007, p. 157) is to "dive" into the world of the organization. Such a 'dive' was done as part of the study. Researcher was able to discover discrepancies between process descriptions and what participants say, and often between what the participants believe should happen and what actually does happen. Observations were written down by the researcher and observed data were analyzed qualitatively against the theoretical framework (*Figure 6*).

To summarize, four case studies were examined in this study. The selected cases represent the global - local dimension of Nokia Networks strategy. The descriptions of the cases are based on interviews, observations and archival data analysis. The observations were done for three of the cases. The case descriptions are presented in the case study section. *Appendix 7* summarizes the steps taken by the data research process in the study during the study timeframe.

3.5. Role of the researcher

The role of the researcher was different in each of the four studied cases. As the researcher works for the case company, the researcher had preliminary working experience that the case company was known to carry out strategy creation and deployment as a continuous process across the corporation. The participation of the researcher differed in the different cases as follows.

The research process started during the researcher's international assignment in Asia (*the production case*). During that time the researcher was involved in the production allocation from Europe to Asia. More specifically the researcher had a role in establishing the factory control function at the local factory. This was done by transferring the processes, tools and methods from Europe to Asia. During that time the researcher was also responsible for the strategy deployment process facilitation at the local level. In concrete terms, the researcher's role was to help the local organization to translate the global production strategy into a concrete action plan at the local level. During that time the researcher was able to observe how, in an international company, strategy process is aligned between different parts and levels of the organization. The observations were linked to the researcher's work at the case

company. During the assignment in Asia, the definition of the research scope and main questions, and the academic context started to evolve to conduct this study.

After the four year assignment in Asia, the researcher returned back to Finland. The hub operations case was selected as the second case study. The motivation for the case selection was based on the ongoing change to re-engineer the existing distribution model globally. The re-engineering focused on the change from having regional distribution centers to establishing hubs in strategically chosen geographical locations in three continents. The researcher had an active role in the hub operations in facilitating the global strategy deployment in different geographical hub locations. In concrete terms, the researcher's role was to help the different hub locations to translate the global hub operations strategy into a concrete action plan at the local hub level, and to monitor how the deployment was carried out against the set targets. The geographical approach opened up an opportunity to observe how local people were involved in the strategy process.

The researcher was not actively involved with the development project case. The researcher worked for the case company while the development projects were created and deployed. The role was that of an observer. The gathering of these observations was conducted during day to day work, team meetings and information sharing sessions where the projects' progress was shared with the wider audience. In the installed base case, the researcher had a non-participatory role. In a non-participatory case the research data were collected through interviews and archival data analysis.

3.6. Data analysis

The target of data analysis is making sense out of the data collected (Eskola & Suoranta, 1998). As Eskola and Suoranta (1998) state, the first step in qualitative data analysis is to

know the content of the research data. The second step is to agree on how to do the data coding and then make sense out of the data. Interviews, archival data and observations were the main source of the data analysis. All research data from interviews, archival data and observations were transcribed and analyzed (Eskola & Suoranta, 1998). In this study, the theoretical framework (*Figure 6*) was applied as the data coding platform for all the research data.

Archival data

The analysis of archival data started with the analysis of the case company strategy process. A vast amount of relevant data was available from the case company. Both the company wide strategy process descriptions and the case specific strategy plans were used as the archival data sources. All archival data was studied extensively. This step provided a good understanding of how the strategy process is defined to work from the global level and what different process steps are characterized. The strategy process analysis was done in phases. First the strategy process was analyzed. Secondly the different cases were separately analyzed and finally compared with each other. The comparison provided valuable information on similarities and differences on how the process works in practice. The global process description was defined as the assumption of how the process should work (Eskola & Suoranta, 1998). All differences from the assumption were coded as interest points. Several differences were found. The differences between the cases were linked to the local people and their involvement with the strategy process. The strategy creation and strategy deployment process steps were found to be typical process steps in the case studies (*Figure 7*).

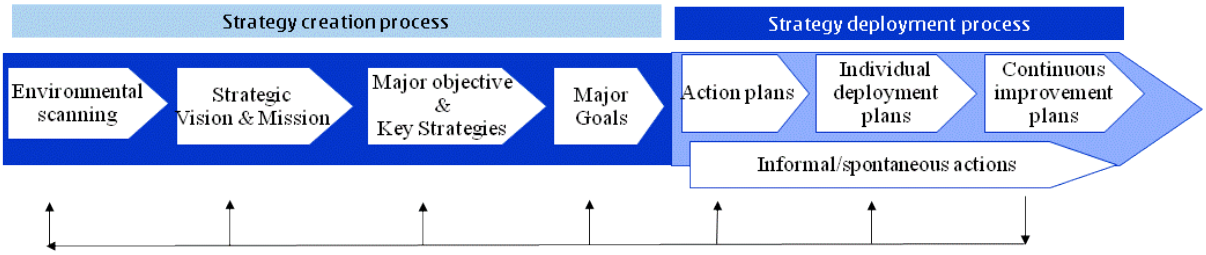


Figure 7: Strategy creation and deployment process

The archival data analysis also included materials such as audit records, standard operating procedures, manuals, agreements, annual reports and performance data. All materials were studied carefully and analyzed against the strategy creation and deployment process description.

Interviews

Interviews were conducted to gain an understanding of the strategy creation and deployment process; what the key process steps are and how the process works in practice. The individual interviews were transcribed by the researcher. The interview results were compared with the case company strategy process descriptions and findings mapped against the theoretical framework (*Figure 6*). The data analysis provided evidence that the strategy process within the case company is *'aligned with the textbook wisdom'* (Pantzar and Ainamo, 2004).

The first building block in the global – local strategy process theoretical framework (*Figure 6*) is the s*trategy creation* process. The strategy creation process analysis is directed at finding out where strategy emanates from. Different process steps and characteristics are investigated. The data analysis started by categorizing the findings to the theoretical framework (*Figure 6*). The *Appendix 5* shows how the case and related project values are mapped against the strategy creation process dimensions.

In one example the interviewee described that when a new hub was created no input from local employees was requested. When mapped against the theoretical framework the conclusion was that the top-down creation approach was applied in this case. Similarly, with the installed base case, the analysis finding is that the action initiation was done locally and then brought up to the global awareness. This finding is linked with the bottom-up strategy creation approach for the case. Similarly all cases were analyzed and their results mapped against the strategy creation dimensions and values.

The second building block in the global – local strategy process theoretical framework (*Figure 6*) is the *strategy deployment process.* The target is to understand by whom the strategy is deployed. The people involvement is defined as a central element in the strategy deployment process. The people involvement in the strategy deployment is analyzed from location, position and role perspective. *Appendix 6* shows the way the case and related project values are mapped against the strategy deployment process theoretical framework (*Figure 6*). In the production case for example the people involvement analysis from role perspective showed that expatriates had a central role for certain key positions. The expatriate role was linked to the knowledge and information transfer between the global and local entity. Similarly for the distribution case, the findings indicate that '*position matters'*. This finding was common to all cases which in turn indicate that a formal position gives authority and responsibility for those who are in charge of the strategy deployment.

The third building block in the theoretical framework (*Figure 6*) is the *global – local dimension of the* s*trategy process.* The impact of local characteristics on the *global – local dimension* of the strategy process is analyzed with the Ignore-Minimize-Utilize framework. The global – local dimension of the strategy process also brings the local actor and local voice into the strategy process analysis.

Interviewees were asked to describe which of these three perspectives was used in each case. Also the motivation behind selecting a certain perspective was defined as important information. The perspectives and motivations for the cases described by the interviewees were listed and summarized for later analysis. For example this quote from the distribution case uses the ignore perspective *'…copy-exact mode is in use…'*. An example of the minimize perspective is the production allocation case. *The local joint-venture contract was setting defined local rules for how to operate locally. Also, the global modular factory set up was in use for the operations.* The utilize approach is linked with the installed base case that was initiated from local conditions and then brought into global awareness. All the findings were further discussed with the interviewees to ensure that precise conclusions were obtained from the interviews. The global – local dimension connects the local actor and the influence of the local voice into the analysis context. The usage of the local voice is therefore central for the case study. A specific question was asked from all the interviewees around this topic to find out if and how the local voice is heard at the global level. The primary source of information was the interviews. All 30 interviewees discussed and elaborated on this question during the interviews. The target for this part of the study was to build an understanding of the characteristics for engaging local actors to the global – local strategy process. As a result, the characteristics of a successful approach for engaging local actors to the global – local strategy process are discovered.

Observations

During the study timeframe the researcher was employed by the case company and participated in the strategy process development both at the global and local level. The observations method was applied for three of the cases. Due to the researcher's employment at the case company, the researcher was able to observe the case company's strategy process

in real life on a regular basis. Therefore an extensive amount of observation data is available for analysis. During the study timeframe, observations were collected by the researcher. Observation analysis included personal observations and notes, meeting minutes and e-mails. All coded observations were written down, studied carefully and analyzed against the strategy creation and deployment process description. Concretely this was done by comparing the individual case findings with each other and identifying similarities and differences. The findings were mapped to the theoretical framework (*Figure 6*). The observations were compared with the archival data and interview data. The use of different data sources provided valuable information and a thorough understanding of the data. All observations related to the research questions and to the theoretical framework (*Figure 6*) were coded as interest points. One concrete example is the observation linked to the strategy process description versus how the process in real life was applied by the people. Another example is the observation on how the strategy creation and deployment varied between the cases and locations.

3.6.1. Execution of within case analysis

The within-case analyses were conducted by using both deductive and inductive qualitative content analysis. The analysis follows the case theoretical framework (*Figure 6*).

Figure 6 illustrates the order in which the within-in analysis was performed. The different case studies were first individually analyzed. The analysis was done against the theoretical framework (*Figure 6*). Firstly the analysis focused on understanding what strategy creation process was applied. Secondly, the analysis of the strategy deployment process provided an understanding of whom the strategy is deployed by. Finally, by using the ignore, minimize and utilize categorization it was possible to determine how well the local voice was heard and taken into account in the global–local strategy process. The theoretical framework (*Figure 6*)

provided a way to ensure a similar categorization approach to each case finding. This approach also allowed drawing conclusions that are later comparable with each other, i.e. conducting cross-case analysis.

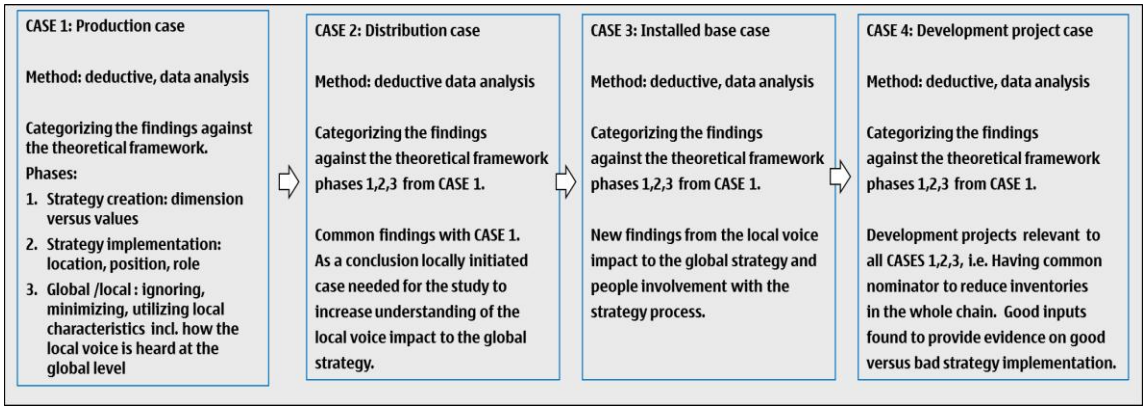


Figure 8: Within-case Analyses

3.6.2. Cross-case analysis

After the within-case analysis a cross-case analysis was carried out. This is done to obtain a deeper understanding of the findings from the within-case analysis in terms of common characteristics and to enhance generalizability (Eisenhardt, 1998). This is conducted by analyzing how the theoretical framework (*Figure 6*) characteristics behave in different cases.

The target of the cross-case analysis is to reveal variations and patterns between the cases in the strategy process. Similarities and differences in each case were evaluated to specify commonalities. The goal was to describe the experiences in a meaningful manner accurately and coherently across the cases. Doing so the target of this study was reached, i.e. to build an understanding of the characteristics of how local actors are involved within the global – local strategy process. The detailed cross-case analysis results are presented at the end of this study.

Figure 9 illustrates the cross-case analysis approach as a result of the within-case analyses. The cross-case analysis revealed four strategy process characteristics; *global*, *global – local*, *local – global – local and global – local – global.*

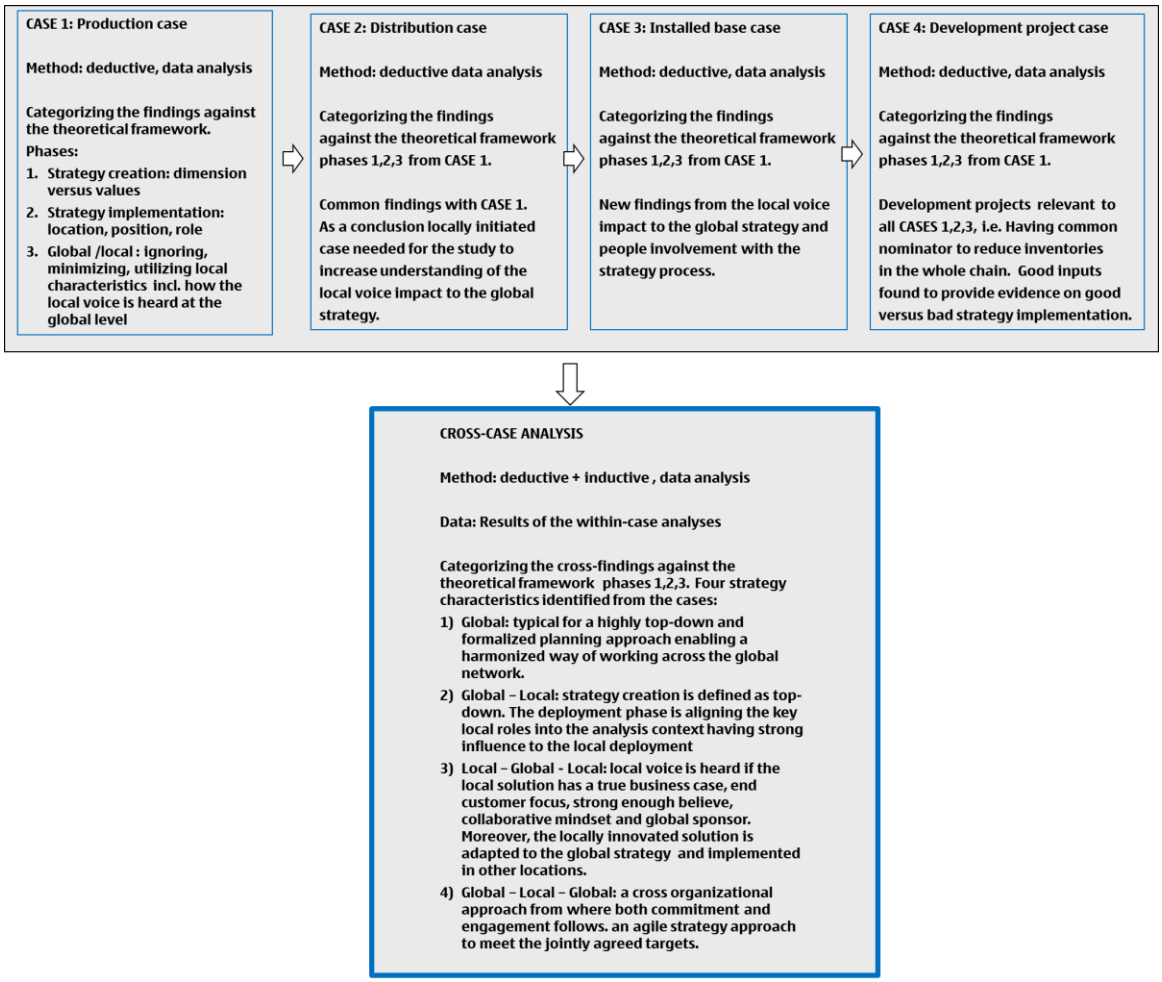


Figure 9: Cross-Case analysis

3.7. Data Validation methods

The interviews conducted by the researcher were the main source of data. The interviews transcriptions were sent to the interviewees for review and approval. Case results were summarized including interview data, archival data and observations. Case results were separately examined in the review sessions organized by the researcher. Relevant stakeholders were invited to the review sessions. The relevant stakeholders for the review

sessions were agreed in co-operation with case company management, such as the case company corporate strategy team representatives and the strategy planning team representatives. The key findings were presented by the researcher to gain feedback on the findings. The local voice and the involvement of local people in the strategy process were topics that stakeholders identified as important findings. For example, referring to comments by two interviewees: '*it could be profitable to hear a voice challenging'* (Interviewee10) and *'it would be good to get that local voice heard, but how?'* (Interviewee1).

Observation analysis included personal observations and notes, meeting minutes and e-mails. All coded observations were written down, studied carefully and analyzed against the strategy creation and deployment process description. Concretely this was done by comparing the individual case findings with each other and identifying similarities and differences. The findings were mapped to the theoretical framework (*Figure 6*). The observations were compared with the archival data and interview data. The use of different data sources provided valuable information and a thorough understanding of the data.

Archival data analysis included materials such as audit records, standard operating procedures, manuals, agreements, annual reports and performance data. All materials were studied carefully and analyzed against the strategy creation and deployment process description. Concretely this was done by comparing the individual case findings with each other and identifying similarities and differences.

Data triangulation by using multiple data sources was used (Eskola and Suoranta, 1998). In this study data triangulation was done by combining selected data sources with each other. Such data sources were interviews, archival data and observations. Data triangulation

minimized the possible biases of the study and maximized the quality of the research (Yin, 1989).

3.8. Data reporting

The results of the study are reported both individually by the case and at the cross-case level. The anonymity of the interviewees is defined as highly important and maintained in the study. The citations referred to in this study are by interviewee's hierarchical position, location and case study. The citations were translated into English if the interview was done in Finnish. The translation was done by the researcher. The reliability of the translation was secured by sending the translation for review to the interviewees. The name of the case company did not need to be concealed as the Nokia Networks tutors gave permission to use the company name when reporting the results. The anonymity of the individual cases is necessary and therefore specific code names were used for the individual cases. This was agreed separately with the case company representatives and observed by the researcher.

4. RESULTS

In this section, the production, distribution, installed base and development project cases are analyzed using the theoretical framework (*Figure 6*).

4.1. Production case

The Asian-located Joint Venture Company was established by Nokia during 1994 to strengthen economic cooperation and technical exchange between Europe and Asia. During that time, a scalable and modular factory concept was discovered. This discovery was a result of a brainstorming session within the case company. The main idea behind the modular factory concept is to streamline the end of the production process. In this context, the modular part is linked with the factory as a place where ready-made units (hardware and software) arrive from one or more suppliers. The ready-made units are configured to a network element delivery based on the end customer order.

The Joint Venture Company's business scope was extended during 1999 to cover the production of core networks in the GSM platform. Consequently, the Joint Venture Company's business scope extension enabled production allocation between the factories and the use of a modular factory concept. Moreover, production allocation between two locations, Europe and Asia, was based on a strategic target to establish operations in a market area, i.e. Asia. In the study, the abbreviations E (Europe) and A (Asia) are used for the analyzed factories. The production case equals to two sub projects (see *Table 1*). The two sub projects are the focus of the case company strategy on the production allocation from Factory E to Factory A. The data for the production case were collected through interviews, observations and archival data. All archival data are defined as company confidential documents describing the contracts, background, solution, strategy and financial data. Altogether 14

interviews were conducted. The list of these informants and their position in the organization is provided in *Appendix 1*. The researcher was working for the case company and valuable information was gathered during her assignment in Asia. Participatory observations played a central role in this case study data collection.

The strategy process analysis deals with the production allocation between two factories and is tightly linked to the four steps mentioned in the JV contract. The analysis is done against the theoretical framework (*Figure 6*). The first step, *technology transfer* is initiated from Factory E to Factory A based on a global allocation decision. In practice, technology transfer describes what products are in question, how much support is needed and under what terms and conditions. The second step, *value added activities* are initiated, based on company-wide targets to gain cost advantage of locally purchased materials. Equally important is the global know-how transfer from expatriates to local personnel. In addition to the company's internal aims, local authorities are setting targets for value-added activities. The local targets set by the authorities are a prerequisite for getting import and operating licenses. As a third step, *export* is initiated. The export objective is partly set by the local authorities as a condition for a ‘good local citizen’ status. In line with the strategy deployment process, it became clear that initiating export activities benefits the case company's presence at the local markets e.g. in terms of smoother co-operation with different authorities. *Research and Development (R&D)* investments are considered the final step. R&D investments are allocated to the local companies based on the level of competitiveness in day-to-day performance, cost level and delivery terms as well as in quality.

4.1.1. Strategy creation

The analysis focuses on the production allocation from Factory E to Factory A (*Table 4*). Factory E has a platform plant role in terms of technology transfer owner. Factory A has a lean plant role aimed at being flexible and cost efficient. The role of the platform plant (E) is to offer the technology, products, processes and systems know-how to the lean plant. The analysis focuses mainly on Factory A's strategy creation in relation to Factory E.

Table 4: Strategy creation: Production case (Project/Factory A=lean plant, Factory E = platform plant)

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**TEMPORAL**
Production case	**A in relation to E**	top-down	determinant	dependent	between certain and uncertain	equal to present

The interviews, observations and archival data findings are that the *direction* of the strategy creation is *top-down*. Further, as production allocation was enabled by means of a modular factory setup, the *authority* was determined and the strategy creation process of Factory A was dependent on the strategy process of the Factory E. Moreover, the interviewees described the strategy creation as a kind of stop-go process '*we were instructed to locally draft the strategy and then they (global) defined the objectives and the overall targets and we (locally) need to make adjustments accordingly*' (Interviewee3). Within the *circumstance* dimension, Factory A is found to be between the defined approaches as the regional conditions and relationships with the local authorities are influencing the operational set-up. Consequently, the *temporal* dimension represents the *equal to present* approach. This is visible through the

role of Factory E as a platform plant, and the aim of the JV contract to offer a model of '*advanced and appropriate technology and management methods'* to Factory A.

The findings indicate a highly centralized and formal process approach across the production operations with a clear platform (E) versus lean plant (A) concept. The local conditions set rules on how to operate with local authorities. For example, local interviewees described numerous and sometimes very time-consuming visits to the local import and export authorities or tax offices. The visits to the local authorities done by local personnel were characterized as crucial for securing business licenses and ensuring smooth operating conditions for production allocation. Further, the interviews revealed that this kind of work is many times invisible to the global company unless deviations occur against the targeted performance.

4.1.2. Strategy deployment

The results emphasize the importance of local people's involvement from the location, position and role perspectives (*Table 5*).

Table 5: Strategy deployment and people involvement: Production case

Deployment levels & case evidence	
People involvement	**Case evidence**
Location	*Key locations:* Headquarters and different plant locations (E, A)
Position	*Key positions:* * Management team (global and local) * Plant manager (local) and management team (local) * Whole personnel (both global and local) through the incentive setting process
Role	*Key roles:* * Head of operations as a boundary person at the global level * Plant manager and controller as boundary persons at the local level * Expatriates as boundary persons at the local level linked to and having iterative influence on all strategy process steps: a) Technology transfer: management teams (local, global) b) Value added activities: local and global sourcing c) Export: demand allocation (global, local) d) R&D: local management, global R&D functions * Local key persons as peripheral boundary persons at the local level with the focus on local execution

The interviews showed that the *location* of the key persons driving the production is similar to the platform plant and the lean plant locations. Management teams both at the global and local level are defined as central for the strategy deployment. This highlights the fact that the key global and local players are involved in the strategy deployment based on their formal organizational *positions*. Interviewee16 said that it was important to establish a stakeholder network between the lean plant (A) and the platform plant (E). In practice, this was done by first identifying the key stakeholders and then inviting different key people from the global platform plant (E) to give presentations and participate in local lean plant (A) management team meetings. Moreover, all production people from both plants were found to be linked to the strategy deployment. This is done with a company-wide incentive setting process. Related to the *roles*, the findings indicate the existence of a boundary role both at the global and local level. The Head of Operations is defined as a boundary person at the global level. The role of Plant Manager and Controller are defined as boundary-related at the local level. Interviewee28 described that the Plant Manager and Controller were clearly described as central to knowledge and information transfer between the global and local entity. Analysis

of the role further reveals that expatriates are linked to a dedicated global know-how transfer to local personnel. One example is the global sourcing management influencing e.g. the decisions on export demand allocation between the plants. Moreover, local key players impact the strategy deployment by bringing their own connections and competencies into the process. Interviewee16 said: *'they (local key people) influence how things are done locally …to the execution they (local key people) bring their own competencies and connections….which we (expatriates) do not have. Without this kind of people, who are familiar with the local conditions and who are able to adapt to our way of working...it is a definitive prerequisite for smooth operations…that we have local and trusted people nominated to dedicated and critical positions'.*

The analysis shows a link between the strategy process formality and the people's impact on the strategy. The lean plant strategy process is formal, following the case company's strategy process. Moreover, as local conditions influence the initial deployment, the finding is that local people are involved in the strategy deployment at the local level. Further, the identified boundary roles are seen as representative of relationship-building, knowledge transfer and of the actual deployment of the strategy.

4.1.3. Global – Local dimension of the strategy process

The use of a modular factory model and the production allocation between the two locations, Europe and Asia, are seen as starting points to set business assumptions and targets to the global - local operational model.

Ignore-Minimize-Utilize framework and plant strategy creation

The research indicates that strategy creation at Factory A follows the case company's strategy creation process. The Factory A production is modeled by the modular factory setup designed at the global level. The establishment however is following the locally relevant *strategic* contractual Joint Venture -conditions (technology transfer, value added activities, export and R&D) '*to strengthen economic cooperation and technical exchange between the countries'*. This is indicated in the analysis of various visitors from the platform plant to the lean plant in terms of e.g. production, testing, packing, sourcing, quality and financial knowledge transfers to the lean plant. During the interviews, it was stated that knowledge localization is the most important task. Interviewee16 explained: *'the starting point was that the work is done by local personnel…and the whole production concept was learned in co-operation with them so that they were adopting it. The production know-how was brought to Asia by the most skillful employees (from the global) in kind of surgical inserts and not so that we would have a designated expatriate in every area…with time, the know-how was totally localized. By that way we created locally based knowledge and it had a great milestone value when production was for the first time activated by the local staff'.* The equal quality requirements are emphasized and regular monitoring is in place at both the platform plant and the lean plant. The quality aspect was summarized as: *'Platform plant will monitor quality of products …by sample testing'* (Interviewee16). Despite the strong global and platform plant approach, the local conditions determine how the global targets are cascaded into the local business environment.

To sum up, the findings indicate that the creation process at Factory A applies a *minimize* approach. The argument is based on the conducted interviews, archival data analysis and observations indicating that there exists a strong business reason to be present in the Asian market. Moreover, the local factory makes use of a globally created modular factory setup

ensuring smooth initiation of production allocation. In addition, the location-related and JV - contractual conditions influence the way strategy creation is divided between the global and local entities. This finding was supported by the archival data analysis and conducted interviews.

Ignore-Minimize-Utilize framework and plant strategy deployment

The data analysis illustrates that strategy deployment at the lean plant is a local operation following the global strategy. The local management team has an important role in strategy deployment by coordinating activities between local and global organizations. Moreover, benchmarking between the factories is deemed important. Some of the interviewees pointed out that benchmarking is used as a competition or comparison method in the performance valuation of the factories. The analysis further revealed that benchmarking is mainly done from the platform plant (E) to the lean plant (A). However, during the interviews with the local personnel it became clear that they hoped someday the learning would take place the other way around also.

Putting together the strategy deployment process, the Factory A represents a *minimize* approach. The argument is that the strategy deployment is seen as a local exercise taking into account local conditions and involvement of the local personnel. The local management team has a coordinating role between local and global organizations to look after potential synergies between the two. The platform plant (A) is visible in the lean plant (E) day-to-day activities. Also the strategy deployment plan at the lean plant recites exactly what the globally created strategy is. But the way strategy at the lean plant (A) is executed is aligned with the local conditions and local environment.

Local voice

Concerning plant operations, the findings from the interviews and observations indicate that local actors have their voices heard in both strategy creation and deployment. The Plant Manager and the Controller in Factory A are defined as boundary actors at the local level. They are also actively involved in both strategy creation and deployment processes. In the strategy creation process, their role is mainly to follow global directions. While in the strategy deployment process, their role is to facilitate and implement the globally set targets into the local conditions. Moreover, their role is to make sure that critical local conditions such as relationship-building with the legal authorities are recognized and acknowledged as important at the global level. The Head of Production Operations is defined as a boundary actor at the global level having an active role in both strategy creation and deployment process. Other boundary roles were identified within expatriate positions linked to technology transfer, value added activities, export and R&D. During the four years of the study timeframe (between the years 1999-2003) the number of expatriates diminished. Their roles and responsibilities were transferred to the local personnel. Local employees emphasized that they would not like to have a 100% local organization. Further, local employees said that it was easier to get hold of global information through expatriates, such as the global strategy and its communication. Other examples described by the local employees are the difficult situations such as material constraints in the supply network or internal announcements of global organizational changes. Further, the interviews with the lean plant personnel revealed the existence of the local boundary actor at the local level. The example described was related to the local actor's connections with local external networks such as local authorities (customs, tax offices and legal authorities) and with local material suppliers.

Results of the case study indicate that the formal strategy process does not help local voices to be heard on the global level even though the local voice appears to influence the strategy deployment at the local level.

4.1.4. Summary

The strategy process analysis in the production case dealt with the modular factory set-up and the four sequential Joint Venture conditions for the production allocation between Europe and Asia, i.e. technology transfer, value-added activities, export and R&D. The *strategy creation* analysis indicates that the strategy at the lean plant (A) is dependent on the global strategy. The platform plant (E) represents the global entity towards the lean plant (A) as the local entity. Despite a highly top-down approach, the location-related conditions, such as laws and regulations influence the way strategy creation is executed at local level. The *strategy deployment* finding is that both the platform and lean plant strategies are deployed by the entire personnel. Personal incentive targets are linked to the strategy through a company-wide process. Further, the strategy deployment analysis indicates the existence of boundary persons at the local level. The finding is that the plant manager, controller, expatriates and other key local actors are linked to the process as boundary persons. Finally, the analysis shows that when local conditions differ from global (i.e. between Europe and Asia), the local boundary actor seems to have an active role in the local strategy deployment.

4.2. Distribution case

During 2001, Nokia Networks started to re-engineer its distribution model. The re-engineering focused on the change from having regional distribution centers to establishing hubs in strategically chosen geographical locations in three different continents. The distribution case consists of six sub projects (see *Table 1*). The six sub projects are the focus

of the case company strategy to re-engineer the distribution model. In the first phase, three hubs were established in the European region (R, M and V). In the second phase, the South American (J) hub was established. And finally, North American (D) and Asian (S) hubs were implemented. In the study hubs are referred to by the abbreviations V, R, M, J, D and S. Data about the distribution case was collected by interviews, archival data and observations. The archival data consisted of company internal documents describing the background, solution, strategy and related financials. 22 key people to the strategy were interviewed. The list of these informants and their position in the organization is provided in the *Appendix 1*. The researcher was working with the case and valuable information was gathered during this work period. To conclude observations played a central role in this case study data analysis. In the distribution case, the researcher had an active role facilitating the global strategy deployment for the different geographical hub locations. The distribution case builds on a paper (Pohjala, 2007) that was published in the Copenhagen Conference on Strategic Management 2007.

4.2.1. Strategy creation

The analysis highlights the fact that the strategy creation dimensions are forming a baseline to a unified and coherent strategy. Six hubs were established in a sequential order creating the global hub distribution model (*Table 6*).

Table 6: Strategy creation: Distribution case[6]

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**TEMPORAL**
Distribution case	**V**	top-down	determinant	dependent	certain	opposite to present
	R	top-down	determinant	dependent	certain	between equal to present and opposite to present
	M	top-down	determinant	between dependent and autonomous	certain	opposite to present
	J	top-down	determinant	between dependent and autonomous	certain	between equal to present and opposite to present
	D	top-down	determinant	between dependent and autonomous	certain	equal to present
	S	top-down	determinant	between dependent and autonomous	certain	equal to present

In the interviews, employees emphasized a predominantly *top-down* approach with the creation of all hubs: *'this hub (R) strategy creation process was quite top-down driven'* (Interviewee2). Moreover, the strategy creation process of all hubs was described by the interviewees as *determinant*, defining exactly how to operate. Interviewee3 described the M hub creation process, '*it was just announced…and then the M hub was created'.* The strategy creation process for all hubs was based on globally chosen locations. Characteristic for J, D and S hubs strategy creation processes were the country-related restrictions, such as taxation and other requirements set by local authorities. The *level of independence* is *dependent* in two of the cases (V, R) and *between dependent and autonomous* in four of the cases (M, J, D, S). The case findings accommodate requirements from both the corporate and regional

[6] The table content is built to show the case evidence, i.e. which strategy creation process is linked with various dimensions.

circumstances. For all the hubs, the strategy creation process was found to represent a *certain* approach. The temporal dimension finding shows that with the first hubs some innovation was used as the creation of V and M hubs are created opposite to the present situation. This was followed by the R and J hubs which were created between equal to present and opposite to present situation. Last two hubs (D, S) are then created as equal to present situation. This finding is also emphasized by the interviewees who state that the creation of multiple hubs gradually formed a hub operational model that was easy to copy from one hub location to another. The model included elements such as structure, processes, roles and responsibilities, scope, working principles and tools as well as standards for performance evaluation. Despite this finding, people had their reservations about the hub model: *'The greatest risk is that we copy the model for new hubs and are not able to utilize our innovation capability'* (Interviewee3).

The findings indicate a primarily centralized and formal strategy creation process approach across the operations with the unwritten rule 'make it happen'. Interviewee2 summarized: '*For sure, this (hub creation process) was strongly part of the formal strategy process'*. Overall, the finding is that there exists a belief that the establishment of hubs brings a competitive advantage to the end-to-end delivery process '*defining the most optimal way to operate'* (Interviewee6). Interviewee6 explained: *'A hub is established close to the customer, so that the customer can decide as late as possible about the final configuration,'* and continued: *'we are able and we do change the delivery point from country to country if needed…for the end customer, it does not matter from which hub the materials are delivered from, due to the fact that identical service levels between the hubs are a prerequisite'*.

4.2.2. Strategy deployment

The strategy deployment analysis focuses on the people involvement with the strategy deployment process from the location, position and role perspectives (*Table 7*).

Table 7: Strategy deployment and people involvement: Distribution case

Deployment levels & case evidence	
People involvement	**Case evidence**
Location	*Key locations*: Headquarters and different hub locations (R, M, V, J, D, S)
Position	*Key positions:* * Management team (global), hub managers at various hub locations (local) and support functions at the management level (global) * Whole personnel (both global and local) through the incentive setting process
Role	*Key roles:* * Head of Hub Operations as a boundary person at the global level * Hub manager as a boundary person at the local level

According to the interviews, archival data analysis and participatory observations the *location* of key persons driving the hub operations is tightly connected with the headquarters and with the different hub locations. Moreover, the finding is that the key persons *position* matters, and that people involvement in deployment is fully formalized through a company-wide incentive-setting process. The analysis indicates the efficiency and effectiveness of how the targets are cascaded across the organization. The Interviewee12 summarized:*' Strategy is implemented with the usage of an incentive setting process. And the results show that the cascade has been good'.* However, the Interviewee7 raised up an interesting topic. He stated that employees do not necessarily care if there is a linkage between the strategy creation phase, deployment plan and incentive setting, *'there are quite a lot people working here who are not at all interested (if there is a cascade or not)'*. Related to the *role*, the findings indicate the existence of boundary roles both at the global and local level. The global level boundary person is the Head of Hub Operations. The local level boundary person is the local Hub Manager. Many of the interviewees emphasized that the hub manager role was claimed

to become distant from global operations. Two findings were linked to this observation. Firstly, the hub managers appeared to remain in their echelon in the hierarchy for a long time. Secondly, a horizontal job rotation pattern was identified among the hub managers, i.e. moving from one hub location to another. Both patterns were claimed to lead towards a comfort zone, as summarized by the interviewees: *'changes or continuous developments are not thoroughly analyzed as the current one seems to work as well...the developments that we see are happening around the IT*' (Interviewee3). Despite such comments, Interviewee1 emphasized the positive aspects of job rotation connected to competence development.

The analysis results show that the hub strategy process is highly formal, closely following the case company's strategy process. Moreover, people involvement and their impact on the strategy deployment process are based on formal location, position and role. This is a central finding in the interviews. This finding is in line with the company wide strategy deployment process and incentive setting process descriptions.

4.2.3. Global – Local dimension of the strategy process

The hub operational model started to evolve as the case company sold factory premises and free warehouse space was needed to relocate the unsold inventories. Consequently, the case company was re-engineering its distribution model from regional distribution centers to establishing one main hub per region. These incidents are seen as starting points for business assumptions and target setting towards the hub operational model. Interviewee8 summarized: '*...equally important is the correct location of selected hubs, we need to cover the whole world both regionally and materially and to understand regional requirements that may vary between the countries (e.g. duties).'*

Ignore-Minimize-Utilize framework and hub strategy creation

The interviews of the global – local dimension of the hub strategy process indicate a local reason behind each hub establishment. However the way the hubs were created ignored the local contingencies. The creation and deployment of the S hub complemented the studied global operational model. Interviewee1 described the S hub establishment thus: *'If we had analyzed better the local customer requirements, whether they were really demanding as short lead times as the others, the operational model could have been different for us.'* During the research process it became evident that even the first hub establishments (V, M, R and J) influenced the later hub creations in terms of processes, standards, target setting, roles as well as responsibilities, culture and values. The quotation illustrates this finding from the ignore perspective: *'...copy-exact mode is in use, but not necessarily the best possible alternative in each hub'* (Interviewee10). The following thoughts continue in the same vein*: 'I have not seen many global key persons visiting here, but still they are developing the concepts all the time there (global) without consulting us'* (Interviewee2) and *'... they (global) are totally lacking in local and operational understanding of how this (local hub) is functioning'* (Interviewee3).

To conclude, the way hubs were created follows an *ignore* approach in the strategy creation process. In concrete terms even if the local differences were recognized, they were not taken into account in the strategy creation process. Instead, the copy-exact approach model was applied. Even though there are both business and location-related reasons behind the individual hub creation processes, the strategic hub initiation was based on a target to create a common, global and centralized way to operate. Common targets such as "close to the source of supply" and "near the customer frontline" were followed. Simultaneously, the applied strategy creation approach for all the hubs enabled overall management of the hub operations' global network. Interviewee6 said: *'Hub targets are the same, normal control of operations.*

Hub functionality is not allowed to tune so that we would be too local-dependent. The focal point is that all hubs can be utilized for global demand. That is what the hub model is about. The essence is that whatever hub can deliver to whatever country'.

Ignore-Minimize-Utilize framework and hub strategy deployment

The findings illustrate that Hub Operations have local management (i.e. hub managers) to improve coordination between local and global organizations. In addition, the overall target is to enhance potential synergies between the hubs.

Benchmarking and collaboration between the hubs was an interesting theme along the conducted interviews and participatory observations. The interviewees emphasized that the hub roles are not individually or specifically defined. Therefore, the benchmarking and collaboration seem to happen more randomly than systematically. Interviewee2 gave an example of a local hub that was developing a tool for its own use to improve inventory visibility. '*We were locally developing a tool to improve the visibility of inventories …. It was a really good tool…but it took many years before any other hub took it into use. I do not know the reason, but more benchmarking could make sense'.* R and V hub strategy deployment analysis shows the ignore approach, i.e. bypassing the local contingencies while deploying the global operational model. This was discovered in the interviews. The M hub follows the minimize approach when taking the global model into use. The finding came up both in the interviews and in the archival data analysis. The M hub primary role described in the M hub operational model was to serve a defined local customer. J, D and S hub deployments are representative of the minimize approach. For the J and S hubs, the observation has to do with the location and country-related restrictions, such as duties, taxation and financial issues that set the rules for the deployment. This was clearly emphasized by the interviewees as well as documented in the operational model. In the D

hub, the local customer pressure dictated to a great extent the way it operates. The D hub strategy creation documentation clearly described this need and interviews recognized the same.

To summarize, the hub deployment process applies a mixture of *ignore and minimize* approaches. The local hub role is to make the strategy happen, simultaneously commanding the headquarters respect. The hub operations' corporate culture is in place as well as local characteristics recognized in terms of leading style, used local resources and local personnel. Related feedback further confirms the used ignore-minimize deployment approach: *'we receive these global initiations to local deployments unfortunately too often'* (Interviewee2) and *...'yes, each hub deployment has been managed from global. The model was crammed as copy-exact to all locations and local resources came to handle the operative work. In each case we sent a hub manager and production planner from global to ensure that the global process was taken into use as one-to-one'* (Interviewee1).

Local voice

The findings indicate that the existence of local actors having a voice in the hub strategy creation and deployment process is position related. The hub manager in each hub is a boundary actor at the local level and actively involved in the strategy deployment process. While in the strategy creation process, the hub manager has mainly an observer role. The head of hub operations is a boundary actor at the global level and has an active role in both strategy creation and the deployment process. The boundary role discussion has not taken place in the case company, nor is the role defined, therefore the boundary actors, especially the local ones, do not enter into the strategy picture: *'I do not recall any entirely local person who had been in a key position, surely there existed some'* (Interviewee1) and *'As to the realization of whatever issue, it does not matter if it is done by a global or a local person. But*

the point is that we do not internally want to ask for new ideas from local. We are lacking that kind of openness. We see things via formal positions' (Interviewee3). Further, as 'the local voice' was discussed, the interviewees stated that the strategy process was not encouraging the local actors' involvement in the process. The interviewees revealed that:' *it could be profitable to hear a voice challenging'* (Interviewee10) and *'it would be good to get that local voice heard, but how?'* (Interviewee1).

4.2.4. Summary

In the study, the distribution case was analyzed through six geographical hub locations following the case company's strategy creation and deployment processes. Firstly, the *strategy creation* analysis indicates a global reasoning behind each hub establishment, but the way the hubs were created ignored the local contingencies. The finding is that the hub strategy emanates mainly from the top down creating a baseline to a unified and coherent strategy plan across the global hub distribution. The creation follows a framed, formal and iterative company-wide process including predefined steps, procedures and tight time schedules. *Strategy deployment* brings the global and local actors into the analysis. The finding is that the location, position and role of the individuals have an important impact on how well the strategy is deployed. The people involvement in the strategy deployment is fully structured by a company-wide cascade process linking every employee with the strategy. The findings further indicate that the local voice is not heard at the global level. Findings from the distribution case indicate a connection between strategy process formality and people involvement with the process. More precisely, as formality is high within the strategy process, the key actors involved in the different strategy process steps represent the global dimension (i.e. the formal location, position and role matters). The creation and deployment of six individual hubs correspond with the Nokia Networks strategy. The Nokia Networks strategy stated that the distribution model needs to be re-engineered from regional

distribution centers to establishing one main hub per region. The re-engineered distribution model then offered a platform for hub operations global network management with shared global and centralized ways to operate. Further, the distribution case analysis seems to enhance a productive strategy creation process. The process applies a copy-exact framework, which mostly ignores the local differences, has equal target setting across the network and aligns the key players into the strategy based on their formal locations, positions and roles.

4.2.5. Distribution case paper

The distribution case builds on a paper (Pohjala, 2007) that was published in the Copenhagen Conference on Strategic Management 2007.

The overall findings between this study and the earlier case study (Pohjala, 2007) are confirming the similarities. The differences between this study and the earlier case study (Pohjala, 2007) are related to the research terminology, research question and findings for the strategy creation process.

Research terminology

First, in the earlier case study term ‘peripheral actor’ (Regner, 1999, 2003) was used. In this study the term ‘peripheral actor’ is replaced by the local actor. Regner’s definition for the peripheral actor is used to the local actor definition in this study. The local actor resides on the boundaries of an organization. Due to the local position, the actor is usually well connected with external networks. Second, in the earlier case study term ‘people alignment’ was used. In this study the term has been revised to people involvement. The revised term is describing the focus of the study, i.e. to elaborate people involvement within the strategy process from a global – local perspective. Third, in the earlier case study term ‘cultural

difference' was used. In this study the term has been revised to local difference. Schneider and Barsoux (1997) are talking about strategies for managing cultural differences. In this study their framework is applied providing three perspectives to study strategy process within a global – local environment: ignoring, minimizing or utilizing the impact of local differences on the global strategy (Schneider and Barsoux, 1997). Fourth, in the earlier case study term 'IMU framework' was used. In this study the IMU abbreviation has not been used, but the full description Ignore-Minimize-Utilize framework. Fifth, in the earlier study the 'analytical action' research term was applied. For this study the term has been revised to a combined participatory and non-participatory research strategy. The revised research strategy is the right term and approach for this study.

Research question

The earlier case study (Pohjala, 2007) and this research are having one different research question, the question #3. The third research question for the earlier case study was 'is there a connection between the strategy outcome and the way strategy is initiated and deployed?' The third research question has been replaced with; 'how to successfully engage local actors to the global –local strategy process'. This replacement of the research question #3 was done to address the gap found in the existing strategy process literature (Parise, Cross and Davenport, 2006). The gap is how to successfully involve local actors inside the global company in the global – local strategy process (Regner, 1999, 2003). This study aimed at providing findings to this question. The case study business performance material was utilized in this study and discussed during the interviews in terms of what kind of targets were set for the cases, how the progress of the set targets was followed, how the progress was communicated inside the case company and with the key stakeholders as well as how well the set targets were achieved (*Appendix 8*).

Research findings for the strategy creation process

For the earlier case study 18 persons were interviewed compared with 22 interviewees for this study. The findings were revisited, as more persons were interviewed. For the strategy creation process the additional finding was that all strategy creation dimensions; *direction, authority, level of independence, circumstance* and *temporal* were getting values from the hubs (see *Table 6*). The findings indicate a primarily centralized and formal strategy creation process approach across the operations with the unwritten rule 'make it happen'.

For strategy deployment and global – local dimension of the strategy process the findings between this study and the earlier study (Pohjala, 2007) confirms the similarities.

4.3. Installed base case

While building the telecommunications network infrastructure, it was recognized that the information about the installed base was not always sufficiently accurate. To improve the data accuracy, a specific tool was created. The purpose of the tool is to enable accurate asset tracking for customers and Nokia on the site configuration (Hardware and Software) of GSM network equipment. The data used in this case consist of interviews and archival data. Observations were not used in this case. The installed base case equals to one project (see *Table 1*). The installed base case is defined as an *emergent* strategy. The reason for calling this an emergent strategy is that it was originally initiated locally and 'outside' of the formal strategy process. Despite the emergent characteristics, the locally initiated installed base solution was later adopted as part of the global strategy. The locally initiated installed base solution was identified as an initiative with high business priority and value. Related to the country and customer-specific sensitivity, the abbreviation C is used to describe the country and the abbreviation C1 is used to describe the customer. The archival data included documents such as technical solution, strategy and financial data. 5 key people to the strategy

were interviewed. The list of these informants and their positions in the organization is provided in the *Appendix 1*.

4.3.1. Strategy creation

Findings from both interviews and archival data indicate that the *direction* dimension represents a *bottom-up* approach (*Table 8*). The finding is that the action initiation was taken locally and brought up to global awareness. Further, the finding is that the *authority* dimension corresponds with an *interactive* view. The *level of independence* dimension is *in between* the autonomous and dependent approach. The interactive approach was emphasized by the local interviewees as highly important between the global and local entity and between the local customer and the local organization. In particular a senior level global sponsor and few people in reasonably senior global positions were defined as key enablers to the project progress. Interviewee18 summarized: '*that we found few persons in senior enough positions who believed and become inspired…and we got a senior level sponsor who created a positive energy around the issue.'* The archival data analysis clearly stated that inaccurate invoicing was a problem both to the customer and to the case company. Despite such a clear problem statement, the interviewees described that the interaction and collaboration between the global and local entity was challenging and time consuming. '*Our trump card was that the customer had a problem and we got to solve the problem. When this was said aloud, everyone (at the global end) started to listen'* (Interviewee18, Interviewee8). The data further indicates that the installed base case is linked with *circumstance* dimension and *certain* approach. The outcome was that the locally created solution will solve the problem experienced by the customer. Finally, the emergent case finding is that no ready-made solution or global tool to solve the problem was found. This became clear from the conducted interviews and from the archival data analysis. The conclusion is that the locally innovated solution is located within

the *temporal* dimension *in between* the opposite of present and equal to present approach (*Table 8*). Interviewee18 explained: *'we were conducting an investigation at the global end to find out if there existed a ready-made solution, but it was not found. We did a decision that we will develop it locally'.*

Table 8: Strategy creation: Installed base case

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**TEMPORAL**
Installed base case	**C1**	bottom-up	interactive	between dependent and autonomous	certain	between equal to present and opposite to present

The finding based on the conducted interviews is that to get the issue initiated bottom-up to reach global awareness and become a part of the global strategy, a great deal of global sponsorship, collaboration and support are needed. Moreover, the issue or problem needs to have a true business linkage and relevance. This finding is based on the statement in the official news letter by the case company: *... installed base is large... The fact is that we are currently not able to use this information effectively to run or improve our businesses. Quality costs, inefficiency in what we do, and our complex and inflexible systems are reasons to pay attention to the installed base management. The aim for installed base development work is to build a balanced benefit-cost ratio and to ensure profitable business for our customers and to us*[7]. The case showed that the inaccurate site information was a clear problem to the end customer as well as to the case company. Consequently there was a real case and a solution found to solve that problem with strong sponsorship and high business priority in place.

[7] Newsletter 8.6.2004: source Nokia Intranet

4.3.2. Strategy deployment

The results emphasize the people involvement from location, position and role perspectives (*Table 9*).

Table 9: Strategy deployment and people involvement: Installed base case

Deployment levels & case evidence	
People involvement	**Case evidence**
Location	*Key locations:* Headquarters and local entities (pilot cases, stakeholder involvement)
Position	*Key positions:* * Management team members (global) * Project manager (global and local) * Project people (both global and local) through incentive setting process * Local customer having an iterative influence on all strategy process steps
Role	*Key roles:* * Global sponsor as a boundary person at the global level * Global key persons as a boundary persons at the global level * Project manager as boundary persons at the local level * Local key persons as peripheral boundary persons at the local level with the focus on local execution

The *location* of the key persons driving the installed base deployment is connected to the local entity. Interviewee18 summarized: *'thing was that we had our own team here (locally) and a couple of competent consultants. That was the set up helping us further'*. Moreover during the interviewees and archival data analysis it became clear that the collaboration between headquarters and the local entity was of great importance to get the problem to reach global awareness. The *position* analysis of the key persons brings the management teams both at the global and local level into the analysis. The finding is that the key players are involved in the strategy deployment process. Moreover, the project manager and the local management team were defined as key players driving the deployment of the strategy. In addition to the internal positions, the external customer was defined as central along the installed base case. *'Along this case, customer influenced the solution and everyone had a feeling that we are*

doing this together…important is the feeling that you can influence and that you know what is happening' (Interviewee18). Related to the *roles*, the findings indicate that the boundary roles exist both at the global and local level. Global sponsor and other senior level contacts are defined as boundary related at the global level. The role of project manager is defined as a boundary related person at the local level. In the interviews, the project manager and project people were described as pivotal to the knowledge and information transfer between the global and local entities and towards the end customer. The findings further reveal that the role of local boundary actor is linked to a dedicated local know-how. Such local know-how is related to the local customer stakeholder management and created installed base solution. Moreover, the local key players are seen to influence the strategy deployment by bringing their own connections and competencies into the process at the local level. 'W*e had a great person working here with this issue (installed base). Her strength is that she needs to be innovative, think big and go ahead…It was one of the success factors with this project'* (Interviewee18).

The finding is that when the initiated strategy is emergent, locally located persons have key positions and roles along the deployment. Further, the identified boundary people both at the global and local level are the key contacts in the relationship building, knowledge transfer and in the actual strategy deployment across the organization.

4.3.3. Global – Local dimension of the strategy process

The inaccurate installed base information and fast installation rate along a telecommunication network infrastructure building process for customer C1 are seen as starting points to set business assumptions and targets.

Ignore-Minimize-Utilize framework and strategy creation in the installed base case

The case findings indicate that the strategy was initiated outside the formal case company's strategy creation process. The installed base strategy was created and the local contingencies were utilized as the problem was locally identified and locally relevant to a local customer. Along the interviews local persons emphasized that this kind of initiation is not possible to create globally. *'This kind of information and know-how is not located globally, as those global people are not involved in the daily rollout work locally. But they (global) should have a method to collect all those found 'strawberries' and then make the corporate strategy, and not so that those wise persons are sitting and thinking what we here far away should be doing' (Interviewee18).* Later the case was integrated with the global and formal strategy creation process to get the required visibility. The global visibility was enabled through global sponsorship and support to solve the identified data inaccuracy.

The conclusion is that the installed base strategy creation process applies a primarily *utilize* approach. This means that the local circumstance and the local customer need were the key drivers for strategy creation. Further, the project was integrated into the global and formal strategy creation process. This enabled the local initiative to be brought to global awareness as an opportunity to utilize the created local solution to other customer cases.

Ignore-Minimize-Utilize framework and strategy deployment in the installed base case

The case finding is that the installed base strategy deployment is a local exercise following the created strategy. However, as the deployment plan clearly states how the created strategy is executed, the collaboration between the global and local entities is more visible in the strategy deployment phase. The local project manager and the local management team have important roles in the strategy realization in coordinating activities between local and global organizations. The analysis further revealed the importance of local actors' participation as

well as the strong collaboration with the end customer. An interesting finding during the study was that the locally initiated and further deployed installed base solution was later taken into use to solve similar problems with another global customer. Interviewee18 said: *'here locally it has been a very positive experience to people, that our solution has been copied to solve problem with another global customer. This has inspired people.'* However, interviewees said they had some reservations should the local solution utilization be executed as copy-exact, especially when the initiation is coming from the bottom-up: *'unfortunately our company does not have that kind of culture that we from the field can influence. The mentality is that the global rules…and we should stop that kind of mindset… it is very important to have a process to collect new ideas and then utilize those where relevant.'*

In summary, the installed base deployment process applies a *utilize* approach. The utilize approach is taking into account the local conditions, customer and key personnel.

Local voice

The findings indicate the existence of local actors utilizing their voices in both strategy creation and deployment in the installed base case. The analysis shows certain challenges in hearing the local voice globally: '*When strategy is missing, vision is missing…and individual people are very wisely having their own opinions. They all have their own strategies, those strong individuals, but the key is that the common approach is missing to go forward, towards common and shared direction'* (Interviewee8 and Interviewee19). As one of the interviewees further commented: *'that local drive from there needs to be transferred here to our awareness… they (local persons) are in the key role – they have identified the problem and how that problem should be solved'.* (Interviewee6). To overcome the described challenge, the following roles are emphasized by the interviewees as important to reach the common and shared direction. The project manager is identified as a boundary actor at the

local level and actively involved in both strategy creation and deployment processes to facilitate and increase awareness of the local conditions globally. Moreover, this role is to make sure that enough resourcing, commitment and funding is allocated to the project. While interviewing the project manager the collaboration with key stakeholders was emphasized as highly important and necessary, but not easy. *'All the stakeholders were needed – to believe in this and work together…I was using a helmet in order to get attention… rhinos mentality was required and you need a strong believe and that we had!'(Interviewee18).* Sponsorship at the global level is deemed very important for project success. Such sponsors are e.g. unit heads as boundary persons at the global level who have an active role in both strategy creation and deployment processes. Other boundary roles were identified with key project people working at the case company and at the end customer interface. The installed base case findings reveal the existence of the local boundary actor at the local level. The example is related to the local actor's connections with the external networks such as local customer and locally created solution.

The conclusion is that as the local actor role is not clearly defined their existence and knowledge as well as influence to the strategy process tend to be overlooked at the global level. However, the installed base case illustrates that when there is a true business case, end customer focus, a strong enough belief, a collaborative mindset and a global sponsor, the local voice gets heard. Moreover, the formal dimension of the strategy process indicates that locally and 'outside' the formal strategy process initiated solution reached global awareness. This opens up the possibility to solve similar problems in other locations.

4.3.4. Summary

The original target with the installed base case was to solve a local problem experienced by the end customer. The *strategy creation* analysis indicates that the installed base strategy

emanates from the bottom-up. Despite a strong local presence, the locally initiated solution was later tightly connected with the global strategy to build up a long term business capability for the case company. *'... it was adapted to the global strategy' (Interviewee18)*. The *strategy deployment* finding was that the boundary persons such as project manager play a key role to execute the targeted strategy at the local level. The case further revealed that sponsorship at the global level is vital for the project to receive visibility, resourcing and adequate funding. *'Without funding allocation the initiative would have been only one item in the wish list' (Interviewee1).* To sum up, the installed base strategy was adapted to the global and formal strategy aligning key players both at the global and local level to the process. The interviewees commented: *'it surprised us all positively that we got good and accurate data'.* Related to the people, the conclusion is that when the initial strategy emanates from the bottom-up, the local boundary actor appears to have a critical role in strategy creation and realization. The local boundary actor has the stakeholder connections both internally and externally as well as between the global and local entity.

4.4. Development project case

Background

The development project case equals to three sub projects (see *Table 1*). The three sub projects; 168H, BIRD and EAGLE are the focus of the case company Operations unit overall strategy to *'radically reduce inventories in the whole chain'*. The whole chain refers to the end-to-end supply chain. The development project case data consist of interviews, archival data and observations findings. The archival data includes two published PhD theses (Tissari, 2002; Collin, 2003) and company confidential documents describing the background, technical solution, strategy and financial data of the cases. Nine key people involved in the case strategies were interviewed. The list of these informants and their position in the

organization is provided in *Appendix 1*. The researcher was working in the case company while these development projects took place. Valuable information was gathered during this work period through observations.

The starting point for the development project case study is a project called '168 hour' that was carried out between the years 1998 – 1999. 168H (i.e. hour) refers to the target to shorten end-to-end delivery lead-time. The 168H project was described as *'merely technical'* (Interviewee16) but with time, the original target evolved towards a new distribution structure. As a continuum, the BIRD[8] project was launched and conducted during the years 1999 and 2000. The target of the BIRD project was to radically reduce inventories for defined customer accounts resulting in improved competitiveness, customer satisfaction and profitability[9]. The deployment program was developed and implemented closely together with the selected customers. The deployment program consisted of a rollout project team including both global and local resources. Finally, a need to strengthen the new distribution structure by changing the information system application was identified. As a result the EAGLE project was initiated. The initiation statement *'operational models and applications will become a major constraint to our (case company) future success unless we conduct a major transformation'*[10] was based on a comprehensive current state analysis and findings from previous projects, such as 168H and BIRD. The finding was that different processes and legacy applications were in use in different divisions and countries for a single activity. Moreover, the organizational structure was complex because the structure consisted of overlapping activities and therefore was slowing down the decision making. Additionally, it was identified from the data that due to the information constraints customer satisfaction and financial visibility was on inadequate level.

[8] BIRD (Breakthrough Inventory Rotation Days)
[9] BIRD project presentation material, source: intranet
[10] case company intranet, Eagle project communication material

4.4.1. Development project – 168H

4.4.1.1. Strategy creation

Findings regarding the strategy creation (*Table 10*) state that the *direction* dimension is characterized as *top-down*. The 168H project used a unified strategic vision 'to deliver a base station within 7 days from the order'. Further, the *authority* dimension corresponds with a *determinant* view. The strategy vision was clear and the 168H project target was to implement the set target. The *level of independence* dimension appears *in between* the autonomous and dependent approaches. The 168H project applied the pilot methodology approach. Pilot studies are a smaller version of a main study and are meant to test the methods of that study for weaknesses. Interviewee17 summarized: '*successful pilots offered good lessons learned for the project and for the company in overall*'. Despite the interviews highlighting the characteristics of the lessons learned the analysis shows that knowledge transfer from the successful pilots was not as high as it could potentially have been. The analysis further indicates that the case is linked with a *circumstance* dimension to an *uncertain* approach. The uncertainty is linked to the commitment challenge towards the globally set targets at the local level. Finally, the *temporal* dimension shows that the 168H project was created as *opposite to present*, i.e. the change initiation was defined as new. This finding is linked with the interview data '*...probably the very first heavy program to improve the NET delivery process end-to-end performance'* (Interviewee17).

Table 10: Strategy creation: Development project case 168H

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**TEMPORAL**
Development project case	**168H**	top-down	determinant	between dependent and autonomous	uncertain	opposite to present

4.4.1.2. Strategy deployment

The 168H project never reached full scale deployment as planned. Therefore it is impossible to evaluate the entire strategy deployment for the project. However, the strategy deployment analysis is conducted for the pilot cases and around the reasons for the roll-out challenges.

The pilot case findings identify the people involvement from location, position and role perspectives (*Table 11*).

Table 11: Strategy deployment and people involvement: Development project - case 168H

Deployment levels & case evidence	
People involvement	**Case evidence**
Location	*Key locations (pilots)* Headquarter and local entity (pilots)
Position	*Key positions:* * Management team members (global and local) * Project manager (local) and management team (local) * Project people (global and local) through incentive setting process
Role	*Key roles (pilots):* * Global project owners as boundary persons at the global level * Project managers as boundary persons at the global and local level * Key stakeholders as boundary persons at the local level with the focus on local execution

The *location* of the key persons driving the development process for case 168H is connected to the headquarters and the pilot case locations. Only a part of the pilots are described as successful. The 168H project did not reach full scale deployment as planned. *'The project never reached the roll-out or deployment phase as planned… the deployment was 'handed' to the "BIRD" Program'* (Interviewee17). The *position* of the key persons in the deployment is linked to the global and local management teams, local pilot project people and key stakeholders. The finding is that key players are involved. However, the explanation for the challenges in deployment is related to key players' involvement that was not sufficiently stable and long lasting. Also, to change the local delivery process was locally challenged.

Interviewee17 explained: *'business units and country organizations had all their own processes and systems, which were not easy to change to one and joint process and system(s)…although the company-wide process was the official target for the project …the job is still ongoing but now the similarities and differences are at least recognized and understood.'* Related to the *role* analysis, the findings indicate the existence of a boundary role both at the global and local level. The boundary person roles are associated with the country and business unit characteristics that are different from the global approach and difficult to change. The local *boundary persons* are connected with the pilot cases inside case 168H.

The outcome is that when the initiated strategy is planned to change the current way to operate, key stakeholders and project people need to have a shared and agreed commitment towards the target. If the commitment is not achieved the deployment targets may not be reached. This was emphasized by the interviews at the global level. Case 168H demonstrates the evidence. Case 168H did not reach the set targets.

4.4.1.3. Global – Local dimension of the strategy process

Ignore-Minimize-Utilize framework: 168H development project strategy creation and deployment

The data analysis shows that before the 168H development project was initiated following the case company's strategy creation process, a feasibility study was carried out to define the scope and key targets. The evidence is that the 168H project strategy was created *ignoring* the local contingencies. As a result the globally created standard process was applied. The case data analysis brought the acknowledgement of the end-to-end delivery process deviations into global awareness in terms of lead-time and ways of working. Even if the company wide end-to-end delivery time was the official target of the 168H development project, the unsuccessful

pilots did not commit to change their own processes to align with the company target. The 168H project deployment was transferred to project BIRD. Despite the challenges, the successful pilots offered excellent 'lessons learned' for future development projects within the company.

Local voice

Concerning the 168H development project case, the findings indicate the existence of actors utilizing the voice in both strategy creation and deployment phases. The global project owner is a boundary person at the global level actively involved in both strategy creation and deployment phases. The project manager role is defined as a boundary person both at the global and local level. The key stakeholders and pilot project people are defined as boundary actors at the local level. The stakeholder and pilot project task is to facilitate and re-align the common process approach to better fit with the dedicated deployments. This was not achieved for the 168H project. The reason is related to the project team composition and resource allocation in competences, agreed roles and responsibilities as well as team stability. Interviewee17 summarized: *'Think about any world-class team sport, it consists of individuals that have a winning spirit in their way of playing. Team success is directly dependent on those individuals. You cannot succeed only by having world-class processes, but if in the project you have individuals who believe in the same goal and have that spirit then you are able to gain success, true breakthrough success'.*

In conclusion, there were strong individual voices both locally and globally without a common shared agenda. Also roles, responsibilities and resource allocation were not clearly defined. The outcome is that even if there were strong local voices, they were not heard at the global level. Despite the poor deployment outcome, the 168H project was characterized by

interviewee17: '*...probably the very first heavy program to improve the NET delivery process end-to-end performance'*.

4.4.2. Development project – BIRD

4.4.2.1. Strategy creation

Findings about strategy creation (*Table 12*) are that the *direction and stakeholder* dimension is characterized as *in between* top-down and bottom-up approaches. The argument is that even the BIRD project used a unified strategic vision aimed at 'improving customer satisfaction and productivity through implementing more efficient processes for the supply chains', the target definition was validated in close co-operation with both global and local project teams. Establishing the change project was also affected by positive experiences gained from a similar effort inside the case company (Tissari, 2002). Further the finding is that the *authority* dimension corresponds with an *interactive* view and the *level of independence* appears in the *autonomous* approach. As described by Tissari (2002) '*The BIRD project applied the so-called microcosm approach (Hoover et al. 1996). A microcosm is a miniature version of the company as a whole, a complete slice of the business from raw materials to customer delivery. The fundamental idea of the approach is that change is launched by designing, testing and implementing radically improved structure in a microcosm within several months and covering successively larger parts of the whole business through waves of microcosms.'* The archival data analysis further indicates that the case is linked with a *circumstance* dimension to an *uncertain* approach. The uncertainty is linked around the nature of change. The change aspect for this case is a central element in the earlier studies by Tissari (2002) and Collin (2003). Finally, the *temporal* dimension shows that the BIRD project was created *in between* the opposite and equal to present approaches. Firstly, establishing the BIRD project as the means for change was affected by the positive

experiences gained from a similar type of effort within the case company. Secondly, the BIRD project was defined as a continuum from the change initiated by the 168H project.

Table 12: Strategy creation: Development project case BIRD

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**TEMPORAL**
Development project case	**BIRD**	between top-down and bottom-up	interactive	autonomous	uncertain	between equal to present and opposite to present

4.4.2.2. Strategy deployment

BIRD deployment was carried out by cross-organizational teams with line representatives from all key activities. Cross-organizational teams were allowed to discover their own solutions within a common framework to create real economic value. The *location* of the key persons driving the development is well connected with the case, i.e. the headquarters and the deployment team locations (*Table 13*). The project manager and local microcosm management teams are defined as key organizational *positions* driving the strategy deployment. In addition to the internal positions, the external customer was defined as central at the local level. Related to the *role* analysis, the findings indicate the existence of boundary roles both at the global and local level. Project managers both at the global and local level were defined as key roles driving the strategy deployment.

Table 13: Strategy deployment and people involvement: Development project case BIRD

Deployment levels & case evidence	
People involvement	**Case evidence**
Location	*Key locations* Headquarter, microcosms, local roll out teams
Position	*Key positions:* * Steering group (global) * Program management group (global and local) * Program people (global and local) through incentive setting process * Local roll-out teams (local) * Local stakeholder (e.g. customers) having iterative influence on all strategy process steps
Role	*Key roles:* * Global project owners as boundary persons at the global level * Program managers as boundary persons at the global and local level * Roll-out teams as boundary persons at the local level * Key stakeholders as boundary persons at the local level with the focus on local execution as well as having influence on all strategy process steps

The outcome is that when the initiated strategy is to change the current way to operate, key stakeholders and project people need to have a shared and agreed commitment towards the target. This ensures that a shared vision and aligned strategy are implemented in practice.

4.4.2.3. Global – Local dimension

Ignore-Minimize-Utilize framework: BIRD development project strategy creation and deployment

The data analysis shows that the BIRD project strategy was created and implemented by using the *minimize* approach. The minimize approach recognizes the local differences as important. The local differences impact how the targeted strategy is implemented at the local level. The regio-centric approach is applied to create a strong relationship between global headquarters and the cross-functional microcosm teams to improve coordination between local and global organizations and to seek potential synergies between them. The strategy formulation is centralized, while strategy deployment is seen as a local activity. As Tissari (2002) describes '*Initiating local deployment was mutually agreed by the program management and the local account team to fit the objectives and timing to the overall*

situation of the account team and the customer. Issues like on-going or coming contract renegotiations with the customer, the phase of the network building project, launches of new products and the local motivation for making the changes affected when and how the local deployment was initiated. When initiating an individual, customer specific deployment, the strategic purpose for the changes was naturally valid'.

Local voice

The local voice concept is used by increasing the awareness of local challenges and linking them to the project scope. Following examples illustrate this approach (Tissari, 2002):

- 'there was no global model for delivering products for turnkey project …BIRD was the means for solving the problems.
- BIRD implementation was the means to carry out the related operational changes to enable the short lead times required and ensure that the changes would be in-line with the global guidelines.
- BIRD implementation was motivated as the means to improve the co-operation between logistics, project and customer and to integrate the supply chain with the site process.
- BIRD processes provided a solution, which fitted well also with the customer's expectations.
- BIRD implementation was carried out locally based on the discussions between the local logistics and the customer.
- BIRD implementation was used for fulfilling the specific local need.'

The analysis reveals that using the local voice is influential in aligning the local deployment needs with the global direction.

4.4.3. Development project – EAGLE

4.4.3.1. Strategy creation

The strategy creation and dimensions finding (*Table 14*) is that the *direction and stakeholder* approach is characterized as *top-down*. The argument is related to the interviews and archival

data on the current state for the EAGLE case: *different processes and legacy applications for same activities, complex structure, difficult to obtain information, slow decision making and inadequate financial visibility.* The future objective emphasizes the common strategic vision: *unified common processes and operational models leveraging unified modular applications built on Nokia application architecture, information is available for decision making and fact based steering with clear accountability*[11]. Further the finding is that the *authority* dimension corresponds with a *determinant* view and the *level of independence* appears in *dependent* approach. The EAGLE project applied the '*Lean and vanilla - approach'.* The lean and vanilla approach in this context means that the solution is - created once and then copied x amount of times.[12]. The analysis further indicates that the case is linked within *circumstance* dimension to a *certain* approach. The certainty is linked around the strong message of *'one flavor WILL suit all*[13]*'*. The EAGLE project limited the customer specific features and targeted to apply a simplified end-to-end process change approach. The benefits outweighed the limitations, e.g. *fast deployment, unified ways of working, standardized applications which can be cost-efficiently maintained and developed further and consistent platform for all e-developments*[14]. Finally, the *temporal* dimension shows that the EAGLE project was created *in between* the opposite and equal to present dimensions. The archival data analysis shows that the EAGLE project is seen as a continuum from earlier projects 168H and BIRD, but expanding the earlier project scope with the information system applications.

[11] EAGLE documentation 27.3.2001, Nokia Intranet
[12] EAGLE documentation 27.3. 2001, Nokia Intranet
[13] EAGLE documentation 27.3.2001, Nokia Intranet
[14] EAGLE documentation, 27.3.2001, Nokia Intranet

Table 14: Strategy creation: Development project case EAGLE

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**TEMPORAL**
Development project case	**EAGLE**	top-down	determinant	dependent	certain	between equal to present and opposite to present

4.4.3.2. Strategy deployment

The EAGLE project was terminated (2004) and never reached the targeted deployment. Due to these circumstances, it is impossible to evaluate the entire strategy deployment for the project. The strategy deployment analysis is conducted around the project challenges (*Table 15*).

The *location* of the key persons driving the development project is connected with the headquarters and the impacted deployment sites. The *position* brings the regional and local deployment management together with the global program and overall progress management into the analysis. Further, related to the *role* analysis, the regional and local deployment management teams together with the global program management team are defined as boundary persons at the local level. The EAGLE project *boundary persons* are connected with the impacted deployment sites.

The EAGLE project had '*lot of planning and less concrete actions' (*Interviewee22). During the project a large amount of organizational changes occurred prolonging the project schedule. Also roles and responsibilities with agreed accountabilities between the case company's own workforce and consultants were not clear enough. One of the interviewees commented: '*not specified roles and responsibilities between own workforce and consultants…also project targets were not clear to all project members'* (Interviewee22).

Table 15: Strategy deployment and people involvement: Development project case EAGLE

Deployment levels & case evidence	
People involvement	**Case evidence**
Location	*Key locations* Headquarter (global) and impacted deployment sites (local)
Position	*Key positions* * Program Management team (global) * Regional and local deployment management teams * Project people (global and local) through incentive setting process
Role	*Key role* * Global program owners as boundary persons at the global level * Regional and Local deployment managers as boundary persons at the regional and local level * Key stakeholders as boundary persons at the local level with the focus on local execution

The EAGLE project was terminated (2004) and replaced by another development program. The outcome is that when the initiated strategy has a large scope as demonstrated in the EAGLE case *'creating and deploying a new operational model for NET Delivery Process and changing the information system applications to comply with Nokia application architecture'*, key stakeholders both at regional, local and global level need to have a shared and agreed commitment towards the target. If the key roles and responsibilities are not clearly defined and a lot of changes are happening during the project lifecycle, the deployment targets may not be reached. This was demonstrated by the development project case EAGLE.

4.4.3.3. Global – Local dimension

Ignore-Minimize-Utilize framework: EAGLE development project strategy creation and deployment

The used method for the EAGLE strategy creation process was to *ignore* the local contingencies in order to design a global process that is deployable throughout the corporation. As one of the interviewees commented: *'we analyzed and did not find that many local characteristics that would have an effect on the global process'* (Interviewee22). The

local resources were merely involved with the local deployment ensuring coordination between global and local organizations.

Local voice

The EAGLE project analysis shows that there were individual voices both locally and globally without a common shared agenda. Also roles and responsibilities were not clearly defined, as the team composition was not stable during the project life cycle. The outcome is that the local voice was not heard nor taken into account. This finding is strongly linked with the EAGLE project target setting: *'Lean and vanilla - creating once, copying exact x times'* resulting e.g. limited customer specific features. Interviewee16 summarized the key challenge with the EAGLE project: *those who are participating the planning, are more ready for the deployment…agility is needed but when there is the time to act you need to do it in a disciplined way…you cannot start sprawling then* (Interviewee16).

4.4.4. Development projects: summary

The development project cases demonstrate findings from both successful and unsuccessful end results. The successful and the unsuccessful cases were found to vary from the organizational set up, the use of 'Ignore-Minimize-Utilize' approach, the usage of the local voice and agreed roles and responsibilities, scope and follow-up practice.

The successful results clearly show the effect of a combined global – local strategy process approach from where both commitment and engagement follow. The unsuccessful results on the other hand demonstrate a strong top-down, and "one-size-fits-all" approach where local contingencies and local voices are ignored. The common finding for the unsuccessful cases was that the planned strategies were not deployed as planned. In the development project case study 168H unsuccessful pilots and EAGLE project are defined as unsuccessful cases. For the

both unsuccessful cases, the common finding is that key stakeholders both at regional, local and global level did not commit towards the shared target. To summarize, the global – local engagement and commitment from strategy creation to strategy deployment seems to build up towards good performance results (*Appendix 5*). Whereas, the 'lean and vanilla' strategy approach results in confusion e.g. in the roles and responsibilities of local people who actually do the deployment work. This finding can be linked to a comment by Steven Spear[15]: '*distribute a tremendous amount of responsibility to the people who actually do the work*'.

4.5. Global – Local strategy process

The case company strategy process was analyzed to get an understanding of what the company level strategy process is and how it is implemented within the case company. The case company strategy process analysis consisted of data from all four cases. The data analysis for the case company strategy process was done by using strategy process documentation and 50 interviews were conducted in all cases. The findings from all four cases indicate that a one common strategy process is in use across the case company. Also the findings indicate that the case company's strategy process includes all dimensions of the Ignore-Minimize-Utilize framework (*Figure 10*).

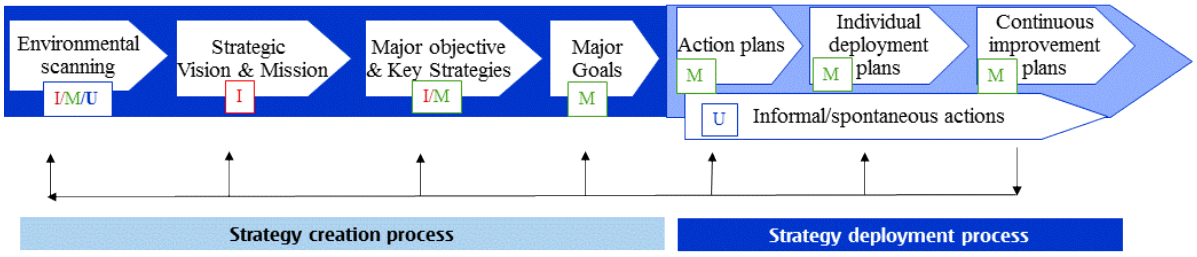


Figure 10: Case company strategy process (I=Ignore, M=Minimize, U=Utilize)

The purpose of the *environmental scanning* is to select possible key trends and analyze them from various dimensions such as the geographical. The environmental scanning process

[15] Prof. Steven Spear, Harvard University in HBS Working Knowledge, 21 Nov 2001

phase includes ignore, minimize and utilize alternatives as inputs to the long term strategy development. After the future scenarios are scanned, a strategic vision, a mission and a strategy are created for the company. The finding is that the ignore approach is linked with *strategic vision & mission* and *strategy.* This is set against the finding that the company has one vision, mission and strategy. Within the ignore approach the company business strategy is seen as the same all over the world, but the country dimensions may differ. As Interviewee12 summarized*: 'Strategy is mainly global with local add-ons when needed, e.g. concerning certain focus areas. The focus areas are selected based on market importance and market dynamics.' The major goals phase* applies the minimize approach. The finding is linked to the overall strategy process. The goals are driven from the defined strategy. The goals should be defined as specific, measurable, realistic and time related to achieve the set strategy. The consolidation of goals for a certain unit or function and for a certain timeframe e.g. for a year or for a half year is called *an action plan*. An action plan, individual deployment plans and continuous improvement plans are all linked to the minimize approach. Within the minimize approach, local differences are recognized as important. However, as the strategy deployment is cascaded from strategy creation, there is a tight alignment need with the corporate strategy. Based on the interviews, the finding is that the informal/spontaneous actions are recognized as part of the company strategy process. Despite the finding, the interviewees were not able to describe how the strategy process works in practice nor were they able to describe concrete examples of the spontaneous actions that would have been brought into wider awareness of the employees.

4.6. Comparison of the cases

In this chapter the comparison of the cases are presented. The target is to reveal variations and patterns between the cases in the strategy process. Similarities and differences in each

case are presented to specify commonalities. The goal is to build an understanding of the characteristics of how local actors are involved within the global – local strategy process.

Strategy creation process

The first research question was to find out *where strategy emanates from*. The consolidated view of the case findings is presented in *Table 16*.

Table 16: Strategy creation dimensions and results - consolidated view for all cases

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**TEMPORAL**
Production case	**A in relation to E**	top-down	determinant	dependent	between certain and uncertain	equal to present
Distribution case	**V**	top-down	determinant	dependent	certain	opposite to present
	R	top-down	determinant	dependent	certain	between equal to present and opposite to present
	M	top-down	determinant	between dependent and autonomous	certain	opposite to present
	J	top-down	determinant	between dependent and autonomous	certain	between equal to present and opposite to present
	D	top-down	determinant	between dependent and autonomous	certain	equal to present
	S	top-down	determinant	between dependent and autonomous	certain	equal to present
Installed base case	**C1**	bottom-up	interactive	between dependent and autonomous	certain	between equal to present and opposite to present
Development project case	**168H**	top-down	determinant	between dependent and autonomous	uncertain	opposite to present
	BIRD	between top-down and bottom-up	interactive	autonomous	uncertain	between equal to present and opposite to present
	EAGLE	top-down	determinant	dependent	certain	between equal to present and opposite to present

Firstly, the *direction* dimension within the strategy creation process deals with the "*top-down"* versus "*bottom-up"* approach. The finding is that nine out of eleven sub projects are applying the 'top-down' approach in the strategy creation process. The variations are from the installed base case that is applying a 'bottom-up' strategy creation process and from the BIRD project that is applying a 'between top-down versus bottom-up' strategy creation approach. The overall finding indicates a highly top-down strategy creation approach. In this approach, the strategies are created centrally with low number of participants and passed downward in an organization with the unwritten rule – 'make it happen'.

Secondly, the *authority* dimension within the strategy creation process is related to the "*interactive"* versus "*determinant"* approach. The finding is that nine out of eleven sub projects are applying the 'determinant' approach in the strategy creation process. The variations are from the installed base case and from the BIRD project that are applying a 'interactive' strategy creation process approach. The interactive approach is continuously searching to identify new directions. The determinant approach is more dictating towards to the underlying characteristics such as structural and business conditions determinants. The overall finding indicates a rather determinant strategy creation approach from where one unified strategy plan at the corporate level is created and disaggregated in the organization.

Thirdly, the *level of independence* within the strategy creation process is related to "*autonomous"* versus "*dependent"* activities at both the corporate and business unit level. The finding is that six out of eleven sub projects are applying a 'between the autonomous and dependent' approach in the strategy creation process. Four sub projects are applying a 'dependent' strategy creation process approach and one sub project is applying an 'autonomous' strategy creation process approach. The variations in the findings indicate the different level of independence in the cases. The production case strategy creation process is

found dependent as the lean plant strategy creation process was dependent from platform plant strategy. Similarly the distribution case strategy creation process shows the pattern of dependent approach. The unified hub distribution model started to evolved after the first two hubs were created. The BIRD project is the only project applying an 'autonomous' strategy creation approach. The BIRD project was created with high level of understanding of the local requirements without risking to achieve the set target at the corporate level.

Fourthly, the *circumstance* dimension within the strategy creation process deals with "*certain"* versus "*uncertain"* approach. The finding is that eight out of eleven sub projects are applying a 'certain' approach in the strategy creation process. In this approach, the strategies are created to be accurate according to the planned targets. The variations in the findings are from three cases. The 168H and BIRD projects are applying the 'uncertain' strategy creation approach. The uncertainty for the projects 168H and BIRD are linked around the nature of change. For the project 168H the ucertaintly was described as '*probably the very first heavy program to improve the NET delivery process end-to-end performance'***.** The production case is applying a 'between certain and uncertain' strategy creation approach. For the production case the regional conditions and relationships with the local authorities were influencing the operational set-up for Factory A.

Finally, the *temporal* dimension emphasizes that the future may be "*opposite to the present"* or "*equal to the present*" situation. The finding is revealing variations in the strategy creation process. Three sub projects were created as 'opposite to the present situation', three sub projects were created 'equal to the present situation' and five sub projects were created as 'between the opposite to the present and equal to present situations'. In the production case the Factory A was created according to the scalable and modular factory concept that was globally discovered. The distribution case applied the copy exact strategy creation process

model in terms of processes, standards, target setting, roles as well as responsibilities, culture and values. The ‘opposite to present’ strategy creation process approach indicated that the change initiation was defined as new. This outcome was indentified for the first hub projects (V and M) and for the 168H project.

To sum up the strategy creation process, the comparison of the cases shows common findings in direction and authority dimensions for the distribution and production cases. The distribution and production cases follow a framed, formal and iterative company-wide process consisting of predefined steps, procedures and tight time schedules. The distribution case analysis indicates a local reason behind each hub establishment, but the way the hubs were created ignored the local differences. The production case indicates that the strategy creation process mostly ignored the local differences as the production model was copied from a globally designed modular factory set-up. However, the location related and contractual (JV contract) conditions influenced the way strategy creation was aligned between the global and local entities. The differences in the findings are in the installed base case and the BIRD case. The installed base case is illustrating a different kind of case that was originally initiated locally and outside the formal strategy process. The findings further demonstrated that when the local circumstances differ from the global (e.g. between Europe and Asia), local conditions influence the strategy creation process. Finally, the development project cases showed that in order to get commitment towards the set targets, a strong collaboration with key stakeholders is needed.

Strategy Deployment Process

The second research question was to understand by whom is the strategy deployed. The consolidated view of the case findings is presented in *Table 17*.

Table 17: Strategy deployment and people involvement results - consolidated view for all cases

Deployment levels & case evidence				
People involvement	**Production case evidence**	**Distribution case evidence**	**Installed base case evidence**	**Development project case evidence**
Location	*Key locations:* Headquarters and different plant locations (E, A)	*Key locations*: Headquarters and different hub locations (R, M, V, J, D, S)	*Key locations:* Headquarters and local entities (pilot cases, stakeholder involvement)	*Key locations:* Headquarter and local entity (pilots & key stakeholder locations)
Position	*Key positions:* * Management team (global and local) * Plant manager (local) and management team (local) * Whole personnel (both global and local) through the incentive setting process	*Key positions:* * Management team (global), hub managers at various hub locations (local) and support functions at the management level (global) * Whole personnel (both global and local) through the incentive setting process	*Key positions:* * Management team members (global) * Project manager (global and local) * Project people (both global and local) through incentive setting process * Local customer having an iterative influence on all strategy process steps	*Key positions:* * Management team members (global and local) * Project manager (local) and management team (local) * Project people (global and local) through incentive setting process * Local stakeholder (e.g. customer project) having iterative influence on all strategy process steps
Role	*Key roles:* * Head of operations as a boundary person at the global level * Plant manager and controller as boundary persons at the local level * Expatriates as boundary persons at the local level linked to and having iterative influence on all strategy process steps: a) Technology transfer: management teams (local, global) b) Value added activities: local and global sourcing c) Export: demand allocation (global, local) d) R&D: local management, global R&D functions * Local key persons as peripheral boundary persons at the local level with the focus on local execution	*Key roles:* * Head of Hub Operations as a boundary person at the global level * Hub manager as a boundary person at the local level	*Key roles:* * Global sponsor as a boundary person at the global level * Global key persons as a boundary persons at the global level * Project manager as boundary persons at the local level * Local key persons as peripheral boundary persons at the local level with the focus on local execution	*Key roles:* * Global project owners as boundary persons at the global level * Project managers as boundary persons at the global and local level * Key stakeholders as boundary persons at the local level with the focus on local execution as well as having influence on all strategy process steps

To analyze the people involvement within the strategy deployment process, the first task is to *locate* the actors involved in the strategy deployment process within an organization. The finding is common to all the cases. Headquarters and the local entities are the key locations for the actor's involvement with the strategy deployment process.

Secondly, the aim was to identify the organizational *position* of the persons involved in the strategy deployment process. Common finding is that the global and local management teams are having key positions in all the cases. Additionally for all the cases a local key position is identified as central for the strategy deployment process implementation. For the production case it is the plant manager, for the distribution case it is the hub manager and for the installed base case and development project cases it is the the project manager. The differences are visible in the external stakeholder engagement with the strategy deployment process. For the istalled base case the local customer was having a key position and influence on the strategy deployment process. Also for the deployment project the local stakeholders were having a key position and influence on the strategy deployment process.

The position analysis brought also the awareness of the boundary role and its existence with the cases. For all the cases boundary roles were identified both globally and locally. The identified boundary roles are seen as representative of relationship-building, knowledge transfer and of the actual deployment of the strategy. The analysis shows that when local conditions differ from global, the local boundary actor seems to have an active role in the local strategy deployment. This was clearly visible in the production, installed base and development project cases.

To sum up the strategy deployment and *people involvement* the distribution, production, installed base and development project cases demonstrate the importance of the people's commitment to the work. This is a common finding across the cases. Commitment was ensured through a company-wide cascade process linking employees to the strategy through a personal incentive setting process. The differences in the case findings are linked to the local actors' involvement with the strategy deployment. The outcome of the distribution case was that local differences and the local actors' involvement in the process were found to be vague.

Whereas the production case finding was that the local actors were involved in the strategy process at the local level. Moreover, the installed base case study and the successful development project (BIRD) findings were that local persons had key roles and their voices were heard both locally and globally. The common finding is that the local voice is heard globally only if it is tightly connected with the global strategy process or has global sponsorship and business relevance. However, as the cases show this is not always true and therefore the local actors' existence, knowledge and impact on the strategy process may also be overlooked at the global level (Forssén, 2002, Parise, Cross and Davenport, 2006). The interviewees summarized: '*It could be profitable to have a local voice challenging the way things are done'* (Interviewee10) and *'you cannot break the ways of the culture*' (Interviewee9).

Global – Local Dimension of the Strategy

As a result of the Global – Local dimension analysis of the case strategies, this study is identifying four different strategy dimensions (*Table 18*).

Table 18: Results - consolidated view for all cases

Dimension	Case	Case Strategy (defined by the case company)	Applied Strategy Process	Additional comments
Global	Distribution	***'To re-engineer distribution model from regional distribution centers to establish six hubs in three different continents'*** • Copy exact model • Shared target setting across the hub network	• Top-down, determinant, dependent, semiautonomous, certain and equal to present • Aligning key players to the strategy • Ignoring mostly the local contingencies • Local actor existence as vague	Targeted performance reached
Global – Local	Production	***'Factory A becomes a global supplier of dedicated network elements having competitive advantage based on high performance – low cost against the global reference'*** • Modular factory set up • Sequential conditions within the JV contract • Platform versus lean plant concept • Shared target setting between the factories	• Top-down, determinant, dependent, between certain and uncertain and equal to present • Aligning key players to the strategy • Ignoring mostly the local contingencies • Local actor role active in local strategy deployment	Targeted performance reached
Local – Global - Local	Installed base	***'To improve data accuracy of network element components for e.g. accurate asset management, planning and site ordering'*** • ***Emergent***, initiated locally and outside the formal strategy process	• Bottom-up, interactive, between autonomous and dependent, certain, between opposite to present and equal to present • Aligning key players to the strategy • Utilizing local contingencies • Local actor role high in both strategy creation and deployment	Targeted performance reached
Global – Local – Global	Development project, BIRD	***'To radically reduce inventories in the whole chain'*** • Co-created unified process approach enabling harmonized way of working	• interactive, autonomous, uncertain, between opposite and equal to present • Aligning key players to the strategy • Local actor role emphasized in terms of team composition	Targeted performance reached.
Global	Development project, 168H and EAGLE	***'To radically reduce inventories in the whole chain'*** • Lean-and-vanilla, one-size-fits all approach.	• Top-down, determinant, between autonomous and dependent, uncertain and certain, opposite to present • Ignoring and minimizing the local contingencies • Local voice ignored	No full scope deployment. Successful pilots offered good lessons learning to the company

The first strategy dimension is characterized as a *global* dimension. The global dimension is linked with the distribution case. The distribution case strategy by the case company was defined as '*to re-engineer distribution model from regional distribution centers to establish six hubs in three different continents'.* The set target was achieved by applying a top-down and formalized strategy creation process approach enabling a harmonized way of working across the global network. The copy-exact model was in use for the strategy deployment. The *global* dimension was also found relevant to 168H and EAGLE development project cases. The successful pilots within the 168H and EAGLE projects offered good lessons learning to the company, but the set targets were not achieved for these projects.

The second strategy dimension is defined as a *global – local* dimension. The global – local dimension is linked with the production case. The production case strategy by the case company was defined as '*Factory A becomes a global supplier of dedicated network elements having competitive advantage based on high performance – low cost against the global reference'.* The set target was achieved. This was ensured by applying a modular factory set up, following the sequential conditions within the JV contract (Technology transfer, Value added activities, Export and R&D), applying the platform versus lean plant concept and sharing the target setting between the factories. The finding is that the strategy creation is defined as top-down. The key roles in the strategy deployment phase seem to have strong influence on the local deployment.

The third strategy dimension is a *local – global – local dimension*. The local - global – local dimension is linked with the installed base case. The installed base case strategy by the case company was defined as '*to improve data accuracy of network element components for e.g. accurate asset management, planning and site ordering'.* The set target was achieved. The

case analysis shows that the local voice is heard if the local solution has a true business case, end customer focus, a strong enough belief, a collaborative mindset and a global sponsor. Moreover, if the locally innovated solution is adapted to the global and formal strategy it will more likely help solve similar problems elsewhere than if the innovation know-how is kept only at the local level. This was clearly the evidence from the installed base case.

The fourth strategy dimension is defined as *global – local – global dimension*. The global – local – global dimension is linked with the BIRD development project case. The BIRD project case strategy by the case company was defined as '*to radically reduce inventories in the whole chain'.* The set target was achieved. The analysis shows the effect on a global – local cross strategy process approach from where both commitment and engagement follow. This approach is forming an agile[16] strategy approach to meet the jointly agreed targets. The applied approach also shows the way how to successfully engage the key global and local players to the strategy process.

Additionally this study found both successful and less successful strategy deployments. The common finding is that all cases followed the corporate strategy process, but the way the strategy process was applied in co-operation with the chosen strategy was different. This indicates three importance change findings. The first finding is related to the lack of stability of people along the project lifecycle. This finding became evident during the EAGLE case when there were several organizational changes along the prolonged project schedule. This resulted in changes in the project team members' participation. The second finding is related to the lack of common understanding and commitment towards the set target. This finding is linked with the 168H and EAGLE cases where one unified strategy plan at the corporate level is created and then disaggregated in the organization with the unwritten rule 'make it happen'

16 Agility is an ability to anticipate market changes and respond quickly and accurately to them while ensuring business continuity (source: adapted from D.C. Plummer and D.W. McCoy, Gartner, 17 September 2010; Y. Doz and M. Kosonen, INSEAD, 2006).

without shared commitment to implement the planned change in practice. The third finding is related to the lack of integration between the change management and the strategy deployment process. Change management was recognized along the interviews and especially highlighted in the BIRD case study by Tissari (2002) as an important element. But in reality the change management was not consistently applied as part of the strategy deployment for the cases.

To sum up, the case findings indicate four different strategy dimensions existence showing that there is no one solution available. The best way to facilitate strategy success within a global – local environment is to compile an approach to fit the different business conditions. The choice of which global dimension to use, is not insignificant. The choice has a major impact on how well the strategy along the strategy process is carried out. Also the choice is central to how individual actors get involved and impact on the strategy process both globally and locally.

5. DISCUSSION

Recent studies around the global – local strategy topic are showing that when subsidiaries are involved in the strategy creation process, strategies are implemented more readily (Kim and Mauborgne, 1993; Schneider and Barsoux, 1997; Regner, 1999, 2003; Burgelman and Grove, 2004; Parise, Cross and Davenport, 2006; Hutzschenreuter and Kleindienst, 2006; Mäkelä, 2006). At the same time there seems to be a gap in the strategic management literature (Parise, Cross and Davenport, 2006), as it does not provide enough information on how to successfully involve local actors or local subsidiaries in the global – local strategy process (Regner, 1999, 2003).

This study aimed to gain a deeper understanding of the challenge of people involvement with the global - local strategy process (Hrebiniak, 1992, 2005) of an organization. The people involvement and specifically the local actors' involvement in the strategy development (Regner, 1999, 2003; Burgelman and Grove, 2004; Parise, Cross and Davenport, 2006; Mäkelä, 2006) is increasingly emphasized in the strategy process literature (Hutzschenreuter and Kleindienst, 2006). Despite the existing research, there seems to be a gap in the strategy process literature (Parise, Cross and Davenport, 2006). What is missing is how to successfully involve local actors inside the global company in the global – local strategy process (Regner, 1999, 2003). This study aimed at providing findings about the people involvement with the strategy process integrating the contributions from various disciplines and reflecting it with a real-life case study. This research was based on four case studies including of eleven projects.

The findings provide answers to particular research questions: *where strategy emanates from, by whom the strategy is deployed* and *how to successfully engage local actors to the global –*

local strategy process. For the data analysis, the theoretical framework (*Figure 6*) was applied. The cases expose both successful and less successful results.

5.1. Contribution

The four case studies contribute to the strategy process research on the global - local dimension of the strategy process and on the individuals' and particularly the local actors' involvement in the strategy development.

The findings provide evidence that the strategy process within the case company is *'aligned with textbook wisdom'* (Pantzar and Ainamo, 2004). This finding is consistent with previous studies on strategy process and the formality thereof (Chandler, 1962; Andrews, 1971; Porter, 1980) and confirms the existing theory.

The theoretical framework (*Figure 6*) was used for the data analysis. The strategy creation and deployment processes are defined as the central elements in the theoretical framework. The theoretical framework (*Figure 6*) is providing incredients for a new theory building providing end-to-end viewpoint to study strategy process within a global environment. The strategy process was analyzed using the theoretical framework from three different viewpoints. The three different viewpoints are called building blocks. The first building block is the s*trategy creation* process. The strategy creation process analysis was directed at finding out *where strategy emanates from* (the first research question). Different strategy process steps are investigated. The second building block is the *strategy deployment* process. The strategy deployment process analyses different process steps and people involvement with the strategy. The target is to understand *by whom the strategy is deployed* (the second research

question). The third building block is the *global – local dimension of the strategy process* reflecting the findings for the third research question on *how to engage local actors to the global – local strategy process.* The impact of local characteristics on the *global – local dimension* of the strategy process is analyzed with the Ignore-Minimize-Utilize framework. The global – local dimension of the strategy process also brings the local actor and the usage of the local voice into the strategy process. As a result, the characteristics of a successful approach on how to engage local actors to the global – local strategy process are proposed. Two main aspects are found.

Firstly, the results confirm the use of a formal and iterative strategy process with a unified global strategy. The finding is in line with the strategy process studies - a global strategy and harmonized way of working enables fast adaptations (Doz and Kosonen, 2006). Despite a highly formal approach, the location-related conditions, such as country related laws and regulations were recognized and taken into account. The location-related conditions were influencing the way the strategy creation was done at local level. This finding was demonstrated by the production case[17].

The researchers in the strategy process field have identified several dimensions and directions for the strategy creation process such as *top-down, bottom-up, certain, uncertain, autonomous, dependent, determinant, interactive, equal to the present and opposite to the present situations* (McLellan and Kelly, 1980; Quinn, 1980; Bourgeois and Brodwin, 1984; Mintzberg, 1987). Most common dimensions identified in the cases were ‘top-down’ direction, ‘determinant’ authority and ‘certain’ circumstance. Less common dimensions identified in the cases were ‘bottom-up’ direction, ‘interactive’ authority, ‘autonomous’ level of independence and ‘uncertain’ circumstance. The top-down and determinant findings

[17] Production case was created following the Joint Venture agreement that is listing the local conditions to do business, see further chapter 4.1.

clearly indicate one unified strategy creation approach with the unwritten rule – 'make it happen'. The temporal and the level of independence on the other hand showed more variations. The distribution case showed the dependent approach. This was clearly visible as the unified hub distribution model started to evolved after the first two hubs were created. The BIRD project was the only project applying an *autonomous* strategy creation approach. The BIRD project was created with high level of understanding of the local requirements without risking achieving the set target at the corporate level. To conclude, the findings confirm the current theory with the empirical findings. In this study all dimensions for the strategy creation process were identified within the cases. As Collin (2003) summarizes *'there is not one best way to organize something, but rather it depends on the environment'*.

Secondly, the theoretical discussion identified a participatory strategy process (Regner, 1999; 2003) linking the local actor to the process. The case findings showed a two-fold character of people involvement with the strategy between the local and global entity. This finding provides incredients to a new theory. More specifically, when strategy is initiated locally or outside the formal strategy process or local conditions differ from the global (e.g. Europe and Asia), the local actor seems to have a more active and visible role. The distribution and production case findings fall in line with what is presented in formal strategy process literature (Weitz and Jap, 1996; Porter, 1980) and play down the local actors' role, existence and influence to the global – local strategy process (Regner, 1999, 2003). Whereas the installed base findings fall in line with emergent strategy process literature (Mintzberg and Waters, 1985; Burgelman and Grove, 2004) and accentuate the local actors' role, existence and influence on the global – local strategy process (Regner, 2003). This finding combines the strategy deployment process, local actor, boundary role and the use of local voice together showing that the local actor has a key role to make the strategy successfully implemented at the local level. The existence of the local actor and the boundary role however tend to be

overlooked at the global level and therefore the local voice may not be heard. This finding is providing incredients to the new theory. To succeed the local actor need to have strong network to get the sponsorship and the local voice heard at the global level.

Therefore the important question is: *Could a strategy be even better by encouraging local voices to speak up and by making them heard at the global level?* As Rai, Patnayakuni and Patnayakuni (1997), Miller (1998), Burgelman and Grove (2004) and Hrebeniak (2007) have described, a productive strategy creation process is one where both top-down and bottom-up voices are strong. This study draws attention to the actors' involvement in the global – local strategy process from four different approaches. This study found four patterns on global dimension of the strategy process used within a company. This finding provides ingredients for a new theory. Firstly, a *global strategy process* where the actors' involvement is found as merely position dependent. Secondly, *a combined global – local strategy process* where the local actor is linked to the process. Thirdly, *the local characteristics* to the *local – global – local strategy process* in terms of an emergent strategy. The emergent strategy is defined as originally initiated 'outside' of the formal strategy process. The study finding is that the emergently initiated strategy needs to have strong global sponsorship to speak out and get visibility and eventually be adapted as a part of the formal strategy process (Narayanan and Fahey, 1982). Fourthly, *global – local – global strategy process* where the key stakeholders early engagement is found important and building towards an agile process. The finding is that the deployment may suffer without people stability along the project lifecycle, common understanding and commitment towards the set target as well as proper change management.

This research is made by interpreting the Ignore-Minimize-Utilize framework (Schneider and Barsoux, 1997) to the studied phenomena. The interpretation of the Ignore-Minimize-Utilize framework is provides ingredients for a new theory. This study utilizes the Ignore-Minimize-

Utilize framework in a new and practical way within the global-local strategy process. The applied approach from Schneider and Barsoux (1997) is a key contribution to the existing body of knowledge about global – local strategy process for global companies. Further in this study, the global – local dimension connects the local actor and the influence of the local voice (Mintzberg, 1970; Friedmann, 1992; Humes, 1993; Juttner and Peck, 1998; Mintzberg 1999; Regner, 1999, 2003). Within this study approach the individual-centric perspective (Hutzschenreuter and Kleindienst, 2006) appears well suited for understanding the actors' role in the global – local dimension of the strategy process (Regner, 1999; Burgelman and Grove, 2004; Parise, Cross and Davenport, 2006; Mäkelä, 2006).

Further contribution is related to the individual-centric perspective of the strategy process. The four cases demonstrated how different actor roles relate to the strategy process in terms of process formality and the global - local dimension (Regner, 2003; Burgelman and Grove, 2004). The boundary role and its existence were clearly visible with the cases. For all the cases boundary roles were identified both globally and locally. The identified boundary roles are seen as representative of relationship-building, knowledge transfer and of the actual deployment of the strategy. The analysis shows that when local conditions differ from global, the local boundary actor seems to have an active role in the local strategy deployment. This finding contributes to the understanding of the local actors' role in the global – local dimension of the strategy process (Regner, 1999; Burgelman and Grove, 2004; Parise, Cross and Davenport, 2006; Mäkelä, 2006).

This study shows that the way the local actors are involved in the strategy process is not only linked in the way global – local strategy is initiated and deployed, but also in the compilation of an approach to get both bottom up and top down voices to contribute to the process (Friedmann, 1992; Regner, 1999, 2003; Burgelman and Grove, 2004). The cases in the study

show that the compiling is not insignificant, as individuals have a major impact on how well the entire strategy is implemented against the set targets. These findings are in line with an earlier study confirming that the diversified view further encourages the notion that strategies may also be developed at the local level for both local and global deployment (Kim and Mauborgne, 1993; Regner, 2003).

5.2. Evaluation of the study

The research results and conclusions are based on the conducted case studies. The quality criteria for the research follow the research method approach presented in the study (Chapter 3). The evaluation criteria relate to whether the study results and conclusions clarify the problem area from its research validity and reliability (Yin, 1989).

Reliability

In qualitative studies the evaluation criteria focus on the research process reliability (Eskola and Suoranta, 1998). Doing similar observations on different occasions or doing multiple observations of similar occasions can increase the reliability. According to Mäkelä (1990) following reliability analysis criteria can help in qualitative study.

First, the data should be evaluated (Mäkelä, 1990). In this study the data were collected using several data collection methods, i.e. interviews, archival data and observations. The data criteria were tested along the research process. This was done with the production and distribution cases that influenced the study process, such as case selection and data analysis. More specifically, as the production and distribution cases were globally initiated strategies, the researcher sought a locally initiated case that had strategic relevance at the global level as

well. The finding was in line with the existing body of knowledge about the emergent strategy process (Mintzberg, 1990) in the case company.

The second criterion is the extreme care in executing the analysis (Mäkelä, 1990). In this study detailed data analysis was carried out. The data were studied several times before the analysis. All the data were analyzed against the theoretical framework (*Figure 6*). This ensured that all data were analyzed with a similar approach, the findings were categorized and conclusions were made. The third evaluation criterion is the accessibility and replication of the qualitative study (Mäkelä, 1990). For this study the research materials, methods and results are stored, coded with the theoretical framework (*Figure 6*) and reported in detail (Eskola and Suoranta, 1998).

Could another researcher do the same study and come up with similar findings is the key question within the study reliability. For this study the transparency and replication of the study is linked to the methods used and the way findings were analyzed and categorized. Reliability also refers to the influence the researcher has had on the research results. In qualitative studies, the researcher is not objective in interviewing, analyzing, categorizing and making conclusions of the studied phenomena. Reliability is increased through the description of the research process and the reporting of the methodological choices taken. Also the role of the researcher has been described in detail. As the researcher is working in the case company, the researchers' bias was likely to be smaller as triangulation was in use. In this study data triangulation was done by combining selected data sources with each other. Such data sources were interviews, archival data and observations. Data triangulation enabled minimizing the possible biases of the study and maximizing the quality of the research (Yin, 1989). The theoretical framework (*Figure 6*) enabled the data triangulation. The data

gathering, reviewing the results and analysis findings were reported in the case company on a regular basis to get feedback and to verify the interpretations of the findings.

Validity

Validity describes whether the researcher has gained full access to the knowledge and interpreted the meanings of the respondents correctly (Eskola and Suoranta, 1998). This study adopts a combined participatory and non-participatory research strategy using both deductive and inductive qualitative case study approaches. Interviews, archival data and observations are utilized as the main data collection methods. This methodology of the study is in line with the conducted case study. The applied theoretical framework (*Figure 6*) guided the reporting of the results. The framework was designed based on extensive examination of research literature. The framework was selected as it was seen to fit well with the research subject and the research environment in the case company. According to Mäkelä (1990) validity is connected to the significance of the data and relevance of the research questions. In this study the validity criteria is covered. First, the researcher had full access to the research data as she is working in the case company. Secondly, the interviews conducted by the researcher are of high quality. This was secured by transcribing the interviews. The transcriptions were then sent to the interviewees for review and approval. This also improved the external validity of the study. The strength of a multiple case study is in allowing replication, i.e. the verification and comparison across several cases, which potentially increases the validity of the research. The validity was also tested by discussing the analysis with the interviewees as well as other representatives of the case company and by discussing and sharing the findings with other co-researchers at the university. The validity of the study potentially increased in the discussions with different audiences (Eskola and Suoranta, 1998).

External validity refers to the research findings and whether they can be generalized (Kidder and Judd, 1986). Within the single case company, the external validity was approached by including multiple cases from the case company to the research scope. The research scope of the study included four case studies with eleven projects from the case company in total.

5.3. Managerial implications

The main outcome of the study arises from the people involvement with the strategy process. The case findings show differences in the people involvement between the strategy in the local and in the global entity. The informants raised the question that perhaps the strategies would have been even more successful with a stronger application of local input. The question is well linked to Burgelman and Grove (2004): *'Maintaining the bottom-up voice strong is one of the most important contributions… and it is the most important way to enhance the productivity of the strategy-making process'.*

To summarize, the managerial implication of this research is formulated as a recommendation to the following question:

So could a strategy be even better by encouraging local voices to speak up and by making them heard at the global level?

This is a call for action and a suggestion to management teams in global organizations. To succeed in strategy deployment, management should involve local personnel for the creation of the strategy. It is not inconsequential who is involved. Management need to know their people in order to involve the correct people. The right people are the ones who have good connections both internally within a firm and externally with the key stakeholders. In this study those right people are called boundary actors.

It is important that management realizes that the business strategies are implemented locally and not in a global vacuum. By understanding and utilizing the local differences and their relevance to do business locally it is therefore essential for global corporate survival in the long haul (Cole, 1992; Regner, 1999; 2003). This research provides a practical three step guidance to management teams within global companies to get started when deciding to localize selected global activities.

As a first step, *competence and know-how transfer* needs to be initiated from the global team to the local team. In practice, the transfer focuses on describing what key competences are in question, how much support is needed from the global headquarters and under what terms and conditions.

Secondly, the global competence and know-how need to be localized. One example in this case study was the competence and knowhow transfer from expatriates to local personnel (see production case study). In addition, the local teams and the local boundary persons need to be integrated with the local networks. The network integration is important both with internal and external stakeholders, e.g. with local authorities, suppliers and other key stakeholders. The selection of the people who manage the stakeholder relationships is crucial. In this study those people are called *boundary persons*. Boundary persons can be found both locally and globally. The roles of the boundary persons have been discussed widely in this study both from a theoretical and a practical standpoint. The boundary persons have a key role in how well the intended global strategy is implemented locally.

The third step is ‘export’. In this context it means that locally initiated activities are brought into the global headquarters’ awareness. This is possible through the identified boundary

persons within the stakeholder network. To succeed with the ‘export’ actions, the locally initiated activity requires strong global sponsorship. This is ensured by having the right level of stakeholder management, organizational structure and governance in place. Also, for the managers it is relevant to understand and select which local initiatives are critical from the business point of view. The local initiative needs to have tight alignment with the business targets and bring true business benefits. After the local initiative selection has been done, sponsorship, visibility, resourcing and funding allocation can be provided by the managers at the global level.

5.4. Future Research

This study concentrates on the strategy process in a business organization. The strategy process within a global company is a widely studied topic and more research is needed to establish the existence of the four global dimensions of the strategy process in different contexts. The case study analysis indicated four global dimensions of the strategy process: a *global* strategy process, a combined *global – local* strategy process, an *emergent* strategy process and an *agile* strategy process.

The limitations of the study are linked to the potential future research opportunities. Firstly this study concentrates on strategy process study in a business organization and therefore excludes validation analysis with other organizations and non-profit organizations. Secondly, the data of the study and the used methods were constructed to describe the situation as-is and do not offer the opportunity for extended studies.

More research is recommended to provide information on how to involve local actors or local subsidiaries in the global – local strategy process. To execute this, the ‘strategy-as-practice’

(Whittington, 1996) approach could be utilized. Strategy-as-practice has been a recognized as an academic field for over 6 years (Stenfors, 2007). The activities of the people who actually manage and develop organizational strategy have become marginalized. Strategy-as-practice argues the reverse. The research on strategy needs to take seriously what strategists do and the effects of what they do. Strategy-as-practice focuses on research into patterns of activities in strategy work.

Further, more research is recommended around the global – local dimension to bring the cultural aspects into the analysis context. The model of Cultural Dimensions (Hofstede, 1991) approach could bring valuable insights into the research while defining the underlying aspects of how to involve local actors into the global strategy process.

Finally, more research is recommended with a similar approach to this research but for other companies and industries to gain further validation on findings such as the strategy patterns, local actors' involvement and the usage of the local voice in the global – local strategy process. Also the recommendation is to find more emergent initiatives to find out what makes them true breakthrough actions. As summarized by Cole (1992), to understand and utilize the local relevance is essential to corporate survival over the long haul.

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APPENDIX

APPENDIX 1: Interview population - location/position/case

This appendix shows the interviewee population related to location, position and case as well as what interview method was used.

Table 1: Interviewee population

position	location	position	case	interview method	interviewee code
Project Manager	global	middle management	strategy process	personal interview	Interviewee9
Project Manager	global	middle management	strategy process	e-mail	Interviewee9
Director Delivery Management	global	top management	hub, plant	personal interview	Interviewee8
Director Delivery Management	global	top management	hub, plant	personal interview	Interviewee8
Logistics Manager	local	middle management	strategy process	personal interview	Interviewee7
Logistics Manager	global	top management	hub	personal interview	Interviewee6
Logistics Manager	local	middle management	hub	personal interview	Interviewee5
Hub Manager	local	middle management	hub	personal discussions	Interviewee5
Logistics Manager	global	middle management	hub	personal discussions	Interviewee4
Quality Manager	global	middle management	quality process, corporate level	personal interview	Interviewee30
Hub Manager	local	middle management	hub	personal interview	Interviewee3
Purchaser	local	operative people	strategy process	discussion over coffee	Interviewee29
Director	global	top management	plant, strategy process	formal settings, meetings, memos	Interviewee28
Strategy Manager	global	middle management	strategy process	personal discussion, e-mails	Interviewee27
Strategy Manager	global	middle management	strategy process	personal interview	Interviewee27
Product Marketing Manager	local	operative people	open source	personal discussion, e-mails	Interviewee26
Competence Manager	local	middle management	strategy process	sms	Interviewee25
Controller	global	middle management	F&C statistics	e-mail	Interviewee24
Controller	global	middle management	F&C statistics	e-mail	Interviewee23
Project Manager	global	middle management	eagle	telephone interview	Interviewee22
Quality Manager	global	middle management	quality statistics	telephone interview	Interviewee21
Quality Manager	global	middle management	quality statistics	personal interview	Interviewee21
Purchaser	local	operative people	hub	personal discussions	Interviewee20
Hub Manager	local	middle management	hub	personal interview	Interviewee2
Consultant	global	top management	all	personal discussions	Interviewee19
Logistics Manager	local	local middle management	installed base	telephone interview	Interviewee18
Logistics Manager	global	top management	168h	telephone interview	Interviewee17
Plant manager	local	middle management	168h	personal interview	Interviewee16
Plant manager	local	top management	plant	personal discussions	Interviewee16
Plant manager	local	top management	hub	personal interview	Interviewee16
Plant manager	local	top management	plant, hub	personal interview	Interviewee15
Plant manager	local	top management	plant, hub	personal discussions	Interviewee15
Logistics Manager	local	middle management	hub	personal interview	Interviewee14
Logistics Manager	local	middle management	hub	personal interview	Interviewee13
Director	global	top management	strategy process	personal interview	Interviewee12
Logistics Manager	local	top management	hub	personal interview	Interviewee11
Logistics Manager	global	top management	hub, bird	telephone interview & dissertation	Interviewee10
Manager, Operations	global	top management	hub	telephone interview	Interviewee1

APPENDIX 2: Transcript verification

This appendix shows by whom (interviewee code) the entire study transcript has been verified during the reseach process.

Table 2: Transcript verification

Location	position	interview code
Global	Top management	Interviewee8
Local	Middle management	Interviewee16
Local & Global	Top management	Interviewee15
Local	Operative people	Interviewee26

APPENDIX 3: Summary of research material

This appendix shows the used research methods for the data collection.

Table 3: Research data & material

Research data collection method	Research material
Interviews	*Formal:* a written record of interviews *Informal:* a written record of what people said and/or did
Archival data	
Internal documents and Presentations	Audit records, Strategy presentations, Standard Operating Procedures, Manuals, Process descriptions, Agreements, Periodical reports
Performance measures	*Financial:* Cost efficiency, Inventory. Localization rate, Export rate *Process:* On-time-delivery, Lead time *Customer & Quality:* Customer Satisfaction Survey statistics (2003&2004) *People:* Personal Incentive participation
Annual reports	Facts and statistics of the case company
Intranet	Internal announcements, newsletters, changes in organizational structure
News	Newspapers (Helsingin Sanomat, Talouselämä, Kauppalehti), TV, Internet, articles about the case company
Observations	Personal observations and notes, meeting minutes, e-mails

***APPENDIX 3.1*: Details of the research material**

This appendix shows the used research methods for the data collection per case.

Table 4: Research material – details

Research material	Research cases										
	Hub V	Hub R	Hub M	Hub J	Hub D	Hub S	Plant A	Emergent C1	Project 168H	Project BIRD	Project EAGLE
Interviews (formal & informal)	x	x	x	x	x	x	x	x	x	x	x
Archival data											
Audit record	x	x	x	x	x	x	x				
Strategy presentations	x	x	x	x	x	x	x	x		x	x
Standard Operating Procedures	x						x			x	x
Manuals or Process descriptions	x	x	X	x	x	x	x	x	x	x	x
Agreements	x	x	X	x	x	x					
Periodical reports	x	x	X	x	x	x	x	x	x	x	x
Cost efficiency	x	x	X	x	x	x	x	x	x	x	x
Inventory rotation	x	x	X	x	x	x	x	x	x	x	x
Delivery time to customer	x	x	X	x	x	x	x	x	x	x	x
Lead Time	x	x	X	x	x	x	x	x	x	x	x
Customer Satisfaction	x	x	X	x	x	x	x	x	x	x	x
Incentive setting	x	x	X	x	x	x	x	x	x	x	x
Annual report of the case company	x										
Internal announcements	x	x	X	x	x	x	x	x	x	x	x
Changes in organizational structure	x	x	X	X	x	x	x	x	x	x	x
News (Newspapers (Helsingin	x										

Sanomat, Talouselämä, Kauppalehti, TV, Internet, articles about the case company)											
Observations	x	x	X	x	x	x	x			x	x
Emails	x	x	X	x	x	x	x	x	x	x	x
Meeting minutes/notes	x	x	X	x	x	x	x	x			

APPENDIX 4: **Interview questions**

This appendix shows the used interview questions.

Table 5: Interview Questions

Interview outline
1. What was the original idea behind the case? 2. Was the case part of official strategy process? 3. What was the scope of the case; global vs. local? Please specify. 4. What were the set targets and time frames for the case strategy creation & deployment? 5. Define key metrics and set targets 6. How would you evaluate the case success against set targets? 7. How important was the collaboration with different interfaces during the case? And why it was important? 8. What were the most important interfaces contributing the strategy deployment of the case? 9. What were the most important interfaces hindering the strategy deployment of the case? 10. Can you name any learning from the case to the business in overall/longer time frame?

APPENDIX 5: **Strategy creation process values**

Table 6: The way the case and related project values are mapped against the strategy creation process dimensions.

STRATEGY CREATION PROCESS						
CASE	**PROJECT**	**DIRECTION**	**AUTHORITY**	**LEVEL OF INDEPENDENCE**	**CIRCUMSTANCE**	**temporal**
Production case	**A in relation to E**	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
Distribution case	**V**	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
	R	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
	M	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
	J	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
	D	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
	S	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
Installed base case	**C1**	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
Development project case	**168H**	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
	Bird	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present
	Eagle	top-down / bottom-up	determinant / interactive	dependent / autonomous	certain / uncertain	equal to present / opposite to present

APPENDIX 6: **Strategy deployment process values**

Table 7: The way the case and related project values are mapped against the strategy deployment process theoretical framework.

Deployment levels & case evidence				
People involvement	**Production case evidence**	**Distribution case evidence**	**Installed case evidence**	**Development projects case evidence**
Location	*Key locations:* - values reported here	*Key locations*: - values reported here	*Key locations:* - values reported here	*Key locations:* - values reported here
Position	*Key positions:* - values reported here	*Key positions:* - values reported here	*Key positions:* - values reported here	*Key positions:* - values reported here
Role	*Key roles:* - values reported here	*Key roles:* - values reported here	*Key roles:* - values reported here	*Key roles:* - values reported here

APPENDIX 7: **The research process**

This appendix shows the steps taken during the research process

Table 8: Research process

Data Gathering steps in the study	Participatory action research *(Coghlan & Brannick, 2001)*	Qualitative case study approach *(Yin, 1989; Stake, 1995)*	Case study approach *(Eisenhardt, 1989)*	Researchers role in the study
Case selection, defining the purpose of the research *(Spring 2001 – Spring 2002)*	purpose and rationale of the study	conceptualize the object of the study (case)	getting started	Along the assignment in Asia the researcher was actively observing how in an international company strategy process is aligned between different parts and levels of the organization. During that time, the researcher was also actively involved in the local strategy process as a facilitator and coordinator between the local and global entity. The researcher influenced the way strategic priorities from global were translated into the local organization - a participatory approach was applied. The definition of the research scope and main questions, linkage between case and academic context started to evolve.
Entering to the field, first data collections *(Spring 2001 – Spring 2002)*	context		selecting case/cases and entering the field, criteria for the cases	The researcher specified the criteria for the case selection. The criteria were referring to the context of the research; organization description, historical backgrounds, field notes and intended outcome of the study. This was done in co-operation with the case company representatives.

Literature review and theoretical framework *(Autumn 2003 - Autumn 2007)*	literature review		enfolding literature	The researcher was doing a comprehensive literature review. The criteria for the selected literature were based on the theoretical approach supportive to the global - local strategy process.
Methodology formation *(Autumn 2003 - Autumn 2007)*	methodology and method of inquiry		enfolding literature	The researcher introduced herself to the methodological literature. The argumentation of the selected methodological approach was done reflective to the case environment.
Development of the research construct *(Autumn 2005 - Autumn 2006)*	finalizing context		selecting case/cases and entering the field	The researcher developed the research construct based on the interactive and systematic cross analysis between the literature, methodological selections and the case environment. The aim at developing a holistic understanding of the global - local strategy process.
Case study *(Spring 2001 - Summer 2007)*	Case study analysis includes data collection	seek patterns of data	analyzing data	Four case studies were carried out. Multiple cases were selected to achieve rich data. The cases were selected in cooperation with the Nokia Networks Delivery Operations organization. As a result of the data analysis, categories, concepts or models could be produced. Data analysis of the building blocks includes within-case and cross-case analysis. According to Eisenhardt (1989), the aim of within-case analysis is to become intimately familiar with each of the case as a stand-alone entity, in order to reveal the unique patterns of each case. After the within-case analysis, a cross-case analysis was performed. Target with the cross-case analysis is to use the within-case analysis results to look for patterns i.e. similarities and differences across cases (Eisenhardt, 1989). Altogether 30 persons were interviewed and 50 interviews done resulting 80 pages of interview data. The amount of observations, informal discussions, personal notes and e-mails are exceptionally rich, as the researcher has worked for the case company more than 15 years. Other sources of research data were audit records, standard operating procedures, manuals, process descriptions, agreements and periodical reports. Those were carefully analyzed.
Preliminary analysis of the data *(Spring 2007 - Autumn 2007)*	self-reflection and learning of the action researcher	key observations	analyzing data	The preliminary analysis of the data influenced to the learning of the researcher. The researcher was taking an action to find an emergent strategy case from the case company. This was done in order to increase the understanding of the local impact to the global strategy.

Final analysis of the data *(Summer 2007 - Autumn 2008)*	reflection of the study in the light of the theory	reflection of the study in light of the theory	analyzing data within case and cross case analyses	The final analysis of the data influenced the learning of the researcher as well as the case company. Consequently, the researcher was carrying out a comprehensive reflection between the case findings, the theory of frameworks used in the research and the methodological choices to build towards validity, reliability and generalizability.
Results and evaluation *(2008 – 2013)*	extrapolation to a broader context and articulation of usable knowledge	develop learning or generalizations of the case	enfolding literature with conflicting or supportive	The researcher is augmenting what are the outcomes from the study for the case company, for future research, for similar companies and theoretical saturation if possible. The process is interactive between all the parties involved.

APPENDIX 8: **Performance data**

This appendix shows the performance data analysis for the cases.

Appendix 8.1.: ***Production case, Business Performance analysis***

Production performance analysis is based on the measures indicated in the production strategies of the case company. The measures' development analysis compares the year 2000 status with the year 2004 status. The analysis indicates that Factory A is reaching the targeted performance level by having '*a competitive advantage based on high performance – low cost'*.

Table 9: Performance Measures: Production case

Data development	2000 status	2004 status
Financials		
Cost efficiency	Factory A cost efficiency below the global reference. • Materials mainly imported by local suppliers (2nd and 3rd tier suppliers not local) • Local contract manufacturers are often European, bringing the European price level to Asia	Factory A cost efficiency developed according to the global reference. • Cost efficiency improved in average by 40% • 50% of materials sourced locally • 2nd and 3rd tier material purchasing localized
Inventory rotation	Factory A inventory rotation slower than the global target setting.	Inventory rotation developed positively. Inventory rotation improved more than 50%.
Process		
Delivery time to customer	Some production ramp up related problems to reach the set targets. Delivery time to customer below the global reference.	Delivery time to customer reached the globally set targets ensuring also a continuous flow of export demand allocation to Factory A. In average, the delivery time to customer improved by 10%.
Lead time	Some production ramp up related problems to reach the set targets. Lead time below the global reference.	Shorter lead times reached in all allocated products. In average, the lead time reduction was 30%.
Customer & Quality		
Customer Satisfaction	Customer satisfaction and complaint management systems established and process know-how transferred from platform plant (E) to lean plant (A).	Customer satisfaction monitored regularly. The trend development shows that a good performance level has been reached.
People		
Incentive setting	Incentive setting process and tool know-how transferred from platform plant (E) to lean plant (A).	Whole personnel (100%) involved in incentive setting.

Factory performance evaluation is an integral part of the case company's strategy process of creation and deployment. Factory A was created and deployed with the use of a modular factory model. The product and process know-how were transferred from platform plant (E) to lean plant (A). Analysis of the measures indicates that production allocation from Europe to Asia is developing as targeted in all performance areas. Moreover, Factory A has become NET global supplier of dedicated network elements.

<u>Appendix 8.2.:</u> Global Hub case, Business Performance analysis

The analysis indicates that business performance is measured and followed at the case company and in all studied hubs. There are only minor variations between the different hub performance outcomes. This finding is explained by the fact that the hub operational model is not allowed to vary. Interviewee6 explained: *'We are able and we change the delivery point from country to country if needed. It can be based e.g. on cost issues and then we change the delivery from hub A to hub B, and this is how it should be. For the customer, it is only an informative issue and it should not matter from which hub the customer is getting the delivery from…This kind of changes must be transparent within the organization.'*

The quality of hub business performance is evaluated against the main strategic targets for the renewed delivery process. Such measures are shorter lead-times and delivery times to the customer, improved customer satisfaction as well as reduced costs and inventories in the delivery chain. Interviewee8 explained: *'the end-to-end delivery process needs to be measurable in order to understand the success. Critical metrics are e.g. cost and quality perceived by the customer'.* The data analysis is based on measure development in 2001-2004. During that time measure development in all hubs shows that both the costs and lead-times decreased. The delivery time to the customer reached the target level and end-to-end inventory visibility was improved by the re-engineered delivery chain.

Table 10: Performance Measures: Distribution case

Data development 2001-2004	Case V	Case R	Case M	Case J	Case D	Case S
Financials						
Cost efficiency	Cost efficiency improved on average by 50% during the analysis period.					
Inventory rotation	The hub establishment improved the end-to-end inventory visibility. Inventory rotation development analysis indicates that inventories have been kept at a stable level. The stabilized inventory level was a conscious management decision in order to ensure good output during changed demand levels.					
Process						
Delivery time to customer	The target level was reached in all hubs. Delivery time to customer improved on average by 40% during the analysis period.					
Lead Time	Shorter lead times achieved in all hubs. An average 10 days reduced during the analysis period.					
Customer & Quality						
	An overall positive trend showing that customers highly appreciate a reliable delivery process.					
	Flat development. Some challenges concerning new projects and new customers. However, the challenges are not related to the hub operational model.			Overall a positive development (short history)	The trend has turned positive.	The local customers are among the most satisfied.
People						
Incentive setting	Whole personnel (100%) involved in incentive setting.					

The variations between the hubs are linked with the hub level target setting that is based on whether the operations are located in a low-cost country or not. Interviewee1 concluded: *'The main idea behind the key metrics and the follow-up is to ensure that we have the optimal model in use from the whole operations perspective and, in addition to that, we are trying to minimize hub level differences and any sub-optimations.'* Another difference was identified in customer centric issues within the area or region. One example is related to the D hub that met some challenges with a key customer. The focused efforts, however, improved the customer delivery time as well as customer satisfaction.

All in all, as performance is continuously measured and monitored, the capability to take immediate action when a deviation from the target is identified exists. Interviewee6 summed

it up like this: '*The main metrics…are the driving force of our operations. These metrics have been there from day one. And immediately, when a deviation is identified, we try to tackle it.'* Examples of such incidents are related to material shortage situations, increases in customer complaints or disruptions in deliveries.

Hub business performance evaluation is an integral part of the case company's strategy process of creation and deployment. The hub model was created and deployed using a global model, mostly ignoring the local contingencies. Consequently the hub model worked as targeted across the network. The hub operational model supported the strategic targets, i.e. having a straightforward logistics process and minimizing handover. The result is further linked with the conducted benchmarking described by Interviewee6 *'We know other companies that have built their logistics based on countries, continents and customers…but the thing is that we need to find the optimal way to function from the end – to –end process perspective. At the other end, we need to be product-oriented and in the other end, customer-oriented, and the key issue is to find the optimal 'collision' point…there the hub is seen as an opportunity to link productivity with customer orientation'.*

<u>Appendix 8.3:</u> Installed base case, Business Performance analysis

The installed base business performance analysis is based on time and data accuracy business target that was set to 80%. The business performance target was linked to the installed base solution benefits argumentation: *'Linking product performance to network performance will give us opportunities to improve customer satisfaction. Creating new network capabilities for our customers will enable them to plan, develop and maintain their network and business*

infrastructure service platform'[18]. Moreover, along the project initiation it was recognized that the solution needs to be compliant with e.g. Sarbanes-Oxley[19] (SOX) act to increase the reliability and accountability related to network equipment and asset reporting. The data analysis is based on status before and after installed base was taken into use to customer C1.

Table 11: Performance Measures: Installed base case

Data development	Before	after
Financials		
Cost efficiency	To improve cost efficiency was one of the globally set strategic targets.	Installed base solution enabled improved cost efficiency through: • a simplified approach to reconcile delivered equipment against placed orders so that accurate invoices can be created • fewer site visits to confirm equipment configuration
Inventory rotation	High field inventory levels and inaccurate inventory data identified.	Installed base solution enabled to lower field inventory levels e.g. through: • an automated solution to track site configuration (logical and physical inventory) accurately
Process		
Data accuracy	Data accuracy developed better than planned. For active units the accuracy was over 95% and for passive units the result was depending on how accurately the site installation process was followed.	
Lead time	Lead time improved over 50%. Installed based enabled to manage the complex logistical process to ensure that equipment is ordered correctly and delivered to a specific cell on time for integration.	
Customer & Quality		
Customer Satisfaction	A positive trend showing that customer highly appreciates an accurate and timely delivery process. The project initiation further enhanced overall customer satisfaction.	
People		
Incentive setting	Project personnel (100%) involved in incentive setting.	

The analysis indicates that the success against the set targets was reached. The Interviewees commented: *'it surprised us all positively that we got good and accurate data'*. Moreover, the finding is that the installed base solution is built on existing product excellence. The data

[18] source: DO newsletter 8.6.2004
19 SOX is referring to internal controls aiming at ensuring that companies' financial reporting and the related processes are reliable. SOX requires that the companies listed in the New York Stock Exchange report annually on the effectiveness of their internal controls related to financial reporting and accounting.

accuracy information has been there from the beginning and now it was 'dragged out'. Finally, one of the success factors was the collaboration with and the accountability towards the end customer throughout the project.

***Appendix 8.4.:* Development project cases, Business Performance analysis**

The business performance is evaluated against the main strategic targets to all development projects *to radically reduce inventories in the whole chain.* The development project cases performance analyses are shown in the table below.

Table 12: Performance measures: Development project cases

Data development	168H (1999)	BIRD (1999 - 2000)	EAGLE (2001 – 2004)
Financials			
Cost efficiency **Inventory rotation**	Improved cost efficiency and inventory rotation for pilot products.	Clear financial benefits, as the end-to-end inventory rotation improved radically.	As a starting point business case calculations showed benefits towards all set targets. The project was terminated as the benefit realization was not possible to evaluate/achieved.
Process			
Delivery time to customer **Lead Time**	Delivery time to customer improved and lead-time reduced for successful pilots.	Improved visibility in the demand-supply chain affecting positively on delivery time to customer and lead time.	As a starting point business case calculations showed benefits towards all set targets. The project was terminated as the benefit realization was not possible to evaluate/achieved.
Customer & Quality			
Customer Satisfaction	• A positive trend for successful pilots showing that customer highly appreciates an accurate, fast and timely delivery. • Non-successful pilots: no commitment to change the current process towards a common standard process	A strong relationship between project (global) and logistics teams (local) influenced positively towards the focused customer's customer satisfaction.	As a starting point business case calculations showed benefits towards all set targets. The project was terminated as the benefit realization was not possible to evaluate/achieved.
People			
Incentive setting	All (100%) development projects personnel involved in incentive setting.		

The analysis shows that only one project, project BIRD reached the full scale deployment phase. Firstly, the 168H project success is impossible to evaluate as the project never reached full scope deployment as planned. The deployment was handed to the BIRD project. The successful 168H pilots offered however good lessons learned to future end-to-end process improvement projects within the case company. Secondly, the BIRD project performance analysis indicates four key outcomes. First on improved common understanding of complex business systems, second on improved end-to-end visibility, third on financial benefits linked with improved inventory rotation and fourth on the change management importance and seamless global – local integration with the project management. Finally, the EAGLE project illustrated ‘a *lot of planning and less concrete actions’ (*Interviewee22) and with a large amount of organizational changes along the prolonged project schedule. The EAGLE project was terminated (2004) and therefore the project success is impossible to evaluate.