TRANSITION PROCESSES TOWARDS INTERNAL NETWORKS: DIFFERENTIAL PACES OF CHANGE AND EFFECTS ON KNOWLEDGE FLOWS AT RABOBANK GROUP

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DIFFERENTIAL PACES OF CHANGE AND EFFECTS ON KNOWLEDGE FLOWS AT RABOBANK GROUP[!]

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TRANSITION PROCESSES TOWARDS INTERNAL NETWORKS:

DIFFERENTIAL PACES OF CHANGE AND EFFECTS ON KNOWLEDGE FLOWS AT RABOBANK GROUP

ABSTRACT

As a result of many changes in the competitive landscape, knowledge has become a crucial resource of firms, which has impelled firms to change their forms of organizing. Evidence suggests that internal networks, as such an alternative form of organizing, progress to emerge to facilitate the organization and management of knowledge. Insights into how firms actually change into internal networks have been sparse, however. On the basis of three case studies conducted at Rabobank—one at the group level, one at the local member banks, and one at the business unit Spectrum—this paper furnishes this lack of inquiry with new insights. The evidence illustrates that when firms change into internal network forms of organizing, horizontal knowledge flows between subunits are facilitated.

KEYWORDS

Internal networks; Knowledge flows; Differential paces of change

INTRODUCTION

In recent years, environmental turbulence has increased and has transformed the competitive landscape. The new competitive landscape has propelled firms to increase the exploration of new opportunities (March, 1995) by managing knowledge creation and sharing as one of the most strategically–significant resources (Grant, 1996), and treating organization form as a 'new strategic variable' (Daft and Lewin, 1993: ii). These developments have required that firms challenge their internal mode of organizing (Bartlett and Ghoshal, 1993; Ghoshal and Bartlett, 1998; Van Wijk and Van den Bosch, 1998). Recent research has pointed out that in a wide variety of industries across Europe, Japan and the United States, several leading firms apparently have recognized this need. Preliminary findings indicate that these firms have restructured themselves and adopted new forms of organizing, or are currently in the process of transition towards new forms of organizing (Whittington, et al., 1999).

One of such new modes of organizing is the *internal network organization*, alternatively labeled N-form corporation (Hedlund, 1994; Hedlund and Ridderstråle, 1997; Pettigrew, Whittington and Conyon, 1995) or integrated network (Ghoshal and Bartlett, 1997; Nohria and Ghoshal, 1997). The internal network differentiates itself from traditional organizational forms in terms of structure, management and knowledge processes (Van Wijk and Van den Bosch, 1998), with the proviso that complementarities between these and other organizational attributes must be present to achieve and sustain high performance levels (Starbuck, 1993; Whittington, et al., 1999). Although an increasing number of firms seems to be involved in transition process towards this or alternative forms of organizing, empirical insight into *the transition process of firms towards internal networks* is limited. Apart from the study by Ferlie and Pettigrew (1996) on the British National Health Service (NHS), existing work is mainly cross-sectional rather than longitudinal in nature and focuses on the characteristics of internal networks once they are established (see Chapter 1 of this volume). It goes without saying then that our empirical insights regarding structure, management and knowledge processes in internal networks, as well as the strategic effects of transition on these characteristics is even more lacking.

The *purpose* of this chapter is to provide new insights into the developmental process of internal network forms of organizing by applying a longitudinal case study methodology (Pettigrew, 1990). It briefly describes the history and evolution of Rabobank Group, a Dutch–based multinational financial services corporation, and assesses the change journey of the company towards an internal network form of organizing over the past decade. The focus of the case study is on the changes in structure, management and knowledge processes in particular, as well as the complementarities among them, that constituted Rabobank's corporate–wide transition. Analyzing the transition process, we pay attention to progression and regression phases regarding the development of internal networks (Van den Bosch and Van Wijk, 1999a), the differential paces of change that distinct units may find themselves in, and possible bipolarities in structure; that is, whether both hierarchical and network forms are, and perhaps must be, present at the same time.

To illustrate the intricacies of such a change towards internal network forms of organizing, the case study is framed along the line of an embedded case study design with *three units of analysis,* each focusing on changes in structure, management and knowledge processes in particular. The first unit of analysis deals with the transition process of Rabobank at the corporate level. Besides Rabobank's drivers for change, we will analyze the pace, scope and depth of the change process towards internal network forms of organizing for different units within Rabobank. Regarding the second and third unit of analysis we focused on two organizational units of the group that have pursued different change trajectories to describe in depth the challenges involved in changing into internal networks. Constituting the second unit of analysis, the local member banks are in the very beginning of the change process towards an internal network. This analysis describes how barriers of horizontal knowledge sharing among local member banks influence the change trajectory of the local member banks. The third unit of analysis involves a longitudinal analysis of the transition process of a facilitatory business unit, Spectrum, towards an internal network, which has functioned as a kind of template for creating internal networks for the rest of the Rabobank organization. This analysis pays attention to both supporting factors and barriers in creating internal networks.

The remainder of this chapter is structured as follows. In the second section, the theoretical background of internal networks is briefly sketched around three themes: an internal network's structure, management and knowledge processes. Next, the key analytical questions to be addressed, the longitudinal case study methodology, and research design are explicated. In the fourth through the seventh section the case study findings are reported at the corporate level, the local member banks, and the facilitatory business unit Spectrum respectively. With regard to all three units of analysis attention will be paid to drivers for change, content and process sequencing, depth and pace of change, barriers, and the consequences of adopting an internal network. The chapter concludes with a discussion of the main findings.

THEORETICAL BACKGROUND OF INTERNAL NETWORKS

A key advantage of internal networks is the ‘ability to create value through the accumulation, transfer, and integration of different kinds of knowledge, resources, and capabilities across its dispersed organizational units’ (Nohria and Ghoshal, 1997: 208). To capitalize on this ability and to benefit from the flexibility (Volberda, 1998), self-renewal and organic growth that are likely to accrue from it (Hedberg, Nystrom and Starbuck, 1976), however, a firm has to change a multitude of characteristics. What is more, Whittington et al. (1999) found that a firm in transition needs to change organizational attributes concurrently to achieve the complementarities required for above-normal performance levels. As internal networks are different compared to traditional organizational forms with respect to *three themes*—that is, structure, management and knowledge processes—next each of these themes is elaborated on. Figure 1 depicts the organizational structure, management processes and knowledge processes of an idealized internal network and guides the following discussion.

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Organizational structure

Hedlund (1994) has denoted the structure of the internal network a heterarchy rather than hierarchy, which presumes that a dense set of dispersed, differentiated, but interdependent organizational units constitutes the structure of an internal network. Since units in internal networks are also decentralized at both the operational and strategic level, this suggests that they are not so much dispersed and differentiated in terms of geography alone, but more fundamentally in terms of resources, capabilities, activities, and knowledge (cf. Galunic and Rodan, 1998; Tsoukas, 1996).

All knowledge relevant to firm behavior and success is difficult to accumulate entirely at the corporate level due to constraints springing from bounded rationality (March and Simon, 1958). Those with the specialized knowledge and expertise most vital to the company's competitiveness are usually located far away from corporate headquarters (Bartlett and Ghoshal, 1993). Whereas in existing organizational forms, such as the multidivisional form, decisions are made on the basis of knowledge residing with higher levels, in internal networks each unit pursues its own decisions (see Figure 1). In units operational and strategic decisions are made based on knowledge and other resources localized to, for example, geographical areas, markets, technologies, or even certain problems. As each unit is capable to perform different activities in congruence with market demand, this decentralization of activities gives also rise to *differentiation* of actors, activities and resources.

Notwithstanding the differentiation of actors, activities, and resources, units remain dependent on the performance of other units, and are therefore required to collaborate with each other (Jones, Hesterly and Borgatti, 1997). These types of interdependencies enable resources and activities to be integrated among units without the interference of the corporate hierarchy (cf. Lawrence and Lorsch, 1967). In this vein, Baker argues that networks are '*integrated* across formal groups created by vertical, horizontal, and spatial differentiation for any type of relation' (1992: 424–425; original emphasis). A particular role in this respect is granted to teams and other temporal constellations of different people from varying organizational levels and units (Hedlund, 1994), not only to explore new opportunities but to expand on existing ones (Müllern, in this volume). In this way, combinations result from interdependencies that move beyond the sequential and pooled, and include the reciprocal and team-based types (Thompson, 1967; Van de Ven, Delbecq and Koenig, 1976).

It should be noted, however, that this is not to say that hierarchy has completely vanished in internal networks. A hierarchy fosters exploitation, whereas a network increases exploration (Hedlund, 1994: March, 1995). Both a hierarchy and a network are therefore required 'to engage in sufficient exploitation to ensure current viability and, at the same time, to devote enough energy to exploration to ensure its future viability' (Levinthal and March, 1993: 105). Likewise, a hierarchy remains indispensable when certain decisions must be reached swiftly, disputes be resolved, or allegiance to a firm’s mission and objectives be induced. Although in extreme cases the internal network may supplant the hierarchy in general, the structure of internal networks is likely to supplement hierarchy and may therefore be considered bipolar (see also Nonaka and Takeuchi, 1995; Sanchez-Runde and Quintanilla, in this volume).

Management processes

Changing organization structure alone will not give rise to internal networks. Subtler changes in management are required as well (Hedlund, 1994). Having conducted a case study, Bartlett and Ghoshal (1993) have observed at ABB (see also Ruigrok, Achtenhagen, Wagner and Rüegg-Stürm, in this volume) that *managerial roles and processes* at various managerial levels in internal networks are different from those in firms with more traditional organization forms. Indigenous to this change of management philosophy is to conceive of managers more as stewards ‘whose behavior is ordered such that pro-organizational, collectivist behaviors have higher utility than individualistic, self–serving behaviors’ (Davis, Schoorman and Donaldson, 1997: 24), rather than supposedly economically rational agents of the sort found in conventional organization forms (Ghoshal and Moran, 1996; Miles and Creed, 1995).

Instead of taking on the traditional roles of monitor and controller, top managers in internal networks are the architects of the organization. In that spirit, they are discharged from strategic planning and composing grand strategies, and instead are responsible for creating a shared context and vision for long term development and organic growth. Within this context, middle management’s role is linking and leveraging the distributed resources and capabilities, rather than implementing resource allocation decisions made at the top. By taking over this integrative and synthesizing role from top management, middle managers can circumvent the often long and tedious vertical path to and from headquarters. To substantiate the structural interdependencies that underlie integration, middle managers also need to create and maintain *trust* among organizational members by behaving as coaches and supporting the initiatives taken by front–line managers (see Figure 1). Rather than being restricted by decisions made at higher levels in the hierarchy, front–line managers pursue the opportunities that crop up in the environment themselves, and generate and update knowledge as necessary (Bartlett and Ghoshal, 1993; Hedlund, 1994).

Based on such studies as the ones elaborated above, Van den Bosch and Van Wijk (1999b) have argued that as managerial roles and tasks have changed, the nature of managerial knowledge and managerial capabilities at the different levels must have changed as well. In congruence with Hedlund (1994), they assert that 'know-what' and 'know-how' is not associated with higher managerial levels any longer but entered the domain of front-line managers. Furthermore, due to the presence of interdependencies and collaboration between organizational units, 'know-who' and 'know-where' are doubtlessly becoming more important, especially for an internal network's middle management.

Knowledge processes

Environmental turbulence has induced firms to take the management of knowledge seriously, and to do so effectively, to consider internal network forms of organizing (Bartlett and Ghoshal, 1993; Hedlund, 1994). But what do these knowledge processes look like in contrast to the ones in more orthodox organization forms?

At the most basic level, two different types of knowledge processes can be discerned. First, organizational units may create and accumulate knowledge with their own means and resources (cf. Nonaka and Takeuchi, 1995). This knowledge creation process is essentially the same as the type employed in traditional organizational forms. But, as was mentioned above, in traditional organizations knowledge is subsequently transferred to and applied at higher levels, whereas in internal networks knowledge is retained at the unit level. Second, knowledge may be transferred and integrated among organizational units. This knowledge sharing capacity differentiates the internal network from other organization forms and gives internal networks the unique capacity to take advantage of a distributed and dispersed knowledge structure (Hedlund, 1994; Van Wijk and Van den Bosch, 1998).

Knowledge transfer and integration processes may be promoted by both vertical and horizontal knowledge flows (cf. Aoki, 1986). In more traditional forms of organizing, knowledge integration is preserved by hierarchy, where knowledge flows are primarily vertical and uni-directional between headquarters and divisions, business units, and operating units. Partly, depending on whether hierarchy remains present, in internal networks vertical knowledge flows are either supplanted or supplemented by *horizontal, multidirectional knowledge flows* to preserve knowledge integration and the embeddedness of the units in the organization (Fenton and Pettigrew, in this volume; Hedlund, 1994; Quinn, Anderson, and Finkelstein, 1996; Van Wijk and Van den Bosch, 1998). What is more, horizontal knowledge flows in traditional organization forms are less frequent and moreover largely informal. In internal networks on the other hand these knowledge flows may be informal, but are also largely formalized, which is reflected in, for example, the extensive use of teams where knowledge is shared and integrated (cf. Fenton and Pettigrew, in this volume).

METHOD

Firms that wish to move from a traditional organization form towards an internal network form of organizing must bring off a change journey. However, scholarly inquiry into these change journeys is still inadequately developed both in number and scope. To contribute to our understanding, processual and longitudinal research approaches are required to uncover processes of strategic and organizational change brought about by firms in transition (Pettigrew, 1990; 1992; 1997). Such an approach requires a number of key analytical questions that guide the investigation, an appropriate research methodology, and research design.

Key analytical questions

The foregoing theoretical outline triggered the formulation of four analytical questions to be addressed and to advance further insight into the developmental process towards internal networks. The questions are presented in Table 1 The first question focuses on the drivers for change, and the heterogeneity of the paces of change. Large firms are normally made up of various divisions, departments and units. Since these units may produce different products and services, each unit may also pursue a different change trajectory, leading to differential paces of change for the firm in its entirety. The second question focuses on the impact of the change process on the structure, management and knowledge processes of a firm in transition. As mentioned above, internal network forms of organizing are different from traditional organizational forms in terms of these three themes. Considering this it is important to see what the effect of the change process on these three organizational attributes is as well as the issue to what extent complementarities between structure, management and knowledge processes are required.

As was mentioned above, horizontal knowledge sharing is more or less the 'lifeblood' of internal networks. As for the internal network's reliance on horizontal knowledge flows, knowledge processes, as one of the three themes, may therefore differentiate the internal network from traditional organizational forms most. To gain insight into this issue the third question focuses on knowledge processes and corresponding knowledge flows, and relates to how changes in the configuration of knowledge flows may be used as an indicator of the transition towards internal networks. In the fourth question, the enabling and restricting factors, or supporting factors and barriers, are addressed. Two different factors and barriers will be addressed: those relating to horizontal knowledge sharing, and those involved in the change process towards internal network forms of organizing. Dependent on whether the configuration of knowledge flows may be considered a key indicator of internal network forms of organizing, these two types of barriers are not mutually excluding.

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Longitudinal case study methodology

The case study methodology has been suggested as an appropriate method for examining in-depth phenomena of organizations in their real-life context. In particular, it serves the purpose of exploring contemporary issues, and of developing and expanding theory (Eisenhardt, 1989; Yin, 1994). Since little is known yet about the transitional and evolutionary processes involved in moving towards internal networks, and their effects on structure, management and knowledge processes in particular, the case study methodology seemed an appropriate method for current purposes. To bring time and dynamics centrally into the analysis (Pettigrew, 1992), the methodology employed in this chapter is a longitudinal case study methodology of the sort advocated by Pettigrew (1990). That is, we were in search of (1) the embeddedness of the case across a number of levels of analysis, (2) temporal interconnections between events, (3) explaining action in its context, and (4) the linkage of process to outcome. In that capacity, the research method is on all fours with the contextualist research tradition in which an event or phenomenon is investigated 'in its setting'; that is, not only the socio–economic, political and business context, but the intraorganizational context are of concern

(Pettigrew, 1985).

Research design and data collection

The financial services industry seems to be an interesting field to perform the case study analysis and to address the analytical questions described above. As the international financial services industry has become a highly volatile field world-wide (e.g., Crane and Bodie, 1996), many international banks have started to question the mode of organizing they employ, and as a consequence have initiated a move towards new forms of organizing. One example is US–based Banc One, which has become a prototypical example of replicating knowledge and best practices (Winter and Szulanski, 1998).

The case study in this chapter was carried out at Rabobank Group, a Dutch multinational financial services corporation employing about 44,000 people, which recently instigated a corporate–wide transition towards a new mode of organizing. The third financial services corporation in the Netherlands behind competitors ABN–AMRO Bank and Internationale Nederlanden Group (ING), Rabobank ranked 248th in terms of total revenues and 52nd in terms of total assets on Fortune's 1998 Global 500. Owing to its expertise of the agricultural, health care and food industries, Rabobank is even the second largest player in these industries in many foreign countries such as Australia and the United States. Rabobank listed 33th in terms of total revenues and 28th in terms of total assets in the global financial industry rankings (*Fortune*, 3 August, 1998). Moreover, Rabobank is the sole financial institution in the Netherlands and one among the 20+ in the global financial industry accredited the AAA-rating for credit liability by US rating companies Moody's and Standard & Poor's.

Yin (1994) argues that a case study design can be either holistic or embedded. In spite of the holistic view that was maintained as a requirement for longitudinal case study research (Pettigrew, 1990), we employed an embedded case study design embodying *three units of analysis*: (1) the corporate level called Rabobank Group, (2) the local member banks through which domestic clients are served, and (3) a facilitatory business unit called Spectrum (see Figure 2). Since Rabobank Group was undergoing a corporate-wide transition towards an internal network form of organizing, the corporate level constitutes the first unit of analysis. Although Rabobank experienced a corporate–wide change journey, different parts within Rabobank Group found themselves in distinct phases of change. Besides that distinct phases of change could indicate different change trajectories, another rationale for adding two units of analysis was to provide for the depth the corporate level of analysis could not provide. The local member banks and the facilitatory business unit, each in a different phase of development, were therefore framed within two separate units of analysis. Since the two embedded units were in different phases of transition—the local member banks starting off to become an internal network, while Rabofacet–Spectrum is experiencing the challenges involved in being an internal network—they were prone also to provide comparative data.

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While these two embedded units of analysis allowed for a closer look at transition processes to internal networks, the corporate unit of analysis was chosen to explore the questions involved in managing differential paces of change. The two embedded units of analysis focused on the second through the fourth analytical questions, and thereby on the changes in structure, management and knowledge processes during transition, the importance of the knowledge perspective, and the barriers and supporting factors involved in sharing knowledge horizontally and moving towards an internal network. Besides the key analytical questions to be addressed, Table 1 presents the units of analysis in which they are addressed. In that vein, the two units of analysis were contextually embedded in the first unit of analysis. Although the history of Rabobank is narrated to futher improve on the contextualist character of the case study (cf. Pettigrew, 1985), the major focus is on *the period 1988–98*. This period covers the entire change process from the start through the achievements made by Rabobank Group.

Data was obtained by a total of 40 pro forma interviews in the period 1996–98. Interviews were semi–structured to provide for focus, reliability and increased validity (Yin, 1994), without passing by the opportunity ‘to let people speak for themselves’ in the shaping of our perceptions (Starbuck, 1993: 887; Eisenhardt, 1989).

Regarding the Group level, 7 interviews were conducted with managers and members of the Strategy Staff at the central organization Rabobank Nederland in 1996. In that same year, interviews were held with 18 general managers directing local banks to gain insight into processes of change and the management of knowledge in particular at the local member banks. As local member banks differed in size—the largest local bank has a balance sheet total exceeding **i** 1 billion, while the smallest local bank reported a balance sheet total of approximately **i** 20 million—general managers were approached so that the size distribution of the banks they directed was proportionate to that of the entire population of local banks. Data on the process of change and knowledge processes at Spectrum was obtained by interviewing 15 members in the period 1997–98, ranging from the business unit manager and (former) Management Team members (N=7) to clustercoordinators and project managers (N=8). Additionally, a substantial number of informal talks with employees throughout the organization proved to be of value. The data obtained from the interviews was supplemented by (1) public information sources, such as generic and company–specific magazines and Annual Reports, and (2) private information sources, such as internal memos and archival data. Where applicable, all investigators were triangulated to increase the validity of the data (Pettigrew, 1990; Yin, 1994).

RABOBANK GROUP: HISTORICAL OVERVIEW

A cooperative, Rabobank celebrated its 100-year existence in 1998. Although the name 'Rabobank' was adopted only in 1972, the financial services corporation traces its origins back to 1898 when 46 local agricultural credit cooperatives spread throughout the Netherlands were merged into two credit federations, Raiffeisenbank and Boerenleenbank. Simultaneous to the merger, each of the two credit federations decided in conjunction to establish a central organization. As a cooperative, however, the local Boards boards also decided together that Rabobank should remain operating as a decentralized organization; the local banks were completely self-responsible for their actions, whereas the central bank acted only as an advisor to the local credit institutions.[1]

In the first 60 to 70 years of the twentieth century, societal developments led Rabobank to change the way in which it had traditionally operated. The increase of the number of local banks to a maximum of 1324 in 1955, the inclusion of non-agricultural customers to clientele, and the diversification of the branch made customers more heterogeneous, as did the inclusion of the small and medium sized enterprise (SME) and large enterprise sectors. As local member banks proved not resourceful enough to deal with these changed circumstances, it was decided in 1972 to unite Raiffeisenbank and Boerenleenbank into one organization: Rabobank. In 1980, as the first international Rabobank subsidiary was opened, the name of the central organization was changed into 'Rabobank Nederland'. During the first century of its existence, Rabobank Group has thus evolved from a domestic agricultural bank serving farmers with savings and loans products to a high-tech multinational financial corporation offering the gamut of financial products and services to a broad range of customers. Still, the bank has continued to operate as a cooperative during all those years.

During the last decade, financial performance of Rabobank has improved steadily (see Figure 3). In the period 1988–97, total assets have increased from **i** 73,320 million to **i** 191,945 million. Total income and operating expenses in 1988 have multiplied themselves with factor 2.5 to **i** 5,280 and **i** 3,730 million respectively in 1997. Net profits have risen from **i** 353 million in 1988 to **i** 865 million in 1997. Rabobank's domestic and international growth is also reflected in the development of the number of employees, international subsidiaries, and local banks in the last decade, as displayed in Figure 4. Except for a small decrease in the period 1992–5, the number of employees has progressed from 33,200 to 44,667 in the past decade. Whereas the number of international subsidiaries has increased markedly from 24 to 112, the number of domestic local banks has almost halved from 906 to 481 in the period 1988–97. Although not indicative of a growth process, the decline in the number of local banks has resulted from a concentration process in which smaller banks were merged into larger ones. This concentration process within Rabobank, together with the international expansion and the other performance figures, was an integral part of the change journey towards a new form of organizing that Rabobank instigated in 1988. Besides dealing with the environmental dynamics that impinged upon Rabobank, Rabobank has undertaken this corporate-wide change process to revitalize the cooperative identity of Rabobank Group.

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FIRST UNIT OF ANALYSIS: THE CHANGE JOURNEY OF RABOBANK

The cooperative identity that Rabobank Group adheres to has always been a strong intraorganizational contextual variable that guided the development of Rabobank. Rabobank has a culture in which the client is placed centrally; everything starts with the client. As Rabobank's CEO stressed in 1996, Rabobank's strategy is that it 'unremittingly seeks to link-up with the changed and changing societal circumstances' (Wijffels, 1996). Because local banks are responsible for their actions at both the strategic and operational level, most market knowledge is retained at the local banks. In contrast to Rabobank's competitors who rely on the corporate hierarchy, the local member banks aim to exploit a competitive edge through continuous assessment of what clients expect from their bank.

In the earlier years when the mass market for products prevailed, it was difficult for Rabobank to differentiate itself from its main competitors. But in the late seventies and eighties, more demanding customers, and corporate clients in particular, started to ask for more integrated financial products that, also because of legislative changes, could provide tax benefits. Consequently, banks were compelled to bring All-Finanz or Universal Life Products to the market. These products are characterized by the combination of previously separately offered products, such as insurances, mortgages, savings, investments and loans.

This development led to an industry-wide concentration movement in which some of Rabobank's competitors merged, and others followed an acquisition trajectory, or did both. Whereas Algemene Bank Nederland (ABN) merged with Amsterdam–Rotterdam Bank (AMRO bank) to form ABN-AMRO Bank and remained in the banking industry, Nationale Middenstandsbank (NMB) merged with insurer Nationale Nederlanden (NN) to form the banking-insurance combination Internationale Nederlanden Groep (ING). The latter also acquired Postbank in 1992, formerly known as Rijkspostspaarbank, which was Rabobank's main rival in the first half of the twentieth century. These two financial conglomerates that emerged from the concentration wave have continued to be Rabobank's main competitors since the mid-eighties.

To implement its strategy, Rabobank also took part in this concentration wave by acquiring cooperative insurer Interpolis in 1990, and after a collaboration of 7 years, global top 10 investment banker Robeco in 1997. In addition, Rabobank entered the large cooperative alliance network UNICO, comprising Austrian RZB, Belgian CERA, German DG Bank, Italian ICCREA, Finnish OKO Bank and Swedish Förenings bank, to provide its international clients with tailored products and services. In this *external network* Rabobank became the nodal bank together with French-based Credit Agricole, with which it started to cooperate in 1990, and with total revenues of $34,015 million listed 67th and with total assets of $417,975 million listed 9th on Fortune's Global 500 in 1998 (*Fortune*, 3 August, 1998). These developments formed an integral part of Rabobank's change journey.

Drivers for change at Rabobank

The blurring boundaries in the financial services sector have challenged financial institutions to change and integrate their products and services. Rabobank's competitors ABN-AMRO and ING pursued, in the words of a member of Rabobank's strategy staff, a strategy tied to the extended product function. These competitors offered a broad range of products and services, and by 'taking these off the shelves' integrated and combined them. Rabobank's traditional competitor Postbank on the other hand maintained its focus on selling mass products.

Although 'Rabobank could not entirely live up to the environmental dynamics in those years' according to the same member of Rabobank's strategy staff, these developments stimulated Rabobank to move even further. It was felt that only by means of this strategy Rabobank could differentiate itself from its competitors. As the CEO of Rabobank, Herman Wijffels, illustrated in an external document in 1996 on Rabobank's transformation, because of the individualization of society 'the turn that had to be made … is the transformation towards the capacity function. Client wishes constitute the full guiding principle, the bank possesses the expertise to fulfill these' (1996). Based upon such a strategy, Rabobank aimed to be a fully customer-driven organization, and to offer clients fully tailored products, rather than the semi-tailored products that result from integrating products off the shelves. However, this strategy required that Rabobank adopted a new mode of organizing, one in which the expertise and knowledge of its employees could be more easily created, integrated and used. Apart from this strategic intent, a second and related driver made Rabobank adopt a new form of organizing.

As Rabobank's central organization Rabobank Nederland grew both in size and influence due to the mergers and acquisitions in the mid and late eighties, Rabobank Group, just like its competitors, came to resemble more a large hierarchy instead of the decentralized organization it used to be ever since Rabobank's founding in 1898. As a result of this gradual evolution to a centralized organization, organizational units began to complain that Rabobank Nederland did not know what happened in the localities lower down the hierarchy. At the same time, corporate headquarters increasingly began to lay its strategies upon organizational units, thereby diminishing their autonomy. In addition, the local units themselves did not know where and with whom to find appropriate knowledge. The hierarchical organization form that had gradually emerged was considered inappropriate to implement Rabobank's new strategy. As the CEO explained,

> The hierarchical, pyramidal structure, with its tendency to uniformity, belongs to the past. The present era demands differentiation and specification, and with that, units with a large degree of autonomy. They have to serve the market and clients in a differentiated fashion. Adapting to client needs forces to lay responsibilities on the level where contacts with the clients occur. … Traditional organization concepts start from concentration of knowledge at the top, to be directed downwards via the hierarchy. Owing to the distribution of knowledge, it has become impossible and unnecessary to manage organizations from the top. An inversion of that organizing principle is necessary. Basically, the pyramid has been inversed upside-down. But that is not a stable organization form. Hence, it is better to think in terms of *the network concept*. The organization as a system of relations between people, who collectively want to realize a shared idea. … Central to the network concept is that all cells, call them expertise centers, in the network have their own responsibility. One cannot speak of subordination, but of mutual service rendering based on equivalence. It is a living organism, in which every cell performs its own function, without getting formalized instructions. The core notions of a network are "working together" and "environmental awareness". Only by realizing that your behavior also bears effects on other cells in the system, you will come to good choices. (Wijffels, 1996; italics added)

As environmental turbulence increased in the shape of the individualization of society, increasing concentration of the financial industry, developments in Information Technology and further development of All-finanz products, top management began to see the necessity of restructuring in 1988. Furthermore, as Rabobank needed to broaden its scope through the further inclusion of corporate clients to remain competitive vis-a-vis its major rivals ABN-AMRO and ING, 'a regrouping of tasks, competences, and responsibilities' (Annual Report, 1988) was in order. Less emphasis should be laid upon the local member banks, traditionally the mainstays of Rabobank, while other units at Rabobank should receive more attention to serve corporate clients more effectively. After first wooings, in the two or three years thereafter the Executive Board gained sufficient support to move towards this new mode of organizing. Later on this proved to be moving towards an internal network form of organizing.

According to its CEO, Rabobank's transition was therefore largely the result of 'the changes "on the outside" [that took] place quicker than ever.' However, Rabobank's CEO still accredits the largest part of the change to an *internal driver*, as he talks about the 'line of fracture' that constituted the start of the transition process Rabobank was about to undergo:

> For we operate on the basis of continuity, there was no external factor, such as a merger, a privatization, or an introduction on the stock exchange, that symbolized the line of fracture. In the shape of a new style, we deliberately created and symbolized such a line of fracture, and as such marked the transition from a product-driven towards a customer-driven organization. (Wijffels, 1996)

The new style Rabobank attempted to adopt involved two important complications, however. First, although Rabobank aimed to be customer-driven, it could not abolish selling mass products, for there was still a large market for such products in the form of standard mortgages, savings, loans, and so forth. As mentioned above by Rabobank's CEO, such products can only be exploited by means of the economies of scale a hierarchical organization generates. Thus, Rabobank needed to maintain at least some of its hierarchical form to preserve the exploitation of mass products, while it needed to introduce an internal network-based form or organizing to preserve the exploration of new, client-tailored products in line with market demand. Second, in 1988 Rabobank was made up of three major divisions: Wholesale Banking, Support Services and Member Banks (see Figure 5). These three divisions were so differentiated in terms of customers they served and type of products they offered that they could not be part of the same network to integrate the knowledge and resources they built upon. Whereas the Wholesale Banking division served corporate and international clients, and Support Services mainly supplied internal organizational units within Rabobank with the services required to perform tasks, the Member Banks division served domestic clients. All these clients demanded different products, and thus that the units that served them maintained different types of knowledge.

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Insert Figure 5 about here

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Scope of Rabobank Group's Change Journey

Although the corporate level transition process started off in 1988, the change journeys of distinct divisions displayed their own year of departure, either because they were not prepared yet to undergo such an encompassing change in 1988, or because they were included in Rabobank Group after 1988, such as insurer Interpolis and investment banker Robeco, acquired in 1990 and 1997 respectively. Before 1996, these acquisitions were normally included in the corporate hierarchy in a fourth division (as in Figure 5). As of 1996, each acquired company, previously combined in the same division, formed a separate division.

The Member Banks Support division, which advises and helps local member banks in their daily business routine, was moved from a line to a staff position in 1996, in an attempt to make it easier for local member banks to consult other organizational units directly instead of through this unit. Figure 6 depicts the structure of Rabobank in 1998 with eight major divisions created during the corporate level transition. If one compares Figures 5 and 6, it becomes clear that Rabobank Group became less centralized. The year in which Rabobank's corporate structure underwent the largest change was in 1996 (this was reflected in that the Annual Report did not contain an organization chart in that year).

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Insert Figure 6 about here

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Differential paces of change

Of all the divisions, business units and other organizational units, Spectrum was the first to initiate an internal network. In line with the demand for knowledge for Rabobank's new strategy, Spectrum was deliberately created in 1992 as an internal network with the aim to provide Rabobank Group with cutting-edge knowledge mainly in Information Technology. As a facilitatory business unit, Spectrum was positioned in the facilitatory division Rabofacet. During the 1992–98 change period described below, Spectrum constituted a template within Rabobank Group, as a learning platform from which other divisions and units tried to learn.

In 1996, Rabofacet underwent the change towards an internal network form of organizing. It went from a hierarchy with two divisions to a more flat organizational structure with 14 business units, in order to increase the collaboration between units. Rabobank International's change program towards internal network forms of organizing also commenced in 1996, the year in which Wholesale Banking was renamed into Rabobank International. Currently, Rabobank International even advertises with the claim that because of the network structure they adopted, clients of, for example, the office in Sydney or London can benefit from knowledge generated in the office in Hong Kong.

The transition of the local member banks was preceded by two change programs: FOCUS and EDLB. The corporate change program FOCUS was instigated to increase customer-responsiveness at Rabobank, by establishing two different business templates, one for standard and one for tailored products, along which customers with different demands were to be served. The local bank change program EDLB (Efficiency Drive Local Banks) was instigated to increase the efficiency of local banks by sharing the best practices of some high-performing local banks. Furthermore, in 1991 an internal labor market was started off to abolish the regional recruitment procedure taht had been in place, and to benefit from the knowledge employees had gained working in different parts of Rabobank. In the context of the two corporate change programs FOCUS and EDLB, the successive change journeys at the local member banks and the Support division were based on what was called Vision '98. As an extension to FOCUS, this program was initiated in 1995 with the formal incorporation of a new banking style and a new corporate logo that changed Rabobank's position in the financial services industry to further the change process at Rabobank towards an internal network form of organizing. Nevertheless, the actual change process at the local member banks started in 1997–8. In 1998, the Member Banks Support division initiated a development towards a 'flexible network organization'.

Figure 7 tentatively illustrates the phenomenon of differential paces of change at five parts of Rabobank, by relating the change process of each of these organizational parts in terms of organizational differentiation and integration, horizontal integration in particular. As mentioned above, two of these five parts, the local member banks and the business unit Spectrum, relate to units to be discussed below. As will be elaborated below, except for the their size, local member banks were much alike. As a result, most local banks offered similar products based on similar knowledge bases. The degree of differentiation was relatively low. At the same time, since they operated largely autonomous without consultation of other local banks, the local banks were not tightly integrated on a horizontal level as well. This is reflected in Figure 7: the starting point of the change process is in the left corner below. Therefore, the change process of the local member banks, starting in 1997–8, was initiated to increase the local banks' position on both dimensions. The knowledge stocks of local member banks were envisaged to be more differentiated, while increasing horizontal knowledge flows should preserve the integration of these knowledge stocks.

Rabofacet's change process, starting in 1996, was intended to increase the integration of its already differentiated business units by increasing the collaboration between them. Also starting in 1996, Rabobank International's change process was a trajectory in which the differentiation of the international subsidiaries increased, followed by a process to increase the integration of these subsidiaries by emphasizing the knowledge sharing between them. Since 1996 Rabobank International has been systematically implementing a knowledge-driven strategy with a focus on customers and a focus on sectors that 'put firmly in place a networked approach which brings together all available expertise within the Rabobank Group'. The Member banks Support division was less horizontally integrated, partly due to its functional structure. In 1998, in this part a change process was started towards a 'flexible network organization' to increase the degree of integration in the unit. Finally, as mentioned above and as will be elaborated below, Spectrum was created with the intent of developing an internal network. Notwithstanding the minor shifts that took place as a result of the problems associated with evolution and high-growth it faced, Spectrum has always been differentiated while being integrated.

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Insert Figure 7 about here

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SECOND UNIT OF ANALYSIS: THE LOCAL MEMBER BANKS

The second unit of analysis deals with the local member banks, which serve domestic clients with the products offered by Rabobank. We will focus particularly on the knowledge process characteristics of the local banks to describe the degree to which the local banks constitute an internal network. The three themes of structure, management and knowledge processes guide the analysis.

Organizational structure

In almost all of the interviews, the general managers stressed that each local bank is largely autonomous. Although the central organization involves itself in affairs that are best handled by a central actor or those that are of concern for the entire organization to keep it on track, both operational and strategic matters are almost completely at the discretion of the local units. That is, within the confines of the industry Rabobank is operating in, what the name and label Rabobank stands for, what it portends to be, and the products and services offered, local units act upon local circumstances using their own resources, and with these may adopt whatever practice to serve its clients. Despite the autonomy of the local units, some linkages exist between local banks in the form of management meetings, seminars, national and regional consultative structures, interpersonal networks and Information Technology networks. In the interviews it was revealed, however, that local banks make no use of teams of employees originating from different local banks.

The interviews also indicated that differences exist among local banks as to the commonality of this consent. An important cause of this is that the central organization develops most products and services to be distributed through the local banks. Moreover, a few of the general managers felt that the central organization involved itself more in their local units than it did in others. By corollary, they argued that the local banks they lead are dependent on the central organization rather than on themselves and other local banks, and that the central organization exerts a role too profound to call Rabobank a network organization. At the other extreme, a few of the general managers experienced that their local units operated in a ‘market with the name Rabobank pinned on it.’ That is, they felt they were loners in a ‘market’ where local units, rather than collaborating, competed with each other to gain the interest of the best clients.

Management

Managers and employees at different levels within the local banks all have different responsibilities as for both the creation of knowledge within the local bank they work for and the sharing of knowledge with other organizational units of Rabobank. Differences in responsibility for the creation of knowledge within local banks are not significant across general management, supervisory management and employees. The specific roles exercised at each level vary substantially though. As a general manager illustrated this in an interview, ‘my role is more one of making sure that knowledge gets created and used properly, whereas the supervisory managers and, even more, the employees are the ones who must do it. They are most closely to our clients.’

As for the sharing of knowledge across local banks, in interviews general managers adduced arguments in support of their importance. Since general managers generally have longer tenure and therefore know more people in Rabobank, it appeared they have first responsibility regarding their local units, and are usually the ones who participate in seminars and meetings. As one of the general managers mentioned, the person in such a position ‘is the one designate for the sharing of knowledge with colleagues.’ Heavy responsibility for sharing knowledge with other local units is put on the general managers. The role of supervisory management, and even more for employees, is limited in that they hardly participate in events that transcend the boundaries of local banks.

Knowledge processes and flows

In Figure 8, the two types of knowledge flows that occur in the local member bank setting are depicted: (1) vertical knowledge flows from the central organization Rabobank Nederland to the local banks, and (2) horizontal knowledge flows between the local member banks. The interviews revealed that flows of knowledge at Rabobank are primarily *vertical and uni-directional* in the sense that the central organization or one of its affiliated subsidiaries is the main source of new knowledge for the local banks. Horizontal knowledge flows between local banks are less important. Furthermore, the interviews made clear that the general managers of the local banks tend to perceive the central organization as ‘thinking for them,’ and that most knowledge is retained at and obtained from this central point. It appeared that most local banks rely on knowledge obtained from the central organization. Examples are advisors of the central organization, products and services, seminars or company documents. The central organization and affiliated subsidiaries invent and develop the core and related products and services respectively. These products and services are distributed via the local units. Market knowledge and knowledge of the local context, however, is mostly created and obtained within the local bank itself.

In line with this finding, a manager at the central organization observed, for example, that Rabobank 'focuses increasingly on systems'. Consequently, the locally embedded distinction between two different local banks in two different geographic areas is becoming blurred in the sense that the local banks in that way are 'nothing more than an interface between client and system', making cooperation and knowledge sharing between them unnecessary.

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Insert Figure 8 about here

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Corroborative evidence: supportive instruments and barriers

Despite the change journey, within the local member banks the mechanisms for sharing knowledge have remained primarily vertically oriented and relate particularly to the transfer of explicit knowledge. The interviews indicate that these 'vertical' mechanisms coordinated by the central organization include seminars, documents and notes, and the use of advisors of the central organization to help local units comply with the wishes of the client at the local site when the matter is too complex to be locally organized. These mechanisms facilitate the vertical transfer of explicit knowledge; mechanisms for the horizontal dissemination of tacit knowledge are not widely used.

Although extremely viable for sharing knowledge horizontally, the formation of interfunctional and interunit teams and the transfer of employees and management between local banks are among the less frequently used instruments for horizontal knowledge sharing. The 'horizontal' mechanisms of management conferences and informal talks are more popular, but are not used to intentionally share knowledge. The interviews clarify that *horizontal knowledge sharing* is inhibited to the degree that each local bank, partly because of its relative autonomy, is perceived by its management to be a separate organization rather than a unit serving the entire organization of Rabobank Group.

To a large extent, the local banks compete with each other within the organization. Furthermore, the Boards of local banks were made of local inhabitants, who did not have an interest in that their local bank shared knowledge with other local banks. This was reflected in the fact that when, for example, the owner of a home appliances shop was on the Board of a local bank, and the owner of a competing shop was on another local bank's Board, they both had an interest in not sharing knowledge. Therefore, local banks are not always receptive to each other. Obviously, this restricts sharing knowledge between local banks. Another barrier to the horizontal spread of knowledge is the observation revealed in an interview that many units do not know what they know, and moreover, do not know where to find the appropriate knowledge. To a large extent, apparently, Rabobank's local banks are not transparent enough to effectively and efficiently share knowledge.

Although the local member banks look like an internal network form of organizing from the outside, a closer look at structure, management, and in particular the knowledge flows between local banks reveals that the 'network' of local member banks actually is not a network yet. But, as mentioned above, a change journey was instigated in 1997–8 to bring the local member banks more to an internal network form of organizing, the consequences of which still have to be seen.

THIRD UNIT OF ANALYSIS: SPECTRUM DURING 1992–8

This embedded case study illustrates the change process and evolution of Spectrum in the period 1992–8. As mentioned above, Spectrum is a business unit within Rabofacet, the facilitatory division within Rabobank (see Figures 5 and 6), created to provide Rabobank Group with cutting-edge knowledge in particular in the area of Information Technology (IT) in order to ameliorate Rabobank's competitive position.

Structural transition of Spectrum 1992-8

The structure of Spectrum underwent substantial changes in its short history, which are illustrated in Figure 9. The major transition occurred in 1994–5 when the previous way of organizing was completely recast. At its founding in 1992, Spectrum employed 30 people and was organized along two explorative Product Units (PUs) that stood in close relation to each other. Shortly after its founding, Spectrum obtained a number of groups of Information Technology experts from other parts of Rabobank and incorporated them as three new PUs in the existing organizational structure. With the inclusion of these three PUs, the number of employees raised from 30 to 60 employees. This increase in organizational size triggered a process of compartementalization. This process was strongly visualized by the organizational dress employed. As a Management Team member observed, ‘People in one Product Unit wear T-shirts, whereas people in another wear suits. This illustrates the difference in culture between the Product Units, and the resulting lack of communication and knowledge sharing between them.’

As these developments inhibited the creation and sharing of knowledge horizontally across PUs, as illustrated in Figure 9, in 1994–5 the structure of Spectrum was completely conceived anew by Spectrum’s management team to regain the internal network structure and the explorative focus of the years right after founding. The five PUs were abolished, and instead three ‘Areas of Attention’ (AoA) were conceived to change the rhetoric used in Spectrum. Partly because the number of employees increased to approximately one hundred, each AoA housed a variable number of interdependent, fluid ‘clusters’ to retain, as the Business Unit manager of Spectrum referred to it, ‘the subtlety of small groups.’ The number of clusters in an AoA was deliberately variable in order to be able to tailor Spectrum to client demand and technological advancements. That is, in one period of time, there could be five clusters, whereas in a subsequent period there could be three or eight clusters, possibly with entirely different names.

By the end of 1996, the number of employees had increased to 220. As in the previous period, there was only one formal management layer. The number of organizational layers, however, has increased with one with the establishment of projects and teams cutting across clusters and AoAs to ease collaboration. Although the increase in number of employees led to tighter time schedules, in particular on behalf of the managers, and, moreover, to an additional AoA, the way of organizing remained intact. This way of organizing remained the same in the period 1997-8. However, as the number of employees has increased by then to approximately 350 people, partly because of the inflow of people from another business unit of Rabobank, the total number of AoAs has increased to six, and the number of clusters has increased as well.

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Transition of management processes in Spectrum 1992-8

The structural transition process of Spectrum towards an internal network had also implications for the management processes. In particular, the increase in employees had a substantial impact on the managerial function in that the 'spans of control' of managers increased rapidly over time. During the main transition period in 1994–5, an extra layer of coordinating personnel was added to free up the management team as the latter were not longer in the position to oversee the activities of all employees in the AoAs they led. These clustercoordinators were not appointed formal management positions with the appropriate management tasks (e.g., execution of performance appraisals, authority to sign for contracts of more than 5,000 dollars); rather, they came to be, as the BU-manager of Spectrum called them, 'the 'functional feeders' of Spectrum, and their task was limited to overseeing and leading the activities in the clusters in order that the goals of Spectrum were adhered to. In addition, they also served an important role in establishing new linkages across clusters and AoAs. Thus, although there were three *organizational layers* (management team - clustercoordinators - employees), there was only one formal *management layer*.

In 1996, the number of organizational layers increased by one with the establishment of project managers heading the projects and teams of persons in different clusters and AoAs. These project managers originated from one of the clusters participating in the project, and if the project was traversing AoA boundaries they originated from the Management Team. As the number of employees increased from approximately 220 to approximately 350 over the period 1996-8, the time constraints of managers had substantially increased. As a Management Team member said, 'If I do all my performance appraisal talks with the employees, I will be busy for one to two months.' This development has currently led to extensive discussions to lay formal management functions with the clustercoordinators. This discussion has focused, on the one hand, on the issue that the Management Team of Spectrum wants to maintain only one formal layer of management to preserve its flatness and concomitant agility and flexibility; on the other hand, it focused on the awareness that the increasing size of Spectrum requires additional management resources.

Currently, the Management Team of Spectrum appears to favor the latter point of the discussion. As the BU-manager of Spectrum recognized, ‘the *way* of organizing matters, no matter what kind of structure you have. The processes are important.’ This way of organizing, emphasizing collaboration, communication, informality, and fluidity, has always been an integral part of the vision of Spectrum. All the changes in Spectrum have also occurred under this vision of the BU-manager, who has been with Spectrum since its founding, and is everywhere else in Rabobank recognized as the champion of Spectrum. Almost all changes in the transition process of Spectrum have been the discretion of the BU-manager and the Management Team.

Knowledge flows in transition within Spectrum 1992-8

Over its seven-year existence, Spectrum has witnessed different developments regarding the incidence of horizontal and vertical knowledge flows. These developments have been both the result and the cause of the managerial and structural changes that took place to reconceptualize the business unit. This process of reconceptualization stems from continuous threats to Spectrum’s transition process towards an internal network form. Shortly after its founding, the two PUs stood in close relation to each other and were able to share both explicit and tacit knowledge directly on a horizontal basis, either by face-to-face contacts or via Information Technology systems, across the boundaries of the respective PUs. With the incorporation of another three PUs in 1993, the increasing compartementalization quickly led to progressing differences among the PUs, inhibiting the process of horizontal knowledge sharing across PU boundaries.

The main transition period of 1994–5 was instigated to reconceptualize the configuration of knowledge flows, and to increase the incidence of horizontal knowledge flows aimed at knowledge creation and sharing. With the rhetorical change of Product Units into Areas of Attention (AoA) and the incorporation of clusters, it was aimed to resuscitate the idea of smallness of Spectrum and, as a result, the sharing of knowledge across boundaries. Clusters remained small in order to ensure that the employees working for the clusters needed to consult each other in Spectrum to solve their problems; by means of formal routes as well as informal routes, such as, as the Chief Executive called it, ‘unintended meetings at the central coffee machine.’ As the number of employees increased constantly, however, the AoAs became also ‘islands’ within Spectrum in terms of knowledge sharing. This doubtlessly led to less innovative efforts by combining knowledge from different AoAs and clusters to generate new products and services.

The incorporation of projects as a structural mechanism was executed in 1996 to ameliorate the transfer of knowledge across boundaries within Spectrum. However, as more employees started working for Spectrum, projects were increasingly established within the confines of the AoAs, not crossing the boundaries of them, in the overall leading to a decrease in the incidence of horizontal knowledge flows. The relative increase of vertical knowledge flows as opposed to horizontal ones was also strengthened by the incorporation of a substantial number of employees from another business unit of Rabobank. This other business unit had a hierarchical tradition, which was internalized by its members. As a result, in joining Spectrum these employees witnessed substantial difficulty in adapting to Spectrum's internal network characteristics.

DISCUSSION AND CONCLUSION

Although the process of change at the corporate level is still going on, it has become evident that Rabobank Group increased its effectiveness in managing knowledge creation and sharing processes throughout the organization in the period 1988–98. Knowledge, knowledge creation and knowledge sharing constituted an important external and internal driver for Rabobank to introduce internal network forms of organizing. As it aimed to differentiate itself from its main competitors by providing fully tailored products to its customers, Rabobank needed a strong capability in creating, sharing and integrating knowledge (cf. Van Wijk and Van den Bosch, 1998). However, the case study was also illustrative of the *bipolarity of structure* that remained imperative to provide all customers with what they demanded. A hierarchy needed to remain existent for mass products, while a network was considered imperative to capitalize on the management of knowledge.

Related to this finding, with the first analytical question we wanted to gain insight into the differential paces of change when a firm moves towards internal network forms of organizing, and the drivers for change. It appeared that a large corporation's organizational parts may exhibit *differential paces of change* when they develop new forms of organizing. During Rabobank's change journey towards an internal network form of organizing, several internal networks developed concurrently at different paces in distinct divisions and organizational units. Three antecedents to these differential paces of change could be observed. All these antecedents deal with the heterogeneity a firm exposes. First, the size of Rabobank restricted the development of one large internal network. Second, since different divisions and organizational units served different customers, it was required to pursue different change processes for each division or unit. Third, the nature of the products, mass or tailored, proved a large determinant of the change processes pursued.

These antecedents also relate to the driver for change at Rabobank. Although strong external pressures were present in the shape of environmental dynamics, the individualization of society, and changes in the nature of products and services offered, the most important driver at Rabobank was an internal one. While its competitors were still mainly offering mass products or 'tailored' them by integrating the different products, Rabobank decided to move further and provide its customers with fully tailored products. As a first mover in the industry to do so, Rabobank recognized it needed to restructure and adopt a new form of organizing, an internal network.

It was difficult to assess the consequences of adopting internal network forms of organizing at the local member banks, for they are in the beginning of the process of change. It was apparent, however, that because the central organization remained developing the bulk of the products, the local member banks continued to rely heavily on the vertical knowledge flows generated by the central organization. Furthermore, when tailoring products to client needs at the site of the local member bank, it was done primarily without the consultation of other local member banks and the knowledge stocks these held. As decreases in horizontal knowledge flows indicated a decrease in the degree of internal networking, the *knowledge perspective* seemed a good indicator to assess whether a firm, or organizational unit, operates as an internal network.

This relationship, earlier suggested by Van Wijk and Van den Bosch (1998), was also illustrated at Spectrum. In addition, in the case of Spectrum it has been illustrated that internal networks increase the effectiveness by which knowledge can be created, shared and integrated. In this way, new combinations of knowledge were possible that led to the exploration of new products and services. The impact of size on the evolution of Spectrum, however, still is an unresolved issue. In 1996, Spectrum found a solution by introducing Areas of Attention and clusters. However, as size continued to increase, Spectrum could not continue to include organizational and managerial levels as this unequivocally led to an increase in the degree of hierarchy and a decrease in the degree of internal networking. Apparently, size plays an important role in the development towards and evolution of internal network forms of organizing.

Besides being indicative of the importance of the knowledge perspective, all units of analysis were also illustrative of the fact that *complementarities* are needed between structural, managerial and knowledge attributes of organizations during change, and with that reinforced earlier findings (Starbuck, 1993; Whittington, et al., 1999). The case evidence of the local member banks suggests the problem of getting rid of the structures and managerial hierarchies that correspond with traditional organizations. Without changing structure and management process towards those corresponding to internal networks, substantial horizontal knowledge sharing will not take place. The Spectrum case provided evidence of the complementarities between structure, management and knowledge processes as well. For instance, it appeared that when horizontal knowledge sharing opportunities were threatened, deliberate structural and managerial changes took place aimed at restoring these opportunities.

Considering the fact that horizontal knowledge flows may be considered the 'lifeblood' of internal networks, the understanding of the *enabling and restricting factors* of this knowledge sharing process were found to be of great importance. Our case evidence contributes to this understanding in several ways. From the complementarities argument made above, it is obvious that organizational structure and management processes can both enable and restrict horizontal knowledge sharing. The more organizational structure and management processes are in line with those of an internal network, the more enabling influence will be exerted. Although the effect of size is a traditional attribute of organization that has been examined in earlier years, the study at Spectrum underscored again that size is an important factor to consider as it impinges strongly on the development and evolution of internal networks. Although Spectrum found a solution to this problem in 1996 with the inclusion of Areas of Attention and clusters in the organization, this also meant an increase in the degree of hierarchy. The same solution may not be available for the time when the next threshold of size is reached, for that would mean an increase in the level of hierarchy that could threaten the progress of the transition process towards internal network forms of organizing. Nevertheless, hierarchy proved indispensable in providing mass products to customers. The use of hierarchy, however, appeared to bear important side-effects in terms of the knowledge flow configuration used among the local banks.

Besides providing insight into the key analytical questions that were addressed, the case study was also illustrative of some other issues that may be important for future research. First, the change journey of Rabobank illustrates that there possibly is a organic element involved in moving towards internal network forms of organizing. In first instance, top management just recognized to adopt a new form of organizing. Only in a later stadium this meant moving towards an internal network form of organizing. Whether Rabobank has managed to move towards an internal network form of organizing in terms of the visualization Rabobank's CEO had of it is difficult to assess, for many parts were still in the process of changing in 1998. At the time of the investigation, the local member banks appeared not to be functioning as an internal network. But, the transition towards this form of organizing has commenced in 1997–8, and it is therefore difficult to assess whether the local member banks have started to operate as an internal network the CEO visualized. Spectrum, on the other hand, was created as an internal network, but experienced the difficulties of being a high-growth firm. As it size increased, operating as an internal network became more problematic. With the efforts of the business unit manager and the intermediate changes in the structure of Spectrum, however, it has managed to some extent offset this effect. The developments at Spectrum also indicate to organic evolution.

Second, the case study indicated that internal networks are not constrained to *multinational operations* alone. Much of the literature on new organizational forms stems from scholarly work done in the fields of international management and MNCs. In the context of the MNC, new modes of organizing emerge because of the turbulence which requires a resilience in being locally responsive while maintaining a global, integrated profile (Bartlett and Ghoshal, 1989; 1993; Hedlund and Ridderstråle, 1997). Grounded in the same adage—being close to customers, and providing them with the products they need—, in the national context, the units of firms are also required to be locally responsive and differentiated, while remaining integrated as a whole (cf. Baker, 1992; Lawrence and Lorsch, 1967).

Third, there are important *contextual measures* in the case study that have to be taken into account in future research. The failure of the local banks to operate as an internal network may be partly ascribed to the fact that Rabobank is a cooperative. The cooperative structure made banks largely autonomous, and with the involvement of local inhabitants as members in the Boards of local member banks, local banks were not prone to share their knowledge with other local banks. Thus, while the cooperative structure certainly proved valuable in the development of internal networks for the mere absence of a strong hierarchy as, for example, multidivisional organizations have, it also provided Rabobank with some barriers that impinged upon the development of its internal network.

In conclusion, the analysis of the change process towards new forms of organizing in a large corporation revealed that different parts of the corporation appeared to have differential paces of change, and were subject to the bipolarity of forms of organizing. These differential paces of change influence the knowledge flow configuration both at the corporate level and at the organizational unit level, and consequently, the opportunities for knowledge creation and sharing. Strategies aimed at increasing these opportunities have to take into account these findings.

ENDNOTES

[1] Invented by German mayor Friedrich Wilhelm Raiffeisen (1818–1888), the cooperative principle was grounded in the establishment of credit institutions of which farmers became members by depositing their savings and excess financial resources in the form of earnings and profits. Coordinated by representatives chosen from and by the members, these what may currently be called local member banks pooled together financial resources from a many different sources. In turn, when farmers were in short of financial resources in later circumstances, the credit institutions could remedy shortages at lower interest rates than when farmers contacted traders and shopkeepers for financial resources while giving their harvest as security. The profits made are explicitly used to preserve the continuity of the cooperatives, rather than paid out as dividends to stockholders. Another essential part of the cooperative principle is that major decisions are decided upon on the basis of democratic governance; that is, in meetings where associates from both the local banks and the central organization meet to discuss, and occasionally vote for the strategies to be implemented.

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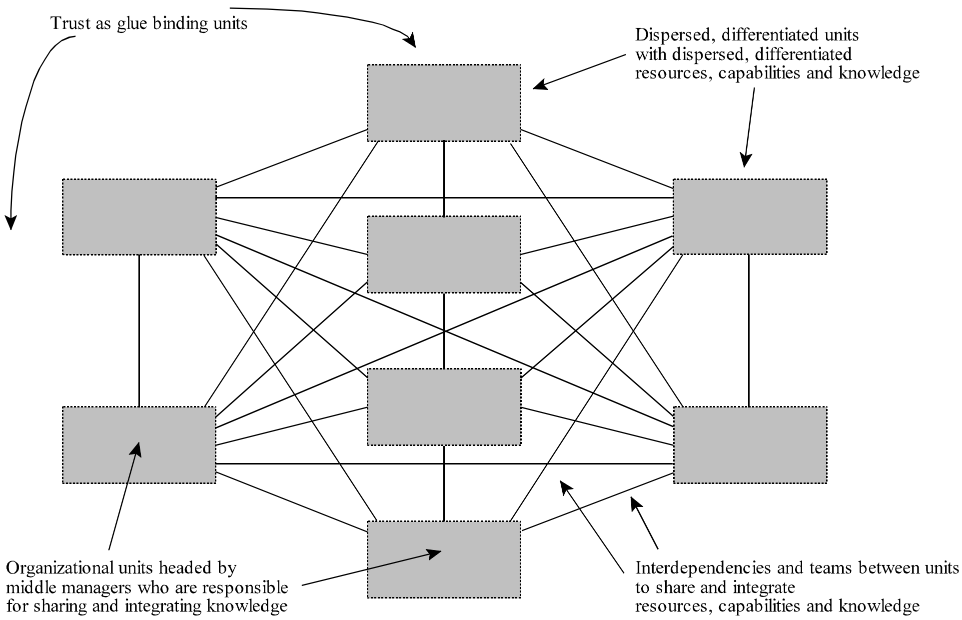
FIGURE 1:

An example of an Internal Network



Based on Ghoshal and Bartlett, 1997

FIGURE 2:

Embedded case study design of transition process:

Three units of analysis

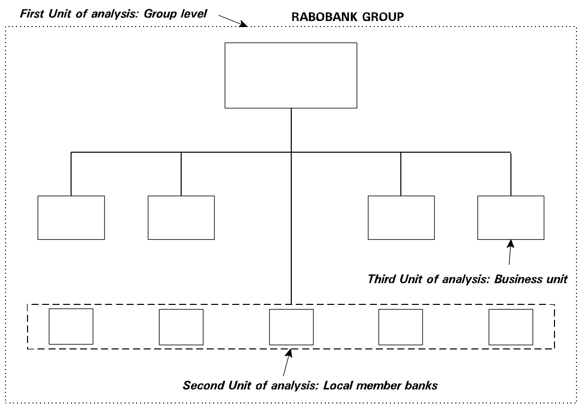
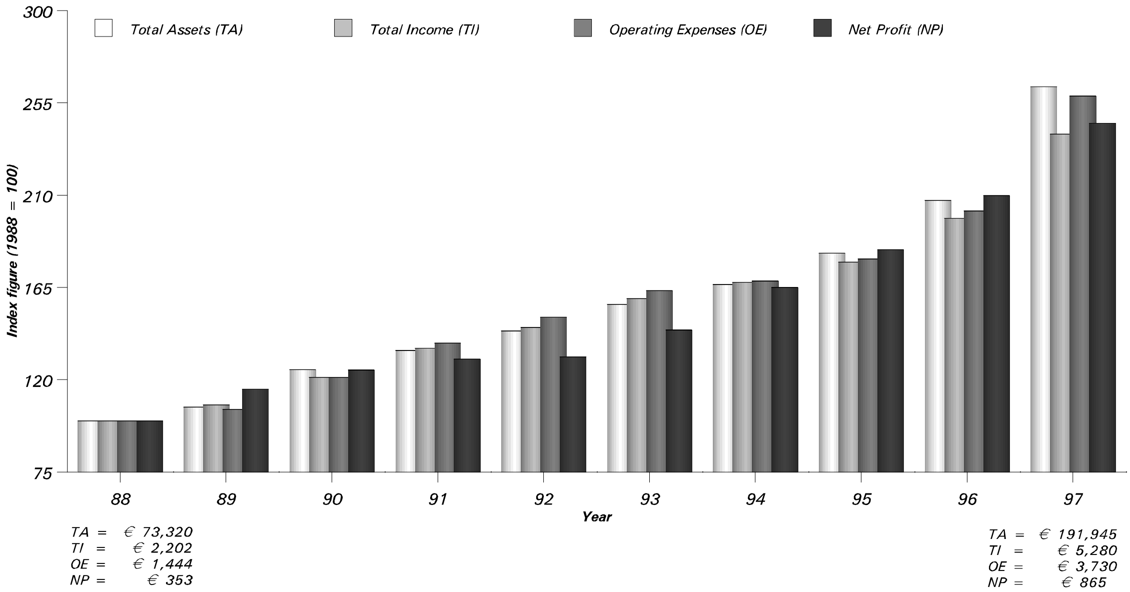


FIGURE 3:

Performance index figures Rabobank Group 1988-1998

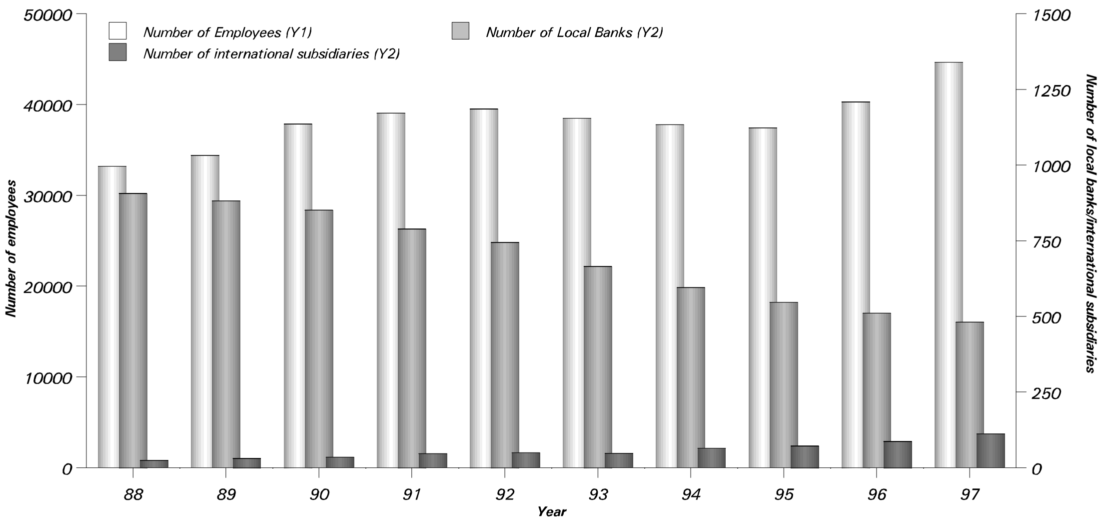
(1988 = 100)



Source: Annual Reports

FIGURE 4:

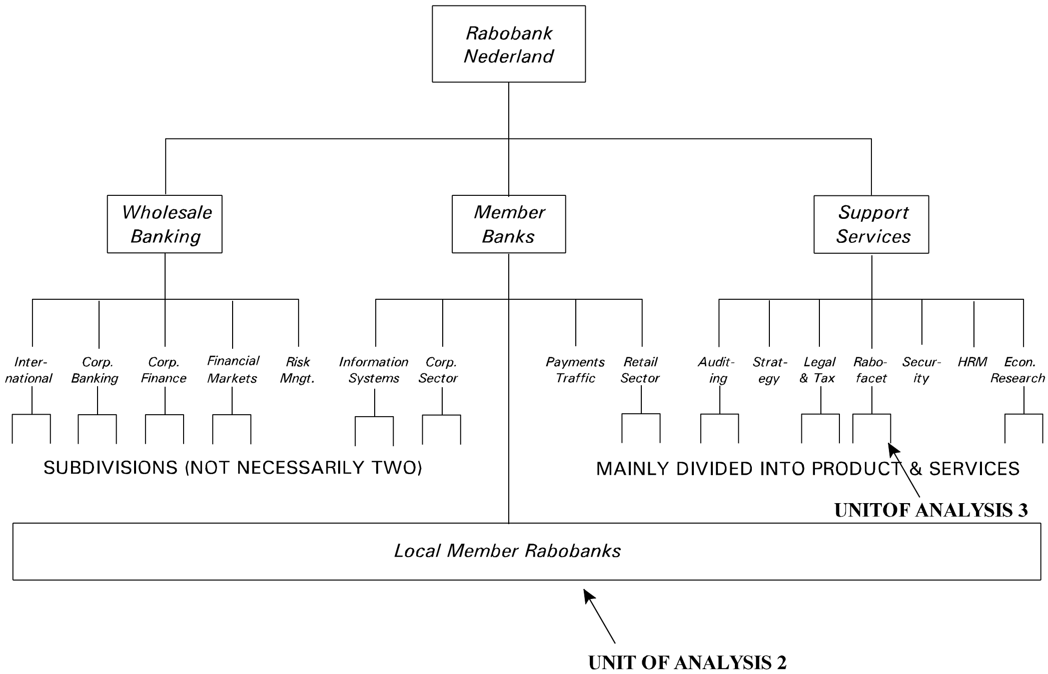
Number of employees, local banks and international subsidiaries Rabobank Group 1988-1998



Source: Annual reports

FIGURE 5:

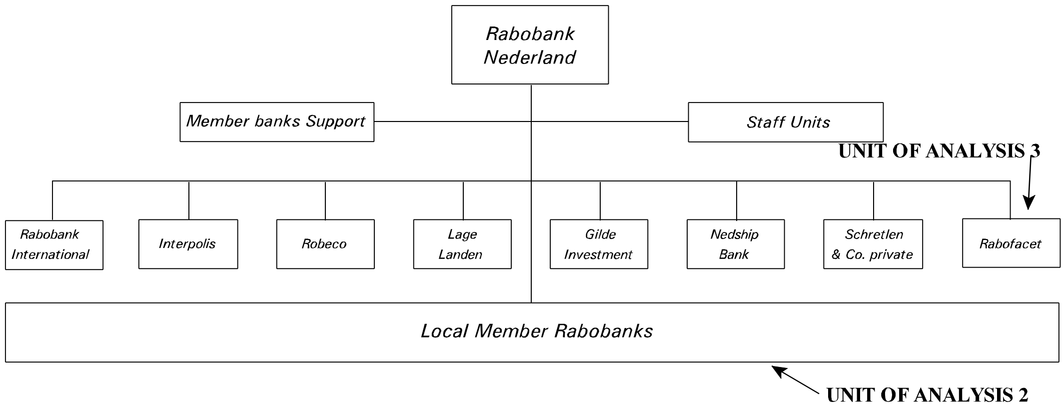
Organizational Structure Rabobank Group 1988



Source: Annual Report

FIGURE 6:

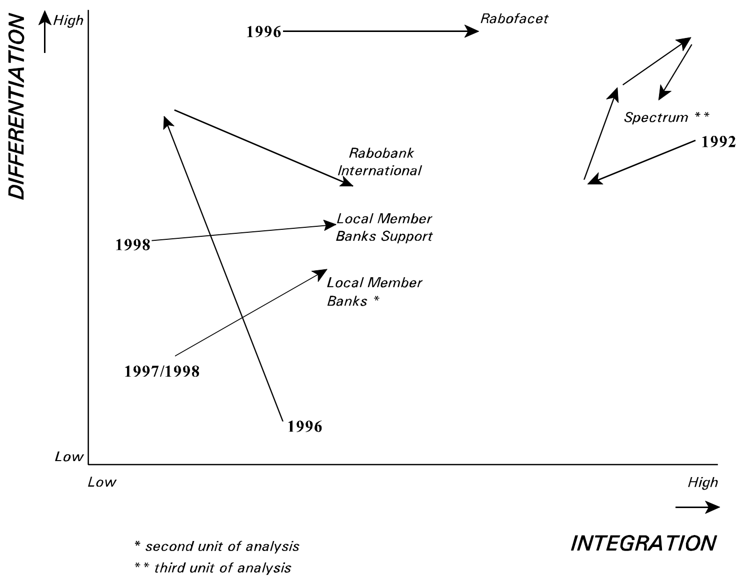
Organizational Structure Rabobank Group 1998



Source: Annual Report

FIGURE 7:

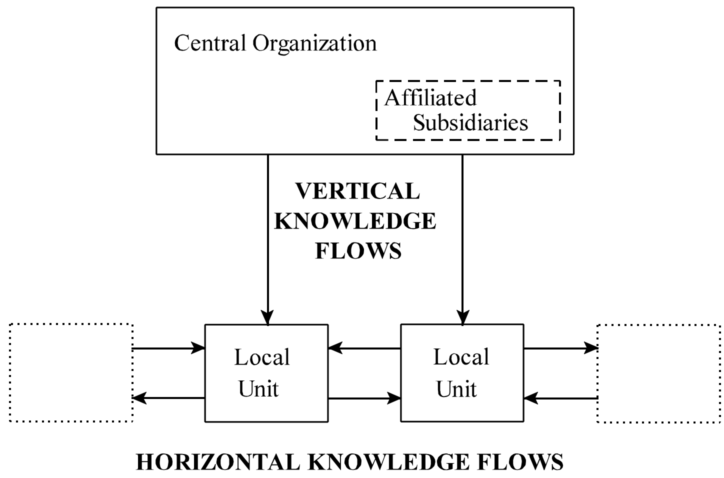
Differential Paces of Change of five parts of the Rabobank Group



Solid lines indicate followed change processes

FIGURE 8:

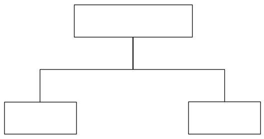
Knowledge flows in the local member bank setting



Source: adapted from Van Wijk and Van den Bosch (1998)

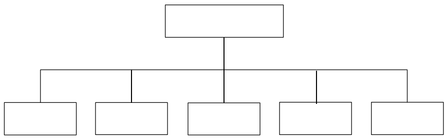
FIGURE 9:

Spectrum’s transition process towards an internal network: 1992–1998



1992

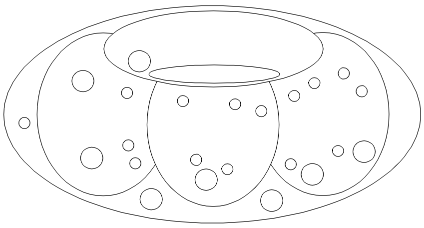
30 employees
2 Product Units



1993

60 employees
5 Product Units

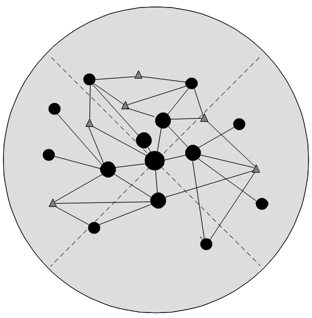
1994–5



100 employees > 120 employees
3 Areas of Attention
15 Product Clusters

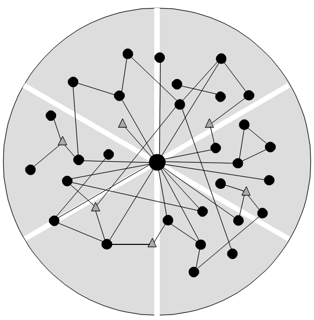
1996

220 employees
4 Areas of Attention
13 Clusters



1997–8

350 employees > 550 employees
6 Areas of Attention
29 Clusters



Ž = Management Team
Ž = Clusters
• = Projects

TABLE 1:

Key analytical questions

	KEY QUESTION	ADDRESSED IN
I	Why and how do large multi-unit firms incorporate internal network forms of organizing? Do different paces of change towards internal networks exist?	First unit of anslysis
II	How are organizational structure, management and knowledge processes of internal networks different in comparison to traditional organizational forms?	Second and third unit of analysis
III	Why are knowledge processes important and how can these processes be used in assessing the progress of the change process towards internal networks?	Second and third unit of analysis
IV	What are the enabling and restricting factors for horizontal knowledge sharing in internal networks?	Second and third unit of analysis

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