DEPARTEMENT TOEGEPASTE ECONOMISCHE WETENSCHAPPEN

ONDERZOEKSRAPPORT NR 9807

KNOWLEDGE INTEGRATION ACROSS BORDERS: MANAGING THE TRANSITION PROCESS.

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D/1998/2376/07

Knowledge Integration Across Borders: Managing The Transition Process.

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Accepted for publication in "*The 21st Century Opportunities and the Challenges for the Asian Economies : Science, Technology and Innovation Policy*", edited by Heitor, M ; Gann, D. ; Gibson, D.; Martins, R. and Shariq, S. , Rowan Littlefield, 1998, forthcoming

Earlier version presented at "*International Conference for Technology Policy and Innovation*", Macau, July 2-4 1997.

Abstract

From their previous research on regional and global company integration, the authors concluded that the management of the transition *process* has a large impact on the successful outcome of the integration of the company's activities and resources. In this paper, it is examined how their findings on the process management aspect possibly apply to explicit cross border knowledge integration.

The author's conclusions on the transition process of fostering cross border integration, are to a large extent applicable to cross border knowledge management efforts as well. Some of the initial findings seem to be even gaining relevance in a knowledge integration context. They have confronted this hypothesis with case studies of the knowledge management and integration processes in a number of companies, particularly *McKinsey and Company* and *Alcatel* as compared to empirical in-depth research at *Procter and Gamble*. They observed that careful management, planning and monitoring of the transition *process* of a multi-national organization with dispersed knowledge sources towards a regionally or globally integrated network organization with cross border leverage of knowledge and learning, is crucial to achieve successful knowledge integration.

1. Introduction

1.1 Knowledge management and integration

While traditional strategy and management models concentrated on product market attractiveness and appropriate positioning of companies in the market and industry as a basis for company success, the recent changes in the technological, political and sociological environment of business have forced strategists to draw more attention to

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the 'internal' view of business organizations. In this often more dynamic view of strategy, the foundation for sustainable competitive advantage lies in the current and future resource base, and especially the intangible and tacit resources, of the company[1] and its capability to grow and nurture them better and faster than the competition.

In light of this evolution, it is no surprise that research and framework development within the strategic management field has recently embarked on a 'knowledge management route'. Knowledge is called 'the most strategically-significant resource of the firm' (Grant, 1996).

As a consequence, the demand for *innovative* and *integrative* capabilities of the company has drastically increased. It is frequently heard that top managers are concerned about the pressure for increasing sophistication and specialization of the company's knowledge. In addition, the ability to *share and coordinate* the company specific know-how, learning and innovation between different parts of the organization is acknowledged to be of increasing importance. Not only is knowledge the crucial, or even sole, base for competitive advantage, the ability to share the knowledge and learning, across functions and country borders, has grown out to be a 'strategic imperative' for any (international) company in the 1990s (Bartlett and Ghoshal, 1989). A recent article, entitled 'Making local knowledge global' is a clear illustration of the complexity and difficulties, and the cruciality of sharing learning and know-how across country borders (Cerny, 1996). The role of the leader and manager of the organization has evolved accordingly towards 'building a learning organization' (Senge, 1995).

1.2 Company integration

Bartlett and Ghoshal (1989) showed that in addition to the company's ability to exploit and leverage the worldwide learning, innovation and knowledge, global efficiency and local responsiveness are key success factors for international companies (see also figure 1). The art of international business is to *integrate and coordinate*, cross-functionally and across country borders, the company's activities, resources and knowledge, while staying or becoming locally responsive. It has been frequently argued that the pure multi-domestic approach, with its widely dispersed and duplicated activities, resources and knowledge is completely outdated ; an integrated and coordinated network approach to organization is required for success in the global Information Age.

In line with this view, today's business news is overwhelmed with articles about the integration challenges of various companies, especially in Europe. It seems that the recent pushes towards more deregulation, market convergence and liberalization (especially within the European market : Europe '1992', the European Monetary Union, etc.), together with the overall globalization of the economy, have created new opportunities for increasing efficiency through coordination, and even centralization, of international activities and resources, and for worldwide and regional leveraging of innovation, learning and knowledge.

While the specific drivers and requirements for internationalization and cross border integration may vary by industry and business (as discussed below), it is clear in these

days that in most industries and companies, and especially those operating in Europe, more rather than less integration is required and many companies have only just begun to make this happen in their organizations. Other have embarked much earlier but found many pitfalls and frustration. All of this is driven largely by lagging profitability (fragmentation; duplication of activities, resources and knowledge; and NIH (not invented here) are significant causes of this[2]), increasing customer pressure (follow the customer's internationalization or integration) and pressure on 'time to market'.

While various researchers have taken different angles and perspectives on this company integration debate and extensive discussions about why (not) integrating and about the organizational requirements of an integrated company structure have taken place, relatively little research has been conducted on the management issues of company integration in a European or regional context. Even less attention has been paid to a related question, at the heart of the authors' ongoing research : how do companies achieve more and better integration? How can executives manage the transition from the existing organization to the new one? How can they manage the process?

1.3 Position of research

In an earlier contribution (De Koning, Verdin and Williamson, 1997), the authors have focused on the process management issue. One could indeed argue that their observations so far have focused especially on integration *per se* and less on the *learning* (which refers to the extent of world-wide or regional leveraging of innovation and knowledge, as indicated on figure 1 with the 'learning' axis). Nevertheless, it is frequently observed that opportunities along the 'learning' axis have been the most important in driving cross border integration in some cases, especially in what is often referred to as multi-local businesses. Various service businesses have embarked on explicit internationalization and integration, not because the key benefit for them was in reducing costs and/or eliminating duplication, but because primary opportunities and benefits for cross border learning exist (e.g. Vedior International case in the European temporary work services business (Van Heck and Verdin, 1996) and Eureko case in the European financial services industry (Freeman and Verdin, 1997)).

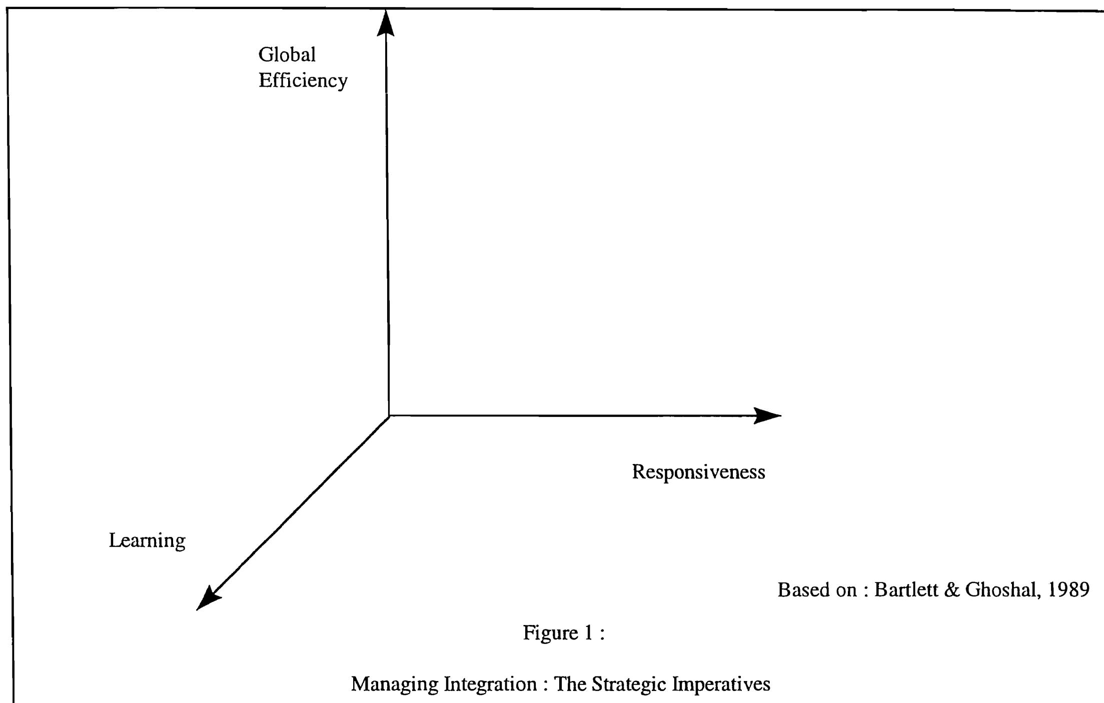

Figure 1 :

Managing Integration : The Strategic Imperatives

Even when the Integration (or Global Efficiency) axis was the most important dimension along which integration and internationalization was achieved, even then it turned out that initiatives to boost efficiency resulted in and/or were supported by improvement of the worldwide learning. In that sense, one could consider the learning axis a dimension to push the integration for global efficiency on.

While some of the objects we initially observed had only implicit (or at least less explicit) consequences for the knowledge integration, the question remains if the initial findings, mostly although certainly not exclusively, collected from integration cases with the objective to increase the global efficiency, apply when the explicit objective is to better integrate knowledge, innovation and learning. In other words, the authors see knowledge and learning broader than solely as a dimension to push integration on. The question under consideration in this contribution is : what can be learned from the observations in company integration and management of the process, for making cross border knowledge management and integration happen?

Although the observations were not limited to company integration in Europe, the issue seems particularly 'hot' in a European context. Corporate Europe has been experiencing drastic changes in its business environment and were hence exposed to various opportunities for cross border leveraging of the company knowledge, dispersed around European and worldwide subsidiaries.

Recent research has recognized strong regional (for example European) organizations as a key step in the globalization process (Malnight, 1996). The authors would argue, however, that strong regional organizations have a role beyond a proverbial “transit stop” on the road to full globalization. As the world seems to be polarizing into ever stronger and more articulated regional trading blocs, the importance of regional strategy and organization building has been recognized as an increasingly significant goal in its own right (witness the early calls made e.g. by Morrison, Ricks and Roth,

1991) and not just as some 'transitory' state from national to global organizations (This point is further developed in De Koning, Subramanian and Verdin, 1997).

The authors used a longitudinal case study methodology to explore the managerial process shifting from national subsidiaries to global or regional organizations. The core of the initial research project originated from in-depth field research at Procter & Gamble Europe (Bartlett, De Koning and Verdin, 1997)[3], together with other integration examples like 3M (Van Heck and Verdin, 1996). The observations and findings from this were checked and deepened making use of other case studies which had more emphasis on the *learning* and *knowledge* integration agenda : McKinsey and Company (Bartlett, 1996) and Alcatel (Bonheure and De Meyer, 1992 ; Bogaert, De Meyer and Verdin, 1997). All these served as the basis for the investigation and allowed to build a richer understanding of the complex organizational changes that lead the way for the creation of integrated organizations, worldwide as well as in Europe.

Describing some of the insights gained and lessons learned from their ongoing research, the authors build a framework to help managers understand the ways in which their chosen process of knowledge integration influences the final outcome, to lay out the different options that are available, and to help them make choices both in terms of achieving their organizational goals and identifying efficient and effective mechanisms for getting there. As the existing 'old' sources of competitive advantage (like differentiation or cost leadership) have faded, few managers need to be convinced about the importance of knowledge and the creation of it. Or as one said : "The belief is that the process by which knowledge is created and *utilized* in organizations may be the inimitable resource for creating sustainable rents" (Schendel, 1996). Hence the interest in understanding how to make knowledge integration happen.

1.4 The critical role of process: How to get there ?

Integration in global or regional blocs is often far less easily achieved than planned. Initial responses by many companies have led to the creation of global or regional headquarters, and integrating some parts of the value chain or by introducing some kind of cross border task forces (e.g. 'Euro-teams', activity groups or coordination centers; Schütte, 1996). But in practice, few companies have achieved a high level of European integration simply by adopting these kinds of initiatives (Bleackley & Williamson, 1995)[4] or have succeeded at all. Integration requires a great deal more than redrawing the organizational boxes or creating new ones.

Some companies have chosen a slow but steady route to integration and have spent an impressive amount of time and energy to reach results which could probably have been achieved much more quickly and more efficiently. Some decided, being forced by crisis, to drastically reorganize into cross-border structures. Others enthusiastically headed down the road to integration only to find out that they have become stranded half-way towards their goal; stuck in the middle as neither fish nor fowl. Still others emphasize the unexpectedly high cost of integration, in terms of the time and effort required. The general consensus is that actually capturing the benefits of highly-

integrated organizations turns out to be much more difficult than imagining how a shiny, new global or regional configuration should look.

The authors believe that a large part of the problem can be traced back to insufficient attention to the planning and implementation of the process of integration as well as the overall framework within which it is to take place. The importance of the processes deployed to promote greater interaction has recently been flagged in the context of headquarters-subsidiary relations and the role of regional headquarters (Shütte, 1996). Going beyond questions of the position and the role of regional or global headquarters within multinationals, they find the issue of what road should be traveled and how when changing the organization, is critical in a broader context.

These findings are in line with research results on integration of mergers and acquisitions which show how important preparation and execution of the integration process is for achieving the intended synergies and worldwide learning (Haspeslagh and Jemison, 1991). In the broader field of corporate strategy, a growing literature on corporate transformation focuses on the importance, the effectiveness and the requirements of alternative change processes (Strebel, 1994; Kotter, 1995; Rumelt, 1995; Chakravarthy, 1996). The authors agree with these researchers that change processes have “path dependent qualities”: in other words, that the pace, type, and style of initiatives have an impact both on what types of outcomes companies can achieve, and their relative success in reaching their goals.

2. Cases

Described below is 'a European integration' example with the *P&G Europe* case, while global knowledge integration is the central theme in the *McKinsey and Company* and *Alcatel* case. Although more often the best insights can be gained from studying failures and pitfalls like Alcatel’s struggle to integrate the company, the cases below want to illustrate how the effective combination of various management aspects within some companies like McKinsey and Company resulted in a knowledge focused and integrated organization. In addition, these cases allow to illustrate the importance of knowledge management and integration in different kinds of industries. Illustrated by these cases, the key findings will be elaborated on in the third part. Complementary examples will be indicated in that section as well.

2.1 Integrating Europe at P&G

P&G moved into the European markets in 1932, starting with a U.K. acquisition. In the mid-1950s, P&G expanded into continental Europe. In these early stages of P&G's internationalization, each subsidiary was structured as a microcosm of P&G in the U.S.A., including the full range of functions. Each P&G General Manager in Europe had a mission to adapt P&G's proven products for their local country market, and to use P&G's brand management approach to gain leadership in the local market.

P&G had only a small European headquarters to overview the subsidiary activity. One major role of the headquarters was managing the trademarks and brand names for Europe.

By 1970, P&G had achieved a significant presence in most Western European countries, although the relative market position and product range varied widely from country to country. However, P&G executives were not satisfied with these achievements. P&G Europe was under pressure from corporate headquarters in Cincinnati to improve financial performance: better economies of scale, speed to market, transfer of successful ideas, and overall effectiveness became important. A new European perspective to solve these problems was called for.

P&G decided to establish the European Technical Center (ETC) in Brussels, and initially the main focus of ETC was on common development programs. The first attempt for a better European coordination, however, proved disastrous. Thereafter, P&G Europe hesitated to force the country managers to adopt new policies and instead, a more voluntary approach to integration was adopted.

P&G's voluntary approach to integration was implemented by the formation of diverse project teams through which it created an ad hoc, matrix structure. R&D was the first function to take a clear step towards European integration. In 1977, European Technical Teams were introduced with the goal of reducing the development costs and leveraging the particular strong product capabilities owned by the local R&D departments. P&G continued to build on this initiative through the 1980s with a number of informal structures (such as lead country responsibility for specific brands, etc.). None the less, most of the R&D staff were located in the country subsidiaries and reported to the local country managers who paid their salaries.

From the marketing side, many European initiatives were started as well. Euro Brand Teams, drawing from the country marketing managers, were created to deal with specific issues. In the early 1980s, Euro Brand Teams (e.g. Vizir) membership was essentially voluntary and hence turnover in the teams very high. Using 'center of excellence' logic, teams were led by a country-based marketing or country manager. Team decisions were all subject to ratification (and adaptation!) by the country organizations, which continued to keep P&L responsibility and remained the key arena for career development.

The project teams gradually included and were later led by the fast-growing cadre of ETC staff and senior management. By the end of the 1980s, team decisions had become less and less negotiable. As a next step in the integration process, P&G gradually centralized many functions, shifting reporting relationships from the country general manager to European management and executives (often moving through a matrix structure as an intermediate stage). This happened at different points in time for the different functions. The earliest steps were taken by the R&D function, already in 1977. By 1989, centralization was largely completed. The same process was used first in Purchasing, then in Manufacturing, and Engineering for all of Europe. Functional executives used this change process to leverage the new critical mass for greater effectiveness and efficiency. R&D, for example, grouped researchers by product categories, rather than countries and brands, to improve focus, learning and productivity. None of these changes happened without pain or frustration, even if (as in R&D) the pressure for knowledge sharing was clear, the benefits obvious and 'buyable' by all.

As a result, by 1990, the role of the general and other country managers had changed dramatically: with fewer functions and less autonomy, the general managers were given greater responsibility for public and government relations, as well as continuing strong focus on the sales and marketing aspects of the business. Within a decade, they were forced to depend on a pan-European organization for product supply, product development and consumer research, and also to absorb the allocated costs of the system. While P&L responsibility remained fully theirs for a long time, a system of shared responsibility and performance measurement was now being put in place.

Overview of integration process.

The changes in P&G Europe and the country organizations represented a fundamental shift in P&G's structure and culture. Years later, the changes seem logical, yet executives and managers throughout P&G often recall the many doubts and passionate debates that surrounded the shift. At one level, the process of integration looks like emergent strategy and 'muddling through'. Yet, in retrospect, one can see a coherence in the many major and minor decisions which drove integration forward.

P&G's early organization in Europe was a lose federation of autonomous country organizations, within the International Division. European perspective was virtually invisible, know-how and innovations were almost exclusively American. As P&G's leadership moved towards a regional organization, the vision was not fixed to dates or a specific structure. Two streams of decisions evolved from that point, one building a European perspective and cross-national coordinating abilities, and the other building a unified European infrastructure of information technology, finance, incentives and other essentials. This infrastructure supported the broader coordination of business and knowledge and allowed managers to become adept at communicating across cultural barriers and to gain a practical knowledge of the specifics of different markets. By beginning early, and holding a long-term vision, P&G was able to succeed in both aspects, while continuing to build revenues and profits.

The main vehicle for building the European perspective and capabilities among managers was through cross-national ad hoc structure of project teams. These teams began as voluntary projects, and over the years shifted to a standard and formal structure led by ETC management.

By then, sufficient time had passed to ensure that the new country managers had been groomed in the new system and the old country managers had either left or moved up and on to become part of the new integrated European organization.

Although the main challenge for P&G was to improve its position on the integration axis (see figure 1) (e.g. through coordinating and centralizing purchasing, R&D, and other), there can referred to some observations particularly of interest in the context of the current investigation. First of all, it turned out that the knowledge management or R&D function, was not only the first function to be integrated but with hindsight, can be considered key for the (success of the) overall integration process. One could say that some of the knowledge and R&D integration initiatives acted as 'catalysts' (as discussed below) for the integration in various other functions and fields. Vice versa, it is clearly distinguished that the overall integration has affected P&G's position on

worldwide learning as well. Although one could consider the improvements in worldwide or regional learning as a coincidental by-product of the overall integration, it seems that in the process, the improvements of the regional learning not just popped up but have supported the overall agenda of company integration.

As a result of P&G's integration efforts, the time-to-market, quality of products, cost basis and competitive position of the company improved. In addition, the flow of knowledge and innovation(s) has drastically changed over time : first, from one way transfer of know-how from the American headquarters in the direction of Europe, to two way transfer ; and second, from local country-based know-how to shared and coordinated, pan-European learning.

2.2 Integrating knowledge at McKinsey and Company

Since its beginning in 1926, McKinsey's image in the market had evolved from a company of "business doctors and efficiency experts" towards a highly respected and well established consulting firm in the 1950s-60s. Their international network had quickly expanded in the 1960s and resulted in a solid presence in Europe and North America.

By the 1970s however McKinsey was observed to be an 'elite firm unable to meet the client demands'. Their consultants were believed excellent generalist problem solvers but lacked the deep industry knowledge and specialized expertise, necessary to meet the client's rising expectations. In addition, aggressive challengers like the Boston Consulting Group, emerged in the consulting market. The pressure from the market and competition has initiated a long process of knowledge management and integration within the company.

A committee of the most respected peers in the company was assigned to study the problems and make recommendations. In 1971, one of the first things they suggested was to position the consultants of the company in the future as *'T-shaped'* consultants. This meant that their broad general background would be complemented with in-depth knowledge and expertise in one industry or functional area.

Ron Daniel, who became Managing Director of the company in 1976, drove up the pace of implementation of the committee's report and installed *Clientele Sectors*. These organizations centralized the company's experience and know-how in specific *industries* (like banking, consumer products, etc.) and acted in a sort of matrix structure with the traditional geographically organized offices. He also started initiatives for more formal development of *functional* expertise. He assembled working groups around two key areas, namely strategy and organization. Local experts were asked to lead those working groups, for example Fred Gluck, from the New York office, was responsible for the strategy group. Throughout the company various concerns about these initiatives were raised : people did not want to compromise the local presence they had build up in the past.

By the early 1980s, Gluck had become the internal champion of the knowledge integration initiatives. The next step was the creation of 15 *Centers of Competence* around existing functional expertise (marketing, change management, etc.). The

centers were headed by *practice leaders* and aimed to help develop consultants and to concentrate on continuous renewal of the intellectual competencies of the company. The centers were meant to complement the personal networks of the individual consultants, not to replace them. The widely communicated message, via endless meetings and discussions, was to emphasize knowledge creation, management and integration within the company, and not only to leverage existing know-how in the market. The culture had to be changed from mere ‘client' development towards 'client and practice development'. In addition, the *Practice Bulletins* were introduced to facilitate the diffusion of important findings and ideas around the company.

Gluck soon wondered if no further organizational changes were to be made in order to support the process. A project team was started in 1987. They proposed a common data base of knowledge within the company to be installed and to hire a full time practice coordinator for each 'practice area' (client sector and competence center). They would bear the responsibility for the quality and accessibility of the data base. In addition, the team emphasized the importance of the specialist consultants and suggested to enhance their position within the company (in relation to the T-shaped consultants).

These recommendations led to the introduction of *Practice Development Network* (PDNet), a computer based assembly of documents representing the core knowledge found around the company; and the *Knowledge Resource Directory*, a sort of Yellow Pages, serving as a directory of all the experts and key documents. The key problem was to solve the issue of the specialist consultants’ status.

In 1988, the same year Gluck became MD, a Clientele and Professional Development Committee (CPDC) was installed and took over Gluck's personal role in championing the practice development and knowledge integration agenda of the company. The Committee observed that the original group of 11 sectors and 15 centers had grown out to 'islands of activity' and 'fiefdoms ruled by experts'. The proposal was made to integrate the existing groups into *seven* sectors and *seven* functional capability groups. A lot of people interpreted this move as centralization and adding another organizational layer.

The CPDC concretized the suggestion for improvement of the specialists' internal position, through the introduction of multiple career paths within the company. Despite these initiatives, a lot of skepticism and confusion remained.

In 1994, Rajat Gupta took over as new MD of the company. After listening to various comments on the knowledge integration initiatives and the status of the integration agenda, Gupta decided to push it one step further, through a combination of measures. He commented : 'The firm did not have to make a choice, we had to pursue *all* the options'.

First, he committed the company to the investments made in the centers of competence and industry sectors. Second, after a successful try-out in Germany, he decided to organize worldwide *Practice Olympics* as a competition between different teams on the basis of their ideas presented to a jury of senior partners and clients. Third, he started diverse *special* initiatives, meant to let senior partners work on

emerging issues within the management of companies. Last but not least, he expanded the *McKinsey Global Institute* as a research center focusing on the consequences of the global economy on business, leading to another center, the Change Center, in 1995.

Overview of integration process.

The actions towards knowledge integration in McKinsey and Company were clearly initiated by the customers and competitors. The commitment of successive MDs within the company to this agenda and the involvement of the individual consultants via various discussions and working groups seems to have contributed to the successful integration of the worldwide offices' know-how and knowledge.

The knowledge integration process within McKinsey and Company was characterized by initially a slow and later on exponential institutionalization process : starting from a few initiatives of ad hoc working groups aiming to coordinate the information flow, towards various projects led by selfstanding organizational units created and fully responsible for the exchange and coordination of the company knowledge. Another characteristic of the integration process of the company, was the slow but steady evolution towards a company culture and long term career development focused primarily on knowledge creation and integration.

2.3 Crossing borders at Alcatel

Alcatel NV is the result of the merger of CGE's and ITT's telecom activities in 1986. Despite attempts to present a European rather than French image, the company was from the beginning typically characterized by decentralized management with most decision making and power located in the national subsidiaries. In theory, Alcatel implemented a matrix organization in which the product responsibility (development and marketing) was in hands of the 5 Business Units (basically product groups, like e.g. Network Services group), while sales and profits were the responsibility of the national subsidiaries. However, it was widely known within and outside the company that the country managers were 'mighty kings in their national kingdoms'.

Product development responsibility was assigned on a 'center of competence' basis and was totally unrelated to the sales responsibility. Usually, the subsidiary that developed the product, ended up manufacturing it as well (e.g. due to different CAD systems in the subsidiaries).

Alcatel had tried to address the issue of better cross functional integration and coordination of the R&D, manufacturing and sales with the installation of the SDI center. The center was a coordinative mechanism that was intended to link the product development and manufacturing. The communication and interaction between the marketing and product development side was still ignored, not to mention the problems with the overall responsibility for the development projects because of a lack of project managers and management. It was clear that the issue of functional integration needed a better answer than the SDI center.

In 1988, the French subsidiary Alcatel-CIT announced the introduction of the concepts 'Product Life Cycle' (PLC) and 'Trio'. PLC was a procedural information gathering and distribution system which spanned the entire life of a product in development, until it went to the market. It described the flow of information and reports required, people involved at the different stages and especially the responsibility at various points in time. Especially for this latter aspect, the Trio was created. The Trio was a project management team consisting of three members with different roles to fulfill in the course of the development of the product.

Although it was meant to be gradually implemented and supported by a number of pilot projects and formal training, it seemed that the implementation of the PLC and Trio did not go as smoothly as hoped for. Some managers felt threatened and closely monitored, some others saw their job contents change significantly and still others complained that the managers within the Trios lacked formal authority.

These problems were even more explicit in the international context. Taking the initial idea of PLC and Trios, Alcatel NV decided to implement the concepts globally within the Line Transmission Group (part of the Network Services Business Unit). But the French innovation did not address how the various national Trios could be coordinated and integrated. For example, one issue was that the national departments (R&D, manufacturing and marketing) had started communicating through the Trio, but concerning the international coordination, one could hardly expect the R&D department in country A to communicate with the sales department of country B. And even worse, it turned out that the various R&D departments seriously misunderstood each other in various situations. Despite the existence of a Central Product Manager (who headed one of the product lines of a Business Unit and brought the different national Trios together regularly), there was a clear lack of formal project coordination on an international scale. The P&L responsibility remained with the country managers who in the best cases lacked accurate information for taking optimal decisions and often had diverging priorities.

The consequence was that several development projects were seriously delayed. Due to early project failures, people were less and less excited about the international coordination and blamed each other for the various problems that showed up. Some complained that the numerous meetings with the different national Trios were time-consuming, not to mention the time spent on the various reports that were supposed to be drawn up and the endless communication that was neither effective, nor efficient.

The international Trio experiment was followed by some other cross border integration projects, but basically the key issue remained the same : the country managers were still very independent and the attempts to break their power had by and large failed.

While earlier attempts to gradually tilt the matrix (like in Philips) had failed, the company went into a severe crisis and hence the need for a drastic reorganization was clearly felt. At the end of 1995, the company created Business Divisions (split up on the basis of technology) which became the key organizational units, with clear formal power and responsibilities. The regional dimension was not completely erased but

became clearly less important. Some of the country managers became head of a Business Division.

Overview of integration process

Although the initial steps taken aimed to boost the cross functional knowledge integration, the Trio and PLC were later transferred to the international scene, in order to boost the cross-border integration. The decision itself explains part of the problems encountered during its implementation : by copying the concepts to the international platform, the drawbacks of the system, as observed on a national level, were simply enlarged. The key problems were : people felt threatened and were not ready to set the steps towards integration; those who wanted to do it, missed the required support (culture, HRM) and formal authorization ; the country managers remained very powerful and had only a national perspective. The initial implementation problems of the Trio in France already indicated the difficulties in making the system work internationally. Alcatel underestimated the formalization of the approach : the endless meetings and reporting attempted to formalize the integration, but it clearly did not happen just like that.

The Trio has initiated a change in the corporate thinking at Alcatel and resulted in maybe modest improvement in the company integration, as well across borders as across functions. The key problem of the Trio was that it was completely isolated from the existing structure and organization. One could indeed wonder if the Trio was not a good first step (an informal working group trying to prepare the organization), which in the end failed because it was not followed by the necessary formalization of the cross border coordination. Under pressure from the market, Alcatel finally had to drastically break with its traditional geographically oriented organization and structure, since the smooth transition route seemed to have failed. The future will provide an answer to the question if the current organization is sufficiently competence or knowledge driven.

3. Key findings

In the following paragraphs, some tentative hypotheses will be put forward on how explicit attention to knowledge integration might affect the previous findings with regard to the integration process and the integration initiatives implemented within that process.

3.1 Pacing the Integration Process: Shock Therapy, or Slow and Steady?

A growing stream of research on corporate transformation raises the question of whether transformations should be effected quickly, or slowly. Working with a model of radical change they term “punctuated equilibrium”, Tushman and Romanelli posit that corporate transformations, because they affect all the fundamentals of an organization, should occur quickly (Tushman & Romanelli, 1985). Organization systems, they argue, are tight configurations of reinforcing patterns, and tweaking the system to achieve change simply does not work. In sharp contrast, others argue that a slower pace (as much as ten years) makes more sense. They contend that changing requirements for skills and even more importantly, the need to build and retain trust, require a more patient approach (Kim & Mauborgne, 1996).

Both approaches were observed in the companies we initially researched. P&G has followed the twenty year plan, building trust, organizational capability, and ensuring changes were positive with a substantial part of limited experimentation. By contrast, 3M Europe opted for shock therapy. The change was implemented quickly, even ahead of schedule, possibly even to the short-term detriment of employees and customers. Many employees had been involved in discussions about the problems that would arise if the company failed to integrate; nearly everyone in 3M Europe agreed that integration was the way to go. With widespread support for the changes, the general sentiment was that dragging out the awkward in-between stages would be too distracting for everyone. Arguably, both approaches were successful for the companies involved.

Applying this to the observations within McKinsey and Company and Alcatel, it seems that McKinsey explicitly decided to take the long route. They gradually build consensus about the need for knowledge integration and took one step at a time (although they drove up the pace when consensus seemed to be established, see later).

The question remains however whether the shock therapy (like 3M) is feasible and possible within the knowledge integration context. The authors have the impression that knowledge integration requires a long and steady process of building consensus, while leaving the option open for some 'shock projects' in the meantime (the long route as a sequence of smaller shock projects or sprints). Although in some circumstances (e.g. near bankruptcy or severe shareholder pressure) slow change may not be feasible (Strebel, 1994), the question remains whether the pure shock therapy can be considered an option to implement better cross-border learning.

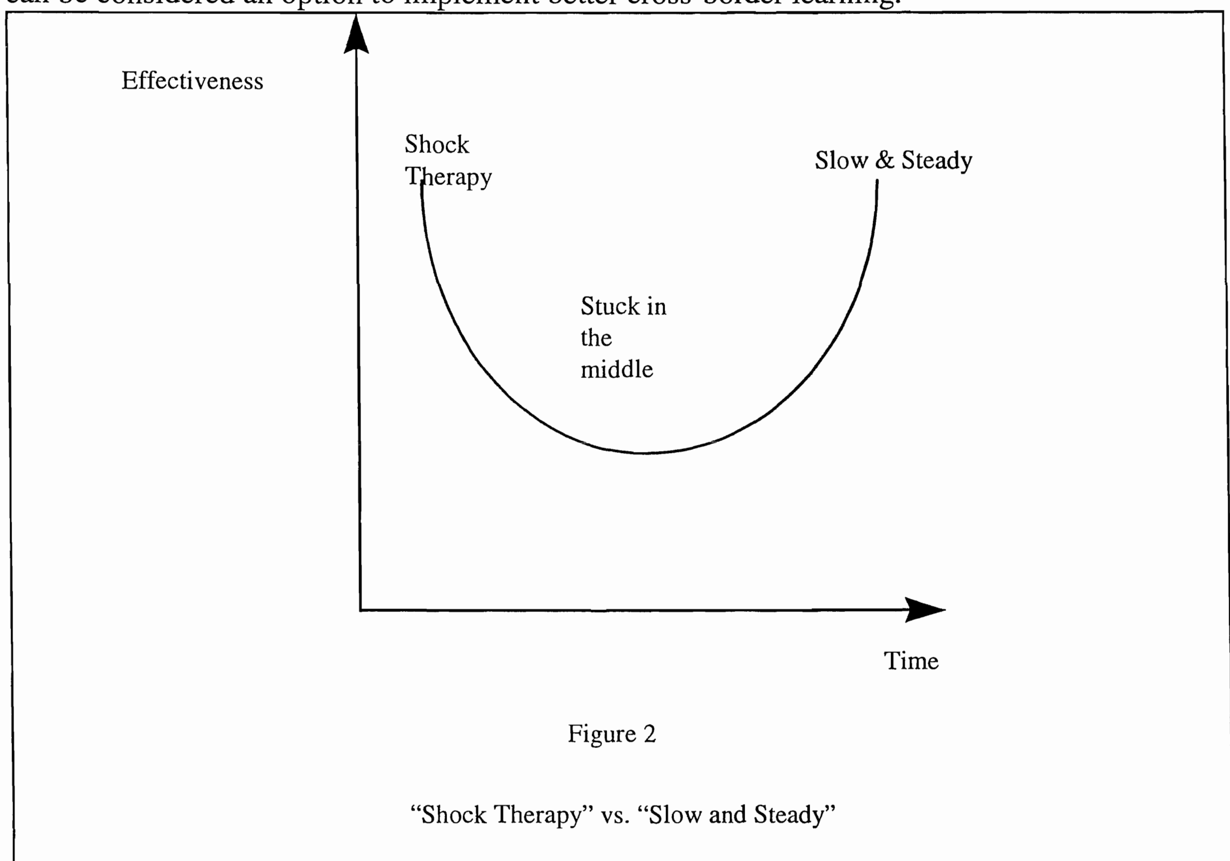

Figure 2

"Shock Therapy" vs. "Slow and Steady"

Despite being polar extremes, both the "shock therapy" and the "slow and steady" approaches share one thing in common: they minimize the trauma and confusion associated with fundamental change. In the shock therapy, because the changes are implemented rapidly, people can settle down to learn the new systems relatively quickly (up to two years). The change may be cathartic, but any confusion and trauma is short-lived. Under the slow and steady approach, most changes occur following discussion, debate, and experimentation. Relatively little resistance is created and where it does arise, the organization can take the time to counter or bypass the resistance that might otherwise blossom. Within McKinsey and Company, the recommendations of the committee installed in 1971, were only slowly implemented from 1976 on when Ron Daniel took over the MD position. The five years in between had given the individual consultants the time to learn and live with the suggestions for a more integrated approach that was suggested and required.

Which of these routes will be most effective in a particular situation depends on the pressure of the market (competitive or bottom line pressure) and on how powerful the resistance encountered will be. The slow and steady approach is preferable for companies whose challenge lies primarily in natural inertia or resistance *in* the system (as is often the case for specific knowledge integration efforts), rather than active hostility. In this case, an initial program of incremental change may provide the basis for a more important or crucial change to take place later.

The companies opting for a "medium" pace of change seemed to experience all the trauma and confusion of the short-term fundamental change, without the benefit of a quick shock to overcome organizational resistance. On the other hand, the change was too quick to allow true evolution of attitudes, responsibilities and capabilities among managers. The result was a greater tendency to retreat to the old structure, making little or no progress towards integration. It is observed that these companies often got stuck in the middle between the two types of change processes because management had not explicitly made the necessary trade-offs and choices, and therefore were not able to manage the critical weaknesses inherent in either approach.

For example, for years Alcatel (and others like Philips and IBM) had been trying to "tilt their matrix" and foster more cross border cooperation in Europe without significant success. Alcatel expected the installation of Trios to be a one time shot and did not plan to take additional steps : they were prepared for neither the quick route nor for the longer term integration process. It took some time (and failures of integration projects) and a severe crisis to finally make major inroads into the stifling power of the country baronies. Alcatel, like some of the other examples mentioned, seem become stuck in the middle for quite some time (see Figure 2).

Whatever path is chosen it has to be carefully prepared and monitored. In the absence of such preparation, the quick route becomes dirty, the slow and steady route involves high costs for little result leading to lots of frustration and even more resistance to change in the future. This was the case in the Alcatel example : they had not carefully planned and prepared the organization for the integration process, which resulted in frustration and poor performance.

3.2 Build Capacity for Integration First.

The next important question is how management can 'prepare the way' for change as required, whether choosing the shock therapy or the slow and steady route? The importance of the involvement of people and the need to build a learning culture before implementing the changes, are important steps on the way to successful integration.

Preparing the scene: the more involvement, the less need for 'implementation'.

First, the authors observed that participation in discussion before the actual change took place is important. P&G, McKinsey and 3M had a deep commitment to extensive discussion and tried to reach an overall shared purpose, even if individual decisions may have appeared haphazard. The approach mirrors the research on Japanese change management, where it was observed that much more time was spent in discussions throughout the organization than in American companies, yet changes were implemented much faster. Overall, the Japanese had less resistance and more efficient changes. Likewise, P&G, McKinsey and 3M have had significantly fewer problems adjusting than Alcatel, which initially involved a few people in the set-up of the Trios and PLCs but overlooked involving people (especially the country managers) in implementing the concepts internationally. The importance of this preparation phase for successful integration parallels that observed in successful mergers and acquisitions (Haspeslagh & Jemison, 1991) or other strategy processes. It is important to generate a common perception and buy-in especially from those that will be most involved in producing the intended results or affected by them.

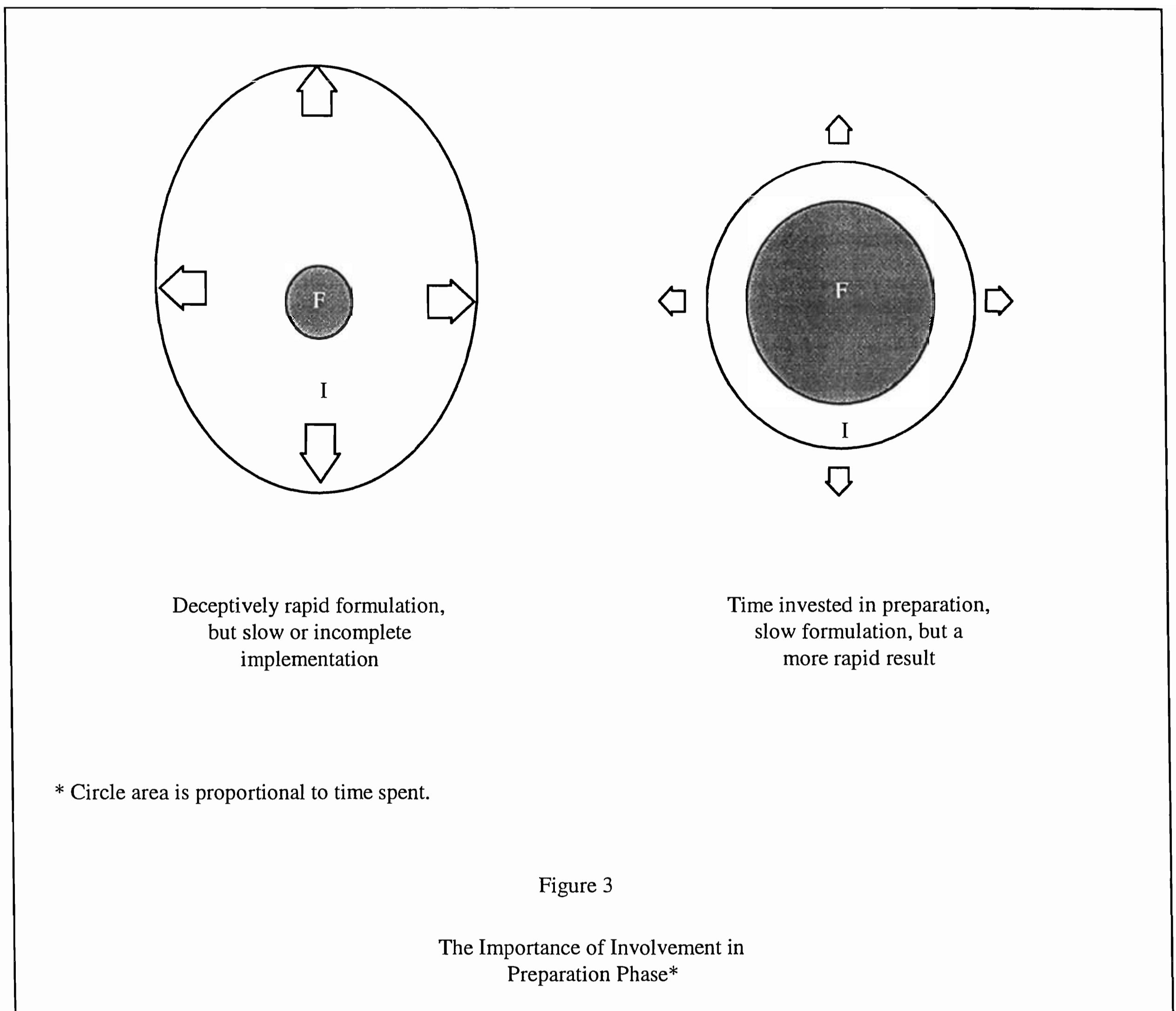

Figure 3

The Importance of Involvement in Preparation Phase*

Creating the culture: learning by doing.

Second, the apparently ad hoc task forces and discussions ('soft' structures) put in place before implementing the integrated structures allowed managers within McKinsey, P&G and 3M to develop the necessary skills and the organizational capacity for the new structure. During the 1980s, for example, P&G marketing managers participated in numerous European projects, either as leaders or team members. During the long integration path within McKinsey and Company, several working groups have been called together to make suggestions and solve specific problems of knowledge coordination. 3M used European executives without line authority, based in Brussels, to encourage country managers to build consensus on strategies. These processes preceded formal restructuring in these organizations[5], and were necessary to build the capacity for cross-national perspectives and management skills. This is where Alcatel took a different approach : although they initially created what seemed to be ad hoc working groups (Trios) which could have been used as catalysts for further integration initiatives, they never formalized their initiatives and left these Trios out of the existing organization structure. The stages preceding restructuring are an important and necessary aspect of the path-dependent forces which affect the probability of successfully achieving integration, but are not

sufficient. In addition, it was not easy for Alcatel to take the next step of formal restructuring, because frustrations and resistance had been built up due to a lack of attention to implementing and guiding the integration process (both across functions and borders).

In short, management should build the organizational capability and support required before and during the implementation of a shift to formal, integrated structures.

3.3 Start with local initiatives.

It is observed that early local initiatives were important to long-term integration success. Local initiatives led by the staff and management of local units at P&G, McKinsey and Company and 3M, for example, began with ad hoc projects and later formal task forces or teams managed by various country units. Fred Gluck, from the local NY office was in charge of the strategy team which consisted of various other strategy experts within McKinsey. The Practice Olympics organization in McKinsey is another example : they had been successfully organized in the German McKinsey office and were leveraged worldwide by the MD. These projects led not just to the increased managerial capability noted above, but also allowed each local unit to build stronger ties to other units. Thus, individual nodes of the future network began by building stronger ties to other nodes, both with the worldwide and European center, and other local units. This has two types of benefits. First, it ensures that the process is better supported and more smoothly implemented. Second, it means that other linkages, especially those with real economic value (e.g. cost reduction via coordinated purchasing) are also likely to develop most actively. Initial successes motivate local units to push integration forward in these directions. As a result, the final outcome is likely to be superior, with the degree of integration aligned to demonstrated value-added, rather than a theoretical master plan (a similar result has been demonstrated by the procedural justice research within multinationals; Kim and Mauborgne, 1996).

The failed integration processes usually started by trying to implement all the network links at once, for example through major Europe-wide initiatives (Bleackley & Williamson, 1995). This approach embodied a fundamental flaw: it required local units to contribute to a process whereby they would lose power or give up locally build-up know-how and innovations (see Alcatel), yet the benefits they would gain were both unproven and unclear. In other words : it might be true that you don't talk about Christmas to the turkey and you surely can't get it involved voluntarily!

In contrast to P&G, McKinsey and 3M, Alcatel blindly copied the French Trio and PLC initiative in the complete Line Transmission Group and has never involved other national units in the process. The resistance from the national country managers was foreseeable since they were supposed to let their people work with other national departments and hence give up some of their decision power, and yet expected to evaluate them on their contribution to the local bottom line.

When initiatives cannot be generated locally, at the very least the benefits and gains of the integration should be widely and locally understood. The authors will add to this below in the finding of the importance of commonly perceived business benefits.

3.4 Choose Initiatives that open new options.

Rather than seeing transformation simply as a shift from one structure to another, hopefully better, one, it has been argued that management must clearly envision the desired future company, and build the implications of that organization into the transformation process itself (Muzyka, de Koning and Churchill, 1995).

The authors' research suggests two important ways in which the final goal of integration should influence the process management adopts. First, in choosing an integration process managers must consider the need to build managerial capacity for the new (still future) integrated company, so that once the formal organization changes, people within the new structure can work effectively. It is precisely the lack of capacity to deal with the more complex structure of regional organizations, the authors believe, that causes so many attempts at formally integrating to fail (Alcatel).

Second, managers need to take into account the impact their chosen integration process will have on the skill and knowledge base of the company. Some processes will result in skills being enhanced, other processes (such as closing down a particular function in a national subsidiary) will be skill destroying. As a result, the integration process chosen by any company may either expand its future strategic options or close them off. The authors believe management must be sensitive to these long-term implications of the integration process they adopt. Moves that destroy too many skills risk boxing the company into a corner. This is especially dangerous given the considerable uncertainty about the rate of convergence imposed by external developments and the demand for internal capacity for learning in newly restructured organizations.

Management at P&G and other companies also realized that their organizational choices would affect the outcome in other ways, beyond simply building capabilities and knowledge. The flexible commitments in R&D personnel assignments in P&G, for example, showed a preference to create options for the future, rather than narrowly focusing the marketing strategy[6]. Creating options and trying to avoid unduly limiting future choices through the integration process are important considerations for management to be aware of. McKinsey clearly monitored and constantly checked their integration initiatives in the field. Key for them was their flexibility to push the integration one step further or to first let people get comfortable with the current initiative or situation, whenever one of these was necessary and/or possible.

3.5 Pushing Integration to the Heart of the Business: A Multidimensional Perspective

Management faces the choice of a number of dimensions along which it can push its intended (knowledge) integration. Dimensions are defined as proxies of relevant cost savings and/or knowledge along which integration is pursued, in the hope to increase the cross border efficiency and/or the learning. Through reviewing the research and the popular business press reports, the following options were identified :

- geography (e.g. adding a V.-P Europe, or a responsible for a group of countries)

- functions (integrating R&D, marketing, production, finance, etc.)
- processes (e.g. cross-border integration in the context of business process reengineering)
- activities (or parts of the 'value chain' or 'business system')
- products, product categories, brands (e.g. as in category management or Eurobrand management)
- customer key accounts (e.g. sales)
- customer-industry groups (e.g. industry verticals at IBM)

P&G Europe's approach clearly focused on functional integration in the first two stages. Later, they shifted to the product and product category dimensions. Over time, they took an eclectic approach to integration. IBM Europe, as part of a worldwide shake-up in 1994, chose the customer-industry groups as a basis for integrating the European operations (internally referred to as industry solution units or industry verticals). A dual way was followed by McKinsey : simultaneous efforts on the functional and client industry dimensions were initiated. 3M Europe preferred to create European business units around product lines, grouped in business centers, inspired by their traditional U.S. structure. Alcatel in its December 1995 shake-up reorganized into Business Divisions (in combination with geographic dimension). Other companies like Nestlé initially took a key account management approach, while maintaining national subsidiaries as strong local players (Parsons, 1996).

In most cases the authors have observed substantial experimentation as integration pushed along only one dimension (e.g. on the basis of geography) got stranded. Therefore a lot of time and frustration could have been saved by carefully evaluating and using the different options available. The key issue is not only which dimensions for integrating provide the best results, but also, which levers should be pulled in what sequence? How can more leverage be obtained? The authors' research so far has only begun to answer some of these questions.

Identifying the dimensions for long-term integration benefits.

In selecting a dimension along which to push integration, management could first compare the relative strategic importance of each dimension for the business i.e. the long-term integration benefits it offers (even if these are sometimes difficult to quantify). When trade-offs between those dimensions with long-term benefits have to be made, those with immediate impact and those which act as "enablers" in laying a foundation for integration on other dimensions are suggested.

For example, in the case of accounting and information technology, integration is often necessary in order to provide the necessary support systems for integration on other dimensions. This category of initiatives, depicted as "A" in Figure 4, will act as enablers by facilitating cross-border comparison of information and coordination of activities. This category of integration initiatives may also offer substantial cost savings. But they are unlikely to have a broad-based impact on people's mind set and skills, nor to fundamentally alter the strategic positioning of the company towards global or pan-European competition.

On the other hand, integrating on a critical dimension and changing performance measurements to highlight the change can have a powerful, direct impact on both mindset and strategic positioning. These are termed category “B” initiatives (Figure 4). For instance, if a consultancy company like McKinsey observes that industry expert consultants will be key for future success, the installation of the Clientele Sectors will be a strong sign of the changes in 'the way business is done'. In fact, McKinsey chose client industry as a key dimension not only because the pressure for integration came from there, but also as a proxy for relevant knowledge, a key asset for a services business like consultancy, to be properly managed and integrated.

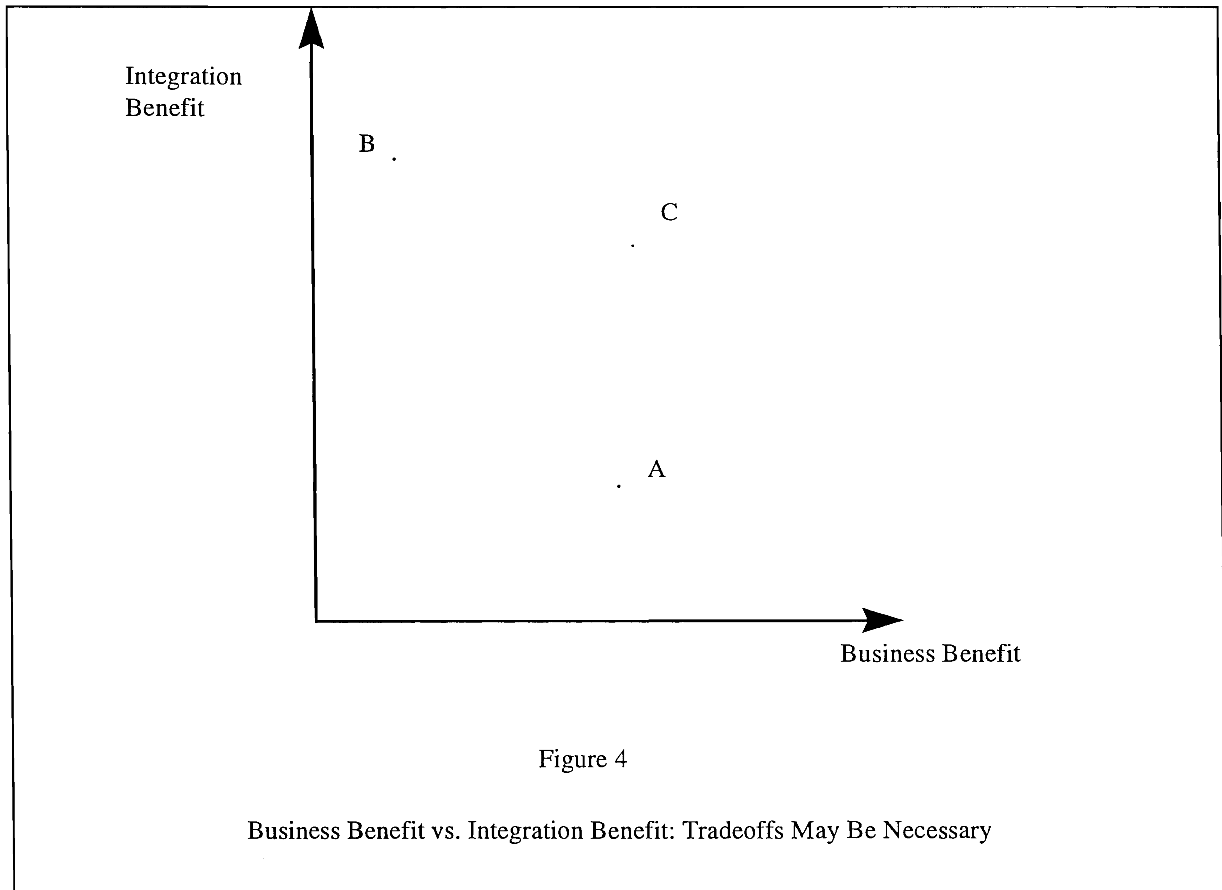

Figure 4

Business Benefit vs. Integration Benefit: Tradeoffs May Be Necessary

Ideally, one should begin by trying to identify those opportunities that will push integration along dimensions that offer both substantial business benefits while at the same time acting as integration enablers (category “C” in Figure 4). When a trade-off exists (as in A vs. B) and cannot be overcome (by finding initiatives of type C or by combining both types A and B at the same time), it is important that management be explicit and realistic about its choice and what it entails. Given that fundamental (economic) benefits are the ultimate goal of integration, category “B” should be preferred over A. But there will be instances where unless category “A” initiatives are undertaken as enablers, the whole process will be impeded (e.g. Alcatel’s attempt to coordinate activities and knowledge across borders initially failed partly because of a lack of overall structural support by HRM, etc.). This is the trade-off which is often hardest to resolve in reality. The situation is even more complex in a dynamic context, as the actual critical dimensions in the business may change over time since the

industry or the company evolves. However, realizing what the terms of the trade-off are in any particular case goes a long way towards managing it properly.

Maximizing integration spill-overs through a multi-dimensional approach.

Integration is rarely achieved in a single sweep, along one dimension of the business. Building critical mass and creating spill-overs of integration benefits are the next requirement that is essential to achieve significant and lasting integration. This means that integration initiatives may have to be sponsored on many dimensions of the business simultaneously, guided by a common, long-term goal.

P&G, with their slow and steady process of integration, clearly showed how initiatives along several dimensions in the business helped to create the highly integrated organization of today. The benefit of combining dimensions were twofold. First, by promoting initiatives on many dimensions, management built a critical mass of strategic awareness and cross-national relationships. Thus, by electing to create change along those dimensions, management built support for integration and avoided needless battles. Second, the organizational capabilities required to cope with the complexity of an integrated European operation are quite different than those needed for the loose federation of country subsidiaries. By taking initiatives along many dimensions of the business, management allowed themselves and others to learn needed skills - before the final integrated structure were implemented. These kinds of spill-overs from specific initiatives were essential to the overall process. Progress on any one dimension of integration is leveraged or reinforced through following a parallel integration path along other dimensions.

McKinsey and Company felt market pressure for increasing knowledge integration along the client sector dimension. However, from the very beginning, it was clear that the functional dimension was not to be neglected. Gupta's comment that the company should try *all* ways simultaneously clearly illustrates the multidimensional approach. The exponential integration process exemplifies the need to build up a certain critical mass before taking off at a higher pace.

3.6 Starting with initiatives giving short-term benefits.

The multi-dimensional nature of the initiatives demonstrates that there are many paths to integration, but success is also driven by practical short-term concerns. In addition to assessing the long term contribution towards integration of moving forward on a particular dimension, one should also evaluate initiatives on the basis of the extent to which they offer early, quantifiable benefits ('quick wins'). The findings here were in accordance with the change management and transformation literature which has emphasized the importance of quick wins to rally support for the overall process (Kotter, 1995).

For example at McKinsey and Company, the pressure for more integration came from the customer who preferred industry specialists for their consultancy projects. In light of this, the short term benefit was especially evident on the client industry dimension. Another example in the same company were the local consultants who experienced immediately the benefits of the PDNet system. This computerized center of know-

how had clear short term benefits in the way consultants gathered information and know-how for their individual projects.

Alcatel's problems in implementing the Trio and PLC on a national level can be considered as an 'early lose', since they only fed the conviction of the country managers that these concepts could not work (and especially not internationally) and were not optimal.

As part of the overall integration process, therefore, management should ensure they adopt at least some integration initiatives along dimensions that provide clear, ideally quantifiable, benefits (hard to accomplish for knowledge integration) that can be realized in the short term.

The demonstrable, short-term benefit does not necessarily need to be financial in nature. In many instances the organization can rally behind other commonly perceived business goals, as long as they are clear, represent a true challenge and have a sense of urgency. Responding to a commonly perceived competitive threat, for example, may provide a strong impetus to the integration process (e.g. McKinsey and Company). In sum, management should give priority to integration initiatives built around focal points based on a commonly perceived, specific business need.

Given the limits and dangers of a pure short term perspective, the importance of a longer term view is indicated below.

3.7 Top commitment to overall long term vision.

No matter how careful management considers the previous points, most benefits will not be apparent in the short term. It is clear that top commitment and a shared vision are essential in order to make the kinds of fundamental changes to an organization's logic and the functioning as those required to achieve integration. Both of these pre-requisites need to be long-term and sustained over a substantial period of time, especially when the "slow and steady" route to integration is chosen. But even if shock therapy is attempted, continued commitment and shared vision will be crucial in making the necessary behavioral and cultural changes after the drastic structural changes have been initiated. McKinsey and Company's internal champion of the knowledge integration process, Fred Gluck, illustrates the contribution of constant attention and support and empowerment for the integration initiatives.

Conflicts and resistance are bound to arise and top management must assume the delicate role of leading the change and empowering the key players or champions in the organization to push the changes through. Important adjustments will have to be made in reward systems, P&L responsibility, reporting lines, career development etc. For example, McKinsey in adapted the career and appraisal systems for specialized consultants while Alcatel's problems in the integration process were partly due to lack of support through P&L responsibility and reward systems. Hard business decisions, often involving trading off short term benefit for long term gains, will have to be faced. Here, like in any strategy process, top management will have to set and manage the context, and arbitrate or intervene clearly and decisively whenever conflicts or paralyzing ambiguities arise.

The nature of this commitment and top level intervention may be somewhat different for the "slow and steady" and "shock therapy" routes to integration. Under the shock therapy approach, where the change is pushed through in a crisis context, a substantial change in top management itself is likely required, especially if the crisis is externally imposed, as was the case with IBM and Alcatel. If you can't change the people, move them!

The importance of shared vision and top commitment is all the greater whenever benefits of the integration are not immediate and easily quantifiable or demonstrable, as unfortunately is often the case for knowledge integration. But even if the benefits seem clear, the impacts of the required changes on the overall organization are likely to require top management attention to the process.

At one company (which had chosen a cross-border alliance route towards European integration), cross-border functional task forces or activity groups which aimed at improving mutual cross border learning, often got stuck despite initial enthusiasm as tough decisions and cross border trade-off had to be made, the problem was the absence of clear top management authority over the various country organizations, which de facto retained a high degree of independence.

4. Conclusion

Previous research has emphasized various aspects of integration management. The authors' initial research flagged the fact that the process a firm chooses to transform itself into a more integrated network organization proved important for two reasons. First, because the integration process a firm adopts significantly alters the probability that increased integration will be successfully achieved. Second, the final outcome itself is path dependent, that is the type of integration a firm achieves depends significantly on the process (or path) it chooses to follow. It seems that applying this specifically to knowledge integration does not affect these observations.

Based on the findings on overall company integration, a framework is developed which emphasizes the options facing managers, relating existing organizational structure, change culture, and market conditions to the optimal or effective choice of integration processes. In this paper, it is tested to what extent the process approach applies to explicit cross border *knowledge* integration. It is observed that the management of the knowledge integration process remains crucial for successful integration. The key conclusions are that the long-term (slow and steady) processes are preferable to medium-term ones; that a preparation phase which builds integration capabilities remains crucial to success; that integration efforts should combine initiatives that directly drive long-term success with those that can act as "enablers" to more fundamental types of integration. It is also suggested beginning the process with focused and quick-return initiatives and combining integration initiatives along multiple dimensions of the business increases the probability of success.

Some of the initial observations apply possibly even more to knowledge integration pushing cross border learning than to overall integration efforts that push cross border efficiency. The need to build trust and to involve people, the suggestion to prepare the

company and build an appropriate coordination culture, and others, have played a key role in the observations of the success or failure of the integration initiatives. The question remains however whether the 'shock therapy' in making the transition, can work for leveraging globally or regionally the learning and knowledge within the organization.

The question is most often not whether integration should be established either to increase the global efficiency *or* to leverage innovation and know-how internationally. It seems that integration initiatives to boost the regional and global efficiency of the company are frequently in close interaction with cross border knowledge integration attempts. In some businesses, especially the multi-domestic businesses, and companies, the integration is particularly aiming at better overall leveraging of know-how, while in other businesses and companies the key focus is on the global efficiency. It seems that for the first kind of industries and companies, integration along the knowledge dimension strongly supports or even initiates better overall integration ; while for the second kind of industries and companies, the integration of the knowledge is at least a by-product but often also a 'catalyst' for the overall integration.

Given the complexity and diversity of the markets, not to mention the fastly changing technological and regulatory environment (e.g. the European integration), companies experience increasing pressure on their knowledge creation, management and integration. Although a recent stream of research has embarked on this evolution, the authors hope that their findings can contribute to the insight that the integration of the company knowledge sources across borders is a complex process that should be monitored, planned and managed carefully.

ACKNOWLEDGMENTS

Research assistance and comments by Alice De Koning (INSEAD) and Venkata Subramanian (KULeuven) and support by Dirk Rijmenams (KULeuven) are greatly appreciated.

Financial support from the Tractebel Chair for European Management Education and Development and from the Office of the Belgian Prime Minister (Federal Office for Scientific, Technological Cultural Affairs in the context of the Inter-University Attraction Poles) is hereby acknowledged.

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[1] Although some propagate the internal view at the expense of the external view, some authors tried to link the two sides and position them as complementary (Verdin and Williamson, 1993 ; and others)
[2] Article in 'Financieel Economische Tijd'(May 23,1996) on the lagging profitability of European industry and rationale for European integration within MNEs as P&G, 3M etc.
[3] The field research project at P&G Europe was conducted over a period over two years, and involved managers in many locations and levels of the organization. We interviewed senior executives assigned to the European Technical Center (ETC, essentially the European headquarters) in Brussels, including those who have since moved onto other parts of P&G, General Managers of country organizations, and directors and managers of various functions and locations. One informant who no longer worked for P&G proved particularly valuable, partly because his memory was less 'contaminated' by more recent events. In all, we interviewed about 20 top executives, currently filling managerial positions down to three levels below global executives in the organization. Several were interviewed more than once. Interviews were semi-structured, with interviewees being explicitly informed at the beginning of each interview what information we were seeking, and why. This open approach allowed the interviewees to understand our broader agenda, and often led to the introduction of new information, documents, and contacts which greatly broadened our understanding of the historical evolution of the organization. In

addition to the interviews, we also reviewed public sources and other published cases about P&G and competitors to fill in the external context of P&G's the organizational evolution.

[4] Similar findings have been reached at a global level e.g. Ruigrok and van Tulder (1995) found very few truly global companies.

[5] The time line for 3M is much clearer, because the organization made a solid, massive shift in a very short period of time. P&G's more modulated approach meant that some departments had already completely centralized, while other functional areas or product lines were just beginning to explore the possibilities of a European approach. This varied approach created additional challenges of maintaining smooth cross-functional coordination and synchronization.

[6] The original idea of the crucial importance of commitment in strategic choices has been highlighted by Schelling (1960) recently elaborated in the context of business and corporate strategy by Ghemawat (1991); the notion of flexible commitment has been developed by Chakravarty (1996).