

# *Working Paper*

**Value Creation through ICT Integration in Merger &  
Acquisition Processes**

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# Value Creation through ICT Integration in Merger & Acquisition Processes

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## Abstract

*As deals are becoming more complex, and as technology, and the people supporting it, are becoming key drivers of merger and acquisition processes, planning of information and communication technologies in early stages of the integration process is vital to the realization of benefits of an Merger & Acquisition process. This statement is substantiated through review of literature from academics as well as practitioners, and case exemplifications of the financial service organization, the Nordea Group.*

**Keywords:** ICT Integration, Mergers & Acquisitions, Nordea Group.

## 1. Introduction

### *1.1 Motivation of the Research*

“Boardroom meetings on mergers and acquisitions often spend more time considering the new corporate logo than issues surrounding information technology” (Brown 2001). Merger & Acquisitions (M&As) is a much debated transformation alternative among practitioners as well as academics, however, mainly from a strategic perspective (Hudspeth & Kliegman 1996, Rappaport & Sirower 1999, Anslinger et al. 1999, Trimbath 2002, Morosini & Steger 2004).

PriceWaterhouseCoopers has in a survey of 125 corporations having completed a merger or acquisition found that nearly 75% of all companies have reported problems in integrating their information systems, cf. PWC (2004a). The effects of this are integration program delays, lost revenue and missed business opportunities. Similar results are found by CEO and IT due-diligence consultant at Vestech, Hugh Craigie-Halkett, who states that in both the UK and US 70% of mergers and acquisitions fail to achieve the anticipated results, mainly because of the IT problems, cf. Brown (2001). Furthermore, in a global survey of 1999, PriceWaterhouseCoopers finds that compatibility of information systems emerged as the leading post-deal difficulty, cf. PWC (1999).

PWC (2004a) reports that post-acquisition integration hurdles were found in more than 50% of the cases in regard to melding divergent operation philosophies, information management practices, administrative procedures and communication styles. BCG (2004) argues that insufficient attention to IT in bank mergers may result in a merged banking entity whose IT landscape amounts to a patchwork of applications that cannot communicate except for a few makeshift links that have been set up to overcome specific operational constraints. Furthermore, additional costs are often incurred because of redundant applications, and business projects cannot be carried out because, for example, client databases have not been properly integrated. Apart from frustrated management, this may also result in increasingly dissatisfied IT users, poorly served customers, and more delays in the overall fusion process.

More than 67% of companies do not carry out IT Due Diligence during the pre-deal phase of a merger or acquisition (Brown 2001). However, when IT due diligence is conducted it leads to the cancellation or delay of approximately 20% of all deals. Merged companies will have to increase their spending by an average of 15% in the first few years after the deal is signed. In addition to this, it takes about five years before the IT budget falls to 70% or 80% of the combined pre-merger costs, according to analyst firm Datamonitor (Brown 2001).

BCG (2004) states that despite the fact that more than one-third of bank-merger synergies can derive from IT, institutions often let defining a well-structured approach to IT integration slip far down the priority list. This calls for more research of the information and communication technology challenges in an M&A process.

### ***1.2 Research Question***

Experience shows that success of an acquisition is closely related to the amount and quality of due diligence carried out before the deal goes ahead, cf. Angwin (2001) and PWC (2004a+b). Due diligence is about investigating and validating the financial, commercial, strategic, and legal assumptions underpinning the deal. More assumptions may also be investigated such as environmental assumptions, information technological assumptions, human resources assumptions, intellectual property rights assumptions, physical property assumptions, etc.

The paper investigates the “what”, “why” and “how” of Information and Communication Technologies (ICT) Integration in a merger and acquisition process. Hence, the following research questions are discussed:

- which ICT issues and decisions are relevant throughout the M&A process (what)?
- what kind of value does ICT integration provide during the M&A process (why)?
- what is IT Due Diligence (how – planning)?
- what best practice recommendations are available for implementation of ICT integration (how – execution)?

Furthermore, the paper illustrates challenges encountered and solutions provided during ICT integration in an M&A process case from the financial sector.

### ***1.3 Research Methodology***

The paper is an explorative study, which mainly relies on theoretical investigations and contributions. This methodology is chosen as little information systems research is focused on M&A processes and the ICT challenges this arise. The paper seeks to balance the theoretical insight of researchers with experiences from companies primarily expressed by leading consulting companies such as Boston Consulting Group, Accenture and PriceWaterhouseCoopers. An M&A process is here considered in five stages, cf. Sudarsanam (2003). These stages are corporate strategy, organization for acquisition, deal structuring, post-acquisition integration, and post acquisition audit. The stages are used to structure the lessons learned throughout the M&A process.

The empirical study relies on a secondary data analysis and an interview with former head of E-banking in Nordea Denmark, Jens Galatius. The paper is delimited from technical and system specific due diligence, as these practices often require engineering skills and a degree of detail which are outside the scope of this paper. However, this does not mean that it is an

issue that does not impact upon value creation in a particular M&A process, and consecutively must be taking into account when the occasion arises.

## **2. The Integration Process**

### ***2.1 Mergers and Acquisition***

As Merger & Acquisitions are not alike (Bower 2001), the content and context of each deal need to be revealed through interaction with the target organization and through analysis. M&As might prove to be an effective management approach to gain business growth (Jemison & Sitkin 1986, Caves 1989, Anslinger & Copeland 1996, Raghavendra & Vermalelen 1998). Other motives for M&As might be gaining marketshare (Gaughan 2002), potential synergies (Gullinan et al. 2004), learning (Håkanson 1995) or access to competences (Bresman et al. 1999, Gammelgaard 2004a+b). Mergers and Acquisitions may be in the core business, related to the core business, or unrelated in new business areas (Bruner 2004).

Post-merger/acquisition integration is often regarded as a primary lever for value generation in an M&A process (Yunker 1983, Habeck et al. 2000, Agrawal & Jaffe 2000, Harding et al. 2004). Therefore, it is crucial to recruit experienced management for managing the integration task (Lajoux & Weston 1998, Ashkenas & Francis 2000). As resistance towards change from employee reduces the likelihood of success, managing culture, e.g. subcultures and countercultures, becomes an important managerial task (Guillaume 1990, Cartwright & Cooper 1995, Zaheer et al. 2003, Shelton et al. 2003). IT may be a determining factor in reducing resistance towards change, although, it also may be the cause of employee resistance. This is supported by the findings of Larsson & Finkelstein (1999).

### ***2.2 Business Process Integration***

For any given business process, Business Process Integration (BPI) may be used for different purposes (Venkatraman 1994, Hasselbring 2000, Hammer 2001). BPI functionality sets vary with regard to the nature and complexity of a business and its IT infrastructure. A prerequisite for effective integration is that the business processes are redesigned, aligned and managed (Hammer 1990, Larsen & Bjørn-Andersen 2001, Champy 2002). Grudén and Strannegard (2003) suggest four functionality sets, which together cover most reasons for integrating business processes, i.e. connectivity, business process automation, visibility, and decision support.

McKeen & Smith (2002) argue for 4 levels of integration, i.e. data level integration, application level integration, process level integration, and interorganisational level integration. The levels of integration are not mutually exclusive. For instance, to achieve application level integration, data level integration is a prerequisite. Similarly, process level integration can only be achieved when application level integration already is established. An alternative classification of integrations levels is suggested by e.g. Pablo (1994). The various integration options, as presented in this section and in section 2.3, impact on the ICT integrations process both in the extent of the required analysis to uncover the full process, and with regard to the complexity of the transformation strategy.

### ***2.3 The Role of ICT in an M&A Process***

The integration activities need to address all relevant functional areas of the business (e.g. Homburg & Bucerius 2005). Haspeslagh & Jemison (1991) argue that the key dimensions in acquisition integration are the needs for strategic interdependence and organizational autonomy. They suggest that management needs to identify the levels (high/low) of these

dimensions in order to clarify the trade-offs at stake in granting or refusing autonomy to an acquired firm (Haspeslagh & Jemison 1991:145). Furthermore, the role of ICT in an M&A process may be regarded with respect to the degree of IT investment in management and architecture, and the degree of which the post-merger business is integrated, cf. Accenture (2004). Here the degree of IT investment in management and architecture is classified in the following categories, i.e. aggregation, selected consolidation, common enterprise systems, and complete integration. Moreover, the degree of post-merger business integration is classified in the following categories, i.e. holding company, network of businesses, shared services, and fully integrated. The space of combinations of these two dimensions is presented in the following figure.

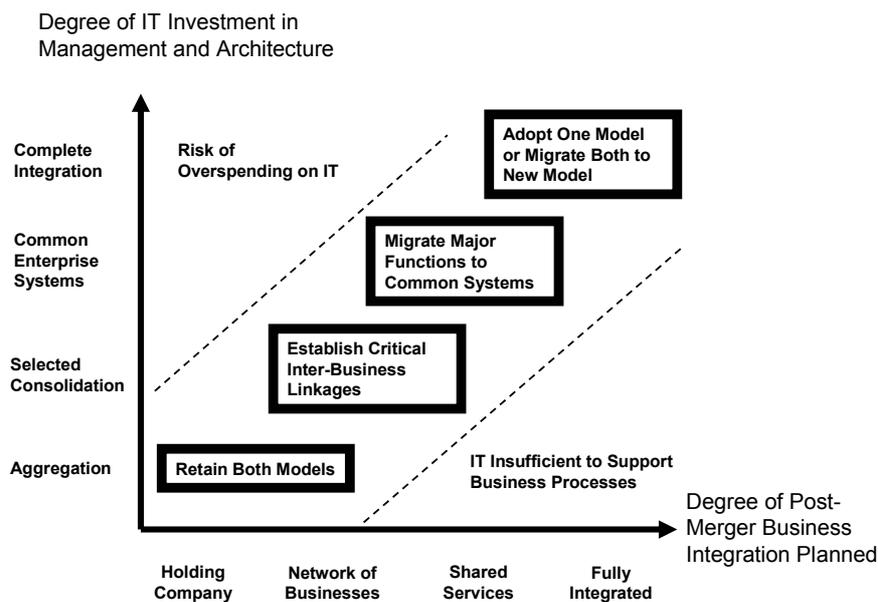


Figure 1: The IT Vision.  
Source: Accenture (2004:8).

Identification of the role of ICT in accordance with the two suggested dimensions, may lead to the establishment of an IT vision. Accenture (2004:8) suggests that the IT vision needs to be stable enough to serve as a substantial target for planning, and at the same time this has to be balanced with the view that the IT vision needs to be revisited and updated in accordance with changes in the organization, the business environment, or the technology. Accenture (2004) suggests that IT integration poses risks at either end of the spectrum. At the one extreme insufficient attention to IT integration may lead to a merged organization where IT capability is unable to support the new business processes. At the other extreme, there is a potential risk of overspending on IT, which also may imply that part of the value of the merger cannot be realized. The courses of action is suggested as either retaining both models, establishing critical inter-business linkages, migrate major functions to common systems, or adopting one model or migrate both organizations to a new model.

The table below is an elaboration of Figure 1, where scope of change for the acquiring and target company, respectively, is specified. The categorizations are defined as follows. A: is comparable to Maintain both models; B: establish critical inter-business linkages; C: migrate major functions to common systems, D: adopt one model; and E: migrate both to a new

model. Risks and benefits of the ICT alignment and integration process increase with the increasing capital letter, A-E, ceteris paribus.

		Scope of Change in Target's ICT			
		No change	Activity	Function	Model
Scope of Change in Acquirer's ICT	Model	D	D	D	E
	Function	C	C	C	D
	Activity	B	B	C	D
	No Change	A	B	C	D

Figure 2: Scope of Change in merging companies ICT.

This may indicate that although the potential gains are attractive by migrating to a new (and third) model, the inherited potential risks are at least equally large.

This rationale is confirmed by the research and client experiences of Boston Consulting Group (BCG 2004) in the financial service sector. Further, they conclude that rapid and comprehensive integration of IT systems greatly enhances the chances of overall merger success. BCG (2004) advocates for 6 Golden rules of IT integration:

- Choose from the existing system landscape – do not build a third.
- Identify “clusters” of applications. A cluster is a set of applications and data that form a relatively autonomous unit.
- Follow a rigorous selection process.
- Look for “nuggets”. Nuggets are some isolated applications that can prove to be absolutely necessary for continuing certain services, sustaining a specific competitive advantage, or generating productivity improvements within a support function.
- Balance integration speed with careful system selection.
- Monitor implementation closely.

The activity of choosing clusters of IT Applications is illustrated below.

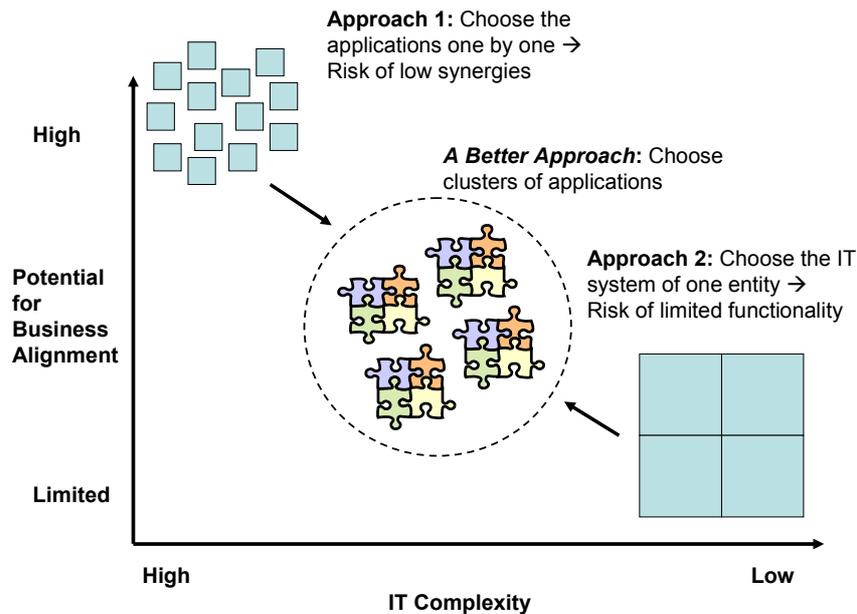


Figure 3: Choosing Clusters of IT Applications  
Source: BCG (2004).

Contrasting the findings of Figure 1 and 3 it verifies that practitioners do not agree on the change approach. Furthermore, choosing an IT Vision also is dependent upon the business model. A classic example is that it was not possible to create the current business model of Dell computers without moving to a new model. Combining existing business models of computer retail stores would not have created the same synergies as the current model has.

Other authors claim that relevant classifications of the post-merger integration efforts are task integration and human integration (Birkinshaw et al. 2000), or the procedural, physical and managerial/sociocultural level of integration (Shrivastava 1986), with the associated managerial activities coordination, control and conflict resolution.

#### 2.4 Roles and Goals of the IT Function during the Integration Process

The roles of the IT function during the post-merger integration process are (Accenture 2004): (a) Continue to deliver operational services and capabilities, (b) Enable the integration of the businesses, and (c) Provide a source of cost savings through realized synergies. The goals of the IT capability integration process are (Sudarsanam 2004:127) cost savings, revenue enhancement, and new growth opportunities. Moreover, the goals are to realize or contribute to the predetermined financial rating scales, e.g. Return On Sales, Return On Assets, and Return On Investment or Return on Net Worth. In addition to this, the goal is to realize more effective IT integration through stabilizing services, faster support for the business, more effective integration in IT planning and management, IT operations, and application delivery.

The task of the IT system evaluation is in practice often a highly complicated and time consuming process. The key reasons for this are, cf. Andersen (2001): (a) high phase of IT development; new generations of both hardware & software, (b) speed of changes in the business environment; competition, technology, regulations, globalization, etc., and (c) the increasing impact/role of IT in all the levels of business activities.

There are differences in the evaluation practices and in the ability to implement needed IT evaluation tasks in different industries and companies. Moreover, Andersen (2001) has categorized a large number of IT-evaluation methods, and identified 9 key parameters of IT-evaluation methods. These key parameters to be identified in the selection of appropriate evaluation methods include (Andersen 2001):

- Extent of involvement. Who is involved in using the IT evaluation method.
- Stage of IT evaluation. Stage of involvement and stage of use; at what stage is the IT-investment evaluated.
- Type of impact. Benefits, certainty and directness of impact; usefulness of evaluation method in evaluating types of impacts achieved from the IT investment.
- Evaluation costs. The cost of use of a particular evaluation method.
- Evaluation criteria. How the IT-investment is evaluated (financial values, effectiveness of use etc.).
- Type of IT investment. The nature of system; methods usefulness in evaluating different types of IT investments.
- Scope (view) of IT evaluation method. The scope of a given method on the changes in the affected business activities.
- The difficulty of the IT evaluation method. How complex the method is to implement.
- Type of outcome. The format of output from completing the IT evaluation method.

Although many classifications exist that is no standard set of evaluation methods, which automatically provides the best result. Hence, the specific circumstances of the problem situation need to be compared against the assumptions of the evaluation methods. This has to be taken into account when an IT Due Diligence is performed.

### **3. ICT Integration**

#### **3.1 *IT Due Diligence***

IT Due Diligence, IT Audit or IT review may to some extent be considered as synonymous. Others may claim that IT Due Diligence is performed in early stages of an M&A process, whereas the IT Audit or Review is performed during or after the post-merger integration process. Sisco (2002) argues that an IT review should contain three main areas to focus the evaluation, i.e.:

- Technology: identifying capability to meet company needs, stability, capacity and scalability, security, risks, and issues.
- IT organization: expertise and depth needed to support the business needs, management, morale, capacity, risks, and issues.
- IT processes: change management, software licenses, project management, policies and procedures regarding technology, and tracking and measuring performance.

As a technology organization has many functional parts, a quantification of the IT organisational structure will include (Sisco 2002) Infrastructure. Networks, i.e. LAN, WAN, and desktop support, and Business Applications, i.e. research and development, and support, including installation services, professional services, help desk, computer center operations, technology assets, and processes and procedures.

Sisco (2002b) states that the due diligence objective needs to be clearly defined. Sisco (2002b) suggests that an IT due diligence plan should be broken down to seven parts, which every

interview and review must take into account. These issues are current IT operation, risks and risk avoidance plans, financial plan (expected cost and budget to continue operation), capital investment requirements, leverage opportunities and recommended plans, transition plan, and the due diligence report. In relation to the entire acquisition project, the IT Due Diligence activity is relevant to carry out after the letter of intent is signed and before the actual deal is signed. This is illustrated below.

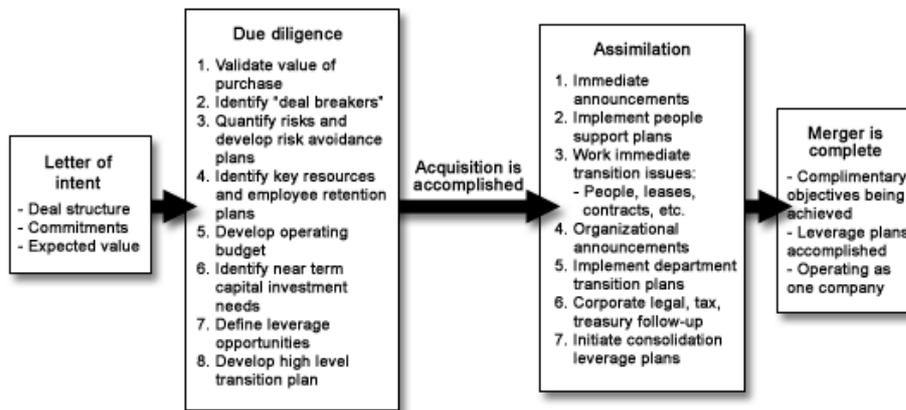


Figure 4: IT Due Diligence in the M&A Process.  
Source: Sisco (2002b).

Sisco (2002b) suggests that discovery efforts are kept to vital issues, including: Technology in place, Inventory, and level and status of business application, infrastructure, organization, processes and level of automation, Stability, Growth capacity, Support methods, IT organization, Contracts and Software License Agreements and Service Level Agreements (SLAs), Hardware and Software ownership and licensure, Transition Costs and IT operating budget including ongoing support costs, Key investments planned, Capital investments needed, Planned initiatives, Risks and Disaster recovery plans, and Client satisfaction and needs related to technology.

Barrett & Graham (2004:1) argue that there are three areas of particular importance to IT due diligence from a legal point of view. These are (a) ensuring suitable confidentiality undertakings are in place before information is disclosed, including non-solicitation of staff and key customer covenants, (b) managing the information flow so that details of the “value” elements of the business are held back until a relatively late stage of the sale process, and (c) controlling access to customers and suppliers.

A complementary questionnaire to support the IT Due Diligence activity is suggested in the IT Governance literature (Weill & Ross 2005). According to Weill & Ross (2005) the IT governance encompasses five decision areas, i.e. IT principles, IT architecture, IT infrastructure strategies, Business application needs, and IT investment and prioritization. The IT Governance perspective provides particular insight into the ICT integration activity. Also, for diagnosis purposes of conformity the ISO/IEC 17799:2000 Code of Practice for Information Security Management may be taken into account.

### 3.2 *ICT Integration in an M&A Process*

The list below identifies a number of ICT Integration issues and activities that various authors claim are important to address during the course of a merger or acquisition process. These issues and activities are classified according to the M&A stages suggested by Sudarsanam

(2003). An alternative classification is suggested by e.g. Quah & Young (2005). The insight from various contributors are:

- **Corporate Strategy.** Barrett & Graham (2004) argue that suitable confidentiality undertakings need to be ensured initially. Johnston & Yetton (1996) argue for the development of an integration strategy considering various models for change. Accenture (2004) supports this finding and states that IT should be involved early in business discussions about the deal, and advocate that the integration program should be driven on a vision of the future IT capability. PWC (2004a) argues for the need to identify merger issues on IT operation and technology. Sisco (2002b) emphasizes that the value of the purchase needs to be validated, and that “deal breakers” related to IT must be identified. Melymuka (2000) suggests that the extent to which the acquisition candidate has a documented IT strategy that's aligned with the business needs to be evaluated, as it gives a sense of whether it's a good or weak IT organization.
- **Organising for Acquisitions.** Melymuka (2000) advocates that the extent to which the acquisition candidate has a set of infrastructure standards, as well as the extent of how much is the standards are followed needs to be determined as that will indicate whether the infrastructure is fragmented or integrated. PWC (2004a) adds that planning for a successful integration of information systems needs to be undertaken. Further, Melymuka (2000) suggests that the acquisitions candidate's application portfolio ought to be evaluated. Also, it needs to be determined whether systems are developed, sourced or purchased, and the state of the company's network and messaging application needs to be evaluated, cf. Melymuka (2000) and Granlund (2003). Sisco (2002b) suggests that risks needs to be quantified and that risk avoidance plans related to IT needs to be developed. Identification of key IT related resources and employee retention plans, development of operating budget for IT function, identification of near term IT capital investment needs, and development of a high level transition plan are also important tasks to undertake during the organizing phase, cf. Sisco (2002b).
- **Deal Structuring.** Important activities during the deal structuring phase are information systems and technology due diligence (before the deal is signed, cf. , Sisco 2002b, Accenture 2004, and Buck-Lew et al. 2005), assessment of legacy IT systems, development of transition IT strategies, assessment of valuation-related IT and Internet metrics, and transition planning and project management, cf. Giacomazzi et al. (1997) and PWC (2004a). Buono (2003:90) points to the importance focusing on the inherent dysfunctions that can emerge in the combined organization due to the informal power held by organizational members, low productivity, poor quality, reduced commitment, voluntary turnover, and related hidden costs and untapped potential. These issues are important issues to bring forward if deviating from expectations in the final deal negotiations (Sebenius 1998, Ashkenas et al. 1998, Paranam et al. 2003, La Piana & Hayes 2005).
- **Post-Acquisition Integration.** Accenture (2004) suggests that it is important to engage in detailed IT integration planning, to appoint a dedicated IT integration team and manager to oversee the IT integration, to use experienced staff to manage the IT integration, to use external staff to help execute the integration activities, and to engage in cultural change and human performance-related programs. These findings are consistent with the research of Ashkenas & Francis (2000) and Angwin (2004). Furthermore, Lind & Stevens (2004) argue that the leadership style needs to be matched with the characteristics of the merger at hand. PWC (2004a) suggests IT organisation and staffing reviews, and McKiernan & Merali (1995), Webber & Pliskin (1996), and Searby (1969) and Sisco (2002b) address the actual execution and

control of the ICT integration. Moreover, Merali & McKiernan (1993) argue for a strategic positioning of information systems in post-acquisition management.

- **Post-Acquisition Audit.** The post-acquisition audit may take the form of an IT Audit, cf. Sisco (2002a). Specific performance measures may be evaluated (Datta 1991, Alaranta & Parvinen 2005), and in particular financial measures (Healy et al. 1992, Kaplan & Weisbach 1992, Ghosh 2001), as well as problems of the information systems integration may be assessed for further development of capabilities (Robbins & Stylianou 1999, Piekkari et al. 2005), and learning (Cossey 1991, Stylianou et al. 1996, Goodwin 1999).

The listing of activities will base the discussion in the case analysis, although the stages will not explicitly be analyzed in the case. Hence, central integration issues will be pointed out in the case.

#### 4. The Case of Nordea

A networked world entails entirely new ways for the financial sector to generate and protect customer value. This is a case study of the largest financial services group, Nordea, in the region of the Baltic Sea with approximately EUR 262 billion in total assets. The case focuses on the integration efforts of the Nordea Group, and identifies main M&A integration process issues. Nordea (short for Nordic Ideas) has a very large customer base containing 9,6 million private customers, 900.000 corporate customers and 500 large corporate customers. The distribution network of Nordea is the most comprehensive in the region entailing 1,209 bank branch offices in 22 countries, and 31.000 employees.

A brief historic outline of the Nordea Group reveals an ongoing process of mergers and acquisitions. The Nordea Group was established in March 2000. The merger of the two groups MeritaNordbanken and Unidanmark (parent company of Unibank) resulted in the creation of the Nordea Group, which in 2002 was the leading financial services group in the Nordic and Baltic region. The group is listed on the stock exchange in Copenhagen, Helsinki and Stockholm, and had a market capitalisation of EUR 15.6bn at that time. An overview of the many M&A's is shown in the following figure.

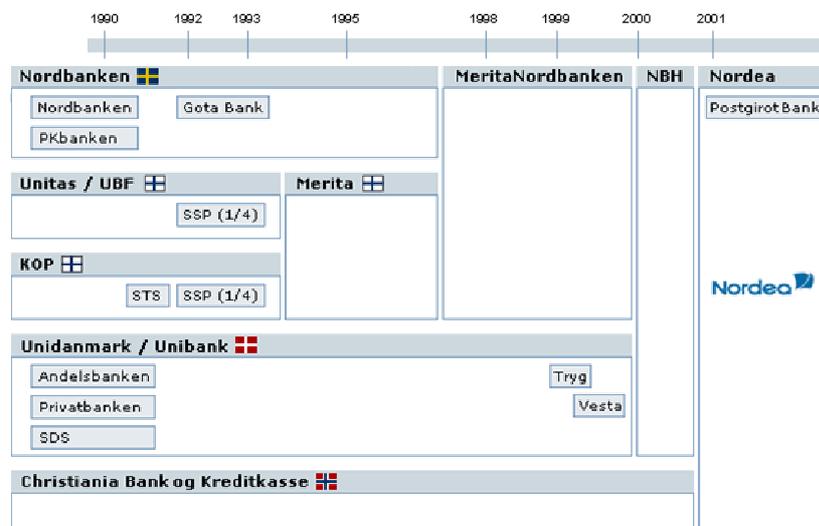


Figure 5: The Nordea Integration Process.

Source: [www.nordea.com](http://www.nordea.com).

The MeritaNordbanken-Unidanmark merger and the acquisition of Norwegian Christiania Bank og Kreditkasse was expected by top-management to create annual synergies of EUR 360m when fully realised by the end of 2003. To ensure the further improved efficiency of the Group, a second wave of integration process had been initiated. This second wave was expected to create annual synergies of the same magnitude when fully realised by the end of 2004.

A new organisational unit, Group Processing and Technology, was established with the responsibility of central production and processing as well as coordination of Group-wide integration projects. According to the news release, "The new unit will speed up consolidation and integration and free up resources in business areas, thus enabling an even stronger customer and business focus". The new unit will consist of Group IT, Electronic Banking, Global Operations Services and Production & Productivity. The focus on Group Processing and Technology chaired by the deputy group CEO underlines that information technology continuously maintained its key role as the most important business enabler.

Nordea increases efficiency and integration through consolidation of IT production. The current IT operations in all four Nordic countries will be merged into a common IT platform to support increased productivity and higher cost efficiency. Consolidation of IT production is a major initiative in the ongoing second wave of integration program. The aim of the program is to simplify, unify, speed up and re-engineer internal processes and to consolidate and share group infrastructure across borders and business areas in order to benefit from the scale of Nordea.

The IT production comprised some 1050 employees and had a cost base in 2002 of around EUR 330m mid 2002. According to the plan this would have to be consolidated and incorporated with contractual obligations for delivery, quality etc to the customers in the business areas and group functions. However, due to the many mergers, and a very business oriented IT-strategy, the architecture was extraordinary complex. Nordea had any type of software and operating system found in any bank in the Nordic region. It was believed that a policy of reducing the number of technological platforms each of which was to be consolidated into one single location, standardized network and desktops would have a significant impact on the Group's future cost development.

The committed cost saving potential is approximately 20 per cent of the future overall production costs without executing the planned consolidation process. The effect will be gradually increasing with full-year sustainable effect after 4 years estimated at EUR 70m. The largest cost reductions emerge from centralised and standardised hardware and software and reduced costs for licences. Expected investments of EUR 60m will be accounted for in 2002-2004 resulting in a positive cash flow from 2004, among other things resulting in downsizing by around 250 employees over the period

The in-house solution was expected to create large cost savings while maintaining control and future flexibility. This has been chosen after thorough analyses of several possible solutions including outsourcing.

## **5 ICT Integration Issues at Nordea**

### ***5.1 IT Consolidation – An Incremental Process***

After the merger of the two groups MeritaNordbanken and Unidanmark, which resulted in the creation of the Nordea Group in 2002, it was clear that the information systems needed to be integrated. However, the challenge was to find out which way was the best.

The IT situation was that Nordea had old core banking systems “stored” in an silo architecture with 4 main production centers with multiple platforms and approximately 9.000 applications. Moreover, Nordea had 4 different branch networks; one for each country in Denmark, Norway, Sweden and Finland, and the working tools differed from country to country though they were developed on standards. It was realized the building a total new platform would be too expensive and would not be gain return on investment within a satisfactory period of time. The situation is similar to the different IT visions as presented in Figure 1. Nordea chose to use a combined platform strategy, which resulted in that new products were developed upon a common platform for all countries, whereas to the existing legacy systems was added a middle layer mapping application-to-application into a common interface.

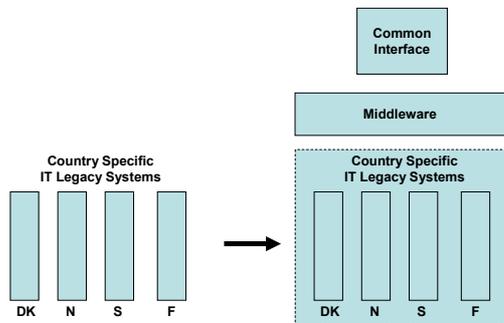


Figure 6: ICT Integration at Nordea.

Hence, the development of the corporate architecture follows an incremental development path changing gradually by each new product introduction.

## 5.2 Management Processes of ICT

After the above mentioned merger the management processes were only partly aligned with regard to decision processes, and the operating, development and management processes differed. In addition to this the organization had different approaches to focus areas.

In order to change this situation, Nordea changed the generic IT mission to “From show-stopper to key enabler for cost efficiency and agility”, and identified a Nordea Group IT mission: “Nordea IT to be a Proactive, Predictable and professional IT Partner”. Hereafter, IT strategies were developed emphasizing comprehensive governance. Nordea states that Business areas now are for buyers, and that IT is a service provider. Basically, business decides what to do, and IT decides how to do it. Furthermore, services, though for internal customers, are delivered based upon service-level-agreements and development agreements. The conception of IT also changed to that IT is responsible to take necessary steps to ensure best value on the IT infrastructure to give maximum cross business value, and IT operates like a business, as if outsourced. The fragmented structure were further enhanced by infrastructure consolidation, and enterprise architecture development and application consolidation

Finally, cost transparency and cost control were enhanced by going from back-office and cost pool orientation to service provider with “commercial” SLA’s to internal customers (as competent buyers), which enabled customer satisfaction due to increased transparency and understanding, influence on service quality and costs, and predictability.

### **5.3 Enterprise Architecture and Levels of Standardization**

Due to the enterprise architecture development supporting an end-to-end view of the value-chain, and application consolidation, a high degree of unification and standardization were obtained without compromising the flexibility requirements of the multi-channel set-up across business areas.

The challenge of a multi-language business set-up is to balance standardization and flexibility. Nordea regards several levels of standardization, i.e. technology level, data center level, functionality level, business process level, system interface level, country specialization level, and project implementation level. The decision to be made were if there should be the same technology across countries, a single data center for all across countries, a single insurance system for all countries, etc. The approach to navigating the levels of standardization was to identify each level where a choice exists, and where flexibility must be allowed, and then minimize the impact of variation.

## **6. Conclusion**

This paper started out by pursuing the “what”, “why” and “how” of Information and Communication Technologies (ICT) Integration in merger and acquisition processes. This leads to answering the question of which ICT issues and decisions are relevant throughout the M&A process (what). The vital decisions is initially to identify the appropriate level of integration, either model integration, function integration or stand-alone solutions (or combinations hereof). The second question concerned what kind of value ICT integration may provide during the M&A process (why). Generally, the value creation comes from cost savings, revenue enhancement, and new growth opportunities. The third question regarded what IT Due Diligence is (how – planning). An array of activities and issues are listed and presented in relation to the particular stages of an M&A process. The fourth and final question pointed to what best practice recommendations were available for implementation of ICT integration (how – execution). Based on primarily consulting experiences of large customer segments recommendations were presented, in addition to some exemplification of ICT integration issues in the case of the Nordea Group.

Although fairly comprehensive, the paper only scratches the surface of this interesting area of ICT integration in M&A processes. Future research may be directed on gaining statistical significant recommendations, as well as more in depth knowledge about the underlying mechanisms of organizational as well as technological nature of the change process.

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