Change Management and Supply Chain Management:

Employee issues in implementation processes of SCM -
The action and re-action related to changes in each stage
of an implementation process.

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Executive Summary

Competition on today’s market is fierce. Providing a defect-free product is no more a competitive advantage. Now money and focus is put on managing the supply chain, a competitive tool to thriving in today’s business climate. There are two distinct flow pipelines: the order information transfer pipeline and the product transfer pipeline, both dependent on the collaboration efforts of individuals.

Evolving within supply chain management equals integrating the supply chain from basic to complex; from baseline or functional to internal or external. Bringing focus to where it is found to be lacking, this literary study highlights and connects issues that may arise during implementation of external supply chain integration. The focal point is thus on employee reactions to change, with each stage of implementation that the implementation issues connect to. Simultaneously, the study provides (pre)requisites to management during the different stages, which would support the implemented transition in its different phases.

The result of this study is a Manger Model that gives an overview of each of the implementation stages, the requisites for management and issues regarding employees at each of the stages. Constructed to be applicable to more than just external integration the model encompasses all the gathered models and theories through a discussion of not only the complexity of the internal and the external supply chain, but also the complex nature of the individuals caught within the implementation, both from the manager’s as well as the employee’s point of view.
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1.0 Introduction

In the modern times of today, globalization, technological advancement, and customers’ increasing demands continuously raise expectations of the performers on the market. This progress has led to an increase in the felt competition by businesses competing with their products. Today, providing the customer with a defect-free product faster and more reliably than the competition is no more perceived as a competitive advantage. Now it is a necessity to even remain in the game. The situation has forced businesses to direct their money and attention toward their supply chains.

The supply chain, when working well, can provide high speed and low cost, today necessities as well as Holy Grails for supply chain management. Perhaps in conjunction, the conventional saying stated in most supply chain management texts is “the more integration – the better the performance of the supply chain.” As such, managers see supply chain management as a competitive tool that can help their companies ‘thrive’ in today’s fierce business climate.

As a result, integration is part of the supply chain of today. Therefore, the main question when it comes to this element is how can successful integration be achieved? Many authors place forth at least two key elements; information sharing and operational planning.

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1 Fawcett & Magnan, (2002), The rhetoric and reality of supply chain integration, p. 22
3 Mentzer, DeWitt, Min, Smith, & Zacharia, (2001), Defining Supply Chain Management, p. 2
5 Lee, (2004), The Triple-A Supply Chain, p. 1
6 Bagchi, Ha, Skjoett-Larsen, & Soerensen, (2005), Supply Chain Integration: a European Survey, p. 1
7 Fawcett & Magnan, (2002), The rhetoric and reality of supply chain integration, p. 24
8 Simatupang et. al. (2002), Fawcett, & Magnan (2002), Bagchi et al (2005), McAdam, & McCormack (2001), Kulp et al (2004) to name a few, see source list for more examples.
1.1 Problem discussion

In 2001, the *Journal of Business Logistics* published a paper composed by Mentzer et al. It examined the existing research on supply chain management. The study was undertaken with a view to understand the supply chain management concept.\(^\text{11}\) The result spoke for itself: There seemed to be a more common definition of ‘supply chains’ across authors than of the concept ‘supply chain management.’ Looking at various definitions, the difference between supply chain and the concept supply chain management seem to lie in the elusive definitions of the two different focuses. The concept supply chain management seems to be more intangible in definition, using words that are not easily defined in the tangible. Where does a process or flow end? How is one built and maintained? On the other hand, the supply chain definition is perhaps not as widely used (based on the literature read for the construction of this paper) but it is more tangible in its wordings. Below are some definitions given of supply chain management; the intangible words written in bold.

“SCM requires traditionally separate materials functions to report to and executive responsible for coordinating the entire materials process, and also requires joint relationships with suppliers across multiple tiers. SCM is a concept “whose primary objective is to integrate and manage the sourcing, flow, and control of materials using a total systems perspective across multiple functions and multiple tiers of suppliers.””  
- Monczaka, Trent, & Handfield, (1998) *Purchasing and Supply Chain Management*\(^\text{12}\)

“Supply chain management deals with the total flow of materials from suppliers through end users...”
- Jones and Riley, (1985), *Using Inventory for competitive advantage through supply chain management*\(^\text{13}\)

“The objective of managing the supply chain is to synchronize the requirements of the customer with the flow of materials from suppliers in order to effect [sic] a balance between what are often seen as conflicting goals of high customer service, low inventory management, and low unit cost.”  
- Stevens, (1989), *Integrating the Supply Chains*\(^\text{14}\)

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\(^\text{11}\) Mentzer et al (2001), *Defining Supply Chain Management*, p. 3  
\(^\text{12}\) Here in reference from Mentzer et al (2001), *Defining Supply Chain Management*, p. 6  
\(^\text{13}\) Here in reference from Mentzer et al (2001), *Defining Supply Chain Management*, p. 6  
\(^\text{14}\) Here in reference from Mentzer et al (2001), *Defining Supply Chain Management*, p. 6
Looking at the three different definitions, it appears to be an accepted and general conduct to approach supply chain management from a production point of view. For instance, supply chain management seems to generally be about integration, information sharing, operational planning,\(^1\) and given the above definitions, with focus on materials. But it never seems to be about what it all really is: individuals from different companies working as one team. During the entire span of university studies, the author has come across only one definition where the individual has even been mentioned directly. At the same time, this definition was more to the point using wordings that were more tangible such as organizations, individuals, and directly involved.

“..a supply chain is defined as a set of three or more entities (organizations or individuals) directly involved in the upstream flows of products, services, finances, and/or information from a source to a customer.”\(^2\)

Managing a supply chain is, as such, much more “open” in format as the definitions offer no clear concept. Therefore, it must be hard for management to find guidance in how to manage their supply chain. Going further, it must be difficult to guide employees to act in the best interest of the supply chain if one can only define the chain and not its guiding principles. Nevertheless, the gains of a supply chain are clear. Having a working supply chain means the possibility to be time efficient and keep low costs – as explained in the introduction, a necessity to staying in the competitive game.

Going back to supply chains, there are two distinct flow pipelines; the one that handles orders coming in to the chain (the order information transfer pipeline) and the one that handles actual products (the product transfer pipeline).\(^3\) These two pipelines both depend on how well the individuals work together. So it seems evident that the employees’ conduct is important for the overall performance of the supply chain. As supply chain management today is caught in a fiercely competitive market where there is belief in the more integration

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\(^1\) See footnotes 8 - 10
\(^2\) Mentzer et al, (2001), *Defining Supply Chain Management*, p. 4
\(^3\) Mason-Jones and Towill, (1999), *Using the Information Decoupling Point to improve supply chain performance*, p. 3
the better the chain will be able to compete, it then appears to be important to know how to integrate successfully. Nevertheless, the academia and practice is far from one another. In a study by Fawcett and Magnan, it was concluded that

“While SCM idea of collaborative competition - competing as allied teams of companies- has gained many adherents, actual practice does not resemble the theory of SCM. Nobody is managing the entire supply chain from suppliers’ supplier to customers’ customers.”

18 Fawcett and Magnan, (2002), The Rhetoric and Reality of Supply Chain Integration, p. 20

This would mean that there is perhaps not enough effort or knowledge today from both management and employees, which leaves the supply chain operating below optimal. In addition, it would mean that there is still a need to master external integration, where every part of the production process, from suppliers’ supplier to the customers’ customers are working together.

This brings forth the need to know how to integrate externally with good results. The author finds that the pressure, as such, then would lie on management to coordinate employees’ efforts and reactions in support of the external supply chain. And hence, the reader arrives at the very core issue of this paper: the author is of the opinion that there is very little, if anything, written on employee reactions (and thereof arising issues) when it comes to implementing external integration of a supply chain. There are no to the author known texts on what management needs to be aware of at each stage of implementation and what is expected and/or needed of managers at each stage. This is therefore an area of study neglected by the discipline, perhaps be it by its general approach to supply chain management; to only look at the general, the diffuse, and the “operational” aspects that are found to be important.

But this area of study is of great importance. The competitive market demands a functioning integration where information sharing works well if not better and operational planning accounts for daily activities. The individual performance is thus of utter influence to the competitiveness of a supply chain. It is then important to know that employees are working
integrated and well. That is why the author finds it essential that managers know how to integrate externally from an employee perspective, i.e. knowing what issues may arise during different stages of an implementation process, and what the (pre)requisites are for managers at each stage.

1.2 Purpose
The purpose of this paper is to highlight and connect issues that may arise during implementation of external supply chain integration. Focus will be set on employee reactions to change, with each stage of implementation that these issues are connected to while simultaneously providing prerequisites to management during the different stages, which would help support the implemented transition in its different phases.

This was supported through answering three sub-questions:
1. Is the human factor significant when looking at its impact on implementing an external integration and why?
2. What can be done by management before integration to enable a more smooth change?
3. What can be done by management during integration to enable a more smooth change?

1.3 Demarcation
This thesis only regards change management as it is applied to supply chain management. In detail, there has only been time enough and interest to apply change management theories and concepts on the supply chain management concept of external integration. As the focus of this thesis has not been change management itself but its applicability, this discipline has not been given an introduction as supply chain management has.

Though it could have been possible to also include tangible, technological necessities to initiate and sustain external integration implementation, the focus was instead put on management (pre)requisites, organizational environment and employee ‘mental’ preparation (through information before the implementation etc) so that the scope of this thesis would not be too wide and/or loose focus.
The reason for concentrating on the intangible is also that it would affect general applicability to other areas of study, i.e. the thoughts portrayed here would not be as easily, if at all, valid in any other situation were they bound to the tangible details of external integration. The technological necessities for external integration would not be completely compatible to any other integration, even much less so to any other type of change.

Therefore, there has not been a specific industry, supply chain or product chosen so that the analysis and conjunctural manager model would have applicability to other areas of change as well. Issues per stage of implementation are applicable to other change implementation stages. Another implication is the scarce use of illustrations within the frame of reference, as they simultaneously provide mental pictures for the reader the author find that they may also restrict the applicability to other fields of study.

The biggest demarcation that has been done may even have a bearing on the strength of this study. It is that of the attainability of true external supply chain. As mentioned in the problem discussion about what is the ideal integration is far from what is out there. This in combination with most companies still struggling with attaining internal integration (see ‘3.0 Frame of reference’) means that there could be grounds to question the attainability of an externally integrated supply chain.

The last demarcation that has to be mentioned is that of point of view when looking at preparing the employee for change. In this thesis the approach is “what you can do to prepare your team to work with others within the company” not simultaneously preparing others to work with you. Therefore there is no help described that is aimed at an “outsider” company that is part of the chain and how the division can help the other company understand used procedures, company culture and habits etc.
1.4 Aim
The aim of this thesis is to highlight issues that may arise during implementation of external supply chain integration, and together with each stage of implementation provide a source of knowledge that might be used by managers in any discipline in times of change implementation as a source of support together with companies’ own implementation policies.

1.5 Scope
The scope of this study has been set at more specific for the supply chain management concept than for the change management theories. In effect, there is only one element of supply chain management that is used in the further analysis to construct ‘the Manager Model’ and that is external supply chain integration. This is due to different types of integration facing differing characteristics and therefore varying requirements. Employees’ reactions have not been combined with any other type of integration in this thesis. In regard to the integration itself, the implementation (external) is here said to be ‘done’ when the change has become part of the bloodstream of the company and thoroughly rooted into the company culture and procedures.

When it comes to change management the scope is broader. This is due to there being many types of reactions and it is necessary to highlight several to give a realistic list of how employees might respond to change. The scope has come to include only the issues that arise, i.e. the more negative reactions, as these are the ones that cause concern as they can affect the process of implementing in a negative way. Nonetheless, there is also a focus on managers’ requirements and order of implementation stages that are included to provide a way to minimize negative response among employees. Though reactions are a result of feelings the scope has been limited to only slightly touch upon how employees feel and why they feel what they feel. This is because it would be too complex to account for the basis of human feelings as well as too inaccurate to provide a key to how people around you may react. Every individual is unique and responds to change in a different way from everybody else.
1.6 Object
The objects of this thesis are at any level of prior knowledge of either supply chain management, change management or leadership management, as it is intended for anyone with interest in these issues. This stresses the importance of the level of explanation, which has to be introductory enough to keep understanding for those not fully acquainted with supply chain management high, yet in-depth enough to be of use to those in managerial positions. Hence, there will be minor terminology and fundamental concepts explained in the beginning of this thesis, but it will be followed by an in-depth investigation of the incorporated models and theories that make up the base for discussion from there on.
2.0 Method

2.1 At the beginning of the writing process – presumptions and influences

As already mentioned in the introduction, external integration is still a Holy Grail for most companies.\textsuperscript{19} According to Roussel and Skov, achieving internal integration is the main focus of the majority of companies today, as has been the situation several years prior as well.\textsuperscript{20} This is supported by Rushton et al who state that the majority of companies have achieved quite limited internal integration. Not many have achieved full internal integration.\textsuperscript{21} However, those who have achieved it are arguably, according to Simchi-Levi et al, amongst the most prominent and powerful companies within their industries.\textsuperscript{22} This was known information at the start of the process of writing this thesis and it has been recognized that there were three major assumptions on the author’s part at this stage:

1. If there is such difficulty to achieving internal integration, it must be logical to conclude that achieving external integration is even harder as it involves an even bigger and inter-organizational expansion.

2. People by nature are complex. They are not easily molded or manipulated and they are affected by the variables around them (such as their closest coworkers). Thus, when implementing external integration that is already a complex matter in itself, the human factor has the capability to play a significant role as either barrier or enabler.

3. Knowing issues of concerns to employees in times of change, by logical deduction regarding the rational human, reducing the experienced level of concern will equal a more positive association to the change. The more positive a feeling toward change is, by conclusion, must lead to a higher general acceptance level of the change (as the

\textsuperscript{19} Rushton et. al., (2006), The Handbook of Logistics and Distribution Management, p. 30
\textsuperscript{20} Roussel and Skov, (2006), European Supply Chain Trends, p. 5
\textsuperscript{21} Rushton et. al., (2006), The Handbook of Logistics and Distribution Management, p. 30
\textsuperscript{22} Simchi-Levi, (2008), Designing and Managing the Supply Chain, p. 14
individual itself is willing to submit to the change and this feeling is supported and amplified by similar actions by those in the closest working environment, i.e. their work teams. This would mean that there must be a need to be able to categorize what possible areas of concern are connected to which stage of implementation. This resulted in ‘The Manager Model’ in chapter four.

2.1.1 The implications of the initial presumptions

Though these presumptions were the initial base to the author’s reasoning, their recognition simultaneously resulted in an awareness to keep an objective approach to the subject. The implications of this were at least four-fold:

1. The content of the thesis would need to include the different stages of external integration implementation. At each stage the different chosen issues relevant to the specific stage would have to be highlighted in order to combine the two sub-focuses of supply chain integration and human resource and change management. This has in the forth chapter resulted in the construction of “the Manager Model.”

2. There was neither intention nor supporting material included that contemplated the complexity of human behavior or even a question as to their having an influence on the success of the implementation. Instead focus was on what different reactions and issues could be. Again, due to the want to keep the included information as a source of insight and/or help to other disciplines and situations reactions and issues have been explained in their more general essence, and only a specific few have been chosen (e.g. attitudes and conflicts).

3. Just knowing employee reaction to change should be supported by what management and managers can do in order for the reactions and issues to be amplified if positive or managed and minimized if negative. This resulted in the Nordhaug list among others.

4. The presumption and support of the complexity of both external integration implementation and ‘steering’ of human reactions meant the tone of the essay would have to remain neutral despite the author’s predisposition toward negative results.
I.e., despite the hardship of achieving external integration there would have to be a subtle reminder that this is still a cause worth fighting for and/or towards. On this point, however, the author hopes to have achieved such a perception for the reader.

As seen, the initial presumptions have had a significant effect on the content and lay-out of this thesis. According to the author, these presumptions have collected the content of this thesis as well as given logical structure to what should be included and how it should be used. Objectivity of the used material has, however, been maintained (further reading in 2.5 Validity, credibility and reliability).

2.2 Constructing the foundation – the process of collecting data

This thesis being a literary study means that the sources used are restricted to print format only. As such the focus has been on including three kinds of written sources:

a) Literary works with focus on one or several of the fields of study chosen in this thesis, written with an educational and informative purpose (e.g. class or seminar literature in supply chain management, human psychology or change management),

b) Relevant reports, articles and/or case studies already in printed form, and

c) Relevant reports and articles on the Internet, not accessible to the author through any other mean than via the Internet.

Physical limitations of information searching were confined to Linköping Stadsbibliotek and the Humanistic and Social Sciences library on Linköping University campus. This is due to the author’s limited time frame as well as limited accessibility to other libraries. All sources were searched from the areas in focus; supply chain management, leadership and knowledge management, human psychology, change management and organizational theory. On the Internet search sites were limited to supply chain management sites and university thesis databases within the focus areas.
During the process of collecting data, a decision was made by the author to limit the scope to entail only five sub-focuses; supply chain management and supply chain integration, administration and leadership, knowledge management, change implementation, and organizational environment and structure. These are all very important aspects of implementing external supply chain integration:

*Supply chain management and supply chain integration:* Without understanding of the ‘setting’ and function of an integration, the author felt there can be no true understanding of the dialogue in and result of this study. In addition, introducing supply chain management and integration also acts as support for understanding ‘the Manager Model’ in chapter four.

*Administration and leadership:* The author felt that understanding how to implement change from a management point of view can help avoiding (very) negative reactions from employees. Knowing what can be done as a manager to support change and how management is perceived by employees act as enablers of reaction “steering.” Management as such have the knowledge to ‘mold’ initial reactions into positive experiences enhanced by the magnitude of acceptance and submission of the corporate work force.

*Knowledge management:* This sub-focus was included to show that each experience, if handled correctly, can build a depository of knowledge that can be used in similar, future situations in a way that can help and support management and employees through means such as guidelines, skills, or situation assessment criteria.

*Change implementation:* Implementing a change affects the employees in different ways. Hence, knowing about the corporate attitude, employee position within his or her group, and personal attributes that enable change helps management with their job to lead their divisions through this transition.

*Organizational environment and structure:* The organizational structure and environment can be either an enabler of or barrier to implementing change. For instance, complex and rigid bureaucracy in an environment with a high degree of continuous adaption is a barrier to
being competitive as it hinders the corporation from being able to conform fast to the rapid changes in its environment.

2.2.1 The implications of the collection process

Being limited to two physical libraries and the Internet has not limited the range of literary scope accessible to the author. Sources are from a variety of locations since the search was not limited to one source (e.g. the campus library). Being constituted exclusively by printed sources the result of this study is more generally applicable to different kinds of situations than had it included opinions from individuals, in the work force, professors, etc, as it does not bear the conviction of any one person in particular but is based on sources written with a given objectivity in mind; not affected by the presence of the author; the format of any questions or dialogues; as well as the purpose of using these sources.

The process however, has meant that there will have been the exclusion of other relevant theories that would have been included, given a larger scope and longer time frame. Not using personal interviews, questionnaires or surveys has limited this thesis to secondary data only, meaning every source will have been written with an ulterior aim and purpose (further on this in sub-chapter 2.5 Validity, credibility and reliability).

Nevertheless, this process of source elimination has still meant that much more has been read by the author than has been included in this thesis. Therefore, there is a need for critical evaluation of the train of thought used in this thesis (more in sub-chapter 2.3 Constructing the dialogue – finding the appropriate format and level).

The method of collecting information has included an objective eye in selecting which theories and models to choose to include. This has resulted in there having been personal demarcations and limitations by the author. As a result, ideas, theories and models that would have seem just as relevant as thus included by another author, may not have been included here. Nevertheless, the chosen models and theories have been anchored in their relevance to the subject (see sub-chapter 2.4 The chosen theories – why are they relevant?). Furthermore,
the process has extended itself to a variety of sources and as such, the thesis had the opportunity to avoid collecting theories from only one ‘dogma’ or written in only one agenda. As such, the process is appropriate in providing different ideas and this through a wider spectrum of knowledge on which to found this study.

2.3 Constructing the dialogue – finding the appropriate format and level

As writing is always conditional on culture\(^\text{23}\) it is the author’s duty, according to the author, to avoid generalization based on the writer’s own disposition of necessary, introduced knowledge needed for the audience. Hence, the author sent out a few introductory copies to trusted people, connected and not connected to supply chain and human resource management. Based on the given feedback the author then decided upon an explanatory level that seemed to support most, if not all, of the readers. The key in the balance was to find the point at which knowledge is already generally accepted and therefore is of no need of further explanation,\(^\text{24}\) e.g. the complexity of human nature (we all now humans are complex beings consisting of emotions, thoughts, senses, etc that all make up the basis for our decision platform).

Accordingly, this study has been extended with a frame of reference germinated from a basic introduction to supply chain management. Nonetheless, the author intended this study to go beyond the introductory level, and therefore this is the only introduction to a field of study that has been added. The continued dialogue does require some prior knowledge from the leader when it comes to change management, human psychology and organizational theory, for instance.

On a further note, the tone of the study has been of the aim to be accessible and understandable to the audience. As such, the author has concluded not to include any other aids to the reader, such as appendix with further explanation, or dictionary list at any point of

\(^{24}\) Dysthe et al, (2002), *Skriva för att lära*, p. 13
this thesis. Instead, there has been a great effort to use terminology that need no further explanation or whose meaning is made clear in the context in which it is presented.

### 2.3.1 The implications of the chosen dialogue

The chosen dialogue style has meant that this thesis is not written with an introductory aim in mind. Terminology used and depth of discussion have been designed not to be in such detail as to making this thesis limited to a specific use only, namely that of external integration of a supply chain in a supply chain management context. It has been designed with the thought in mind that this knowledge presented can be applicable in various degrees to other areas also affected by change, as well as be of interest to others than managers and management active within supply chain management, or human resource management, such as student of business studies or just the average layman.

Unfortunately this meant that there is no deeper dialogue about fundamental issues that arise regarding employees and management during implementation stages, neither in specifics in supply chain management context, nor in general. Instead there is a general ‘mid-level’ depth to each issue and stage in the main body and analysis, and to the combination of the two in the manager model. Perhaps it will be of interest to further the depth of this analysis in a Master’s thesis further along the line…

### 2.4 The chosen theories – why are they relevant?

This theoretical study has taken the use of eight specific theories in addition to elements such as collaboration and the supply chain management concept (explained as the origins and application of supply chain management given in sub-chapters 3.1-3.4.).

The underlying motive behind the chosen theories is that they were used to demonstrate (but not exaggerate) the complexity of an externally integrated supply chain (through “the Supply Chain Maturity Model,” “silo-mentality theory,” “the process-oriented mentality” and elements such as collaboration and the supply chain management concept). The were also
chosen to show how to get to an externally integrated state and to encompass two different sides to the employee-employer relationship in times of change, namely from the employees position (“Group behavior” and “The Requirement List by Nordhaug”) and the manager’s and management’s position (“Kotter’s Eight Traps when Implementing Change” and “The Requirement List by Nordhaug”).

2.4.1 The theories

The theory given by The Performance Measurement Group, the Supply Chain Maturity Model, ranks companies in level one through four as either followers or leader when it comes to the state of their supply chain. Every company starts out at level 1 and integrates “up” the scale until they have gone from followers to leaders within supply chain integration. This theory shows that there are already existing criteria for when a supply chain is in the state of external integration. At the same time it demonstrates that external integration is not the final stage of integration, but that there is still a level to aspire to in terms of being a competitive chain.

Silo-mentality theory describes the information and interaction flow between functional divisions in integrated stages prior to an internally integrated state. External integration cannot be supported if the company is still operating within this mentality as it indicates (with support from the Supply Chain Maturity Model) that the supply chain is in a state of pre-internal integration (either basic or functional). Managers must be aware of the necessity of moving from this state of information and interaction flow to a process-oriented mentality and format. When the supply chain has a process-oriented mentality they have required a vital part in integrating further into an external supply chain. This is because an external supply chain needs to be designed as one whole process, just as an internal one, but on a larger scale with outside players.

Kotter’s eight traps when implementing change is the theory that has the highest level of detail and most clearly shows all the issues that management face in times of

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implementation, among the theories chosen. This theory focuses on what management and managers can do to try to avoid negative reactions to change, ranging from planning to post-implementation stage. This is one of the founding theories on which ‘The Manager Model’ was then later based.

*The requirement list by Nordhaug* focuses on both the employee’s and management’s position during implementation by stating desirable individual attributes for both manager and employee that can help ease the transition. As the human factor is in this thesis believed to be either enabler or barrier to transition, this theory is relevant in showing that not only can individuals affect the perception and ease of transition, this theory also states how to possibly ‘mold’ human reactions into positive effects, that is, enablers for change.

The concept of *group behavior*, encompassing role allocation, attitudes, and communication, serves the purpose of highlighting the situation from an employee’s point of view. It does so by looking at how individuals are affected by their own attitudes and the environment he or she is in.

*Organizational environment and structure* has been included to show the underlying complexity of integration. A supply chain is dependent on its supporting ‘infrastructure’ made up by organizational rules (procedures, habits, culture, etc.) as well as environment (competitors’ presence and influence).

The last concept and theory, *knowledge management*, is a theory that combines all the motives that guided the selection of these theories. It connects management and employees through the knowledge of how to implement change, the skills necessary and the analytical skill that comes from years of collecting knowledge from different changes and implementations. The theory then connects management and employees to the complexity of external integration by adding to the complexity of the ‘infrastructure.’ Within an organization there is a collective knowledge on corporate culture, habits, competitive environment as well as skills needed to adapt and cope in its environment. An external supply chain needs to have a generic culture that encompasses every unit that is part of that
chain. There needs to be an understanding of what situation the external supply chain is in, and the skills to manage within that environment.

2.5 Validity, credibility and reliability

Validity
This thesis was written with the purpose to highlight and connect issues that may arise during implementation of external supply chain integration, in regards to employee reactions to change, with each stage of implementation that these issues are connected to while simultaneously providing prerequisites to management during the different stages, which would help support the implemented transition in its different phases.

This was done by asking three sub-questions:
1. Is the human factor significant when looking at its impact on implementing an external integration and why?
2. What can be done by management before integration to enable a more smooth change?
3. What can be done by management during integration to enable a more smooth change?

It is the author’s conviction that these questions have been coherently and relevantly answered. However, there is need to highlight that this is a study of limited proportions and that both focus and depth can be further explored. Therefore, the thesis is valid in its result as it is true to its aim. This is supported by the construction of ‘The Manager Model’ in chapter four where all three aspects (implementation stages, possible employee issues, and management requisites) are combined.

Credibility
The credibility of this thesis is dependant on three aspects:

a) The extent to which it can be generalized and applied to other issues,
b) External influences of the established field, and
c) Reliability

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26 Peter Gustavsson, Bachelor Thesis Seminar, 4th of August, 2008
It has already been highlighted that this thesis does not venture out into the deepest of depths within this field of focus or level of detailed description. This was specifically in accordance with the author’s wish to write a study that could possibly be of use and or insight to others than only those active in change management in regards to supply chain management. The result is that this thesis has a frame of reference that separates supply chain management from the administrative and organizational. Hence, the degree of applicability and or support to other areas of study is high enough to support this thesis having a character of applicability to other areas than supply chain management.

Whether there is a politically correct way to write about supply chain management or a generally excepted formatting of such papers the writer has not been aware of such conventions or followed any other set standards other than those set by the faculty of Economics and Business Studies at Linköping University in regards to writing a Bachelor’s thesis. Therefore, this thesis is, according to the author, free of deliberate or common deception that could possibly follow a ‘standardized’ format within a field of study. In layman’s terms this means that the author has not avoided any certain aspects or information that would normally not be included or treated in a predisposed way were there such a standardized practice in place.

**Reliability**

Would the result of this study be different had other sources been used? The answer would have to be in the negative due to two fundamental characteristics of the chosen focus:

1. Implementing any change, regardless of it being in supply chain management context or other, always has a planning stage, preparation stage, implementation stage and an ‘after’ stage. Therefore, choosing alternative sources on how to implement change, these will also have been built on the underlying format of ‘stages.’

2. Human’s reaction to change is undisputable. The different alternative ways to respond (positive and or negative) to a change are all set in the field of psychology. The human reactions to change will not change because of a new source is used. On the contrary, all theories on change management indicate that there are general and or
specific actions that management can implement as to easing the transition through lowering negative response from employees and thereby increasing general acceptance of the change at hand. The actions approach may vary, but not their nature.\(^\text{27}\)

Combining the stages and the human reactions is what has been done in this thesis. As such, the result, though perhaps different in wording or approach, would still hold the same result had alternative sources been used in this paper. There would still be issues for management to regard in each stage of the implementation process, and there would still be requisites for management at each stage.

### 2.6 The author’s additions and evaluation

When composing an academic paper the first step is to analyze the task at hand in order to understand what it actually entails and what kind of knowledge is needed to be collected.\(^\text{28}\)

After careful and detailed consideration on the author’s part, this sub-chapter has been included as an independent sub-chapter, which content will have no bearing on the overall result of the thesis, but merely serves as an outlet for thoughts and ideas that for some reason or another has not permitted their being expressed anywhere else in this study.

Placing the demarcations for this thesis was of highest difficulty as the subject in itself, to the best of the author’s knowledge, has not been explored in this context prior to this. Therefore, it was hard to see where the actual demarcations and limitation would and should have to be as there are no direct theories, models or concepts written for this specific study. Though it has brought with it a challenge of great interest to the author, the question cannot be avoided whether this quest has been too ambitious and therefore should have been even more restricted in its focus and theories.

\(^{27}\) An example would be different types of change implementation techniques. They are all designed differently but share the characteristic to ease the coming transition.

\(^{28}\) Dysthe et al, (2002), *Skriva för att lär*, p. 23
It needs to be said that supply chain management is a field of study that encompasses only little over 20 years of theoretical and practical knowledge. This means that there is yet to be established ‘core theoreticians’ within this field, as has been done within fields such as Marketing (e.g. Kottler) and Philosophy (Aristotle’s, etc).

There could be a need for a complementary study which would explore and or measure the attainability of external integration. This is due to the author, after having composed the thesis, not finding that the initial presumptions have been altered. On the contrary, the belief in the complex nature of external integration and the impact of human behavior on the transition has been strengthened by the result and process of this study. Therefore, it would be of interest to see how attainable the external level of integration is, and thus see how relevant this study is to the field of supply chain management. That being said the result and applicability of this paper are not under critique, but rather the actual real applicability of this thesis (rather than it serving simply as a theoretical food for thought) can be re-estimated.

As a last note, the author wishes to express the need for further study within this sub-filed of supply chain management. According to Roussel and Skov, supply chain management is today regarded as a strategic issue\(^\text{29}\) which means that there will be more and more companies that focus on supply chains and their management. Thus, there will be a greater need for knowledge, through acquired skills and theoretical support, in the (nearby) future.

\(^{29}\) Roussel and Skov, (2006), *European Supply Chain Trends*, p. 4
3.0 Frame of Reference – Supply Chain Management and Human Resource Management

For the sake of easy reading this section has been written with supply chain management and change management (leadership etc) separated from one another. As a result, this chapter starts out with the perimeter within which leadership and administration will be placed, namely supply chain management. Thereafter following is the main body of concern, management and leadership.

3.1 Supply chain management – the origins

Supply chain management is the product of a quite recent theoretical awakening within the field of distribution and logistics: The awakening started as a result of rapid cost increases and a better definition of the true costs of logistics, both starting a reaction within the manufacturing industry in the late 1980s/early 1990s. Ever since, academics have tried to provide structure in this subject. This change led to an increase in professionalism and a pursuit of cost-saving measures, bringing with it recognition of and need for integrated logistics systems. During this time, “organizations began to broaden their perspective in terms of the functions that could be integrated.” This meant a combining of “materials management (the inbound side) with physical distribution (the outbound side).” The process idea was given the name of logistics.

This pace of change kept on going, and in the 1990s the concept of logistics expanded from only encompassing key functions within an organization to including those functions outside that also contribute to the provision of a product to the final customer. The concept came to differ from logistics in four aspects:

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30 All reference from Rushton et al, (2006), the Handbook of Logistics and Distribution Management, p. 8
31 Lambert et al, (1998), Supply Chain Management: Implementation Issues and Research Opportunities, p. 2
1. It focuses on all units involved functioning as one single entity “going outside the boundaries of a single organization” by including the supplier(s) and the end customer(s).
2. The focus lies on strategic planning systems rather than operational systems.
3. It holds a very different approach to dealing with inventory.
4. Integrated information systems are a central concept which is to assist in achieving product visibility and a clear view of the inventory stock levels.

Today we know this emerged concept as supply chain management. The definition(s) of supply chain management is as the list of documented or to-be documented texts in this field of study; endless. However, the author has come across a definition that serves the purpose of “frame.” Accordingly, supply chain management is here defined as:

“…a set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize systemwide costs while satisfying service level requirements.”

Even though it is, as mentioned, a definition that serves its purpose, it is nonetheless in need of a small addition in this context. Not only does supply chain management include the supplier(s), the producer(s) and the distributor(s), here it needs also to include the very recent modernization, or perhaps, “trend”: the customer(s). Today, it is no longer just about being one competitive chain with those involved in finishing the product; it has also started incorporating the commodities’ very reason for existing: those who ask for it. For it is reality; be it not for the customer asking for the product, there would be neither incentive nor reason to produce. To be ultimately competitive today companies are therefore looking at those whom they serve. Supply chain is hence today a very different field of knowledge and routines, even despite it still incorporating logistics and distribution. Serving as a visual aid, a

comparison with a ‘traditional’ logistics and distribution structure illustrate the wider scope and encompassed parts of a supply chain:

![Supply Chain Diagram]

Fig. 1: Supply chain management. The figure shows how supply chain management incorporates a much wider aspect of end-product procurement.

Seen in figure 1 are the three components of the supply-side process of production: supplier, manufacturer (materials management) and distribution. The middle line represents the logistics and distribution approach to the three components. The lowest line stands for the whole scope of the supply chain process. The left-hand side and right-hand side boxes show terminology used to describe the stage of overall production within the supply chain, whether inbound (at producing end) or outbound (at distributing end).

As afore mentioned, there are different definitions of both a supply chain and supply chain management, therefore it is important to also give a definition of a supply chain before introducing this building block of the discipline. Thus, a supply chain has here been defined as

“..a supply chain is defined as a set of three or more entities (organizations or individuals) directly involved in the upstream flows of products, services, finances, and/or information from a source to a customer.”

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37 Mentzer et al., (2001), *Defining Supply Chain Management*, p. 4
3.1.1 The supply chain

“A supply chain is an intrinsically collaborative form of an “alliance constellation;” where multiple partner firms compete against a single firm or group of firms.” Yet, as mentioned, it demands more of the ones involved within their respective organizations as it calls for a change in mentality from “them and us” to “all of us.”

The supply chain (also known as the logistics network) is made up by “suppliers, manufacturing centers, warehouses, distribution centers, and retail outlets, as well as raw materials, work-in-progress inventory, and finished products that flow between the facilities.” And yet reminded, in this context it is also assumed to incorporate the customer. Supply chain management is thus about “efficient integration” of all the different units involved, and expands over the strategic, tactical, and operational levels. In layman’s terms supply chain is beyond cooperation as partners, it is everyone, from supplier to customer, working as one team all the way from planning and procurement to the product having been purchased and produced. Integration is, however, a great source of debate it would seem, as integration in texts today seem to be mainly consisting of integrating the overall information system within the chain, using various measurement standards, or pooling warehouse and inventory resources. Nevertheless, integration is much more than just technical…

“In today’s economy, we see a number of different approaches to supply chain management, which leads to a wide variety of organizational structures.” This, as supported by the figure below, Figure 2, one chain can have many building blocks to be constructed with. Each is connected to one another through the core hub, here (and if not always); the producer. The difference between an alliance and the supply chain is that the latter requires a change of working culture, habits and procedures beyond situations where one unit communicates with one another. When being in a supply chain every unit needs to work for the same ultimate goal, without hidden ‘personal’ agendas and in trust and cooperation greater than what is necessary in an alliance.

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38 Fawcett et al, (2005), Supply Chain Alliance: Rhetoric and Reality, p. 4
40 Ibid., p.2
41 White et al, (2004), Economic Impact of Inadequate Infrastructure for Supply Chain Integration, p. 55
All the participants of a supply chain, centered around the core hub: the firm (producer).

If the partners in a supply chain, such as that in figure 2, are in a right state of cooperation, then the supplier in the far-most left corner works toward the same goal as the supplier on the right-most corner. They all work for and together with each other and all the other units. Procedures are unified for all, the working mentality is the same in every unit, and there is extended feeling of all units being in it together. At any stage of the process channels of communication is in such an flexible state that changes, questions and recommendations can be implemented and “sent on” without extra costs from miscommunication, delayed response or increase in production costs due to other than rearrangement of active/actual production (e.g. excess production). But this is unfortunately not reality, only the optimistic textbook scenario… Nevertheless, “most companies now consider supply chain management to be a strategic issue and leading companies are focusing less on process improvement and more on using the supply chain to enable international expansion and to leverage alliances and partners in the global economy.”

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42 Fawcett et al, (2005), *Supply chain alliances: Rhetoric and Reality*, p.32
43 Roussel & Skov, (2006), *European Supply Chain Trends 2006: Using the Supply Chain to Drive Operational Innovation*, p. 4
3.2 The effective supply chain – the issue of collaboration

Today, heavy competition on the global market is forcing businesses to investing in and focusing on their supply chains.\textsuperscript{44} However, many companies in the industry have “reduced manufacturing costs as much as practically possible” and “are discovering that effective supply chain management is the next step” to increase profit and market share.\textsuperscript{45}

Supply chains are nonetheless complex to construct, the reason being contributed not only to their consisting of a complex network, but different units within the chain often have “different, conflicting objectives.”\textsuperscript{46} Furthermore, the supply chain is dynamic in nature and needs to take into account future fluctuations caused by factors such as trends, advertising, competitors’ strategies, and technological advances.\textsuperscript{47}

The glue of the system is universally agreed to be not the physical attributes and/or support, i.e. technological, but the intangible but necessary human interaction of collaboration. “We conclude that the effectiveness of supply chain collaboration relies upon two factors: the level to which it integrates internal and external operations, and the level to which the efforts are aligned to the supply chain settings in terms of the geographical dispersion, the demand pattern, and the product characteristics.”\textsuperscript{48}

3.2.1 Collaboration in supply chains

Among the top of the list of topics most talked about in business today stands collaboration.\textsuperscript{49} It is not only stated to be one of the driving forces behind effective supply chain management, but holds the idea that there is much to be gained by working together with supply chain partners.\textsuperscript{50}

\textsuperscript{44} Semchi-Levi et al, (2008), \textit{Designing and managing supply chains}, p.1
\textsuperscript{45} Ibid., p. 7
\textsuperscript{46} Ibid., p. 4
\textsuperscript{47} Ibid., p. 5
\textsuperscript{49} Min et al, (2005), \textit{Supply Chain Collaboration: What is happening?}, p. 3
\textsuperscript{50} Ibid., p.3
In a study made by Soonhong Min et al, collaboration can lead to “enhancement to efficiency, effectiveness, and market positions” for those firms implementing collaboration initiatives.51

![Diagram](image)

Figure 3: Supply chain collaboration.52 The study by Soonhong Min et al supports the idea that there is much to be gained by working together with supply chain partners.

“Collaboration in the supply chain comes in a wide range of forms, but in general have [sic] a common goal: to create a transparent, visible demand pattern that paces the entire supply chain.” 53 This means that at every point of production there is easily accessible, understandable and real-time information about what the demand (for parts or finished products) is in the active production line and in the near future. As a result, for this core competence follows a need for common procedures as well as technological support and systems. Employees then know how to use the technology they are surrounded with, how to incorporate it into their daily job and routines and understand its implications for their daily

51 Ibid. p. 1
52 Ibid., p 18
and future situation. Due to the complexity and reward of collaboration, it “may be considered to be the ultimate core capability.”

Though defined as two or more companies responsible for sharing information about management, planning, implementation and performance measurement information, collaboration can also be said to hold the “most disappointing track record of the various supply chain management strategies introduced to date.” Adding to its problem(s) is that collaboration is not something created over night. It usually starts out as a relationship where functional areas within an organization start to communicate and collaborate over a continued period of time. This “alliance” then acts as a founding ledge into a collaborative relationship with a partner firm, the result being an integration of the firms’ activities on both intra –and inter level. “Participants become functionally interdependent and, therefore, pursue mutually beneficial outcomes.” This happens over a longer period of time and benefits rising from collaboration are not often seen in the short term. However, due to its potential long-term rewards; the mentioned improvement of effectiveness, efficiency and market position, its rewards are nonetheless attractive.

Serving as a backbone to collaboration is of course communication. Though this is a very positive characteristic, the difficulty with communication and aligning procedures is that the different units “often have diverging interests in the short term,” and this constitutes a barrier to fully committing to the collaboration with the rest of the supply chain. The most served issue today, within a supply chain, in accordance to what is in books, articles, cases and memos, is the sharing of information. The focus, however, is not on those who communicate, but with what system and fashion. Companies, instead of thinking of the needs for the whole supply chain they are in, act in a strange self-serving way and do not fully share demand information with their partners. In a study by Cachon and Fisher, they found that when

54 Min et al, (2005), *Supply Chain Collaboration: What is happening?*, p. 1
55 Ibid., p. 3
56 Ibid., p. 5
57 Ibid., p.14
59 Ibid, p.6
working with a full information policy rather than the traditional information policy, supply chain costs were 2.2% lower on average, the maximum difference being 12.1%.\textsuperscript{60}

Another problem with company behavior within a supply chain was highlighted in a study made by Holweg, Disney, Holmström, and Småros, who looked at successful and less successful implementations within collaboration initiatives, and what companies need to do to benefit in full from their collaborative efforts: They found that much of the information received by companies who had implemented collaboration initiatives was not incorporated into the receiving company’s own operations.\textsuperscript{61} Instead of using this information to adjust day to day operations, large multinational manufacturers collected the received information in business data warehouses “and use(d) it off-line in process development and performance measurement studies”\textsuperscript{62} instead.

As understandable, each supply chain is unique and fits only its own context, and with that there are also different levels of supply chains in regards to degree of complexity. This brings us to the dividing of the supply chain into level of scope, whether they encompass those only on the supply side (sans customer), or everyone from start to finish of the produced commodity (avec customer). Hence, supply chains are said to be integrated as either internal or external.

### 3.3 Supply chain integration – its function and complexity levels

“The fundamental principle driving supply chain integration is that closer, more cooperative relationships can yield mutually beneficial competitive advantage.”\textsuperscript{63}

Integration within supply chain hence means making the process of producing the end product into just one single process rather than in ‘steps’. That means that all units involved must communicate beyond well with one another, that there is visibility within the chain – everyone knows what is happening now (everywhere is up for discussion), and what will be

\textsuperscript{60} Cachon & Fisher, (2000), *Supply Chain Inventory Management and the Value of Shared Information*, p.1
\textsuperscript{61} Ibid., p. 6
\textsuperscript{62} Holweg et al, (2004), *Supply Chain Strategy: Making Sense of the Strategy Continuum*, p.6
\textsuperscript{63} Fawcett et al, (2005), *Supply Chain Alliances: Rhetoric and Reality*, p. 8
the requirements and following scheduled activity. Integration can be done through various adjustments: Sharing information through same-formatted systems, procedures and/or at more effective intervals, or through a system where the commitment to chain partners is at highest level and efforts to see an efficient collaboration through has the highest priority.

Today, integration has come to mean only sharing of information, nonetheless, “the aim of the integrated supply chain is to achieve competitive criteria for end consumers at a profit”64 and is being pursued by more and more companies as the number of cases of ‘successful’ internal integration, such as those of big companies like Dell, Wal-Mart, and Procter and Gamble,65 keeps increasing.

“The challenge […] is to coordinate activities across the supply chain so that the enterprise can improve performance […]”.66 This today means reducing costs, raising performance levels, better utilization of resources, reducing the bullwhip effect, and “effectively respond to changes in the market place.”67 But this can be done with two different set of players: only those belonging to the inbound and the distributor, or with a set that includes every unit from both inbound and outbound, i.e. from supplier’s supplier to customer (recall figure 2). The difference between internal (inbound) and external (inbound and outbound) integration is the span of integration – i.e. the number of partners involved in the commitment.

To make the matter visually clearer, in figure 3 (below) the scope and integrated partners in the two integrations is illustrated. This aids comprehension in understanding the logic behind why internal integration is said to be inbound with a little bit of outbound and external integration both inbound and outbound. However, the problem is that depending on whom you read, the boundaries of the two are going to shift. Therefore, in this essay, I have come to rely on definitions that are in harmony with other definitions in this thesis, as they do not

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64 Sadler, (2007), Logistics and Supply Chain Integration, p.220  
66 Ibid., p.188  
67 Ibid., p. 188
exceed any of the basic boundaries (the elements are included in most if not all definitions of internal/external integration).

Figure 4: The illustration of internal and external integration and their respective scope and integrated partners. Internal integration is said to be inbound but also includes distribution from the outbound side, whereas external integration encompasses both inbound and outbound partners.68

3.3.1 The integrated leader or follower- at which integration level is the company?

Developed by The Performance Measurement Group, the Supply Chain Maturity Model can be used to identify ‘leaders’ and ‘followers’ through measuring “how companies apply strategic, organizational, collaborative, and performance management practices to the management of their supply chains.”69

There are four stages, Functional Focus, Internal Integration, External Integration, and Cross-Enterprise Collaboration70:

Stage 1. Functional Focus: small-scale supply chain processes with resources under functional management.

68 This figure is a personally revised version adapted from Rushton et al, (2006), the Handbook of Distribution and Logistics ;Management, (2006) p.5
69 Roussel & Skov, (2006), European Supply Chain Trends 2006: Using the Supply Chain to drive Operational Innovation, p. 3
70 Ibid., p. 3
**Stage 2.** Internal Integration: Supply chain processes aligned and integrated throughout the company continuously measured and kept in alignment with common objectives.

**Stage 3.** External Integration: “Collaboration with strategic partners (customers, suppliers, and service providers) including joint objectives, shared plans, common processes, and performance metrics”

**Stage 4.** Cross-Enterprise Collaboration: Use of IT and e-business solutions with the result of “real-time planning, decision making, and execution of customer requirements.”

Those residing in stage 1 and 2 are by the Supply Chain Maturity Model classified as ‘followers,’ those in stage 4 ‘leaders,’ and those in stage 3 ‘challengers.’

Those in the European Trend study who were classified as ‘followers,’ still struggle with the concept of internal integration, whereas those who have reached ‘leader’ stage face the need to integrate externally, seeing suppliers and customers as “a major source of innovation.”

3.3.2 Internal integration – inbound plus distributor

“More and more companies are moving beyond the early stages of internal supply chain excellence and are beginning to collaborate effectively with their supply chain partners.”

Internal integration is the first real integration where full use of integrated information systems plays a central role to switch units from acting in isolation from each other in a step-by-step process, to becoming one single process. Instead of having inventories throughout the chain, before planning, after planning, material control, production, sales and distribution, the chain now works as a flexible unit with information flows up and down the chain.

At this stage of integration the chain components have already surpassed baseline and functional integration, both in which the inbound is allowed to function in a step-by-step fashion and without any linked information or procedural structure throughout the chain.

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71 Ibid., p. 3
72 Ibid., p.7
73 Poirier & Quinn, (2006), *Solid Gains*, p. 1
75 Ibid., p.30
key element is that supply and production is linked with sales and distribution. Instead of relying on “in-house” forecasts, suppliers and manufacturers can see the actual demand that is coming their way in the near future. This allows for leaner inventory and more flexible adjustments in dealings on a day to day basis. At the same time, distributors and sales representatives can now see how much is in the production line as they sell/deliver, as well as the nearby future capacity of the manufacturers. Future campaigns can be incorporated into production schedules to lower costs by lowering peak production hours and instead raise average production, thereby bringing down operational costs/ unit further.

3.3.2.1 The silo-mentality and basic integration

Having already implemented internal integration, this would imply a mental and organizational shift from silo- to process oriented. Before, individual divisions were in an “us versus them” state of mind. Here, procurement deals with production, production then deals with marketing, marketing then deals with distribution, distribution deals with sales, and sales in the end deals with the customer. Now it has been argued that in order to be successful in implementing supply chain management, the supply chain has to evolve past working in a functional (i.e. basic) integration state and instead take on a process oriented approach.\(^\text{76}\) In figure 5, below, is the functional division between different parts of the organization. The arrows represent the information flows and as can be seen there is not one circular free flow of information (and thus interaction), but instead several restricted information flows which all connect through the chief executive officer.

\(^{76}\) Mentzer et al, (2001), \textit{Defining Supply Chain Management}, p.8
Now, with the process orientation in effect, the internal supply chain has a more free information flow up and down the chain. There is now a more open dialogue between the different divisions and more understanding for other divisions’ processes due to their working closer together in this integrated state.

3.3.2.2 The move to a process-oriented mind

In order to be internally integrated those involved must evolve from a silo-oriented structure\(^7^8\) to a process-oriented structure.\(^7^9\) This means a reset from thinking of everybody else as “the others” to including them into the close team. However, it does not come easily as “traditional organizational structures do not really lend themselves to this new way of thinking.”\(^8^0\) The habitual way of working includes an inward focus, with

“several directors of functional activities reporting to a chief executive officer. There is a tendency for these functional boundaries to create barriers to integration – with the power

\(^{7^7}\) Adapted from Rushton et al, (2006), the Handbook of Logistics and Distribution Management, p. 166
\(^{7^8}\) Gimenez & Ventura, (2005), Logistics-Production, Logistics-Marketing and External Integration: their impact on performance, p. 3
\(^{7^9}\) Rushton et al, (2006), The Handbook of Logistics and Distribution Management, p. 30, 166
\(^{8^0}\) Ibid., p. 166
barons at the head of each function fighting to protect their own power base, rather than serving the overall company objectives.”

Thus, evolving into internal integration stage includes setting expanded boundaries and thoughts into motion. There is a need for support from all units to all units. Whatever new structure is implemented, it aims to “increase the visibility of the market demand and enable an integrated supply chain response.” Hence, they no longer work as separate units, but respond as one single team, coordinated among functional areas.

Having come thus far in internal integration the outcome is a production process that now instead of a step-by-step approach with inventory at each stage works as one single procedure, where inventory is kept lean, if at all needed, throughout the system:

![Diagram of internal integration process](Figure 6)

Figure 6: The internal integration process, focused on the inbound partnerships

As can be seen from figure 6, internal integration brings with it a whole new way to interact and think about the work being done. No longer are the different stages of production kept separate, now they are in contact with all units at the same time, all the time. This implies a need for standardizing procedures and making information flow as efficient between the units as possible. Still, however, the part that has truly been integrated is main production – the “inner core.” Suppliers and customers are taken into account but are not an integrated part of

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81 Ibid., p.167  
82 Ibid., p. 167  
83 Gimenez & Ventura, (2005), Logisitics-Production, Logistics-Marketing and External Integration: their impact on performance, p. 3  
the supply chain, as seen in figure 6. Main inventories are kept at start and finish, before entering the materials management zone, and after point of distribution. In supply chains today “many companies have moved to functional integration, with some achieving an element of full internal integration.”

3.3.3 External integration – inbound plus outbound

According to Bowesox and Closs, supply chains must expand their “integrated behavior” to encompass suppliers and customers if they are to be “fully effective” in the competitive environment of today. Simultaneously, there are already companies ready to take integration to the next level and focus their efforts, no longer only on those on the inbound side, but towards stretching their integration to include the whole outbound side as well. The first step having been internal integration, these partners now “extend the integration to its supply chain members.” That is, external integration is a state of integration where all players involved, from supplier to customer, are integrated and synchronized in cooperative alignment.

Mentality-wise this means yet another stretch of team boundaries: Whereas internal integration stays within the “we are all a part of main production” mentality, external integration has to go beyond it. It is no longer “we who produce” for it also contains suppliers and customers. Today, the advancement into integrated supply chains has been slow, “most companies have fairly limited integration within their own organizations” Thus, (full) external integration is yet a “Holy Grail” for many companies.
The major objective in external integration is reducing the level of uncertainty through making the information flow up and down the chain transparent.\(^{92}\) This is supported by the integration ‘structure’ where external integration is the integration forming the supply chain into a ring: It makes the two supply chain ends come together in collaboration (i.e. suppliers and customers).\(^{93}\)

![Diagram of material flow and collaboration between suppliers, internal supply chain, and customers](image)

Fig. 7\(^ {94}\) External integration, concentrates on both inbound and outbound partnerships.

### 3.3.4 Internal and External Integration: the summary

In effect, once a chain starts to go from being functionally (i.e. basic level) integrated to the more complex form(s), whether internal or external, it involves the change of team mentality from silo-mentality to process-oriented frame of mind, as well as standardization and alignment of work procedures through synchronized (if not the same) information systems, protocols and procedures. These integrations bring with them a much more “sphere-shaped” information flow, where all different firms in the supply chain interact with one another on a daily, if not hourly basis, using their (preferred) real-time information to adjust their own targets and operations on a daily (if not hourly) basis wherever it allows and/or calls for it. The new way of interaction links from and to every ‘unit’ in the chain (sphere on the right hand side in figure 8)

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\(^{93}\) Simchi-Levi, (2008), *Designing and Managing Supply Chains*, p. 188  
Figure 8: The move from functional integration to external integration of a supply chain: The pink arrows represent the flow of communication in a silo-mentality state of integration. Further integration (internal or then external) turns the integrated supply chain into a diamond shaped sphere, as it brings suppliers’ supplier (starting point of any production chain) in direct contact with the customer (the ending point of any production chain).

But getting to this state (i.e. external integration) of collaboration and flexibility requires belief in and trust for that which is to be accomplished. “[…] the extent to which leaders and individual managers trust each other is a key enabler for supply chain integration.”\textsuperscript{95} Trust, however, “is confidence in the loyalty, strength and truthfulness of a person.”\textsuperscript{96} Therefore, there needs to be an understanding from management’s side of how their employees experience such a change. There are things to think through, and ways to prepare for and implement integration that leaves most if not all feeling as though it was a turn for the better. By understanding how an individual reacts to change and how these reactions can be alleviated or amplified a supply chain can ensure a better chance of successful integration.

3.4. Administration and Leadership – their necessity and complexity

“[…] consider the relationships between organizations in a supply chain. Such relationships between supply chain partners have a major influence on how the chain functions.”\textsuperscript{97}

\textsuperscript{95} Sadler, (2007), \textit{Logistics and Supply Chain Integration} p. 195
\textsuperscript{96} Sadler, (2007), \textit{Logistics and Supply Chain Integration} p.195
\textsuperscript{97} Ibid. p.165
Today, most organizations have different managers responsible for different activities that are a part of the total chain. These managers enter the responsibility of handling a supply chain with very different views on how to do it, all seen from the view of their own responsibilities despite being integrated. The manufacturer sees the impact on manufacturing, the distributor sees the chain from a distributional point of view and the supplier sees the chain from his (supplying) point of view. This is known as the previously mentioned “silhouette mentality” which can result in “mediocre if not poor communication” between and within companies. Getting these different views and activities coordinated are crucial for and the base concept of a supply chain in order for it to work and be profitable. That is where collaboration in a supply chain comes into the picture. Because integration cannot happen if those individuals involved in it do not want to work together.

![Collaboration diagram](image)

Figure 9: The connections from collaboration to a functioning supply chain through integration. Without creating collaboration the supply chain will be nonexistent as its very ‘glue’ is ‘team work’.

As can be understood then; management or administrative management is a set of processes that makes a complicated system of humans and technology run smoothly. Nevertheless, the subject of management and leadership cohesively links to attitude. Regardless of what type of change is happening within the organization, you cannot preach what you do not support by actions and make it credible. In other words, talk is cheap when it comes to leadership; if you do not lead the way with your own behavior, then it does not matter what the message is for it will be discredited the minute after it has been announced. By result, successful changes are 70-90% leadership but only 10-30% administrative management.

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99 Barrat, (2004), *Understanding the meaning of collaboration in the supply chain*, p. 2
100 Kotter, (1998), [*Leda förändring*], p. 33
101 Ibid., p. 103
102 Ibid., p. 34
Hence leadership matters: efforts should be made to have recruitments from within the company, promotions from within, and calling on those in leadership positions who do not show it to prove themselves. At the same time care has to be taken not to promote individuals who will end up working against the system instead of with it. Three individual types are to be avoided, the first being the ego-centric who will not listen to others. Second comes the snake who creates so much distrust within the group that collaboration collapses. And last but not least is the involuntary participant who does not want to leave his or her position and will therefore never be passionate about their new responsibilities. If change is targeted at a factory, sales office or working unit, then those most influential, key persons will be the factory manager, head of unit, and other personnel on low, middle management that are in (direct) contact with that unit.

3.5 Knowledge Management

Some say that the whole point of knowledge management is to assist knowledge creation and processing so that it benefits the organization and the individual. It regards the collection and presentation of knowledge, thereby making it re-usable for the employee and the organization.

However, “numerous studies show that almost all businesses contain enormous amount of waste: misdirected efforts, poor or missing information, ineffectual management, lack of leadership, authority or trust, power plays, delays and excessive inventory.” When it comes to supply chain management, Jespersen and Skjoett-Larsen highlight the need to have a coordinator that helps as support and guide for all the different functions within the company. To ensure that the coordinator has all the needed skills and tools to manage his/her duties supplementary training can be needed. They stress the importance of knowledge of the goals of implementing supply chain management as well as a good understanding and

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103 Ibid., p. 65
104 Ibid., p. 67
105 Ibid., p. 54
106 Chibba & Höfte, (2003), Information flows and physical material flows in supply chains, p.11
107 Ibid., p. 11
108 Sadler, (2007), Logistics and Supply Chain Integration, p. 12
guiding abilities of what it means to work together in groups with people from the ‘outside’.  

Furthermore, Jespersen and Skjoett-Larsen emphasize the importance of clearly communicating what the company’s supply chain management concept entails, under what circumstances it will be implemented, as well as the boundaries within which the company wishes to operate. This not only helps coordinate activities and decisions made within the company, it also acts as a guide on how to manage the knowledge within the company. However, before such a thing as integration plans are initiated, the authors say that internal conditions raise the question of how ready for supply chain integration the company is in reality, and what it should do to “increase its readiness.” It comes down to seeing if management is ready to take the necessary decisions regarding the organization that are needed. This in company reality means having over the years, or at least prior to the initiated change, managed knowledge to aid the coming transition. There has been a gathering of expertise of different kinds, and there has been preparations set forth to ensure that there is knowledge within the company walls to guide and lead the company in the right direction.

3.6 Implementing change

Change is necessary to move the supply chain forward, be competitive and ensure a more secure position on the (global) market. It is not to be forgotten that successful supply chain management can lead to:

- Lowered costs,
- Bettered Customer value and customer satisfaction, and
- A competitive advantage

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110 Ibid., p. 146
111 Ibid., p. 147
On a fierce competitive market such as that of today there is therefore incentive enough to aspire toward these improvements. But there is unfortunately a downside to change as change can lead to disappointed, burnt-out, frustrated or scared employees.\(^{113}\) Therefore, it is important to have an insight to what change can bring about, how it can be brought about, and how bringing it about might change people before or along the transition.

According to J.P Kotter, when implementing change, managers should be aware of eight important traps to avoid:\(^{114}\)

![Kotter's 8 traps when implementing change](image)

**1) The trap of self-righteousness**\(^{115}\): Being too confident in the successful conversion of employees and colleagues that change is necessary.

When managers push for change they are simultaneously pushing people out of their comfort zones. Therefore, managers must take care to create such a strong feeling of “urgency” for the change that employees, instead of clinging to their old habits and routines or falling into

\(^{113}\) Kotter, (1998), [Leda Förråndring], p. 11

\(^{114}\) Ibid., p. 12-22

\(^{115}\) Ibid., p. 12
“defense mode,” embrace and prioritize the change and are willing to give that “little extra” to implement it and make it work.\textsuperscript{116}

2) \textit{The trap of failing to assemble a strong, guiding coalition.}

Top, middle and lower management must all be part of the change.\textsuperscript{117} All of top management is rarely a part of this group as most are skeptical to change, at least to a start.\textsuperscript{118} In addition, the change needs long-term support\textsuperscript{119} and charismatic leaders. One alone cannot bring about such a change, no matter how charismatic one’s personality is.\textsuperscript{120} As such, when forming the coalition there are four issues to keep in mind:

   i) Influence: The key individuals must hold positions that reach a lot of people, and be plenty enough to act as an active barrier to resistance.\textsuperscript{121}

   ii) Expertise: The coalition must take rational, intelligent decisions. It must attain trust in its ability to guide and hold different kinds of expertise.\textsuperscript{122}

   iii) Credibility: The people involved must have good reputations, be respected and be taken seriously.\textsuperscript{123}

   iv) Leadership: The individuals must have leadership skills to lead and drive the change forward.\textsuperscript{124}

3) \textit{Underestimating the power of a vision.}

Coalition composition and a high priority level do not matter if there is no reasonable vision behind it.\textsuperscript{125} A good vision should be presentable in less than 5 minutes, as to why change is necessary.\textsuperscript{126} Not only does it need to be short, the vision needs to be good enough to act as a guide in decision making. This helps align all actions, by whomever in the company, quick

\textsuperscript{116} Ibid., p. 13
\textsuperscript{117} Ibid., p. 13
\textsuperscript{118} Ibid., p. 14
\textsuperscript{119} Ibid., p. 153
\textsuperscript{120} Ibid., p. 14
\textsuperscript{121} Ibid., p. 65
\textsuperscript{122} Ibid., p. 65
\textsuperscript{123} Ibid., p. 65
\textsuperscript{124} Ibid., p. 65
\textsuperscript{125} Ibid., p. 14
\textsuperscript{126} Ibid., p. 16
and efficiently as all know in what direction the company is planned to be headed.127 Nevertheless, in today’s business environment change is drowned in communications according to a study by J.P. Kotter. In his study, communication to an employee regarding a change only took up 0.58 per cent of total communication.128 Unfortunately, inefficient visions are easy to construct and deliver to the audience. It is much harder to encompass an overall thought-through vision with only a few words.129

4) Failure in reaching the audience with the vision.

You will not get employees to fight for your cause without a credible and encompassing message of the vision.130 The problem can lie in inefficient communication.

i) Little use of internal communication;

ii) The boss talks to most employees but division managers are next to mute;

iii) Focus lies on printed and verbal information but some visible key individuals act in a fashion that contradicts the message being communicated. The result is employee cynicism and diminished belief in the new vision.131 Nothing undermines change as much as influential individuals’ behavior contradicting the verbal communication.132

5) Letting barriers block the new vision.

There is need to convince employees that they can manage this change, as well as fix organizational barriers that may act as inhibitors to a flexible transition.133 This also entails making sure everybody adjusts themselves to the change, especially those in high, visible positions, even if they do not believe the change to be necessary.134 Supportive actions thus
include removing structural barriers, offering necessary training, aligning the system in harmony with the vision, and dealing with troublesome managers.

6) *Failure to create success in the short term.*

Real change takes time. Complex efforts to change strategies, structure or etc, run a risk to loose their leverage/driving force, if there is a lack of short-term goals that can be achieved and celebrated.

7) *Doing the mistake of celebrating the victory before the war is won.*

On the other hand of celebrating success in the short term, accomplishing the first achievement does not mean that the bigger part of the job is over. Changes can take anything between 2-10 years to sink into, and through, the company and root. The reason for a yearly timeframe being difficult is that people [in a SCM environment] work in much shorter cyclical spans: days, weeks, and months, not years.

8) *Neglecting to root the changes made in the corporate culture.*

A change is not permanent until it is part of the “this-is-how-we-do-things-around-here” attitude and culture. That is, until it is a part of the blood circulation system of the company. Supporting the change and thus rooting it into the company thus includes highlighting how specific behavior and attitudes have contributed to the increase in performance (levels); and reserve enough time to ensure that the next generation of managers truly personifies the new attitude and change. This might even need a change in hiring criteria when bringing on board new personnel.

\[135\] Ibid., p. 110
\[136\] Ibid., p. 114
\[137\] Ibid., p. 117
\[138\] Ibid., p. 119
\[139\] Ibid., p. 19
\[140\] Ibid., p. 20
\[141\] Ibid., p. 37
\[142\] Kotter, (1998), [Leda förändring], p. 22
\[143\] Ibid., p. 22
At the end of such a long and detailed list and the limitation of the human memory to contain most if not all momentarily brought-upon information, it is only in favor of both to format the above given list in short-form yet again:

<table>
<thead>
<tr>
<th>Kotter's 8 traps when implementing change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-righteousness</td>
</tr>
<tr>
<td>2. Failure to create strong, guiding coalition</td>
</tr>
<tr>
<td>3. Underestimating the power of a vision</td>
</tr>
<tr>
<td>4. Failure in reaching the audience with the vision</td>
</tr>
<tr>
<td>5. Letting barriers block the new vision</td>
</tr>
<tr>
<td>6. Failure to create success in the short term</td>
</tr>
<tr>
<td>7. Celebrating the victory before the war is done</td>
</tr>
<tr>
<td>8. Neglecting to manifest changes into company culture</td>
</tr>
</tbody>
</table>

Figure 11: The 8 traps when orchestrating an alterative change in a corporation according to J.P. Kotter.

Kotter’s classifications are there to ensure that change happens in a cohesive way: step 1-4 ‘defrosts’ the existing conditions, 5-7 introduces a new way of conduct, and after that step 8 helps manifest the made change(s) into the corporate culture and secure them into everyday practice.\(^{144}\)

These are not the easiest thoughts to remember, and almost adding insult to injury change also has other downsides that are risky: A miss in planning of implementation can lead to a need to re-engineer the situation and/or vision, which can come to cost too much both in monetary terms and time. Quality programs can fail to generate hoped-for results. It can even

\(^{144}\) Kotter, (1998), [Leda förändring], p. 30
come to a situation where downsizing can no longer alleviate costs.\textsuperscript{145} Nevertheless, it is important to remember what the implementation is going to bring about: \textsuperscript{146}

- Lowered costs,
- Bettered Customer value and customer satisfaction, and
- A competitive advantage

And as recalled, supply chains today are in a highly competitive environment where competitive advantages are the make or break for staying in the game. As such, keeping the requirements in mind should help alleviate the situation and bring about a more frictionless change.

### 3.6.1 The requirement list by Nordhaug – for the leader and the employed

When it comes to integration, there are individual attributes that can ease the transition. Nordhaug et al introduced already at the beginning of supply chain management back in the 1980s necessary requirements for the leader and the employed in a situation of change (here used to regard integration) that has stood the test of time and still hold true today: The following dimensions were suggested for management: \textsuperscript{147}

- Look for problems and opportunities
- Formulate solutions
- Motivate and stimulate co-workers
- Utilize and develop employee competence
- Implement necessary changes, including the ability and conviction to implement unpopular decisions

For the employee the situation is somewhat different: Here the requirements are:

\begin{itemize}
\item Look for problems and opportunities
\item Formulate solutions
\item Motivate and stimulate co-workers
\item Utilize and develop employee competence
\item Implement necessary changes, including the ability and conviction to implement unpopular decisions
\end{itemize}

\textsuperscript{145} Ibid., p. 24
\textsuperscript{146} Mentzer et al, (2001), \textit{Defining Supply Chain Management}, p.12
\textsuperscript{147} Nordhaug et al, (1987), \textit{Organisasjon og ledelse- strategiske utfordringer}, (1987), the whole list p. 79-80
• The ability to learn new skills (encompassing the possible need to attain additional certificates or degrees to ensure certification for certain tasks)
• “Sharpening up” ones act, i.e. perform new and/or more precise tasks that have occurred as a result of change
• Collaboration with co-workers. Working as a team is especially important in situations of change as many tasks and duties will be new. Common understanding must be attained, as well as new skills and competence (individual learning aspect) which implies prolonged interaction with others.148

Much of this is the very essence of knowledge management, already brought forth in subchapter 3.5. In addition to those requirements given in the list the author(s) also suggest that the ability and will to both physical and mental mobility be added.149 None of these are simple actions but require a great deal of understanding. Before and during the process of integrating those involved, the difficulty of what they are trying to achieve is substantial. This brings us yet again, to the silo-mentality shift. The wish/will and conviction to implement these requirements requires a change of perspective by management, from tradition-bound praxis to keeping an ‘open eye’ approach. At the same time, recognizing and interpreting signs in the surroundings and to give them meaning requires insight and training150.

3.6.2 Group behavior – role allocation, attitudes and communication

Having a list of things to avoid, what personal attributes are favorable as a manager, or in times of change, does not mean that there is sufficient knowledge about successful integration. It is important to know how people feel about and react to change. When it come to change it is important to see the positions the employees inhabit, their attitudes towards altercations, understand how they communicate to ensure efficient two-way sharing, and also know how to react if a situation escalates and turns into a conflict.

149 Ibid., p. 79-80
150 Ibid., p.80
3.6.2.1 Role allocation – who is what in the group?

People behave differently from one another and will therefore get different roles within a group. The longer the group interacts and stays together the more “locked” these given positions within the group will become. This role allocation can act as help or hindrance by leaving some inspired and some ‘voted out’ of the group. However, the group that is the most important to an individual is the small groups which are longer-term active and where everyone knows each other. This group affects the individual in a high degree. Trust is often lacking within organizations: loyalty after years of service is directed towards the core group, those closest, and distrust is found toward all other groups and divisions (the outsiders), such as other divisions, project teams, etc…

Individuals can, however, project their feelings for e.g. their company’s shortcomings or alike, onto another individual close to them and use this individual as a scapegoat and relief object for their felt frustration. This acts as a concern in times of change especially, as no transition is completely friction free.

3.6.2.2 Attitudes

The acceptance and to-be role of new people introduced to a group is affected by the group’s initial expectations. Positive expectations enforce (enhance) the level of acceptance by the group, whereas negative expectations easily end up placing the newcomer in a defensive position. “Attitudes constitute important intervening variables; they are generalized viewpoints with affective connotation, indicating what is good and favorable or bad and unfavorable.” As such, this comes to play a major role in introducing new team members (or new management for that matter). The issue can also be addressed to the change itself –

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152 Ibid., p. 47
153 Kotter, (1998), [Leda förändring], p. 69
154 Larsson, (1989), Mänskligt beteende – psykologins grundläggande idéer och behandlingsformer, p.49
155 Ibid., p.51
156 Strumpel et al, (1972), Human Behavior in Economic Affairs; Katona’s Theory of Expectation, p. 549
individual expectations of what integration will lead to will color their initial reaction to the change.

One aspect of attitude that is not often mentioned is that it is the main foundation of culture. Attitudes color our perception of reality, and if it cannot co-exist with others’ interpretations, then the two opinions will part ways. This translates to the work environment by being mimicked in a culture where everyone in that company agreeing with the attitude it represents. If they did not they would not be working there. When it comes to change, the corporate culture is not left untouched. However, there are three reasons why this type of culture is so very powerful.157

1. Individuals are chosen and indoctrinated with great care. No company will hire a new employee who does not seem to be able to work with his/her colleagues. This new coworker is given a mentor or supervisor who ‘teaches’ him/her the ways of the firm.
2. The culture is prevailing within hundreds if not thousands of employees/individuals.
3. It all happens in greater part subconsciously and is hence hard to challenge or even discuss.

And so Larsson concludes that our perception of others is very dependant on our expectations and what others in the group think.158

3.6.2.3 Communication

Communication is affecting one another through a series of messages.159 Specific groups can also create and use a specific language to erect a barrier between ‘their group’ (i.e. the ones inclined to using this language) and others. People from the same kind of situation

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157 Kotter, (1998), [Leda förändring], p. 157
159 Ibid., p. 80
understand what they mean by specific words, meanings that might be lost on others who have not experienced the same type of situation.160

Interaction is explained to be a series of messages that result in specifically sought after behavioral reactions. The message will be interpreted depending on the situation and relationship between the communicating partners.161 Body language and tone of voice aside, the predetermined expectations will color the meaning of the message. This means that if we feel negatively towards a person, whatever they say or do we will be looking for that negativity to be mirrored and thus ‘justify’ continued skepticism towards said individual.

Furthermore, if the relationships between two or more people are unclear, then the language of the different individuals will be unclear to those involved and thus not properly understood. The words said do not correspond to what is meant by the speaker to be conveyed. This ambiguous message increases tensions by adding to the felt frustration and confusion.162 Once the feelings are out in the open there can be a constructive dialogue and trust building to enable a healthier relationship and more truthful and productive interactions between co-workers. Allowing a two-way communication in the beginning of a transition period lets the employees discuss problems with, e.g. the formerly mentioned new vision already in the beginning, and expensive corrections can thus be avoided.163 Thus, open and two-way information flows benefit the company by allowing smoother cooperation and more flexible reactions to change or problems. Another emphasis in regards to communication is internal and external trust as strong enablers of long-term collaboration.164

3.6.3 Conflicts

Especially for companies conflicts between coworkers are seen as resource and time consuming businesses. A conflict is also seen as communication and collaboration obstructive. However, it can also be seen for its potential to generate excitement that can

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160 Ibid., p. 82-83
161 Ibid., p. 84
162 Ibid., p. 87
163 Kotter, (1998), [Leda förändring], p. 106
164 Barrat (2004), Understanding the meaning of collaboration in a supply chain, p. 4
result in common ground for interest and creativity. Disagreement is also said to be able to lead to a wide range of ideas and perspectives, which can then lead to more solution alternatives. The aim regarding conflicts should as such lie on emphasizing team work that will keep the learning environment from ‘freezing up’ because of a conflict.\(^{165}\) While implementing external integration, therefore, the companies should be aware that expanding the team borders means pushing people out of their comfort zones, giving individuals new roles within their (new) teams, or perhaps designing a team in which two people used to have the same “role”. This means opening the door to conflicts as team members assess their new coworkers and their new positions. It does not mean it has to happen, many function just fine in new zones, but at the same time these conflicts can also show flaws in the implementation procedures. Frustration, irritation or inability to act can be the result of organizational hurdles that causes the individual to be frustrated. This individual then takes his or her frustration out on those around him/her as previously mentioned in subchapter 3.6.2.1 Role allocation. As such, seeing the underlying problems with conflicts can be a help to initiating solutions to avoid future (costly) problems.

Other reasons for conflicts can be intolerance, insecurity, and power struggles.\(^{166}\) People in powerful positions can feel that their power base is threatened which causes them to act in their own best interest rather than the company’s. “Restructuring entails a serious reduction in the influence and importance of local management” which is a part of the reason why “people present the biggest challenges and barriers to change.”\(^{167}\) As such,

“\emph{Attempts to work across a function-oriented company will lead to resistance from managers guarding their territory, who do not want to empower or leave decisions to others within the organization.}”\(^{168}\)

All the same, there can be tensions and mistrust between employees who feel they have different levels of power.\(^{169}\) Changing the group role allocation during and as a result of

\(^{165}\) Paragraph supported by Nordhaug et al (1987), Organisasjon og ledelse – strategiske utfordringer, p. 194
\(^{166}\) Ibid., p. 195
\(^{168}\) Ibid., p. 70
implementing external integration, can leave one person with more power than another even though they both held similar positions in their former teams.

One solution to relieve or eliminate this kind of situation is communication trainings. This measure would lead to the employees getting a deeper understanding of how they themselves function and their impact on those around them. This leads to individuals learning to give and receive feedback appropriately and rewardingly.\textsuperscript{170}

3.7 The organizational environment and structure

Having the right \textit{people} in the right \textit{position} with the right \textit{attitudes} and the right \textit{expertise} is a fairy-tale not even Walt Disney has seen the likes of. Nonetheless, individuals in themselves do not need to be the sole problem to a troublesome change in regards to integration. The organizational environment and structure can play a most significant part in bringing about, or hindering, a change.

3.7.1 The continuously learning organization

Having a continuously learning organization is related to the organization, its employees, or a combination of both. It means a constant adapting to changes from inside or outside the company. On an individual level this encompasses learning dimensions such as knowledge, skills, abilities, thoughts, and feelings, among others. It can be reduced to the concept of an employee’s constant ability to learn. This would mean that the company at all times is compatible with the ‘frameworks’ of its surroundings (changes in industry standards, a competitor’s production process etc).\textsuperscript{171}

\footnotesize
\begin{itemize}
\item\textsuperscript{170} Ibid., p. 195
\item\textsuperscript{171} Ibid., p. 187
\end{itemize}
3.7.2 The organizational structure as restrictor

When it comes to implementing changes, organizational structure can play a role resulting in failed or dysfunctional integration: If an employee is bound by high structural degree he/she can keep on managing tasks according to rules and regulations that were designed in accordance with former standards; the organizational structure can thereby hinder flexible behavior from the employees.\(^{172}\) And there is no harder thing to implement, no thing that has a higher possibility for success, or is trickier to manage than to suggest a change.\(^{173}\) To help making the transition, the shift can be implemented through a shift in management positions. A change of leader also serves as a very symbolic gesture that things are no longer to be the same as before.\(^{174}\) An external new manager signals that more effective changes are in store for the near future stronger than if the one appointed is internal.\(^{175}\)

\(^{172}\) Ibid., p. 197  
\(^{173}\) Ibid., p. 229  
\(^{174}\) Ibid., p.230  
\(^{175}\) Ibid., p. 231
4.0 The Analysis

The analysis follows the same layout as chapter three, starting with analyzing the supply chain and its requirements. It then works its way through each of the implementation stages; planning, implementing and after, and the issues and thoughts that come up at each stage. At the end of the chapter the analysis dialogue is concluded by the ‘The Manager Model.’

The layout serves both as a reminder of the different stages, their implications, as it renders more clarity of thought and connects the supply chain situation with the managerial skills and thoughts needed at that specific sequence.

4.1 Thinking about integrating externally – Being in the position to consider it

Looking at the situation with internal integration, most companies today have a limited implementation according to authors such as Lee and Rushton et al among others. The list of ‘successfully’ (internally) integrated companies consists of corporations of considerable size and market dominance, such as Dell, Wal-Mart, and P&G. But the number is increasing. Hence, in combination with looking at how loose the definitions and boundaries of supply chain management and supply chains are in general, as given by Mentzer et al, one can understand the justification of calling external integration the Holy Grail for most companies.

Furthermore, looking at the ‘age’ of external integration this means that a company needs to recognize the limited amount of information and expertise available for top and middle management when looking into the possibility to expand integration. It is a spin-off from logistics and distribution (Rushton et al), but making the assumption that supply chain management and thereby integration can be sought with strictly this knowledge and experience is incorrect. Where logistics and distribution is operational oriented supply chain management is strategic-planning oriented. As such, it would serve more justice to consider the following three subchapters to see if your chain is ready, has the opportunity and necessary elements, to consider expanding to external integration.
4.1.1 The supply chain and the requirements for external integration.

As today’s environment within supply chain management is very integration-oriented due to the fierce competition, one must question the motives of considering an external expansion. Having the status of Holy Grail surely sounds like a worthy trophy on the mantelpiece if achieved, nonetheless, it can lead to hasty and faultily-justified decisions that have more to do with “everybody else is doing it/ it would look good” than the actual need and capability to perform such a feat.

Another issue to consider is that supply chains are difficult to build as they in accordance with Semchi-Levi et al are big in size, depend on the level of integration, and how it is aligned to geographical dispersion, demand patterns and product characteristics according to Holweg et al. Hence, external integration is not something you just start to implement without knowing your internal integration stands on solid ground. For any company this means that a well-functioning full internal integration will have to be in place before contemplating expansion.

The internal supply chain must have agreed on whom to include in the expansion. Nonetheless, the collaboration efforts with these companies need to be implemented already before any actual, serious planning takes place, meaning there cannot be hurry for the chain to attain synergies from this expansion. The good thing about this situation, however, is that if you have mastered the internal supply chain, you probably have a network with suppliers and customers that would fit the profile for expansion-included companies.

There is much to gain from expanding: As mentioned by Mentzer et al the gains of a working supply chain are lowered costs, improved customer satisfactions and customer value as well as a competitive advantage. As such, if the chain then already is fully internally integrated, running smoothly, then it could consider external integration. The possibility to enhance performance through efficiency, effectiveness and market share, as given by Soonhong Min et al, are rewards attractive to any chain. However, this raises expectations which add to the
stress levels. Hoped-for rewards can remain unachieved and costs can drive a once solid company into a rough patch. This, logically, is neither good for moral nor reputation. Adding to the complex nature of external integration is the needed expansion of collaboration. Collaboration is not created overnight. But without it, expansion will not be possible. Looking at the collaboration situation throughout the internal supply chain – can it handle an expansion?

Today’s business environment is built on competitiveness according to many authors, such as Semchi-Levi et al and Fawcett & Magnan. Hence, what needs to be recognized is the consequential stress and pressure to be competitive in one’s niche. As most companies today consider supply chain management to be a strategic issue, it is given a lot of stress to be handled successfully due to its projections of being able to function as a springboard into the international and global competition. The stakes are therefore considerable when dealing with external supply chains, not only because it involves a lot of different partners, but also due to its doing so incorporates much higher costs to implement new techniques or procedures, as well as correcting mistakes.

4.1.2 The issue of Knowledge Management

As external integration has not been implemented much, the knowledge bank on how to implement supply chain integration strategies is low on these kinds of strategies. This means that any company interested in looking into an external expansion of their supply chain has to have the monetary solidity to see it through as seen by Dell, Wal-Mart and P&G, in addition to knowledge on how to see it through. Being a company that can afford going into the external integration “business” does, however, not make that firm immune to the very stress of being competitive on the national, international, and global market.
4.1.3 Expertise, leadership and the organizational structure – does the internal chain have the in-house strength?

Combining knowledge management with the learning organization concept then establishing the “physical” compatibility to integrate externally is linked to another requirement: the in-house expertise. Implementing a new level of integration constitutes it not having been done before, or done with an unsuccessful result. In either case the company might not possess the necessary skills in bringing about a successful transition.

External integration requires an expansion of mentality, procedures, corporate culture and communication to incorporate suppliers and customers as seen from the silo-mentality and process-orientation concepts. However, today few supply chains hold a success story in implementing external integration. As mentioned, not even internal integration is yet a very wide-spread success. Conclusively, there are very few real-life models to look at, analyze or even get inspired by, which means that the expertise needs to be a combination of what can indeed be found from ‘outside’ and what is already available ‘in-house’.

The implications for any internal supply chain is thus that there is a need to make sure that there is enough in-house expertise, leadership skill and a culture that allows an expansion of integration. There has to be extensive scrutinizing at the knowledge that resides within the company as stress of successful implementation and want for its rewards can lead to certain people being overlooked, over-valued, or that the wrong people are being prioritized. This would mean that the implementation might not have the inbound strength to succeed in bringing about external integration.

4.1.4 Organizational structure

The last in-bound aspect to consider is the organizational structure. Any situation where change is concerned will need a flexible environment to be implemented in as said by Kotter’s fifth ‘trap’ and mentioned in the learning organization concept. This means that if procedures are traditional, rigid or out-dated, the chain will not be in a position to support an expansion of their supply chain. This also adheres to the corporate culture. If the culture does
not support change then the supply chain will have limited chances of successfully bringing about any change of any kind.

Today, the number of different approaches to supply chains is big and as a result there are a variety of structures. As such, there are no golden rules or concepts that work for everyone. Different units, however, often have diverging, conflicting objectives (given by Semchi-Levi) that need to be eliminated completely before even considering external integration. It is one thing if an internally integrated company has problems with a unit – they can still easily maintain their face outwards. But in external integration the customer is part of the process in a much more present way and hence problems in a division can be a big liability if it leads to broken trust with the customer. Consequently, the organizational structure must be inter-division supportive and collaborating.

Another big issue that regards organizational structure is that companies usually are not that willing to share any sensitive information with their chain partners according to Holweg et al, this no matter how needed that information is. This practice was found by Cachon & Fisher to prevent some companies a cost cut by 2.2 %. Nor are the companies good at using information that comes from their partners and incorporating it into their routines and information. Companies tend to act in a strange self-serving fashion, and this can be very hard to shake off. This makes the chain suffer in the end, in costs if not efficiency. Thus, the supply chain structure must be trusting, integrated and supportive, being supported throughout by managerial strength. If there is lacking managerial involvement or support then there is no use in spending money on integrating to a state of collaboration that will not be supported or hold any interest with management. This will only hurt profitability and company reputation – two of the most important competitive issues.

It is very important according to Kotter that those involved know the goals of the implementation. This means understanding the guidelines, leadership issues, goals administrative requirements, as well as what it means to work together in teams with people from the “outside.” As a supply chain by Semchi-Levi is dynamic in nature there needs to be a considerable expertise present to ensure that changes are made ahead of need and in the
right direction. Nordhaug has addressed this issue looking at the managerial qualities that top, middle, and lower management must have as the needed expertise at their various positions. Training initiatives is a solid investment as it is a resource to the supply chain’s knowledge bank if the chain for some reason is not in a state to integrate straight away.

As change, as stated by Kotter, can lead to disappointed, burnt-out, frustrated employees, there is a considerable stress on leadership. Employees that are unhappy at their work are not at their most productive. At same time, Kotter says, loyalty within a company is not toward the company itself, but to the closest team. Again Nordhaug’s requirement list comes to mind where it says there is need for managerial insight in how to alleviate negative feelings and company indifference by inspiring and supporting employees, especially during times of change. It is important to remember, as Kotter mentions, that during the time of employment the worker has come to have distrust towards other teams and divisions. This means that the managerial and leadership skills will have to be able to rally everyone into working as one team, and one team only. This sort of inbound knowledge or skills are not easily identified, nourished or even encouraged. Sometimes working against the leader is the corporate culture, an even more intangible liability, as seen in Kotter’s last ‘trap.’

4.2 Setting the perimeters – where is the company now and to where is it envisioned?

Planning is one of the two most critical stages when implementing external integration. Good planning means good preparations. Good preparations mean avoiding costly back-lashes as much as possible. Analyzing where the supply chain is now and where it is envisioned opens the company up for exhausting scrutiny. Knowing the supply chain’s current position lays the foundation for more realistic planning. As it is crucial that the planning stage is not rushed through, only partially implemented or poorly executed, only managers (preferably from different divisions) who hold extensive planning skills should be heavily involved in the planning process.
4.2.1 Where is the supply chain today?

If you do not know where you are you cannot find where to go. In what stage of integration is the company today? Has it managed to implement internal integration successfully and is it ready to move on to external integration? This means that if there are any severe or otherwise performance-affecting hick-ups, the company should focus on fixing their internal supply chain before even considering an external one. However, this does not mean that they cannot start to look at the prerequisites for external integration – the planning stage with the compatibility issues, the gathering of expertise, the preparing stage of implementation. On the contrary, being externally focused can bring with it actions that align the internal chain in a more favorable path to becoming an external one.

Already at the planning stage the company needs to be analyzed and broken into smaller components to ensure that there a realistic understanding of the “health” of the company. For instance, a change will affect company culture only if specifically targeted to do so, or it will most often be left unchanged. This is very hard as not only have new recruitments brought with it an employee that fits with the ruling culture, but the culture itself resides within hundreds if not thousands if people. In addition to that, unless specifically targeted, analyzed and highlighted, the company culture easily remains intangible, subconscious, and hard to challenge. That means that if any new recruitments are being made shortly prior to or right during the planning stage, the new employees must be scrutinized to see if they encompass the coming culture and could be a true asset in changing daily routines.

Here one must also be sure that managers possess the skills and positions to promote the right future recruitments and guiding skills to enforce a change in the corporate culture.

4.2.2 Where too is the supply chain headed?

What is the vision for the company? Is it one of the stages provided by the Performance Measurement Group; full internal integration, external integration, or cross-enterprise collaboration? The logical step is moving from internal to external to cross-enterprise. However, when the goal is to later move into a state of cross-enterprise then it is always good
to have that in mind when implementing external integration. The implementations and actions can be adjusted to enable or support an easier transition to cross-enterprise state. In any case, the goal needs to be precise or planning for the transition will not have a reference point strong enough to guide plans and planning efforts.

How has management been prepared for the future? If there is an inclination towards probable near-future integration expansion managers need to be prepared to be ready for it. Again there is the question of planning ahead through management training seminars and courses. Requirements, environment and readiness are issues that the concepts of knowledge management, the learning organization, and authors Nordhaug and Kotter all highlight.

4.2.3 How will the supply chain get there?

Knowing the situation of the internal chain and to what it is envisioned to change means having to investigate how to get from present to future. This is the very core of the planning stage. It is finding the line between the two dots A and B.

The planning stage is, as mentioned by Kotter, of utter importance as a miss in the process can lead to costly situations that could have been avoided. There is always the danger that stress to implement integration expansion that will improve profitability and competitiveness will make planners blind to the consequences of a rushed plan. Hoped-for results may not appear, costs increase due to glitches or restructurings, and it might even come to a situation where there will be a need to downsize the business to alleviate costs. As Kotter mentions, in the worst case scenario this alleviation will not be possible and the company might even end up making a loss from the implementation.

4.2.3.1 The vision

The point with the vision is to achieve a competitive edge that leads to improved profits, as supported by Kotter and Mentzer et al. The vision, then, has to be short, clear and encompassing. Since less than 1 per cent of communication to an employee according to the
study by Kotter is communication regarding a change, this communication must be catchy and powerful. A good vision can align all actions within a supply chain simply through all employees acting in accordance with the new message. At the same time it is much harder finding a short and good vision than a long and complicated one.

As Jespersen and Skjoett-Larsen mention, managers therefore need to be updated in the overall goals, its minute detail, and be able to act according to the message that their division hears before the implementation stage starts. The vision also has to be adaptable or conformed into fitting the many different divisions in terms of terminology, communication method(s), and time schedule(s). Furthermore, they need to be ready to make sure that the vision is given highest priority, that they back up senior management and keep the vision alert and at the highest priority level at all times to ensure that the importance, gravity and the implementation of the change is given highest attention.

4.2.3.2 The plan

Already in the planning stage there must be an analysis of the corporate compatibility with the sought-after integration: Are their technological hindrances or incompatibilities visible already now or in the future? Managers must identify areas in which employees could use extra or new training and implement before the transition takes place. Again there is a melt of organizational structures: Kotter’s ‘traps,’ Nordhaug’s management requirement list as well as Chibba & Hörte.

Planning has to be built on an environment of open dialogues, understanding of processes, aligned procedures and cultures and that information is shared (freely) between all partners. This means that the organization has the prerequisites to be part of a transition to external integrated state of chain. If the organizational structure is traditional, there could be significant problems, as these structures do not lend themselves to the process-mentality way of thinking. The units have to already be in a state where they cooperate coordinated among functional areas. The procedures are standardized and information flow is efficient up and down the chain. To put it in fancier words: they must be integrated and synchronized in
cooperative alignment. This is all coordinated through management. If they do not support
open dialogue then their employees will not be able to benefit from it. Instead they might
start to feel resentment towards their managers as they are then isolating themselves from the
team, all as mentioned by Larsson.

The plan needs to encompass every aspect of the intended integration expansion.
Planning stage must take into account that integration requires a change in habits, culture,
and procedures. This is not lightly or easily supported by managers and therefore change
management training could be useful in preparing management in how employees will react
and how managers should guide their division throughout the transition. Planning needs to
account for the fact that a chain is dynamic in nature, and there are fluctuations in trends,
demand, competitors’ strategies etc. This means managers have to be able to guide their
divisions through real-time adjustments, etc.

Management will have to look at the personality traits of the division and see how they
correlate to the new vision. This helps locate possible liabilities as well as act as a guide in
how to lead the division into the new corporate environment. There might be a need to
change recruitment and training procedures to ensure a smooth expansion and employees that
are assets and not liabilities during and after implementation is done.

The planning must ensure visible short-term goals that are realistic and yet significant for the
continuation of the integration. It puts a lot of pressure or management to be able to enforce
positive connotations through leadership. Short-term rewards must be linked to the
achievement and behavior of the overall team. Employees who start to loose faith in the
integration expansion will need to be able to have a positive understanding and connotation
to the new changes or the awareness and priority of the expansion diminishes, and rapidly.
This could then lead to employees slipping back into their old habits and thereby putting
themselves at risk of being relocated or let go.
4.2.3.3 The reaction factor

If the head manager has not provided an open environment where the frustrated coworker can ventilate the irritation, before external integration expansion takes place, there will be difficulties in solving the situation. If there is no real trust in the manager the employee will rather talk to his or her closest team, which can spread the negative vibes throughout the whole division. Therefore, it could be a precaution to work into the plan a coordinator to whom employees can go when they feel that they are frustrated, insecure about their responsibilities or otherwise to just gain more information, in case the manager is unavailable or not accepted into the employee’s closest team. This could be implemented already during the planning stage as this individual would then hold all the facts about the upcoming transition, not just the same information everyone else has gotten at the information meetings.

During the planning phase there needs to be a collection of knowledge. Knowing beforehand who in which division possesses the skills and knowledge to act as a good guide or ‘beacon’ should be nourished and encouraged to assist others with their knowledge. At the same time key individuals should be identified to whom most if not all of the division listens too and who is a real asset if spreading the good word about the coming integration expansion. They are the biggest asset during the pre-action stage, where employees first hear about the upcoming expansion.

4.3 Before setting external integration in motion – the pre-action action

This is the stage where the internal chain is made aware and prepared for what is to come. Here there needs to be the introduction of the coming changes, such as system standardization as well as the standardization of procedures, routines, systems and culture. Management also needs to communicate the goals and vision by which the expansion is being led as well as highlight the need for this change. This is to awake awareness and create a sense of priority in employees so that they will take the coming changes to heart.
At the same time the internal chain need to have a functioning plan as well as coordinate the last efforts into making sure that overall production is not harmed by the transition through faulty leadership or other functional problems.

4.3.1. The issues regarding managers and management

It is important in this situation to recognize the different liabilities of managers willing and accepting of the change, giving it their full support and priority and those managers who do not see the vision as a priority. Those managers who are onboard the new change are less of a liability than those managers who are not as enthusiastic. They will then belong to one of two kinds: those who do not see the necessity but comply with its overall message, and those who do not see the necessity and therefore do not care to conform to its message. In this case it might even become a matter of removing those who are not conforming, as their actions diminish the vision’s credibility among employees. Managers must have the skill to embody the message of the vision and guide and support employees still learning its concept and implications.

Every part of top management must support and act in accordance with the change. It needs long-term support which means a need to elect and promote those who will be around to see it through. So even if the most impressive key person is two years from retirement, if he is not around to see it through he is a liability. As soon as he is gone people will start to loose the beacon for what they are doing. The things to regard are influence, expertise, credibility, and leadership.

Failure in reaching everyone in the initial stage means people will not be prioritizing the new agenda; it leads to inefficient communication; it does not get the support it needs from visible or supporting managers, and actions by managers contradict the communicated vision.

Just as planning, the pre-implementation stage can cause frustration and disputes among colleagues. However, Managers should not fear conflicts, despite that these have the air of being time consuming and costly. However, they should be seen as a source of creativity and
validation testing. The excitement around a conflict can generate a common ground and interest to form a base on. It can be the source of new ideas, alternatives and lead to a better solution. Working through conflicts not only reduces stress levels for everyone affected, it provides trust in the team that is working together, and especially in the leader’s ability to lead his or her team through the supply chain expansion.

Nonetheless, it is true that conflicts can also work as “locks” that freeze the planning stage or add to the stress levels of those involved, impairing critical judgment and resulting in poorer planning and future increased costs. Managers must possess the skills needed to steer these situations into exploitable situations.

Continuing with conflicts, the issue could also regard the managers themselves. Their power base is threatened which jeopardizes the commitment from upper, middle and lower management depending on where the ‘loss of power’ is most severe. Therefore, people in general represent the biggest challenge in change.

4.3.2 The team to lead

There is always a need to know the team you are leading. Looking at the roles of the different people does not mean reading their table tags and categorizing them as key individuals out of regard for their professional title. It means seeing who in the group that is playing which role. What are their attitudes, how do they communicate and who is the go-to guy in the ensemble? Who is their pillar of support, and what kind of support do they come seeking? This does not mean that they want the same type of support from their manager – but it gives a clear view of what “team responsibilities” they have, which helps locate key individuals within the group.

Managers must be aware that people in teams have a ‘code of conduct’ specific to that team – working in new teams or in expanded teams means a mix of every individual’s former team conduct code, which can lead to confusion, miscommunication and frustration. Therefore, managers must be clear when rearranging teams how they want the teams to act and what
they want the prevailing culture to be. This means a need for very clear and direct communication.

The change, nevertheless, has to hold a positive image in people’s minds or they will not be eager to have it happen. Positive expectations mean that the introductory phase is very critical. Rumors can hurt a coming change even before it has left the planning board. Implementing a change also means that the locked positions of those in the team will be shaken and might come undone. This causes conflicts and stress, as well as relief and eagerness in people depending on their powerbase and personal preferences. Managers must remember to be clear about the new responsibilities of those in the group. Appointing a new boss means that the group must see him as a help in some way – either as a welcomed change or a strong leader signaling times have change. People very easily slip in to defense mode when they encounter something they are unsure about.

Adding to the complexity, moving from internal to external integration means a further expansion of team boundaries – the process-oriented mind needs to expand to the whole chain, not just the production part. Collaboration is not something created over night – this means that there has to be collaborative initiatives before the start of the transfer. If there will be restructuring of any division, team, project, etc., then these individuals need to be introduced to their new colleagues a long time before the change takes place. This is so that they can get to know one another a little bit better which enables them to start to create a relationship and thence trust and collaboration. This eases transition into the new groups.

Also linked to collaborative incentives in the pre-implementation stage are the planned-for changes, which need to be visible beforehand as this guides people to be ready for the transition. This is in support to the collaboration incentives and trust enhancers. There need to be trust in those with whom to work. At the same time managers cannot allow employees to not work only for their own agenda and not work in the interest of the whole supply chain. Employees feel distrust towards ‘outsiders’ or others than their immediate team, and as such managers must be consequent in making sure that collaboration incentives are used well before the transition.
As collaboration cannot happen without trust, trust is a key issue. Without it, it would not be feasible to exercise leadership. This means there must be confidence in the manager or colleague. This comes into play when managers have to guide their divisions into taking the right actions and following his lead. It is also important when choosing key coworkers and team players who can help support and communicate the new vision, enabling an easier and more positive acceptance of the new agenda. This can be seen in the attitude of the person which is heavily linked to leadership. Careful promotion needs to be done. Those promoted must support the change and have the respect of those around them. This means not having the ego-centric, the snake or the involuntary leader around. There must be passion for the change. At any unit, some influential key individuals would be the manager, middle manager and other personnel linked to that unit.

Employees easily fall back into old ways of working. Thus, when the organizational structure does not support or hinder the new vision, employees must be told how to act so that the outcome favors the new vision. Hence, managers must already have made their division ready so that on day one they start to implement the little changes that guide actions during the initial transition phase.

4.3.3. The organizational hurdles

Before implementation managers need to make sure that there are no organizational structures such as procedures, systems or cultures that will hinder the transition, or in worst case, stop it completely. They need to give courage, make sure people adjust to the new stuff, and offer training, and dealing with troublesome managers. Fixing things that are wrong already in the start means a saving in future complication costs. They need to defrost the current conditions at their division and support defrosting in other divisions wherever and whenever possible.

Minimizing friction already during the pre-implementation stage can be done by before the pre-action action being observant of possible problems such as procedures and/or employees
so that they can be flexible and come up with possible solutions and stop the problem even before it emerges. This also means making unpopular decisions, but making them in such a way that the manager does not lose the respect and or trust of his coworkers and subordinates. At the same time they can look around and see if there is any employee competence or expertise that is not being put to its best use. This also means that managers have the obligation to make sure that they possess the skills to lead their division through the change, and that they possess the needed training and expertise that such a situation calls for. Throughout the change the manager must be flexible to his team’s needs and the changing environment. And keep an open ear to be able to nip problems already in the bud.

Conclusively, the pre-action action must make the company ready for what is to come and what is expected of future behavior and performance.

4.4 During implementation – how to keep the integration on track

This is where the internal supply chain takes on the form of an external supply chain. The implications are standardization taken into full use, new procedures and routines are implemented fully and people are expected to conform to a new standard and daily routine. Here the issues are to make sure that these new goals are followed so that the new vision can be achieved. This means keeping the vision, changes and support fresh in the employees’ minds so that they feel sure about what is expected of them and they feel they have support to move to the “new system.”

4.4.1. The issues regarding managers and management

External integration is still such a young field that implementation expertise is still many years from being banal. Therefore, implementing this kind of integration can be not only frustration for the average employee but also the manager him/herself who has a limited frame of reference on these sorts of operation. As such, top management need to be very clear about what is to happen, and might benefit from continuously making sure that implementations are going the right way.
Managers have to be able to spot organizational hurdles that can spring up during implementation and be ready to deal with them in a swift efficient way. At the same time managers have to keep up moral and keep his or her division motivated and giving that little extra despite the occasional hick-ups. Keep reminding them that they can do it, and make sure that everyone is always true to the new agenda, even if they might feel doubts about it. The trick is to deal with problems the second they appear. This presents quite a challenge as the problems are quite complex in a chain.

Whenever there is a short-term success managers have to make sure that it is appropriately celebrated, tying a positive to the change taking place. Commenting on how certain behavior has supported such an achievement can encourage others to work with the next challenge that lies ahead. At the same time managers cannot allow any celebration that would symbolize that ‘the war has been won.’ The first achievement does not encompass the bigger part of the job and celebrating it as such can lead to diminish in prioritization and people slowly phasing back into their old habits. Changes can take between 2-10 years to implement, and thus celebrating an achievement three months into the implementation needs to be appropriate to its place on the time-schedule and importance.

Leaders need to be extra strong during the actual implementation phase as this is where things actually start to change. This will be the phase where frustration, insecurity and uncertainty will be at its highest, and therefore managers will need to be strong pillars of support in order to guide and implement wanted behavior.

As such, during implementation, managers should still keep an eye out for problems, troublesome personnel that might have to be removed, as well as continuously being motivating and stimulating to the whole division. The change in work environment will shake the team roles up as well, and the manager need to be aware, and step in when needed, in order to get the new teams feeling comfortable with the situation. Since the group affects the individual in a high degree, shaking up the locked and familiar role allocations needs to be done with care, as frustration and insecurity can manifest itself through badgering.
colleagues instead of using other relief objects. This is why a change curator is a good way to go as having someone to talk to diminish the stress felt in the situation.

4.4.2 The team to lead

Maintaining trust and information sharing is important as collaboration is the glue to integration being continuously implemented. There cannot be any slipping back into old habits. Talk is cheap so all managers and key personnel must at all times act accordingly to what the new vision stands for. One slip can be significant enough to wreck all faith in what is being changed. That is why managers of all employees cannot afford to forget themselves during this process. Acquiring new personnel must bring with it people who are willing to breathe the new corporate vision. Remember that successful changes are 70-90 per cent leadership and only 10-30% administrative.

The trap of self-righteousness is important to remember. As time goes by people start forgetting that feeling of necessity that they had in the beginning. And as barriers and setbacks occur or people start to forget the vision, the more they will start to question the motive as well as the vision. At the same time they will be more enticed to go back to their old habits, as implementing change means pushing them out of their comfort zones. This is why the vision must be not just available at all times, but constantly reinforced through communication(s). The shortness of the vision acts as a help here as it will be easier to remember in full for managers so that they can at a moment’s notice communicate the message, and it is easy to remember for the employees as well. Underestimating its power, however, is still a danger during the implementation stage. Employees are bombarded with communications every day. This diminishes the vision’s priority with employees as they have not only this new change in routines, they also have to perform their old job according to new standards. This is where the “what’s in it for me?” mentality can start to show since an employee is not loyal to the company, but to his or her closest team.

Keep in mind that collaboration is not created over night and as such new relationships and teams might have a transition period where they go from being strangers to working together.
Team days could be a good idea once in a while, deflating stress levels while creating positive feelings connected to the change taking place. Remember that open and two-way information flows not only benefit the company but also ensures a more stress free environment where issues and problems can be solved instead of causing barriers. Again, collaboration is important as it gives long-term support. This is exactly what the integration needs – long-term support. All through the transition period there will be a change in power base. This means that people who started out positive to the change start to slowly become more and more negative as they notice that more and more of their former responsibilities is phased out or given to somebody else.

It is also positive to implement knowledge management and giving employees the freedom to learn from the transition. Not only does a bigger responsibility nurse self-esteem and commitment, it allows the company to build a knowledge base that is available long after the implementation has taken place.

4.5 After implementation – what now?

Now the supply chain has come through its transition phase and is (knock-on-wood) now integrated into an external supply chain. This means that management from here on has to keep up the “new” work environment, i.e. the new culture, routines, procedures as well as continued support. The supply chain is now expanded with more partners, greater magnitude of communication as well as a lot more elements to handle.

The implementation is not done until it has been rooted into the company ‘bloodstream’. This means that behavior is linked with improved performance, giving an incentive to keeping up that very same behavior. Even though the implementation phase is over enough time has to be reserved to make sure that the next generation of managers and employees embodies the new corporate way. That might even bring with it a needed change in hiring criteria.
4.6 The manager model

This essay was designed to serve as assistant to the middle manager in times of expansion into external supply chain. The better the visibility of this information, the more of accessible use it can be to those who read it. As such the author has constructed the five former chapters into what has been named, “the Manager Model.” This model shows each of the four stages leading to an expanded internal supply chain (i.e. external supply chain), what each stage means for the internal supply chain, the requisites for each stage from management, and the main issues that face them regarding the division employees.

The model is very simplistic in nature as it only incorporates the overall issues in each stage. This has been done due to the very diffuse management experience and used general details of each of the expansion stages. What has been included in the main body of this thesis might divert from or encompass some of supply chain managers’ most highlighted supply chain issues when it comes to expansion of the supply chain into external supply chain state. In addition, it would be to no benefit nor even esthetically possible to include all the encompassed issues, thoughts and suggestions into one model.

According to the Manager Model the first stage of external integration, the planning stage, is where the company must analyze whether it has what it needs (internal supply chain, expertise, etc.) to integrate externally while requirements for management is that in-house knowledge about leading personnel through such a change is available. During the same stage employee issues are their working environment (does it support external integration?) and that the new vision is realistic, inspiring and guiding to the employees.

Then in the second stage of integrating into external supply chain in the manager model, the pre-action stage, where the supply chain is made ready for the coming implementations. This means that management uproots the current working environment to be able to execute the coming transition by taking on the issues of getting a high priority level for the change form the employees, supporting and guiding employees “defrosted” from their previous way of working, tackling occurring and possible conflicts while at the same time removing or relocating employees that are not conforming to the upcoming change, or are jeopardizing it.
The third stage then, the stage of implementation, is where the supply chain is integrated into an external supply chain by applying integration-enabling and supporting actions, such as standardization of routines, procedures, systems and culture. During this stage management needs to be confident in how to guide their colleagues in the right direction and supporting them throughout the process. Meanwhile the main issues that management has to regard is keeping employees motivated and change-productive while making sure that they do not slip into prior habits. This stage also requires that management needs to keep information sharing flowing, maintain trust among employees, maintaining positive experience and encourage employees to learn while going through the process of change.

As last stage comes the situation after implementation when the chain is a fully integrated external supply chain and managers enforce the new agenda constantly in order for it to be rooted into the company “bloodstream” to ensure that employees do not slip into old habits.

All stages of the model are critical as mistakes in any of them can result in significant losses while possibly creating more frustration and collaboration-straining stress around divisions. This could jeopardize the success of the entire process, meaning that instead of becoming an external supply chain, the internal supply chain looses a lot of money in wasted implementation-supporting activities, ends up not being externally integrated, and getting a division full of frustration and lost trust in management and the possibility of ever succeeding with external integration.

Figure 12 shows the manger model in table form. This format serves the purpose of easy comprehension of how to use it, easy accessibility of requirements and issues that are connected to a certain stage of the process, as well as an overall guide line that can be used as support in any given supply chain, regardless of which industry it is residing in.
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The Manager Model

<table>
<thead>
<tr>
<th>Stage of integration expansion into external supply chain</th>
<th>Implications for the supply chain</th>
<th>Requisites regarding management/leadership</th>
<th>Issues regarding employees</th>
</tr>
</thead>
</table>
| **The planning stage**                                    | Is the internal supply chain ready for expansion? | In-house knowledge about handling personnel in this type of change | • Are employees in an expansion-supportive environment?  
• Is the set vision realistic enough to lead, inspire and guide employees in the right direction? |
| **The pre-action stage**                                  | Making the supply chain open for expansion implementation | Managers “un-freeze” current working environment to enable transition implementation | • Getting employees to understand, trust and prioritize the coming change  
• Employee support and guidance as they are uprooted from their previous habits, culture and routines  
• Probable employee frustration and conflicts due to the uncertainty of the situation  
• Removing or relocating employees that will clearly not conform to the new vision and will act as barriers to the change. |
| **The implementation stage**                              | • Making the expansion into external supply chain. Implementing changes and standardizing routines, procedures, systems and culture with the whole chain. | Managers are confident in facing the challenge of leading employees through the transition and provide support throughout the expansion | • Keeping employees motivated and pushing forward with the change instead of slipping back into their old routines  
• Maintaining information sharing, trust and positive experience while encouraging employees to learn as they go along. |
| **After implementation**                                  | The supply chain is now expanded into external supply chain state | Management must enforce the new corporate agenda until it is rooted into the “bloodstream” of the company | • Keeping employees from slipping into their old habits undoing much of the work and jeopardizing the stability of the expansion |

Figure 12, the Manager Model. This model states the implications for the supply chain, the requirements for management and the issues regarding employees for each of the stages of implementing external integration of the supply chain.
5.0 Conclusion

Depending on which stage in expansion implementation the internal supply chain resides, the requisites for managers and the issues that they face regarding employees differs. Returning to the guiding questions given in the aim of this thesis they are now ready to be answered…

Guiding question nr.1: Is the human factor significant when looking at its impact on implementing an external integration and why?

It stands very clear that the human factor is very significant when looking at its impact on implementing an external integration. Human reactions can shape the outcome of the implementation at any stage of the process. People who prioritize change and are willing to embrace a new working situation are part of the working element in making the supply chain competitive on the market. As the new procedures and routines are slowly eradicating old habits and as the priority level for the change decreases over time as awareness diminishes people are making the change felt all the way to the core of the company, making it a part of the corporate bloodstream.

On the other hand, those employees who do not support the expansion into an external supply chain can jeopardize the transition at any stage by convincing others that this change is not necessary (diminishing the overall priority level) as well as refusing to let go of the old way of doing things. These ‘barriers’ have to be relocated or let go in order to help ease the transition into external supply chain. Otherwise, these barriers will endanger the trust and collaboration that is forming in new relationships and new teams and groups. Without trust there is no stable collaboration, which means that there cannot be a solid integration of the supply chain. But at the same time, individuals working for the change can hold such a degree of trust and respect within the overall group that the actions by the non-supporters are diminished or simply ineffective as barriers.

Again, depending on how the initial planning stage is performed, employees will respond either positively or negatively. The matter comes down to communication between management and employees, management’s actions in comparison to the new vision, as well
as the trust in those wanting and implementing the change as well as trust in the change itself. There are also the person’s own attitudes to consider. If they are not the type to like change in general the question might becomes a matter of keeping or removing this employee to enable an environment where change can be brought about successfully. On the other hand, if the employee is positive towards change he or she will already be more open to change and as such pose no threat to the implementation process. In fact, he or she is probably part of the change-supportive collective that influence those who are yet undecided.

Guiding question nr 2: *What can be done by management before integration to enable a more smooth change?*

Before integration is implemented management is better of having planned for and implemented supportive incentives for the change already a substantial time before the process of implementation is to start. This includes making sure that the company is in a position to be able to integrate successfully, for example by possessing the knowledge and expertise needed, a working environment that is open and flexible and thereby supportive of change. Furthermore, the company would need to have a solid plan to show employees and base their communication and coming implementation supporting applications. The company can also construct a guiding coalition that can support the transition and thereby reducing stress levels as employees see people whom they trust leading the way.

In addition, the company can restructure their organizational structure to be aligned and supportive to the change throughout the whole process. This could also mean increasing management training in leadership and organizational theory to ensure that the firm possesses the in-house strength to successfully integrate.

Guiding question nr 3: *What can be done by management during integration to enable a more smooth change?*

During this stage of the process management has a great responsibility to provide not only guidance to their employees, but also support, flexible solutions and an atmosphere that does not stress the employee unnecessarily. This means dealing with conflicts as they occur, giving constant feedback and information to the division so that everyone knows what is
expected of them now and in the future, endorsing the spirit of the new vision at all times, and making sure that the employee’s behavior is corrected at the first sign of slipping back into old habits.

Final summary
The benefits of change far outweigh the dangers that oppose it. Lowering costs and increasing customer satisfaction levels as well as customer value will therefore be a priority when implementing external integration. Therefore, management and employees must work together, support one another, be flexible and open to changing as the market changes. The success of the change is not all up to how management behaves, how they have ‘prepared’ the employees, but also on the environment in which they work, both the intangible (culture) as well as tangible (procedural handbooks). As such, management must also remember to look beyond the individual and place him or her in their true context, remembering that the change is new for everyone as no change is the other alike.

Making sure that everyone is onboard at the beginning of the change, that they feel that they have support during the change, and that they feel confident in the change made, helps ensure the success of the external integration.

Taking a broader view this way of implementation is not unique for external integration, or for supply chain management and as such will always benefit from further and deeper research: As every change has a start, middle and an end, they all meet the same issues. People need to understand what is coming, people need to understand and be ok with what is expected of them, and for them to stay true to the transformation they must see that it has given good results. With that said, the applicability of the manager model, the thoughts, ideas and presentations given in this thesis are hopefully a source of help, support or just new thoughts, the next time management is faced with an operational change.
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