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School of Management

Implementation Dynamics of Successful Purchasing and Supply Management Development Programmes

Volume 1 of 2

by

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ABSTRACT
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Doctor of Philosophy
IMPLEMENTATION DYNAMICS OF SUCCESSFUL PURCHASING AND SUPPLY MANAGEMENT DEVELOPMENT PROGRAMMES

by Ian Robert George

The definition of what constitutes advanced Purchasing and Supply Management practice has been well researched over the past twenty years. However, little contribution to this has been made by the contemporaneous research on methods used by business change leaders. This research addresses this gap by identifying the key change dynamics that enable the implementation of successful Purchasing and Supply Management development programmes.

The design research is pluralistic. Action research is used to develop an organising framework while collective case study is used to identify and develop the content of the framework. The approach is qualitative in nature.

The revealed implementation dynamics are organised within four distinct groups that are dependent on both the maturity and objectives of the organisation. The dynamics themselves identify enabling actions that appear to address both technical and behavioural inhibitors.

This research codifies the methods that can be used to overcome barriers to change and may thus be used to support the implementation of development programmes.

The value of this research is in its potential to replace the commonplace reliance on intuitive behaviour with explicit and knowledge-based applications of change management.

Key Words
Purchasing, Supply Management, Development, Implementation, Dynamics.

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Chapter 1: Thesis Introduction

1.1 Introduction and Origins

The origins of this thesis came from extensive practical work in the areas of supplier development and purchasing improvement. It became apparent, over time, that even when the characteristics underpinning the project objectives were clearly articulated and the process for change was well defined the level of progress or success still tended to be widely variable from organisation to organisation.

Personal experiences from the field of supplier development, which are described later, have shown that even when a well defined improvement process is taught to supplier representatives through a structured programme of classroom teaching and practical application, supported by third party consultants and customer engineers, and the improvement objectives are well defined by the customer and time is given for the supplier organisations to improve their performance, the results still vary from organisation to organisation in a seemingly unpredictable manner.

Purchasing development programmes appear to fair no better, as will be shown later. Numerous content models are described later that chart the course of improvement over time and these are supported by an even wider array of change process models, often touted as universally applicable. Despite this, the function is still argued to be behind its peers with regard to both maturity and capability.

Examples presented in this thesis from the supplier development activities stress the importance of an improvement process, while examples presented from purchasing development projects provide guidance in the form of purchasing content models. Yet it appears that having a change process and content knowledge may not be enough. It therefore seems that some critical element could be missing that might increase the potential for a successful outcome.

Therefore, the purpose of this research is to explore the field of purchasing

and supply management in an attempt to identify and codify the critical element(s) that appear to be missing.

The fundamental approach of this research is phenomenological in nature. The issues described above can be argued to be poorly understood by both the academic and practitioner communities and therefore positivist propositions should not be made at this point due to the perceived lack of knowledge. This point is discussed further in the Methodology Section.

The objective of the research is the construction of some form of model to represent the missing elements of change that might exist. This supports the adoption of a design paradigm to guide both the development of the methodology and structure of the findings.

The approach to the research involved the implementation of a number of iterative steps that followed each other in an attempt to build propositions and then simultaneously test and enrich them. This resulted in a pluralistic approach to the research methodology being taken, utilising the benefits of both Action Research and Collective Case Study Analysis.

At the commencement of the research, little was known about what aspects of change might be missing and this required an exploratory approach. Therefore, Action Research was used during the supplier development programme as the investigative vehicle to work with those directly involved. This resulted in a tentative definition for the phenomenon, based on the improvement process.

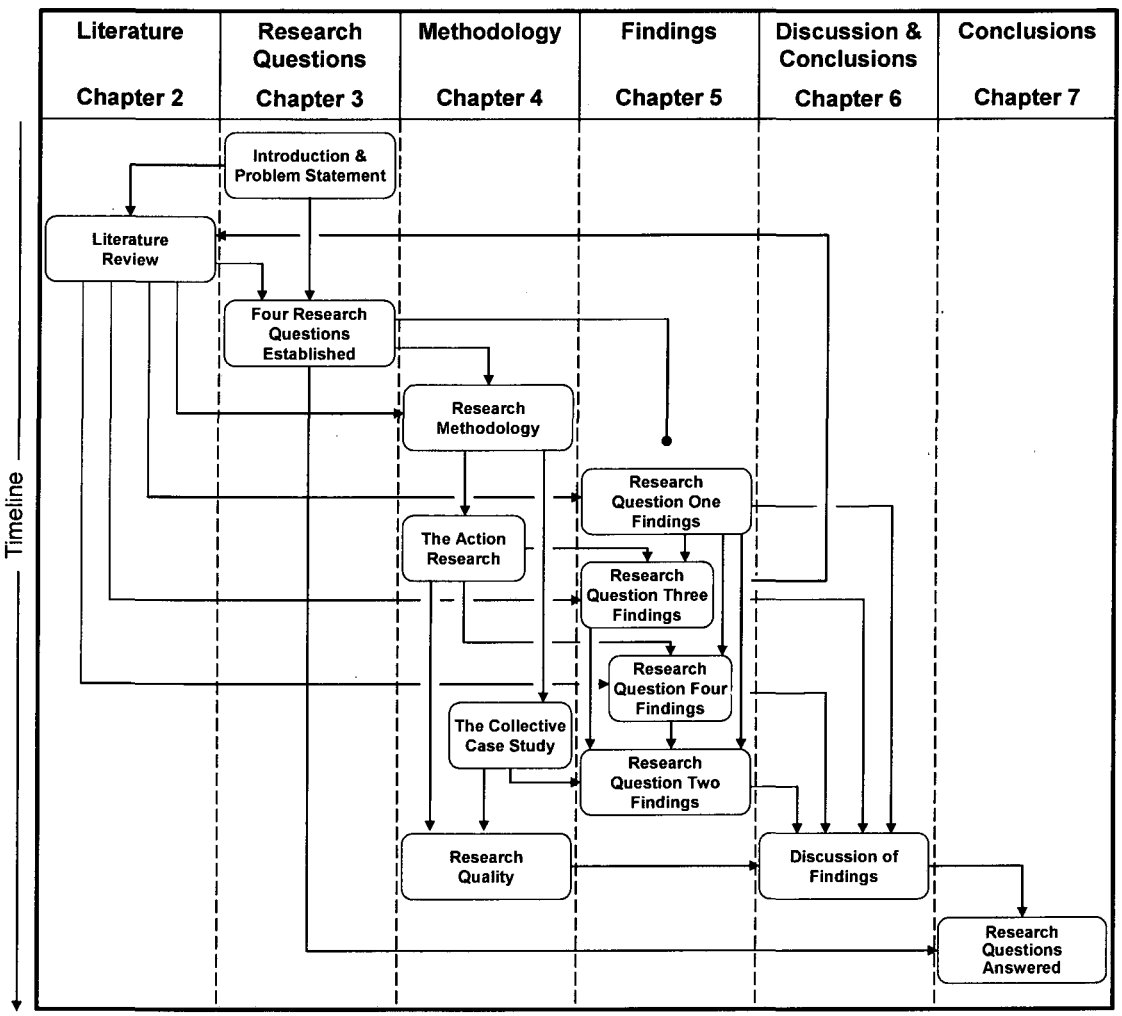
This was followed by the analysis of a number of purchasing development programme case studies, which then positioned the tentative definition within the field of purchasing and supply management. It also enriched the definition, enabling its transformation into a model as defined by this research.

The research environment focused heavily on people and their environments within an organisational setting. This lent itself more readily to qualitative

study as a means of capturing and interpreting the rich data that could be extracted from such situations.

1.2 Structure of the Study

Detailed below is a graphical representation of the basic structure employed in this thesis. This overview is presented in more detail following Figure 1.



Note: See Section 3.1 for an explanation of the order of the Research Questions.

Figure 1: Structure of the thesis

The genesis of the research was an apparent gap in the knowledge of the critical issues that enable the successful implementation of development programmes.

The Literature Review was used to construct the framework for the research

through the development of a comprehensive change model. The outcome of the Literature Review was used as the basis for defining Research Questions. The proposed change model was then used to codify the assumptions that informed the interpretation of the findings in the form of a set of critical characteristics.

Due to the perceived knowledge gap relating to both implementation activities and its use within a purchasing context, it was necessary to build the Research Questions from a foundational level. This meant that the Research Questions were structured in such a way as to enable the definition of the focus of the research, construction of a framework within which the findings could be presented, and finally, the description of the findings.

The research methodology was constructed in response to the needs of both the research problem and the key issues highlighted within the Literature Review. The reconciliation of these factors resulted in a pluralistic approach combining action research with collective case study analysis (Stake, 2000).

The Findings were organised in line with the Research Questions. First, the definition of Implementation Dynamics was constructed as a means of presenting a perspective from which the remaining findings could be contextualised. The action research findings were used to develop the framework for the detailed content. Finally, the detailed findings were presented within the framework as a means of simplifying their presentation and description. For an overview of this approach see Section 3 and particularly Figure 26.

The discussion section pulls the thesis together, highlighting the dominant themes that emerged as the research was conducted. Part of this approach involved exploring the findings further and explaining their relevance in terms of the fields of theory and practice.

The conclusions were used to bring the thesis to a close by providing definitive answers to the original Research Questions.

Chapter 2: Literature Review

2.1 Introduction

This literature review sets out to answer a number of questions relating to the extent of change management knowledge within the field of purchasing and supply management. These questions ask (following Murcott, *in* Silverman 2000, p.227):

1. What do we already know about the topic?
2. What do we have to say critically about what is already known?
3. Has anyone else ever done anything exactly the same?
4. Has anyone else done anything that is related?
5. Where does the work fit in with what has gone before?
6. Why is the research worth doing in the light of what has already been done?

It is anticipated that answers to these questions will lead to the development of a change model that can be used to position the findings within the field of purchasing and supply management.

Although the above questions form the objectives of the literature review, they do not form a coherent structure for it. The apparent lack of knowledge surrounding change management within the purchasing and supply management field necessitated a multi-faceted approach to the Literature Review. The process began with an investigation of the change management literature from a holistic perspective. The intention was not to determine the micro-level detail of change but to understand the broad issues that need to be considered. This provided a framework from which a more considered review of the change management literature could be conducted. The result of this second process was the proposition of a change management model that could be applied as a critique to the change management literature in the purchasing and supply management field. The findings from this critique then formed the definition of gaps in the existing purchasing literature and the means of postulating their potential significance. The structure and logic of this review process is shown in Figure 2 and forms the basis of the structure of the review that follows.

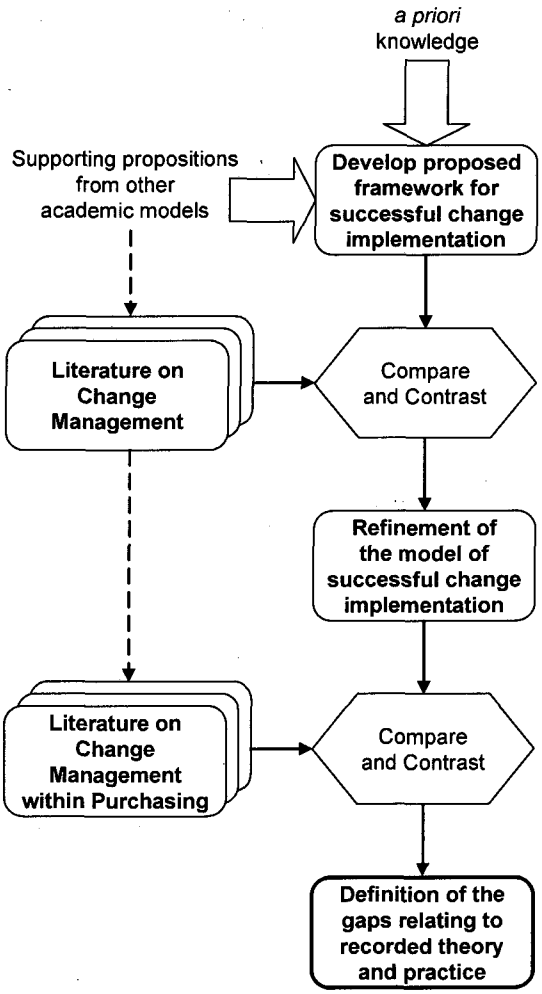


Figure 2: Structure and logic of the literature review

The literature review process cycled through a number of iterations, as indicated by the boxes above. Within each iteration, a sub-process of keyword searches, consolidated through cross-referencing with the relevant international citation indexes, was used to identify the core literature. The citation indexes were used with care as they tended to refer to related fields of research rather than the specific focus of this study. The selection of references for use in the Literature Review was more a function of their perceived relevance to this study than their more general significance within academic research. Figure 2 was then used to guide the extraction of relevant points. The outcomes were then consolidated, reviewed and constructed into the following review.

2.2 Introduction to the Literature

In 2002, van Weele consolidated a number of content models in order to distil out the competency characteristics that purchasing functions attempt to implement. This work can be argued to represent a consolidation of the knowledge relating to the descriptive profile of an evolving purchasing organisation. As early as 1951, Lewin proposed a theory of organisational change and, subsequently, Kotter (1996) defined a framework for the change process itself. Despite this apparent breadth of knowledge, purchasing and supply management development programmes still appear to fail to yield consistent levels of successful progress. Pfeffer (1997, p.202) supports this observing that 'there are many instances in which organisations know what to do [content] but have difficulty in actually implementing that knowledge [action]'.

It appears that there is an inherent lack of understanding relating to the implementation of successful change programmes (Counsell *et al* 2005, p.13). This proposition is supported by Miles *et al* (1995, p.129) who argue that managers tend to treat symptoms, rather than root-causes and Sevon (1996, p.60) who observes that managers watch one another, adopting what they perceive to be successful strategies. The net effect of this state of affairs, reported in the *Economist*, is that more than half of the strategic change programmes engaged in by business fail to meet the expectations of their senior executives (Allio 2005, p.12).

Turner & Cochrane (1993, p.95) classify the projects that exist within change programmes according to two dimensions:

1. Definition of the goals of the project; and
2. Definition of the methods required to achieve these goals.

As mentioned previously, van Weele's (2002) research indicates a good level of purchasing content knowledge exists which might be used to provide a means of defining a purchasing organisation's current profile and thus provide insight into the next logical goals that might be set along the improvement continuum. However, when discussing issues surrounding change

programmes, Dobni *et al* (2001, p.401) signal a note of caution, declaring that the advice on what to do is not matched by a clear definition of relevant implementation methods, a point that appears to be of particular pertinence when viewed from a purchasing perspective (Levy 1995, p.356; Stannack & Jones 1996, p.66; Brookshaw & Terziovski 1997, p.245).

It may be argued that this is a generic state of affairs that simply includes purchasing within its domain. However, Gadde & Håkansson (*in* Ford, 2002, p.426) argue that purchasing and supply management is far behind its peer functions in terms of maturity and capability. This creates an imperative for directed research into this area of implementation.

Cousins (*in* Hines *et al* 2000, p.194) argues the importance of the internal infrastructure when implementing purchasing development programmes. He qualifies this as relating to management systems and philosophies that are supported by appropriately qualified staff. McKenna (1999, p.774) develops the people emphasis further, citing knowledge and intellectual capital as the prime sources of an organisation's competitive advantage. If Cousins and McKenna are correct then this moves the focus away from a myopic emphasis on the technical aspects of content and process toward a more balanced view that includes aspects of the social sciences (Barker 1998, p.554; Kaufman 1992, p.85; Kotter 1996, p.15; Turner 1999, p.58).

Teece *et al* (1997, p.515) view successful implementation of a change programme as a consequence of possessing 'dynamic capabilities', which are the capabilities of an organisation's management team to redeploy 'skills, resources and functional competences towards a changing environment.' These dynamic capabilities are determined by:

1. Processes - 'the way things are done in the firm...what might be referred to as its routines';
2. Position - 'the current specific endowments of technology, intellectual property, complementary assets, customer base and its external relations with suppliers';
3. Paths - 'the strategic alternatives available'.

Winter (2003, p.991) makes the distinction between ordinary and dynamic capabilities by stating that 'ordinary or 'zero-level' capabilities [are] those that permit a firm to 'make a living' in the short term...dynamic capabilities [are] those that operate to extend, modify or create ordinary capabilities.' Combining the propositions of Teece *et al* and Winter implies an interdependence between current ways of working and their development. If this is the case then it is reasonable to assume that this interdependence can be described in some way.

Argyris (1979, p.673) appears to support the importance of describing change activities, emphasising the need for theoretical models to be designed that can inform practice thus enabling action to be taken. His view of this proposition 'may be understood by explaining how people construe or enact their environment.' Noble (1999, p.132) supports the need for research in this area arguing that 'there is a significant need for detailed and comprehensive conceptual models related to strategy implementation.' Despite this need, it appears that little progress has been made.

2.3 Framework Models for Change Implementation

Despite change management, as a field of study, being well researched it appears that research on change implementation as part of, or an adjunct to, change management has not yet been the subject of detailed investigation. Where research has been conducted, the findings can be described as contradictory when it comes to proposing approaches to organisational change (Bamford & Forrester 2003, p.547). The impact of this problem on this research is a lack of clear direction (Tzortzopoulos *et al*, 2005 p.482) compounded by a variety of theories that all have merit yet demonstrate significant variation in their core proposals.

Therefore, the approach taken in this first section of the review is to develop a proposed framework for change implementation and then test this against the propositions made by other academic models.

2.4 Towards a Conceptual Framework Model of Change Implementation

The fundamental tenet of a change is that the Outcome is different from the Start Condition. The issue being investigated in this review covers the implementation aspects of change that exist between the initial state and the end state.

Change does not happen within a vacuum and therefore a Context must exist within which the change takes place, the change being Triggered by some event or situation (Tzortzopoulos *et al,* 2005). The change must be defined in some way and this Content forms the objectives to be achieved. However, these objectives cannot be achieved without Processes to deliver them. Pettigrew *et al* (2001, p.698) argue that it is all of these factors and the relationship between them that forms the basis of a robust theoretical model and that is the approach proposed in this research. The relationship between these aspects of change ultimately defines the implementation activities that are used to deliver the desired outcome (Tzortzopoulos *et al* 2005, p.472). These aspects of change are conceptualised in Figure 3. Context does not appear in the original figure, but does feature in the text of their article. It has been added here for clarity.

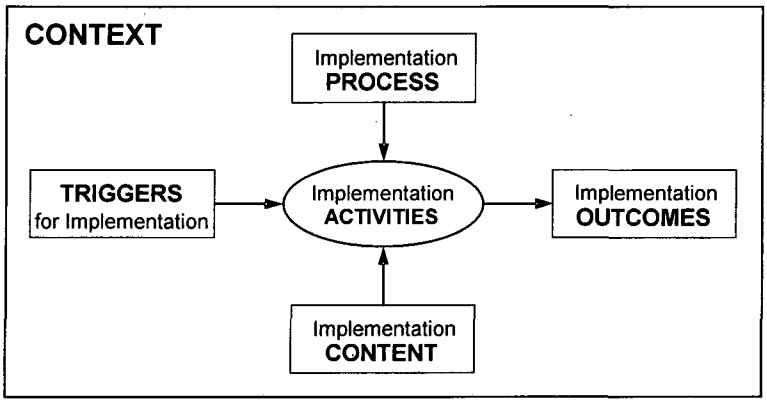


Figure 3: Generic model of the implementation process
(*adapted from* Tzortzopoulos *et al* 2005, p.472)

Although the above model is clear, it appears to be static in nature and therefore does not impart the dynamic characteristics of a change programme in action. Change implementation suffers from a number of problems that

appear to be generic in nature. As Cicmil (1999, p.9) observes, plans seen as sufficient at the outset pass through endless iterations as unforeseen circumstances and outcomes dictate the need for remedial and corrective action. This, in turn, necessitates changes in the implementation processes in order to accommodate the new plans. The consequence of these constant changes can be confusion within the organisation as individuals lose track of what they are supposed to be focusing on or how they are supposed to be working. Ultimately, confusion can lead to the perception of a misfit between what is being implemented and what is actually required. This cycle is depicted in Figure 4.

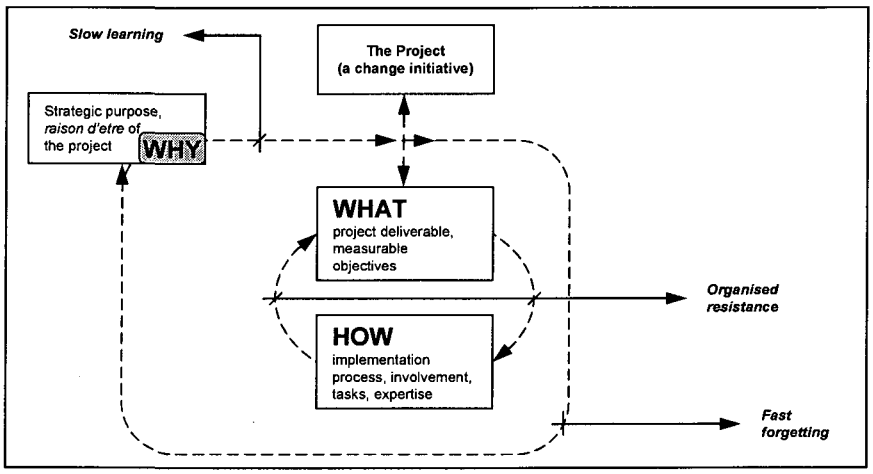


Figure 4: Mapping the implementation gaps and impediments (Cicmil, 1999, p.9)

The indication from both Tzortzopoulos, *et al* and Cicmil appears to be that human factors are significant in the implementation of a change programme. This thesis is strongly advocated by Gibb (1991), who proposes the model shown in Figure 5.

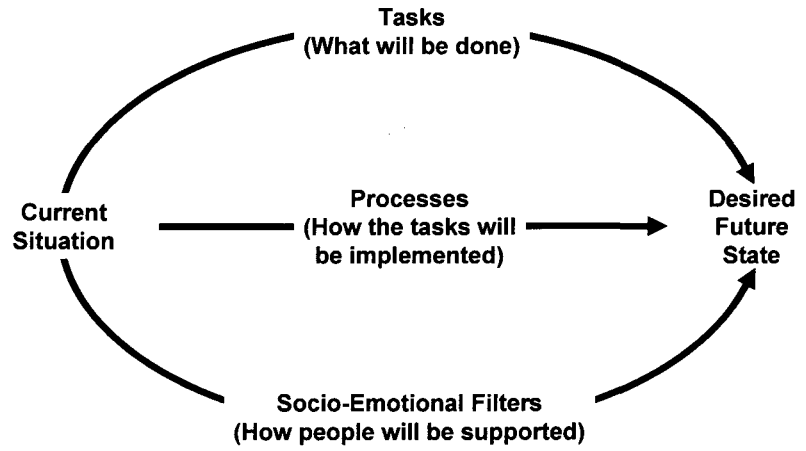


Figure 5: A new view of personal and organisational development (*adapted from* Gibb, 1991)

Content and process are clearly both important aspects of the model. Whereas the previous two models appear to indicate a balanced interplay between the various aspects of change implementation, Gibb argues that the socio-emotional aspects of change are also critical enablers of success, supporting task delivery through process implementation.

Gibb appears to propose a deceptively simplistic view of what is a broad spectrum of issues in an attempt to emphasis the humanistic aspects, whereas Cicmil presents a comprehensive model that is dynamic in nature and therefore representative of the emergent nature of change. The introduction of the dynamic nature adds significant complexity that may be difficult to articulate without reference to a clearly defined context. This would make this review contextually specific and may result in a restricted outcome. Tzortzopoulos, *et al* present a rather clinical model, although the subtleties of implementing change are clearly understood within the text of their article. Therefore, this model is used to guide the exploration and refinement of a framework for examining the implementation literature. However, the dynamic and humanistic aspects highlighted by Cicmil and Gibb should not be denied and are therefore captured within the body of the Literature Review itself.

The structure of the Literature Review draws on the four key aspects of Trigger, Context, Process and Content. The model being adopted positions

activities and outcome as results of the other aspects and this tends to subordinate them to being consequential rather than influential. This is supported by the literature that discusses change activities and outcomes from a contextual perspective, denying their relevance as independent issues that can be adequately discussed without being grounded in some situational description. Also, it has been proposed that 'theoretically sound and practically useful research on change' need only consider three of the four aspects, namely, context, process and content (Pettigrew *et al* 2001, p.698). Although this is useful and can be defended, some aspect of change has to exist that overcomes the existing inertia in the system (Keuning 1998, p.350). Therefore, the Trigger should be added as a fourth aspect given that this is the catalyst that begins the whole change programme and can be argued to be influential in the subsequent decisions and approaches taken.

Figure 3 describes the structure and logic of the literature review process. Within each of these steps the following investigative process was used:

1. Perform a keyword search to identify relevant literature;
2. Review and catalogue relevant extracts from the literature;
3. Review the relevant international citation index to identify the most influential authors in the field;
4. Select referenced literature primarily based on relevance to the review and then the influence of the author within the field of study.

The selection of the change model to be used within the literature review constrained the field of study to the point where only two areas of related literature were rejected after consideration. First, from the perspective of implementing change, leadership was clearly a highly influential field. However, the leadership literature tends to focus on the role of the individual leader or the followers. This research is focused on activities rather than the leaders of those activities. Second, much of the general purchasing literature tends to mention implementation activities as important but does not describe it to any level of detail. In these cases the focus of the articles reviewed would cover issues such as new product development, supplier development, performance measurement, etc... The problem with this type of article is that it

is context specific. Therefore, in order to develop a generic model, all purchasing fields would have to be considered as the exclusion of any could bring into question the validity and ability to propose generally applicable findings from the research. Identifying and researching all purchasing and supply management fields is an unfeasible proposition. The literature states that implementation activities have received little attention (Brookshaw & Terziovski 1997, p.245). Indeed, the review supported this view as no material was found that focused exclusively on implementation activities from a purchasing and supply management perspective.

During the research process as a whole it became apparent that the extent of Purchasing's influence could be seen as an indicator of maturity. This perspective was an unforeseen outcome of the research process and was therefore not covered in the original literature review. Given its potential importance this area of the findings warranted a literature review of its own to both check what had been discovered and to evaluate it relative to what was already known. This second review is presented as a supplement to the main literature review.

2.5 The Trigger

2.5.1 Introduction

It can be argued that most people and organisations actively resist any attempt at change, preferring the stability and predictability of the status quo. However, the constant state of flux that exists within and across organisational systems means that change has become both an inevitability and an imperative of survival. This section covers the issue of triggers as the initiator of the change programme, shown in Figure 6.

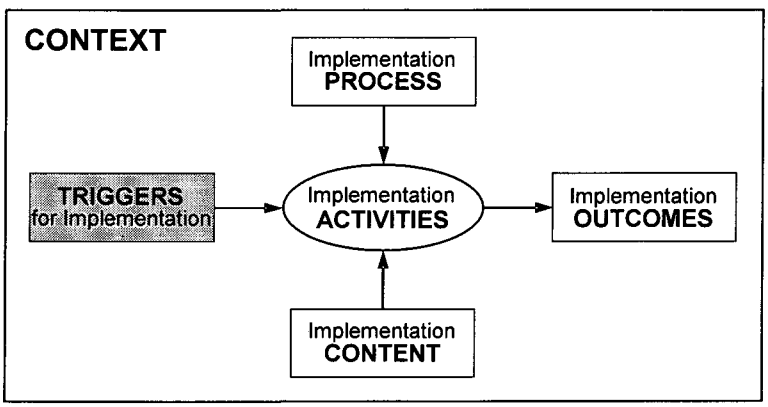


Figure 6: The position of The Trigger within the change activity

Although change is normally seen to exist as an organisational system issue, it is individuals within the system that decide and enact the changes. Therefore, this section looks at both the evolution of situations that lead to a decision to change being taken and the impact that this series of events has on the individuals concerned.

2.5.2 Why Change?

The need to change can be argued to occur as the result of a set of business decisions that has resulted in the organisation finding itself in an unviable situation. The need to change may originate from several different sources, both inside and outside the organisation (Kanter *et al* 1992, p.24; Goodstein & Burke 1997, p.159; French & Bell 1999, p.2). The actual decision to invoke changes may well be triggered by the perception or experience of environmental threat, loss or opportunity (Kleiner & Corrigan 1989, p.25; Scherr 1989, p.407; Miles *et al* 1995, p.142). The consequence of this

sequence may be that the organisation finds itself in a state of crisis as it tries to 'catch-up' making the subsequent implementation of changes more difficult as external forces simultaneously initiate, facilitate and inhibit the change processes (Bamford & Forrester 2003, p.557).

This view of organisational crisis followed by the rapid deployment of a change programme contrasts significantly with the view that people need to be given time to make sense of their situation before they can engage in meaningful responses (Allport & Postman 1947, p.37). People tend to prefer stability within their working environment as it offers a sense of security (Morris & Raben 1995, p.48). There are two views as to why people resist change. First, the commitment to, and investment in, the status quo resulting in a desire to persist with the existing goals and plans even though they are obviously failing (Dunphy & Stace 1990, p.151). Second, the security found from the relational networks that people exist within through which they fulfil their personal needs as social animals (Blau & Scott 1962, p.240; Vickers 1983, p.33; Checkland & Casar 1986, p.16). Both of these propositions are compelling and may be appropriate within given situational contexts. Ultimately, they observe that deep psychological issues need to be addressed in order to get people to agree that change is necessary and good (Antrim 1998, p.106). This can be termed as 'breaking the quasi-balance', which occurs when the need to engage with change has such intensity that it cannot be ignored. Put another way the perceived benefits of the 'goals' exceed the preference for the 'norm' (Keuning 1998, p.350). This is a significant challenge given that the defence arguments will probably have developed over a long period of time and been well rehearsed.

An alternative to the humanistic approach described above is the more mechanistic approach in which the quasi-balance is considered to be the nominal equilibrium between economic results and economic risks. The balance becomes an assessment of whether the risk of changing the organisation out-weighs the benefits of change even considering potential risks from unforeseen factor changes (Drucker, 1996, p.198).

It may be possible to posit a successful argument for either approach given certain conditions. For example, in a military conflict setting the mechanistic approach may be successful and extremely necessary. However, within a hospital or university setting, highly qualified staff, upon which the organisation depends, may well need a more humanistic style of engagement. Ultimately, it appears that the issue is one of understanding the factors that may cause problems and then identifying and implementing responses that are appropriate to the situation at hand (Smith 2005, p.522).

2.5.3 The Trigger: Summary

Discourse between the business and its environment appear to be the main catalyst for change based on the realisation that doing nothing may well end in some form of catastrophic failure. This is often the consequence of changes that happen over a long period of time or as a short-term shift in circumstances. The first stage therefore becomes one of understanding the conditions that have led to the need for change.

The second stage becomes one of convincing the people that work within the organisational system that change is required. From a humanistic perspective this is difficult to achieve given the psychological preference for the security found in stability. If a compelling argument for change cannot be found then the alternative is the imposition of change through some form of mandate followed by a mechanistic application of imposed changes.

2.6 Implementation Context

2.6.1 Introduction

Once change has been initiated, the role of management translates to one of resolving conflicts and removing barriers to cooperation from within the organisational entity (Deming 1993, p.65). This appears to require the two perspectives of the organisation as a structure and as a coordinated construction of people. Once again, the structural perspective indicates a static view while the coordinating view acknowledges the dynamic nature of the structure over time. These issues define the context within which the changes take place and are shown in Figure 7.

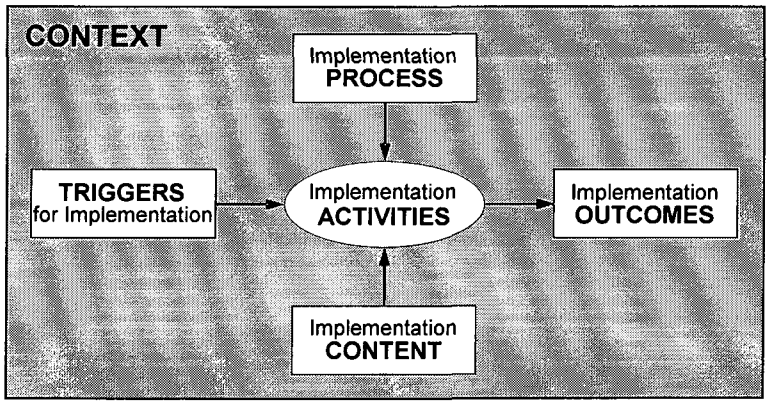


Figure 7: The position of Context within the change activity

2.6.2 How We View Organisations

Organisation charts have been used historically to emphasise the formal reporting relationships within the firm (Handy 1993, p.350). However, this does not necessarily represent how things actually work, who is influential, where the power lies or how organisational politics can be used to make change happen (Clarke 1994, p.32).

A systems view focuses on the dynamics of coexisting factors and attempts to infer their interdependence (Lewin 1946, p.240). As an example (Figure 8) Deming modelled production not as a set of silos or discrete processes, but as a cycle of interactions permeating both the firm and its wider business environment.

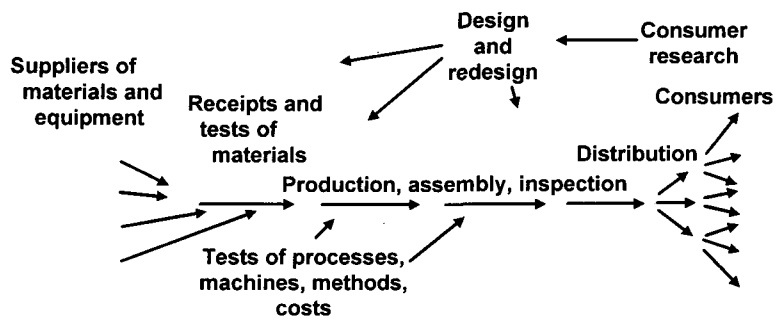


Figure 8: Production viewed as a system (Deming 1986, p.3)

A system may be described in different ways, depending on the purpose of

the analysis. This can range from a description of just the system's processes (Hannan & Freeman 1989, p.76), to the firm's internal structure, processes and normative order (Hannan & Freeman 1977, p.935), or its internal characteristics and their link to its external environment (Hannan & Freeman 1984, p.156).

It is reasonably easy to argue the relationship between a firm's structure and its ability to respond positively to changes in its surrounding environment (Drucker 1996, p.202). If this argument is accepted, the issue then becomes one of defining what constitutes the critical enablers that the organisation can use. It has been argued that the wrong structure can smother improvement efforts and damage results; while the right structure, although not guaranteeing success, acts as an enabler (Drucker 1996, p.196). Additionally, however, it is the coordination of people within an appropriate, but flexible, structure that is perceived to deliver a greater probability of success. This view seems to progress the structural view to a different level by viewing people as the enactors, or users, of the structure. This argument proposes that by providing the right structure for appropriately competent people who understand the aim of the system and their role in it they will be more willing to naturally generate the improvements required (Thornhill *et al* 2000, p.36).

This argument seems to imply that neither structure nor human systems as discrete approaches to change are capable of delivering an improvement to the firm. Instead, it appears that it is the development of a synthesis relationship between the two that will ultimately lead to success. This rejects the traditional view of organisations as a hierarchy of relationships in favour of a systems view that is cognisant of both the mechanistic and humanistic needs of the situation at hand (Deming 1986, p.69).

2.6.3 The Complexity of Organisations

Attempting to make sense of an organisation appears to require a contingent approach to its definition, covering both internal and external factors (Thornhill *et al* 2000, p.40). This is not a simple process given the number of

interdependent variables that both influence and directly impact upon each other, as shown in Figure 9. If the modelling is incorrect the results can be chaotic as dependencies are not factored into proposals and the consequences multiply in number and severity, unchecked, as the true impact of the changes unfolds (Macbeth 2002, p.728).

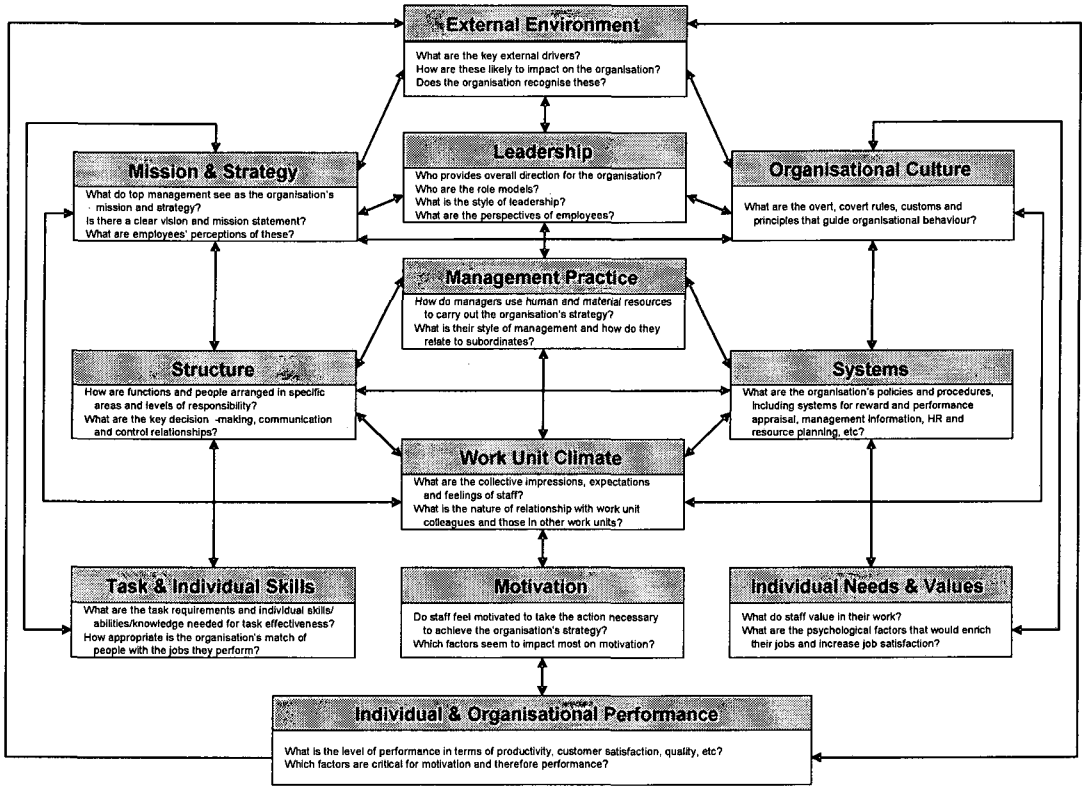


Figure 9: A causal model of organisational performance and change (Burke & Litwin 1992, p.523)

Attempting to 'manage' all of the factors mentioned above is probably beyond the capabilities of most individuals. Therefore, the issue becomes one of identifying the key issues that need to be addressed. Reducing this to a debate surrounding internal versus external drivers is self-defeating. The issue therefore becomes one of understanding the relationship between the parts of the organisation and how they (dynamically) interact (Katz & Khan 1966, p.17; Strickland 1998, p.76). This leads back to the system view, arguing that by focusing on one part of the organisational system to the exclusion of other areas will lead to sub-optimisation of the outcome (Deming 1993, p.53). In turn, this reinforces the argument that relates the organisation

as a structure with organising as a set of social processes (Pentland & Rueter 1994, p.484).

2.6.4 The Cultural Organisation

Underlying the structure and social processes are a set of responses collectively developed by the people within the organisation for dealing with situations (Colville *et al* 1993, p.559). These responses are often described as culture and are a critical issue when considering the approach that is most appropriate for a given implementation activity (Byars 1991, p.10; Kotter 1996, p.148; French & Bell 1999, p.4). This point is important because culture will tend to conspire against any change programme given its foundation in normative behaviour. However, this can be used to the advantage of the change agent if the organisational culture can be understood and then modified to encourage the rejection of inertial practices in favour of improvement practices (Kleiner & Corrigan 1989, p.29). This view is contradicted by the perception that culture is a consequence of change, the argument being that as tangible changes take place to structure, processes and ways of working the culture begins to either reflect or be a response to the underlying environment that is created (Kotter 1996, p.155). It is, of course, possible that the two views are simply different aspects of the same evolution, culture influencing the way that change is instigated and the changes then subsequently influencing the cultural norms.

Whether culture can be managed at all is a contentious issue. Many commentators appear to describe it in clearly defined terms and others propose ways in which it can be harnessed, or at least, understood. However, many of these descriptions include references to its subliminal nature (Yates & Orlikowski 1992, p.299; Dobni *et al* 2001, p.401) and this could mean that it is difficult to codify coherently in relation to the surrounding environment. If this is the case then the argument becomes one of whether culture can be credibly managed at all.

2.6.5 Implementation Context: Summary

It appears that organisations face difficulties during any kind of change programme (Alashloo *et al* 2005, p.135). This is often interpreted as a lack of understanding of organisational structure, systems, culture, power and conflict (Ellis & Dick 2000, p.123) and how they relate to each other (Allport 1948, p.ix; Geertz 1975, p.10). Therefore, it seems that analysing an organisation from an economic or structural perspective is only a small part of the solution. Humanistic aspects such as culture, individual needs and understanding need to be added in order to create a more holistic proposition (Smircich 1983, p.348). This second set of issues can be considered to predominantly reside with the individuals within the system. These people make sense of the issues being presented in terms of their own perceptions, feelings and actions as they experience them (Allport 1948, p.vii). Understanding the change environment is particularly pertinent given that people are highly influential in delivering the outcome and, therefore, their support often becomes critical (Kotter & Cohen 2002, p.88; Szamosi & Duxbury 2002, p.184).

If we expand the context from the individual to the group level, the concept of the integrated system becomes significant. When groups of people interact the outcomes of their actions, both intentional and unintentional, have consequences for other groups who also form part of the system (Cohen & Manion 1989, p.140). As these different groups interact and influence each other, they create the norms of behaviour that underpin the structure of the organisation resulting in a 'normalising' or converging effect. These become the inertial forces that act against the change effort (Buckho 1994, p.90).

Therefore, the contextual issues centre around the need for articulating the change imperative in terms that are relevant to the individuals involved. This means describing the position of the firm within its systemic context, considering both static structure and dynamic interactions. This is particularly difficult given the high levels of complexity that form the situational picture.

2.7 Implementation Process

2.7.1 Introduction

The methodological foundation of the change process is taken to be Kurt Lewin's (1951) three stage process. Process-based models are then developed from this, leading to Kotter's (1996) eight-step process. Issues of complexity are then used to question the validity of planned change and this leads into a discussion on contingency theory. Unplanned change theory is then used to develop the themes of contingent and emergent theories. The magnitude of a change is next considered and this introduces the issue of discrete and continuous change styles. Ultimately the discussion is framed in terms of the role of the change leader and the approaches that they may take. The position of process within the change activity is shown in Figure 10.

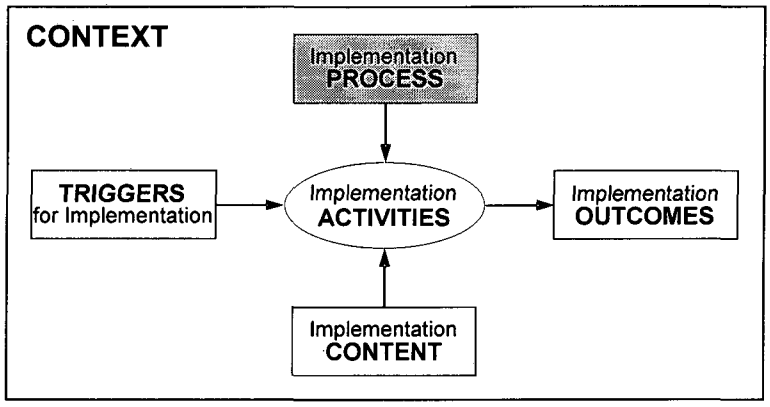


Figure 10: The position of process within the change activity

2.7.2 Planned Change

Planned change is one of the most important and foundational areas of the change management literature (Cummings & Worley 1993, p.52; Miles *et al* 1995, p.140). Probably the most influential of these planned models is Lewin's (1951) three stage process, as described in Table 1.

Unfreeze	This entails reducing or eradicating those behaviours striving to keep the organisation's behaviours in its present state. Once unfreezing has taken place the individual is ready to acquire new behaviour.
Change	Shifting the behaviour to a new level. It means developing new behaviours that are commensurate with any structural and process changes that are introduced.
Refreeze	This occurs when the new behaviour patterns are adopted as the accepted practice within the organisation. It is the successful completion of this stage that signals the change is permanent.

Table 1: Lewin's three-stage change model (Lewin, 1951)

Although this is only one of many models, it appears to be foundational in nature, having stood the test of both time and subsequent research (Hendry 1996, p.624).

Kanter, *et al* (1992, p.10) criticise Lewin's model, reducing it to a 'quaintly linear and static conception - the organisation as ice cube.' This appears to be a cynical misrepresentation of Lewin's work. He was a psychologist by profession, who researched, at length, areas such as experiential learning, group dynamics and action research. Therefore it is more likely that he saw an organisation as a warm-blooded animal rather than an ice cube. Kanter, *et al* (1992, p.12) did, however, make an important point in their dubious argument observing that organisations are 'fluid entities with many personalities', which results in a complex situation where change stages 'overlap and interpenetrate one another in important ways' resulting in a change process that is 'ubiquitous and multidirectional'. This could simply mean that there are many 'unfreeze-change-refreeze' models in action at any one time within a given environment. It does not demonstrate that the model is flawed.

Another criticism raised of Lewin's model is that it does not deal with issues associated with organisational politics (Cummings & Worley 1993, p.153). However, his work on field theory and group dynamics does seem to cover this area (*see* Hall & Lindzey 1978, p.386). Dickens and Watkins (1999, p.127) argue that Lewin's approach is '... intended to foster change on the

group, organisational and even societal levels'. If we accept that inertia in organisations can be considered to be a function of organisational status structures (Blau & Scott 1962, p.240) then it is reasonable to propose that status structures are, at least partly, maintained through organisational politics. Lewin's argument therefore becomes one for a need to deal with organisational politics as part of the 'unfreezing' process; a reasonable proposition from a psychologist.

Elrod and Tippett (2002, p.273) come to Lewin's defence finding that most approaches to organisational change could be reduced to his 3-phase model. They went on to extend their research to include other forms of human and organisational change, and again found clear relationships with Lewin's model; see Table 2.

Date	Source	Initial Equilibrium	Transition	Final Equilibrium
1952	Lewin	Unfreezing	Moving	Refreezing
1961	Harvey, Hunt & Schroeder	Unilateral dependence	Negative independence	Conditional dependence, positive interdependence
1967	Fink	Shock	Defensive retreat	Acknowledgement, adaptation, change
1969	Kubler-Ross	Denial	Anger, bargaining, depression	Acceptance
1969	Adams	Dependence	Reaction or rebellion	Coordination and integration
1977	Elgin	Decline	Crisis, muddling through and procrastination, chaos	Back to basics, transformation and revitalization
1982	Lippitt	Shock	Defensive retreat	Acknowledgement, adaptation, change
1989	Rashford & Coghlan	Denying	Dodging	Doing, sustaining
1990	Perlman & Takacs	Equilibrium, denial	Anger, bargaining, chaos, depression, resignation	Openness, readiness, re-emergence
1993	Katzenback & Smith	Working group	Pseudo-team	Potential team; real team; high-performance team
1994	Kegan	Unfreezing	Double-loop unfreezing	Triple-loop unfreezing, and so on
1994	Reynolds	Denial	Resistance	Exploration/ commitment
1996	Bupp	Shock, denial	Anger, bargaining, grief	Acceptance, exploration, opportunity, accomplishment, creativity
1996	Grant	Shock/ immobilisation, denial/minimisation	Depression/ incompetence	Acceptance/letting go, testing, search for meaning, integration
1996	Mariotti		(1) Confusion (2) Immediate criticism (3) Denial (4) Malicious compliance (5) Sabotage (6) Easy agreement (7) Deflection (8) Silence (9) Silence pseudo-team	

Table 2: Summary of change models (Elrod & Tippitt 2001, p.286)

Kanter *et al* (1992, p.372) further criticise Lewin's model by arguing that it does not offer enough information for carrying out change in practice. This is a reasonable argument, if viewed from the perspective of direct utility. However, as a methodological work, Lewin's model can be seen to underpin numerous utilitarian models and therefore has its value in its intellectual, rather than practical, knowledge.

Probably the most influential of the more practically based models was developed by Kotter (1996, p.21). His approach, although basically more practical in nature, can be seen as an attempt to deal with some of the psychological issues relating to inertia that are commonly encountered. His model is summarised in Table 3:

1. Establishing a Sense of Urgency • Examining market and competitive realities. • Identifying and discussing crises, potential crises, or major opportunities.
2. Forming a Powerful Guiding Coalition • Assembling a group with enough power to lead the change effort. • Encouraging the group to work together as a team.
3. Creating a Vision • Creating a vision to help direct the change effort. • Developing strategies for achieving that vision.
4. Communicating the Vision • Using every vehicle possible to communicate the new vision and strategies. • Teaching new behaviours by the example of the guiding coalition.
5. Empowering Others to Act on the Vision • Getting rid of obstacles to change. • Changing systems or structures that seriously undermine the vision. • Encouraging risk taking and non-traditional ideas, activities, and actions.
6. Planning for and Creating Short-Term Wins • Planning for visible performance improvements. • Creating those improvements. • Recognising and rewarding employees involved in the improvements.
7. Consolidating Improvements and Producing Still More Change • Using increased credibility to change systems, structures, and policies that don't fit the vision. • Hiring, promoting, and developing employees who can implement the vision. • Reinvigorating the process with new projects, themes, and change agents.
8. Institutionalising New Approaches • Articulating the connections between the new behaviours and corporate success. • Developing the means to ensure leadership development and succession.

Table 3: Eight steps to transforming the organisation (Kotter 1996, p.92)

Inspection of Kotter's Model does seem, again, to mirror the basic philosophy of change defined by Lewin. In some ways Kotter's model is more utilitarian in nature, but this seems to be a consequence more of its expansion in detail and emphasis on generic outcomes. Referring back to some of the contextual debate described earlier, it may be that an organisational context is required in order to elicit a more practical interpretation of the issues the model raises. Any linear model that defines generic issues is open to criticism. However, developed detailed descriptions can result in a lack of generic application. The balance between the two extremes can never be an easy or universally acceptable one.

2.7.3 Complexity Theory

Contrary to the mechanistic view indicated by linear models of change, complexity theory puts into question the linearity and singular direction of such organisation change models. Complexity theory proposes that changes are produced on the basis of a multiplicity of interconnected causes and effects whose relationships are difficult to understand when viewed from the perspective of an analytical framework that assumes linearity. As a consequence, an analysis of organisational change activities based on a complexity theory framework recognises the broader systems issues associated with the unpredictability of people oriented activities (Checkland 1999, p.115). In this view, organisational change is never solely a one-dimensional series of successive activities, but is seen as taking place amidst the turmoil of transient states and interaction between activities (Styhre 2002, p.349). Again, this could imply that there are multiple Lewinian change models happening simultaneously. Alternatively it could indicate that the Lewinian model is fundamentally flawed. Complexity theory does not appear to resolve this question.

2.7.4 Contingency Theory

The question that contingency theory attempts to answer is 'What kind of organisation does it take to deal with different environmental conditions?' (Lawrence & Lorsch 1967, p.3). The basic premise of the theory is that internal characteristics are made sense of by understanding their relationship

with related external characteristics. This quite clearly recognises the systemic nature of the relationship between an organisation and its context. As a result, the determinants of effective internal organisational processes are dependent (or contingent) upon variations in the environment in which the organisation operates. If sense can be made of the relationships then they can be managed on a case by case basis resulting in a more targeted set of solutions (Lawrence & Lorsch 1967, p186.). Therefore, the essence of contingency theory becomes one of abandoning the view that there is one best way to organise in favour of believing that the best solution is dependent on the nature of the environment to which the organisation relates (Hicks & Gullett 1981, p.625; Scott 1998, p.96). Classical management principles thus become subordinated to the unique characteristics of the situation (Bartol *et al* 1995, p.65).

2.7.5 Unplanned Change

Complexity theory appears to drive the need for a response in the form of contingency theory. Ultimately, the combination of complexity and a contingent approach lead to the concept of unplanned change.

Unplanned change subordinates the planned change models to that status of logical framework or methodological paradigm that acts to guide, rather than provide a rigid method that can be followed (Dawson 1994, p.3). This view strongly reinforces the original criticisms of Kanter, *et al* (1992). The criticisms are further developed in terms of the inability of change leaders to adequately describe contextual issues that are often messy, continually changing and non-linear (Buchanan & Storey 1997, p.127). Instead, the approach appears to favour the development of appropriate responses as they occur (Anderson *et al* 2004, p.152).

Although the term 'unplanned' can be construed to mean chaotic and reactionary, the reality could be more accurately described as a broader methodology guiding the small-scale and short-term responses that are required to keep the change programme on track. The main characteristics that this approach embodies are described in Table 4.

Characteristics
Characterised by continuous processes of experimentation and adaptation in order to match the organisation's capabilities to the uncertain environment;
Best achieved through a complexity of incremental changes, which occur over time, and which can themselves 'constitute a major reconfiguration and transformation of an organisation';
Bbased on the facilitation not the planning of change initiatives by managers - this means that the focus is on developing a cultural climate, that 'encourages experimentation and risk-taking';
Include key organisational activities such as: 'information gathering - about the external environment and internal objectives and capabilities; communication - the transmission, analysis and discussion of information and learning'; and 'the ability to develop new skills, identify appropriate responses and draw knowledge from their own and others' past and present actions.

Table 4: Characteristics of an unplanned change programme (Burnes 1996, p.14)

Distillation of Burnes' theories appear to promote an approach not dissimilar to that of action research as investigation results in new knowledge, which is applied and the outcomes used to generate learning thus starting the next cycle of improvement.

Ashby's 'Law of Requisite Variety' states that for a system to preserve its integrity and survive, its rate of learning must at least match the rate of change in its environment (Ashby 1956, p.206). Learning in this context is at an organisational level, being the consolidation of individual learning into useful collective action (McGill & Beaty 1995, p.14; Anderson *et al* 2004, p.152). Although organisational learning implies the collective wisdom of the firm, change can be successfully implemented at the level of the individual in terms of small scale incremental improvements to existing situations. Alternatively, it can take the form of organisation-wide transformation that fundamentally change both the nature and form of the business and involve every member of the firm. These types of change are characterised into four discrete categories in Table 5.

Fine tuning	where organisational change is an ongoing process, characterised by the fine-tuning of the 'fit' or match between the organisation's strategy, structure, people, and processes;
Incremental adjustment	defined as a stage of incremental adjustment to the changing environment;
Modular transformation	characterised by major re-alignment of one or more departments or divisions;
Corporate transformation	change is corporation wide and implies radical shifts in strategy and revolutionary changes throughout the whole organisation.

Table 5: Change magnitude within the organisation
(Dunphy & Stace 1990, p.72)

'Fine tuning' clearly coincides with the concept of incremental change, with the definitions progressing along a nominal continuum toward 'corporate transformation', which appears to align with the concept of radical change as identified by intermittent events of significant magnitude (Dunphy & Stace 1990, p.70).

2.7.6 Discrete and Continuous Change

Continuous, evolving, and incremental changes tend to relate to change within the operation. This type of change is often labelled as 'continuous change' and is characterised as consisting of an ongoing implementation of numerous small improvements that collectively contribute to the business in a way that ensures its ongoing viability (Sadler 1996, p.55). A common interpretation of this view is that change is emergent, meaning that it is 'the realisation of the new pattern of organising in the absence of explicit *a priori* intentions' (Orlikowski 1996, p.65). This appears to indicate an emergent approach to change, with an ongoing interplay between the objectives and activities of the change programme and its surrounding environment. This is a point echoed by Kotter (1996, p.11) who observes that, small, stepped changes each day lead to future dramatic change that has been managed successfully.

Contrasting with continuous change is discrete change that is described as revolutionary, radical, transformation, turnaround, refocus or reorientation (Mintzberg & Westley 1992, p.40; Goodstein & Burke 1997, p.160; Barker 1998, p.549; Buhanist 2000, p.95). This type of change tends to occur either after long periods of organisational stability within a changing environment or when significant shifts in environmental conditions occur quickly, the result being a need for the organisation to make dramatic changes within a short period of time (Romanelli & Tushman 1994, p.1141). In this situation, the meta-context that maintains the organisation in equilibrium is deliberately altered to cause tension within the system (Gersick 1991, p.16).

(Mintzberg & Quinn 1991, p.334) provide a useful framework for understanding the different approaches that can be used between the continuous and discrete extremes, as described in Table 6.

Direct mutual adjustment	achieves co-ordination of work by the simple process of informal communication. The people who do the work interact with one another to co-ordinate;
Direct supervision	in which one person co-ordinates by giving orders to others, tends to come into play when a certain number of people must work together toward a specific goal;
Standardisation of work processes	the programming of the content of the work procedures to be followed;
Standardisation of output of the work	specification of the results of the work without consideration of the means required to achieve them;
Standardisation of knowledge and skills	that serve as inputs to the work; here it is the worker rather than the work or the output that is standardised;
Standardisation of norms	that more generally guides the work: workers share a set of common beliefs and can achieve co-ordination based on these.

Table 6: Different approaches in magnitudes of change intervention (Mintzberg & Quinn 1991, p.334)

It is probable that organisations will favour certain of the above interventions over others, depending on the needs of the business, fit with culture, external influences, and so on. (Mintzberg & Quinn 1991, p.330).

Continuous change is the more humanistic approach of the two paradigms, taking people along and allowing the changes to be internalised and understood in a way that reduces feelings of crisis and anxiety. In some ways, radical change deliberately sets out to create these feelings and is therefore more technically orientated as evidenced by such approaches as Business Process Re-engineering (Hammer & Champy 1993, p.32). Whichever approach is taken, the results can often be disturbing for the individuals concerned and therefore becomes a significant challenge for the change leader to overcome (Mintzberg & Quinn 1991, p.759).

2.7.7 Leading the Change Process

A fundamental ability of the change leader is to be able to transition people, either as individuals, or as a group from the current organisational state to the new state in a way that enables them to engage positively with the new paradigm (Elrod & Tippett 2001, p.287). Given that the organisation exists at many levels and in many forms, this either requires the change leader to be able to operate simultaneously in multiple roles (Okumus 2001, p.337), or it requires the existence of multiple change leaders all taking specific contextual roles (Buchanan & Boddy 1992, p.115).

Senior managers are generally seen as the architects of the change programme. Given their unique ability to gain access to all areas of the business and see the organisational system as a whole this is a reasonable assumption (Freedman 2003, p.26). However, having the ability to construct a strategy requires a completely different skill set to being able to implement it and the two are not necessarily co-existent (Power 2005, p.99). While senior managers may have the power, it is the middle managers that are the custodians of the organisations resources and who have a clearer view of the daily interactions and their impact on the organisation from both an internal and external perspective. It can therefore be argued that it is this group that are best positioned to coordinate the actual change activities (Bamford & Forrester 2003, p.554). The distinction does have to be made between coordination and implementation. It is the actual process of implementation that results in the changed state and this is the ultimate objective of the

programme. Development of the correct strategy does not add value: implementation of the strategy does. Implementation is the preserve of the first-line and supervisory managers. These form the group that has direct access and regular contact with the people that will be most affected by the proposals and most influential in their implementation (Moran & Brightman 2001, p.111). Their role becomes one of understanding and delivering the strategic intent through a contingent approach of understanding the issues being faced and coordinating the available resources to mitigate their potentially harmful effects (Young 2000, p.378).

It appears, therefore, that there are multiple sources of leadership within a change programme and the issue is one of which to use at any specific time (Scott 1987, p.502). This highlights the complexity involved in being a leader of change. At the higher levels of management it can be argued that the approach is more directive. Directive methods tend to be prescriptive, control and authority-based techniques. They tend to be top-down, procedural, focused on resource allocation and follow formal authority lines. Objectives and formal aspects of the organisation can be modified by these methods and as a result, the prior support of the whole workforce is not required (Waldersee & Griffiths 2004, p.425). This is intuitively correct if viewed as the preference for senior managers. Their perspective is one of directing their subordinate managers with regard to the direction that the organisation should take, but does not necessarily expand to the implementation problems caused by complexity and unforeseen circumstances. At the supervisory level, effective change requires the leader to be able to engage the people in productive pursuits. This implies shared methods that are participative and directly target the values, attitudes and skills of organisational members. The primary goal of these implementation methods is to build employee support for the change (Waldersee & Griffiths 2004, p.425).

2.7.8 Implementation Process: Summary

The literature on planned change tends to centre on Lewin's three-stage unfreeze-change-refreeze process. This is acknowledged by many authors as the foundation of most other change models, encompassing sociological and

psychological issues in addition to the fundamental mechanics of change. However, the advocates of unplanned change argue that organisations are too complex and volatile to rely upon a planned change model. They argue that change tends to be emergent as the consequences of previous actions unfold and contingent on the consequences that these outcomes have on the desired objectives of the development programme. In this way, programmes can be characterised as iterative cycles of modified response to semi-predictable outcomes.

Continuous change is the less dramatic of the two approaches, favouring a more humanistic approach with people engaging in evolutionary improvement as they identify and rectify problems within their own domains. Discrete change is much more volatile, with the emphasis on large-scale interventions and redesign. This tends to be more mechanistic in nature and seemingly ignores the social issues involved in such traumatic circumstances.

Change leadership is concerned with migrating people from one state of existence to another. Authors argue as to where the critical power exists within the organisation, variously citing senior management, middle management and supervisory management as the key group. When combined with the unplanned view of change it can be argued that each has their part to play depending upon the context and content objective of the particular development activity in question.

2.8 Implementation Content

2.8.1 Introduction

Given its explicit and tightly focused nature, implementation content has been described from a purely purchasing and supply management perspective. This is because the 'content literature' cannot be meaningfully generalised to an organisational or business level. Although the descriptions within these models are not the focus of this research, they are included in this Literature Review as examples of available knowledge in an attempt to relate the different aspects of the change model shown in Figure 11.

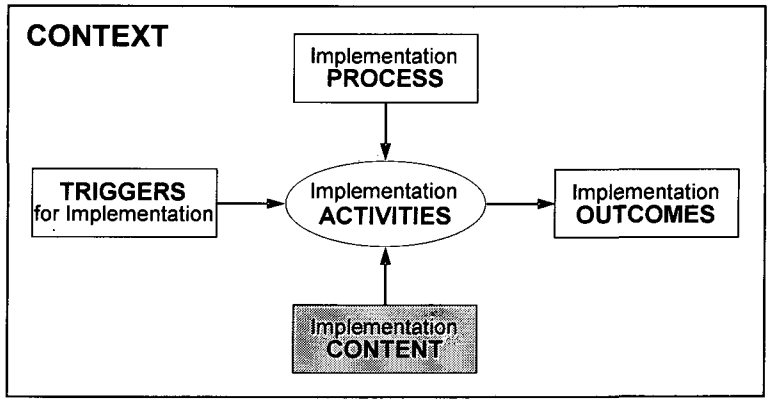


Figure 11: The position of Content within the change activity

This section is important for the research as it is the main source of information relating to change within a purchasing and supply management context. Although the primary purpose at this point is to support the development of the framework describing successful implementation, this section also supports the identification of gaps identified by the various authors represented.

2.8.2 Definition of Content Models

Content models describe the outcome characteristics of a change programme within a given contextual situation. Content models do not describe the methods or processes used to achieve a given outcome and are therefore distinct in terms of their depiction of the current or desired state rather aspects of moving between the two. For example, a purchasing function may use a content model as an audit tool to understand the way it currently buys goods and services. The consequence of this audit, in content terms, may be that it buys on price alone, negotiating on a win-lose basis to drive down spend and will happily switch suppliers based on opportunities for further savings as and when the present themselves. The Function may then decide that, in content terms, it wants to move to a Total Cost of Ownership model where the cost of purchased goods and services are calculated from initial supplier to the point of receipt together with the costs of using the goods and services and the final disposal costs, based on a strategic partnership approach with critical supplier partners.

While this example provides a description of what the Function currently looks like and what it aims to look like, it provides no insight or advice on how that transformation can be achieved.

Content models play a significant role in development programmes as they often provide the means to determine a (sometimes vague) course of action in terms of objectives when no other stimuli, such as corporate failure, are available to provide focus or chart the way forward. In many ways their purpose may be restricted to simply presenting a credible alternative to the incumbent mindset (Macbeth 2002, p.730).

2.8.3 Structure of Content Models

Over 20 content models now exist that cover the issues of developing purchasing and supply management. Their contextual perspectives do vary and as a result they recommend different courses of action. This provides an insight into the broad range of roles that Purchasing can play within the organisational system and highlights the complexity of trying to implement changes that may affect multiple areas of the firm and wider business environment. van Weele (2002, p.108) provided a useful overview of the main themes emerging from the models and this is summarised in Table 7.

Integrated final stage	• Final stage to which all efforts are directed; • Integration with the major lines of business; • Involvement of line management in purchasing strategy and tactics; • Purchasing processes organised around multi-disciplinary team-based structures.
Purchasing's organisational status	• Initially, purchasing reports at a low management level; • Some level of centralisation occurs resulting in some form of coordinated purchasing.
Supply management	• Initially reactive and opportunistic in nature; • Develops to cover supplier performance improvement; • At an advanced level becomes relationship driven.
Supplier relationships	• Relationships change as progress through the models is achieved; • Initially, many suppliers are dealt with at 'arms-length'; • At the more advanced levels, the number of suppliers is significantly reduced in order to enable close relationships with critical suppliers.

Table 7: Themes emerging from the content models (van Weele 2002, p.108)

Taking a different perspective on the development of purchasing, it appears that the concept of development aligns with that of 'spheres of influence' (Roemer, 1977). In this context, the definition of spheres of influence relates to purchasing as both a function and a set of activities. The description of the 'integrated final stage' seems to indicate that Purchasing begins as a discrete function and then expands into the wider firm. Both 'supplier management' and 'supplier relationships' indicate a further expansion from the firm to include suppliers and the 'integration with the lines of business' can be taken to cover the end-to-end supply chain as, for example, where the final customer's views are used to drive the development of the business together with its supply network.

Table 8 provides an overview of the purchasing and supply management models found in the literature. These models are typically known as 'phase', 'content' or 'maturity' models.

van Weele (2002) provides a categorisation scheme for the different aspects of content models. These have been used as sub-headings for the remainder of the section on Content Implementation as they adequately describe the diverse nature of the characteristics identified by the various academics and practitioners cited.

Table 8: Purchasing & Supply Management phase models

(adapted from van Weele, 2002)

Year	Author	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
1984	van Weele	Clerical Function	Commercial Activity	Strategic Business Function			
1988	Reck & Long	Passive	Independent	Supportive	Integrative		
1989	Bhote	Confrontation	Arm's Length	Goal Congruence	Full Partnership		
	Syson	Clerical	Commercial	Strategic			
1990	Freeman & Cavinato	Basic Financial Planning	Forecast Based Planning	Externally Oriented Planning	Strategic Planning		
1991	Blenkhorn & Banting	Traditional purchaser	Reverse marketing oriented purchaser				
	Cammish & Keough	Serve The Factory	Lowest Unit Cost	Coordinate Purchasing	Strategic Procurement		
1992	van Weele	Operational / Administrative Orientation	Commercial Orientation	Logistic Orientation	Strategic Orientation		
1993	Burt & Doyle	Reactive	Mechanical	Proactive	Strategic Supply Management		
	Keough	Serve The Factory	Lowest Unit Cost	Coordinate Purchasing	Cross-Functional Purchasing	World-Class Supply Management	
	Lamming	Traditional	Stress	Resolved	Partnership		
1994							
1995	Chadwick & Rajagopal	Opportunistic	Contractual	Collaborative			
1996	Barry, Cavinato, Green & Young	Basic Purchasing Processes	Enhanced Procurement Practices	World-class Procurement Practices			
	Stannack & Jones	Product-centred	Process-centred	Relational	Performance-centred		
1997							
1998							
1999	Jones	Infant	Awakening	Developing	Mature	Advanced	
2000	Cousins	Flat Pricing	Total Cost Focus	Supply-Side Management	Strategic Sourcing	Network & Relationship Management	
2001							
2002	Monczka, Trent & Handfield	Basic Beginnings	Moderate Development	Limited Integration	Fully Integrated Supply Chains		
	van Weele	Transactional Orientation	Commercial Orientation	Purchasing Co-ordination	Internal Integration	External Integration	Value Chain Integration
2003							
2004	Murray	Clerical	Private Sector Imitator	Strategic Breakthrough			
	van Weele & Rietveld	Transactional Orientation	Commercial Orientation	Purchasing Co-ordination	Internal Integration	External Integration	Value Chain Integration
2005							

2.8.4 Level of Work Integration

At the most basic level, Purchasing is seen as providing a 'buying service within the firm, placing orders and ensuring the delivery of externally sourced products and services' (Freeman & Cavinato 1990, p.9). In terms of performance measures for the function, this usually means negative economics, buying the same items at a lower price. This can sometimes cause problems with other functions that may have different, but related, objectives that put them in direct conflict with Purchasing. The result of this conflict can be an isolation of the various functions through adversarial or lack-of-trust relationships (Cammish & Keough 1991, p.27; van Weele 2002, p.110) resulting in the entrenchment of existing and sometimes long-held practices. To effect change under these conditions requires the creation of a new rule set that enables the move toward a desired future state (Macbeth 2002, p.739).

At the basic levels of maturity, Purchasing is very much a reactive function being directed by the explicitly stated needs of the organisation. This normally distils down to ensuring supply and minimising price. To do this the function doesn't tend to have any formal strategy, relying on opportunistic behaviour and overt power play with suppliers (Reck & long 1988, p.4; Keough 1993, p.44; van Weele 2002, p.109).

To move Purchasing toward a more advanced level of maturity, it is necessary for the function to develop its competency set. This tends to be represented in the models as a 'change in behaviour and becomes a precondition for further evolutionary development' (Murray 2004, p.W-603). Given the new roles that Purchasing engages in, such as new product development and business performance improvement, the competency set not only needs to develop to higher levels of expertise, but also to include a wider portfolio.

To facilitate new ways of working, cross-functional or multi-disciplinary teams are introduced to pool expertise and resources but also to align objectives. Despite these attempts to integrate the function into the business, territorial

issues can still remain. The increasing importance of the function can be seen as a threat and attempts to halt long-held unofficial practices such as 'backdoor buying' simply serve to enflame a potentially tense situation (Freeman & Cavinato 1990, p.9).

At the most mature end of the content models the emphasis tends to be on multi-lateral teams engaged in problem solving that focuses on reducing the total system cost (van Weele 2002, p.111). Purchasing performs the role of a supply market expert, being able to recommend sourcing strategies relating to business, marketing and product and/or process management (Freeman & Cavinato 1990, p.9). As a result of this role diversification, purchasing staff tend to have specific areas of expertise, which may involve them being moved into other functional areas of the business. This necessitates further training in order to develop wider business skills in addition to enhancing their existing purchasing skills (van Weele 2002, p.111).

2.8.5 Level of Management Integration

In the early stages of development, the purchasing manager spends a great deal of time evaluating the business strategy and extracting the issues that are relevant to the purchasing function. The purchasing manager then translates these issues into meaningful terms that individuals within the function can understand and engage with. Over time, this process may develop to include the evaluation of future trends that may have an impact on the performance of the function, but in the early phases it is purely reactionary (Reck & Long 1988, p.6).

As the function develops, its focus may extend to cover wider supply management issues and the role of the manager becomes one of positioning the function to maximise its contribution to the business. This requires the development of good all-round managerial skills at both a functional and multi-functional level (Freeman & Cavinato 1990, p.9) given the consequential increase in complexity. This focus on business contribution provides an opportunity to raise awareness amongst senior management regarding the potential of the function to add value. Often the result of this interest is the

inclusion of purchasing performance measures in the management information and reporting systems (Murray 2004, p.W-606).

Progression to the higher levels of maturity sees the purchasing manager enrolled as part of the coordinating team tasked with formulating and implementing the firm's competitive strategy based on their perceived supply market expertise (Reck & Long 1988, p.6). Ironically this tends to distance the manager from the core day-to-day activities and problems, which are becoming ever more complex. The ultimate goal of the manager becomes one of optimising the efficiency and effectiveness of the purchasing process with a strong focus on end-customer service. At this point, the purchasing strategy becomes part of a wider amorphous business strategy being driven and supported by the business as a whole (van Weele 2002, p.113).

2.8.6 Level of Strategic Alignment

As Purchasing moves toward a more strategic focus, the emphasis on price reduction and simple efficiency measures becomes suboptimal in assessing its true contribution. Decisions tend to be based on wider cost performance criteria and take into consideration the potential impact on other functions and the overall competitiveness of the business (Reck & Long 1988, p.6). This is partly enabled by the integration of purchasing plans with those of other functions, led by a cohesive senior management team. In some cases, other guiding factors are used, such as the fit to the product life cycle or the position within the economic business cycle (Freeman & Cavinato 1990, p.9).

Maturation of Purchasing increases the potential for the functional strategy to become integrated within the business strategy, rather than simply a passive subset of it. Performance measurement then shifts from discrete efficiency and effectiveness measures toward a broader assessment of the relative contribution to the competitive success of the business as a whole (Barry *et al* 1996, p.38). This assessment also forms the foundation for the allocation of resources and is therefore critical for the ongoing development of the function. Paradoxically, this extensive integration changes the 'traditional' view of Purchasing, blurring its boundaries as its activities are dispersed into the parts

of the business where they can be most effective. At this point, the focus of the strategy tends to migrate to a wider supply chain context, outsourcing of non-core activities becomes routine and close cooperation is encouraged with supply partners who provide critical competences (van Weele 2002, p.112).

2.8.7 Level of Strategy Formulation

At lower levels of maturity, the business tends to formulate strategy based on internal issues. Although Purchasing is perceived as an 'outward' facing function, it can contribute through the coordination of external sourcing synergies to enable leverage buying. As this becomes successful the need, and desire, to communicate more and develop new competences increases to the point where cooperation becomes a more natural state of existence within the firm. This requires Purchasing to develop a unique value-adding competence not found in other parts of the firm to maintain, or grow, its status relative to its functional peers (van Weele 2002, p.111).

The role of the purchasing manager in developing strategy at the lower levels of maturity can be characterised as largely impotent. The role is very much one of taking existing strategy and developing the purchasing plan from it. As the level of maturity grows, the manager's role becomes one of contributing to its creation as a member of the management team, ultimately evolving into a major contributor of supply market intelligence and business improvement ideas (Reck & Long 1988, p.6).

2.8.8 Purchasing's Status in the Firm

In the initial stages of purchasing strategy development, Purchasing is often characterised as a service or support to other functions (Monczka *et al* 2002, p.188; Cammish & Keough 1991, p.27) and therefore its status is perceived to be low.

Status improves as a consequence of professionalising and can often be regressive in organisational terms as managers attempt to gain control of external spend by creating autonomous empires. The reality is that this process is being used to organise the company's buying processes, gain

control over spend, and implement some form of coordination across the business (Monczka *et al* 2002, p.189; Cammish & Keough 1991, p.27; van Weele 2002, p.111). Once this transition is complete, some transactional activities are returned to the business unit level (Cammish & Keough 1991, p.27). From an organisational perspective, this requires a higher level of process-orientation, being centre-led but locally executed through the implementation and adoption of integrated business processes (van Weele 2002, p.111).

Although the function may have reduced in size as a result of the above changes it will have attained a higher level of perceived status through its closer links with other functions and its ability to add key expert knowledge (Barry *et al* 1996, p.38; Freeman & Cavinato 1990, p.9). This expertise tends to manifest itself in a broader range of responsibilities covering both purchasing and supply at both an operational and strategic level including, for example, the outsourcing of non-core activities (Freeman & Cavinato 1990, p.9). This acknowledges the significant advantage to be gained by the business when adopting a total cost (strategic) focus rather than price (operational) focus (Keough 1993, p.44).

Performance assessment still covers the fundamental efficiency measures found in the 'basic' purchasing functions, but these have expanded to cover some effectiveness measures such as (internal) customer satisfaction and compliance to contractual obligations (on both sides) (Murray 2004, p.W-605).

As Purchasing reaches the higher levels of status within the organisation, it starts to be perceived as an equal partner in developing and implementing the competitive strategy (Freeman & Cavinato 1990, p.9; Monczka *et al* 2002, p.190). In none of the literature is there any evidence that Purchasing should attempt to usurp power from others, the intention being that influence should reside where the core competence exists. For Purchasing this means a strong external supplier and customer focus (Monczka *et al* 2002, p.189). Facilitation of this process requires both non-purchasing and purchasing staff to develop their understanding of each other so that decisions are made with full

recognition of their impact on other areas of the business (Reck & Long 1988, p.6). As mentioned previously, this requires an ongoing development of the competency set so that principles such as total-cost-of-ownership, strategic supply management, business management and leadership can be used effectively within the organisational context (van Weele 2002, p.112).

2.8.9 Purchasing's Approach to Work

In its simplest form, purchasing executes rudimentary purchasing practices that have remained unchanged for extended periods (Freeman & Cavinato 1990, p.9). This stagnation is often compounded by stretched resources that allow the staff to perform their basic role, but nothing more (Barry *et al* 1996, p.37). The consequence of this benign environment is a passive approach with 'non-routine' activities only being acted upon following instructions from higher management or complaints from internal customers when their requirements are not met (Monczka *et al* 2002, p.188; van Weele 2002, p.109). If the measure of success is the efficiency of order processing (Freeman & Cavinato 1990, p.9) and negative price variance (van Weele 2002, p.110), then it is easy to see that the motivation to do more will be sadly lacking.

From the supplier perspective, the approach becomes one of routinely conducting 'win-lose' style negotiations. This is a direct result of the purchasing staff having a limited competence portfolio of aggressive negotiations and hands-on order management/expediting (van Weele 2002, p.110; Keough 1993, p.44).

The development of new skills leads to the introduction of new techniques and ways of working. This process of constant updating is an important factor in enabling Purchasing to at least maintain parity with its business competitors (Reck & Long 1988, p.4). As the level of value-adding functionality increases, senior management become more aware of the potential for Purchasing to enhance the competitive position of the business. This results in resources being released to enable further development (Barry *et al* 1996, p.37) and reveres the cycle of stagnation within the function. The new proactive role that

can result includes supporting strategic objectives aimed at increasing the organisation's competitive position. This migrates the manager's role to one of supply market business expert, acting as a credible resource for the rest of the firm to use when sourcing externally (Reck & Long 1988, p.6). This recalibration places Purchasing in an ideal position to coordinate the insourcing and outsourcing of core and non-core competences (Monczka *et al* 2002, p.189) placing it at the heart of the strategic organisation. This naturally breaks down the barriers between the customer and its supplier organisations in a way that merges discrete organisational entities into a cohesive system aimed at optimising the total system cost (Cammish & Keough 1991, p.27; Monczka *et al* 2002, p.189). This requires the need for a shared vision that is common to all partners and the development of a culture that is entrepreneurial, with different groups using their specific expertise to solve problems and improve sub-optimal processes. To enable this process, information systems need to extend beyond organisational boundaries to include as many groups as possible across the supply network (van Weele 2002, p.113). The logical role for Purchasing thus becomes one of coordinating and networking these different groups and individuals to the best advantage of the whole system.

2.8.10 Relationships with Suppliers

At the lower levels of maturity, the primary role of Purchasing is one of ensuring the supply of goods and services for the business. Coupled with the lack of skills and competence, this usually results in suppliers being kept at arm's-length, being viewed with suspicion and treated as adversaries (Monczka *et al* 2002, p.188; Veludo *et al* 2006, p.199).

Even after the function has developed to a more competent level of engagement that can manage costs and negotiate credibly with suppliers, it is still common for the underlying approach to remain adversarial (van Weele 2002, p.109). This tends to manifest itself in the continuing of opportunistic behaviour coupled with the 'disciplining' of suppliers (Cammish & Keough 1991, p.27) and a 'take all' policy as suppliers begin to propose savings ideas (Wagner *et al* 2002, p.260).

As the needs of the organisation increase beyond price, the demands move toward more holistic and equitable customer-supplier performance standards. The practical realisation of this need is mostly instigated by the customer through activities such as supplier capability development and the adoption of 'systems thinking' approaches that encompass the entire supply chain (Monczka *et al* 2002, p.190; Murray 2004, p.W-606). This move begins the evolution toward a partnership based approach. Before it can do this, however, it needs to be able to coordinate effectively with the other functions within its own business. These relationships normally form around key commodities and products and manifest themselves in terms of specific internal customer-supplier partnership relationships across functions (Barry *et al* 1996, p.37). As these internal partnerships develop, they begin to include external suppliers, facilitated by 'a move from confrontational to partnership sourcing' (van Weele 2002, p.111). The focus at this point becomes one of involving supplier partners in the relevant internal processes on an as needed basis (Wagner *et al* 2002, p.262), rather than simply buying from the cheapest source at the time (van Weele 2002, p.112). As the delineation between customer and supplier processes becomes 'blurred' it is common for the supplier to adopt or mirror many of the traditional in-house procurement functions when dealing with their own suppliers (Barry *et al* 1996, p.38). In the same way, purchasing as a process is no longer performed within the function. Instead, purchasing staff become facilitators of the relationships between different individuals and groups required to make the extended organisation work (Freeman & Cavinato 1990, p.9).

The measurement of performance shifts at this point away from the discrete measurement of efficiency and effectiveness, toward a more holistic view of what delivers value to the end customer. This refocusing is also promoted within the supplier network to encourage both a shift in working practices and a focus on common objectives (van Weele 2002, p.112).

2.8.11 Progression through the Models

Most authors assume a stage-wise or step-wise development of purchasing and supply management within organisations (van Weele 2002, p.108). Reck

& Long (1988, p.3) imply a journey through progressive stages of maturity. Although they qualify this statement by stating that Purchasing can move both up and down, depending on the amount of stress being experienced. Given that it is reasonable to argue that stress is a result of the issues influencing the function, then progression through the model can be argued to be contextual on circumstances and, as a result, contingent.

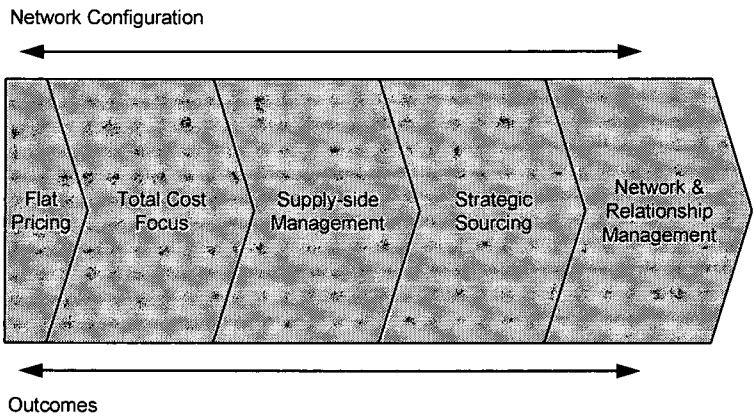


Figure 12: The transition model (Cousins 2000, *in* Hines *et al* 2000, p.195)

Understanding where the function is on the continuum is seen as important not only from the point of view of assessing the current position, but also from the need to formulate the plan of action to reach the next stage. As Cousins (2000, *in* Hines *et al* 2000, p.196) points out, when referring to his own model (shown in Figure 12), 'Each of these phases has a given output, and a set of characteristics that defines it.' This implies that the level of complexity is increased further as both internal and external issues interact with each other. Therefore, not only must Purchasing be capable and willing to move to the next level of maturity, the organisation it serves must also be able to accommodate the wider changes that will need to take place. Long-held attitudes and ways of working take a long time to change and simply forcing the issue often proves counter-productive (Reck & Long 1988, p.8; Cammish & Keough 1991, p.27). The consequences of this seem to relegate the mostly technical content of the purchasing change models in favour of the more humanistic approaches described in the Organisational Development literature.

Given that the level of maturity exhibited by an organisation is contingent on its purpose and environment (both internal and external), it is possible that different elements (people, groups, processes and relationships) could display different levels of maturity simultaneously. That is, the development of the purchasing function shouldn't be considered as homogenous. Instead, each element exists at its own natural level of maturity (Reck & Long 1988, p.8). For example, world-class levels of planning, supplier analysis, expediting or engineering liaison may not be necessary for office supplies, but they may be critical to the success of strategic business projects. Also, as Freeman and Cavinato (1990, p.10) observe, 'the structure of the organisation in which Purchasing resides can influence the level of the department's development. Multi-tiered purchasing organisations often contain mixes of the four phases.' Despite this, the change models are generic in nature and tend to focus on the functional level, rather than the task level.

van Weele (2002, p.114) does sound a note of caution, commenting that all of the development models should be used carefully. He argues that when reading the literature uncritically it appears that the models should be followed almost slavishly in a 'stage-wise' fashion. His concern with this approach is that not all stages may be relevant for all situations, which appears to echo the concern over their generic nature.

2.8.12 Implementation Content: Summary

The issues facing purchasing organisations wishing to engage in development activities are diverse and context specific. This seems to marginalise the value of content models. However, they provide a useful resource in terms of defining generic improvement roadmaps.

The models that currently exist tend to focus on the more technical characteristics of change outcomes, describing different aspects of the function and its relationship with the firm and its suppliers. Very little focused literature exists on the activities required to enable the successful implementation of these characteristics. In some ways this is reasonable as implementation activities tend to be context, process and content specific.

Progression form one state of maturity to the next is generally seen as a continuum along which the organisation travels. Warning is given however that progress may be both up and down the maturity scale as environmental issues influence the development of the changes.

Due to the generic nature of the models, multiple levels of maturity can be perceived to exist within a single organisation. This may be the result of multiple sites, fragmented organisational structures or lifecycle stages across business lines. The literature does seem to imply that the models relate to a holistic view of Purchasing rather than the fragmented view that is a closer perception of reality. Ultimately, the use of the models as a roadmap and their use to assess progress is contingent on the contextual characteristics of the situation being considered. It is this comparison of how the real world is modelled against the holistic representations that highlight deviations that then lead to the initiation of change activities framed within the situational characteristics prevalent at the time.

2.9 Refinement of the Implementation framework

The literature has so far drawn on the relevant fields of organisational development with regard to change management. The consequence of this has been to provide awareness and insight into the critical issues that may affect the implementation activities associated with change programmes. This review of 'parallel' literature has resulted from a lack of focused literature on change within the purchasing field.

The refinement of the model focuses on the development of core themes, generated from the broader literature that describes each of the four main aspects that were extracted from the Tzortzopoulos *et al* (2005) model shown in Figure 13.

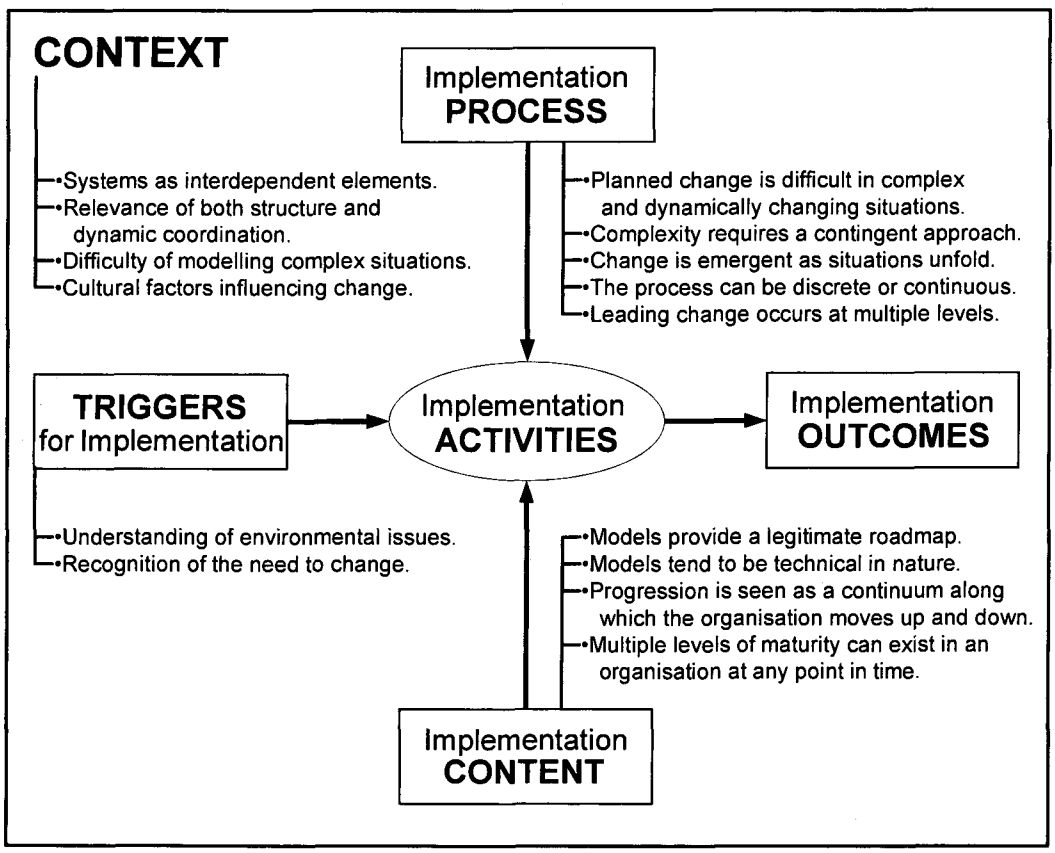


Figure 13: Refined framework of the implementation process

The detail behind this model is captured in each of the summaries from the previous four sections.

In addition to the elements of context, content and process, Pettigrew *et al* (2001, p.698) stress the importance of taking a systems perspective with respect to their interrelationship. Figure 14 summarises the main learning points generated from the generic change management literature.

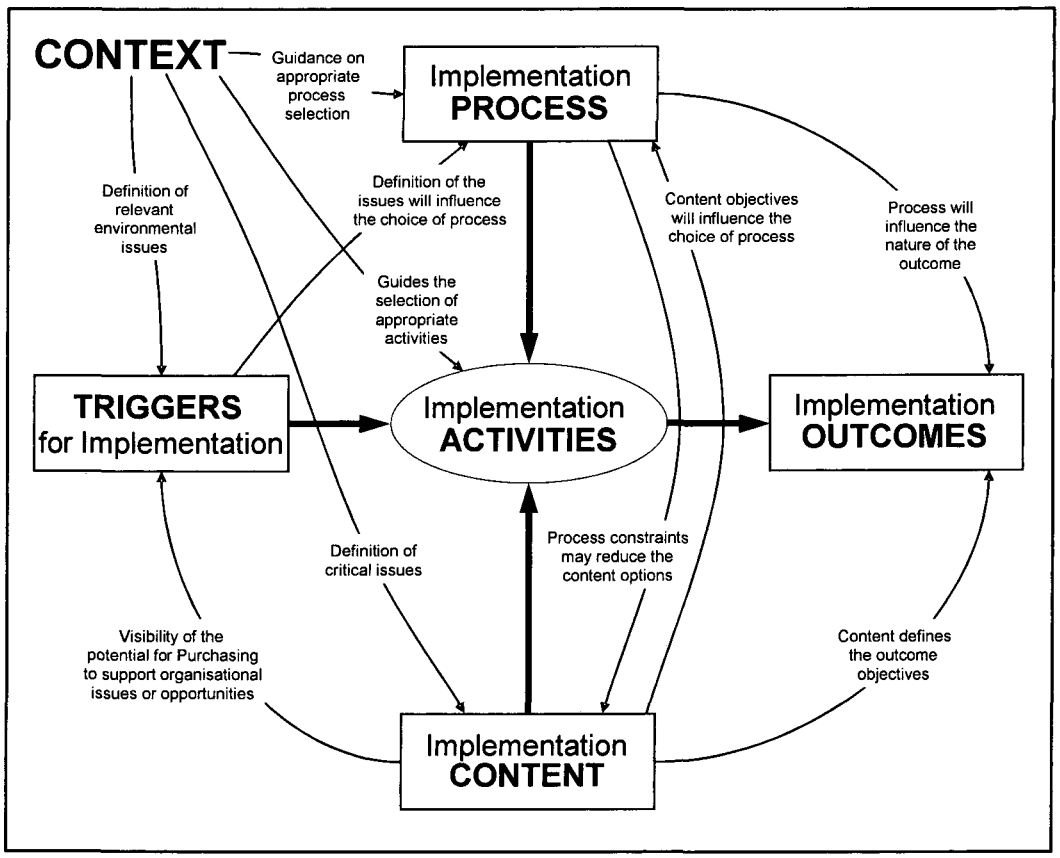


Figure 14: Interdependencies in the implementation framework

Of particular note is the foundational role of context in guiding and defining other elements of the change intervention. This is not a particularly surprising revelation, but does highlight the importance of aligning activities with the specific needs of the micro and macro-environment being targeted.

The triggers present an interesting nuance. Not only do they require an understanding of the current situation, they also require visibility of the benefits to be achieved by overcoming the hiatus caused by inertia.

Process and content, while being driven by context, also appear to share a close relationship in terms of both influencing and being influenced. This effectively forms a triangular relationship between the three elements in an attempt to create viable and appropriate responses to the current situation and its developmental needs. In addition, process and content clearly influence the outcome in terms of the objectives that will be set and the nature of the outcome as a consequence of the implementation approach.

Implementation activities sit in the centre of the model and become the focus for the elements that surround it. These activities are the daily ongoing adjustments and accommodations that make the change process fit within its environment. This makes the activities element highly contingent on its surroundings, which may explain its discussion within other areas of research rather than as an area in its own right.

2.9.1 Implementation Framework: Summary

Expanding the concept of relationships into the literature, it becomes apparent that a number of links exist between those different aspects of change reviewed. These are shown in Table 9.

Development level of Purchasing	Low Maturity	High Maturity
Scale	Small	Large
Situation	Simple	Complex
Intervention	Continuous	Discrete
Preparation	Planned	Unplanned
Engagement	Predictable	Contingent

Table 9: Relationship between purchasing maturity and aspects of change

From the content models it is apparent that initial activities are small scale and conducted within simple intra-functional situations. This profile changes dramatically as both the firm and its suppliers becoming actively involved in large-scale and complex development activities. Due to the nature of the small-scale changes, a continuous stream of developments can be implemented without causing major disruption to the daily functioning of Purchasing due to their relatively simple nature. As the firm and suppliers become involved, the more complex nature of change requires the adoption of discrete change interventions that cause a shift in focus and activity followed by a period of standardisation. The complexity of these situations often results in a low level of detailed planning. That is, they can be argued to be unplanned. Instead, strategies are developed that guide a process of contingent implementation as unforeseen circumstances across the complexity of multiple autonomous entities are encountered and dealt with

This last discussion serves as a useful object lesson in the contingent nature of the different change elements. In the discussion regarding the relationships between the change elements it was the context that was seen as guiding the debate. In this previous discussion it was the content that was seen as pivotal in explaining the relationships between the different areas of literature reviewed.

2.10 The Purchasing Change Management Literature

2.10.1 Introduction

This section explores the purchasing specific change management literature and reflects upon it in the context of the generic change literature. The purpose of this exercise is to identify the main aspects of change implementation using the models developed in Figures 13 and 14 and the form and extent to which they appear within the purchasing literature. This will enable the development of the Research Questions and define the addition to knowledge that will be created.

2.10.2 Definition of Purchasing

Traditional definitions of purchasing emphasise the largely passive view of ensuring supply at minimum perceived price (Aljian 1984, p.3; Dillforce 1986, p.3; Steele & Court 1996, p.2). The Author's recent collaborative work with Professor Brian Wilson, one of the original developers of Soft Systems Methodology, resulted in the development of the following definition in which Purchasing is viewed as an interface function:

> 'An organisation-owned system, operated by suitably skilled personnel, to develop appropriate relationships within and external to the organisation together with the associated procedures, so that products and services are obtained to satisfy internal utilisation requirements with respect to quality, quantity, timeliness and cost by making use of developments in "Best Practice", relevant technology and previous purchasing history and learning, but acting within financial and other organisation-imposed constraints.'

This appears to echo the evolution in the perception of Purchasing over the last 20 years from a clerical (overhead) function into a major strategic contributor to the firm (Gadde & Håkansson, *ed.* Ford 2002, p.426).

The remainder of Section 2.10 investigates the literature relating to the purchasing content models. The models generated in Figure 13 and 14 are used as a frame of reference for their review.

2.10.3 The Trigger

Understanding the environment within which Purchasing operates for the purpose of initiating change is more than simply evaluating the business context and deciding that there is a problem. The definition of the problem needs to be translated into purchasing and supply management terms so that a decision can be made as to what development of the function might yield an improvement to the situation and whether there is a viable business case for proceeding (Carter *et al* 1998, p.13; Cavinato 2001, p.1). The aim of this is to break the inertial forces by creating a critical mass within the organisation that recognises the need for change. Reck & Long (1988, p.5) conclude that these inertial forces tend to either be the result of long periods of development neglect or may be the result of ignorance as to the contribution that Purchasing can deliver to the firm.

Both the contextual and inertial issues will have an impact on the way that the proposals are developed and the approach taken to their implementation. Therefore, although the trigger may be considered as a small aspect of the change programme, it can be highly influential. Despite this, the purchasing literature seems to stop short of providing insight into the mechanisms that will support this triggering process. Instead, it simply comments on its importance and acknowledges that it needs to be effectively managed (Cousins & Crone, 2003). The triggering process is clearly contextually sensitive and this makes it important in terms of providing insight into the factors that will support a successful deployment. This could be in the form of a sequential 'Kotter' style model (1986) following critical steps/issues or it could be in terms of an amorphous framework of critical elements that need to be considered, such as

that presented in Figure 9. Neither of these appears to exist in the purchasing literature.

2.10.4 Context

Purchasing and supply management has been positioned as behind its peer functions in terms of maturity and capability (Gadde & Håkansson, *ed.* Ford 2002, p.426). Therefore, for it to be relevant in a constantly changing environment, it must adapt and develop its own ways of working to fit with those of its peers (Reck & Long 1988, p.3; Syson 1989, p.18; Freeman & Cavinato 1990, p.6; Chadwick & Rajagopal 1995, p.15; Fung 1999, p.362; Cousins, *in* Hines *et al* 2000, p.194). Conversely, problems can also occur if the purchasing function develops too quickly and leaves the business behind thus creating a disconnect within the system. Also, if people are asked to change but the mechanics of the business system remain the same then old behaviour is reinforced and new behaviour goes unrewarded resulting in entropy and a loss of the investment made in the changes (Pasmore 1994, p.11). What is important for successful change management is that the people, the business system, and the purchasing function that serves it, develop in sympathy with each other. Within the wider system the scope of the concept should expand to include suppliers and customers as parts of the extended enterprise (Walton 1986, p.141; Deming 1993, p.53).

This argument is in stark contrast to the perceived wisdom of treating suppliers as adversaries (Porter 1980, p.108) as it may be seen to lessen the buyer's bargaining power to achieve lowest price. Although the majority of literature now advocates a partnership approach (Lamming 1993; Cousins & Crone 2003, p.1471) many of the content models position a price focus as the first stage of purchasing maturity, leading on to more relational modes during later stages. Therefore, from a development prospective the literature appears to advocate a detrimental practice as the starting point of purchasing improvement (Reck & Long 1988, p.3). In some ways this is reinforced by the historical perspective that also identifies price as the base-line of purchasing maturity and relationships (Lamming 1993). From the customer's perspective, given the ever increasing rate of innovation change, Hamel (2000, p.296)

argues that there is simply no way to stay ahead of the innovation curve, unless your suppliers are your co-developers. From this perspective, Porter's advice is not only flawed, but potentially damaging to the long-term viability of businesses. This does not negate the need to consider the financial implications of inter-firm dealing, but it does require the need to intellectualise it in terms of thinking about the total cost to the system (Deming 1986, p.23). This point is reflected in the content models once the initial stages are passed. Although the emphasis on price is seen as detrimental it can be rationalised from the perspective of a function that already focuses on price, albeit badly. The logic thus becomes professionalise the incumbent operating paradigm and then move forward to more rewarding practices.

Although the majority of the focus in the purchasing literature emphasises the role of Purchasing and its suppliers, a whole-systems view advocates the importance of the final customer as the key determinant in defining the aim of the system (Rodin 1999, p.33). This increases the need for high levels of interdependence across the extended enterprise and causes a consequential increase in the complexity involved in understanding and managing it. This, in turn, suggests that the system will be more successful if the 'voice of the customer' directs its actions, but that achieving this state becomes increasingly difficult.

For Purchasing to be successful in its change programmes it appears that a broad contextual view should be taken that considers many issues, including those that ensure a strong connecting to the wider business system (Freeman & Cavinato 1990, p.10). This implies, to some degree, that it is the whole system that must share some level of responsibility for the development of Purchasing, rather than just the function itself (Deming 1993, p.53; Capra 1996, p.42). However, Reck & Long (1988, p.3) appear to take the opposite view, arguing that it is Purchasing's role to develop and manage its implementation programmes.

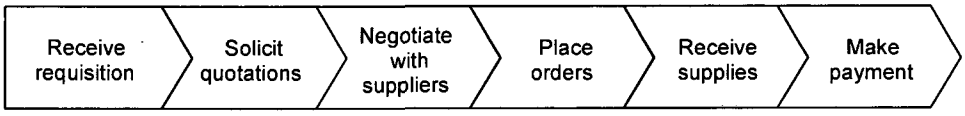


Figure 15: The purchasing process chain
(Lysons & Gillingham 2003, p.4)

In the context of Figure 15, it may appear quite simple to instigate change as all of the steps listed are executed within the confines of the functional boundary and can therefore be changed through autonomous actions directed by the purchasing management team. If the changes are successful then customers and suppliers only see the change in the performance of the function, if it is noticed at all. The changes to the actual processes and the ways in which they are executed remain 'hidden' and largely irrelevant. Reck & Long (1988, p.4) may be correct when the implementation objectives are intra-functional and simple to achieve, but the purchasing content models clearly indicate both intra and inter-functional and inter-organisational themes as higher levels of maturity are reached (Keough, 1993 p.44; Cousins 2000, p.196; van Weele 2002). This demonstrates a trap that purchasing functions can fall into when they believe that they can improve autonomously in that change may be possible, but only up to a point. Significant developments tend to require cooperation beyond the boundaries of the function in order to ensure a successful and sustainable implementation. Both Reck & Long (1988) and Lysons & Gillingham (2003) appear to ignore this in their description of the purchasing process chain and how it is developed.

In Figure 16 the range covered by the purchasing function is expanded by van Weele to include activities (determining specification; follow-up and evaluation) that require cross-functional cooperation. This, by implication, requires a deeper integration with other parts of the wider business. Although it is of note that van Weele omits the external customer from his model.

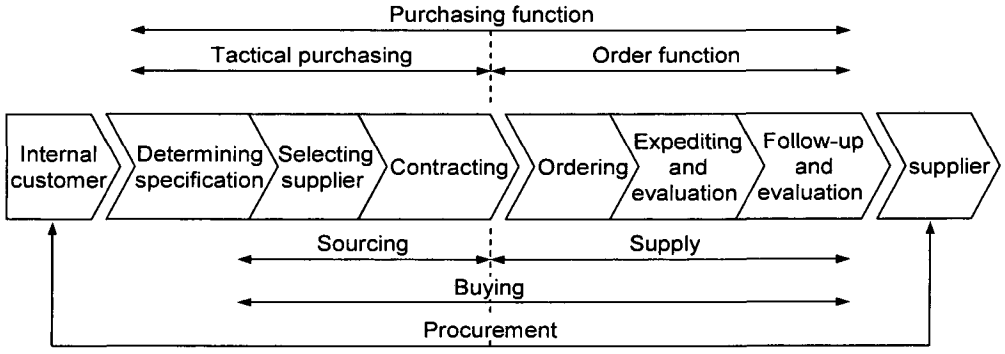


Figure 16; Purchasing process model and some related concepts (van Weele 2002, p.15)

This model requires acceptance from other players that change is both necessary and good, and that Purchasing is capable of either delivering or leading the changes. When Purchasing does not have authority over other functions, as is often the case, the problem becomes one of how to ensure change without being seen to try to overtly impose it. This is particularly pertinent given the often low perception of Purchasing within the organisation.

The poor perception of Purchasing can be argued to exist not just as an indication of its apparent low competence but also as a result of the relative visibility or perceived importance of peer functions. For example, in a highly technical business, Engineering may be the main source of power and influence. This does not mean that Purchasing does not have a wider and more proactive role to play; it simply means that it will be more difficult to engage the business in agreeing to its development (Syson 1989, p.20). Alternatively, Purchasing may be perceived as low in status because of its lack of relevant competence and demonstrated contribution (Cammish & Keough 1991, p.27). This often requires the purchasing management to 'educate' the senior management team in the potential of the function and then for the two groups to work together to overcome the obstacles that have grown up based on 'traditions, attitudes, and outdated behaviour patterns' (Reck & Long 1988, p.8).

Contextual issues are based on highly complex sets of interdependent factors

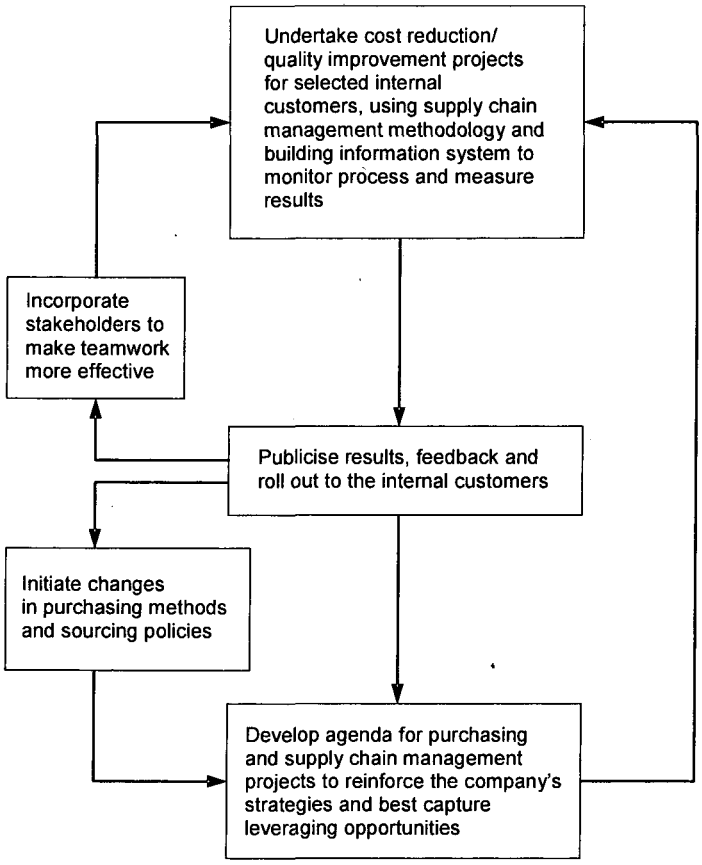
that need to be understood and organised in terms of their relative influence. It is almost impossible to be able to model the totality of issues confronting an organisation and therefore some degree of expertise is required to be able to identify and codify the salient points (as they exist at a given point in time). Many of these issues may remain 'hidden' as they reflect cultural and deeply embedded beliefs concerning the potential of Purchasing to do anything other than simply place orders. The responsibility for breaking out of this mindset has to remain with Purchasing, but the way in which it is achieved needs to consider and involve the 'parent' system and its influential actors. The consequences of this approach are the development of appropriate mechanisms for interpretation, communication and engagement across the organisation.

The purchasing literature demonstrates recognition of the contextual issues and their relevance to the development of the function. This includes acknowledgement of the need to change within an externally changing environment. However, the literature tends to deal with these issues from a descriptive perspective with only minor references to how these issues might be addressed. Indeed, van Weele (2002, p.113) appears to support this view stressing the need to identify and understand the change strategies that underpin development processes within Purchasing.

2.10.5 Process

Unless the triggering process is successful, it can be argued that the existing purchasing organisation is one that the wider organisation is willing to passively accept. Attempting to change this without preparation or in isolation, therefore, may well result in a backlash from the organisation, not only because they don't see the need, but also because of the potential for disruption to the existing day-to-day support (Cammish & Keough 1991, p.27). Given this need to maintain a level of service to the business, it appears that while the preference may be for a planned implementation the reality is often a 'semi-structured and environmentally contingent approach' (Day & Atkinson 2004, p.4). The range of operationally oriented activities that need to be managed within organisations is significant, resulting in a complex set of

interdependencies. Fung (1999, p.366) proposes an incremental process for developing purchasing with projects being used as the main vehicle for driving improvements. His theory proposes that stepped developments can be implemented that yield both immediate tangible benefits and make progress toward longer-term strategic objectives. This process is shown in Figure 17.



Note: Supply chain management methodology includes a focus on end products and critical components, as well as total cost appraisal (product and process costs incurred in internal and external supply chain members are included.

Figure 17: A schematic for implementing purchasing and supply chain management (Fung 1999, p.366)

For this type of 'contingent incremental' approach to be successful, careful alignment of current practices, future objectives and the processes for achieving them needs to take place. This accommodates the legacy of old procedures, methods, and personnel practices while moving Purchasing to a position where they can be discarded as they become obsolete (Freeman & Cavinato 1990, p.10). Cousins (2000) sees this as a three stage process, as described in Table 10.

1	Assessment	The purchasing organisation should benchmark where it currently sees itself against the characteristics and criteria listed within the model
2	Strategy Development	Purchasing should consider where it wants to be and examine the gaps in its approach vis-à-vis what the model is telling them. They should then develop a strategy to take the function forward
3	Benchmarking	The final stage is to use the model to review current progress and see how the function is developing

Table 10: Stages of implementation of the transition model (Cousins, *in* Hines *et al* 2000, p.198)

Although this only portrays a three stage cycle, the comparison with the Shewhart Plan-Do-Study-Act Cycle (Deming 1993, p.132), shown in Figure 18, is quite clear with contingencies being programmed into the plan after each study/benchmarking phase.

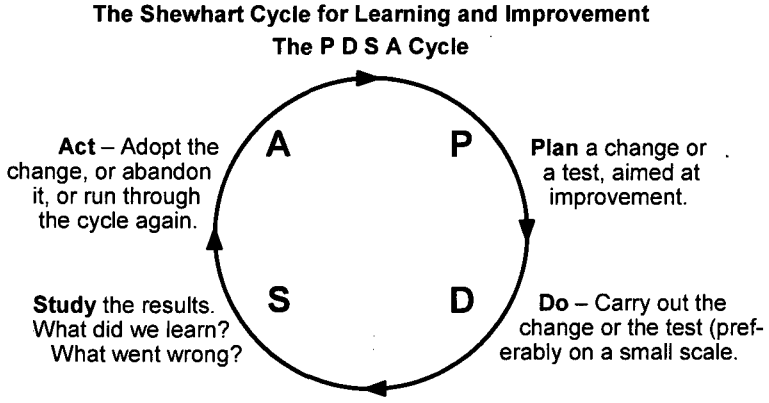


Figure 18: Shewhart's Plan-Do-Study-Act Cycle (Deming1993, p.132)

Cousins' model appears to portray a process of considered and well researched development relying on a detailed implementation roadmap that can be used to guide the process. This implies that Cousins sees the development process as containing elements of planned change in terms of the content roadmap, moderated by the environmental conditions and levels of ongoing progress. The Shewhart model describes a more intuitive approach focusing on an improvement need, testing ideas to see if they work, developing further enhancements to the plan as needed and then finally deciding whether the changes are worth investing in. This is more emergent in terms of the development of content and highly contingent on environmental

issues and the impact of theories that are tested on a temporary basis before full implementation or refinement. It can be argued that both models acknowledge the complex nature of change in that they both include reflective stages aimed at gauging the level of success achieved and identifying next steps based on perceived need. With both models it should be noted that a significant amount of process detail exists behind the figures presented.

Whichever approach is taken, the change leader needs to be able to understand and manage a number of interrelated contextual, content and process factors in order to successfully implement the programme. Figure 19, gives a useful insight into what some of these factors may be.

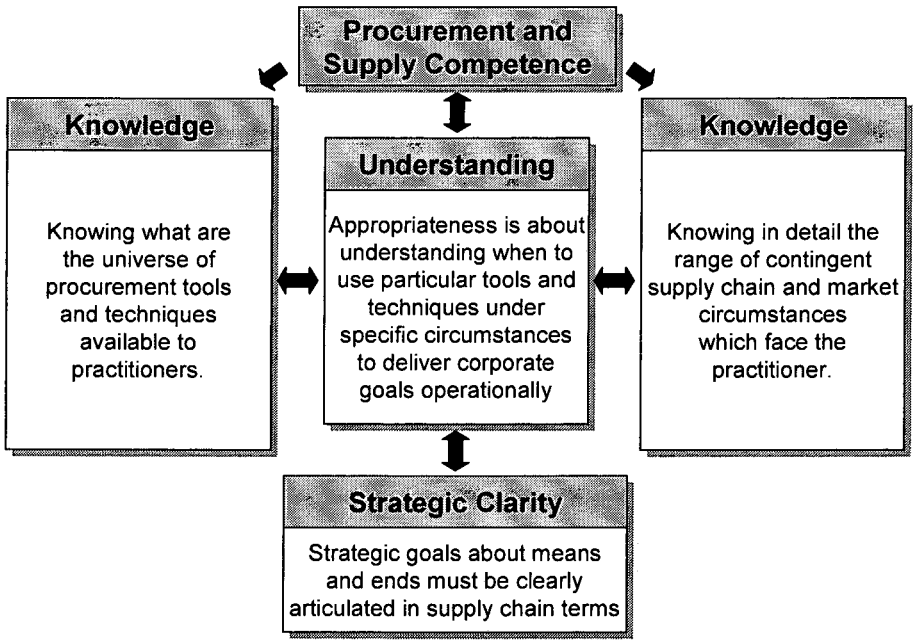


Figure 19: Procurement and supply competence
(Cox, *in* Lamming & Cox 1999, p.16)

It is clear that both internal and external factors need to be considered and that as Purchasing makes progress, achieving an appropriate balance between the different factors is likely to become more difficult. The initial characteristics of purchasing development within the content models tend to focus on functional issues (within the department). These then expand to include the organisation being served and then evolve further to include the additional complexity of influences from autonomous supplier businesses and

networks. Taking this external focus further, Dobni *et al* (2001, p.401) argue that 'traditional implementation approaches [have] failed to provide a sufficient operational interface between the environment and the organisation. These approaches have not adequately focused on intangibles such as the people and processes necessary to develop ongoing sustainable implementation contexts'. Whereas this may not be a particular concern at the lower levels of maturity it may become a critical disabling factor as the higher and more integrated levels of maturity are reached. Monczka, *et al* (2002, p.191) see this as a particularly acute problem given the perceived lack of appropriate resources, skills and capabilities. Situations where the organisation is not capable of implementing the desired changes can lead to significant resistance as people begin to feel unable to cope (O'Toole 1996, p.13). Syson (1989, p.21) saw this as a particular issue given the potential numbers of purchasing staff who had 'plateaued' in career terms due to a historical neglect in purchasing development training; a situation that can be argued to still be the case today. The role of the change leader becomes one of not only providing direction but also instruction in support of achievement of the developmental objectives (Deming 1986, p.69; Oakland 1993, p.408). Direction clearly comes from the content models, instruction on how to implement them is available in generic terms from the likes of Kotter (1996) and purchasing-specific form from the likes of Fung (1999) and Cousins (2000). The purchasing perspective is a critical area of importance, given the sometimes unique position that Purchasing has as a primary interface between the internal and external organisations ((Axelsson & Håkansson, *in* Ford 1997, p.318). Although work has started in this knowledge area, the lack of mature research can still be argued to be an impediment to the future development of purchasing.

2.10.6 Content

The content aspects of the refined implementation framework were generated from the purchasing specific literature itself and, therefore, are not repeated here.

2.10.7 Summary

Change implementation can be seen to be mainly influenced by context, processes and content. Within each of these areas there are a number of factors that need to be considered, cross-referenced and managed with respect to the whole change intervention. While generic change models exist as sources of useful knowledge, the particular role and position that Purchasing plays within the wider business system makes purchasing and supply management development programmes worthy of particular research.

Implementation activities constitute a particular aspect of change that has been demonstrated to be highly contingent. While some oblique references are made to implementation activities within the purchasing-specific literature, they are predominantly written from the perspective of other areas of purchasing knowledge, particularly content areas such as cost management, customer-supplier relationships, new product introduction and supplier development. The consequence of this is that a highly contingent issue has been dealt with from a particular set of related perspectives, but not as a subject in its own right. It is difficult to theorise as to whether this is an issue or not. Amalgamation of the literature available from the different perspectives may yield a consolidated view and thus provide new insight. However, it is argued here that specific research needs to be conducted to address the subject from a generic purchasing view point. This argument has already been supported by numerous other researchers.

2.11 Supplemental Literature Review

During the refinement of the framework model of change implementation it became apparent that a relationship exists between the maturity characteristics of the content models and the context issues that guide the implementation process.

This indicated a new perspective on the development of Purchasing that required further investigation. This perspective appears to link the content models within an organisational context, describing them in terms of their footprint or influence.

The Supplemental Review also develops the literature from a more dynamic point of view. The refinement of the change model used the literature in terms of discrete areas of knowledge and was therefore largely static in its portrayal of the salient issues. In contrast, this section of the review joins these different areas of knowledge together to form a continuum along which the development of Purchasing may move. The distinction here is that previous content models developed a predominantly technical description of this continuum; this review introduces the more humanistic aspects that have been demonstrated to be equally important, as described in Section 2.5.

Adopting this approach, an initial examination of the organisational development literature identified many of the characteristics found in other areas in the previous review. However, no single piece of research appeared to put them all together into a continuum. The following section investigates how this might manifest itself, focusing on the four areas of:

1. Functional development;
2. Organisational development;
3. Inter-firm relationships;
4. Inter-firm networking.

These areas will be used to structure the investigation. First however it is important to consider the context.

2.11.1 Purchasing's System-Wide Role

Within purchasing models there normally exists a clear distinction between the internal and the external relationships that the function must develop. As the maturity of the function increases, it appears that these relationships become more complex and diverse.

As the portfolio of purchasing activity expands so does its 'footprint' of influence. The traditional view of Purchasing describes it in terms of its involvement with suppliers. However, the ability to perform competently at the higher levels of purchasing maturity requires the function to integrate closely

within its own organisation, its suppliers and its customers (internal and external), as concluded for example by Reck and Long (1988). It is not realistic to assume that this can occur as a single development step. Taking a more evolutionary approach progressively expands the remit of Purchasing through a number of stages that integrate it with other business areas. This idea is developed in Figure 20, following work by Fawcett and Magnan (2002).

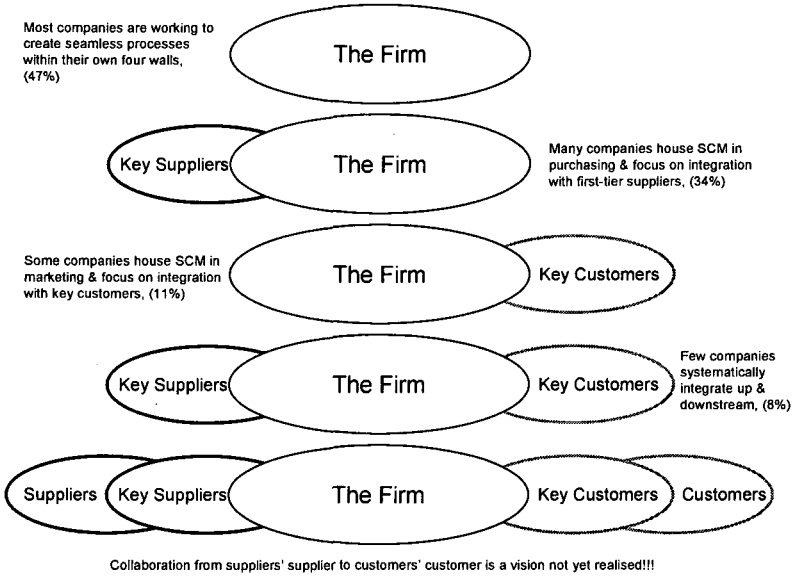


Figure 20: Different views of supply chain integration (Fawcett & Magnan 2002, p.354).

This model appears to take the view of integration as an architectural paradigm, based on individual organisational entities. However, the supporting literature clearly indicates the importance of the humanistic aspects as the means of consolidating the physical organisation. Klint & Sjøberg (2003, p.415) take a systemic perspective in their development of a strategic network model. This provides a clear frame of reference that can be used to review and contextualise the progression through an increasingly complex and diverse development programme. In Figure 21, Klint & Sjøberg (2003) demonstrate the necessity to evolve all aspects of the system as its structure changes. Although this may appear obvious, it is not explicitly stated in the purchasing content models and therefore cannot be assumed to be common knowledge.

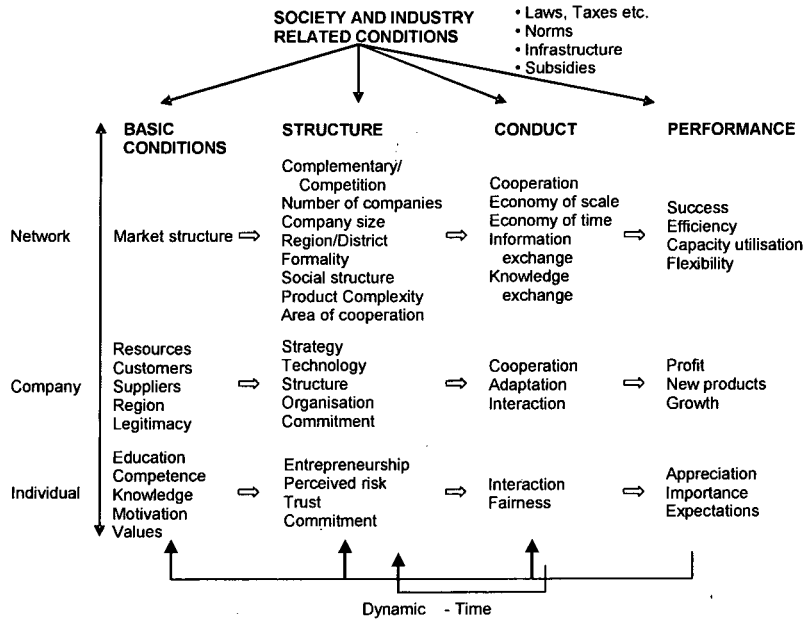


Figure 21: The structure-conduct model of strategic networks (Klint & Sjøberg 2003, p.414)

Although the above two models cover structure and context, the purchasing content models tend to emphasise activity-based characteristics. Given that the development proposal moves from an individual to a network perspective, there exists a need to develop processes as the vehicle for aligning the aggregated competences (Lockamy & McCormack 2004, p.272). This appears to be mirrored in the purchasing content models in terms of increasing levels of competence aligning closely with increasing levels of organisational complexity. As argued above, as Purchasing tends to have an existing operational role within the firm, which it must maintain while it develops, it is appropriate to view the improvement in terms of evolutionary steps aligned with both the capabilities of the function and the needs of the firm, and eventually with its network. Figure 22 demonstrates this idea from a process-based perspective.

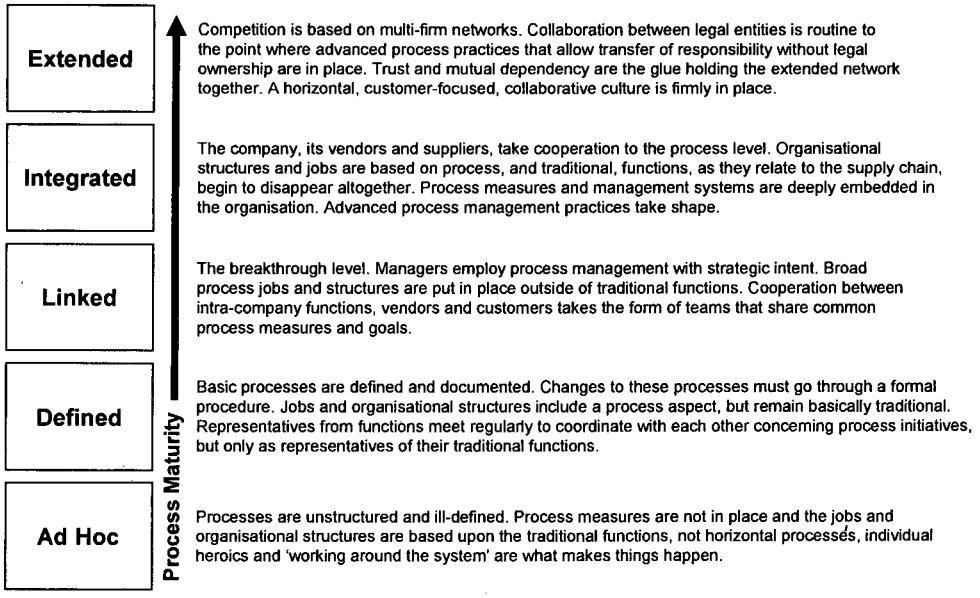


Figure 22: The business process-oriented maturity model
(Lockamy & McCormack 2004, p.275)

Not only does this model describe the core processes that form the basis of the firm's functionality, it also makes reference to the enabling processes that allow the firm to operate successfully in its current form and develop into its next evolutionary form (Winter 2003, p.991).

While taking a more dynamic view of organisation development, it is still apparent that context, process and content are important and interdependent variables. The above discussion has been taken from a deliberately generic basis. The following section develops the themes identified here and explores them in more detail from a purchasing perspective.

2.11.2 Functional Development

The tendency to react to problems, as opposed to managing their resolution, is reflected within the purchasing literature. This is manifested in the common characterisation of Purchasing as a tactical function and reinforced in the descriptions contained in the lower levels of the various content models. These have indicated that, historically, purchasing has been primarily focused on price (and its reduction), which is easy to measure and offers instant gratification in both the negotiation act and the outcome (Syson 1989, p.19).

This set of circumstances is compounded by the lack of management knowledge relating to the potential competitive advantages that purchasing can bring (Reck & Long 1988, p.5). Because of this situation, Buyers are often held in low esteem, their actions being viewed as having little impact on the long-term competitive success of their firms (Cammish & Keough 1991, p.29).

Given this state of affairs, it is important to understand the mechanisms and activities that might enable Purchasing to break out of this cycle of self-perpetuating mediocrity.

Changing the working environment requires more than simply an 'enlightened executive decision'. One of the problems appears to be that organisations attempt to develop the skills and knowledge of people in a way that orientates them toward what is already being done. That is, they focus on the short-term or immediate issues and use incumbent competences to develop solutions to these problems. This simply reinforces the status quo (Teece & Pisano 1994, p.553; Pedler *et al* 1996, p.141).

To break this cycle of inertia it is necessary for management within Purchasing to understand and develop its role within the firm. It has been suggested that one way of achieving this is to define its value proposition in terms of contribution to the strategic objectives of the firm (Webster 1991, p.327; Harland *et al* 2005, p.838). From a purchasing perspective, this forces managers in the function to assess the requisite skills and knowledge (competence) requirements to support the strategic objectives and then use this as a benchmark against the current level of competence leading to a gap analysis that can be used to strategically direct staff development (Reck & Long 1988, p.9; Giunipero 2000, p.5).

The strategic development of staff competence requires more than simply imparting technical skills to individuals. Given the previous arguments emphasising the importance of a more socially oriented perspective, people and conceptual skills need to attract a much higher prominence (Katz 1955, p.34; Evarts 1988, p.51; Guinipero 2000, p.9). An example of this spectrum of

competences is described in Table 11.

Competence	Description
Knowledge/ Cognitive	The possession of appropriate work-related knowledge and the ability to put this to effective use. The linkage of cognitive competence with knowledge emphasizes the importance of the latter part of the definition, i.e. the ability to apply knowledge in a variety of ways.
Functional	The ability to perform a range of work based tasks effectively to produce specific outcomes. This includes, and indeed requires, the possession of discrete skills but the emphasis is on putting these to use to achieve specific outcomes.
Personal or Behavioural	The ability to adopt appropriate, observable behaviours in work-related situations.
Values/Ethical	The possession of appropriate personal and professional values and the ability to make sound judgments based upon these in work-related situations.

Table 11: Classification of competence (Cheetham & Chivers 1996, p.24)

Given the dynamic nature of business the strategic objectives of the firm will change over time. This requires Purchasing to take a longer-term view acknowledging that, while new competences may be required now, they may become less important as the strategic direction and needs of the firm changes (Teece *et al* 1997, p.524). This requires an ongoing process of competence development.

Developing new competences is a necessary first step. However, it is their use that adds value to the business. Anything short of the useful application of competences, when viewed as resources, can only be considered as latent potential rather than added value. Many factors affect the contribution made by a competence and these can be measured, as described in Table 12.

1	The health of its resources; i.e. those things that enable the competence to be executed.
2	The appropriateness of its resources to the services required; i.e. the match between capability and need.
3	The co-ordination of the resources; i.e. their availability and use relative to the outputs generated.
4	The performance of sub-competences which act to develop co-ordination aspects or resource health and/or appropriateness; i.e. the alignment of different parts of the organisational system.
5	The priority given to the activity, particularly where shared resources are involved; i.e. the management of competences based on strategic priorities and needs.
6	How often the competence is exercised; i.e. as competences remain dormant expertise in their use declines and relevance to the business system becomes fragmented.

Table 12: Factors affecting the performance of competences (*adapted from* Mills, Platts & Bourne 2003, p.992)

The above table implies some level of system thinking in terms of considering multiple aspects of the organisation and their interdependence leading to an emphasis on not simply aligning with the strategy but also of assessing the day-to-day activities and their interplay (Smith 2005, p.8). This implies a cause and effect relationship between the development of purchasing competence and performance (Cousins, *in* Hines *et al* 2000, p.194). It also implies the need for some level of pre-existing competence or upgrading of staff in order to overcome the disabling impact of inertia (van Weele & Rozemeijer 1996, p.159; Cousins *et al* 2006, p.790).

2.11.3 Organisational Development

The early phases of the purchasing content models tend to focus on price as the primary driver of activities. This necessarily entails a combative approach to the relationship with suppliers. The legacy of this focus engenders a philosophy of segregation and confrontation, which will logically impact upon internal firm relationships also (Syson 1989, p.17). The initial requirement to develop competence is based on the need for skills and knowledge that can be targeted on some value proposition, as perceived by the firm. In order to do this, Purchasing will need to secure (finite) organisational resources and take primary responsibility for some areas of the firm's business activity. This

will probably require the use of political power to usurp competing factions within the firm (Handy 1985, p.222). Therefore, given the legacy of previous purchasing activity and the mechanisms required to develop its competence, instead of bringing the function closer to the rest of the firm, the net result may well be alienation and competition.

However, the purpose of focusing on the firm's strategic objectives is not only to identify Purchasing's role, but also to align with other parts of the business in a deliberate attempt to reduce the potential for conflict. The intention of this action is to develop common goals that are aligned with the system aim and delivered through cooperative cross-functional working (Pinto & Pinto 1990, p.14).

Cross-functional working is more than simply putting teams together within the firm and expecting them to act for the common good. Effective coordination and integration are required between what will previously have been individual entities autonomously operating within an organisational construct (Durkheim 1933, p.212; Deming 1993, p.65; Sezen 2005, p.350). In many respects it is necessary for this cooperative environment to be created before Purchasing attempts to adopt the mid-level content model characteristics and develop into a pan-organisational entity (Cousins & Crone 2003, p.1470).

The key question at this point becomes one of how an incumbent adversarial system can be developed into a cooperative system. Schein (1994, p.179) appears to offer a number of practical options for achieving this transformation, as described in Table 13.

Greater emphasis needs to be given to total organisational effectiveness versus team or individual effort;
Win-lose situations should be avoided;
High coordination and frequent communication should be stimulated between groups;
There should be frequent rotation of members among groups or departments.

Table 13: Four ways to achieving organisational collaboration (Schein 1994, p.179)

Table 13 takes a systemic view of the development of cooperation. It also takes a persuasive, rather than authoritarian stance as to how this should be achieved. In many ways, the initial competence phase appears to reflect a more directive and technically oriented approach while this cooperative phase stresses the more humanistic characteristics of interaction and mutual respect.

Simply enforcing a rule set (Prusak & Cohen 2001, p.92) will probably not yield a cooperative environment, but the adoption of processes that cross functional boundaries may encourage its development (Penrose 1959, p.25; Weick & Roberts 1993, p.365). The impact of taking a process view tends to subordinate the functional silo perspective to a position of convenient organisational description rather than organisational constraint. In this way approaches tend to be less fragmented and consequently more integrated requiring people to work together at a process level in order to deliver the organisational priorities being pursued (McLaughlin *et al* 2006, p.1012). The consequence of developing a cooperative environment within the firm not only results in better business performance, but also acts as an enabler for further purchasing development (Chadwick & Rajagopal 1995, p.17; Wynstra *et al* 2001, p.164).

The implications of failing to secure a cooperative business system also have an impact beyond the confines of the firm. When suppliers see fragmentation and a lack of coordination within the firm they may perceive that the potential for effective collaboration between the firms is low (Wynstra *et al* 2001, p.162; Veludo *et al* 2004, p.153). If this is the case the potential for Purchasing to develop further becomes frustrated. In the initial stages of maturity, functional development was seen to yield a certain level of benefit. When extended to include other parts of the firm, these benefits could be further enhanced through cooperative cross-functional practices. Unless this can be extended to include a cross-section of important suppliers, as described by the purchasing content models, then the process of development and organisational benefit will have become exhausted.

2.11.4 Inter-Firm Relationships

Developing close relationships with important suppliers is described in this thesis as collaboration. The defining principle of collaboration is found in the level of integration and mutual dependence that occurs between the customer and supplier firms. Whereas a business relationship occurs at the interface between the two organisations, collaboration deeply embeds that relationship through alignment of policies, strategy and working practices (Pelton *et al* 1997, p.246). This creates mutual dependence, which implies the need for an equitable distribution of benefits and risks within the collaboration (Bititci *et al* 2004, p.263; Veludo *et al* 2006, p.199). This precludes the use of power play or opportunistic behaviour (Porter 1980, p.108), instead relying on a long-term focus on the means of achieving sustainable competitive advantage for both organisations.

The legacy of power play and dominant positioning may well result in the buyers believing that they are still in some form of dominant position due to their commercial position (Cox 2004a, p.348). However, this concept is fundamentally flawed when considering much larger suppliers, suppliers for whom the customer is a small or unimportant part of their business or suppliers who hold the rights to proprietary technologies essential to the customer's business (Wynstra *et al* 2003, p.74). In these cases it is unrealistic to assume that the buyer is dominant. Although the effect may appear to be compliance on the part of the supplier, the actual effect may be capitulation and a desire to exit the relationship when the opportunity arises (Dapiran & Hogarth-Scott 2003, p.264). Ultimately, initiatives can be launched by customers or suppliers and often exhibit several modes of transparency that enable collaboration, exert coercion or result in a withdrawal from the relationship altogether (Lamming *et al* 2005, p.812). These types of collaboration can be seen in Table 14 as a continuum along which both firms move as the business environment changes and they respond to the resulting relational imperatives.

Ad hoc	collaboration does not go beyond the traditional customer supplier relationship;
Defined and linked	collaboration focuses on operational issues and is limited to collaborative planning, forecasting and replenishment of materials and capacities, i.e. supply chain management;
Integrated and extended	collaboration at a strategic level where integrated and coordinated strategies lead to strategic synergy, i.e. extended and virtual enterprises;
Clustered	integrated collaborations that also include supporting infrastructures.

Table 14: Stages of collaboration between firms
(*adapted from* Childerhouse *et al*, in Bititci *et al* 2004, p.256)

Simatupang & Sridharan (2005) propose Figure 23 as an example of what the 'supporting infrastructure' might look like within a cluster. Although each node represents a distinct set of activities, they collectively represent a set of competences that should exist at the functional, intra and inter-organisational levels. This point is important because the notion of competence is often viewed as existing within the organisational construct, whereas it is actually the interface between the organisations that becomes the critical factor (Lewis 2003, p.752). That is, each organisation may have highly competent collaborative systems, but unless they are compatible it is unlikely that a successful and collaborative relationship will develop.

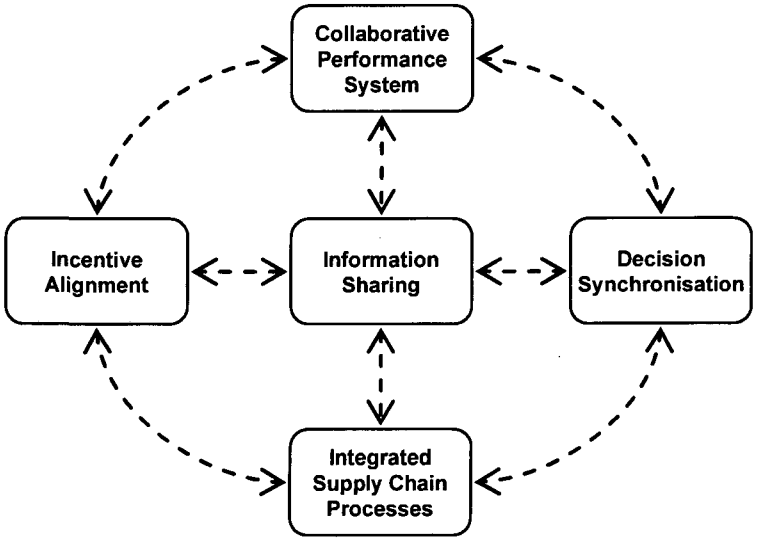


Figure 23: Collaborative supply chain framework
(Simatupang & Sridharan 2005, p.261)

Figure 23 indicates a relative balance between the technical and humanistic aspects of a successful collaborative relationship. Therefore, in addition to the development of robust interfacing processes, careful attention needs to be paid to the selection and development of liaison staff and leaders (Mockler 1999, p.144). This is not only from a competence point of view but also from the development of a stable environment where staff are not routinely moved. Instead, staff need to be allowed to nurture relationships with other individuals and groups from both their own firm and partner organisations. Within a collaborative framework Purchasing becomes more of a coordinating function in an attempt to manage the multiple interactions that are occurring simultaneously on multiple fronts and locations (Cousins & Crone 2003, p.1452).

This requires the development of new competences both within Purchasing and in the firm (Syson 1989, p.20). This point is developed by Cox *et al* (2004, p.369) who observe that 'internal alignment is equally as important as external alignment.' So, although the focus may be on the interface-based collaboration itself, it demands the development of competence and cooperation within the firm. This consequently negates the need for power and coercion offering instead the prospect of reciprocal arrangements where the benefits are both mutually attractive and strategically interdependent (Brennan *et al* 2003, p.1660; Cousins & Crone 2003, p.1467). For the two firms to be able to engage in this way both need to be 'strategically mature' enough to understand the relevant issues (Cousins & Crone 2003, p.1470). This raises an important issue in terms of the relative maturity of the customer and supplier organisations. If the intent is to develop a mutually beneficial collaboration then the implication is that both organisations must have intra-firm cooperation and adequately developed mutually aligned competences in order for the collaboration to succeed. Often, this latter point is described in terms of the alignment of strategic core and non-core competences.

2.11.5 Inter-Firm Networking

The system view posited by Deming (1993, p.53) argues that optimisation needs to address the requirements of the whole system and not just its parts.

If this concept is applied to multiple business systems then the implication is that all organisations within the supply network need to be considered collectively as a fundamental part of the firm's environment (Powell 1991, p.269; Ford 1997, p.xiv). This perspective has been defined as the 'network context' (Veludo *et al* 2006, p.202) or 'extended enterprise' (Prahalad & Ramaswany 2000, p.80) and expands the concept of collaboration to include both the supplier and the customer side of the firm's network (Bititci *et al* 2004, p.259). Taking this theme to its logical conclusion, there may well come a time when it is not firms that compete but the end-to-end supply chains that collectively generate the finished products and services (Christopher 1992; Fawcett & Magnan 2002, p.358). Bititci *et al* (2004, p.259) view the extended enterprise in the same way as a virtual enterprise within which it uses 'the distributed capabilities, competencies and intellectual strengths of its members to gain competitive advantage'. The extended enterprise is a physical construct made up of organisations. However, a systems view fundamentally ignores the organisation focusing instead on the attributes of the organisation that define its value adding contribution. Although the attributes exist at physical locations within each organisation, the systems perspective allows them to be viewed in terms of their relative position within the systemically defined processes that enable the system to work toward its objectives. This effectively moves the focus away from the management of physical assets in favour of the management of value adding activities and their relationship with each other (Rigby *et al* 2000, p.179). Where multiple organisations are involved this introduces the concept of managing core and outsourcing non-core organisational competences. Harland (*cited in* Harland & Knight 2001, p.476) explains that 'Supply strategy has been developed from the externalisation of operations strategy into inter-organisational supply networks, extending the work of supply chain management into larger, more complex network systems.' New and Mitropoulos (1995, p.55) describe this as the agile form of enterprise within which a network of firms work as an operational system, negotiating their task roles and managing internal processes in a way that is mutually beneficial.

The role of each firm within the extended enterprise will normally have some

unique characteristics, such as relative position (Figure 24) or core competence that help to define its value proposition within the network.

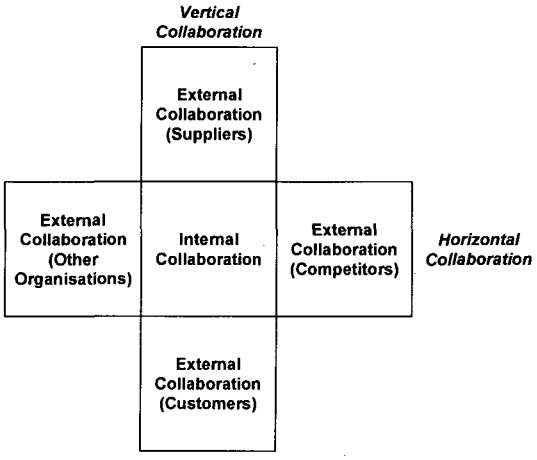


Figure 24: The scope of collaboration: generally (Barratt 2004, p.32)

Whereas collaboration defined the relationship in terms of two firms, the network concept implies a number of relationships occurring simultaneously between a number of firms who are collectively focused on the aim of the network system. These relationships naturally exist at different levels and, to some extent, are driven by the characteristics of the member firms and their relative position within the network. An example of what this might look like is presented in Table 15.

Enmeshed groups	identified by strong group identity but weak individual identity (typical of the Fire or Ambulance Service);
Connected groups	identified by both high group loyalty and pride in personal achievement (typical of some small firms);
Separated groups	identified by individual goal-oriented interests that use shared facilities (typical of a university departments);
Disengaged groups	identified by egocentric behaviour of members (typical of groups where cohesive relationships are at their lowest).

Table 15: Types of cohesive groups
(Mills & Murgatroyd 1991, p.38)

However, given the complexity and dynamic nature of relationships, it is reasonable to argue that relationships are contingent on the factors that directly impact them. Therefore, although Mills & Murgatroyd may provide a

generic classification of the type of relational from a network perspective, it is still the dyadic relationships that provide the useful insight.

This point can be further developed by understanding how networks are organised. It can be argued that control of the network is the exclusive privilege of the strongest players (Harland & Knight 2000, p.478). Alternatively it could also be argued that no single firm has the capability to fully understand and coordinate the ongoing dynamic changes occurring across the network (Fawcett & Magnan 2002, p.358). Problems exist with both of these arguments as they emphasise the roles of the individual firms. As argued previously, it is the relationship between the firms that is important in the network context. Therefore, the network imperative becomes one of managing the relationships and not the firms. This calls for a fundamentally different competence set based on the ability to link related firms together through value-based relationships. The people who take on this role are aptly described as network brokers (Snow *et al* 1992, p.15). These individuals do not exert power over network members in terms of dictating who should work with whom, as has been the case in many supply base reduction projects. Rather, their primary objective becomes one of identifying and exploiting network opportunities in response to changing environmental circumstances (Harland & Knight 2001, p.481). Due to the diverse nature of business situations, these network management tasks cover many perspectives. Harland & Knight (2001, p.482) developed the following profiles, shown in Table 16, based on their work in the NHS.

Role	Descriptions and examples from data
Network structuring agent	Monitoring and influencing the competitiveness of supply markets. Acting to protect critical suppliers from detrimental consequences of fragmented purchasing by the NHS (e.g. peaks and troughs in demand for ambulance bodybuilding work; absence of forward planning of demand for assistive technology). Restructuring supply routes to interface directly with manufacturers rather than wholesalers.
Co-ordinator	Acting as co-ordinator for one-off requirements (e.g. implementation of CE marking in prosthetic service and component network). Acting as co-ordinator for ongoing requirements (e.g. supporting the prosthetic strategic supply club [NHS, contractors and manufacturers]).
Advisor	Providing advice on supply policy and strategy matters to NHS hospital trusts, Health Authorities, suppliers, the NHS Executive and government.
Information broker	Collating, analysing and disseminating information to various parties (see Advisor), sometimes when requested, but often pro-actively to monitor demand and spending patterns, and to encourage focus on key issues.
Relationship broker	Presentations, one-to-one meetings, workshops to promote intra-network communication and negotiation, and to encourage change. Facilitate communication between and within groups of network members to deal with specific performance issues.
Innovation sponsor	Promoting and facilitating product and process innovation (e.g. prosthetic components to reduce cost and increase functionality).

Table 16: Six network management roles (Harland & Knight 2001, p.482)

Given that the network broker's role involves analysing, understanding and developing market opportunities, it is reasonable to argue that this would be a purchasing role within a mature firm. This is a fundamental shift from the concept of the power-based buyer described in early phases of the content models to a strategic facilitation role that may involve no direct buying at all. Instead, the primary role of Purchasing becomes the development of a coherent response to the aims of the extended network system.

2.11.6 Summary

From the commencement of a development programme, some level of competence needs to exist in order to enable Purchasing to develop. These initial stages of development are often hampered by the legacy of old adversarial practices. Focusing on the business strategy as a means of identifying important business issues can break the emphasis on tactical

approaches as the organisation begins to appreciate and accommodate the changes being proposed. At this point, people skills become important in addition to more generally promoted technical skills. However, both types of skill need to evolve as the strategic objectives and business environment change.

In order to expand Purchasing's repertoire beyond a price focus it is often necessary to engage with other parts of the firm. Unfortunately, the legacy of a historically combative approach acts against any form of cooperative approach. As described before, focusing on strategic objectives that support common goals can be used as a means of neutralising some of these negative connotations. Cooperation within the firm can be further enhanced through a systemic and process-based approach. This begins to stress the humanistic rather than technical view. The consequence of this refocusing is the need to learn a new set of competences.

Collaboration is a bi-lateral relationship between two firms based on mutual and equitable dependence as distinct from a passive customer-supplier relationship. Although there may always be some level of power imbalance it is not used in these relationships as the primary influencing mechanism. Instead, it is the interface between firms that becomes the critical factor, enabled by the levels of competence and cooperation found within each firm. People become the critical interface enablers, but this requires time in order to develop networks of robust relationships between individuals and groups across the two firms.

Networks of multiple firms working together are based on the systems view of optimising the whole rather than its parts. This can be argued to be a natural development from the people-based networks in the collaboration phase. In this phase, competition moves from the firm to the supply network level and is a function of competence acquisition and alignment. Although networks tend to be characterised in generic form, it is still the dyadic relationship that remains critical to network success. The key role, therefore, becomes that of the network broker, which may naturally fall under the domain of Purchasing.

The above evolutionary roadmap highlights the broadening horizon within which Purchasing might exist as it develops toward becoming a strategic contributor to the firm. It is possible to model this roadmap in terms of the four levels of maturity previously described, which supports their alignment with the various purchasing content models thus giving them both context and meaning. However, it is important that these four levels are not seen as discrete 'events'. They are positions on a continuum and are highly contingent upon each other, each level providing both a foundation and a legacy for the next (Fitz-Enz 1997, p.208). This concept is captured in Figure 25.

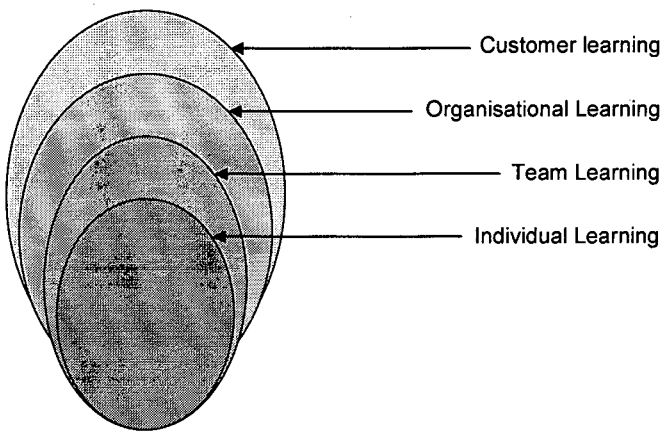


Figure 25: CIBC learning model (Fitz-Enz 1997, p.208)

As Bertalanfy (1968, p.31) observes, 'It is necessary to study not only parts and processes in isolation, but also to solve the decisive problems found in the organization and order unifying them.' Therefore, if all learning stems from the individual, then all aggregated levels of learning must be a function of the individual representatives and their collective competence. This means that within different parts of an organisation or network the profile of skills and knowledge will be contingent on both the individuals and their relationship with and to each other.

While the above approach may appear logical and somewhat intuitive, it is not necessarily easy to implement. Therefore, the purpose of this research is to investigate how this might be achieved from the perspective of the activities that change agents might use to facilitate a successful outcome.

2.12 Literature Review Summary

The approach used to develop the Literature Review cycled through two iterations covering first the general change management literature and second the purchasing specific change management literature. This approach was summarised in Figure 2. As the research progressed, it became evident that a third section of literature was important in the form of change management as it relates to organisations as systems. The remainder of this section is used to summarise the main conclusions derived from the literature.

2.12.1 General Change Management: Conclusions

The review of the general change management literature identified the Tzortzopoulos, *et al* (2005) model, shown in Figure 3, as the most appropriate for this research. After detailed investigation, the model was refined to include the key points shown in Figure 13 and the subsequent relationships between the headings, shown in Figure 14.

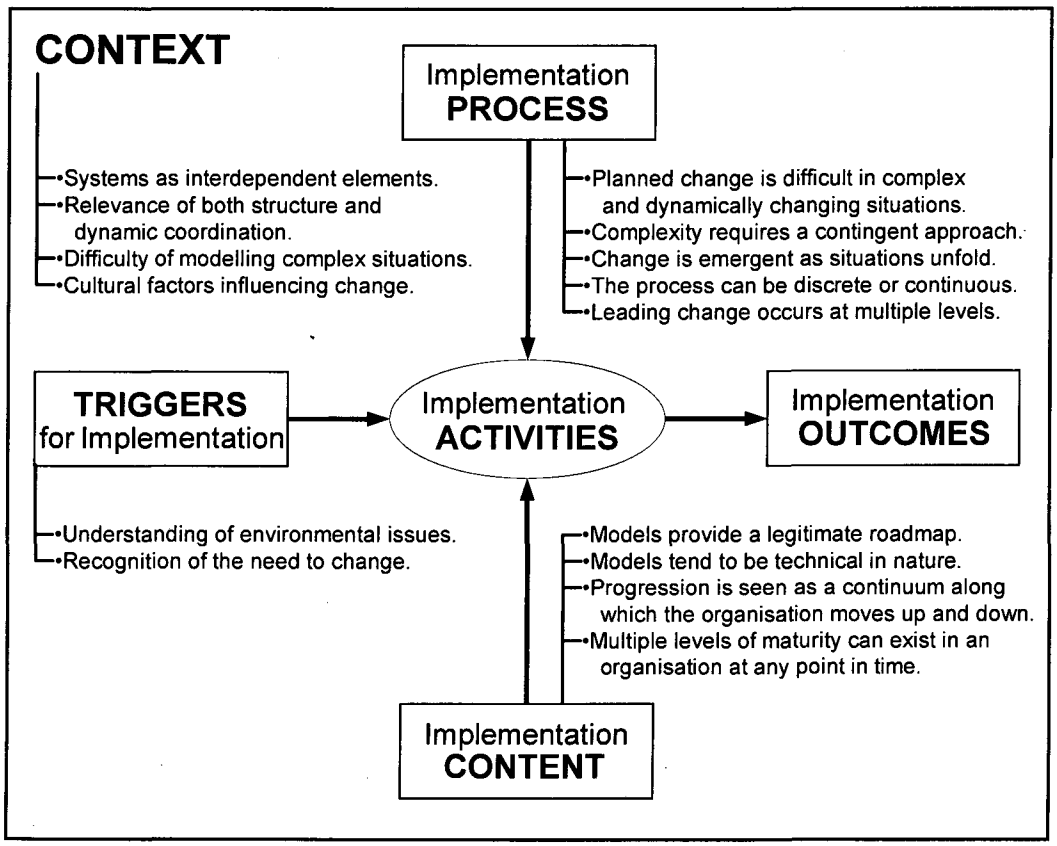


Figure 13 (*Repeated*): Refined framework of the implementation process

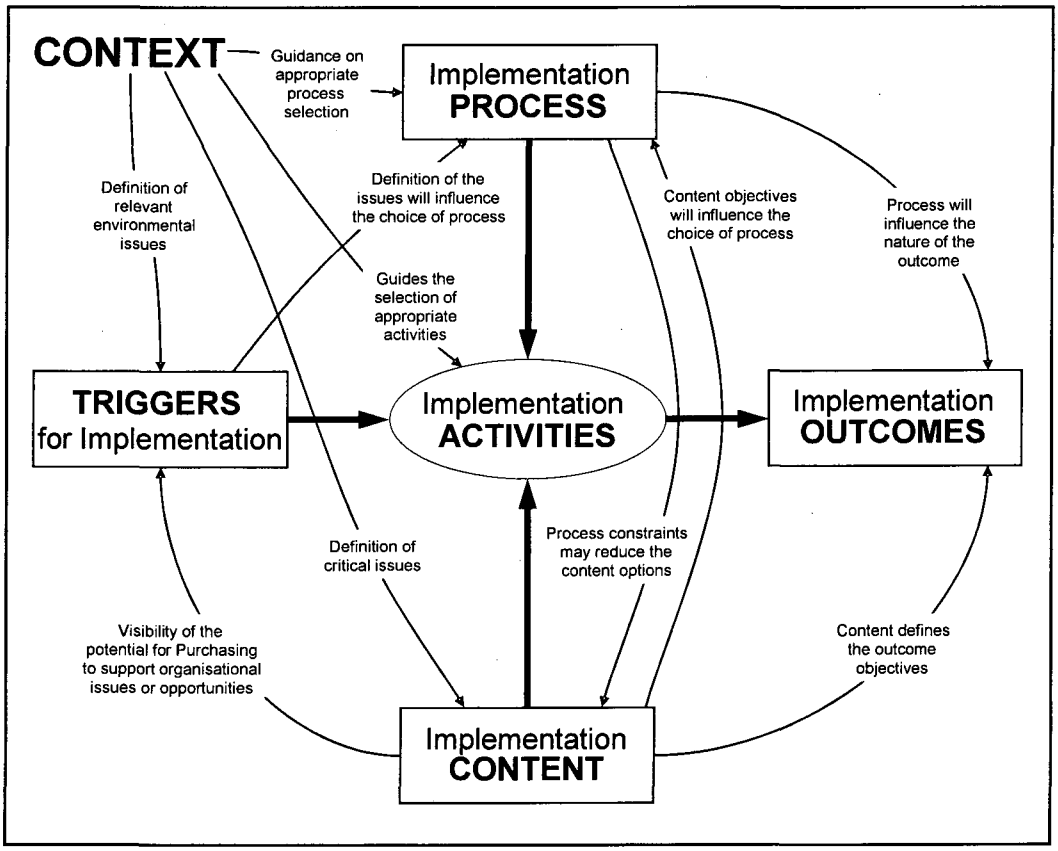


Figure 14 (*Repeated*): Interdependencies in the implementation framework

Figure 13 and 14 highlighted the importance of viewing the implementation of the change programme as a system. While the constituent parts were important, their relationship to each other was also seen to be a critical factor in creating a coherent approach to the changes being proposed.

2.12.2 Purchasing Specific Change Management: Conclusions

The section covering the purchasing specific literature built upon the previous conclusions as a means of refining the generic context into a more purchasing specific review. As mentioned previously, this was necessitated by the lack of specific literature relating to the implementation of change within a purchasing context. The main issues identified were:

- The Trigger:
    - Understanding the business environment needs to be developed from a purchasing and supply management specific context;
    - Recognition of the need to change should be framed within a

more generic construct, such as a business case proposal.

- The Process:
  - Planned change is very difficult due to the complexities and dynamics of any given situation. This suggests that change is actually a mix of planned and unplanned approaches;
  - Often projects are used to link discrete pieces of improvement work into a coherent programme that satisfies both the immediate business imperatives and the longer-term strategic objectives;
  - The need to constantly refine the improvement programme leads to the importance of adopting an iterative learning approach, such as that provided by Shewhart's PDSA approach;
  - Understanding and accommodating emerging systemic issues is a crucial part of any change programme and the processes used must be response to these changing factors;
  - Overall, it appears that the emphasis placed on the process aspects of change programmes has centred on the mechanics of activities to the detriment of the more humanistic issues.

- The Content:
  - The content models tend to be characterised by descriptions of technical complexity, often translated into the difference between tactical and strategic purchasing;
  - Underpinning these descriptions is the need for a set of 'enablers' that facilitate the development and use of these core technical processes;
  - Both the processes and enablers require the development of new skills, which emphasises the importance of the humanistic aspects of change;
  - The level of maturity that a purchasing organisation exhibits at any given time appears to be the consequence of the needs of the organisation being served. This means that the function can

move both up and down the improvement continuum;
    - The consequences of this interdependence stress the importance of taking a systemic perspective and developing strong relationships with key stakeholders as a means of targeting short-term priorities in pursuit of longer-term objectives.

- The Context:
    - Whole system thinking is important when considering the approach needed for a given improvement programme;
    - This is because the development of the function needs to fit with the rest of the organisation it interfaces with;
    - A consequence of this is that Purchasing and the organisation as a whole probably need to both engage in the improvement programme for it to achieve its full potential;
    - This leads to a joint responsibility within and external to the function for the development of purchasing and supply management competences;
    - The development activities will need to be prioritised and tackled in a sequence that is manageable and reflects the most important issues first.

Some duplication is evident in the lists described above. This has been included intentionally as a means of restating the nature of successful change implementation as a system of interrelated parts that influence and directly affect each other through an arrangement of nested interactions.

2.12.3 Change within Organisations as Systems: Conclusions

As the research progressed it became apparent that the scope of the change programme was a critical issue and therefore merited specific investigation. This was contained within the Supplemental Literature Review, being split into four discrete sections. A summary of the main points includes:

- Functional Development:
    - Purchasing has tended to be described in the literature as tactical and short-tem;
    - This has reinforced more technical skills and knowledge development that reflect opportunistic and sometimes aggressive behaviours;
    - To break this cycle, Purchasing needs to engage with the business at a more strategic level, while still maintaining its role in meeting immediate day-to-day requirements;
    - The complexity of elevating the function to a more business oriented level is compounded by the lack of awareness within management circles of the potential contribution that Purchasing can make;

- Organisational Development:
    - The legacy of confrontation with suppliers often translates into internal conflict;
    - Coordination and integration are an essential enabler of organisational development and come from aligning priorities based on a common system aim, objectives or strategy;
    - This highlights the more humanistic aspects in contrast to the more technical characteristics highlighted at the functional level;
    - An inability to develop a cooperative business model within the organisation will inevitably become a barrier to developing effective relationships with key suppliers outside the organisation.

- Inter-Firm Relationships:
    - Traditionally, a business relationship has been considered to form at the interface between the two organisations. However, if a systemic perspective is taken, then it is the processes that flow between the two organisations that is important and this requires an embedded approach involving the alignment of

policies, strategy and processes;

- For the above to work effectively the use of dominance as an influencing strategy should be avoided;
- A good working relationship should be supported by an enabling infrastructure underpinning and bridging the two organisations that is staffed by highly and appropriately competent people;
- A prerequisite of this structure is the strategic maturity of both organisations in terms of knowing and aligning core and non-core operational competences.

- Inter-Firm Networking:
  - In order to create an integrated system all constituent organisations need to be engaged, including customers and suppliers;
  - This structure is then augmented by a focus on the value that each organisation can bring and how it should be organised at the extended enterprise level;
  - This, in turn, moves the emphasis away from the management of physical assets toward the management of adding value through negotiation based on task roles, process responsibility and ownership;
  - The new competence therefore becomes one of managing the relationships between member organisations based on facilitation rather than coercion.

This apparent progression indicates that a series of thresholds might exist from an organisational perspective. Not only must certain characteristics be in place to enable progress from one level to the next, each level requires a unique set of implementation activities to support its improvement.

Chapter 3: Research Justification and Questions

The Literature Review has highlighted the complex nature of change and the importance of effectively managing the change intervention with appropriate actions and responses. Paradoxically, the Literature Review also highlights the lack of knowledge relating to implementation activities, specifically in the area of purchasing.

Change is often viewed as involving the transformation of a system between two points in time. This view has tended to focus research on a comparison of the organisation before and after the development intervention (Barnett & Carroll 1995, p.219), with the emphasis on finding 'dramatic explanations for change' (March 1981, p.564). Although it can be argued that this is a valid research objective in its own right, it does not necessarily provide a full explanation of the change event (Weick 1993b, p.34). Indeed, it may be argued that it is the ongoing activities within the development programme that provide greater insight into the processes of change (Van de Ven 1986, p.644; Chang 1997, p.1).

When trying to understand the change intervention between two points in time it has been argued that the main factors to consider are context, content and process and their interconnections (Pettigrew *et al* 2001, p.698). However, the existing research that has been conducted appears to favour analysis of these factors separately, without significant regard for the others (Barnett & Carroll 1995, p.219). This has resulted in the criticism that change models are too simple to adequately describe the dynamic interactions that occur (Kanter *et al* 1992, p.372; Cummings & Worley 1993, p.67; Buhanist 2000, p.5). Many of these models are presented as structured step-wise approaches or aesthetically pleasing diagrams. The reality appears to imply that organisations struggle to maintain order, often flirting with the edge of chaos as priorities change, unforeseen circumstances emerge and 'quick-fix' solutions are grasped whenever they appear.

Pettigrew *et al* (2001, p.700) argue that process actions are dependent on the context of the change. By context they imply both environmental context and

content. They go on to argue that the greatest need is to identify the 'processes and mechanisms' that are employed, over time, to bring about a successful conclusion. This seems to promote the need for contingent activities that evolve to meet the needs of what can often be a complex situation, the ultimate purpose of these activities being to enable the successful delivery of the programme objectives.

Systems thinking is a useful lens to use when focusing on time-based interactions that result in change. This enables the change activities to be viewed as processes (Capra 1996, p.42). It may not be that these change processes are defined in the classical sense (e.g. Kotter), rather they may be conceived as enabling processes. It may also be that these processes are not clearly delineated or linear in nature, being 'a collection of parts which interact with each other to function as a whole' (Kauffman 1980, p.1). This concept is reflected in the model proposed by Tzortzopoulos *et al* (2005) in Section 2.1 whereby the implementation activities are seen as a consequence of other aspects of the change situation (i.e. Trigger, Context, etc...).

This raises another problem in that the majority of existing research appears to treat the implementation variables as independent of each other. The concept of understanding one aspect of change to the exclusion of others should be considered as fundamentally flawed. If it can be accepted that there is interdependence between the various aspects of change then they must be considered collectively (Okumus 2001, p.327; Tzortzopoulos *et al* 2005, p.482). This acknowledges the Gestaltist view that developing one aspect to the exclusion of others does not mean that the outcome will improve, only that it will be different (Koffka 1935, p.176).

The literature review has identified a significant gap in knowledge relating to the implementation activities undertaken within development programmes. Indeed, it has been noted that 'there are many instances in which organisations know what to do (content) but have difficulty in actually implementing that knowledge (action)' (Pfeffer 1997, p.202). It can therefore be argued that if content knowledge exists (*see* van Weele, 2002) and change

processes exist (*see* Kotter, 1996) then, according to both Tzortzopoulos, *et al* (2005) and Pfeffer (1997) the issue becomes one of understanding the implementation activities that will result in a successful outcome. Although this may be a generic issue (*see* Dobni *et al*, 2001), this research is focused on this specific area of purchasing and supply management.

3.1 Research Questions

Researching an area that does not have a rich history of foundational work can be seen as both an opportunity and a problem. The opportunity exists to select and research the area that is perceived to be of most use or interest. The problem arises when trying to select an area that is fundamental enough to reflect the elementary state of current knowledge while adding to it in a meaningful and useful manner.

The first question reflects this current state. As Stannack and Jones (1996, p.62) comment, 'In order to understand the phenomenon we need to describe it, and place it in a context which will lend it meaning'. Therefore, the first issue is one of defining the actual meaning of implementation activities; this is described in this thesis as implementation dynamics.

3.1.1 Question 1: What characteristics may be used to describe implementation dynamics?

Given the lack of clear information and understanding of the issues relating to implementation it is not surprising that change leaders tend to copy each other, instigating activities that may be inadequate or wrong. This supports the proposition that 'There is a significant need for detailed and comprehensive conceptual models related to strategy implementation' (Noble 1999, p.132). Therefore, the second issue is one of identifying the implementation dynamics themselves.

Question 2: What are the implementation dynamics of purchasing and supply management development programmes?

Change implementation does not happen within a vacuum and therefore a context must exist within which the changes take place (Tzortzopoulos *et al*

2005, p.482). To facilitate this, the implementation must be defined in some way through the description of changed content and guided by a change process. It is a combination of all of these factors and the relationship between them that forms the basis of a theoretically sound model (Pettigrew *et al* 2001, p.698). Therefore, the third and fourth questions reflect the interdependent relationships that exist between context, process, content and the implementation activities that they influence.

3.1.3 Question 3: How can the implementation dynamics from Research Question 2 be aligned with the existing purchasing and supply management content models?

3.1.4 Question 4: How can the implementation dynamics from Research Question 2 be related to the process aspects of change management?

The relationship between the four Research Questions and the way that they are used in this research is shown in Figure 26. The questions should not be considered independently as this detracts from their contextual meaning. Instead, they should be viewed as elements of a systemic model that forms part of a wider change implementation system. In this way their meaning is defined in terms of both their individual content and their relationship with each other.

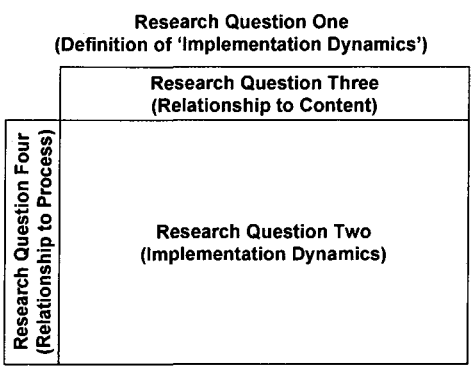


Figure 26: Relationship between the Research Questions

Chapter 4: Methodology and Methods

4.1 Introduction

Due to the complexities of conducting research into an area that has historically received little attention the foundation for this investigation needed to build the body of evidence from first principles into a structured framework of findings. This process necessitated a phased approach as summarised in Figure 27. The consequence of this has been the need to provide an extensive explanation of the methodology and methods used. Of particular importance has been the assurance of research quality within and across the two phases of the investigation.

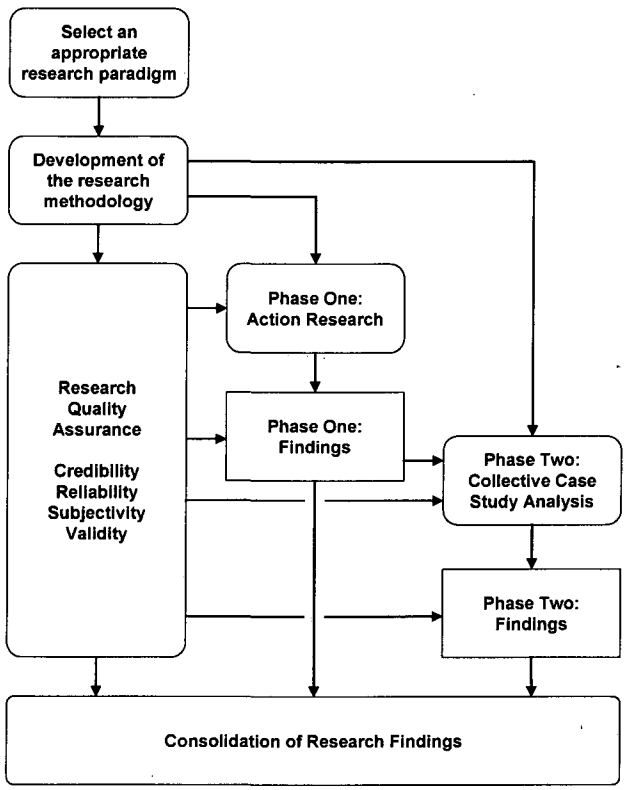


Figure 27: Overview of the Research Methodology

4.2 Selecting the Research Paradigm

The research approach adopted is the culmination of thinking clearly about the epistemological and ontological choices that best serve the objectives of the research within a given research environment (Morgan & Smircich 1980, p.491; Patton 1990, p.196; Stake 1995, p.19). The key question thus

becomes one of 'Given the questions asked in the research, are the methods appropriate?' (Graue & Walsh 1998, p.246). Successfully answering this question can be argued to be the result of the reader's perception being that 'data generation and analysis have not only been appropriate to the research questions, but also thorough, careful, honest and accurate' (Marshall & Rossman 1995, p.146). Therefore, the quality of the research procedure is fundamental to the reliability of the research findings (Yin 2003, p.90).

Building on the views of Lewin (1951), modelling an organisation from a numerically-based analytical perspective appears to impoverish our understanding of what it means to exist within such a dynamic environment. Indeed, if it were possible to model such things in formulaic terms then why do we still struggle to define the essence of such important issues as leadership, relationships and trust? Despite the researcher's engineering background, quantitative methods, whilst attractive, were quickly rejected as being inappropriate to the problem under investigation due to their inability to describe in rich terms the phenomena under investigation (*see* Halfpenny 1979, p.799).

The research problem was identified as a result of variations in the performance of supplier organisations that were known to be employing the same business improvement methodology. This highlighted the issue of implementation as a critical success factor that did not appear to be well understood at either an academic or practitioner level. The research options that presented themselves were drawn from design research (March & Smith, 1995) and case study (Yin, 2003), both emphasising the same three possible outcomes:

1. A description that supports understanding;
2. An investigation that leads to explanation;
3. A construct that informs improved implementation practices.

The problem emerged from a lack of knowledge concerning the deployment of appropriate implementation activities in support of development programme

objectives. This indicated that the issue was one of practitioners having limited information upon which to base their decisions. Given the focus on application issues, it appeared that the emphasis of the research should favour practice rather than just theory. Both understanding and explanation can be argued to focus on theoretical utility, while only the improvement construct relates directly to practice. Therefore, the initial response to the research problem directed the selection of an approach towards the development of a utility-based model that would be of relevance and value to both the academic community and implementation practitioners, contributing to knowledge in both cases.

At the start of the research process little *a priori* knowledge existed and this factor was compounded by the relative lack of academic information found during the literature review. The consequence of this situation led to the need to apply a research methodology that was emergent in nature. This effectively precluded the use of the positivist tradition given the inability to construct a hypothesis that could then be tested through research. The alternative tradition is phenomenology within which the findings are progressively developed during the application of the research process. This is clearly relevant to this situation given the need to build the body of knowledge from a relatively low foundational base.

The problem that this research seeks to address exists within the socially-oriented setting of implementing change within organisations. Within this frame, the intention was to simultaneously create a model that informs practice and adds to the academic knowledge in this area. This meant that the natural sciences approach of describing and explaining phenomena would only partly meet the stated objective of the research. Instead, the intention was to build further and develop an interpreted construction of the appropriate implementation activities that would inform improvement activities. This distinction is important in that it implies that the most appropriate research approach might be found within the design sciences (Simon, 1996). Indeed, the exploration of 'wicked problems' that are characterised by conflicting or sparse theoretical bases are considered ideal candidates for design research

(Carroll & Kellogg, 1989; March & Smith 1995, p.139). The key characteristics of the positivist and phenomenological research traditions are contrasted with that of design research in Table 17. Although positivism was found to be an untenable proposition, the interpretive approaches still provided some level of applicability to the research problem in trying to 'produce descriptions and explanations of particular phenomena' (Denzin & Lincoln 1994, p.4; Hammersley & Atkinson 1995, p.25). Coffey and Atkinson (1996) support this view, regarding analysis as 'systematic procedures to identify essential features and relationships'. However, Hycner (1999, p.143) picks up on this theme highlighting the conflict between 'essential features' and the exploration of detail citing the 'reluctance on the part of phenomenologists to focus too much on specific steps'. This is a significant issue with regard to this research as little is known about the subject in question other than generic models and disaggregated constructs. It appears that the above argument raises questions about the true potential of the interpretive perspective. It is therefore incumbent on the research to create an integrated model that provides the detail necessary to inform both theory and practice in order to mitigate this potential problem.

	Research Perspective		
Basic Belief	**Positivist**	**Interpretive**	**Design**
Ontology	A single reality, Knowable, probabilistic	Multiple realities, socially constructed	Multiple, contextually situated alternative world-states. Socio-technologically enabled
Epistemology	Objective; dispassionate. Detached observer of truth	Subjective, i.e. values and knowledge emerge from the researcher-participant interaction.	Knowing through making: objectively constrained construction within a context. Iterative circumscription reveals meaning.
Methodology	Observation; quantitative, statistical	Participation; qualitative. Hermeneutical, dialectical.	Developmental. Measure artefactual impacts on the composite system.
Axiology	Truth; universal and beautiful; prediction	Understanding; situated and description	Control; creation; progress (i.e. improvement); understanding

Table 17: Philosophical assumptions of three research perspectives (March & Smith, 1995)

The issues raised by both of the 'traditional' paradigms appear to be resolved by the design research approach. Not only does it appear to be appropriate it also presented a holistic research 'lens' made up of analytical techniques and perspectives that were complementary, rather than opposed, to the positivist and interpretive paradigms. This was particularly important given the perception that both the research objectives and the practicalities of conducting the research were going to be complex and difficult.

4.3 Methodology

Methodology is the overarching philosophy that is employed to relate the methods used with the situation and objectives of the research (Crotty 1998, p.3; Cryer 1996, p.45). To some extent this characterises the methodology as the 'glue' that holds the methods together and gives them an integrated academic legitimacy within the context of the research.

The purpose of design research is to generate and codify new knowledge in the form of an artefact or object. In many instances, knowledge is generated as the consequence of action. Events happen, which are then investigated and evaluated. As new knowledge is derived, the artefacts evolve to reflect the learning that has taken place within a given context (Owen 1997). This cycle is reflected in Figure 28 and is similar in principle to the concepts of action research although the emphasis is on design rather than the broader situational learning that normally forms the focus of action research projects.

Although the model may appear to reflect characteristics of a 'trial and error' approach to developing knowledge, structured discipline is evident through the channels that guide the iterative process. These channels are based on empirically devised conventions that reflect the standards and protocols of other disciplines, but they retain nuances that are particular to the design approach.

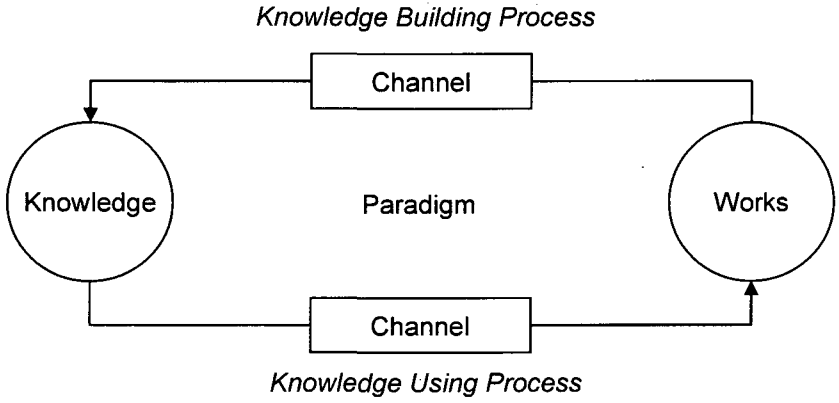


Figure 28: A general model for generating and accumulating knowledge (Owen 1997)

Of significance in Figure 28 is the systemic concept of multiple parts being linked to each through clearly defined relationships. From a design research perspective, the outer environment includes all of the factors that impact upon the artefact. The inner environment includes those components that constitute the artefact itself. The relationships characterise the constraints and utility of the artefact within its given situation (Simon 1996).

The systemic approach described above has a significant influence on the methodological approach taken. The design of the artefact is evidently interdependent with its environment and its development is the consequence of an ongoing interaction and process of learning between artefact and environment. This argues that the research methodology is grounded in direct involvement with the research population. This, however, raises the problem of how to conduct research into a topic that has not been well researched academically and demonstrates significant deficiencies when applied practically. From the perspective of the research problem, although the problem itself is known the issues that inform the selection and deployment of an appropriate research approach are not. The consequences of this are acute in terms of developing an appropriate format that can be used to present the findings.

During the design of the methodology many research methods were considered and quickly rejected. Detailed below are the methods that initially appeared suitable but were subsequently discarded after being investigated more deeply in favour of the approach detailed later in this chapter.

Given the lack of knowledge and understanding of the causes of the variation in each supplier's improvement performance the first research method considered was that of interviewing those involved. This would have had the advantage of creating transparency around the research, an extremely important issue given the political environment, and allowing direct involvement of the interested parties as the process developed (Easterby-Smith, *et al* 1991, p.34). However, given that the researcher was an employee of the customer organisation it would have been impossible to take a 'neutral

observer' stance in the eyes of the suppliers. The potential to produce robust data that was not politically skewed through the perceived need for self protection by the suppliers was thought to be remote, a point stressed by Reason and Bradbury when '...assert[ing] the importance of sensitivity and attunement in the moment of relationship' (2001, p.9).

One possible approach that could have reduced the impact of the customer-supplier sensitivities would have been the use of questionnaires as the means of gathering data. This would have provided anonymity to the participants thus encouraging a more open dialogue, albeit constrained by the structure of the questionnaire. This in itself proved debilitating as a research method given the need for reflection based on the findings as a means of creating knowledge (Reason & Bradbury 2001, p.7). The only realistic means by which this could have been achieved would have been to develop theories and test them; a significant issue given the lack of *a priori* knowledge in the field. The trap here would have been that the process degenerated into a cycle of seeking and presenting confirming evidence for theories that were either known or unknown at the time. This would have been a real risk given the relatively few opportunities to get the questionnaire structure and content right and to gather useful data from respondents.

An alternative to the questionnaire approach would have been the use of a Delphi study. It was apparent that different groups had different competences; PMI were competent in the improvement process, the automotive manufacturer was competent in articulating their needs and the suppliers were competent in explaining their organisational systems. However, none had the experience of implementing this type of programme on this scale previously. This raised fundamental questions as to the validity of any findings (Hammersley 1990, p.57) given that they would, by necessity, be predominantly opinion based thus reducing the concept of a Delphi group to one based on best intentions to help rather than demonstrable expertise (*see* Bryman 1988, p.77).

It would have been disingenuous to believe that there was a complete dearth

of knowledge within the potential research population and this acknowledgement presented the opportunity to undertake a case study approach. Taking a small number of cases would have resulted in a study that was deep and longitudinal in nature, transcended the problems of the staccato events offered by the previous methods. Whilst viable from an academic perspective, significant questions remained with regard to the research objectives (Morgan & Smircich 1980, p.491; Patton 1990, p.196; Stake 1995, p.19). For example, how could the issue of bias be addressed? All of the supplier organisations, by definition, had a history of long-term failure from the perspective of the customer, they were all automotive suppliers and had all shown an inability to undertake successful self-led improvement activities. In this situation it was inconceivable that any claim of transferability of the findings could be made. Also, whilst the depth of the study would not be in question, what relationship could be made to breadth? Given that this field of study has so far received little attention, it was felt that early investigations should focus on proposing a landscape from which further work could validate, refute or enhance the foundations laid down during the early investigations.

The nature of developing a comprehensive understanding of the issues faced by the practitioners who deploy the improvement programmes implies that some form of direct involvement would be a suitable course of action (Easterby-Smith 1991, p.34). This approach is justified further by the particularly low level of *a priori* knowledge resulting in the need for an iterative process of engagement and analysis as a means of building a frame of reference from which to launch the main part of the research (Cohen & Manion 1989, p.223). Action Research aims to produce practical knowledge that is useful to people in conducting their daily activities. A wider purpose of the research method is to improve their well-being 'economic, political, psychological, spiritual – of human persons and communities and to a more equitable and sustainable relationship with the wider ecology of the planet of which are an intrinsic part.' (Reason & Bradbury 2001, p.12). This strongly echoes the sentiments of Deming (1993) who has proved to be a strong motivational aspect of this research. These factors presented action research

as the most appropriate methodology for this situation, based on its propensity to support learning through action. It also mitigated the issue with all of the rejected approaches with regard to their subsequent need to organise and interpret the evidence gathered in the form of either an analytical or conceptual framework (Brewerton & Millward 2001, p.14). In Action Research this is embedded within the process.

Once a frame of reference has been created, the need becomes one of identifying the implementation activities that enable the deployment of improvements to take place. Given that the problem emerged from a population that did not know how to successfully implement improvements, it does not seem credible that this same population could be used to identify the very activities of which they are not currently cognisant. This problem is compounded by the lack of structured knowledge within the literature, which effectively precludes the use of the supplier population as there is no means of validating the findings, but requires the identification of a second group that are capable of providing useful insight. Identifying this group argues that some form of qualifying characteristic is required such as a demonstrated historical competence in deployment. This raises two questions:

1. Can they repeatedly demonstrate deployment competence?
2. Are they currently working on projects that require them to demonstrate deployment competence?

If the answer to either of these questions is negative then arguably they cannot be used as a reliable source of information because either they have not demonstrated a track record and therefore may simply have been 'lucky' or the successful project is now the subject of historical record and therefore relies heavily on their recollection and interpretation of events.

Referring back to the objectives of the research highlighted a strong need to identify a second research population that was within the purchasing and supply management field. Given that the purpose of the first phase of research was to identify the implementation issues, it became apparent that

the purpose of the second phase needed to identify what the organisations had done to resolve these issues. This suggested two research approaches; questionnaire or case study.

The questionnaire approach becomes possible at this stage due to the development in phase one of a list of implementation issues. These issues provide the *a priori* knowledge required for the design of the questionnaire. The advantages of this approach would be the ability to engage a significant number of organisations who would then 'self-filter' in terms of those for whom it wasn't appropriate to respond or who didn't want to respond. The balance of the respondents providing data in a form that could be analysed from multiple perspectives, depending upon the design and purpose of the questionnaire documents. The risk of this approach was that respondents would always be open to interpretation of the questions. For example, asking the question "Did you communicate the changes with your organisation?" could yield a positive response from someone who held regular meetings, sent email updates and gathered feedback from their staff. It could also yield a positive response from someone who chatted to their staff in the corridor at opportune or ad hoc moments. Obviously, the two scenarios present completely different opportunities for interpretation but are both resolvable from the respondent's perspective given their propensity to experience the real world based on the way they understand it (Bruner 2002, p.103).

The alternative research approach considered focused on the case study method. As above, the provision of a framework developed in phase one presented the opportunity to conduct focused research within one or a small number of organisations engaged in a relevant improvement programme. Whilst this would have supported the validation of the framework, it would have made little progress in assessing the transferability of the findings to other industries or situations. However, the provision of the framework also provided the opportunity for performing a collective case study analysis (Stake 2000). The collective case study approach appeared to resolve both of the above problems. The issue with the questionnaire approach appeared to be one of ensuring a standardised interpretation and answering of the questions

posed. The collective case study method would place the responsibility for this standardisation upon the researcher in terms of developing and making visible the frames of reference used to conduct the analysis. This not only minimises the risk of rogue responses, but also presents evidence to the reader upon which decisions of validity and reliability can be made. Secondly, the issue of transferability could be resolved given the possible number of cases that could be assessed and then profiled in terms of their context. If this was the case, then the general applicability of the findings could be both claimed and validated within the research.

The above issues are revisited during Section 4.5 where they are discussed from an applied perspective.

The proposal of a combined action research and case study approach introduces the concept of pluralism. Within some research environments this approach is viewed with considerable scepticism, particularly in the more traditional and conservative research methodologies encompassing positivism. For example, Midgley (2000, p.104) argues against using methodological pluralism, proposing that:

1. 'it is not theoretically coherent because different methods embody contradictory assumptions of different paradigms;
2. it is not culturally feasible because academic research communities have vested interests in promoting single methodologies and methods;
3. it is not psychologically feasible because it requires too much intellectual effort from interveners.'

Despite the above reservations, a pluralistic approach was adopted. This decision rested on the proposition that it was important that the overall methodology be judged on the merits of its relationship to the broader research issues that needed to be addressed (Dörner 1989, p.308; Crabtree & Miller 1999, p.346). Given the diverse nature of the two key issues of identifying the implementation dynamics and developing a framework to host them, it was necessary to apply two different research approaches, integrated

through the application of an appropriate design research paradigm. Ultimately, the underpinning criterion upon which the research was developed was one of defensibility in reconciling the numerous issues and options rather than relying on academic dogma as the primary navigation tool (Kant 1963, p.3; Wilson 2001, p.1).

4.4 Design Research

The general design cycle follows a broadly generic reasoning process (Takeda *et al* 1990) as shown in Figure 29. As with most design work the process begins with the awareness and tentative codification of a problem. This problem statement is then responded to through the development of improvement proposals that are abductively generated (i.e. the most likely solution) from existing knowledge areas (Pierce 1931). This can be the consequence of a lack of data to confirm or disprove any proposals and is further compounded by the often unique characteristics of the problem being addressed. Resulting proposals are implemented, often on a small scale, as a means of generating further insight into the problem. This new knowledge is then used to evaluate the situation and develop a clearer understanding of the nature of the problem and the applicability of the solution proposed in a similar approach to that advocated by the Shewhart PDCA Cycle. At some stage the process will either be deemed a success, uneconomical to continue or an unrecoverable failure at which point the process will stop and new cycles will be initiated.

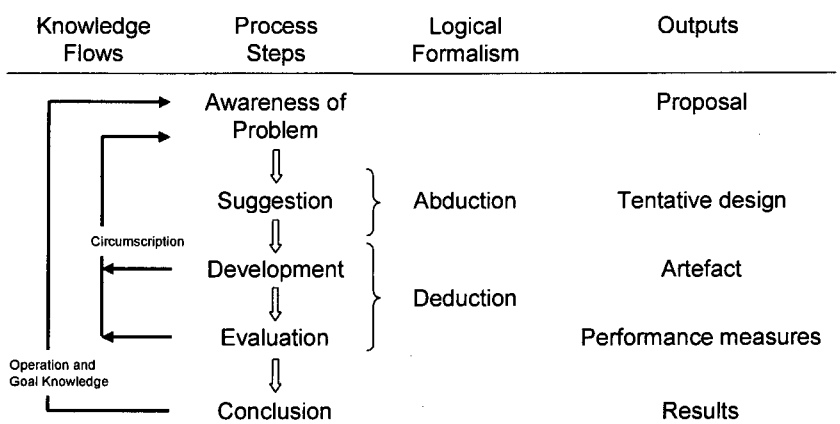


Figure 29: Reasoning in the design cycle (*adapted from* Takeda *et al*, 1990)

In Figure 29, circumscription is a formal logical method that proposes the validity of knowledge based on the presence of a supporting context (McCarthy 1980). For the design research perspective, this is manifested through an iterative cycle that alternates between the abductive and deductive phases, applying learning from the current design to the next improvement activity in a similar approach to that used by action research. However, elements of hypothesis testing are employed as the applicability of knowledge is determined through the identification and analysis of contradictions to the incumbent theory at the time. This not only informs the field of knowledge used to construct the artefact but also builds awareness of the constraints that limit the applicability of that knowledge. In this way, it appears that there can be 'a continual interplay between ends and means [that] involves interpretation, understanding and application in one unified process' (Gadamer 1979).

4.5 The Application of the Design Research Process

The following is an overview of the research process used during this study. The approach is first described in summary form so that an overview of the way that the design research methodology was applied can be assimilated. This is followed by a more detailed description of its application.

Awareness of the problem originally surfaced during the supplier development programme (described in Section 4.6.2) that seemed to imply a significant lack of implementation expertise with specific reference to improvement programmes. This formed the launch point for the research. This problem was reinforced during work undertaken to improve the capability of purchasing and supply management within a multinational electronics firm. As the main issues took form, it became apparent that this was symptomatic of a lack of data within the knowledge area and specifically within the field of purchasing. These further findings resulted in the clarification of the research problem and codification of the Research Questions that would guide its resolution.

The proposal of a tentative design was built through the action research methods used to understand the supplier development issues. The existence

and codification of the problem did not elicit a significant amount of guidance in terms of what the solutions might entail. This ambiguity led to the selection of action research as a means of exploring the 'messy' situations that existed through iterative processes of investigation and analysis. Incumbent in this approach were the people directly affected who were able to take an active role in developing observations into generalisations through an abductive process of theory building (McShane & von Glinow 2003, p.604). At this stage it would have been naive to expect the outcomes to be more definitive due to the amorphous and unpredictable nature of the organisational issues being considered (Rapoport & Horvath 1968, p.74; Morgan 1986, p.341; Bhaskar 1989, p.4). Indeed, it was perceived at the time that taking this approach further might well have resulted in the creation of theories that were defendable but relatively benign (McCall & Lombardo 1978, p.xii; Stogdill 1974, p.vii). When looking from a systems perspective, the focus was on deriving interrelationships over time, rather than 'snapshot' cause-and-effect mechanisms (Senge 1990, p.73). The maturity of the research population at the time was of such a rudimentary nature that to expect a higher level of insight and theory building from this systems perspective was clearly unrealistic.

The development phase focused on the evolution of the tentative design into an artefact. This process is dependent on the nature of the artefact and the environment within which it is constructed and used, the critical issue being the design process rather than the actual design. By combining the findings generated within the action research process with the specific interest in purchasing improvement, it was possible to construct a framework proposal of the relevant issues that should be considered further. The issue thus became one of developing a research approach that would yield the necessary level of detail to populate the framework from a purchasing perspective. However, taking a narrow and deep approach would risk the creation of results that were context specific and not justifiable at a generic level, which is perfectly acceptable if the objective was to understand or explain the phenomena.

However, the purpose of this research was the development of a utilitarian

model that would inform and enable better implementation performance. Therefore, an approach was required that would provide data that was defensible if presented as a generic output. This effectively limited the research options to either analysis through an exploratory approach such as questionnaires or Delphi studies or an investigative approach such as case study or action research. In order to develop a generic model it would be necessary to cover a representative sample of the broader population and this raised further issues that limited the selection still further.

From the literature it was evident that the level of existing knowledge at both a theoretical and practical level was low. Therefore, simply sending out a questionnaire to all or a sample of the members of a purchasing related group would not guarantee that the responses would be informed through expertise, the opportunity to filter out opinion being minimal. This is also potentially true of a Delphi study group.

Even if this issue can be reconciled, the problem of proposing general findings from a small expert group becomes the critical disabling factor. Questions surrounding the breadth of organisational environments and contexts arise, the nature of the improvement work, the problems encountered and the intuitive preferences of the change agents all begin to have a disproportionate influence on the outcomes the smaller the research population becomes. Action research suffers from all of the above impediments, the population tends to be a very small number and is often a single group and the level of expertise will probably be low due to the need to engage in this sort of developmental approach. This leaves the case study as the remaining logical option. However, it is not without problems of its own.

Case study research is usually conducted on a small population of between one and three cases. This leaves little opportunity for making generic statements about observed phenomena. Also, the research population within each case cannot be guaranteed to display implementation expertise. It is possible for the case being researched to be found to be beyond their level of existing competence and circumstances may prevail that make 'success'

unattainable even with exposure to the most capable levels of expertise.

This situation highlights one other opportunity known as a collective case study. Within this approach, a number of existing case studies are investigated. The advantages of this approach are that the details of the cases are known before the investigation and therefore the level of relevance can be gauged before a commitment is made to the approach. Also, the outcomes generated by each case are known and this provides a level of security that the cases exist within the constraints of the research objectives. In this case, the demonstration of implementation capabilities during successful purchasing and supply management development programmes. Finally, the number of cases is known and this provides an opportunity to assess the potential for creating generic statements from the possible findings. Therefore, the preferred approach for this research was deemed to be a collective case study analysis based on an appropriate sample of cases from a recognised source of academic purchasing expertise.

Evaluation of the artefact can exist at a number of levels. The intent was to create a model that helped practitioners in their quest to deploy suitable enabling activities and this required the exploration of successful programmes in an attempt to extract the relevant data that could be constructed into some form of model. The evaluation was carried out in three phases.

The first phase of evaluation was based on the utility of the model from a practical perspective. If the model could not be related to either the content or process perspectives of change then it could be assumed that it may be quickly discarded as the practitioners persist with their intuitive behaviours or look for an alternative, more easily adopted solution. This process took two forms. First, a maturity axis was developed that enabled easy alignment of the model with the existing purchasing content models. This was evaluated in terms of the level of alignment and the ease with which the alignment relationships could be made. Second, implementation characteristics were defined that could be related to process aspects of change. This enabled relational contexts to be created between the model and the various stages of

a change process. Again, these were related to existing models in an attempt to determine their ease of positioning against well recognised schemas.

The second phase of evaluation took place before the model was created. This involved a review process to check that the collection of case studies was relevant to the research objectives and approach. This process was also conducted in two stages. First, the integrity of the cases was assessed from the perspective of academic rigour in terms of the way they were selected and the method used to construct each case. In the second stage the cases themselves were examined to confirm that each resulted in a successful outcome and that the enabling activities used were sufficiently well described.

The third phase of the evaluation process was concerned with the detail of the finished model. This assessment was conducted from a number of perspectives. Throughout the research, propositions and theories were made that would both guide and inform the construction of the findings. These ideas were continually tested and refined as each iterative cycle was completed. The result of this process was progressive enlightenment as issues emerged and their relevance was understood. A clear example of this related to the need to conduct a secondary literature review as the relevance of the maturity levels surfaced. The model itself was evaluated in terms of the themes and interrelationships that it exhibited. These were explored both from the inner environmental perspective (the components that make up the artefact) and the outer environmental perspective (the contextual forces and effects impacting upon the artefact, together with the relationships between both environments) (Maturana 1987; Varela 1988). Much of this aspect of the evaluation process relied on the extrapolation of themes and characteristics in order to develop the discussion to a reasonable level of detail.

Within many design research activities it is possible to test the artefact within the context of its expected use. Testing of this nature was not performed within this research project. During the action research phase the continual interaction between researcher and researched resulted in an ongoing iterative test of the theories being developed. This resulted in a robust

'tentative design' reinforced by a significant amount of supporting data. The case studies used were based on carefully researched projects that all exhibited successful outcomes and the focal research content required by this thesis. Integrating these two data sources resulted in the development of the research model proposed by the thesis. While it can be argued that generating the model within a sparsely researched area of knowledge is significant progress in its own right, it does highlight the possibility of issues emerging that might not have been found during the development phase. This, therefore, is acknowledged as a limitation of the research.

The conclusions from the design research are used to summarise the key points and make definitive statements relating to the initial research problem and the questions that are subsequently raised. This is particularly important given the propensity for multiple theoretical iterations to have been developed over the course of the project as the data has emerged (Tesch 1987, p.231; Kensit 2000, p.104). The output of the design research can be characterised in terms of five levels of abstraction, as shown in Table 18.

	Outputs	**Descriptions**
1	Constructs	The conceptual vocabulary of a domain
2	Models	A set of propositions or statements expressing relationships between constructs
3	Methods	A set of steps used to perform a task – how-to knowledge
4	Instantiations	The operationalisation of constructs, models and methods
5	Better Theories	Artefact construction as analogous to experimental natural science

Table 18: The outputs of design research (*adapted from* March & Smith, 1995; Purao, 2002; Rossi & Sein, 2003)

An alternative perspective on the levels of abstraction is presented in Figure 30. This model provides useful insight into the most appropriate options to consider when developing the research design in terms of the objectives of the project and understanding what types of knowledge already exist.

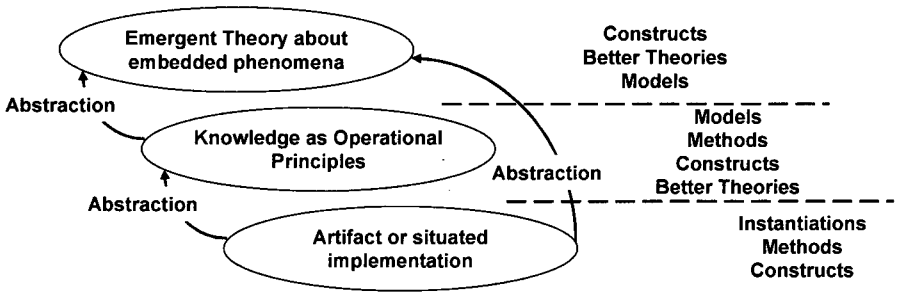


Figure 30: Outputs of design research (Purao, 2002), *after* Gregg *et al*, 2001)

The literature review highlighted the presence of numerous constructs within the field of organisational development. The change management models of Gibb, Cicmil, and Tzortzopoulos *et al* provided a means of understanding the critical relationships between parts and thus helped to identify the areas of weakness within the existing knowledge. Relevant methods were evident in the form of Lewin's and Kotter's instantiations, which were used in a broader context through the availability of the case study material. Although, as March and Smith (1995) observe, this level of abstraction existed without the more fundamental levels of construct, model and method.

At an early stage of this research it became apparent that the level of applicable knowledge was limited. This implied that the underlying objective of this research should be to develop a foundation from which further investigation could take place. The literature provided a clear indication of the importance of a systemic approach within this type of real world environment and this implies that simply identifying and defining an appropriate set of constructs would not be a sufficient response to the research problem. The complexity of the subject provides a counter-balance in that being too ambitious may well result in ultimate failure as the work becomes divergent or unmanageable. The proposed output from the research was thus positioned at the 'model' level of abstraction. This emphasised the importance within the research of developing the constructs but acknowledged the systemic importance of creating some form of structure within which their relationships over time could be demonstrated.

4.6 Research Methodology and Method Overview

The research was split into three distinct phases of activity. Each phase was based on a different methodological perspective and generated specific outcomes, as shown in Figure 31.

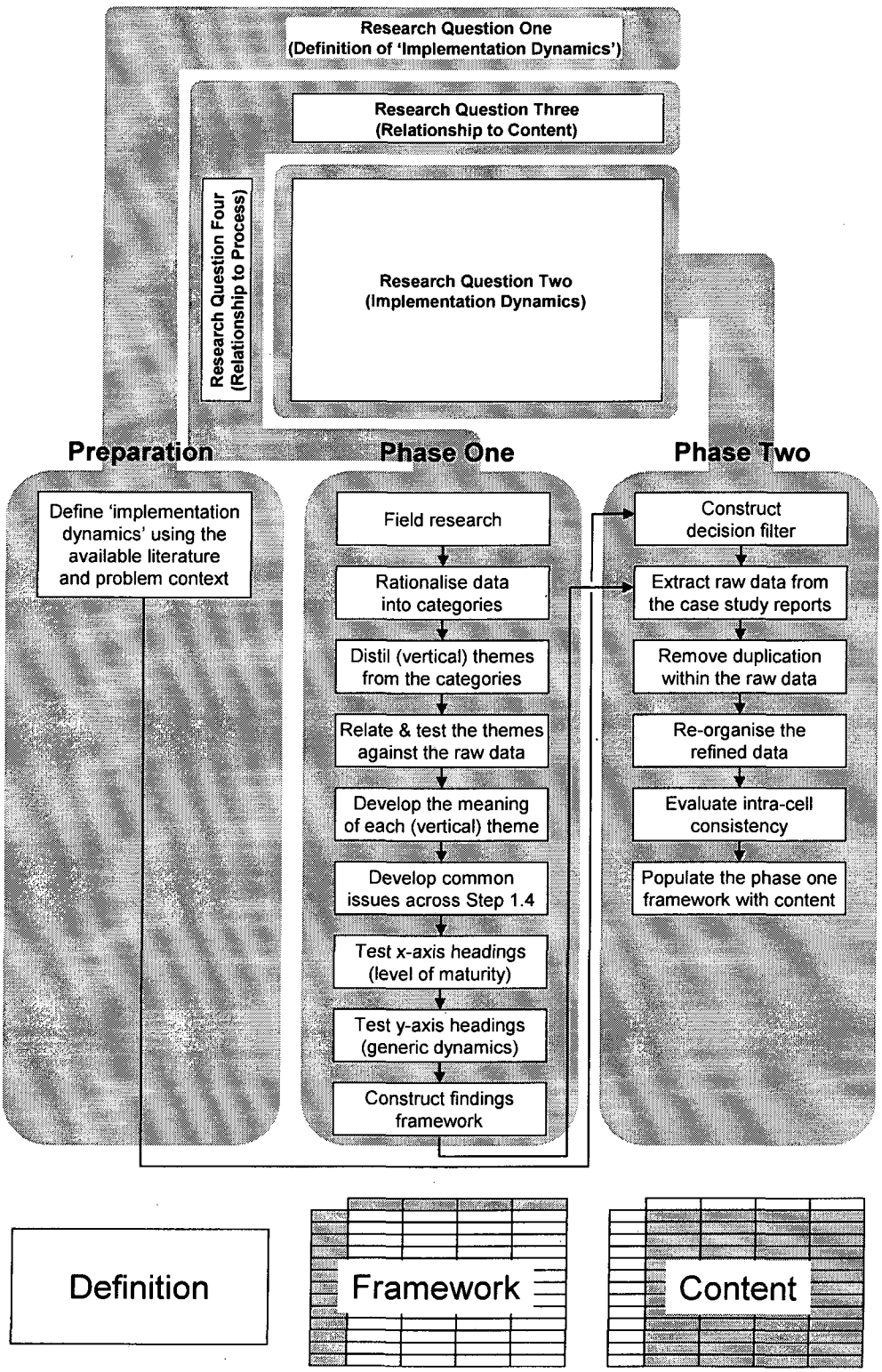


Figure 31: Structure of the design research methodology used

4.7 Phase One – Action Research

4.7.1 Introduction

'Action research is essentially a problem-solving process, appropriate to any situation where specific knowledge is required to address a specific problem or when a new approach is to be introduced into an old system' (Brewerton & Millward 2001, p.13). It therefore comprises a group of academic research methodols that aim to pursue both action and research outcomes simultaneously. This characteristic tends to exhibit itself through some components that resemble consultancy, and some that resemble field research. Indeed, during the research process concerns were expressed that the approach was 'too academic' by practitioners and 'too much like consultancy' by some academics. This situation continually reinforced the need to provide a balanced accommodation during the applied phases of the research so that both paradigms enabled rather than detracted from each other.

Action research is particularly appropriate for this study as it is a science based on immersion in practical enquiry and application (Torbert 1991, p.220). This is in sharp contrast to the approaches of the 'traditional' sciences (Argyris *et al* 1985, p.1), where the researcher 'makes every effort to remain objectively remote from the system being studied' (Bawden 1991, p.37). Environments undergoing significant change are inherently complex and difficult to understand as an external observer, an issue that is compounded by the strong social connotations invoked by such situations. In this respect, if action research were not accepted as a valid research methodology, then there would be many situations where robust or in-depth research would not be possible. As Bawden (1991, p.37) observes, 'it is the activity of the [researcher]-observer joining with other participant-observers, that enables the system to become a researching system in the first place!'

The rejection of the more positivist approach implies a certain propensity toward critical theory, given the dissatisfaction with the incumbent ideological frames used by more 'mainstream' researchers in their attempts to make sense of the world (Kincheloe & McLaren 2000, p.288). The initial

observations indicated that the practitioners were not only lacking knowledge and skill in change implementation but also that they lacked the ability to critically analyse their problems and construct meaningful analysis and responses to the situations they found themselves in. This is extremely important if meaningful research is to be conducted using a positivist approach given their lack of ability to articulate their perceptions. Working directly with the research population allows the simultaneous duality of 'understanding' and 'promoting change' (Robson 1993, p.438; Fals Borda 2001, p.28), the latter emphasising the need to focus on developing possibilities for future action, rather than reflecting on past actions (Elden & Chisholm 1993, p.127). This is contradictory to the traditional view of scientific knowledge as resulting from 'sense data that can be directly experienced and verified between independent observers' (Susman & Evered 1978, p.583). Action research therefore presents a conundrum in terms of balancing the abstract truth of positivism with the richness that can be gained through a deep exploration of complex situations as they happen. A comparison of the two research traditions is shown in Table 19.

Points of comparison	**Positivist science**	**Action research**
Value proposition	Methods are value neutral	Methods develop social systems and release human potential
Time perspective	Observation of the present	Observation of the present plus interpretation of the present from knowledge of the past, conceptualisation of more desirable futures
Relationship with units	Detached spectator, client system members are objects to study	Client system members are self-reflective subjects with whom to collaborate
Treatment of units studied	Cases are of interest only as representatives of populations	Cases can be sufficient sources of knowledge
Language for describing units	Denotative, observational	Connotative, metaphorical
Basis for assuming existence of units	Exist independently of humans	Human artefacts for human purposes
Epistemological aims	Induction and deduction	Conjecturing, creating settings for learning & modelling of behaviour
Criteria for confirmation	Logical consistency, prediction and control	Evaluating whether actions produce intended consequences
Basis for generalisation	Broad, universal and free of context	Narrow situational and bound by context

Table 19: Comparisons of positivist science and action research (Susman & Evered 1978, p.600)

Despite action research residing mainly within the domain of the social sciences, it appears that this rigid view of what 'proper' research entails still remains, even among social scientists (Argyris *et al* 1985, p.12). As a result, 'action research is bound to be found wanting if measured against the criteria reserved for positivism whereas it is perfectly justifiable from the standpoint of other philosophies such as phenomenology' (Easterby-Smith *et al* 1991, p.34).

The purpose of the research was to identify the critical implementation issues and then construct a framework within which they could be organised. Initially, this process was a problem due to the lack of awareness of anything beyond the symptoms that were presenting themselves as unsuccessful implementation actions were taken. Neither root-causes nor the full spectrum of issues were becoming apparent as each supplier organisation focused intently on its own situation. As a consequence, the action research approach became a critical enabler in facilitating the deconstruction and hypothesising necessary to understand the 'unworkable theories and organisational defences' that had been progressively constructed and endorsed by the organisational members themselves (Grudens-Schuck 1998, p.61). Key to this process was the collaboration that used the research vehicle as a means of enabling 'mutual understanding and consensus, democratic decision making and common action' (Oja & Smulyan 1989, p.12). To achieve collaboration at this level required a great deal of sensitivity, given that the experiences of the participants tended to have the effect of upsetting their incumbent paradigms within a context of the need to change being forced upon them by a powerful customer (Michael 1995, p.470). Ultimately, the intent was to create conditions 'conducive to inquiry and learning' (Argyris *et al* 1985, p.137). In this way, action research was used as a form of self-reflective enquiry undertaken by participants in socially oriented organisational situations as a means of improving the rationality of their own practices through better understanding of these practices and the systemic environment (Carr & Kemmis 1986, p.162; Reason & Bradbury 2001, p.1). This approach tended to reflect the Lewinian proposition that 'causal inferences about the behaviour of human beings are more likely to be valid and enactable when the

human beings in question participate in building and testing them' (Argyris & Schön 1991, p.86). It also provided the means of academically exploring a situation that would have been unresearchable to any level of defensible detail using a positivistic methodology.

4.7.2 The Research Context

In 1997, the Deming-based system improvement consultancy, Process Management International (PMI), was contracted by a UK automotive manufacturer to provide expertise in deploying process improvement skills within 120 of its worst performing suppliers. The programme had been running within the automotive manufacturer developing competences within its own business for approximately two years before it was expanded to include suppliers. Suppliers attended programmes in 'waves' of 20 at a time and progressed through a structured programme of management education, process improvement consultant training and implementation support, including group workshops, as depicted in Figure 32.

The focus of the programme was very much centred on process improvement (*see* Sirkin & Stalk 1990, p.26) as exemplified by the work of W. Edwards Deming (Deming 1982; 1986; 1993). The aim of the programme was to simultaneously resolve the supply issues that were at the root-cause of some of the customer's own poor performance and to support the development of a process improvement competence within the supplier as a means of ensuring that future problems could be dealt with autonomously without the need for further customer support.

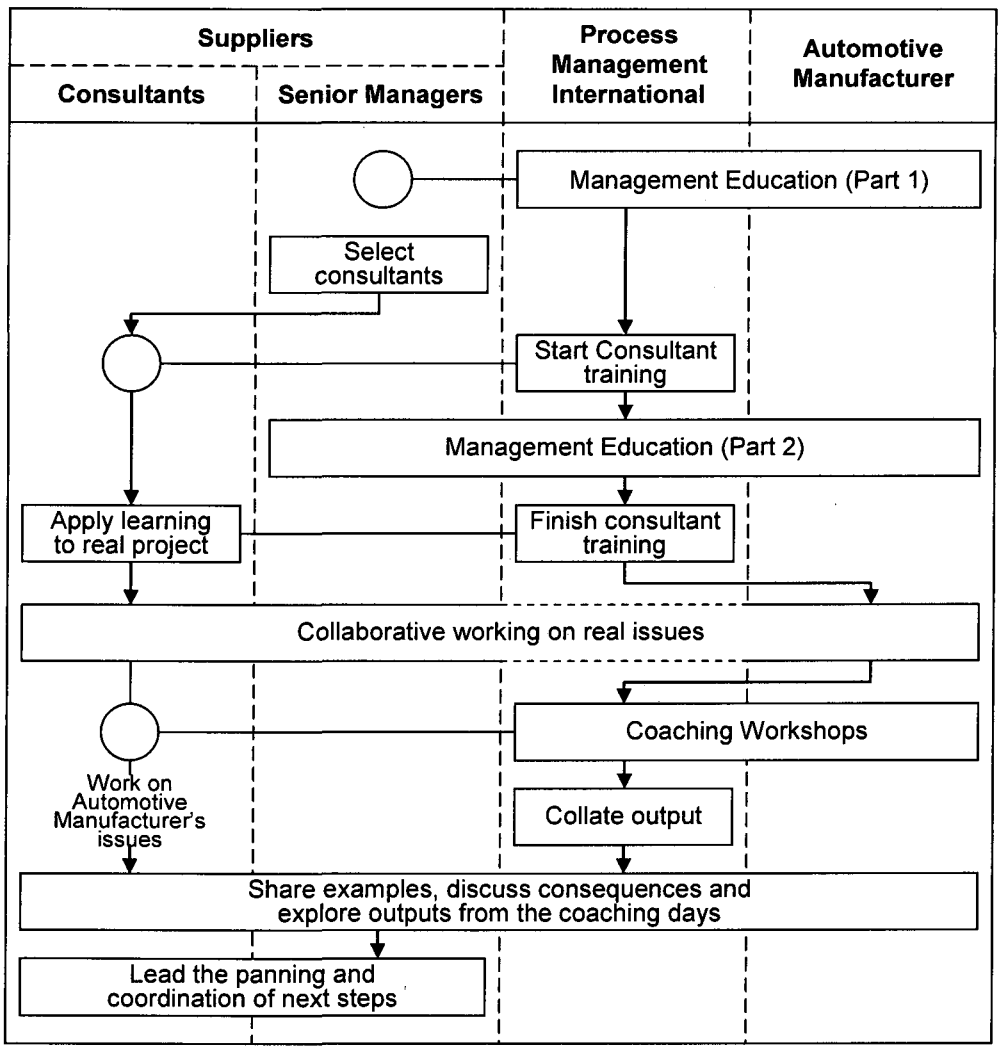


Figure 32: The Initial Learning Process for Supplier Process Improvement (Process Management International, 1996)

The action research focused on the coaching workshops that followed the training stages. The purpose of these was to explore and resolve the implementation issues being experienced by the trainee process improvement consultants (Eden & Huxham 1996, p.75; Freire 1970, p.75; Rapoport 1970, p.1). These workshops tended to follow a structured, but emergent, framework that developed as the needs of the participants were discovered and codified by PMI (Cohen & Manion 1989, p.223). The workshop planning followed the same model as action research planning with the initial codified framework being derived deductively (i.e. using logical thought), and the workshop process being developed inductively (i.e. from empirical evidence)

as the issues emerged (Brewerton & Millward 2001, p.14). This meant that no two workshops followed exactly the same format, or generated the same output.

Given this iterative development of the workshops, the purpose and outcomes became more sophisticated as both the knowledge base and the competence to apply the knowledge grew.

Generally, the approach was to look beyond the issues of individual aspects of the organisation or processes, preferring to attempt to 'understand issues found within organisations by making a distinction between the way we look at the parts of a system and the system itself' as discussed by Bertalanfy (1968, p.31). This naturally shifted the focus of the trainee consultants onto dealing with the complexities of whole systems (Bertalanfy 1968, p.5) and the way that they interact with their environment (Behrens 1984, p.49). The types of problem that they appeared to be experiencing seemed to revolve around the myopic situation of understanding the process improvement theory but not its practical application (Winter 1987, p.48). This presented itself as an ideal situation in which to use action research given its 'applicability to the understanding, planning, and implementing of change in business firms and other organisations' (Greenwood *et al* 1993, p.175; *see also* Carr & Kemmis 1986, p.165). This was a particularly important part of the development process for the trainee consultants, especially for those who were struggling in difficult environments, as the investigations enabled them to come to an understanding of what was happening to them and their environment. As they 'co-created their world' with the other members of the group (Reason & Bradbury 2001, p.7), they were able to explore and develop practical strategies for resolving their difficulties and moving forward. This co-creation necessitated close collaboration between the set of actors (Clark 1972, p.65; Easterby-Smith *et al* 1991, p.81; French & Bell 1973, p.87) consisting of PMI (as expert leaders), customer consultants (experienced, customer-centric practitioners) and the supplier trainee consultants (who were still in learning mode).

This level of maturity in thinking did not emerge immediately. Progressive learning from each wave informed the assumptions that were applied to the next and in this way a model began to emerge that codified the major aspects of organisational improvement work that needed to be considered. The early waves were rather rudimentary with a strong emphasis on the local application of the improvement work. During the later waves the importance of support from the organisational infrastructure became widely recognised as a critical enabler and this realisation significantly changed the approach to the whole improvement programme. This was largely enabled by the improvements in the Action Research process itself, rather than solely the assimilation of new knowledge.

Of particular significance during the research was the undercurrent of tension between the perceptions of the research as a customer initiated activity and its role as a means of generating insight and providing support. This required a continuous and quite intensive process of first understanding the subconscious concerns of the trainee consultants and then developing suitable responses (Reason & Bradbury 2001, p.2). Central to this approach was the need to explicitly consider relationships with the other participants (Reason & Bradbury 2001, p.9). This point did become an issue at one point when two supplier representatives approached PMI and explained that they were feeling intimidated by the deep level of interest being shown in their work. In effect, their concern was that the interest being shown was in an attempt to find fault rather than to understand the deeper issues as a means of developing more robust solutions. The consequence of this intervention was a re-emphasis on supporting the supplier trainee consultants, the research being positioned as a secondary objective (Easterby-Smith *et al* 1991, p.33). Upon reflection this was quite a natural reaction on the part of the trainees given the customer-supplier relationship (*see* Ackoff 1994b, p.179; Rorty 1979, p.315), but the initial focus on conducting 'good' research had deflected attention away from the relationship issues (Easterby-Smith *et al* 1991, p.81; Kuhn 1962, p.151; Marshall 2001, p.433). After this incident much more attention was paid to the relationship implications of how the research was conducted resulting in the process being continually developed as

potential problems came to light (Easterby-Smith *et al* 1991, p.8).
Data from four of the waves was used in this thesis and these were selected as the stages at which a step-change in understanding was identified. Of special note is Wave One. It was acknowledged by all involved that this was the first attempt at a new approach to this type of work and therefore a great deal of time would be spent 'finding out' what worked from a practitioner perspective. This meant that the potential to produce a robust piece of academic work from this wave was negligible. Therefore, this wave was used as the vehicle for designing the academic aspects of the Action Research programme. Effectively, it served the purpose of piloting the process to be used.

Wave Two became the first structured research into understanding the issues that were facing the trainee improvement consultants. As little was known at this time it was important to ground the research findings within a context that was more contextually rich than simply relating it to an improvement programme. Therefore a pre-step was undertaken to understand the key characteristics of the actual work that had been undertaken (rather than the programme) and therefore the foundation for the subsequent feedback during the session. In terms of protecting the quality of data produced, it was decided to ask the delegates to describe the positive things that they had discovered before allowing them the opportunity to discuss the negative aspects of their work. This was felt to be important given the ease with which people tend to slip into negativity, unburdening themselves rather than focusing on the opportunity to learn about the possible solutions. This approach appeared successful in that objective data was secured before the emotional responses became dominant.

Wave Four adopted similar objectives to Wave Two, but followed an adapted process given the belief that political and peer pressure was skewing the data along the lines of specific agenda and customer-supplier relationship issues. As before, the context was seen as important. However, the process was modified in terms of the delegates presenting their own project progress and a PMI consultant noting the key factors. These factors were then consolidated

for the group to review and as a source of additional research data in terms of what appeared to be important from a success perspective. This approach effectively replaced the process of creating a 'positive' agenda at the start of the investigative process and allowed more time for investigating the issues facing the group. To minimise the skewing problems mentioned above, the delegates were asked to individually list their three top concerns. This presented an opportunity for anonymity and therefore the potential for more honest and accurate data. These were then arranged by the group as a whole using an Affinity Process and then discussed to enrich the understanding of what had been written. Active participation in the discussion was voluntary. By the end of Wave Four it was felt that significant data had been generated, as signalled by the significant levels of repetition that were beginning to emerge.

Wave Five signalled a significant change in the approach taken given both the quality of data that had already been generated and improvements in the sophistication of the action research process. The first development focused on the need to stratify the data collected in terms of the primary stakeholder groups to understand if there were any critical distinctions to be made between them. These groups were identified as the trainee improvement consultants, the management that were supporting them and the customer's representatives who had the dual role of supporting and overseeing the work. This stratified data presented a further opportunity in terms of prioritising the main issue themes through the use of an Interrelationship Diagraph. The consequence of this for the research was that not only were the needs of the different stakeholders now visible, the priority for implementing the solutions was also visible. This wave therefore became the tipping point from investigating and understanding the issues that were being faced to understanding the key implementation activities that needed to be undertaken by the improvement groups in order to resolve their difficulties.

Wave Seven existed toward the end of the programme and therefore benefited from the majority of the (research) learning that had taken place. Many of the activities described in previous waves were repeated as part of their own learning journey, but special emphasis was placed on assessing

where they were in terms of their level of understanding of the challenge facing them and what this might mean for their organisation in the future. The first stage of this approach attempted to consolidate the research findings generated so far by translating them into a real-world situation. The process used attempted to take the key success factors and model them into a generic organisation based on the knowledge and understanding of the delegates. This was obviously heavily biased toward the automotive industry, but it provided insight into the relevance or redundancy of the issues developed by the various waves. Indeed, this view was supported by the results, which expressed strong characteristics of 'automotive' and 'manufacturing'. This factor formed part of the justification for seeking a second research group as a means of generalising the findings to a wider population. Despite this limitation of the findings, the modelling activity was taken even further and an attempt made to envisage what the future might look like if the implementation programme proved to be successful. Again, the subtlety in this approach was to move the delegates away from thinking about solutions to their current problems and translating the motivation to what 'success' might look like. In this way, an attempt was being made to remove any constraints on what they believed they needed to do as a means of generating additional insight and ideas.

In summary, each of the four waves used yielded unique insight into the issues being faced during the implementation of an improvement programme:

- Wave Two provided the landscape of issues upon which themes could be developed;
- Wave Four developed and clarified some of these themes based on the experiences and perceived needs of the people directly involved in the programme;
- Wave Five built upon the understanding of these needs by stratifying data from the various stakeholder groups as a means of providing multiple perspectives at various organisational levels on the implementation issues;
- Wave Seven used the findings of the previous waves as a launch

platform to create the picture of a 'successful' outcome, thus providing some insight into the potential time implications of the programme as the programme became embedded within each organisation and matured.

The process used for analysing and interpreting the data for the academic report is detailed in the following section.

4.7.3 The Action Research Process

Rapoport (1970) describes action research as an approach that aims to contribute both to the practical concerns of people, including those in organisations, and to the goals of science. This highlights the importance of the action research process within the design research approach adopted by this study.

Before the process started, it was important to create an environment that was conducive to mutual understanding and consensus building. Part of the preparation process involved reinforcing to the delegates that 'the legitimacy of any conclusions and decisions reached by participants will be proportional to the degree of authentic engagement of those concerned' (Kemmis 2001, p.100). This was the case not only from an operational perspective but also in terms of the quality of research findings. A balance was agreed in terms of the delegates being offered clear visibility of both the process and the outcomes generated in return for their direct involvement in the process.

Hopkins (1985, p.114) describes a summary of the action research process that correlated closely to the approach taken in this project as shown in Table 20.

1	***Data collection*** and the generation of hypotheses.
2	***Validation*** of hypotheses through the use of analytic techniques.
3	***Interpretation*** by reference to theory, established practice and practitioner judgement.
4	***Action*** for improvement that is also monitored by the same research techniques.

Table 20: The simplified action research model (Hopkins 1985, p.114)

These stages seem to share some similarities with the Shewhart Cycle described by Deming (1986, p.132) and the Kolb Learning Cycle (Kolb & Fry 1975, p.35; Kolb 1984, p.21). By using the model presented in Table 20 it was possible to develop sufficient information to be able to produce a tentative design in response to the research problem.

Although the issues arising from poor implementation were perceived to be at the core of the research problem, there was insufficient data to be able to codify a hypothesis with which to progress. Thus, 'data collection' from the workshops provided insight into the range of issues that were adversely affecting the ability of the trainees to successfully implement their development programmes. The general approach tended to begin with a review of progress made by the supplier organisations; this provided a context for the subsequent investigative work. This was followed by a diagnostic session to identify and propose solutions to critical constraints. The result of these activities was the initial development of a number of theories relating to the ways in which implementation could be enabled.

'Validation' was approached from the perspective of being able to defend the concepts and ideas developed in the research. This was quite distinct from the concept of validation in terms of defining a theory as either 'right' or 'wrong'. Central to the success of this approach was the involvement of the delegates. They launched each set of activities by identifying the issues that were either causing them problems or that they did not understand enough to use properly, thus providing insight into the constraints that were preventing effective implementation. Paradoxically, despite presenting more questions than answers it was often their further involvement in the subsequent debate and exploration that led to the rich detail used in the later research phases.

'Interpretation' was conducted with reference back to the existing body of knowledge in the form of literature reviews of the relevant subjects. This proved to be difficult given the contextual sensitivities of each situation that tended to emphasise different aspects of the implementation issues being explored. The systems perspective proved very useful in providing a

standardised framework in terms of a lens through which appropriate questions could be constructed as a means of developing generic themes. This process was managed from a research perspective by positioning the generic findings as the basis from which the specific enabling actions of each supplier organisation were developed. In this way the needs of the client and the research were simultaneously aligned and resolved.

'Action' is the point at which the programme and the research significantly diverged. Once the supplier organisations had collectively worked on the improvement of the problematic situations (Rorty 1999, p.xxv; Fals Bardo 2001, p.28), the research process took the further step of developing the findings for the second stage of the research, the collective case study (Gustavsen 2001, p.17). This involved a significant amount of desk work that was not part of the core action research process, focusing instead on preparation for the diagnostic processes used to explore the case studies. As Kemmis and McTaggert (1988, p.10) observe, to be successful it is important to apply the process 'more carefully, more systematically, and more rigorously than one does in everyday life; and to use the relationships between those moments in the process as a source of both improvement and knowledge.' This approach is what made the supplier improvement programme academically distinct as an action research project.

4.7.4 Process Steps

During the Supplier Development Programme Seven waves of approximately 20 suppliers were progressed through the improvement methodology. This provided two distinct benefits to this research. First, the amount of data available was increased as the successive waves of suppliers worked through almost identical programmes. Second, as each wave was processed, the level of learning increased and it became possible to target specific research issues on successive waves of suppliers.

Step 1.1 – Field research:

- This is as per the workshop description given in the Research Context section, above.

Step 1.2 – Rationalise data into categories:

- [Wave 2 data was used as it focused on the learning during the initial implementation stages and identification of the common barriers to implementation that had been encountered.] See Appendix 1 - 4.
- Determine the focal issue being expressed in each bullet point (listed in the column 'Focal Issues'). See Appendix 5.
- Develop a Pareto Chart of the number of times each focal issue occurred. See Appendix 6.
- Rationalise the list. In this case, it was decided to remove all of the issues that occurred only once. The assumption used was that if issues were not repeated elsewhere then they were either unique to a specific contextual situation or not of major importance from a generic perspective. This approach was subjective given that the aim at this stage was to generate a set of data for guidance purposes. The coding process involved breaking the data down into their core themes. While this was being done, an attempt was made to 'keep hold of a large picture' (Ely *et al* 1991, p.87) as a means of making sure that the categories remained appropriate to the source context.

Step 1.3 – Distil (vertical) themes from the categories:

- [Wave 4 data was used, which asked a broader range of questions and focused more on the concerns of the trainee consultants resulting from the problems they were having.] See Appendix 2.
- Align the bullet points with the rationalised issues list developed in Step 1.2. See Appendix 7.
- Pareto the results and check for anomalies.
- Develop conceptual meaning from the Pareto list. The rationale applied for using the list was that the most often occurring issues might relate in terms of importance and/or general applicability. The meanings were also influenced by the 'Expanding spheres of influence' developed in the literature review from the work of Lamming & Cox (1999, p.16). See Appendix 8.

Step 1.4 – Relate and test the themes against the raw data:

- [Re-use the Wave 2 data]
- Review each bullet point against the conceptual meanings developed in Step 1.3 and explicitly state the relationship. See Appendix 9.
- Organise the relationships within each group of conceptual meanings; identifying first broad relationships and then more detailed relationships. See Appendix 10.
- Interpret a generic meaning from each of the closely related groups. See Appendix 11.

Step 1.5 – Develop the meaning of each vertical theme (*see* Hycner 1999, p.153):

- Develop cognitive maps for each of the four 'conceptual' groups as a means of checking their general coherence and logical progression through the various points highlighted. See Appendix 12.

Step 1.6 – Develop a codification of the common issues found across Step 1.4 (horizontal themes):

- Align the general meanings developed in step 1.4 horizontally, cutting across the root definitions developed in Step 1.5.
- Develop high-level headings that describe each of the implementation dynamics. See Appendix 13.

Step 1.7 – Test x-axis headings (Level of organisational maturity):

- [Wave 7 data was used as the test of the x-axis headings as it looked more toward the actions that the companies (rather than individuals) had in place to support implementation.] See Appendix 4.
- Cross-reference each bullet point with the most appropriate maturity level(s). See Appendix 14.
- Count the number of selections for each maturity level.
- Check for, and explain, any anomalies in terms of exceptionally high or low counts.

Step 1.8 – Test y-axis headings (Change leader Implementation dynamics):

- [Wave 5 data was used as the test of the y-axis headings as it focused more on the actions that needed to be taken by individuals within both the customer and supplier organisations.] See Appendix 3.
- Cross-reference each bullet point with the most appropriate implementation dynamic. See Appendix 15.
- Count the number of selections for each implementation dynamic.
- Check for, and explain, any anomalies in terms of exceptionally high or low counts.

Step 1.9 – Construct findings framework:

- Create the multiple case study analysis framework, placing the maturity levels on the horizontal axis and the implementation dynamics on the vertical axis. This is shown in Table 37.

The aim of the recycling of data was to 'continually seek to extract meaning from our environment... [by developing] plausible reason[s] for a confused situation...' (Allport & Postman 1947, p.37). This was, by its very nature a subjective process (Bhaskar 1989, p.24). However, it retained its academic legitimacy by following the action research process that evolved over a number of supplier waves, based on the cyclical process of 'research, action, reflection and evaluation' (Hart 1996, p.454). This is a point highlighted by Reason & Goodwin (1999, p.288) who argue that the 'order of a complex system is not predictable from the characteristics of the interconnected components nor from any design blueprint, but can be discovered only by operating the iterative cycle.' However, McTaggart (1996, p.248) cautions that viewing the action research spiral as a process is fundamentally wrong. Instead, he describes it as 'a series of commitments to observe and problematise *[sic]* through practice a series of principles for conducting social enquiry.' In this regard, the research 'process' described above should be viewed purely as a convenient mechanism for informing the reader of the way in which the action research phase of the project was approached.

4.7.5 Phase One Summary

The action research phase of this research focused on the needs of practitioners engaged in implementing development programmes within their own organisations. Since it related to a specific context this precludes the justification of general applicability for the results. It is suggested, however, that the results are relevant and applicable to the implementation of development programmes within organisations. This makes the outcome of phase one more specific but still flexible enough to be of use in phase two of the research. In taking this stance, Lyotard's post-modernist view was adopted arguing that there is no single 'grand narrative' regarding what can be viewed as truth. Instead, truth is constructed from a multitude of 'little narratives' formed as the result of 'local determinism' (Lyotard 1984, p.xxiv). This adopts the perspective of the 'pragmatists' who see knowledge emerging from the integration of data from a multitude of sources (Pierce 1992, p.52; p.131), the truth of each statement depending on its 'coherence' with other statements (Ramberg 1989, p.44). However, this approach to the nature of truth appears to rely quite heavily on the 'law of averages' argument, and as Putnam (1987, p.24) cautions, 'empirically established' general statements about the world we experience are only true 'under normal conditions.' This chimes with the use of phase one outputs in phase two.

The alternative view to this approach would have argued that there is an objective reality. However, Collier (1994, p.16; p.50) counters this argument, not by dismissing it, but by stating that 'our knowledge of it is destined to be forever fallible.' We must therefore either look for alternative ways of presenting 'reality' or caveat all research with the observation that we are presenting our findings in the knowledge that they are fundamentally flawed. In this respect, this research openly acknowledges the multitude of subjective influences that will have impacted upon the research process (Bhaskar 1986, p.160).

By its very nature, this research was based on the social world and therefore needed to be 'self-reflexive'; recognising, explaining and accommodating its limitations within a social context. The approach has enabled progressive

convergence with objective reality through iterative cycles, while readily acknowledging that the process can never be completed and true objectivity achieved (Bhaskar 1989, p.22). Convergence was achieved through a process of continually checking assumptions against various cognitive resources, such as direct observation, existing literature and discussion with participants and observers. To this end, it is inherently value-laden. While this was perceived to be of concern it was not judged critical, given the subsequent phase of the research, which would act as a normalising influence on the findings (Bhaskar 1986, p.169).

4.8 Phase Two – Collective Case Study Analysis

4.8.1 Introduction

As has already been described, qualitative research focuses on studying phenomena that occur in complex natural or social settings (Leedy & Ormrod 2001, p.147). A sub-set of this research paradigm is the case study methodology. It should be noted, however, that case study research is not exclusively qualitative in nature (Yin 2003, p.14) and can also include quantitative methods with neither approach necessarily being predominant (Sjoberg *et al* 1991, p.2). Indeed, the original case study research process employed by Monczka used both methods as a means of identifying and then exploring examples of best practice in purchasing development.

The research problem identified the need for sources of information that would provide insight into the implementation practices that resulted in successful development outcomes. As shown earlier, the literature proposes that this is a poorly understood area of knowledge and that Purchasing is no exception. Therefore, the issue became one of identifying a research population that was either undergoing a development programme or had recently recorded a relevant implementation process used in previous developments and had demonstrated success in terms of the outcomes of that implementation. This second point effectively precluded the use of 'real-time' investigation as the outcomes would remain unknown until the completion of the project. Creating a profile of both successful and unsuccessful implementation activities did initially appear to have some merit. However, the literature also indicated the high level of contextual sensitivity that exists and this may have resulted in activities being classified as unsuccessful simply because they were applied in the wrong situation rather than because they were generally ineffective. The outcome of this reasoning was the decision to explore a large number of successful programmes across a broad area in an attempt to identify a significant and diverse number of implementation activities. This removed the issue of activities being incorrectly categorised for a specific case, providing instead the constructs of a model that could be used as a generic reference and then contextualised by the user for a given situation.

The search for potential sources of data, following the reasoning explained above, identified *The Global Procurement and Supply Chain Benchmarking Initiative* as a comprehensive source of academically constructed information. This work, conducted by Monczka between 1997-2000, was unpublished beyond the member companies of the study and had focused on defining best practices across diverse areas of purchasing and supply management. Within the material was a large number of case studies that included the processes and activities used to implement each successful change programme. The case studies were researched within their organisational context drawing on first-hand experiences to develop the content of each case. This was important given the need to disaggregate the contextual issues from the phenomena in order to accurately codify the various characteristics of each development programme. The investigations themselves also involved third-parties, such as supplier organisations, as a means of validating and enriching the data that was being generated (Creswell 2002, p.154). This implied a good level of alignment between the objectives of the research, the design research methodology and the information that was already available (Yin 2003, p.13). The research processes used by the Monczka work are described in detail later in this section.

The level of detail generated by this approach resulted in a 'thick description' that supports the assessment of 'judgments of transferability' (Lincoln & Guba 1985, p.359). This was important in terms of developing a generic model as identified in the objectives of the research, particularly given that the research was intended to explore a phenomenon that is little understood. It was therefore important that the findings could be generalised to a wider context in order to become testable. As Stake (2000, p.437) observes 'cases are chosen because it is believed that understanding them will lead to better understanding ... about a still larger collection of cases.' The owner of the research data, Professor Monczka of Michigan State University, agreed to allow them to be used for this work with the caveat of confidentiality. This means that the cases used cannot be reproduced in their entirety, but 'appropriate extracts' may be used as necessary.

The legitimacy of this approach was carefully considered from an academic perspective, but as Miles & Huberman (1994, p.40) state, 'by discarding previous lessons as irrelevant, [inexperienced researchers] fail to learn from the studies of others.' This provided a precedent for using existing research work, including developing its findings for a different purpose, and so the approach was adopted within the Development and Evaluation phases of the Design Research process.

In summary, this approach provided high quality, extensive and recent data that could be used to provide the breadth and richness of case material necessary for this research. Such data could not have been gathered otherwise in this context, nor would a few new cases provide the necessary integrity for the purpose.

4.8.2 Research Context

The Global Procurement and Supply Chain Benchmarking Initiative at Michigan State University was developed to 'identify and describe leading and insightful practices in procurement and supply chain management.' (GEBN 1998, p.1). This objective was realised through the introduction of a number of work streams that sought to add knowledge found from different sources and combine them into a single coherent resource.

The foundation of the work was based around a benchmarking activity that provided the insight into the areas of procurement and supply chain management that were either of most interest to the participating companies or were causing them particular problems at that time. This study was published to the members, but the responses were never attributed to individual companies.

Following this benchmark activity, the research staff made contact with the companies that appeared to be 'best in class' in the different aspects of procurement and supply chain management (see Figures 33 & 34) with the intention of performing in-depth studies into these specific processes. These detailed studies formed the basis for the case study reports used in this

thesis. The benchmarking and case study research processes are described in more detail later in this section.

Beyond these two stages, the work of the Benchmarking Initiative took on a more consultative role to its members following a formal handover to The Executive Development Programs Group within Michigan State University in 2000. This was exemplified by the creation of a Strategic Self-Assessment System 'to allow companies to compare their strategic performance against other organisations, identify gaps and prioritise the gaps for resolution' (Monczka 2000, p.3).

Additional work streams that continued included twice-yearly Executive Workshops for the member companies that consisted of reports on further 'best practice' development and discussions through Delphi-style groups.

In some instances, these meetings generated issues that warranted further investigation through questionnaires on specific issues that were then turned into discrete reports back to the member companies.

Running in the background to this direct contact with members was the review of academic and generally published literature covering the topics of procurement and supply chain management. These were then provided through the member's website.

The research population consisted of approximately 200 organisations. Listed below is a summary of the main sectors, together with some description of the types of company that they include:

- Manufacturing:
    - Heavy construction equipment (design and make);
    - Heavy transportation equipment (design and make);
    - Mechanical and electrical components and assemblies;
    - Consumer and white goods manufacture.

- Transport Services:
    - Airlines;
    - Railways.
- Service Industries:
    - Transport infrastructure;
    - Mail services;
    - Consultancy;
    - Domestic services (gas, water, electric, telephone);
    - Financial.
- Automotive:
    - Manufacturers;
    - Suppliers.
- Government:
    - Central government departments;
    - Local government departments.
- Petrochemicals:
    - Oil producers;
    - Oil refiners and distributors.
- Process Industries:
    - Food stuffs (including drinks);
    - Domestic materials (mainly cleaning).

The character of the organisations in terms of global presence varies greatly. The significant majority of the companies have a well recognised and mature global footprint with a very small minority only existing at a regional or national level. These are predominantly government organisations. The spend profile of the various companies is also broad, with the majority generating turnovers close to, or in excess of, one billion dollars annually. Again, a small minority have a significantly lower turnover, ranging from one to a few million dollars annually.

Given that the case studies were generated from the above population and were anonymous, it was not felt necessary or meaningful within the context of

this research to elaborate more accurately on the profile of the research population as any inference between statistical profiles and the data generated from an individual case or group of cases could not be correlated in any meaningful way.

The initiative was organised around eight processes and six enablers as shown in Figure 33 and Figure 34.

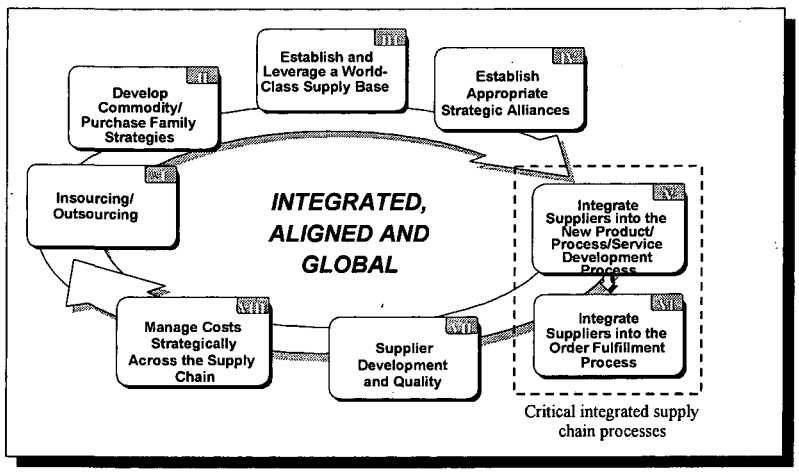


Figure 33: World class excellence model strategic processes (GEBN 1998, p.2)

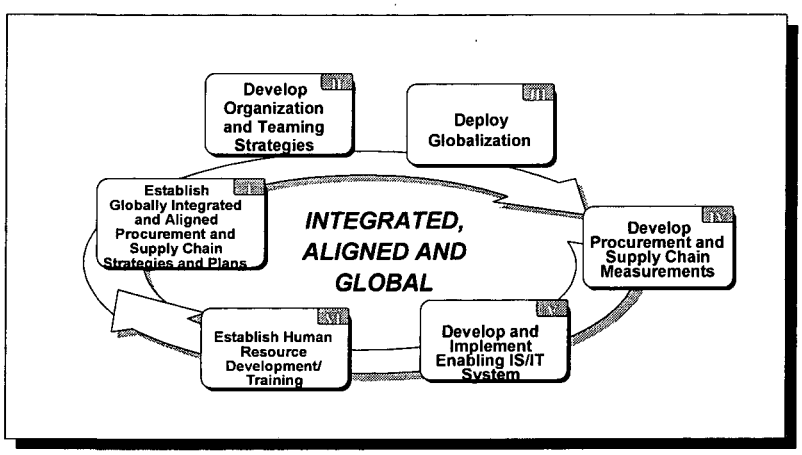


Figure 34: World class excellence model enabling processes (GEBN 1998, p.2)

The research was conducted in two distinct phases. First, questionnaires were sent to all participating companies, covering each of the processes and

enablers. This was followed by the case study exploration of the most proficient purchasing and supply management organisations, identified from the initial questionnaire investigation (described later in this section). This structured questionnaire was used to determine the purchasing profile of each organisation. The information sought was qualitative and quantitative in nature in order to generate a holistic picture of the situation. The responses were analysed, interpreted and collated to form the basis of the report. Analysis was conducted by a number of researchers who were paired, but worked independently of each other using the same data sets. Where discrepancies were found in the collated output, a third researcher was introduced to check and then mediate the findings until a consensus could be agreed. Statistical analysis of the quantitative questions was used to develop a profile of the responding companies. This was then used to develop insights into factors that might help to develop the function further both within a firm and across enterprises. Conclusions from these statistical analyses resulted in the following key outcomes (GEBN, 1999):

1. An explanatory model based on existing literature and knowledge generated by the study.
2. Comparative criteria to classify companies' responses.
3. The classification of companies as most advanced, moderately advanced and basic; based on the above comparative criteria.
4. A summary of critical success factors, lessons learned and future directions.
5. Identification of suitable candidate organisations for further case study exploration.

The case study activities followed as a consequence of the above findings and followed the general approach described below (GEBN, 2000):

1. Identify from the questionnaire responses the leading examples of process and enabler capability;

2. Ensure a spread of market sector categories to cover both traditional manufacturing and developing industries;
3. From the above, select a number of 'focus companies' that would be investigated in depth and be responsible for nominating representative customers and suppliers for further interviews. (In some cases, the supply chain for a particular product was explored in depth, in others the total supply chain was used.);
4. Identify a contact person at each of the focus companies to coordinate the interviews;
5. Visit each of the focus companies for two or three days to:
   a. fully brief them on the purpose of the research and expected outputs,
   b. undertake one-to-two hour interviews with individuals or small groups who have direct responsibility for purchasing and supply processes and activities.
6. Interview representative supplier and customer organisations from each focus companies' supply chains. (In no case, did the same supplier and customer interview cover two focus company supply chains.);
7. Follow up with some limited telephone interviews and conference calls where face-to-face interviews could not be arranged within the timescale or where individuals were remotely situated;
8. Write up the 'Supply Chain Assessment and Gap Analysis' for each focus company (a confidential document for the focus company);
9. Compare field interview findings against previously developed models to support further research development and findings;
10. Prepare a final report to be provided to all participating organisations.

Each case followed the same general format, consisting of seven main sections:

1. *Background* – an introduction to the case, its context, objectives and any special issues that were of specific relevance.
2. *Strategy* – a description of the general approach that was taken by the organisation.
3. *Critical Success Factors* – a summary of the key issues that were managed in order to ensure a successful outcome.
4. *Implementation Steps* – a step-by-step guide to the actual activities executed during the project.
5. *Results* – a list of the performance measures used during the project and the level of improvement made (normally expressed as a percentage).
6. *Failed and Rejected Strategies* – a summary and explanation of what did not work or was not used during implementation.
7. *Future Plans* – an overview of further developments that are planned as next-steps, building on the current success of the respective projects.

4.8.2.1 Validation of the Case Studies

The methodology described above was checked against a number of mainstream academic resources (Miles & Huberman, 1994; Silverman, 2000; Brewerton & Millward, 2001) to ensure that it conforms to the standards expected of an academic piece of work. However, given its clear grounding in practice, it also appeared to suggest some characteristics of consultancy. This presented a dilemma and it was thus felt necessary to get an independent (academic) view as to whether the material being used constituted 'case studies' to a level of acceptable academic rigour. The issue was discussed with Professor Brian Wilson, formerly at Lancaster University. Professor Wilson was one of the original developers of the Soft Systems Methodology (itself derived from the outcome of action research), and therefore eminently

qualified to express an academically-based opinion on the matter. It was his clear conclusion, after discussing the way in which the cases were both generated and would be used, that they were of an acceptable academic quality and detail, and that their use would constitute rigorous research in this context.

4.8.3 Collective Case Study Analysis

Yin (2003, p.13) argues that 'you would use the case study method because you deliberately wanted to cover contextual conditions-believing that they might be highly pertinent to your phenomenon of study.' However, in this instance it is preferable that the contextual constraints of individual cases are mitigated through the aggregation of data from a number of cases (Stake 2000, p.77). The cases used in this research cover multiple operational aspects of purchasing and supply management and therefore provides the opportunity to gain insight at a more generic and functional level. It should be acknowledged that this is a nominal relationship, based on functional significance, and that in other respects the cases are independent of each other.

The collective case study analysis is used in this research to 'investigate a phenomenon, population, or general condition' (Stake 2000, p.437). The availability of such a large number of cases that were simultaneously diverse and relevant to this research supported the belief that it might be possible to draw generic conclusions from the findings. Reflecting on the statistical view that the larger the sample population the greater the level of confidence that can be inferred upon extrapolations from the data, it seemed appropriate to explore all of the cases available from Monczka's study. The qualitative approach used in this research negates any empirical inference from the number of cases selected. However, the diversity of issues that they relate to could result in a skewing effect if inappropriately sampled. For instance, cases relating to strategy could have a financial emphasis, as could those covering commodity strategies, strategic cost management and skill and knowledge development. In order to filter out any bias, the whole population would have to be reviewed and a framework created to select a representative sample.

This in itself would be a largely subjective process and therefore present the risk of corrupting the whole research phase before it had begun. Ultimately, the safest approach was to use all of the available cases and accept the possibility that some of the work may be a duplication of findings already generated. Indeed, Creswell (2000, p.120) argues that case studies should 'represent diverse cases to fully display multiple perspectives about the cases and show different perspectives on the problem, process, or event.' In the context of this research, the logical argument was that the more cases used, the more likely it would be to capture multiple perspectives.

The issue of diversity is further exacerbated by the engagement of a large number of researchers to produce the case studies. This can be argued to be a problem for the research in that the inherently subjective nature of case study research means that each researcher will introduce bias into their reporting. However, two positive views can be drawn from this situation. First, the availability of such a large number of studies argues a neutralising effect on the possible bias introduced within each individual case. Second, these diverse perspectives can be argued to represent the range of views that will be exhibited within a real change situation. Therefore, their accommodation within the research can be argued to enhance, rather than detract from, the quality of the findings generated. Further supporting this view, Yin (2003, p.46) sees the use of multiple-case studies as adding to rigour and validity believing that they can be 'considered more compelling, and the overall study is therefore regarded as more robust.' This is a belief well worth protecting if academic rigour is to be ensured.

However, Neuman (1997, p.22) states that 'damage occurs when the commitment to generalise, or create theory runs so strong that the researcher's attention is drawn away from features important for understanding the case itself.' The consequences of this statement for the research are clear. If an attempt is made to do too much with the available data it is possible that the immediately obvious findings generated through a sweep of the cases as a whole would be considered sufficient. This risked missing the more deeply embedded richness that existed within each case.

Both Powell (1998, p.49) and Mouton (2001, p.149) are of the opinion that case study research involves intensive analysis of a small number of subjects, possibly gathered from a larger sample population. In response to this potential problem, a research template was created that provided clear and consistent structure to the process of exploring the cases. This template was the output generated from the Action Research phase of the research. In this way, the depth of investigation was maintained as the search criteria were cycled through for each case study. Had the template been inappropriate for the cases then problems would have arisen in aligning the Action Research and case study findings, leading to the need for a further iteration of the analysis work. Miles & Huberman (1994, p.245) propose a number of data analysis tactics for finding meaning and for drawing and verifying the quality of conclusions, which include:

1. *Noting patterns and themes* - the human mind is able to find patterns quickly. This means that complex instructions are not needed;
2. *Seeing plausibility* - the idea that certain conclusions are plausible. That is, they make good sense;
3. *Clustering* - clustering is the process of grouping similar categories, and, as with the preceding tactics, caution should be used to avoid premature closure of categories;
4. *Making metaphors* - metaphors add richness and complexity to qualitative data analysis in such a way as to clarify and elucidate meanings. The definition of metaphor as data reducing devices, by taking several particulars and making a single generality of them, is useful in handling the volume of data generated in qualitative research. Metaphors are also pattern-making devices that can centre data within a larger context;
5. *Counting* - using quantitative techniques in qualitative research should not be ignored as a categorisation strategy;
6. *Making contrasts and comparisons* - comparing is 'a natural and quick method to evaluate experiences, as well as a time honoured, classic way to test a conclusion.'

Although the use of metaphors appeared to offer a potential way forward, it would have resulted in other problems, given the need to interpret meaning from the data as a necessary part of the metaphor building process. This left clustering as the alternative approach relevant to the objectives of this research. However, the case studies were in narrative form and therefore needed to be codified prior to categorising. This process was not without risk given the definition of content analysis as being used to make 'inherent inferences from texts' (Weber 1990, p.9) thus potentially introducing the subjectivity that has been so carefully avoided.

Content analysis has been defined in various ways; it may be distilled as the application of a systematic process used to make inferences from any available form of communication (Berelson 1952, p.18; Stone *et al* 1966, p.5; Carney 1971, p.52; Krippendorf 1980, p.21; Weber 1990, p.9; Riffe *et al* 1998, p.20). It is often aligned with quantitative research (Neuendorf 2002, p.1) although Krippendorf (2004, p.16) argues that the need to distinguish between quantitative and qualitative paradigms is pointless, arguing that all analysis of this kind is fundamentally qualitative given the initial need to interpret meaning from the source material. Within this part of the research it is the process of extraction that is central to the generation of useful information, this has been facilitated through the substitution of the 'inference building' part of the content analysis process with the framework developed in the suggestion phase of the design research process.

As mentioned earlier, the framework provided 'naturalistic generalisations', which are 'generalizations that people can learn from the case either for themselves or for applying it to a population of cases' (Creswell 1998, p.154). This was a useful approach to take in that it presented a means of tentatively organising the case study data and testing the phase one framework with a completely different set of data. The assumption was made that if the case study data could not be organised within the framework with reasonable ease, then there was potentially a problem between what had been identified as the main implementation dynamic 'themes' and the data that represented the real-life situations. Ultimately what this tests is the paradigm that had been

developed in the form of the framework. Kohl (1992, p.117) defines this as 'a filter or grid through which the world is understood. It is not a theory or set of rules governing thought so much as an orientation of mind that determines how one thinks about the world.' To quote Professor Brian Wilson (27/03/2006) 'It is not right or wrong, only different.' Therefore, what was being tested was whether the 'differences' were compatible within the context of the research. If there appears to be alignment between the two sets of findings then it is possible to go to the next stage and go 'through [the case study] documentation to search for primary issues and to develop a table representing the repetition of categorical data.' (Stake 2000, p.82).

4.8.4 The Collective Case Study Analysis Process

Merriam (1998, p.194) provides a succinct description of the research approach employed, recounting that 'For the within-case analysis, each case is first treated as a comprehensive case in and of itself. Data are gathered so the researcher can learn as much about the contextual variables as possible that might have a bearing on the case... A qualitative, inductive, multi-case study seeks to build abstractions across cases.' The key point in this description is that abstractions lead to generalisations, one of the primary objectives of this research.

The starting point was the organisation of the cases. The most appropriate way of doing this reflected the type of activity being developed, as described in Figures 33 and 34 above. This potentially offered an additional, more detailed, avenue of investigation, should the findings yield anomalies or patterns requiring further exploration.

The analysis of the case studies followed a pattern of repetition as the material was reviewed a number of times in order to contextualise the cases, first separately and then collectively, followed by a process of extracting the relevant content. As Stake (2000, p.77) observes, 'Analysis is a matter of giving meaning to first impressions as well as to final compilations.' Yin (2003, p.11) emphasises this approach of continually testing understanding by identifying the need for both rigour and repetition in order to develop high-

quality research. This naturally led to a process of 'selecting, focussing, simplifying, abstracting and transforming the data' (Miles & Huberman 1994, p.10) in order to develop useful conclusions. Similarities with case study research were evident on this approach in terms of the search for converging information (Creswell 1998, p.213). Although, as Miles & Huberman (1994, p.11) caution, 'final conclusions would not emerge until all the data had been collected, even though tentative conclusions could be drawn much sooner.' However, the emphasis on iteration as an emergent method for developing progressively more detailed findings did prove to be a successful approach.

The methods used to perform these tasks were described within the research literature and tended to promote the use of computers to support the analysis of large volumes of text (*see* Neuendorf 2002, p.225; Krippendorf 2004, p.ch.12). The main benefit of using a computer would have been the speed and reliability of the data processing (Krippendorf 2004, p.257). However, the problem with this approach was that the computer programmes would require the creation of a decision filter as a reference for analysing the text. The only available framework to base this on was the findings developed in phase one. The problem with using these findings in this way was that the computer programme would slavishly follow the instruction-set that it had been given. This meant that the programme would simply mirror the phase one findings through the output generated from the collective case study material, thus presenting no opportunity for iterative learning and reflection. Therefore, it was decided to perform the process manually, using a computer to capture the output of each stage and to manage the organisation of the data as it was sorted. This did result in delays in the processing of the full text, but the benefit of having taking time to stop and think about the findings carefully, and then to explore possible alternative scenarios far, outweighed any demerit.

4.8.5 Process Steps

Step 2.1 – Construct decision filter:

- The purpose of the decision filter was to create a standard reference from which to evaluate activities and their relevance to the research.

The definition of an implementation dynamic was refined during the execution of Step 2.2 and took the form of the following three criteria:

1. The activities were described in verb form;
2. The activities did not directly result in achievement of the stated objectives of the development programme;
3. Instead, the dynamics either enabled or supported the implementation of the stated programme objectives without forming part of the characteristic of the outcome.

Step 2.2 – Extract raw data from case study reports:

- Read the complete set of case studies to gain a contextually collective understanding of the nature of the dynamics and the general themes that might be of relevance.
- Re-read each case study and highlight (electronically in Microsoft Word) descriptions of development activities and how they were implemented. This emphasised the importance of finding appropriate verbs that related to 'how' things were done, rather than 'what' was done. For example, a new process was introduced (what was done) by engaging senior executive support (how it was done). Being able to discriminate required a clear understanding of the stated objectives of each programme as a prerequisite to making the distinction between 'direct' and 'enabling' activities.
- A third re-read was undertaken to understand the contextual situation within which the development took place. The highlighted description was then linked to appropriate generic dynamics within the framework model (the vertical axis) and the appropriate level of maturity (the horizontal axis). The dynamics were identified by codifying the activity steps that were described in each case. The level of maturity was defined in terms of either the sphere of influence that the programme objective covered (function, firm, dyad or network) or the sphere of influence of the activity itself. The decision as to which approach to use was based on the strength of the logical relationship to organisational entity or activity. If the activity related to more than one 'cell' within the

framework then it was placed in all relevant cells. The case study text was electronically 'cut-and-pasted' into the framework document as a means of maintaining the integrity of the original language used. See Appendix 16.

Step 2.3 – Remove duplication from raw data:

- Each of the cells was reviewed in turn to identify obvious duplication of descriptions (i.e. where the same generic description of an activity had been generated from more than one case study). If there were minor differences or ambiguity in meaning the descriptions were not deleted.

Step 2.4 – Re-organise refined data:

- The remaining descriptions within each framework cell were then sub-grouped, based on emerging themes or relationships between the individual descriptions.
- A heading was developed for each set of descriptions that summarised their collective meaning. Key words from the descriptions were used in an attempt to maintain the integrity of the analysis.
- The headings were then placed into the framework as a summary form of the case study analysis. See Appendix 17.

Step 2.5 – Evaluate intra-cell consistency:

- The relationships between the headings were then analysed graphically through the use of cognitive maps (Miles & Huberman, 1994).
- Headings that closely related to each other were bounded together within the maps.
- Any anomalies or 'outliers' were investigated and resolved within the context of the field of enquiry using the Affinity Diagram technique. (Miles & Huberman, 1994)
- The headings were further summarised to provide a succinct definition of each respective issue.

Step 2.6 – Populate framework with content:

- The summarised definitions were aligned within the original framework and any relationships that crossed the maturity levels were highlighted using arrows. See Appendix 18.

4.8.6 Phase Two Summary

Although this phase of the research appears to begin with an emphasis on objectivity in terms of the framework developed in phase one, a necessary part of the reflective process is the acknowledgement and accommodation of the subjective influences inherent in all researchers (Gitlin *et al* 1993, p.205; Hodkinson 1998, p.557). As Creswell (1998, p.85) points out when discussing case study research, the issue is to create an appropriate balance given that 'neither subjectivity nor objectivity has a stranglehold on truth' (Phillips 1993, p.61). This emphasises the rejection of 'the naive view that research findings can have the objective status of timeless and more or less context-free truths' while protecting this type of research outcome from degenerating into 'a multitude of personal accounts of particular situations' (Newby 1997, p.77).

The issue to be addressed at this stage of the research was whether more data and analysis were required, or whether the research has reached an appropriate and natural conclusion. Ely *et al* (1991, p.91) describe this as 'knowing when to leave the field' and see it as a 'judgement based on the researcher's sense that substantial amounts of data have been gathered on the initial questions that have emerged during the study.' This is ultimately a subjective assessment although there are certain criteria that can guide the decision to end data collection or to leave the field Ely *et al* (1991, p.92):

1. when a feeling of immersion is reached;
2. when few unanswered questions remain;
3. when the most important questions are answered;
4. when staying in the field is only for the sake of fun, or of feeling needed;

5. when a sense of redundancy and feeling completed is reached, not when a great deal of time is spent, or a large amount of data is collected.

These criteria appear to focus quite strongly on the discretion of the researcher. This reinforces the proposition that in addition to the 'science' of research it is also important to 'Have courage to use your own reason' (Kant 1963, p.3). As Wilson (1984, p.1) observes 'The best we can achieve is to derive conclusions which are defensible (and hopefully appropriate to the situation). The defensibility can be argued on the basis of the intellectual constructs used; the appropriateness comes from the selection of the intellectual constructs themselves.' Ultimately, the issue is one of credibility, why should this research be believed? These questions are dealt with in the last section of this research methodology.

4.8.7 Research Quality Assurance

Throughout the study, the approach and outcomes were measured against a number of academic research standards. Rather than being adopted at discrete points of the study, the approach taken focused on the importance of assessing the entire thesis as one piece of work against the standards of rigour demanded for academic research.

4.8.8 Research Credibility

The issue of credibility appears to be difficult to resolve when considering qualitative research. As Eisner (1991, p.53) observes, 'there are no operationally defined truth tests to apply to qualitative research.' This appears to limit the assessment of a piece of research to 'a joint responsibility' shared between the researcher and the reader (Glaser & Strauss 1967, p.232). On the one hand, it is incumbent upon the researcher to be as explicit as possible about the assumptions and approaches used. On the other-hand it is necessary for the reader to take a considered view of the material presented to them, acknowledging their own preferences in favour of a measured evaluation of the material. This implies that credibility should be judged in terms of 'pragmatic validation' in which 'the perspective presented is judged

by its relevance to and use by those to whom it is presented: their perspective and actions joined to the [researcher's] perspective and actions' (Patton 1990, p.485).

From an input perspective, the action research phase of the study followed a clear process using the work with delegates from the supplier development programme to construct the framework model for phase two of the research. Phase two did present a significant issue regarding the lack of published raw data within this thesis due to the constraints imposed by Monczka in his conditions for using the data. This ultimately prevents the corroboration of findings or the development of alternative interpretations (Mehan 1979, p.15; Lincoln & Guba 1985, p.212). Miles and Huberman (1994, p.11) argue that 'the other side of conclusion drawing is verification.' If we accept this argument, then the findings of this research cannot necessarily be verified and this could be seen as a limitation of the research. However, the raw data does exist with Professor Monczka, who could be contacted as the information owner, of such verification were required.

Yin (2003, p.90) focuses more on the process side of research, identifying three principles. Despite his focus on case study research, these principles do have wider applicability in guiding research methodology and methods. First, using multiple sources of evidence not only builds credibility through the corroboration of ideas from disparate sources but also demonstrates the ability to retrieve and coherently integrate various sources of information. This study focused primarily on the supplier development action research material, the case studies and existing literature as the means for building a portfolio of evidence. This leads to the second principle of creating a database of information in order to effectively organise and present the research and its findings. This is a fundamental issue in terms of making transparent the distinction between original and modified data. The combination of methods used and the material generated leads to the third principle of maintaining a chain of evidence. This allows the reader to scrutinise and judge the research process from initial questions through to results and conclusions. The basic tenet of this approach is that no original evidence is lost and a clear

description of the research process exists. This principle does present problems with regard to this research in that the original data from the case studies is only available in the form of discrete quotes. However, the quotes themselves were presented verbatim from the original material and therefore it is only the context that is lost.

Eisner (1991) focuses on the outcomes of the research process by taking a holistic view of the issues that should be considered by the reader. The need for coherence emphasises the importance of the sections of the thesis integrating to form a single piece of work. This was approached within this study by leading the reader through the sections in an attempt to first build an awareness of the issue and then explore the subject as a means of eventually drawing conclusions. In this way, the process begins with a problem that is bounded by the literature and then researched, using multiple sources, to the point where useful outcomes are presented as a consequence of the investigation. Until consensus can be achieved with regard to the outcomes generated, the thesis will tend to exist within a state of scepticism or rejection. Ultimately this is a function of whether the reader can agree with the findings based on the evidence presented. This does not necessarily mean that the reader's own understanding of the subject is identical, but it does require the presentation of a plausible argument based on the perspectives of incumbent knowledge. Fundamental to this concept is the agreement of the reader that the methodology used to generate the findings was both robust and relevant. Part of the consensus-building process is the issue of instrumental utility. This was a core issue throughout the research given the evidence that practitioners were experiencing significant problems during the implementation phases of their development programmes. This issue was reinforced by the apparent lack of information available from previous academic research. The combination of these two factors indicated that the research would be of significant interest to all groups involved in implementing change or development programmes.

The careful consideration of input, process and output issues collectively informed the development and execution of the research, rendering it credible

from both an academic and general reader point of view.

4.9 Reliability

The issue of reliability presents a clear distinction between the quantitative tradition and that of the qualitative approach used in this research. Considering the level of complexity often found in qualitative studies, Wilson (2001, p.1) argues that 'In business analysis generally it is a defensible argument to support business change (not optimisation or the right answer) that is sought.' This acknowledges the myriad issues and perspectives that need to be consolidated in order to present a summarisation and evaluation of the research area. Given that every individual has a unique perspective, developed as a result of their experiences and learning, it is questionable whether the same set of circumstances can be repeatably codified by different researchers, even when using the same methodology. Indeed, Glassner and Loughlin (*in* Silverman 2000, p.228) make the clear distinction that 'In more positivistic research designs, coder reliability is assessed in terms of agreement among coders. In qualitative research one is unconcerned with standardising interpretation of data.' However, this is a contentious issue as demonstrated by the definition of qualitative reliability as 'the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions' (Hammersley 1992a, p.67). This presented a quandary in terms of which approach to take when viewing the problem in terms of the outcome. Yin (2003, p.90) takes a different perspective viewing reliability as relating to the quality of the research processes, the quality being measured in terms of the ability of other researchers to repeat the research and generate comparable results. This implies that the outcomes may demonstrate differences but qualifies this point by arguing that it should be possible to resolve these differences by looking at the broader research and situational context. This involves showing how 'data generation and analysis have not only been appropriate to the research questions, but also thorough, careful, honest and accurate' (Mason 1996, p.146). As Kirk and Miller (1986, p.72) observe 'Qualitative researchers can no longer afford to beg the issue of reliability. While the forte of field research will always lie in its capability to sort out the

validity of propositions, its results will (reasonably) go ignored without attention to reliability. For reliability to be calculated, it is incumbent on the scientific investigator to document his or her procedure.'

The approach taken within this research acknowledged the importance of being able to generate comparable outcomes but argued that for it to be the primary criterion upon which reliability is assessed would mean that the degree of consistency of the researchers would also need to be a primary consideration. This would arguably involve matching their life experiences, educational backgrounds, beliefs and values, and motivation for doing research in order to create a consistent frame in terms of the symbiotic relationship between researcher and research methods inherent in all qualitative studies. This is an unrealistic situation and therefore the approach adopted involved focusing on the importance of creating a defensible process that was closely aligned to the research data trail as the primary source of reliability, reflecting the credibility issue of the reader being able to reconcile their own views with the logic offered by the researcher.

4.10 Subjectivity

The issues described above relating to reliability have strong links to the issue of subjectivity. Kirk and Miller (1986, p.11) highlight the tensions between the research traditions observing that 'The assumptions underlying the search for objectivity are simple. There is a world of empirical reality out there. The way we perceive and understand that world is largely up to us, but the world does not tolerate all understandings of it equally.' The processes used within the qualitative tradition openly acknowledge the role of 'the researcher's values, experiences, and personal points of view' (Strand 2000, p.91) as influential in the development and interpretation of findings. In these situations the responsibility rests with the researcher to reveal their preferences, as far as they are able to identify them, so that others can critically evaluate their implications and limitations within the context of the mental constructs influencing the project (Brown 1992, p.390). As Peshkin (1988, p.17) notes, subjectivity is 'the quality of the investigator that affects the results of observational investigation.' This argument appears to place a great deal of

emphasis on the quality of the researcher. If this is the case then it calls into question the reliability argument that the replication of findings by different observers is important. If we accept that reliability and subjectivity are important issues to consider then the researcher/observer is simultaneously a non-critical (re: reliability – where the method is the issue) and a critical (re: subjectivity – where the person is the issue) factor. This conundrum can only be resolved by accepting that both reliability and subjectivity are important issues that reflect the collaborative relationship between researcher and research methods.

Creswell (1998, p.85) appears to accept the presence of researcher influence when discussing case study research, arguing that the approach requires a balance between subjectivity and objectivity. During the action research phase of the study it could be argued that the whole process was inherently subjective given the lack of *a priori* knowledge upon which to build. To some extent this was balanced by the collective case study analysis, which used the constructed framework as a reference vehicle from which to extract and organise the extracted descriptions of implementation activity. The critical issue from a research perspective appears to one of explicitly stating where and when subjective judgements have been used. An example of this was demonstrated to some extent within the literature review, which acted as a mechanism for constructing a representation of the issues that were deemed to be important to the research. Given the constraints of a literary review it is incumbent upon the researcher to present what they believe to be the primary issues and to exclude the peripheral aspects of the subject.

Ultimately, it is the combination of researcher subjectivity and methodological reliability that maintains the integrity of the research. To deny the existence of subjectivity appears to be naïve. Instead, the issue should be identified and the ways in which its detrimental influences are managed clearly defined within the methodology.

4.11 Validity

Stake (2000, p.109) emphasises the importance of using high standards of

validation when assessing research. He acknowledges the complexity and subsequent difficulty of conducting qualitative research, arguing that the researcher is ethically obliged to 'minimise misrepresentation and misunderstanding.' The ethics of research are echoed by Christians (2000, p.140), who claims that 'fabrications, fraudulent materials, omissions, and contrivances are both non-scientific and unethical.' The approach used in this research has been to ensure transparency of both the material (within the constraints imposed) and the research processes used.

Validity can often be focused solely on the findings of the research. As already mentioned, this is an issue for qualitative research, where an emphasis on process is critical to assessing the quality of the work produced. Graue and Walsh (1998, p.246) combine the issues of outcome and process by asking whether the research methods are appropriate for the research questions being asked. They go on to explore the validity of interpretation by reviewing the links between research questions, the relationships between interpretation and research methods, the data presentation and the theories employed. This argues that all components of the thesis need to correlate and validate each other. This deals with the issues relating directly to the thesis itself and can therefore be described as internal validity. However, the research has come from a 'real world' investigation and its value is partly a function of how the real world perceives the findings presented. This is the issue of external validity.

External validity explains how transferable the research findings are beyond the cases used in the study (Yin 2003, p.43). Critics of research involving case studies claim that no generalisation can be claimed on the basis of a few, or one, case (Yin 2003, p.43). This criticism played some part in the decision to review the full complement of 126 cases available within the Monczka study. Not only was this a comprehensive portfolio of data, it also covered a comprehensive range of purchasing and supply management functionality.

According to Yin (2003, p.38; *see also* Buhanist 2000, p.166), there are two different ways of claiming validity through generalisation:

1. Statistical – Positivistic inferences are made about a research population on the basis of mathematical predictions emerging from the analysis of a sample of empirical data (Yin 2003, p.38; Argyris & Schön 1991, p.85).
2. Analytical – Phenomenological approaches are used to analyse cases and identify patterns that exist from one to another; the more cases that are used, the greater the level of implied validity (Ellram 1996, p.104; *see also* Miles & Huberman 1994, p.435). Yin (2003, p.38) appears quite belligerent on this point by claiming that even when only two cases support previous results, replication can be claimed.

This research process employed an analytical approach to generalisation, first building a framework in response to the problems faced by practitioners through the Action Research phase of the study and then populating the framework with purchasing specific implementation dynamics through the Collective Case Study phase. This approach has provided the opportunity to claim transferability of the findings from a number of perspectives:

1. The supplier organisations used in the first phase, although all within the automotive sector, developed a cross-organisational profile of the issues typically faced. In all, over 100 companies contributed to the study. Therefore, transferability is believed to exist across the automotive sector at an organisational level;
2. The second phase of the study used over 120 case studies derived from a diverse research population as described earlier. The main limitation of this population was the lack of small organisations in terms of turnover. With this exception, it is suggested that the population is reasonably representative of the major business sectors found in most major economies.

Accepting the caveats presented above, a high degree of transferability is claimed for the findings of this research. However, the author does suggest that due care is taken in applying the findings given the unique contextual issues found in all development programmes as discussed in the Literature Review.

4.12 Methodological Summary

The research employed the design research paradigm to build a model of implementation dynamics that could be used to improve the potential for success of improvement programmes within the field of purchasing and supply management. The methodology was pluralistic, covering action research in the abductive stage and collective case study analysis in the deductive stage of the research design process.

Central to the research was the use of case studies generated during a previous academic study. Careful attention was paid to the validation of this material through discussion with various academics and through reference to research literature.

Throughout the study a quality assurance approach has been used to ensure the integrity of both the research processes used and the outcomes generated.

Chapter 5: Findings

5.1 Introduction

The initial motivation for the research came from a desire to understand why organisations were apparently achieving varying levels of success when employing the same improvement methodology.

Given the lack of knowledge within the area of implementing change within purchasing, it was necessary to develop the findings from a foundational level, building the evidence to a point where conclusions could be drawn that could resolve the questions posited in this thesis. The result of this was intended to inform theory in terms of this relatively under-developed field of study and practice in terms of potentially successful approaches to the implementation of change.

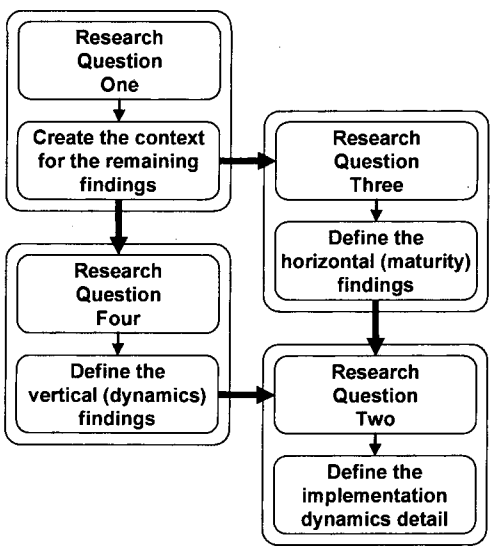


Figure 35: Logical flow of the Findings Section

Figure 35 provides a graphical summary of the organisation of this section and is described in more detail below.

The first issue addressed was the development of a clear definition of 'implementation dynamics'. This formed the root from which the remainder of the study was developed and provided the answer to Research Question one.

The use of the supplier development programme as part of the action research phase required an abductive approach. This yielded a number of useful insights given the multiple facets of internal competence development (i.e. in the supplier), problems of implementing improvements at the firm level, relationships with the customer organisation and interaction with other suppliers within a network environment.

The findings from this supplier development area of the research were used for the development of a framework that provided answers to Research Questions three and four in the form of the two framework axes. The horizontal axis resolves Research Question three and defines the maturity characteristics of the implementation dynamics, which enables an alignment with the purchasing content models. The vertical axis responds to Research Question four and defines the various groups of implementation dynamics in a generic form that provides a means of relating them to the change processes defined by authors such as Kotter.

The answers to Research Questions three and four served two purposes. First, they were used to provide a model within which the implementation dynamics were developed and organised during the research process itself. Second, they were used to form the framework as part of the final output to provide relational meaning with regard to the content and process aspects of implementing change.

The use of data derived from a large number of 'best practice' purchasing and supply management case studies provided insight across a broad range of organisations and related content areas. This was useful in terms of developing findings that could be generalised within the field of purchasing. The approach taken here was more deductive, using the output from the action research phase to inform the development of the implementation dynamics. These findings were used for the development of the implementation dynamic detail that formed the basis of the answer to Research Question two.

The remainder of this section is split into four parts as defined by the Research Questions. Research Question one was answered first to provide a foundation upon which the research was based. Research Questions three and four were then developed in preparation for the organisation of the detail that was contained within Research Question two. The findings are presented in this order.

Throughout this presentation of Findings, specific resonance with relevant points made in the literature is noted by reference.

5.2 Research Question 1: Definition of 'implementation dynamics'.

Question 1:
What characteristics may be used to describe implementation dynamics?

5.2.1 Introduction

Due to the lack of a clear definition of 'implementation dynamics' it became necessary to start with this objective. Not only did this contribute to the thesis in terms of an outcome, it also provided a frame of reference upon which the subsequent research could be conducted. The material used to construct the definition came predominantly from the literature as it was a prerequisite of defining the research focus and approach.

5.2.2 Findings

The change models reviewed (Gibb 1991; Cicmil 1999, p.9; Tzortzopoulos *et al* 2005, p.472) identified that there were a number of aspects that needed to be considered. These aspects included '*context*, *triggers*, *process*, *content*, *activities* and *outcomes*'. Probably the least well defined of these was 'activities'. While much of the research focus emphasised them as individually distinct in their own right, it was their relationships with each other that provides a more holistic meaning (Lewin 1946, p.240; Pettigrew *et al* 2001, p.698).

Defining these aspects of change is a complex issue, not simply because of

their characteristics but also due to their continual evolution as they develop in response to each other and the situational circumstances (Cicmil, 1999). In order to respond to these emergent changes it is incumbent on the change leaders to deploy activities that are both situational and relevant to the needs of the programme; these are referred to as 'dynamic capabilities' (Teece *et al* 1997, p.515).

Therefore, within the context of this research, 'activities' are referred to as 'implementation dynamics', which are the responses used to support the changes within the emergent environment as characterised by the aspects of change identified above.

The *context* defines the issues that the dynamics need to address. Context is often constructed in the form of a system model that is flexible enough to change over time (Thornhill *et al* 2000, p.40). From a systems perspective this highlights the importance of understanding both the elements and their interaction (Katz & Khan 1966, p.17; Pettigrew 1990, p.270; Strickland 1998, p.76). If the modelling is inadequate or unrepresentative then the consequences can be the use of inappropriate implementation dynamics that might generate more issues than they solve (Macbeth 2002, p.730). Over time this becomes a vicious circle resulting in a steady loss of control and eventual chaos or collapse. Instead, what is required is the application of dynamics that both move the technical aspects of the programme forward and also accommodate the humanistic aspects that are influenced by culture and inertial forces (Kleiner & Corrigan 1989, p.29).

Triggers identify the main issues that have led to the need for change from both inside and outside the organisation (Kanter *et al* 1992, p.24; Goodstein & Burke 1997, p.159; French & Bell 1999, p.2). Consequently, they provide an undercurrent that influences the selection of appropriate dynamics in response to the perception of threat, loss or opportunity (Kleiner & Corrigan 1989, p.25; Scherr 1989, p.407; Miles *et al* 1995, p.142).

The *process* provides a general guiding approach within, what is often, a

complex and constantly changing situation (Kanter *et al* 1992, p.12; Dawson 1994, p.3; Styhre 2002, p.349). Given the disorder that this causes, the process, as a macro-concept, is underpinned by the micro-level implementation dynamics, which modify and realign the approach in accordance with the emerging demands of the situation.

In the above situations, the issue becomes one of understanding the relationship between the parts of the organisation and how they dynamically interact (Katz & Khan 1966, p.17; Strickland 1998, p.76). Making sense of the situation then allows issues to be managed more effectively on a case-by-case basis as they occur collectively contributing and reinforcing the implementation process and objectives (Lawrence & Lorsch 1967, p.133; Sadler 1996, p.55; Anderson *et al* 2004, p.152).

The change *content* is predominantly used to define outcome objectives, but can also be used to make visible proposed improvement roadmaps (Macbeth 2002, p.730). Although this is often portrayed at a generic organisational level the reality is that maturity is not a homogenous concept; rather, it varies in its nature across the organisation and its incumbent practices (Reck & Long 1988, p.8).

Content models are often defined in terms of capability characteristics. These are mainly the 'ordinary' capabilities that are required to do the job. However, a second set of competences exist, dynamic competences, which are used to 'extend, modify or create ordinary capabilities' (Winter 2003, p.991). These are the capabilities that directly relate to implementation dynamics. In this respect, implementation dynamics are activities that enable the delivery of ordinary capabilities and, as such, may be neither permanent nor defined as a development outcome in their own right.

5.2.3 Summary

Implementation dynamics are reactive in nature, being used as a corrective response to contextual issues as they emerge. They are strongly influenced (and constrained) by both the triggers that initiated the development

programme and the change process that guides its implementation. The primary purpose of using implementation dynamics is to enable the deployment of content objectives in pursuance of the desired programme outcomes.

Capturing this succinctly, Smith (2005, p.522) summarises the appropriate use of implementation dynamics as one of understanding the factors that may cause problems and then identifying and implementing responses that are appropriate to the situation at hand.

5.2.4 Definition

Implementation dynamics are context specific micro-level actions used to enable the delivery of change related content as a prerequisite of achieving predefined improvement programme objectives.

5.3 Research Question 3: Alignment with Purchasing Content Models.

Question 3: How can the implementation dynamics from Research Question 2 be aligned with the existing purchasing and supply management content models?

5.3.1 Introduction

Reviewing the development of the suppliers during their training and deployment activities identified characteristics that correlated with both the maturity aspects of the purchasing content models and the literature on organisational change. This emphasised the importance of the relationships between the various aspects of a change programme and thus influenced the decision to explore further the nature of these interdependencies (Pettigrew *et al* 2001, p.698; Tzortzopoulos *et al* 2005, p.482).

The organisation of this section builds on an exploration of the findings from the supplier development programme. These findings are then organised into a logical framework and their dynamic interactions explained. Finally, the resulting maturity profile is aligned with the existing purchasing content

models in order to evaluate the degree of correlation between the data sets. The original purpose of the outcome was to understand the relationship between the implementation dynamics and the purchasing content models. However, it became apparent that the relationship could be useful in the actual development and organisation of the dynamics themselves. Therefore, Research Question 3 became the second question in the logical sequence of research.

The supplier development waves referred to in the text are detailed in appendices 1 to 4.

5.3.2 Findings

The findings are sub-divided into the four sections of *Functional Development*, *Organisational Development*, *Inter-Firm Relationships* and *Inter-Firm Networking* that represent the phases of maturity identified within the research. The 'waves' relate to the groups of 20 supplier organisations processes through the programme at 6 monthly intervals. The causal networks are the consolidated outputs of the data extracted from the case studies. These are detailed in the Appendices 16 and 17. Where possible, actual terminology was used to preserve the integrity of the original material and this is reflected in the mix of tenses and contexts.

5.3.3 Functional Development

Issues relating to the objectives appeared to be the most common areas of concern for the supplier-based process improvement leaders. These specifically focused on tactical rather than strategic problems. While 'quick wins' were seen as important from an organisational perspective, they were actually a problem in terms of the full deployment of the improvement methodology (as shown in Wave 4). This may be partly explained by the poor delivery performance of the supplier placing pressure on its management team to deliver results in an attempt to quickly regain ground on their better performing competitor suppliers (*see* Bamford & Forrester 2003, p.553). However, the customer organisation stipulated that time should be given for the improvement methodology to be applied rigorously, in stark contrast to the

historical demand for instant results. The history of adversarial contact between customer and supplier may have meant that this point was ignored, misunderstood or simply dismissed.

This anxiety to deliver quick wins led to a misalignment of the objectives of the supplier development programme with regard to delivering sustainable supplier improvement and caused a significant amount of frustration on the part of the newly trained supplier process improvement leaders. For the objectives to be delivered, the focus of the programme needed to shift from short-term gains to a longer-term focus (Wave 7). The problem appeared to be that the supplier management were simply looking at the benefits of the programme as a means of 'getting out of jail', rather than as a strategic enabler of future competitive advantage if employed over the longer term. If they had viewed the programme more strategically (Wave 5) it is quite probable that many of the problems would have resolved themselves (*see* Webster 1991, p.327; Harland *et al* 2005, p.838).

Despite the new improvement methodologies introduced to the supplier organisations including management education and intensive skill training for the supplier's process improvement leaders, it became apparent that the new working practices were sometimes used to reinforce the original and often sub-optimal problem solving approaches (Wave 2). This can be argued to be partly a consequence of the desire for quick wins placing pressure on the supplier's process improvement leaders to generate quick solutions (*see* Teece & Pisano 1994, p.539; Pedler *et al* 1996, p.141), a practice that was not part of their formal training. The provision of expert support in the form of the customer's experienced supplier improvement leaders did appear to mitigate some of this activity although it was clear that the engagement had to be direct and sustained for the effects to become self-sustaining. Supporting this approach was the need for resources and training appropriate to the delivery needs of the longer-term objectives of the organisation (Wave 5). (*see* Webster 1991, p.327; Harland *et al* 2005, p.838).

The natural consequence of the above problems was the need for adequate

management commitment in the supplier. Support was being requested by the supplier's process improvement leaders, but not simply in terms of the supplier's management publicly stating their support for the programme within their respective organisations (Wave 5). It was seen as important that the support was provided on a continuing basis. This necessitated the need for multiple sources of authority within the improvement programme all of whom were required to play their part at the appropriate time and location (Wave 7) (*see* Scott 1987, p.502; Buchanan & Boddy 1992, p.115; Okumus 2001, p.337).

The supplier development training programme evolved into a process of problem solving associated with the implementation and use of the skills required within the improvement projects. As before, these issues were multi-faceted. From the perspective of the supplier process improvement leaders, they were requesting a full-time role in order to apply the skills they had been taught (Wave 2, 4, 5). They could see the potential benefit to the business, but were being denied the opportunity to deliver that benefit. This led to opportunistic behaviour in terms of applying the new skills in a piece-meal fashion rather than progressively adapting them to the specific needs and context of the organisation. The other side of the skills problem related to the development of skills within the organisation. The supplier process improvement leaders were made fully aware that part of their role was to transfer these skills to other employees within the organisation. Demands for short-term wins were adversely affecting this process as short-cuts were taken in unsuccessful attempts to reduce the inevitable learning curve delays that impacted upon the delivery of results. This failure often led to reluctance to expand any skills training beyond the immediate problem area. However, from a systems perspective it was quite apparent that the root causes of many of the supplier problems existed beyond the confines of the specific production line or cell, requiring cross-functional engagement and cooperation (*see* Pinto & Pinto 1990, p.14).

From the discussions held during the workshops it became apparent that the development of the improvement programmes tended to begin on a small

scale within a confined area of the organisation that possessed some form of relevant skill set and knowledge of how to use the skills to resolve the specific issue at hand. Where the results were successful it was more likely that the programme would be expanded to include other areas and organisational groups. This implied an evolutionary approach not only along the lines of 'survival of the fittest', in that successful projects evolved further, but also in terms of progressively influencing and changing other parts of the business.

Much of this early stage centred on the ability to deploy a new set of competences (skills and knowledge) within an existing organisational system. This meant a shift from short-term, sub-optimal practices toward a more strategic view supported by sustainable improvement methodologies. Critical enablers to the success of this programme were the sponsorship of the organisation's senior management and the provision of external expert resources from the customer.

5.3.4 Definition of Functional Development

The competence phase emphasises the necessity to develop skills and knowledge that are perceived to be of sustainable value to the firm and recognised as such by peer functions.

5.3.5 Organisational Development

When developing the improvement programme beyond the confines of the local problem area, communication issues became a key enabling (or often disabling) activity (Wave 5). The supplier's own consultants often spoke of the mistrust that emerged around their work (Wave 2). Thus it was felt necessary that an important aspect of developing the improvement methodology into the wider business was the use of communication to create awareness and understanding of the aims of the programme. This issue was seen to be deeply embedded within the organisation's cultural issues (Wave 5). Understanding how this manifested itself in terms of responses to change requests became a priority, informing the approaches taken when initiating new improvement projects (Wave 5) (*see* Kleiner & Corrigan 1989, p.29).

An essential aspect of this process was ensuring that terminology was universally understood. One particular conversation centred on the perceived belief that 'improvement' meant 'savings' to the management and 'redundancies' to the workforce. Other examples were cited where apparently innocent remarks became shrouded in sinister overtones of impending doom. Often, this reflected the negative culture or working environment within which the organisation's staff perceived themselves to be and thus they were simply projecting their dissatisfaction onto the projects as a natural and available focal point (*see* Colville *et al* 1993, p.559).

Cross-organisational support was widely acknowledged as the precursor for team working (*see* Cousins & Crone 2003, p.1467). Despite the perceived support, the consultants expressed frustration at the lack of progress made in creating teams that were staffed from multiple areas and levels of the business (Wave 4, 5). This was often the result of a failure to develop common goals at an organisational level to which the different factions could align (Wave 7) (*see* Pinto & Pinto 1990, p.14). The consequence tended to result in teams that were limited to the immediate area of concern. This was recognised as an inhibitor to progress when the root-causes of problems were found to exist in other areas of the business (Wave 2). To break this inhibitor, it became necessary to develop strong coordinating and integrating processes that extended across the organisation (Wave 7) (*see* Durkheim 1933, p.212; Sezen 2005, p.350). This had to be an action that was instigated and, in many ways, executed by the supplier's management team (Wave 2, 4, 5, 7) (*see* Deming 1993, p.65).

Conversely, supplier organisations that had succeeded in creating teams often had the problem of too much activity occurring simultaneously. These organisations often found it necessary to introduce a steering team to carry out a coordinating function for the improvement programme in order to maximise the benefits to the business and minimise the potential for internal conflict or duplication of activities (Wave 5). The improvement methodology being used by the development programme had a significant emphasis on

systems thinking. This meant that processes were a central tenet of its application. Apart from setting priorities and assigning resources to the programme, the steering teams sponsored the development of enabling and improvement processes that were based on need, rather than incumbent organisational structure (Wave 7) (*see* Penrose 1959, p.25; Weick & Roberts 1993, p.378). This had the effect of bridging the schisms that existed between different organisational factions by providing a process-based structure (Wave 5), along which individuals could align, as opposed to a functional structure that reinforced the differences between individuals (*see* McLaughlin *et al* 2006, p.1012).

Combining the approach of cross-organisational processes with the understanding that the root-causes of problems did not necessarily occur at the same location as the symptom caused a growing awareness of the need to consider the whole business when planning improvement projects (Wave 2). This developed over time as projects were implemented and the teams began to realise that although the individual elements of the problem provided information about the issues being investigated, it was often the relationship between them that provided the context for developing causal meaning (*see* Katz & Khan 1966, p.17; Strickland 1998, p.76).

In the more advanced and capable suppliers it became evident that the structure of the organisation was developing to accommodate these new working practices. However, the majority of the supplier's process improvement leaders identified a significant internal resistance to the idea of organisational change from both the functions and senior management (Wave 4, 5). A great deal of frustration was voiced within the workshop environment concerning the propensity to persist with obviously failing practices. These remonstrations were made particularly when senior managers were not present (*see* Dunphy & Stace 1990, p.70). It was also noted by some that the level of political manoeuvring and 'spoiling' tactics used appeared to be more pronounced within certain areas of the organisation. This was often interpreted in terms of functional belligerence or protectionism (*see* Blau & Scott 1962, p.240; Vickers 1983, p.33; Checkland & Casar 1986, p.16).

This relationship between the level of improvement activity and the perceived resistance to it was an ongoing theme throughout the supplier development programme. It was less pronounced in organisations where major changes were already occurring or where the staff were proactively engaged or informed about the activity. Of note was the observation that where resistance was at its strongest, it often continued even after the measurable benefits to the business were openly acknowledged by others (Wave 4). This identified issues beyond simply demonstrating scientific proof as to the benefits of the programme; there were also psychological issues that needed addressing in order to get people to recognise and acknowledge the relative merits of the approach (Antrim 1998, p.107).

Communication was seen as a critical enabler to the development of intra-organisational support. This was particularly important given the relationship between problem symptoms and their root-causes, which often existed in other parts of the organisational system. As the improvement programmes grew it often became necessary to create a steering team that acted to coordinate and provide the necessary resources. A natural consequence of this growth was the emphasis on pan-organisational processes that resulted in a need to restructure the organisation. This was often seen to lead to further cycles of resistance and a need to develop support mechanisms that emphasised the more psychological aspects of change management.

5.3.6 Definition of Organisational Development

The cooperation phase emphasises the development of cross-functional alignment based on mutually compatible objectives and a systems-based approach to the deployment of resources and practices throughout the business processes of the firm.

5.3.7 Inter-Firm Relationships

Developing a common understanding between the customer and supplier organisations of the programme objectives and how this should be achieved was seen as a critical issue by the workshop groups (Wave 5). This was partly

motivated by the severity of the issues facing the supplier but also a consequence of their frustration at receiving mixed messages from the customer organisation. In some ways this was a bold statement to make as many of the poorly performing supplier organisations were led by weak management teams that tended to capitulate at the smallest sign of customer intimidation. Instead, the suppliers were beginning to stand their ground and place the onus on the customer to clearly define their expectations and wants (Wave 4). This took some time to occur and began as undercurrents and private discussions between supplier representatives during workshop breaks. Ultimately, the suppliers began to feel confident enough to voice their frustrations, breaking from the legacy of a power play that had positioned them as victims of the buyer's commercial dominance (*see* Cox 2004a, p.348). Although it is possible to perceive this as a form of muted rebellion, it is more appropriate to view the events as the suppliers beginning to understand their role in the relationship and the means of improving their situation, given adequate guidance and support from the customer.

A prerequisite step in this process was seen as the development of a common language that would lead to a common understanding of needs and objectives (Wave 4, 5). In some ways this probably placed a greater emphasis on the customer organisation, which tended to have multiple, semi-autonomous interfaces with each supplier in the form of Purchasing, Supplier Quality Assurance, Logistics, Manufacturing and Finance (Wave 4). The perceived lack of coordination within the customer firm was seen and verbalised by some of the suppliers as a clear weakness within the customer (*see* Wynstra *et al* 2001, p.162; Veludo *et al* 2004, p.151). As such a number of the suppliers clearly articulated the opinion that they were only there under duress.

However, as the programme developed, the ongoing presence of a number of process improvement experts from the customer organisation tended to reduce these comments to a very small minority of suppliers, the remainder proactively advocating the provision of this resource. The consequence of developing these close relationships between customer and supplier staff was

greatly improved awareness and understanding of the root-cause issues of many long-standing problems (Wave 4, 5). This process did not always work and in some cases it was necessary to move staff to mitigate personality clashes or historically fuelled confrontations (*see* Mockler 1999, p.144).

References back to previous negative experiences manifested themselves in other ways. Representative of these was a number of requests for agreement on a set of rules that could be used to govern the relationship (Wave 4). Across the group this was seen in different ways. To some it was a means of protection from further intimidation and exploitation, while to others it was seen simply as a code of practice to guide the development of closer working practices over time (the latter view tending to come from the leaders of larger and more powerful supplier organisations) (Wave 5) . For this process to be effective, each organisation needed to be able to understand the relevant relational issues and then use this as the context for structuring the code (*see* Cousins & Crone 2003, p.1452). It is questionable whether a good quality relationship should need a set of rules but, given the poor history between the customer and its suppliers, it was probably perceived by the latter as a useful mechanism for providing some form of protection from future opportunistic behaviour.

For the relationship to flourish it was seen necessary that the priorities for improvement be mutually beneficial. Again, this clearly reflected the nature of the customer-supplier relationship up to this point, an issue that caused ill-feeling throughout the programme. Although the call was for a focus on priorities relevant to both organisations it was understood that this did not mean they had to be the same. For example, a reduction in delivered quality problems occurring at the customer site could yield a financial benefit at the supplier site through reduced rework and scrap if robust process improvement methodologies were jointly applied (Wave 5).

This raises an important issue in terms of the relative maturity of the customer and supplier organisations. If the intent is to develop a mutually beneficial collaboration then the implication is that both organisations must have intra-

firm cooperation and adequately developed mutually aligned competences in order for the collaboration to succeed without duplication of work and the resulting conflict that ensues. It was believed that for this to work properly the appropriate resources would have to be managed in some form of collective approach (Wave 4, 5, 7). However, it was noticed that although both customer and supplier process improvement leaders were taking part in the workshops it was always at the behest of the customer and not at the request of the supplier (*see* Dapiran & Hogarth-Scott 2003, p.264).

Adopting a more strategic perspective, it was also proposed that priorities should be identified with a focus on developing continuity into future projects (Wave 7). This was a perceptive comment as it implied a long-term working relationship, a point that seemed to be missed by many of the people on both sides of the relationship. However, this was generally at odds with the nature of the workshop discussions that tended to reflect on the often aggressive approach taken by the customer organisation as a means of achieving its goals (Wave 4).

In summary, for a good quality relationship to develop between the customer and supplier organisations it is essential that there exists a common understanding of obligations and expectations. During the early stages of the relationship this may be supplemented by a set of guiding principles that define the relationship and how it will be conducted. For the relationship to develop there must be consistency within each organisation through intra-firm cooperation and the development of appropriate competences. These developments should be guided by the adoption of a longer-term strategic perspective based on mutual benefit.

5.3.8 Definition of Inter-Firm Relationships

The collaboration phase emphasises the development of mutually beneficial long-term dyadic relationships that are built on interdependence through the alignment of core competences and deeply embedded processes.

5.3.9 Inter-Firm Networking

The final frame of maturity that emerged was based more on the dynamics of individuals within the programme than the actual purpose of the network. Whereas the previous three levels of maturity included the development of competence, expansion across the supplier firm through internal cooperation and closer good quality relations between the customer and supplier, this level emerged as a result of understanding what was happening within the programme as opposed to outcomes of the programme.

The aim of the programme was the training and development of process improvement competence within the supplier organisations. This was distinct from the programme driver, which was the deficiency of the supply performance. Historically, the customer organisation would have simply informed the supplier of the deficiency and expected them to resolve it. The customer was already providing expert resources within its own organisation to resolve problems and this was seen as a natural extension of this approach (*see* Harland & Knight 2001, p.481). Therefore, the network became one of customer, suppliers and third party process improvement expertise in the form of Process Management International (PMI). PMI moved the focus away from the management of physical assets in favour of the improvement and development of value adding activities and their relationship within the wider business system (*see* Rigby *et al* 2000, p.179). In this respect the suppliers became 'students' of the new improvement approach, the customer became the financial and practitioner resource provider, and PMI became the expert training and development provider.

This approach completely changed the dynamics of the network. The suppliers moved from a position of 'naughty child' being repeatedly chastised by the 'parent' customer to one of programme partner. Simply chastising suppliers was acknowledged as a flawed concept and so the new approach positioned them as the focus of the programme in terms of being a student learning new improvement skills. This meant that they effectively became the customer of the programme. The customer organisation took on the role of supplier, providing both people and resources to the programme. PMI,

although suppliers themselves, took on the leadership role of transitioning the poor performing suppliers to the new competence level and guiding the customer organisation in its operational and strategic development of the programme (*see* Elrod & Tippett 2001, p.287). In this respect, the emphasis was on supporting the supplier rather than the customer.

As the group matured, confidence and trust grew creating a more cohesive relationship between the various actors as people became aware of their relative position and value within the wider group (*see* New & Mitropoulos 1995, p.55). Although there was always an undercurrent of who the 'real' customer was and therefore where the 'real' power existed, this was often forgotten during the structured activities and workshops developed by PMI, an approach that was purposefully promoted by the 'real' customer. This tended to promote the network as a learning environment within which everyone was developing their skills and knowledge in one form or another. Of particular relevance to the concept of coherent networks was the level of shared intellectual analysis of situations and cross-fertilisation of ideas to solutions between the various supplier organisations. This was partly enabled by the management of competing suppliers, keeping them apart from each other by inducting them into separate waves of the programme so that they never came into direct contact with each other.

There had been a shift in roles within the programme. It was of note that this shift had occurred, from a purchasing perspective, outside the programme also. The symptoms of poor supplier performance were felt most acutely within the manufacturing areas. This meant that it was often necessary to engage the manufacturing staff in discussions with the suppliers to fully understand the issues in question. Historically, rejects or rework were notified by the Accounts Departments with a brief summary of the reason. To be able to adequately understand and develop improvement proposals it was necessary for the suppliers to have much more relevant detail. Manufacturing had often played a power game in the past and so the relationship was dysfunctional from the perspective of a genuine attempt at improvement. In these circumstances the Supplier Development function within Purchasing

tended to find itself acting as mediators between the two groups. This work included not only the technical aspects of validating claims and counter-claims, but also the more social aspects of mediation, team building and facilitation (*see* Snow *et al* 1992, p.15; Harland & Knight 2001, p.482).

This was a significant departure from the normal working practices within Purchasing. Historically, the internal focus had been on Engineering to specify requirements and then an external focus to ensure supply. The situation now involved connecting the relevant internal and external stakeholders together so that they could engage in meaningful discussion surrounding the problems being experienced and develop mutually acceptable improvement proposals. In this situation the role of Purchasing became one of 'matchmaker' and network broker.

5.3.10 Definition of Inter-Firm Networking

The coherence phase emphasises the systems view of optimising the whole business network through the development of symbiotic relationships based on the aim of the network rather than simply the customer-supplier connections found along the linear supply chains.

The remainder of the findings for Research Question three deals with the development of the maturity perspective, combining the findings from the literature and action research in an attempt to construct a proposal that resolves many of the issues raised.

5.3.11 Alignment with Content Models

Okumus (2003, p.970) observes that 'researchers are advised to employ a holistic approach to viewing the formulation and implementation of strategy, and then evaluate how the implementation factors interact with each other and how they impact on the process.' The purpose of analysing the relationship between the maturity levels, derived from this research and the pre-existing purchasing content models, was to evaluate whether developing the research using the maturity approach as one of the perspectives would be useful.

As mentioned in the Methodology and Methods Section, it was not possible to develop a clear delineation between levels of maturity and sub-levels were used to more accurately describe the degree of fit. The results of this exercise are shown in Figure 36, below. The maturity levels of each of the purchasing content models are represented by a Roman numeral and these are then superimposed over the maturity levels defined in this thesis. In this way an analysis could be made for sequence (whether the levels of maturity described in this thesis correlated with those proposed in the content models) and the degree of fit (how well each of the phases presented in this thesis aligned with those of the content models).

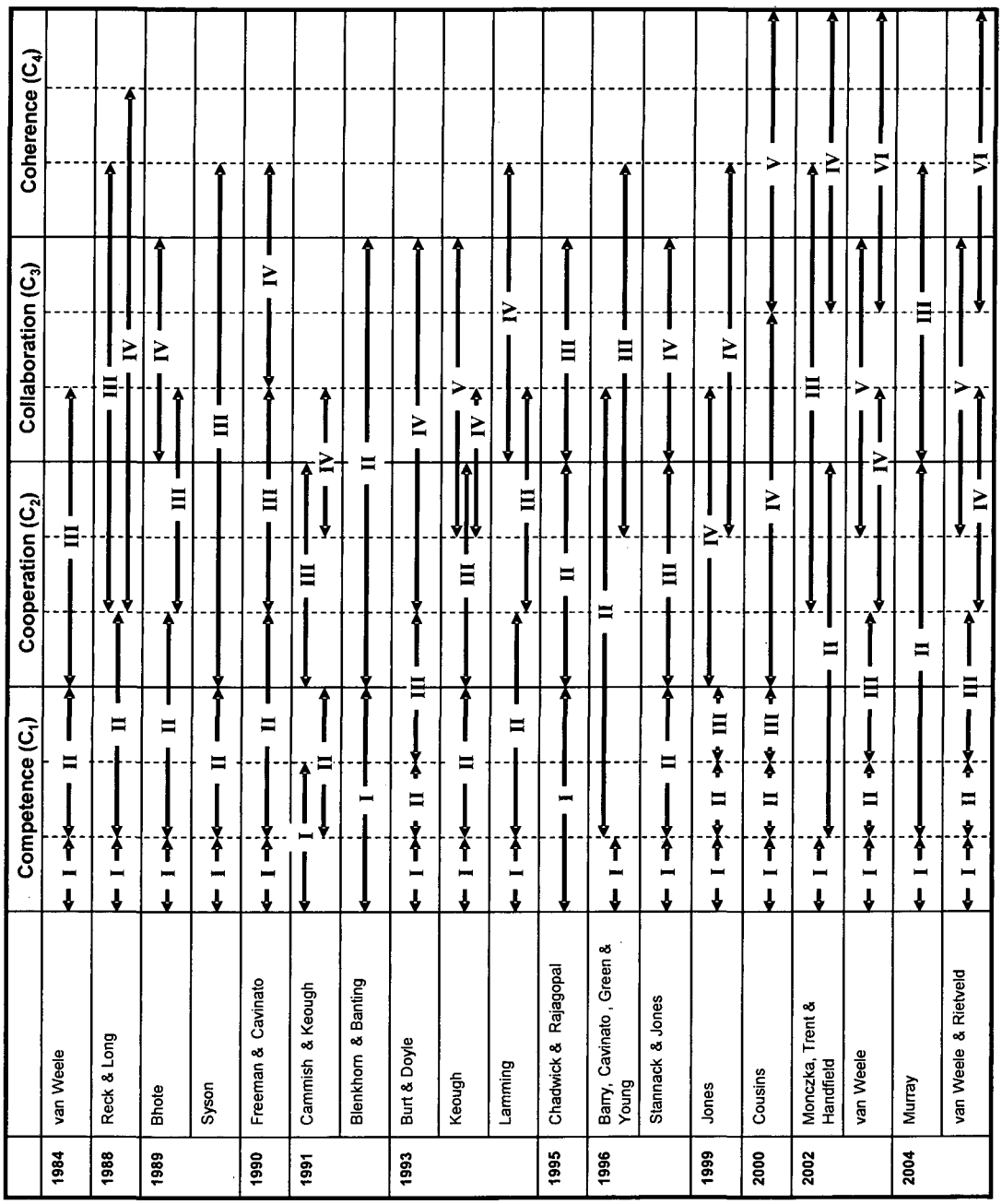


Figure 36: Alignment of process and content model maturity levels

This model did seem to demonstrate a reasonable degree of alignment when viewed subjectively and therefore a further investigation was undertaken to search for further insight. The analysis is summarised in Figure 37, below. The 'phases' mentioned in the key relate to those found in Table 8 in the Literature Review.

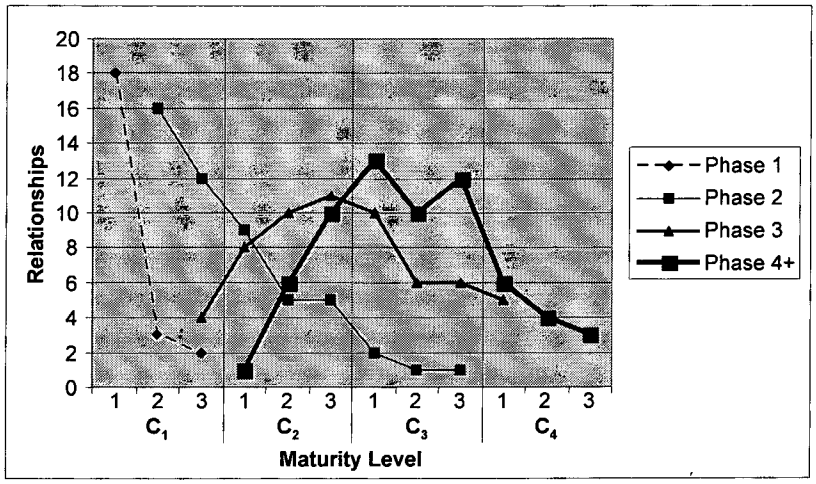


Figure 37: Analysis of alignment of process and content model maturity levels

What is apparent from the analysis is that the levels of maturity tend to fall in line with those developed within the maturity levels proposed in this research. The range and overlap of each of the phases can be explained by the diverse perspective with which the content models were developed. For example, Reck and Long (1988) stance within the organisation, Freeman and Cavinato (1990) type of planning, van Weele (1992) orientation, Lamming (1993) nature of relationships, and so on. This appears to imply that the models do offer a reasonable degree of alignment. However, each specific model should be carefully reviewed within a contextual setting in order to identify any specific characteristics and their actual relationship. Another factor causing the wide variation may be the legacy effect of previous development iterations, as described previously.

Of particular note is the observation that the purchasing content model phases 3 and 4 onward appear to align at a lower level of maturity than those identified by this research. One reason for this could be the definition of competence as relating to the function. Klint and Sjøberg (2003, p.415) identify the individual as the lowest level of consideration. Thus, if competence was split between 'individual' and 'functional' competence this might align the two sets of maturity profiles more closely. The problem with focusing on the individual is that they are both highly portable and volatile. Thus, the competence cannot be considered to be robustly embedded,

potentially undermining any future development work. This argues that competence within the function is preferable, given the emphasis on a longer-term strategic perspective and systems as the dominant structural paradigm.

However, it is important to stress that the above arguments do not imply that either the content or maturity models are incorrect. The implication is simply that they could be made to align more closely with the proposed amendment. The reasons for not doing this have already been articulated and are explored further in the Discussion section.

5.3.12 Summary

This research has identified the presence of four distinct phases of maturity. *Competence* is seen as the foundational phase that must be developed before any other type of development can be instigated. Once the function has a level of competence that enables it to add value to the business then *cooperation* can be developed within the organisational boundaries of the firm. Learning to work within a team working environment is a necessary precursor to working *collaboratively* with supplier organisations on an equitable partnership basis and this forms the third phase. Once a number of collaborative suppliers exist then the final phase of *coherence* can be developed in order to connect them together into an integrated network system, focused on achieving the aims of the system.

While these maturity phases are defined in their own right, the above description demonstrates a clear interdependent relationship between them that causes an ongoing cycle of evolution and further development as the firm, its suppliers and the network develop to meet the changing needs of their surrounding environment.

Aspects of these environmental considerations are the objectives of the development programme as defined in the purchasing content models. These clearly relate to functional, firm, dyadic customer-supplier relationships and network issues and therefore help to define the context within which the various implementation dynamics should be employed.

5.4 Research Question 4: Relationship to process aspects of change.

Question 4: How can the implementation dynamics from Research Question 2 be related to the process aspects of change management?

5.4.1 Introduction

During the development and deployment of supplier expertise in process improvement a number of recurring themes began to emerge. These tended to be a mix of technical and implementation issues. The technical issues were often dealt with expediently due to the available expertise of PMI and the experience of the customer engineers. However, a great deal of investigation was often required when trying to resolve implementation issues and the proposals put forward were often diverse or even contradictory. This was significant given the expedient nature with which the technical issues were often dealt with.

The purpose of this section is to define the implementation dynamics in generic form so that they can be used within the collective case study research as an aid to organising the detail behind each of the dynamics identified. In this way, the headings provided utility during the research and conceptual meaning within the findings. Although the headings were developed as an outcome of evaluating the findings, they are used to preface each section to provide clarity.

5.4.2 Findings

The findings are sub-divided into the thirteen generic headings (D_1 to D_{13}) used to structure the detail of the implementation dynamic groups, shown in Table 21.

Number	Dynamic Title
D_1	Business Focus
D_2	Expert Leadership
D_3	Senior Management Sponsorship
D_4	Strategy Development
D_5	Purchasing and Supply Management Positioning
D_6	Change Management
D_7	Communication
D_8	Skill & Knowledge Development
D_9	Team Working
D_{10}	Rules of Engagement
D_{11}	New Ways of Working
D_{12}	Performance Measurement
D_{13}	Continuous Improvement

Table 21: The implementation dynamics

The definitions used below are strictly for the purposes of this research and subsequent outputs such as implementation diagnostic and improvement tools. It is acknowledged that the headings may use previously defined terminology, which has been found impossible to avoid given the nature of the research topic.

5.4.2.1 Business Focus (D_1)

One of the many problems experienced by the supplier improvement teams was a lack of commitment from other parts of the business (*see* Cohan & Manion 1989, p.140). However, the common practice amongst the supplier groups was one of defining the project objectives in operational terms such as reducing scrap rates or improving delivery performance. This tended to distance the project from areas of the business that were not directly related to the perceived source of the problem and therefore caused problems with engaging support on a wider scale. In order to develop wider understanding,

and therefore engender support, it was often necessary for the supplier improvement teams to redefine their work in terms of contribution to the business (*see* Carter *et al* 1998, p.13; Cavinato 2001, p.1). This reflected the need for a strategic emphasis at a systems level in order to provide a holistic perspective on the problem and its potential impact at the business level (*see* Klint & Sjøberg 2003, p.415).

As the competence of the improvement teams increased they began to take on ever more complex problems. This resulted in an expansion of their remit beyond local areas and eventually extended into the customer and supplier organisations. Customers adopted the role of development and clarification of project aims, while suppliers became implementation resources based on their particular core competences. This required a business focus as a mechanism for translating project objectives and issues across the extended enterprise (*see* Harland & Knight 2001, p.476).

Definition: Business focus describes the application of a wider systems perspective, using appropriate business terminology and protocols, to define the priorities, objectives and actions to be undertaken.

5.4.2.2 Expert Leadership (D_2)

When initiating projects, there was a common propensity for team leaders to set unrealistic targets, often under pressure from their senior management sponsors. Setting realistic targets was an important role of the expert leader. Targets that were too high were seen as unachievable and targets that were too low were seen as unimportant, both of which acted as demotivators.

Once the target had been agreed, the next logical step moved toward developing possible solutions. Two approaches were evident. First, solutions were proposed based on *a priori* expert knowledge (*see* Teece & Pisano 1994, p.540). Second, a methodology was employed to develop suitable proposals. These methods required either a change process or content expertise and therefore the second aspect of expert leadership was identified as the existence of some form of competence that could be used to generate

improvement theories (*see* van Weele & Rozemeijer 1996, p.159; Cousins *et al* 2006, p.790).

The third area of expertise tended to be the most problematic within the improvement programme. Although the process improvement leaders had been trained in a robust improvement methodology, their competence in applying it and implementing the subsequent recommendations that had been made took a significant amount of time to develop and perfect. Given the contextual issues that needed to be accommodated, it was impossible to develop prescriptive responses to implementation issues. As such, a degree of experience-based competence needed to be developed in order to understand the relevant situations and the dynamic interactions that would lead to the implementation of potential solutions (*see* Cousins, *in* Hines *et al* 2000, p.194).

Definition: Expert leadership covers the areas of systemic business analysis, priority and target setting and improvement implementation. These need to be available but not necessarily from a single source or individual.

5.4.2.3 Senior Management Sponsorship (D_3)

Clear evidence existed relating the visible sponsorship of the improvement programme by senior management with both the speed of implementation and the ultimate level of success achieved. In some ways the level of sponsorship could be predicted in terms of the attendance and contribution made by the senior managers of each supplier organisation at the workshop days provided specifically for that group. It was not uncommon for them not to attend or for subordinates to be substituted, and this became an indicator of predicted future performance in the later waves of suppliers.

To some extent the role of the senior management was aligned with the need for clear strategic objectives; both were associated with the upper echelons of the organisation (*see* Freedman 2003, p.26). This was a task that could not be subordinated to the lower levels and it thus became a pivotal aspect of successfully launching and communicating the programme.

This need for visibility was also found in the communication events that were periodically held by the better performing suppliers. It was found that not only was it important to initiate the programme within each supplier, but that a regular injection of focused attention was required from the senior managers to prevent drift and disinterest. Linked to the success of this was the competence with which the senior managers were able to articulate the details of the programme and the area of methodology being used at the time.

During the implementation, senior managers were generally passive in their role (*see* Power 2005, p.99). This was an acceptable situation, given that much of the activity was operational by this point. However, they were important in wielding their power to break disabling roadblocks whenever and wherever they appeared. In these instances speed was found to be an important aspect of maintaining project momentum.

Definition: Senior Management Sponsorship is a largely promotional and highly visible role coupled with interventions to ensure organisational alignment and engagement with the objectives of the improvement programme.

5.4.2.4 Strategy Development (D_4)

In many cases strategy was not seen as a priority by the supplier organisations. This can be explained by the circumstances that had led to them being inducted into the improvement programme. Many had very deficient supply performance issues for which they had often experienced punitive responses from the customer. Given this situation many of them simply wanted to resolve their problems, do exactly what the customer asked, and survive the hiatus. This manifested itself in short-term tactical approaches that were fundamentally reactive in nature (*see* Teece & Pisano 1994, p.553; Pedler *et al* 1996, p.141).

Those suppliers that improved quickly appeared to recognise the potential of the improvement programme to develop themselves beyond mere survival.

These organisations developed an approach to strategy that was based on a broader systems view and a longer-term horizon. The result of this was an ability to direct resources into areas of the business that would yield sustainable improvement in areas of long-term competitive advantage. Ultimately this led to an integrated approach as different parts of their organisations were aligned with the priority objectives and activities (*see* Pinto & Pinto, 1990, p.14).

An important enabler of this approach was the involvement of key stakeholders in developing the strategy and enacting it once general agreement had been reached. This was soon found to be a continuous activity as the business environment was constantly changing, requiring an evolutionary approach to the strategy (*see* Lawrence & Lorsch 1967, p.157). In some cases this caused dissent from individuals who argued that the continual changes to the strategy indicated that it was flawed in some way. Informing these people about the emergent nature of change and business development had to be tackled carefully as it sometimes appeared to become a defensive reaction to their complaints rather than an informative justification.

Definition: Strategy Development articulates the long-term perspective of the business aim and is used to guide the deployment of resources and shorter-term projects directed toward its delivery.

5.4.2.5 Project Positioning (D_5)

Positioning each project was an important precursor and appeared to have significant impact on the types of problem experienced and the ongoing performance of the team. Project positioning was extremely sensitive to contextual issues such as perception of the customer and relative competence of the workforce. This meant that a unique approach needed to be taken to each project, a point that was misunderstood and then badly implemented during the majority of the programme.

Many mechanisms were used for positioning but the two that appeared to be most effective were the sponsorship of the senior managers, who publicly

stated the priority of the project and the positioning of the project in a business, rather than operational, context. Both of these mechanisms elevated the project to a higher level of visibility and relative importance. Failing to position the projects effectively often meant that they were starved of resources and quickly lost momentum.

Those projects that were successful tended to see the supplier's own improvement programme develop into a much broader initiative. Although the increase in scale of the programmes led to consequential increases in complexity, the approach appeared to remain in an evolutionary, continuous improvement, frame (*see* Orlikowski 1996, p.65). In some ways this could be argued to stifle the attempts at a more strategic business focus, with the definition of the projects in business terms but their selection and implementation based on operational issues. The ultimate aim was clearly a more strategic approach but evidence of this was not found during the supplier development programme.

Definition: Project Positioning defines the initiative in a way that references the contextual and business issues as a means of communicating its relative importance and contribution within the wider system.

5.4.2.6 Change Management (D_6)

The performance of the various supplier process improvement leaders demonstrated a distinction between process improvement and change management competence. While many of the leaders could understand, articulate and guide teams through the development of improvement proposals using the methodology taught, many had difficulty with implementing those proposals (*see* Counsel *et al* 2005, p.13). This was a significant impediment to the supplier programmes given that the improvement proposals only had the potential to improve performance, it was their implementation that caused that potential to be realised. Project management was periodically recognised as a key implementation skill by various organisations although, due to the relatively small scale of many of the initial improvement projects, the tendency appeared to be one of

managing the issues as they occurred (*see* Miles *et al* 1995, p.129).

This point influenced the approach taken to developing both the process improvement leaders and their senior management sponsors, recognising change implementation as a fundamental leadership skill. However, this research found that these skills are deployed in different ways depending upon the situation and position of the leader. For the most senior change tended to focus on the development of priorities and enabling progress through the leveraging of their available power. For others change was more focused on the support and detailed coordination of the implementation activities themselves (*see* Power 2005, p.104).

The logical consequence of the above approach meant that change management skills needed to be cascaded throughout the organisation, with an emphasis on different aspects at different levels. To facilitate this, part of the supplier process improvement leader's role was to train people within the workplace with the ultimate aim of providing them with the competence to implement small-scale improvements within their own work areas after the project had been completed and the team disbanded. This was inevitably a long-term aim of the programme and progress was difficult to measure.

Definition: Change Management involves all levels of the organisation and emphasises the implementation of robust business improvement proposals using contextually appropriate techniques and an underpinning process improvement methodology.

5.4.2.7 Communication (D_7)

Even before projects were initiated within the supplier organisations unrest was sometimes evident amongst the staff. This was often the result of people being informed of the induction of their organisation onto the programme as a result of poor performance coupled with a failure to explain the nature of the programme itself. In situations where this issue wasn't tackled quickly it became entrenched making it almost impossible to change established, doom-laden perceptions (*see* Kleiner & Corrigan 1989, p.25).

Where communication was used successfully it tended to be the result of two-way dialogue that was based on a definition of the programme followed by discussion with the affected stakeholders. It was also found to be important that the improvement programme was put into context in terms of the aims of the customer and supplier organisations that were influencing the decisions to pursue the programme (*see* Powell 1991, p.269; Ford 1997, p.xiv). This naturally led onto a discussion surrounding the intended outcomes.

During the programme continuous dialogue and regular communication events were useful in trying to combat the rumours and crisis scenarios that were propagated by those struggling the most with the changes being proposed. Part of this process involved checking the understanding of people so that any mismatch between what people had said and what was thought had been said could be addressed at the time, rather than being the cause of further tangential speculation.

Definition: Communication focuses on the dissemination of information and data to guide and protect the integrity of the programme as it is implemented within the wider business system.

5.4.2.8 Skill & Knowledge Development (D_8)

The training programme developed by PMI contained a mix of theory and reviewed, practical application. This was based on the concept of imparting new knowledge to the supplier process improvement leaders and then consolidating this knowledge into a competence through the development of appropriate skills (*see* Reck & Long 1988, p.4; Guinipero 2000). This was achieved through alternate periods of classroom tutoring and supported project activity in the supplier workplace. Subsequent to the tutoring phase the projects became full time with one-to-one mentoring provided by the customer's process improvement leaders.

The training did not appear to pose any major issues for the delegates and the material presented was comprehensive enough to be used as an expert resource in its own right during the project work. The main problems occurred

during the implementation phases and were often the result of a lack of experience (*see* Sevon 1996, p.60). Although training provided a foundation of knowledge on which to base decisions, the situational nuances presented unknown issues that could not be feasibly mitigated within a classroom environment. Thus, expertise was provided in terms of the customer process improvement leaders.

The critical issue for the above situation was the balancing of the immediate support needs of the supplier process improvement leader and team with their need to experience problems and work through them. In some situations this led to discontent and a refocusing of the leadership role onto the customer process improvement leader as the true source of expertise. This was detrimental to the aims of the programme and thus some refocusing work needed to be undertaken with the customer leaders to ensure they maintained a competency development emphasis on the supplier organisation.

Definition: Skill and Knowledge Development relates to the transfer of relevant competences to the focus organisation with the aim of creating a self-sustaining and autonomously driven improvement system.

5.4.2.9 Team Working (D_9)

As mentioned previously, the systems approach was encouraged as a means of highlighting and developing the interdependencies between the various organisational groups. Although the theory of this approach was generally accepted by the majority of delegates, after some exploration and testing its implementation in practice was far more difficult. The strong emphasis on short-term operational problems tended to galvanise discrete areas of the business into action, often reinforcing the disaggregated approach that had prevailed (*see* Durkheim 1933, p.212; Deming 1993, p.65; Sezen 2005, p.350).

To make the shift toward a team-working approach required a fundamental shift in the approach taken to resolving performance issues. Although the problems had to be resolved within a reasonably short space of time,

emphasising the strategic business benefit as the primary driver had the effect of creating convergent, rather than divergent, perspectives on the task at hand. This enabled the development of team-working approaches by creating mutually aligned business imperatives (*see* Pinot & Pinot, 1990, p.14).

The effect of developing mutually aligned functional objectives was the propensity for these groups to come together and combine their competence sets within a team structure. This had the added advantage of reducing the competition for resources and thus the level of conflict that was experienced within the organisation (*see* Handy 1985, p.222). A small number of suppliers developed this concept further by deliberately trying to blur both the internal and customer organisational boundaries (*see* McLaughlin *et al* 2006, p.1012).

The consequences of combining a team-working approach with an emphasis on whole system thinking (blurred interfaces) was the need to begin to align ways of working. This meant that processes had to be developed that flowed seamlessly across the parts of the organisational system that could be influenced (*see* Penrose 1959, p.25; Weick & Roberts 1993, p.365). In some cases this expanded the team concept to include both customer and supplier representatives.

This enlargement of the concept of team working raised the significant issue of who should lead the team. Tradition dictated that it should be the strongest 'customer' based organisation, but logic and the systems view promoted the concept of leadership being based on ascendant situational competence (*see* New & Mitropoulos 1995, p.53). In this way, issues were resolved by applying the relevant strengths of the team for each situation encountered. This could imply that the leadership role migrates as different issues are encountered. In these cases it was appropriate to create some form of governing function for the team. This situation was not developed to any great extent by any of the organisations involved in the programme.

Definition: Team Working involves the mutual alignment of individual's competences toward a common aim that the group should be empowered and

capable of collectively achieving.

5.4.2.10 Rules of Engagement (D_{10})

As mentioned above, it was found to be advantageous to develop a system whereby competence was used as the primary criterion for selecting leaders. Within the improvement projects this tended to be the supplier process improvement leader. However, when specific issues such as technical problems were encountered the process improvement leaders were encouraged to let the technical experts assume responsibility for developing an understanding of, and resolving, the issues at hand. Counter to historical trends, the customer's process improvement leaders were encouraged not to take a leadership role, but simply to mentor and support the development of a sustainable improvement system within their respective supplier organisations.

Rules were seen as constraining and therefore not emphasised. However, it was appropriate to develop some rules and guiding principles to which the teams and leaders could reference their actions. The balance was very much in favour of enabling innovation and empowerment, while being sure to protect the organisation from making critical mistakes or descending into a state of chaos. Over time, it became apparent that many of the supplier organisations modified these principles to reflect the nature of their own businesses. In some cases this was detrimental in that it reflected, and therefore tended to reinforce, incumbent bad practices (*see* Allport 1948, p.vii).

This approach was also taken with relationship building. After a long period of adversarial and dysfunctional relationships, particularly between the customer and supplier, there was a need to 'retrain' both parties in the nature of productive relationships (*see* Syson 1989, p.17). As time went on and the relationships matured, these rules were sidelined in favour of a natural evolution of relations.

Definition: Rules of Engagement define the initial framework, ways of working and behavioural norms that should be used to encourage the development of a process based improvement system.

5.4.2.11 New Ways of Working (D_{11})

The improvement requirements placed on the supplier organisations often elicited the response that the customer did not understand their industry and that rejects and rework were a fact of life. This was particularly true of the castings industry. During the initial stages of the programme these views were listened to and accommodated in the improvement target setting process. However it became apparent that significant improvements could be made within industry groups that had previously been thought of as unachievable. This changed the approach to one of setting demanding targets that required changes to the organisation's ways of working that required the suppliers to develop new competence sets. This was often enabled through the development of tools and techniques that could be taught and then linked together to form the requisite processes (*see* Cicmil 1999, p.8).

The process approach was also useful as a means of integrating the different organisational entities, thus bringing together a number of competence sets that could be used to create broader portfolios of tools and techniques leading to the ability to generate more capable processes and a better standard of operational performance (*see* Rigby *et al* 2000, p.179). The consequence of this approach was recognition of the need to standardise working practices across the organisations so that everyone involved understood what was being done, why it was being done and the impact of their actions on the wider system (*see* Harland & Knight 2001, p.476).

When implementing these new approaches, engagement was seen as a primary enabler. New ways of working had to be co-developed if they were to be accepted and embedded within the daily working practices of staff members. Enforcement was rarely successful (*see* Elrod & Tippett 2001, p.287).

Definition: New Ways of Working involves a collaborative approach to the development and implementation of change based on an enabling environment that introduces improvements through collective engagement.

5.4.2.12 Performance Measurement (D_{12})

Performance measurement was a serious problem throughout the improvement programme. It was extremely difficult to tally the reject quantities quoted by the supplier and customer and this invariably resulted in disputes. The root-cause of many of the disputes was the different protocols used in each organisation's measurement system. The remedy was often a process of encouraging the supplier to develop their system in order to reflect that of the customer. Given the number of suppliers it was impracticable to agree the reverse remedy with the customer. Ultimately, as the need for strategic alignment and common aims developed, it became increasingly important for common measurement systems to be deployed across the network system (*see* Deming 1993, p.53). This point was never reached within the development programme.

The emphasis on strategic alignment and common aims also raised the issue of performance needing to measure more than simply outcomes. It was generally recognised that outcomes were a consequence of the processes and their performance and therefore other measures should exist that support the understanding of the system during its activities, rather than simply the outcomes upon completion. On a cross-organisational level this was found to be extremely difficult to do and so an audit process was agreed that would develop representative snap shots of each organisation. This was a rudimentary approach but one that was acknowledged as the most practical solution at the time.

Definition: Performance Measurement develops in-process, systemic and outcome data in a structured way that enables inferences and relationships to be made between them in support of an improvement strategy.

5.4.2.13 Continuous Improvement (D_{13})

The foundation of the supplier development programme was widely acknowledged as process improvement. Although the primary objective of the programme was the improvement of supplier performance and overcoming the negative impact it was having on the customer's own performance, process improvement was always seen as the foundational issue.

The customer organisation had been developing a process improvement approach within its own organisation for over three years by the time it started the supplier programme and this was beneficial in terms of anaesthetizing the obvious pain being experienced by the manufacturing areas and providing time for the improvement effects to be felt. These experiences reinforced the aim of embedding the process improvement approach within the wider organisational system.

The practice of taking the wider systems view had consequences for both the customer and supplier organisations. Given that part of this approach required an honest interrogation of problematic situations so that root-causes could be detected, it became apparent that approximately half of the issues emanated from the customer organisation rather than the supplier. In the early stages of the supplier activity many situations arose where the supplier did not know how to deal with this politically sensitive issue. A great deal of time was thus spent reinforcing the concept of all parties being encouraged to challenge bad practices and the resulting weaknesses being used to inform improvement priorities rather than for punishment regimes. This was not readily believed by the suppliers, for obvious reasons, until a few iterations of the process had been observed.

The concept of benefit sharing was a difficult one to embed. While the supplier development areas of Purchasing were promoting this concept, a number of the buyers were systematically subverting the process by using the improvements as a reason for enforcing negative economics deals on the relevant suppliers (*see* Pasmore 1994, p.11). This was not widespread but did have a negative impact on the whole programme and the development of

anything other than conditional trust between customer and supplier.

Definition: Continuous Improvement is the underpinning methodology that ensures a viable and targeted improvement competence is developed within and across the particiapting organisational system.

5.4.3 Relationship to the Processes of Change

The change processes used to guide this research were those of Lewin (1951) and Kotter (1996). Although Lewin's model may be considered too basic to provide useful insight on its own, Kotter's model complements it, presenting the opportunity to seek relationships between the dynamics developed in this research and the acknowledged principles proposed in his eight step change methodology. The results of this activity are shown in Table 22. The importance of this table is to demonstrate the mix of relationships that can be interpolated. The intention is not to make a definitive statement, since the issue of context, previously discussed, makes this a meaningless activity. However, it does imply some degree of utility within the dynamics when addressing the issue of how to implement each of Kotter's steps and sub-steps. This appears to reinforce the proposition of Gibb (1991), Cicmil (1999) and Tzortzopoulos, *et al* (2005) that process and implementation activities are related to each other as constituent parts within a larger change management system.

		Business Focus	Expert Leadership	Senior Management Sponsorship	Strategy Development	Purchasing and Supply Management Positioning	Change Management	Communication	Skill and Knowledge Development	Team Working	Rules of Engagement	New Ways of Working	Performance Measurement	Continuous Improvement
UNFREEZE	**1. Establishing a Sense of Urgency** Examining market and competitive realities. Identifying and discussing crises, potential crises, or major opportunities.	✓	✓	✓	✓								✓	
	2. Forming a Powerful Guiding Coalition Assembling a group with enough power to lead the change effort. Encouraging the group to work together as a team.		✓	✓	✓					✓			✓	
	3. Creating a Vision Creating a vision to help direct the change effort. Developing strategies for achieving that vision.	✓	✓	✓	✓		✓							
	4. Communicating the Vision Using every vehicle possible to communicate the new vision and strategies. Teaching new behaviours by the example of the guiding coalition.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CHANGE	**5. Empowering Others to Act on the Vision** Getting rid of obstacles to change. Changing systems or structures that seriously undermine the vision. Encouraging risk taking and non-traditional ideas, activities, and actions.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	6. Planning for and Creating Short-Term Wins Planning for visible performance improvements. Creating those improvements. Recognising and rewarding employees involved in the improvements.	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
	7. Consolidating Improvements and Producing Still More Change Using increased credibility to change systems, structures, and policies that don't fit the vision. Hiring, promoting, and developing employees who can implement the vision. Reinvigorating the process with new projects, themes, and change agents.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
REFREEZE	**8. Institutionalising New Approaches** Articulating the connections between the new behaviours and corporate success. Developing the means to ensure leadership development and succession.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 22: The relationship between the dynamics, Lewin's (1951) Three-Phase Model and Kotter's (1996) Eight-Step Model

It is clear from the findings within each dynamic that relationships also exist between them. If a suitable frame of reference or context is created, then inferences could be made between almost all of the dynamic elements. However, some strong generic relationships did emerge from the analysis and these are mapped in Table 23. The relationship aspects of the findings are discussed in more detail in the summary at the end of this chapter.

Table 23: Relationships between the supplier development programme dynamics

	Business Focus	Expert Leadership	Senior Management Sponsorship	Strategy Development	Project Positioning	Change Management	Communication	Skill & Knowledge Development	Team Working	Rules of Engagement	New Ways of Working	Performance Measurement	Continuous Improvement
Continuous Improvement	Contonuous improvement needs to reflect the business needs	Experts are the knowledge holders in continuous improvement			Good positioning is required to support the provision of adequate resources			Improvement becomes a core business competence	System-based teams enable effective improvement	Honesty and integrity become fundamental principles	Improvement benefits are shared equitably amongst partners	Need to measure multiple aspects of the business system	
Performance Measurement			Senior management involvement correlates directly to outcome performance	Measures are used that enable common targets across the business system	Objectives are used to influence team approaches & priorities		Communication events are used to reiterate targets and report on progress		Strategic targets are used to encourage team based approaches		A standard, pan-organisational measurement system is required		
New Ways of Working	Processes designed to fit the business system		Senior management are used to disable roadblocks to new ways of working			Change and Continuous improvement become core business competences		New ways of working are embedded through the development of new competence sets	Teams are used to develop the system-based approach				
Rules of Engagement	Rules are created that reflect the business culture	Competence criterion need to be defined for the leaders							Rules are used to guide teams in the early stages				
Team Working		Team leadership is competence driven	Leadership is competence based not hierarchical	Strategy guides the integration of team working practices across the business system	The perceived level of the project influences the team structure	Team structures reduce the potential for conflict during implementation	Dialogue is used to support the development and activities of teams	Teams are used to develop the organisational competences					
Skill & Knowledge Development		Competence development is facilitated by experts	Strategic and change skills are critical			Implementation skills are critical							
Communication	Communication is used to inform business stakeholders		Senior managers must personally communicate the programme	The strategy is used to inform & set expectations	Clarity is required to properly position the improvements								
Change Management		Change is deployed by multiple & skilled expert leaders	Change becomes a fundamental leadership skill										
Project Positioning	The developments are defined within a business context		The senior management position the improvements within the business	The strategy is used to prioritise the improvements within the business									
Strategy Development	The strategy is defined in clear business terms		The senior managers set a clear direction										
Senior Management Sponsorship	Improvements are defined in business terms to engage the executives	Realistic improvement objectives are defined											
Expert Leadership													
Business Focus													

5.5 Research Question 2: Description of the Implementation Dynamics.

Question 2: What are the implementation dynamics of purchasing and supply management development programmes?

5.5.1 Introduction

The literature review highlighted the point that describing a process for change and outlining some predefined outcomes in terms of content is not enough for practitioners to be able to implement development programmes robustly.

What is required is information that relates to the tactics that should be used in different contexts in order to align the change process recommendations with both the nuances of the situation in question and the defined objectives of the programme as advised by Cummings & Worley (1993, p.2).

The organisation of this section builds on the framework developed by Research Questions 3 and 4, which provides a matrix for organising the findings into a logical array. Causal Networks (Miles & Huberman 1994, p.222) are used to summarise and organise the findings from the collective case studies. The structure of the networks is developed around the two features of the actions that aggregate together to form the implementation dynamics and the relationships between the actions. These are then further summarised to create the table at the end of each section, demonstrating the way in which the findings are presented in Table 37 and Table 38.

This section responds directly to the need identified by Cummings and Worley for generating a table of implementation dynamics (tactics) that may be used by the change leader as they progress through the development programme. This is at the heart of the practical purpose of this thesis.

5.5.2 Findings

The findings for this section are sub-divided into the 13 dynamics that form the output to Research Question 4, organised in maturity terms according to the output from Research Question 3 namely, *Functional Development*, *Organisational Development*, *Inter-Firm Relationships* and *Inter-Firm Networking*.

In some of the implementation dynamics no data was forthcoming that related to inter-firm networking. In these instances, the output was interpolated and stated as such in the text.

5.5.2.1 Business Focus (D_1)

Competence Level ($C_1 - D_1$)

Business skills and knowledge training are used to raise the awareness of purchasing staff so that they can begin to gain a better understanding of the environment within which they operate. This enables them to assess cultural and other business issues so that business improvement proposals can be targeted on known areas of need. The longer-term perspective balances with the short-term needs through the alignment of purchasing plans with those of the business. This summary is shown graphically in Figure 38.

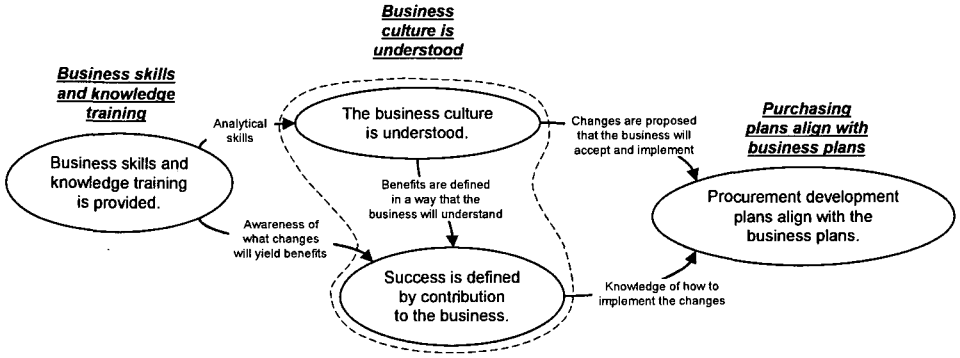


Figure 38: Competence level ($C_1 - D_1$) causal network

Cooperation Level ($C_2 - D_1$)

Purchasing aligns itself with the business priorities by focusing on its internal customers and meeting their needs in ways that they understand and value.

To enable this to be sustainable, purchasing processes are integrated with those of other functions within the business from the planning stage onward. Implementation of the new ways of working is collectively owned and the performance of the new processes are defined and assessed by the business. Figure 39 provides the detail and relationships of this summary.

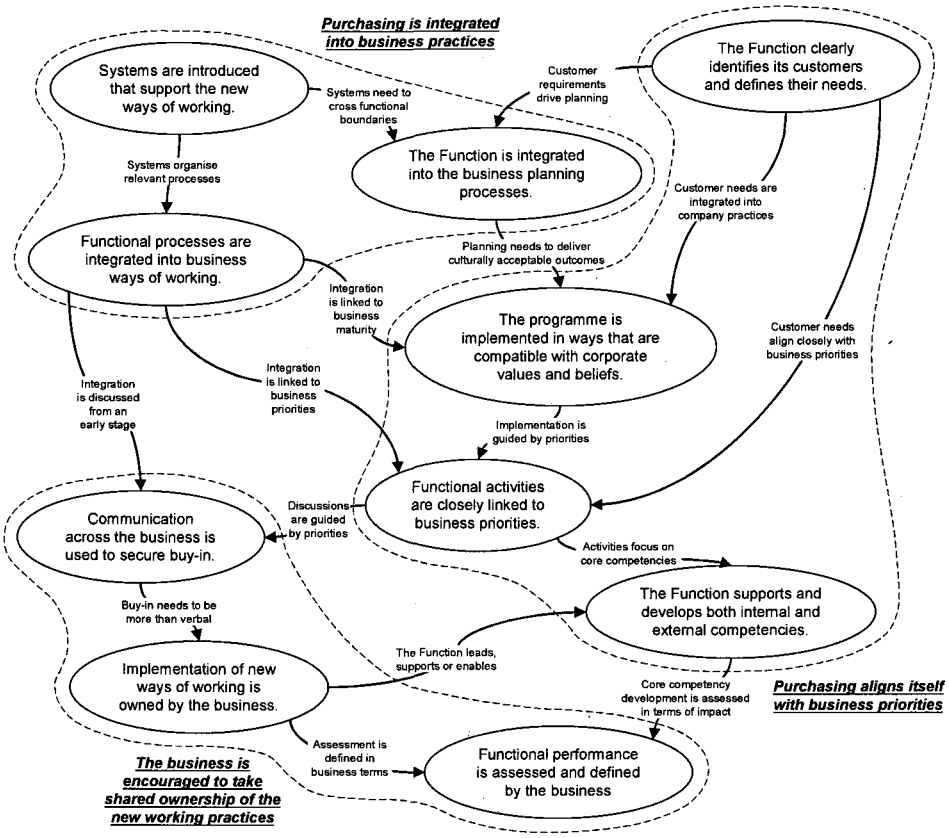


Figure 39: Cooperation level ($C_2 - D_1$) causal network

Collaboration Level ($C_3 - D_1$)

The firm takes a broader systems perspective with its customers and suppliers, looking at all aspects of the extended enterprise and developing relationships with those that have complementary capabilities. These are often driven by external customer requirements, which are translated by the firm into opportunities to develop suppliers by providing future business opportunities. The selection of suppliers moves from a price focus toward a more holistic emphasis on compatible cultures and value systems. 'Out of the box' thinking is encouraged with all aspects of the business relationship as a means of creating competitive advantage through more than just the standard

transactional processes. The interaction of the firm with its supplier partners is shown in Figure 40.

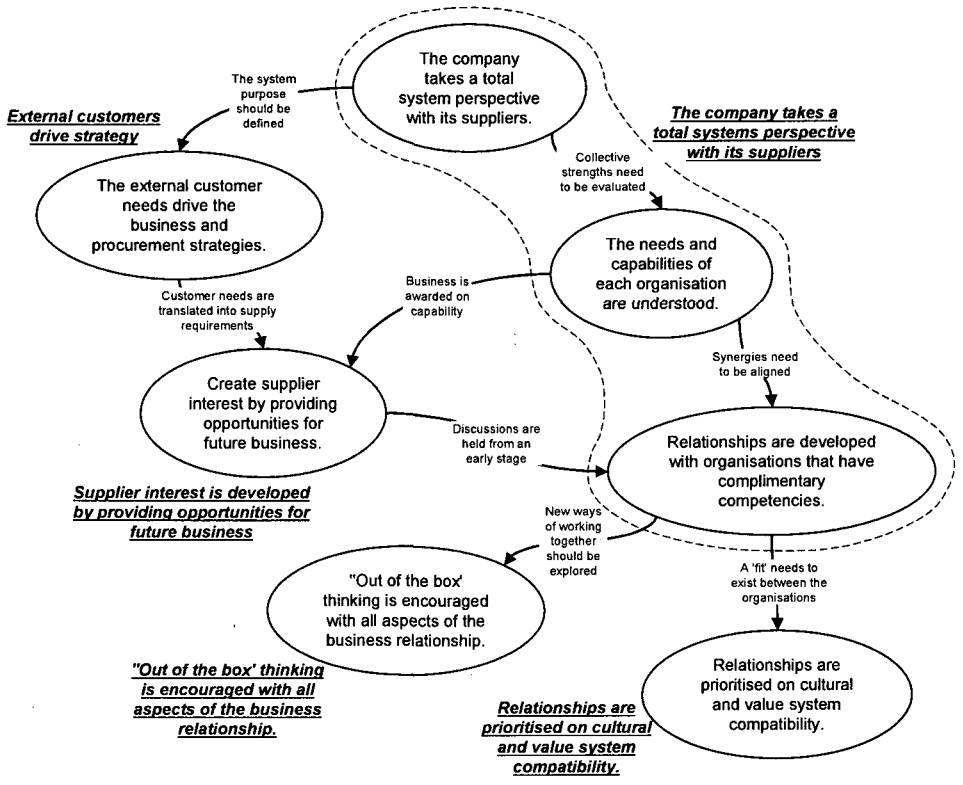


Figure 40: Collaboration level ($C_3 - D_1$) causal network

Coherence Level ($C_4 - D_1$)

Core competencies are defined relative to those found across the extended enterprise. The firms within the extended enterprise are then developed as unique centres of excellence to prevent unnecessary duplication and to minimise the potential for conflict between organisations. Issues that do arise are managed at the business level and are based on the needs of the network, rather than simply the dyad in question. Although relationships do exist between the two nodes shown in Figure 41 they are not strongly causal, often being influenced by other issues.

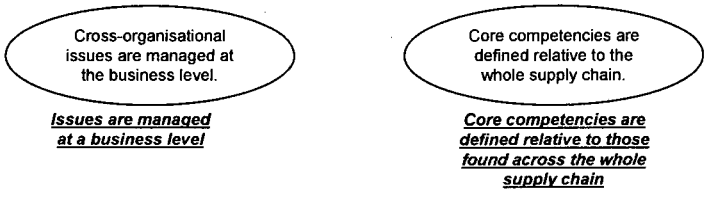


Figure 41: Coherence level ($C_4 - D_1$) causal network

Summary

Business focus shifts the emphasis from a functional perspective toward a more holistic business view of the ways in which activities should be planned and executed. The business objectives are used as the key drivers for purchasing improvements. Purchasing develops an understanding of the ways of workings of a business so that it can engage with its peer group from a business perspective. Engagement leads to wider business involvement in the development of the purchasing activities and enables the introduction of a systems-based extended enterprise. The themes are framed in Table 24.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Understand the business environment	**Integrate practices into the wider business operation**	**Select and develop suppliers from a competence-based perspective**	**Coordinate network activities based on extended enterprise priorities**

Table 24: Main themes of D_1 – Business Focus

5.5.2.2 Expert Leadership (D_2)

Competence Level ($C_1 - D_2$)

Training programmes are aligned to pre-identified business needs and used to develop management skills and knowledge in the area of purchasing and supply management. To support the successful deployment of training, a self-learning ethic is encouraged as a means of developing and then maintaining an adequate level of functional expertise. These activities act as the catalyst for overcoming inertia and enable the function to begin the process of developing its specific functional competence set. The main areas of consideration are described on Figure 42.

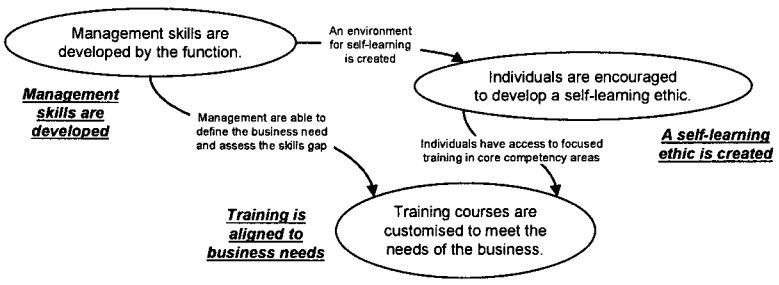


Figure 42: Competence level ($C_1 - D_2$) causal network

Cooperation Level ($C_2 - D_2$)

Experts are both recruited into the firm and seconded internally from across the business functions to fill the skill and knowledge gaps that are preventing the development of purchasing across the firm. The movement of people around the firm begins to blur the functional silos and encourages a systems-based approach. Experts are used in a dual role to support ongoing operational requirements and to implement development activities. These experts are made accountable for their specific actions in addition to the collective responsibility owned by the organisation. The role of experts across the firm is shown in Figure 43.

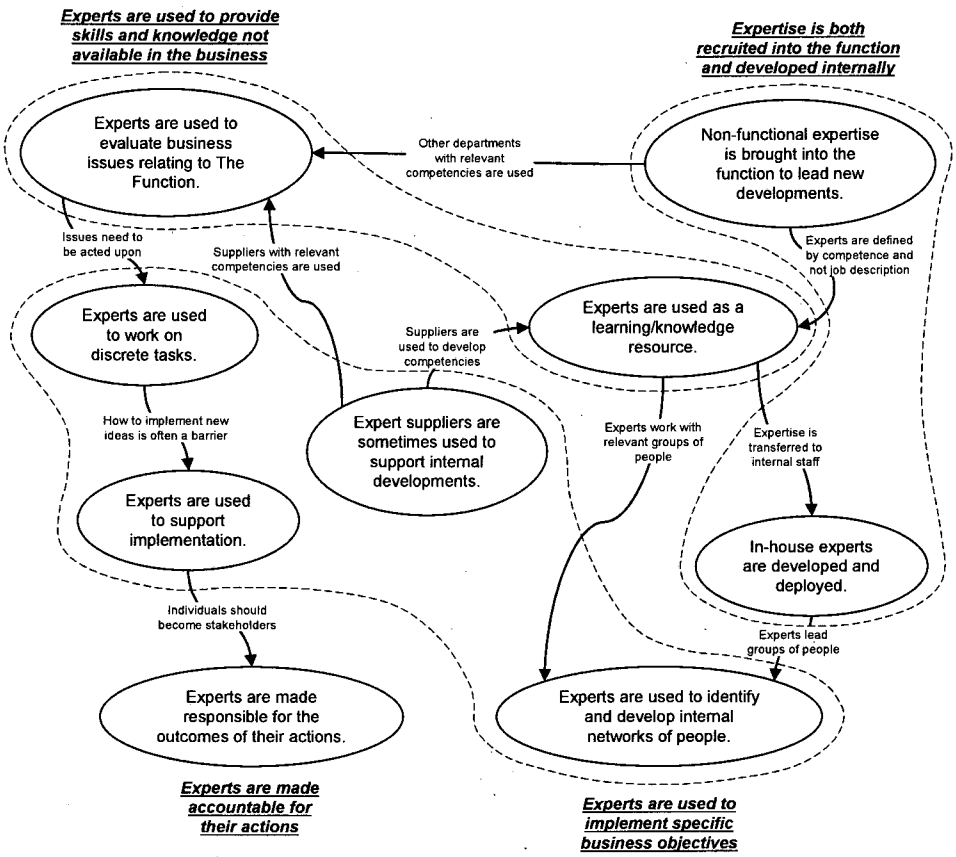


Figure 43: Cooperation level ($C_2 - D_2$) causal network

Collaboration Level ($C_3 - D_2$)

Supplier expertise is developed in line with their relative core competence and identified relationship objectives. The experts are shared across the two organisations to improve and align ways of working that support mutually beneficial objectives. The time required for experts to implement changes

successfully should not be underestimated. Instead, the use of experts should be seen as part of the longer-term development of the system and to act as a means of engaging further improvements. Figure 44 provides a schematic overview of these issues.

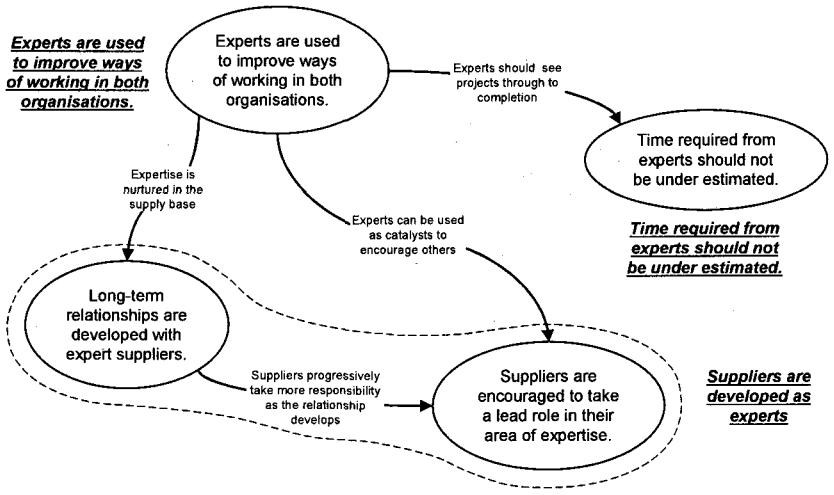


Figure 44: Collaboration level ($C_3 - D_2$) causal network

Coherence Level ($C_4 - D_2$)

No findings were generated from the case study material. However, the literature indicates that an extension of the above concepts at the broader enterprise level would involve the use of brokers to coordinate and prioritise the movement of experts across the network in order to facilitate the best possible resolution of problems or maximisation of opportunities.

Summary

Knowledge of the potential benefits derivable from improving purchasing within a given situational context requires the competence-based experience of experts in terms of both analysing the potential and then translating the findings into meaningful opportunities for the firm. Once a potential for improvement has been defined it is necessary to engage the business in a sequence of coordinated implementation activities that will realise the benefits on offer. This process usually occurs within the context of an existing purchasing operation. The problems that this situation raise are normally beyond the capability of an organisational system that does not have an

adequately developed skill and knowledge set, thus requiring the support of expert leadership at both the strategic and operational level. The main theme of each maturity level is framed in Table 25.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Expertise is developed within the function	**Improvements within the firm are guided by experts**	**Expertise is shared across firms for mutual benefit**	**Expertise is aligned and coordinated across the network**

Table 25: Main themes of D_2 – Expert Leadership

5.5.2.3 Senior Management Sponsorship (D_3)

Competence Level ($C_1 - D_3$)

The functional management team needs to be seen to launch and support the development programme in an unambiguous way. They must also have the competence to not only lead but also become actively involved in the implementation of the development activities being proposed. This requires an explicit recognition of the importance of upfront training and personal development and will often necessitate some level of mentoring intervention by experts in the early stages. The issues faced by the functional sponsors are described in Figure 45.

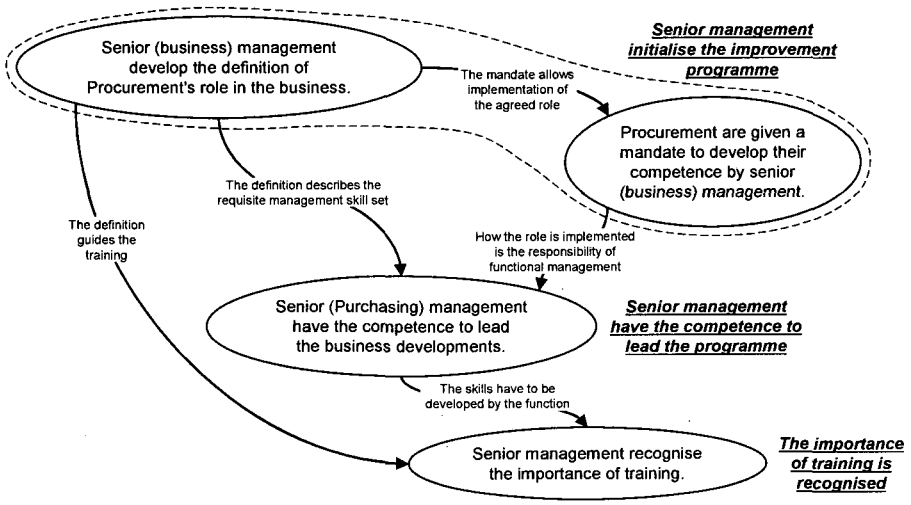


Figure 45: Competence level ($C_1 - D_3$) causal network

Cooperation Level ($C_2 - D_3$)

The organisation's senior management team needs to become actively engaged in the implementation of the purchasing development programme at least at a sponsorship level as it is rolled out across the business. To facilitate this, Purchasing needs to be represented at senior management level so that an ongoing process of two-way communication between management stakeholders can take place. This provides the means for balancing the necessary trade-offs that will exist between the need for resources and reorganisation upheaval with the perceived benefits that will result. During implementation this approach also facilitates the speedy resolution of roadblocks or other diversionary tactics that may hinder progress. The structure of the sponsorship group within the firm is shown in Figure 46.

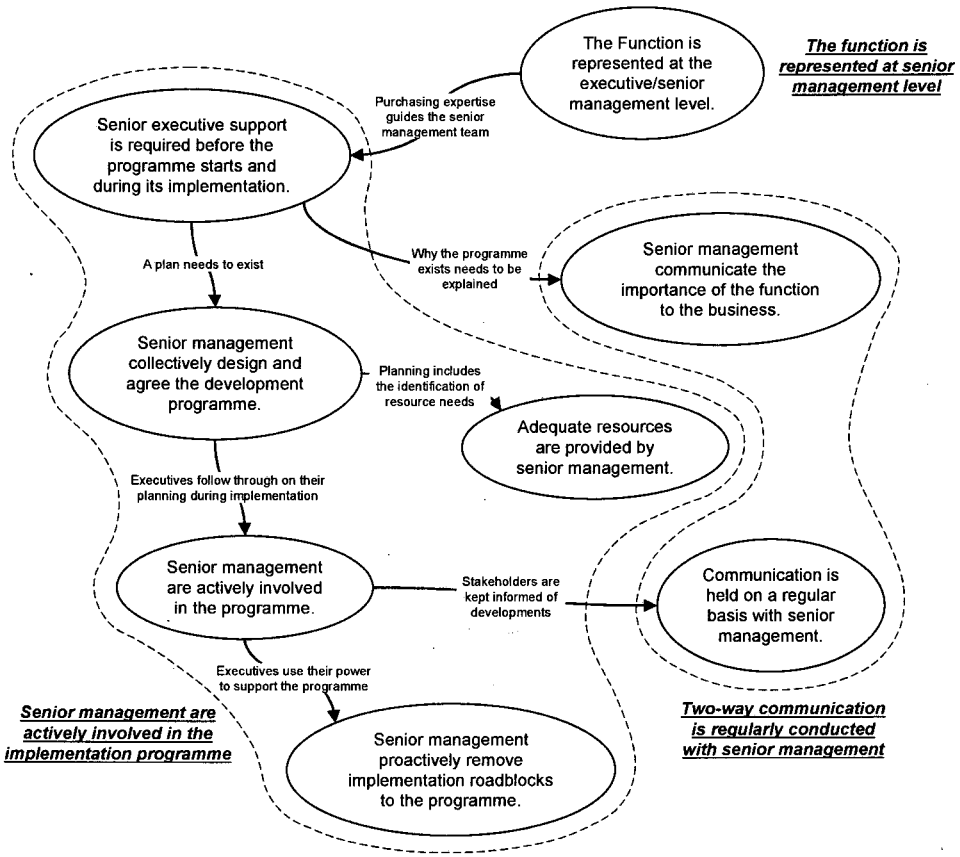


Figure 46: Cooperation level ($C_2 - D_3$) causal network

Collaboration Level ($C_3 - D_3$)

To begin the process of collaboration, the two sets of senior management need to communicate their endorsement of the collaborative approach with the few suppliers with whom they wish to engage. This has to occur at this level to signal the seriousness of the intent and the willingness to change the working relationship. Both sets of senior managers then remain personally involved in the partnership for its duration through dialogue and formal business reviews. In many situations, issues will arise at the operational or implementation level that would have been previously resolved through power play. The roles of senior managers in these situations are to coach their people through a team-oriented review and develop an equitable resolution of the given situation. These new approaches thus become embedded within the organisations as staff witness and learn the preferred ways of working being demonstrated by their managers. Issues relating to inter-firm collaboration are described in Figure 47.

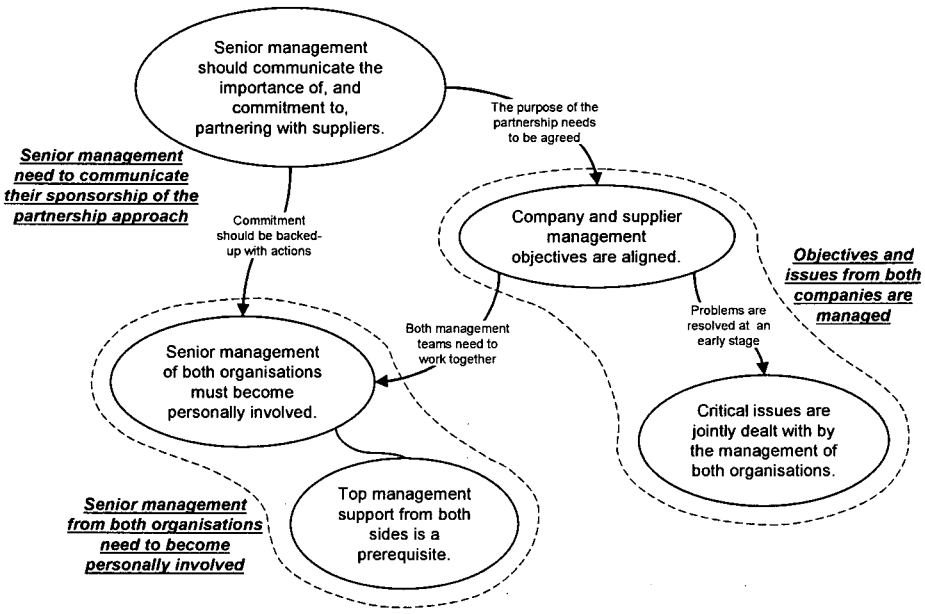


Figure 47: Collaboration level ($C_3 - D_3$) causal network

Coherence Level ($C_4 - D_3$)

Senior managers from key organisations in the network begin the process of developing a coherent approach to meeting the needs of the final customer. This results in the ability to coordinate and align the core network suppliers,

non-core suppliers being positioned around them as a support structure. A secondary consequence of this action is the ability to both manage and satisfy the expectations of network partners as customers through a disaggregating and cascading of the customer-supplier interfaces backwards from the final customer. Although issues will always remain, the approach enables the best possible fit of opportunities with objectives and provides a logical explanation of why disconnections exist between organisations under certain circumstances. These activities are summarised in Figure 48.

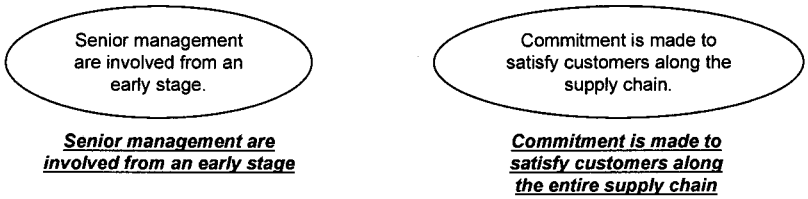


Figure 48: Coherence level ($C_4 - D_3$) causal network

Summary

Senior managers are the power-brokers in the development of purchasing maturity. As a prerequisite these individuals need to have a clear understanding of the potential contribution Purchasing can make and how this could be achieved. Their role is to initiate, mediate and implement the stated objectives of the development programme in-line with the needs of the firm and eventually the wider network. The role of each sponsor in each situation needs to be clear and their support visible throughout the organisational entity. The main theme of each maturity level is framed in Table 26.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
New competence development is launched through effective & engaged sponsorship	**The sponsors ensure that new practices cross organisational barriers**	**Sponsors promote and demonstrate the new approach to customer-supplier relations**	**Managers focus on the ultimate aims of the network to guide the alignment of its members**

Table 26: Main themes of D_3 – Senior Management Sponsorship

5.5.2.4 Strategy Development (D_4)

Competence Level ($C_1 - D_4$)

The initial strategy is designed to overcome inertia within the function and to start the processes of defining and implementing change. Part of this approach involves moving Purchasing from the position of operational service toward integrated partner within the firm. Training and development are key aspects of the strategy during these early stages and emphasise both the technical development of core competences and the repositioning of the tactical perspective toward a more strategic focus. The progress through the strategic issues is mapped in Figure 49.

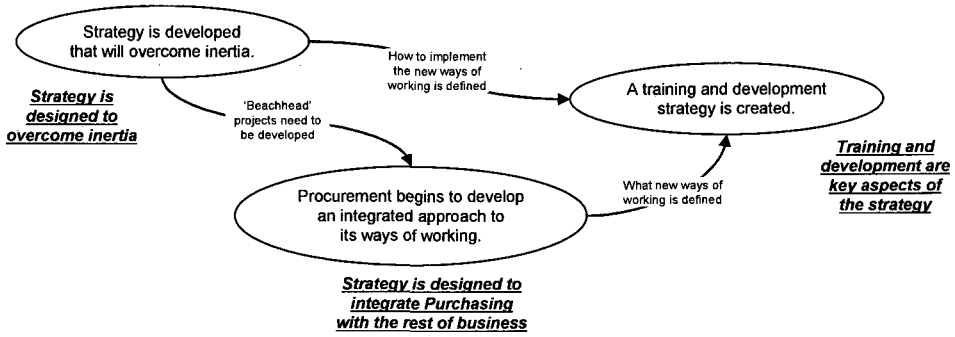


Figure 49: Competence level ($C_1 - D_4$) causal network

Cooperation Level ($C_2 - D_4$)

Stakeholder needs from within the firm are used to define clear goals and drive the strategy development process. However, a paradox tends to exist in that the potential that Purchasing can deliver is often not apparent or understood by the key decision makers. Therefore, a process of education and awareness building is often a prerequisite of the goal-setting activity. The purchasing strategy needs to align with other functional strategies and be embedded as a subset of the business strategy. This encourages integrated working practices that cross functional boundaries by minimising the potential for competing priorities and the tension within the system that this creates. Continuous improvement is included as an element of the strategy as a means of ensuring the ongoing viability of the programme. The resulting strategy has to be sponsored and communicated throughout the organisation by senior management if it is to stand any chance of being widely adopted.

These issues are described in Figure 50.

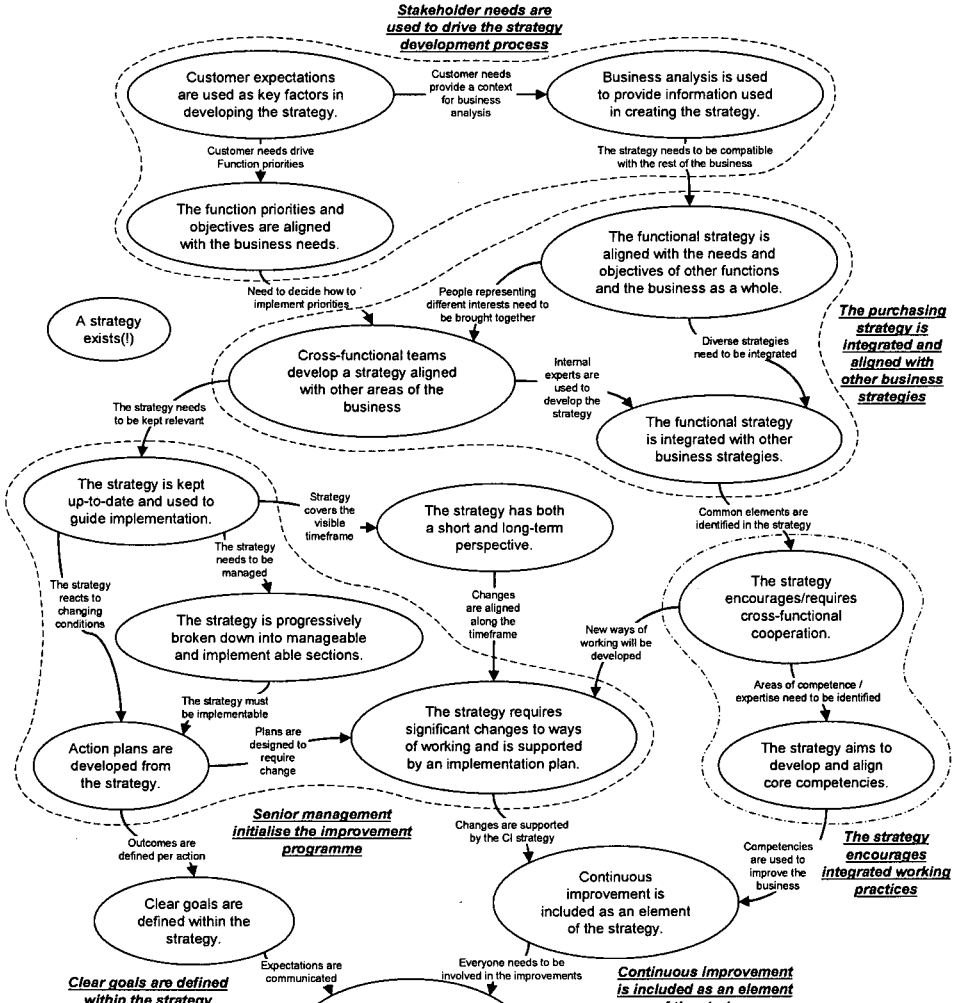


Figure 50: Cooperation level ($C_2 - D_4$) causal network

Collaboration Level ($C_3 - D_4$)

The first step in the development of strategy is the definition and alignment of mutually beneficial business objectives. If this cannot be achieved the issue moves beyond one of simply failing to develop a strategy and calls into question the viability of any longer-term relationship. Emphasis is placed on the development of integrated ways of working across both the customer and supplier organisations. The resulting strategy tends to be symbiotic, stating each organisation's goals and obligations in the relationship. Change is a

fundamental purpose of the strategy creation process and therefore stresses the importance of well-grounded descriptions and targets. As changes take place, the strategy evolves to reflect emerging contextual opportunities and challenges. Figure 51 shows the relationships between the various aspects of the strategy development.

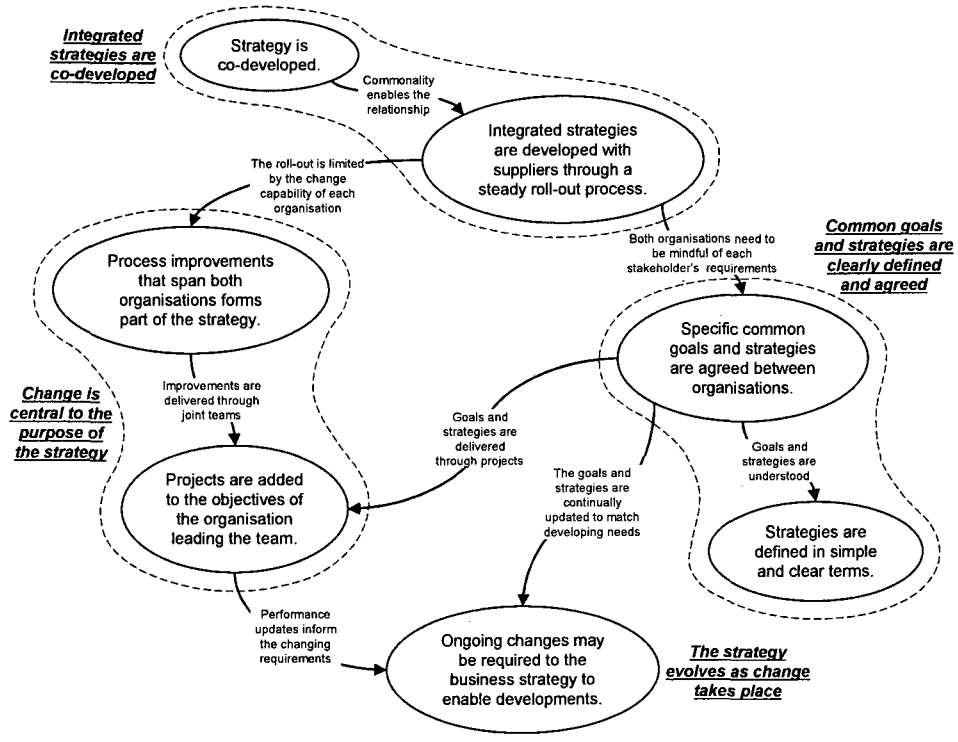


Figure 51: Collaboration level ($C_3 - D_4$) causal network

Coherence Level ($C_4 - D_4$)

The need to use inclusive processes when developing clearly defined strategic synergies across the supply network is critical. Given the dispersion of firms, it is important that an equitable and transparent process is used to consolidate and organise the disparate issues that will exist. This is particularly pertinent given the need for each firm to compromise its own needs in favour of the needs of the network as a means of developing a sustainable solution. The network-level strategy effectively becomes the guiding document upon which the individual firm and department strategies are formulated. Without this alignment it is probable that entropy will slowly corrupt the original intentions as organisational entities seek to optimise their own performance. Although it is proposed that performance should be based

on more than simply financial criteria, it is not uncommon for this to be the predominant strategic criterion. The issues discussed above are shown in Figure 52.

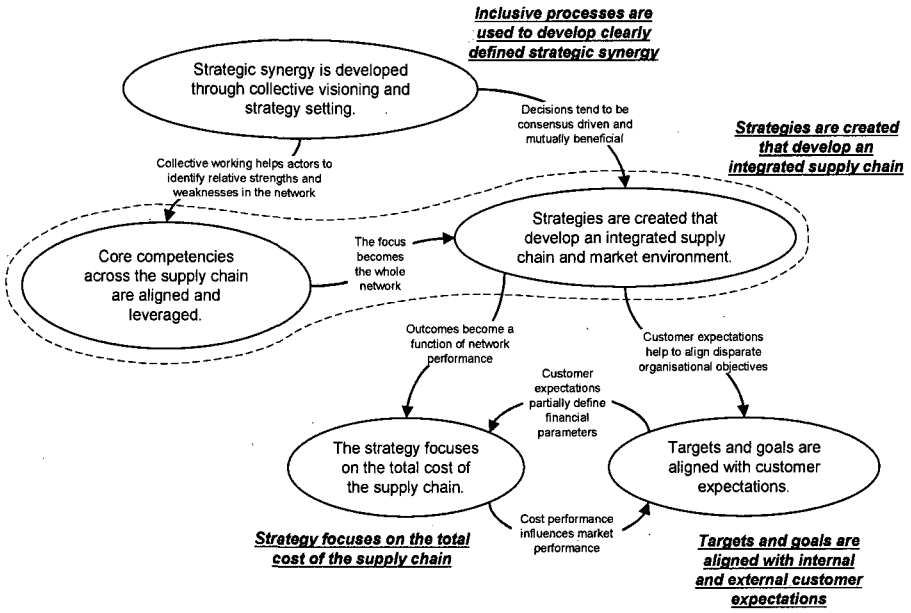


Figure 52: Coherence level (C_4 – D_4) causal network

Summary

Strategy is used to both inform and structure the expectations of the different organisational entities and provide a route map for migrating ways of working toward the stated objectives of the development programme. The detail of the strategies needs to be grounded in the stated objectives of the organisational network and then disaggregated through the partner firms and departments. This formulation and cascade process is ongoing and iterative in an attempt to maintain alignment as the business environment evolves over time. This necessitates the need for a 'broad church' of stakeholders to be involved in the strategy development processes. The main themes appear in Table 27.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
The objective is to overcome inertia and begin the change process	**Functional strategies are aligned with the business strategy**	**Strategies are co-developed, being both sustainable & mutually beneficial**	**Strategy development is part of a pan-network management process**

Table 27: Main themes of D_4 – Strategy Development

5.5.2.5 Purchasing & Supply Management Positioning (D_5)

Competence Level ($C_1 - D_5$)

Purchasing begins the process of repositioning itself by informing the firm of its potential contribution and working through the barriers formed as a result of historical activities and peer group perceptions. This has multiple consequences in terms of work content, objectives and organisational structure as barriers are removed and progress is made. Congruent with this process is the need to develop the competences of staff so that they are able to work at a more strategic and business-oriented level. Although working practices are still executed at a functional level, they are closely aligned to the business structure and this has the added advantage of visibly demonstrating to the firm the changes that are taking place. The process of repositioning is described in Figure 53.

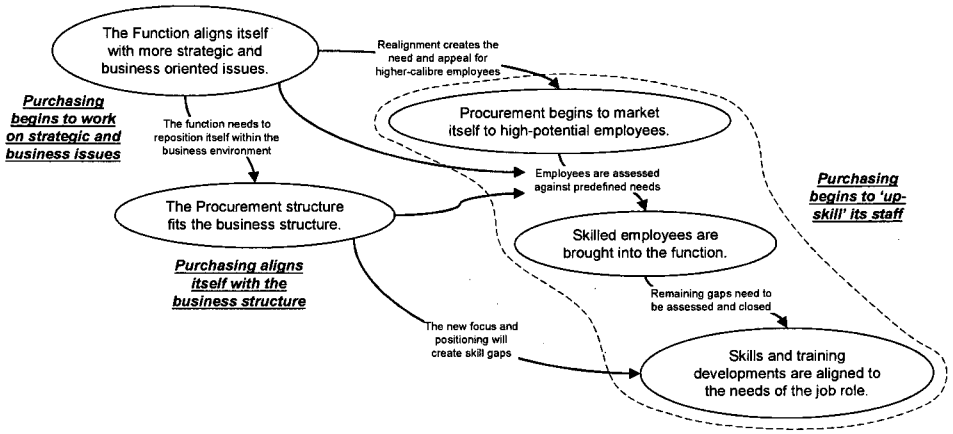


Figure 53: Competence level ($C_1 - D_5$) causal network

Cooperation Level ($C_2 - D_5$)

As Purchasing's role becomes understood by the business, the ability to engage at an operational and strategic level increases. This enables the integration of purchasing processes across the firm based on an activity rather than a functional structure. This requires peer functions to be willing to adapt their own processes accordingly and as such the strategy plays a major part in this development phase. Despite the devolvement of purchasing activities across the business, purchasing remains the key role of a single senior management representative who holds responsibility for a clear set of

purchasing related aims and objectives. The integration of Purchasing into the wider firm is shown in Figure 54.

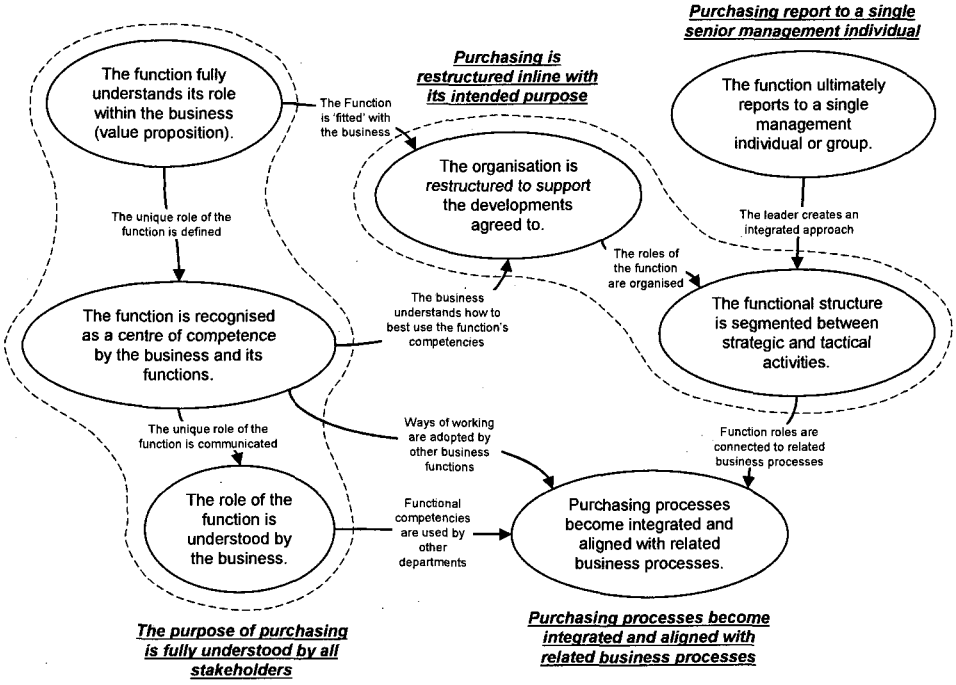


Figure 54: Cooperation level ($C_2 - D_5$) causal network

Collaboration Level ($C_3 - D_5$)

At this level, the role of Purchasing moves from positioning itself within the firm to positioning the firm with its key suppliers. This not only involves developing the desired approach and ways of working with each supplier, but also involves the coordination of peer groups within its own organisation. Devolution of purchasing activity has enabled the firm to operate at a more integrated level, which requires ongoing coordination to prevent degradation back into functionally myopic activities. This is facilitated by Purchasing maintaining an operational overview of the day-to-day administration and contractual activities. These issues are summarised in Figure 55.

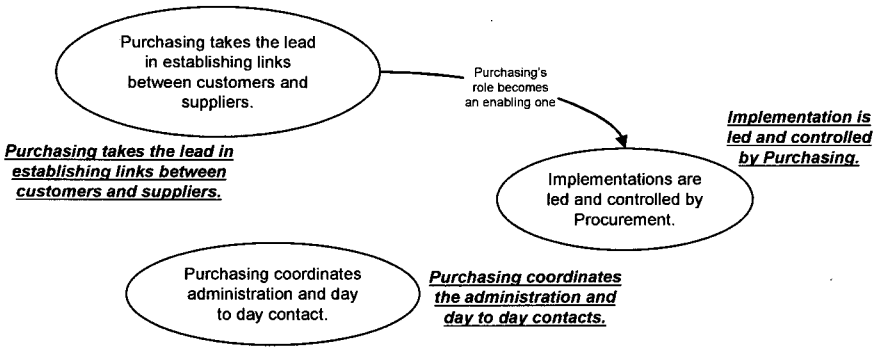


Figure 55: Collaboration level ($C_3 - D_5$) causal network

Coherence Level ($C_4 - D_5$)

No findings were found in the case study material that specifically related to this topic. The literature indicated the importance of network management as multiple organisations developed closer and more interdependent relationships. Given the historical role of Purchasing as the experts in supply management, it seems that this may be a natural evolutionary step. However, Marketing may also have a role to play in this activity given their expertise in networking and developing relationships. This situation could be resolved through the integration of the relevant Purchasing and Marketing activities to form a networking function that has a broad view across the extended enterprise. This ultimately provides the opportunity for developing relationships between third parties as opposed to directly with, or through, the function's own firm.

Summary

The role of Purchasing within the business needs to be clarified and an appropriate business structure adopted to enable the new ways of working to be fully implemented and exploited. This is facilitated through purchasing practices being aligned and integrated with those of the wider business community it serves. In this way the role of the function becomes one of both enabling and directly contributing to business performance. As the development moves beyond the boundaries of the firm, the role of Purchasing changes to one of managing the relationship aspects of the interactions between customers and suppliers. At the network level this takes the form of brokering relationships between parties. The main theme of each maturity

level is framed in Table 28.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Functionality develops to a business level	**Purchasing expertise and processes are deployed across the firm as appropriate**	**Purchasing takes the lead in the management of supplier relations**	**Purchasing develops a network broker role to link suitable partners**

Table 28: Main themes of D_5 – Purchasing & Supply Management Positioning

5.5.2.6 Change Management (D_6)

Competence Level ($C_1 - D_6$)

As the role of Purchasing is clarified, its development programme can be viewed by the firm from a position of informed observation rather than historical perception. This results in either a formal or informal debate surrounding the merits and potential for success of the proposals being made and eventually leads to a position where the functional strategy can be adopted as part of the wider business plan. The result of this process is the provision of necessary resources, particularly competent people, to guide and implement the necessary changes. Further aspects of change management appear to be ignored at this level given the ability for issues to be micro-managed within the function. The process of developing a readiness for change is summarised in Figure 56.

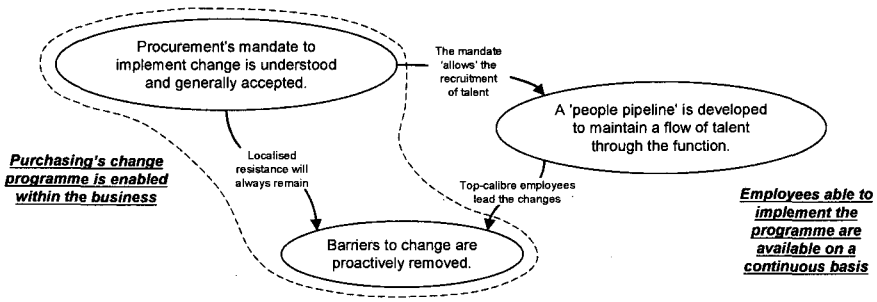


Figure 56: Competence level ($C_1 - D_6$) causal network

Cooperation Level ($C_2 - D_6$)

Projects are used as the main implementation vehicle for developing discrete activities and deploying the development programme. The focus of the projects is placed on developing processes and creating the supporting infrastructure to ensure their ongoing capability. Cross-functional resources are factored in at two levels; the change process itself and the ongoing requirements for operating the new processes. The outcome of consuming these resources is then assessed by monitoring both project progress measures (process) and purchasing process performance measures (outcomes). Ultimately the results of this assessment are used to review the programme as a whole against the evolving needs of the business. People maintain a high profile throughout the development work in terms of supporting them through the changes and keeping them informed of the wider activities and issues being addressed. These activities and their relationships are described in Figure 57.

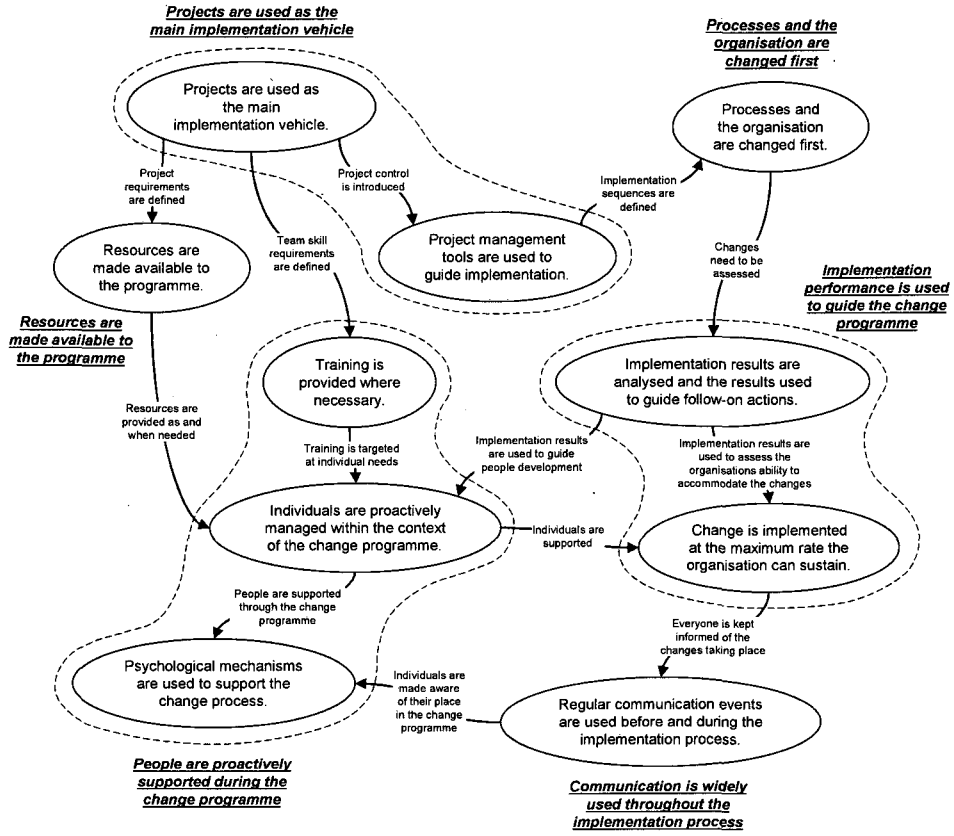


Figure 57: Cooperation level ($C_2 - D_6$) causal network

Collaboration Level ($C_3 - D_6$)

Changes that cross organisational boundaries tend to take significantly longer to develop and implement. As such, a project management system often forms the core of the coordination activities that ensure a successful migration from exiting to new ways of working between the two firms. This involves very clear communication channels and close collaboration between the improvement teams. The emphasis of the work is placed at the process level to ensure that a good interface is developed between the two organisational systems. This reinforces the need for high quality and intensive training of staff within both firms. Cross-organisational reviews are held regularly to check progress and resolve unexpected issues that might emerge. The main aspects of the change infrastructure are shown in Figure 58.

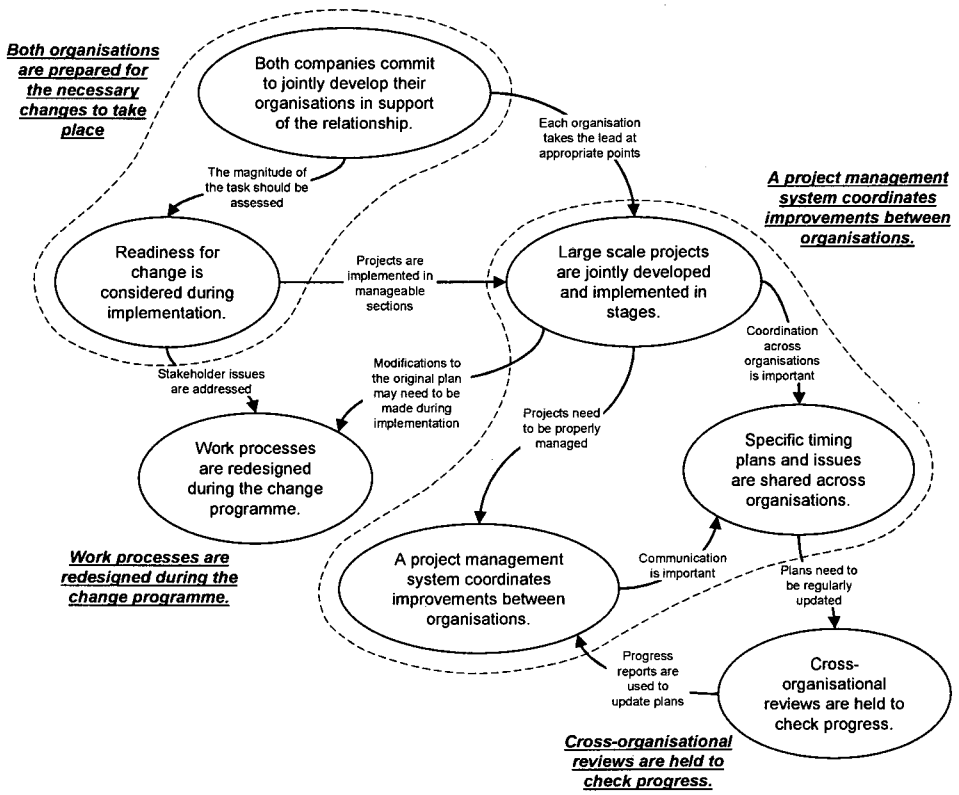


Figure 58: Collaboration level ($C_3 - D_6$) causal network

Coherence Level ($C_4 - D_6$)

No significant findings relating to this topic were found in the case study material. However, it is apparent that as the size of the network increases and the subsequent level of complexity become difficult to manage, expertise

becomes a critical enabler to the development of large-scale network improvements. This implies that a specific set of competences needs to be developed in order to facilitate a network approach that is coordinated and focused on the strategic aims of satisfying customer needs. It is questionable whether this is a role that Purchasing could or should develop given the magnitude and expert level of the work required.

Summary

Change management is developed as a discrete competence to support the implementation of the development programme at progressively broader organisational levels. This requires a low-level specific competence at a functional level but develops to a point where it requires expert competence at the network level. Therefore, both change management and project management emerge as core skills as the roles of both suppliers and the extended enterprise are developed. The development programmes need to be sponsored by individuals with an appropriate level of authority to be able to make appropriate changes. The changes themselves need to be regularly communicated as an enabler of wider understanding and engagement. The main theme of each maturity level is framed in Table 29.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Changes are agreed by the business and developed within the function	**Projects are deployed using cross-functional teams to implement process-based changes**	**Change projects are jointly developed, coordinated and implemented by both partners**	**Change and project management becomes core competences for developing the extended enterprise**

Table 29: Main themes of D_6 – Change Management

5.5.2.7 Communication (D_7)

Competence Level ($C_1 - D_7$)

A communication programme needs to be developed that informs the organisation on multiple fronts and at multiple levels. The functional staff need to know what is being proposed, how it is to be accomplished and their role in achieving the stated programme objectives. This is of no use unless the key decision makers have been engaged on a personal level and their support

and public sponsorship secured. It is of note that these key influencers may not be exclusively hierarchical in nature and they may include knowledge experts or union representatives. Also, key stakeholders from across the firm need to develop a clear picture of what is planned and how this will impact upon them both operationally and in terms of the ongoing support they receive from Purchasing. The most effective way to accomplish this process is through the development of a communications infrastructure that ensures all stakeholders are informed and updated as the programme progresses. These issues and their relationships to each other are described in Figure 59.

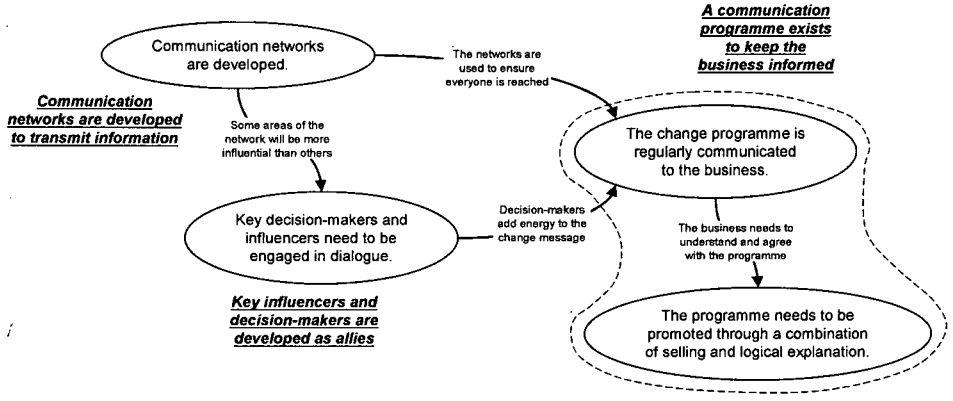


Figure 59: Competence level ($C_1 - D_7$) causal network

Cooperation Level ($C_2 - D_7$)

Common information systems are developed across the business to link the functional disciplines and support the development of cross-functional, system-based, processes. These processes are used, in turn, to encourage integration between the various parts of the firm as the new cooperative working practices are developed and implemented. The information system is designed to carry data for general consumption and data that is targeted at specific stakeholder groups. To ensure that this approach does not result in a proliferation of bureaucracy, the content and accuracy of the information carried need to be carefully managed. Although information systems are seen as important disseminators of data, face-to-face meetings are promoted as the primary method for communicating within the firm. This has a strong psychological impact on individuals, who tend to relate their work in terms of its impact on their colleagues as opposed to the impersonal function to which

the individual belongs, thus increasing the commitment to quality of service. These aspects of communication within the firm are summarised in Figure 60.

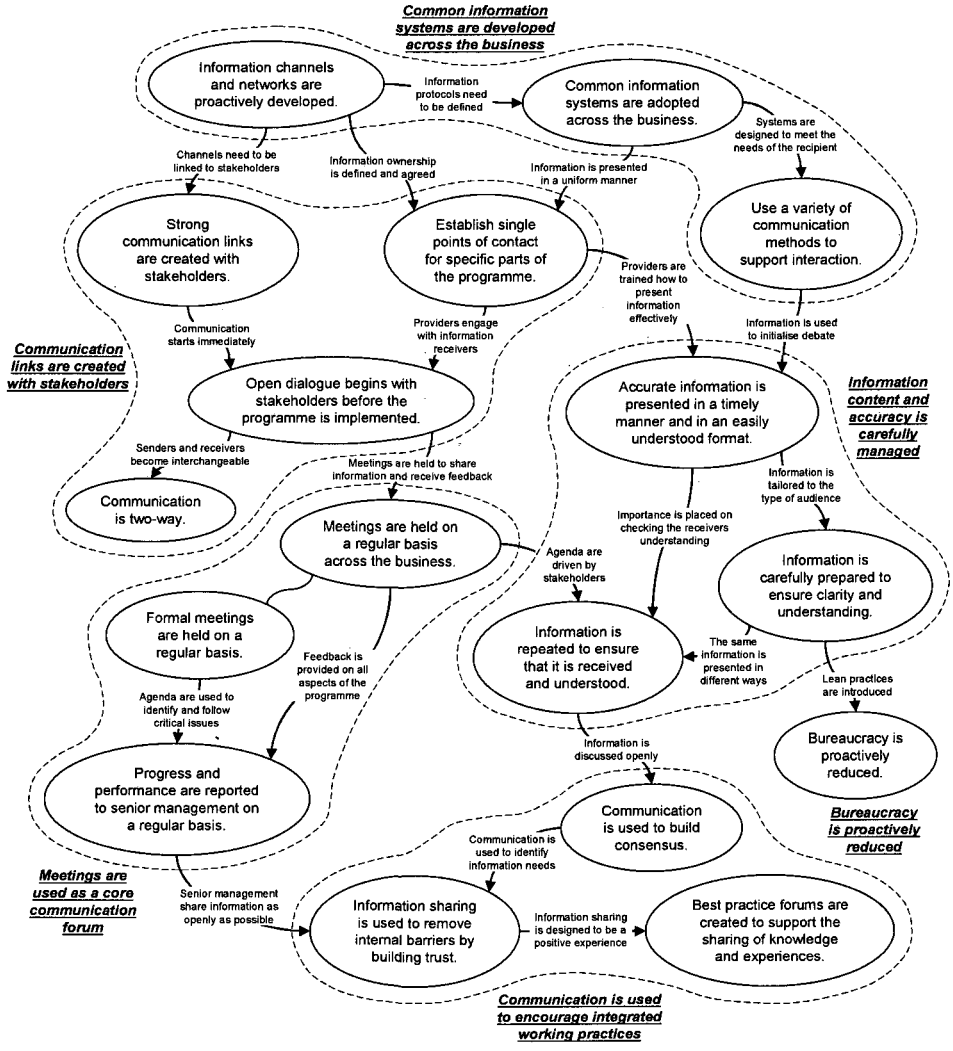


Figure 60: Cooperation level ($C_2 - D_7$) causal network

Collaboration Level ($C_3 - D_7$)

Common communication systems are recognised as one of the key enablers of a sustainable collaborative relationship. During the early stages of the relationship problems tend to occur through misunderstandings and a failure to resolve difficulties quickly. The development of common approaches to bi-lateral communication opens the channels for resolving these problems. Over time information sharing forms the catalyst for developing relationships at multiple levels across the two firms resulting in both formal and informal information sharing. Customer needs provide a focus for the bulk of communication and provide a common context from which both firms can

engage the other in creating mutually aligned and beneficial solutions. This evolutionary process is shown in Figure 61.

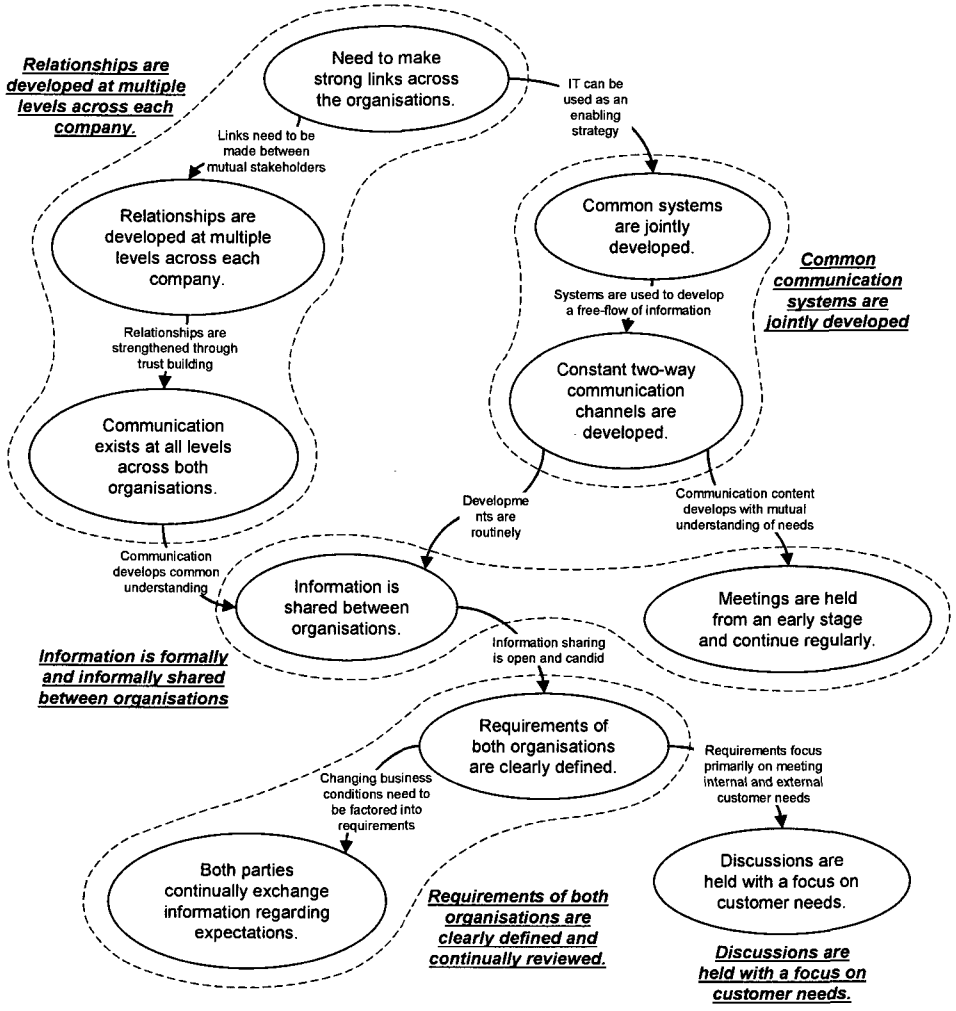


Figure 61: Collaboration level ($C_3 - D_7$) causal network

Coherence Level ($C_4 - D_7$)

Information systems are developed to enable open communication between network firms across the extended enterprise. This can result in the unplanned development of self-led sub-networks that offer the benefit of concentrating core competences within specific areas of the network. By keeping these organisations informed of end-user issues the information system becomes a key enabler for coordinating the individual priorities and activities of the member firms. This has the progressive impact of aligning capacities and capabilities of individual firms to those required by the network in pursuit of systems-based objectives. Where gaps are found to exist in competence, employees are temporarily shared in an attempt to fulfil specific

objectives. This approach is shown in Figure 62.

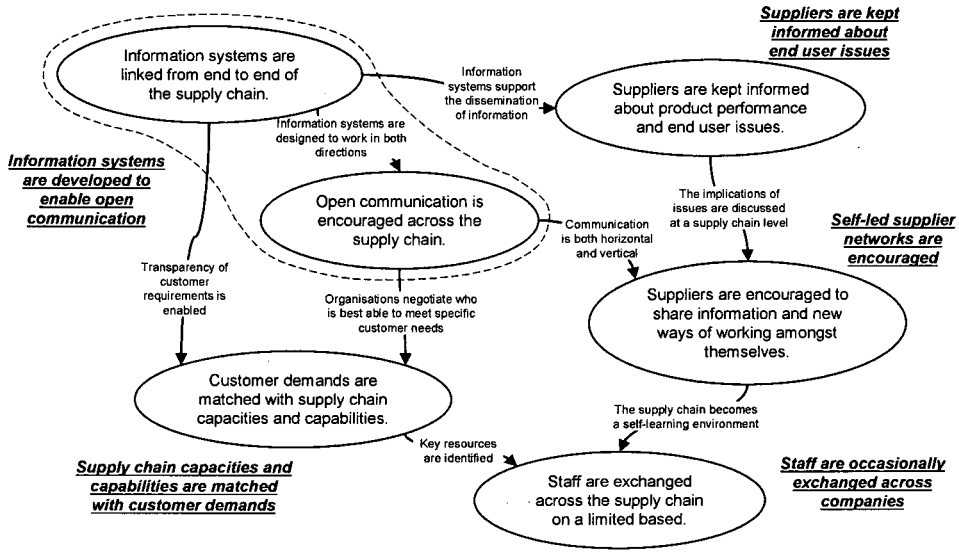


Figure 62: Coherence level (C_4 – D_7) causal network

Summary

Communication is used as a means of keeping stakeholders informed and empowered to make decisions based on the objectives of the development programme. However, communication is carefully developed as a process of two-way dialogue between relevant stakeholders to ensure engagement and alignment at both the operational and strategic level. This positions the communication network as a tool for aligning and integrating working practices across organisational entities, rather than simply as a disseminator of data. This allows stakeholder to test their assumptions and understanding continually when making critical decisions. In order to support continual development, the communication network is proactively maintained as an ongoing and iterative process between stakeholder groups. The main theme of each maturity level is framed in Table 30.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Communication is used to inform and energise the change process within Purchasing	**Information protocols are used to integrate working practices across the organisation**	**Communication is used to develop and coordinate bi-lateral relationships**	**Network members become self-aligning through the availability of relevant information**

Table 30: Main themes of D_7 – Communication

5.5.2.8 Skill and Knowledge Development (D_8)

Competence Level ($C_1 - D_8$)

A precondition for successfully developing the competence of Purchasing is the development of the function's senior management team in change leadership skills. Failure to start at this point can result in a lack of direction as the senior team falls short of providing the necessary support. Training throughout the function needs to be tailored to the needs of both the function and the individual in an attempt to match the competence development with the functional requirements. This can have the impact of supporting the individuals through the change process as they become able to recognise where and how they fit into the new working system. These processes required the availability of a fully resourced training programme the operation of which is governed by the principle of shared responsibility between the function and individual for creating and executing a personal development plan. The development of these new competence sets needs to be consolidated through an operational alignment of rewards (such as bonuses) with the demonstrated use of new skills and knowledge that can be linked to improved performance. The development processes are shown in Figure 63.

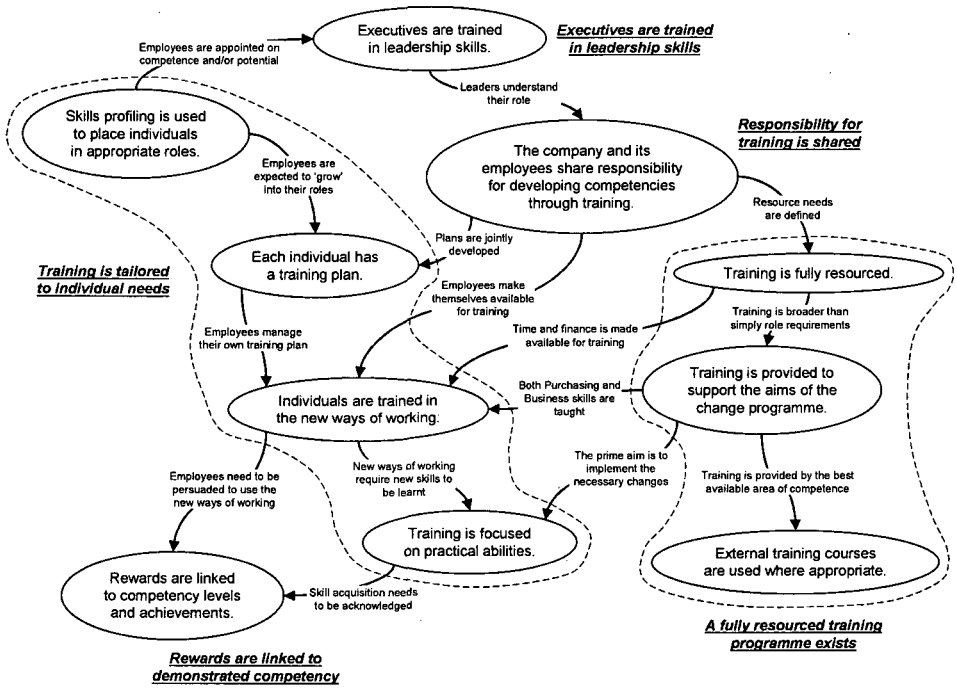


Figure 63: Competence level ($C_1 - D_8$) causal network

Cooperation Level ($C_2 - D_8$)

Business processes are mapped across the firm to help staff gain understanding of where and how the contribution of Purchasing can add value to the business. These processes are then used to evaluate improvement priorities in terms of competence gaps and business needs. To close the gaps, all of the relevant staff are inducted into a managed personal development programme. Part of this process involves the development of selected individuals to a level of competence that allows them to take responsibility for others within the firm. The areas that would be covered by this approach usually centre on the perceived core competences of the business. This process is enabled through coordinated programmes that run across the whole business and operate on a continuous development basis matching need with provision, as shown in Figure 64.

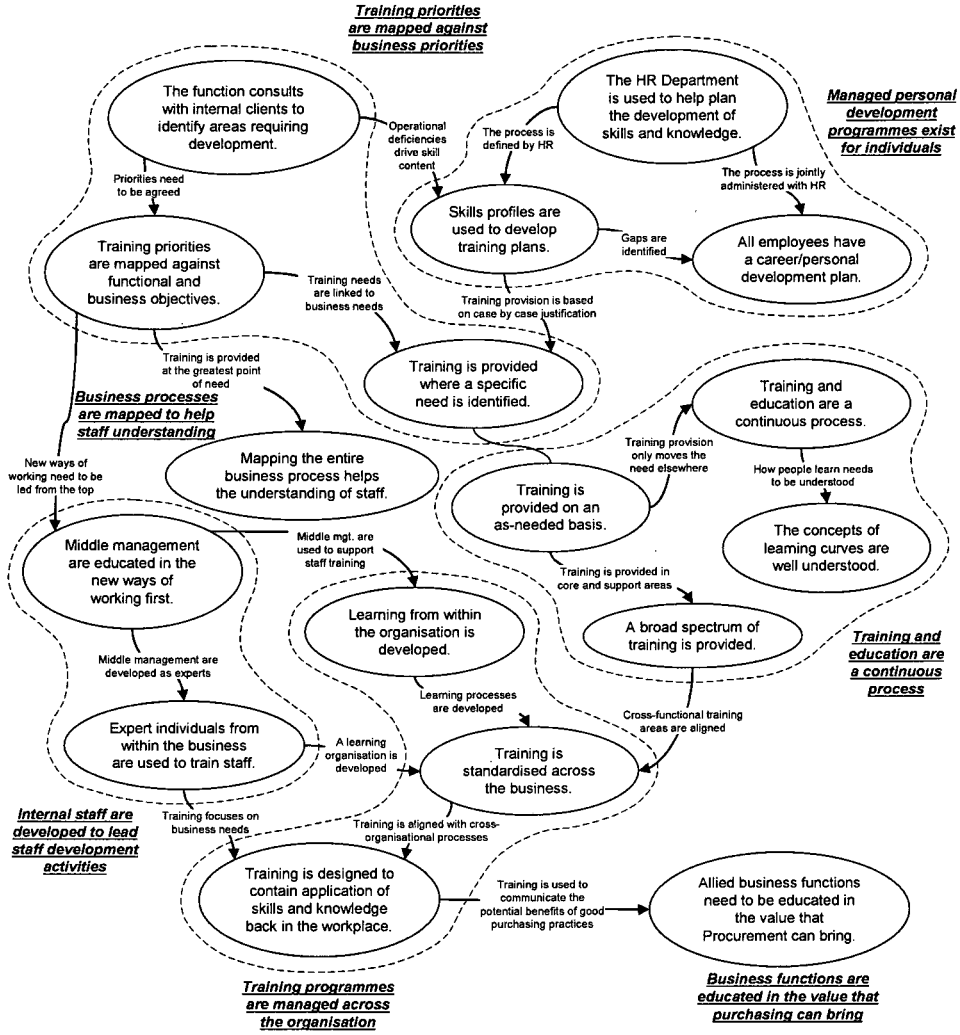


Figure 64: Cooperation level ($C_2 - D_8$) causal network

Collaboration Level ($C_3 - D_8$)

Unless developments are guided by an overall strategy then the approach becomes one of fixing competence deficiencies as they become visible. The availability of a clear strategy not only enables firms to plan ahead but also creates the opportunity for aligning the training in parallel with unique core competence development and integration of working practices. By combining the systemic and strategic approaches, training and education can be provided on the basis of both current and future needs, emphasis being placed on the development of requisite competence. These issues are highlighted in Figure 65.

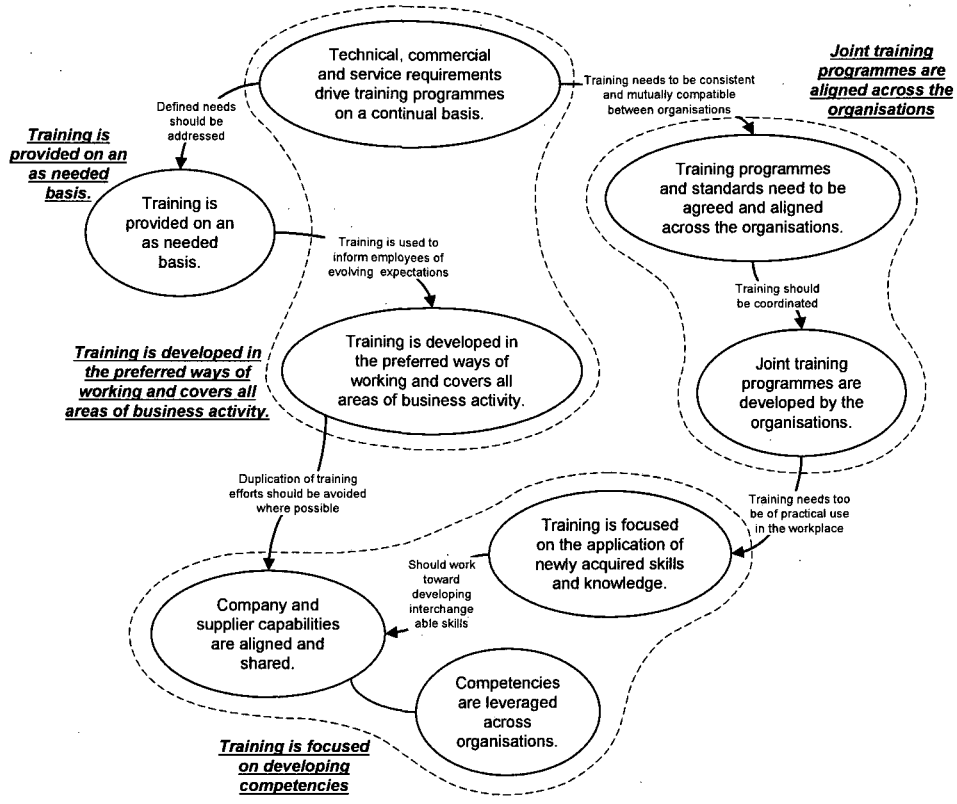


Figure 65: Collaboration level ($C_3 - D_8$) causal network

Coherence Level ($C_4 - D_8$)

The development of competence at a network level requires a clear understanding of how the network system operates and its ultimate aim. The complexity that this creates requires specific development in investigative and analytical techniques. Part of this process requires the sharing of information across the network so that multiple firms can work on similar diagnoses, but from different perspectives. This both enriches the information that can be

used to align firms within the network and reduces the potential for conflict through misunderstanding or competing priorities. As this process matures, second and third-tier suppliers can be inducted into the networking processes. The development of aligned network competence is described in Figure 66.

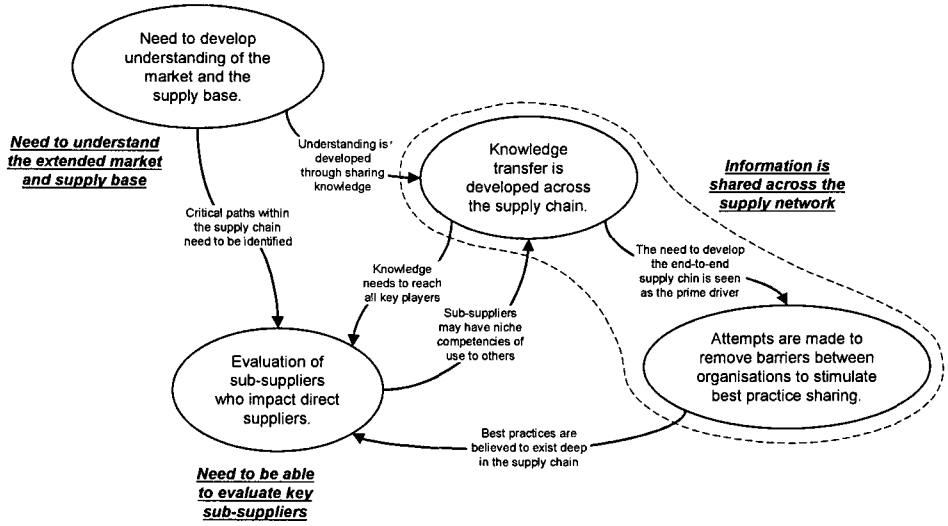


Figure 66: Coherence level (C_4 – D_8) causal network

Summary

Skills are developed as needed by each organisational entity through training programmes led by experts with both theoretical and practical experience. It focuses predominantly on the individual as a means of developing appropriate competences. Development is also structured in a way that encourages joint working practices across the different levels of organisational aggregation with strong emphasis on the importance of application of the learning in a working environment. As the complexity of the business system increases the need for effective management of skill and knowledge development becomes more critical. The main theme of each maturity level is framed in Table 31.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Training focuses on the development of personal competence within a functional setting	**Training is coordinated and integrated cross-functionally to meet firm needs**	**Training is used to develop and align core business competences between partners**	**The focus shifts to knowledge and the identification of extended market opportunities**

Table 31: Main themes of D_8 – Skill and Knowledge Development

5.5.2.9 Team Working (D_9)

Competence Level ($C_1 - D_9$)

The ability to work within a team environment is seen as a necessary attribute in individuals and is taught to groups at a functional level before engagement is attempted with the business. To enable this process, the function is physically and operationally restructured to encourage and support team-working practices. This approach is reinforced through the use of individual performance appraisals to review both individual and team member contributions toward overall functional performance. This process of team development is shown in Figure 67.

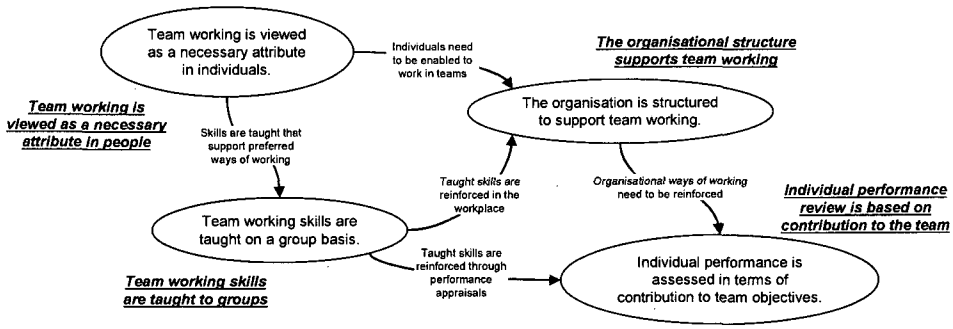


Figure 67: Competence level ($C_1 - D_9$) causal network

Cooperation Level ($C_2 - D_9$)

Business teams are both sponsored by senior management and provided with training and expertise as required. This approach is reinforced by cultivating a suitable environment within the firm using longer-term strategies and mutually aligned objectives. These are intended to have the effect of overcoming the normally segmented approach incumbent within most firms, migrating the organisational culture toward a more relational and integrated system. This process is reinforced by the development of system-based processes that require team-based practices to be operated effectively. As maturity and competence increases, the teams become self-determining within the constraints of the business priorities and prevailing practices. The main issues that impact upon the development of an integrated team structure are described in Figure 68.

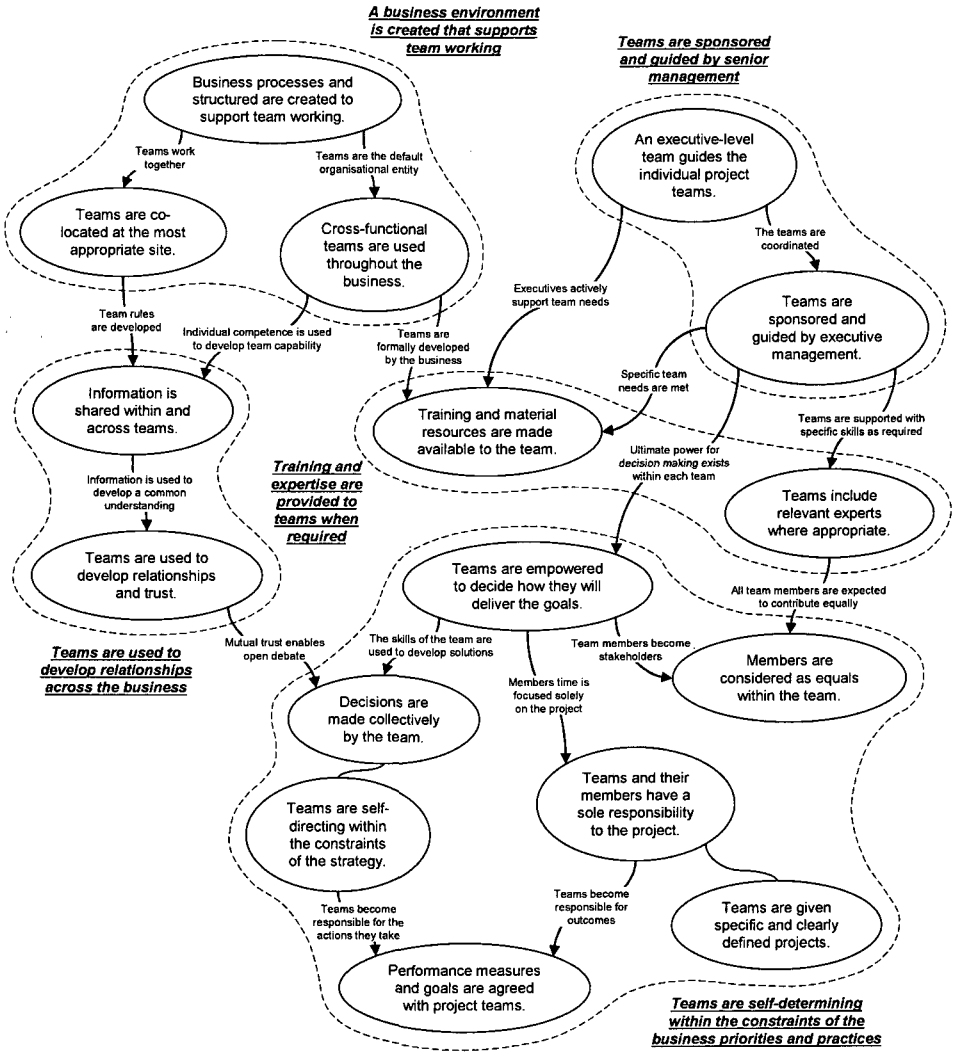


Figure 68: Cooperation level ($C_2 - D_9$) causal network

Collaboration Level ($C_3 - D_9$)

The development of aligned strategies and priorities enables the construction of clearly defined team projects. Given the strategic and interdependent nature of these projects it is usual for them to be jointly sponsored by senior managers from both organisations. The induction of individuals into the team requires more care given their previously diverse backgrounds. As such, team members often learn about each others' working practices in an attempt to develop synergies through the development of a common contextual understanding. This provides the foundation for developing cooperative and coordinated approaches to the maturation of the team and its proposals. This process tends to protract the project time and requires a high level of dedication from both firms. This commitment emphasises the importance of

retaining a consistent team membership for the life of the project. This approach is summarised in Figure 69.

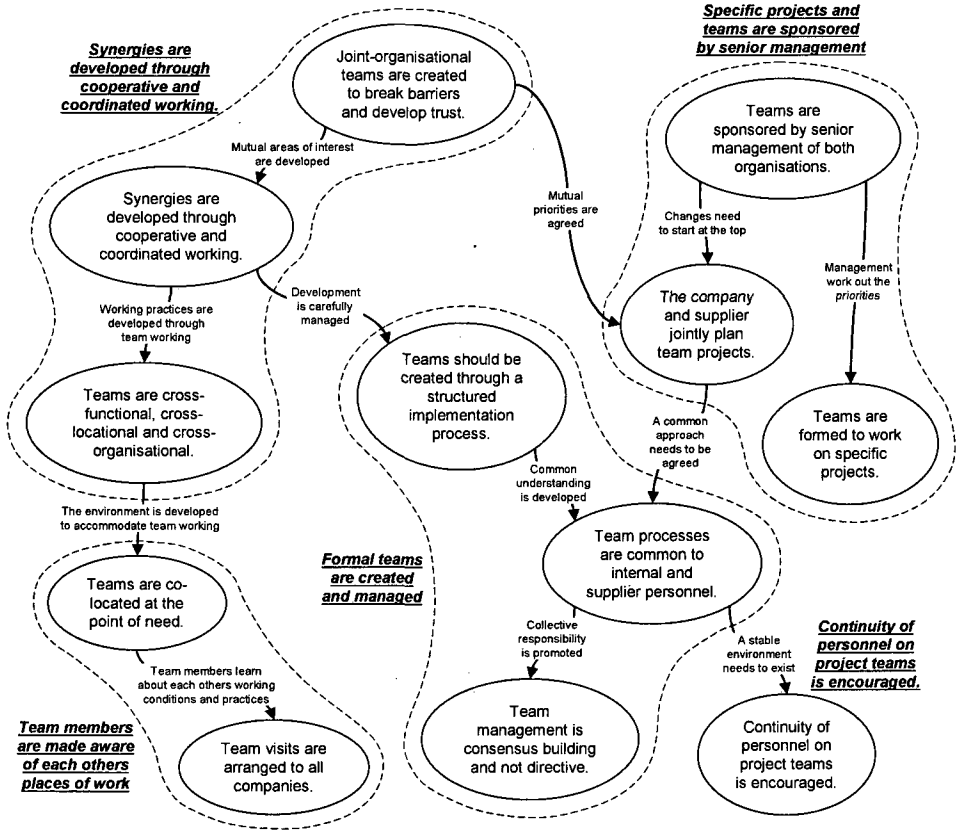


Figure 69: Collaboration level ($C_3 - D_9$) causal network

Coherence Level ($C_4 - D_9$)

At the network level the concept of team working becomes a more complex proposition. Multiple organisations can become involved and this requires the coordination of different objectives and resources. It can be argued that coordination rather than an alignment is the only viable approach given the difficulty in creating a single proposition from multiple and contextually divergent organisational situations. The role of Purchasing therefore becomes one of creating a 'best fit' scenario that is acceptable to all parties but only optimal from a total systems perspective. This allows the individual firms to release resources to the project team within the constraints of the need to justify their decisions to the relevant stakeholder groups. The complexity of this situation is mapped in Figure 70.

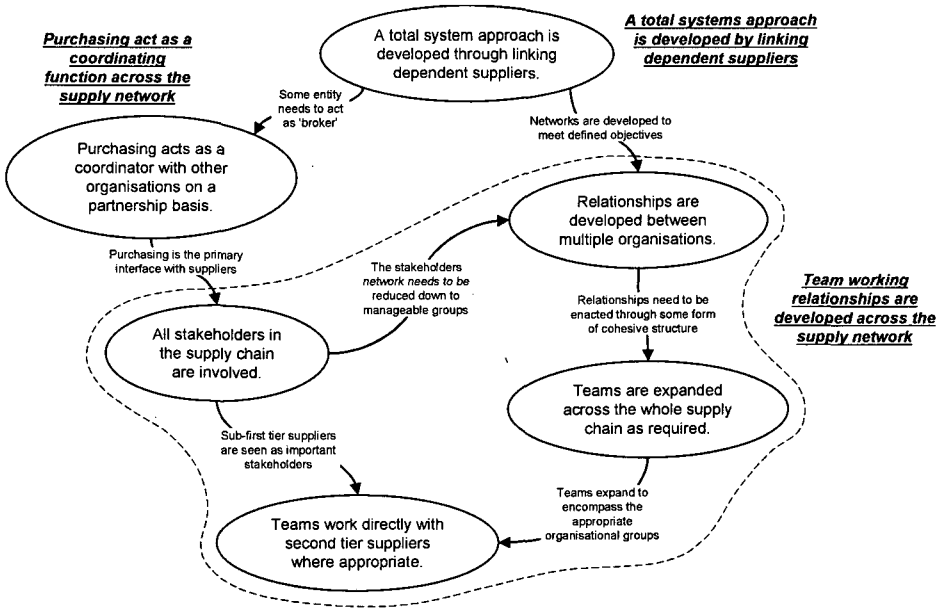


Figure 70: Coherence level (C_4 – D_9) causal network

Summary

Team working is used as a means of implementing changes through the development of relationships and alignment of working practices across the various organisational entities. Cross-functional and cross-organisational teams become the standard organisational unit and form the basis for migrating new ways of working across the business system. The formation of teams is based on the development of skill portfolios matched to business objectives. Teams are proactively managed, with performance being measured in terms of team contribution. The main theme of each maturity level is framed in Table 32.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Team-working principles are taught within the function	**The business is developed to deploy and support team working**	**Cross-business teams are co-developed and jointly sponsored**	**Purchasing coordinates the development of multi-firm teams**

Table 32: Main themes of D_9 – Team Working

5.5.2.10 Rules of Engagement (D_{10})

Competence Level ($C_1 - D_{10}$)

Employees within the purchasing community have personal development plans that include elements of specific competence development and broader business awareness through job rotation within the firm. Roles within the function are comprehensively described and related directly to the strategic objectives of both the function and firm. Employees are kept informed of their evolving roles as change projects are developed and implemented. This process is described in Figure 71.

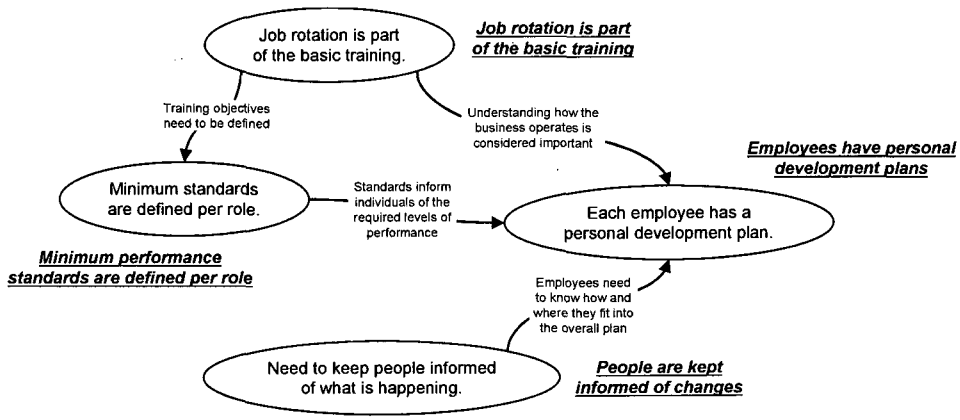


Figure 71: Competence level ($C_1 - D_{10}$) causal network

Cooperation Level ($C_2 - D_{10}$)

As the competence of Purchasing is acknowledged by the firm, the function is given responsibility for managing all external spend across the supply network from initial supplier to end customer. This requires transparency in the processes used to develop, agree and implement strategies at the business system level. Synonymous with this approach is the concept of teamwork across the business within a project-based deployment system. As the projects are deployed, information is shared openly between stakeholders as part of the testing process for the new ways of working. A core part of the integrated transparency is the implementation of a common business measurement system. Although the system is standardised across the firm, in some instances it is appropriate to provide information in the native language of the individual users. This improves accessibility to information and helps to

detect problems at an early stage. Where problems are found a formal grievance procedure exists to facilitate the quick resolution of employee issues. These issues are described in Figure 72.

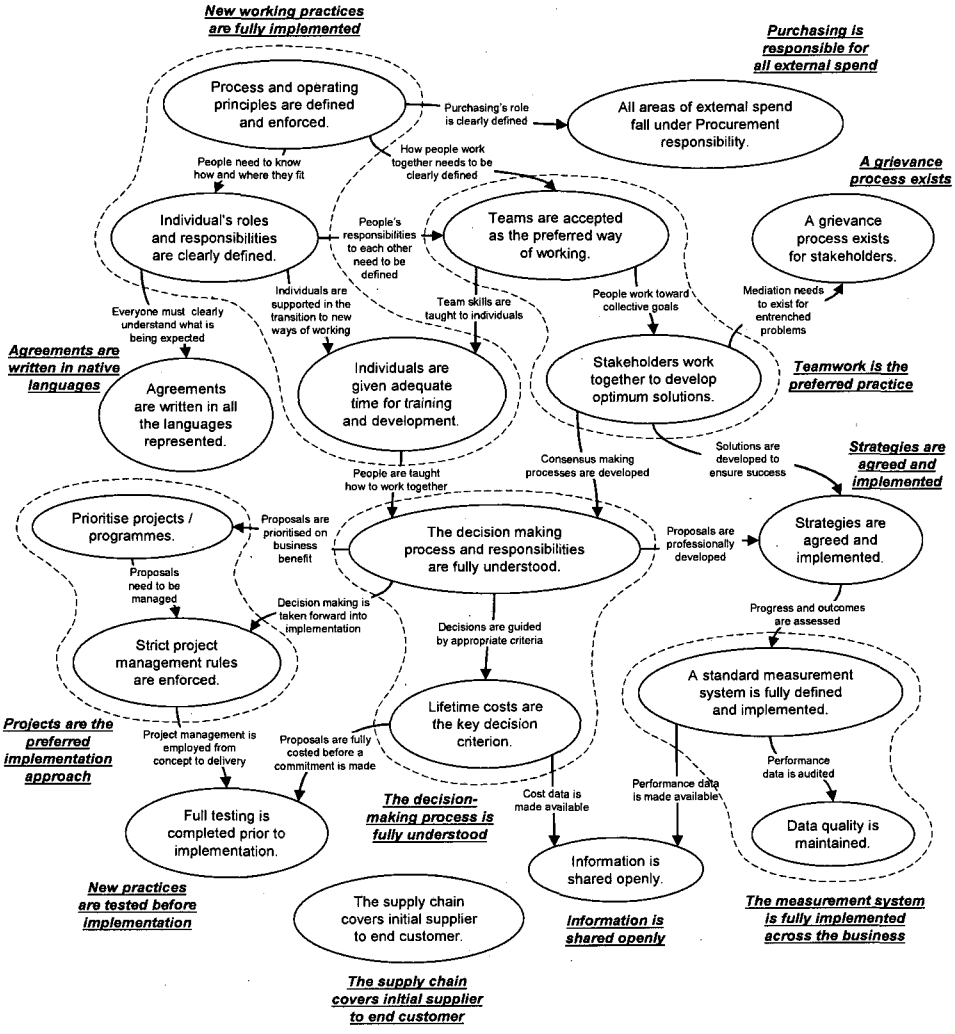


Figure 72: Cooperation level ($C_2 - D_{10}$) causal network

Collaboration Level ($C_3 - D_{10}$)

As a result of the work completed in aligning the strategies and priorities between the two firms, it becomes possible to align performance criteria and benefits sharing through a clearly defined and understood set of business protocols. Underpinning this approach is the need for dedicated resources from both parties to develop the relationship and manage any launch problems. Rules of engagement can be used during the very early stages of the relationship as a means of managing expectations and guiding ways of

working. The psychological security provided by a guiding infrastructure encourages the sharing of knowledge between the firms helping to embed the integrated systems approach further. Given the emphasis on strategic objectives, agreements tend to be long-term in nature, usually spanning the product life-cycle or term of the relationship. This general approach is shown in Figure 73.

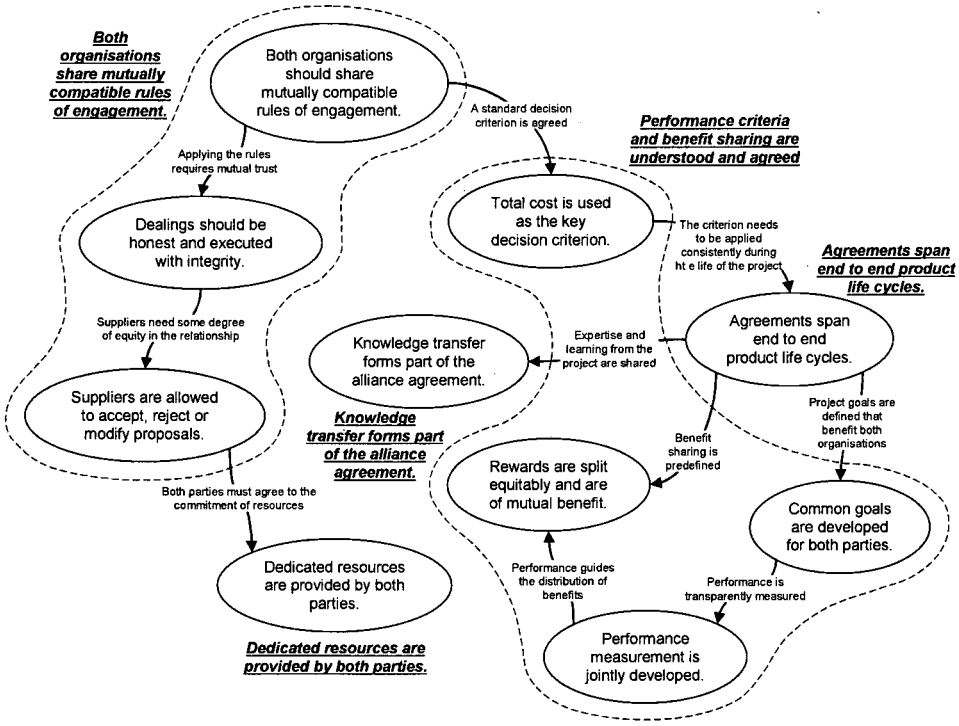


Figure 73: Collaboration level ($C_3 - D_{10}$) causal network

Coherence Level ($C_4 - D_{10}$)

Responsibility and empowerment for managing the extended enterprise are delegated to the firm within the network that demonstrates the highest level of relevant competence. This covers all organisations across the spectrum from raw material to final consumption and disposal. Providing a level of governance is the adoption of strategic cost management as the primary decision-making methodology. This does not propose a reversion back to a purely financial approach, but acknowledges the need for the network to remain financially viable through a continual testing of the strategic aims of the system against the financial constraints imposed by stakeholder groups such as shareholders. These issues are identified in Figure 74.

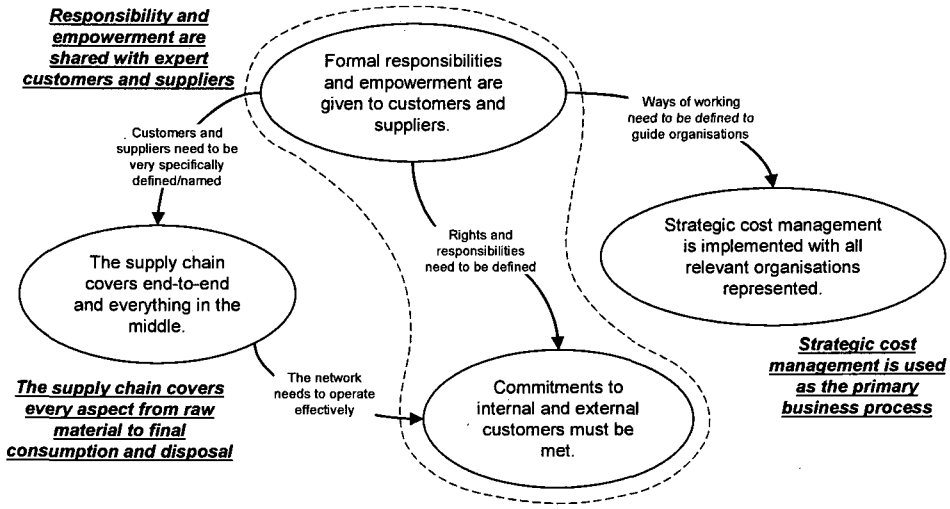


Figure 74: Coherence level ($C_4 - D_{10}$) causal network

Summary

Rules of engagement are used primarily as a guide for individuals learning new ways of working in order to avoid unnecessary conflict and risk to the development programme. New ways of working are initially supported by the communication of changes across each affected organisation. These changes are reinforced by defined rules and protocols, which are relaxed over time as the system matures. Responsibilities are assigned to individuals and groups in line with the needs and objectives of the changed practices. The main theme of each maturity level is framed in Table 33.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
People are developed as the core enablers of improvement	**Protocols are defined within which the business must integrate & operate**	**Holistic rules of engagement and development are jointly agreed**	**Sustainable opportunities and objectives guide the network's aim**

Table 33: Main themes of D_{10} – Rules of Engagement

5.5.2.11 New Ways of Working (D_{11})

Competence Level ($C_1 - D_{11}$)

People development is used as the foundation for creating functional core competences. These newly acquired competences need to be deployed quickly before they become lost or diluted. As such, functional processes need to be introduced that target specific objectives through the use of the new range of competences available. Projects are used extensively as a means of relating the functional objectives with the new competence-based processes. These issues are shown in Figure 75.

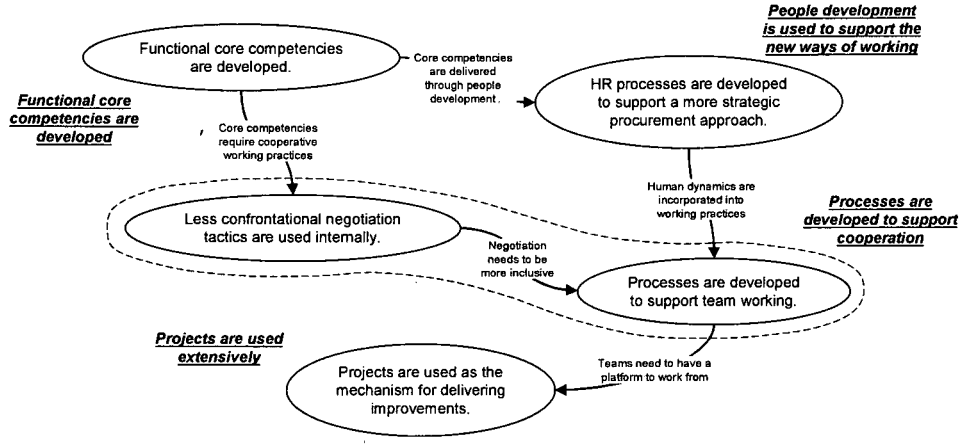


Figure 75: Competence level ($C_1 - D_{11}$) causal network

Cooperation Level ($C_2 - D_{11}$)

The new working practices focus on leveraging core competences through the cross-functional alignment of an integrated set of business processes. These processes need to be implemented using a structured project-based process improvement approach supported by an appropriate infrastructure. This provides a foundation and the time required for them to become embedded within the new organisational system. Part of this process involves the provision of transparency across the firm to enable a better understanding of the issues being faced and the solutions being proposed and implemented. As problems or barriers emerge, they are proactively removed by the senior sponsoring executives. Visibility of these actions also acts to promote and refresh the improvement programme. The relationships between these aspects of change are shown in Figure 76.

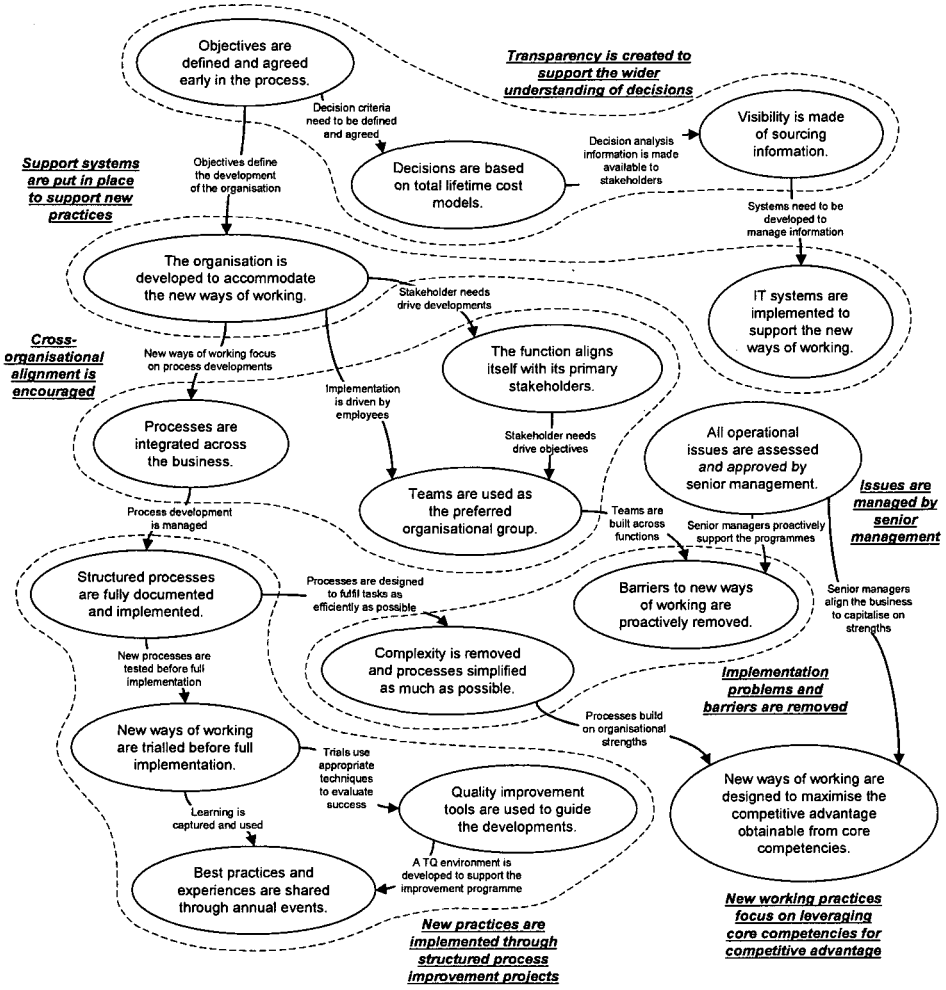


Figure 76: Cooperation level ($C_2 - D_{11}$) causal network

Collaboration Level ($C_3 - D_{11}$)

To facilitate the introduction of new ways of working between the customer and their key suppliers, it is often necessary to vastly reduce the total supply base to a manageable size. This creates an environment within which the remainder can be brought closer to the customer organisation and effective relationships developed. This process of consolidation is particularly important given the emphasis on aligning processes between firms using the systems-based approach of developing processes rather than organisational constructions. Underpinning this approach is the focus on cost management principles that result in an equitable and sustainable distribution of the costs and benefits as the governing principle for decision-making. These concepts are developed in Figure 77.

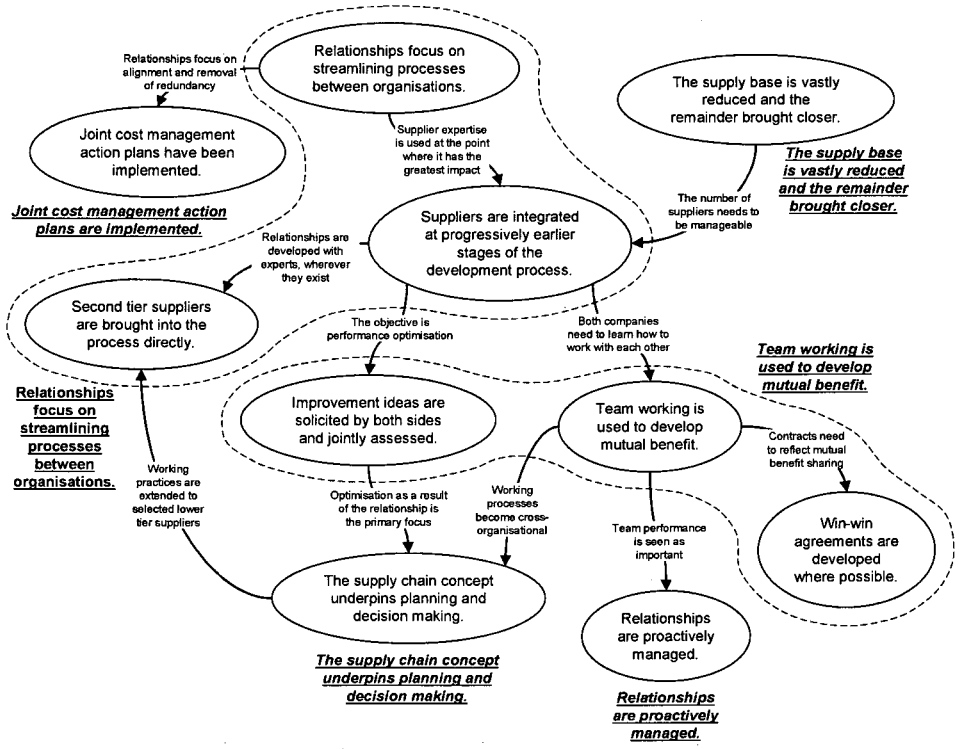


Figure 77: Collaboration level ($C_3 - D_{11}$) causal network

Coherence Level ($C_4 - D_{11}$)

Common processes and resources are shared across the supply network within the constraints of the guiding principles and system objectives agreed by the various partner organisations. This enables each firm to make decisions autonomously or collectively, depending on the relevance of the issue at hand. Figure 78 summarises this approach.

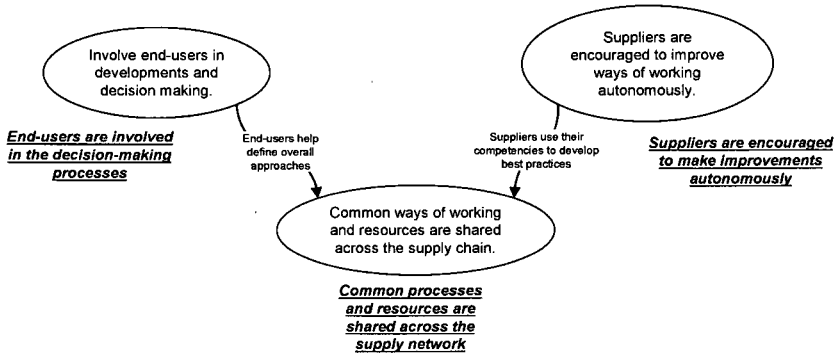


Figure 78: Coherence level ($C_4 - D_{11}$) causal network

Summary

New ways of working are built around the development of core competences at the appropriate location and level of organisational integration. The deployment of these new processes often requires time and support before they can be considered to be consolidated within the wider business system. The development of processes between firms is used as a means of nurturing the desired level and type of relationship that will deliver the objectives of the system. At the extended enterprise level this process becomes organic in nature as different firms develop their part of the network in sub-groups or autonomously. The main theme of each maturity level is framed in Table 34.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Competence development is used as a means of consolidating new ways of working	**New practices are designed to leverage core competences across the firm**	**New ways of working influence the creation of a specific type of relationship between the two firms**	**New practices encourage the devolution of power and encourage cohesive autonomy**

Table 34: Main themes of D_{11} – New Ways of Working

5.5.2.12 Performance Measurement (D_{12})

Competence Level ($C_1 - D_{12}$)

Functional objectives are understood from the perspective of internal customer needs and used as the main frame of reference for developing performance measures. These measures are then structured in a way that facilitates team-oriented activities within the function, as shown in Figure 79.

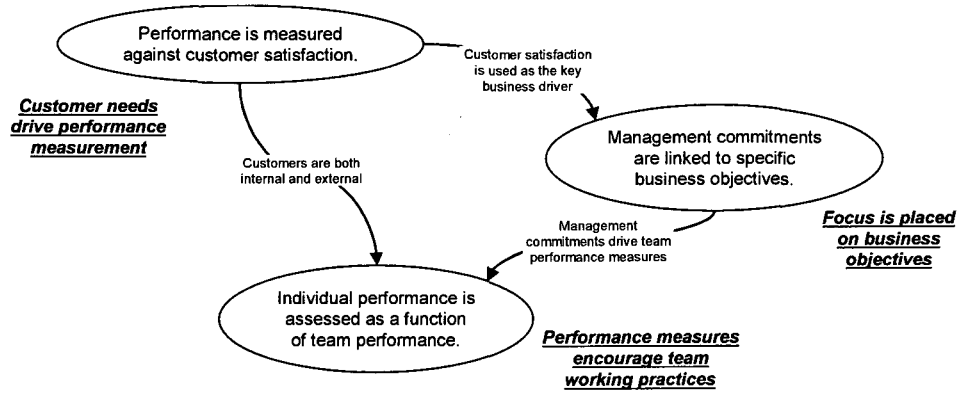


Figure 79: Competence level ($C_1 - D_{12}$) causal network

Cooperation Level ($C_2 - D_{12}$)

Performance measures are extracted from the strategic objectives of the firm and defined and agreed before being integrated into the wider business system. The performance measures become more sophisticated as they emphasise the importance of process performance as well as outcomes. The improvement of purchasing practices within the firm is further enhanced through the adoption of a performance and reward system based on the operational and development objectives. Performance data is validated by a third party, such as Finance, before being cascaded through the business reporting system. This performance measurement approach is described in Figure 80.

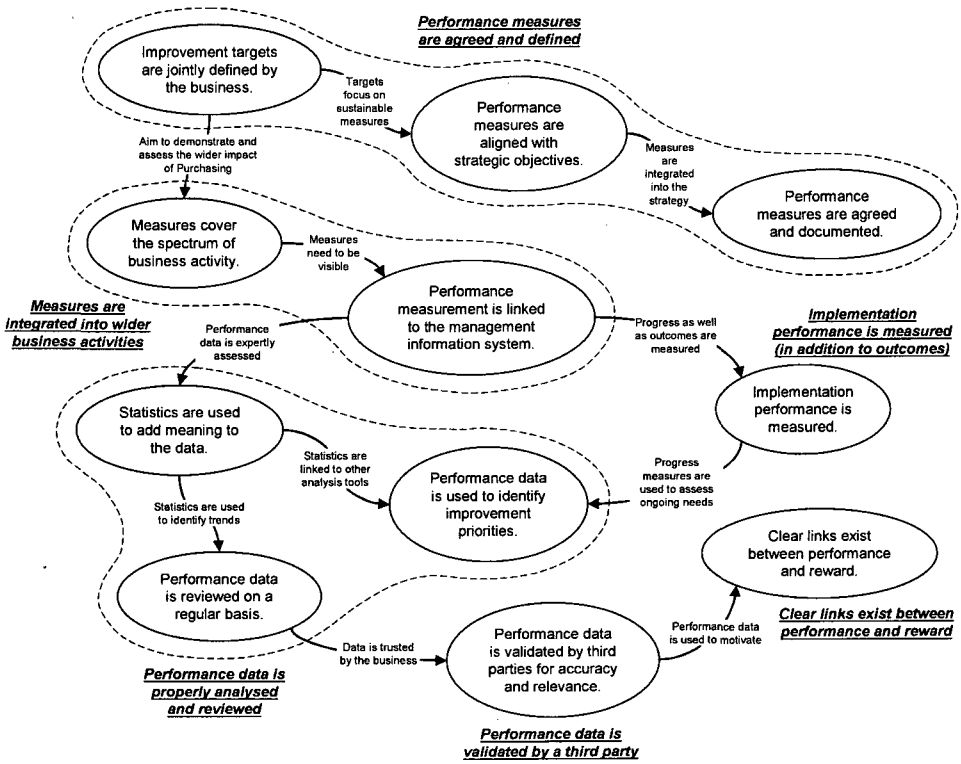


Figure 80: Cooperation level ($C_2 - D_{12}$) causal network

Collaboration Level ($C_3 - D_{12}$)

Due to the increasing complexity involved in developing a collaborative relationship with a third party, the measurement systems and processes used to guide the initiative must cover a broad range of issues. Also, they need to be clearly understood and interpreted within a common context so that expectations and consequential actions are aligned. To ensure that the

relationship maintains a common perspective it is important that performance evaluation is face-to-face, open and candid. These issues are expanded upon in figure 81.

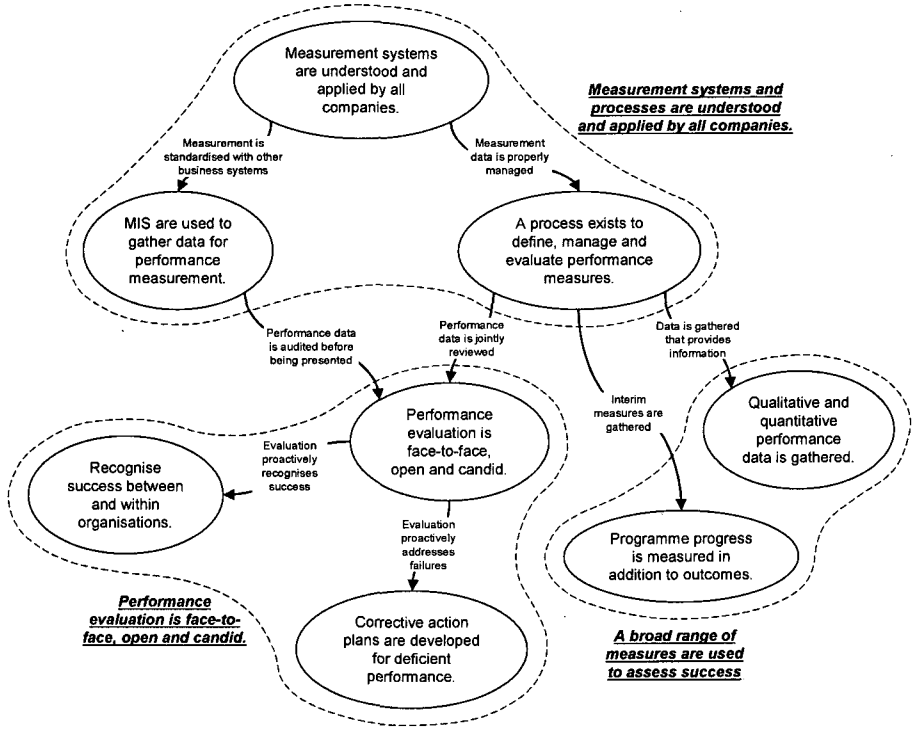


Figure 81: Collaboration level ($C_3 - D_{12}$) causal network

Coherence Level ($C_4 - D_{12}$)

Customer oriented measures are used to align the priorities and objectives of the extended enterprise. As far as possible, these need to be standardised across the network so that integration and approaches are guided by a common set of performance measures that have a common meaning. These issues are summarised in Figure 82.

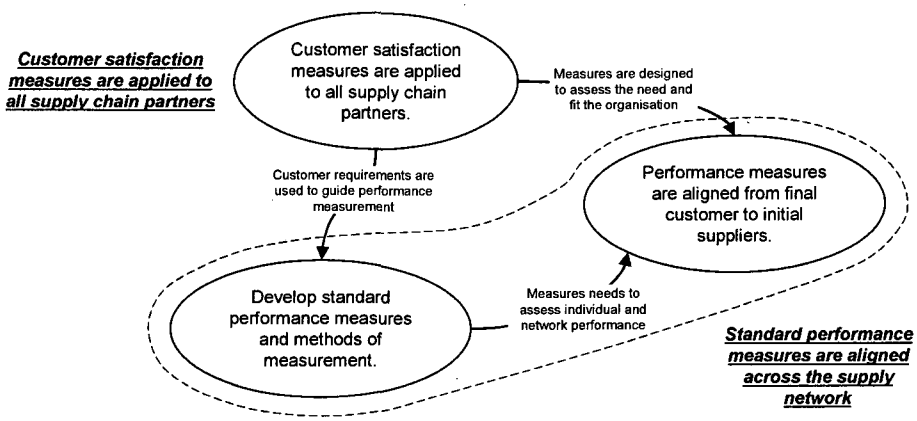


Figure 82: Coherence level ($C_4 - D_{12}$) causal network

Summary

Performance measurement is used as the mechanism for catalysing and directing the development programme across the different organisational entities. Performance is measured in terms of the impact the network has on the final customer. Both hard and soft performance measures are recorded as a means of improving the transparency of progress and the resolution of problems. Common data generation systems are encouraged across the relevant organisations and performance data is shared with key stakeholders. The main theme of each maturity level is framed in Table 35.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Measures focus on internal customer needs as the key driver of performance	**Measures assess both efficiency and effectiveness in meeting business objectives**	**Measures are used to guide the actions of both parties within a relational framework**	**Customer satisfaction is used as the primary measure for guiding network activities**

Table 35: Main themes of D_{12} – Performance Measurement

5.5.2.13 Continuous Improvement (D_{13})

Competence Level ($C_1 - D_{13}$)

Continuous improvement training provides core skill development for all staff within Purchasing. This emphasises the need to support the development of other areas of need in addition to those within their own areas of responsibility. Although the primary focus at this point is to improve the competence of Purchasing, it is quite common for problems to expand beyond the boundaries of the function. Personal development is seen as a critical core skill that it is included in the hierarchy of job descriptions that lead to career advancement. These issues are shown in Figure 83.

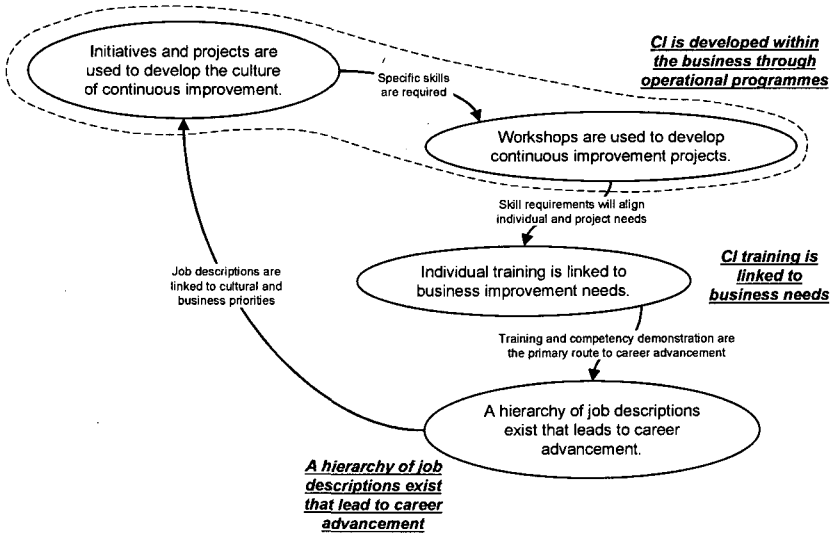


Figure 83: Competence level ($C_1 - D_{13}$) causal network

Cooperation Level ($C_2 - D_{13}$)

The importance of continuous improvement expands to become an integrated part of normal business activity. This requires the development of a steering function within the business to coordinate project-based activities and the provision of resources to support the ongoing development of the programme and the implementation of improvement projects. This approach is of particular relevance given the development of systems-based cross-functional processes. As these need improving, multiple areas of the firm will need to proactively engage in the initiative. For the results to be balanced it will be necessary for those areas concerned to be able to engage in the project as equal partners in terms of knowledge and implementation expertise. This approach is described in Figure 84.

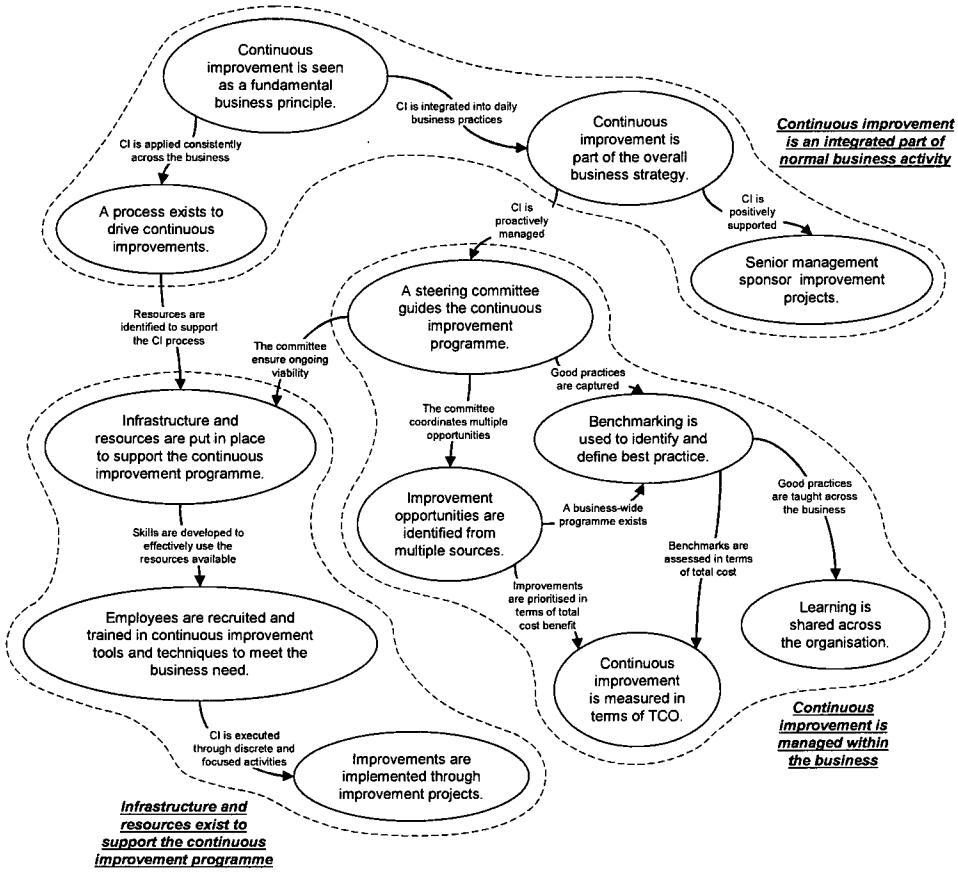


Figure 84: Cooperation level ($C_2 - D_{13}$) causal network

Collaboration Level ($C_3 - D_{13}$)

In order to be able to engage in continuous improvement collaboratively it is necessary for both firms to have developed the competence within their own organisations. This requires a significant amount of time and financial investment to reach a viable level of sustainable competence. The business strategy is used as the key driver for identifying and prioritising improvement opportunities. The longer-term perspective of the strategy then allows for the structured and sustainable implementation of improvements. Improvements are made across the collaborative system and tend to reflect the processes that are used rather than the organisational constructions. The framework that supports this approach is described in Figure 85.

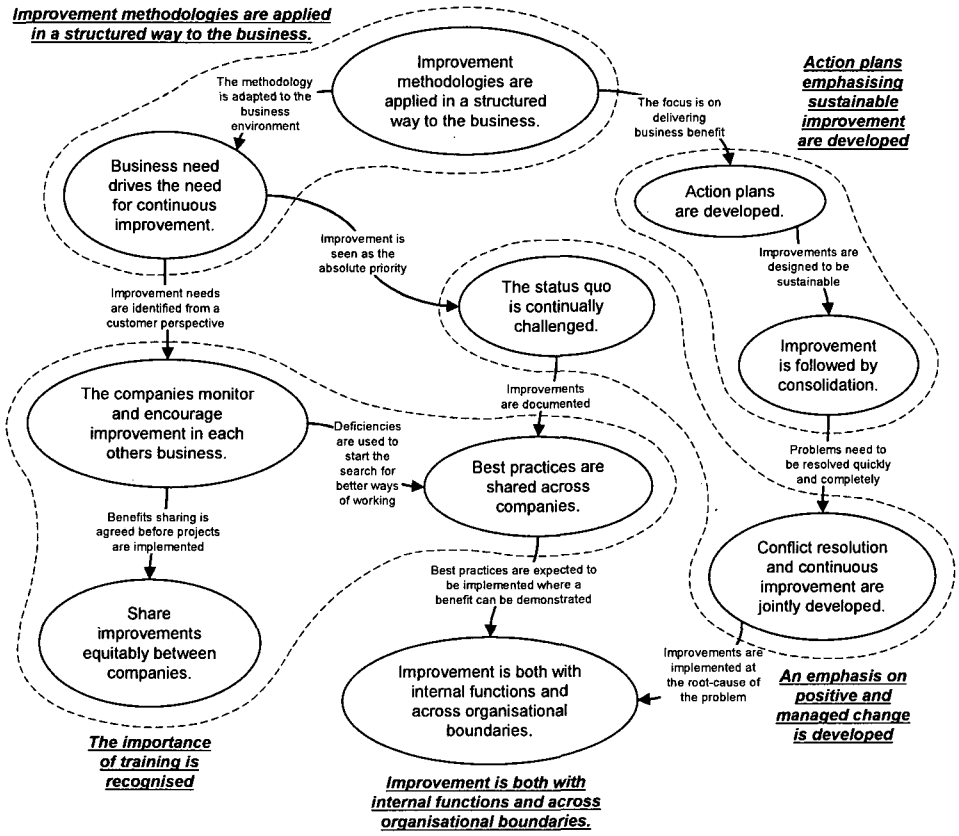


Figure 85: Collaboration level ($C_3 - D_{13}$) causal network

Coherence Level ($C_4 - D_{13}$)

Continuous improvement is collectively implemented across the supply network and relies on the expertise of the more competent organisations involved to support the development needs of their partners. The concept of a steering group can significantly enhance the effectiveness of the activities as duplication is minimised or mutually beneficial projects co-developed. These concepts are shown in figure 86.

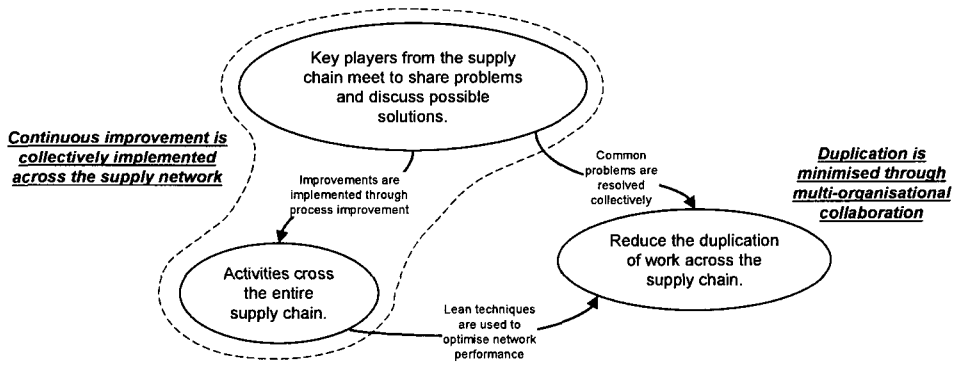


Figure 86: Coherence level ($C_4 - D_{13}$) causal network

Summary

Continuous improvement is used as a vehicle for maintaining momentum within the development programme and extending the potential for benefit across the various organisational entities. Improvement methodologies are used to guide the resolution of issues in preference to the administration of punishment regimes wherever possible. Equality in the relationship is a fundamental principle of challenging bad practice or poor performance. Solutions are jointly developed by stakeholders, based on relative competence, and the benefits shared equitably. The main theme of each maturity level is framed in Table 36.

Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Continuous improvement is developed as a core competence within staff members	**Continuous improvement is a developed as a fundamental enabling process**	**Continuous improvement is used to mutually develop both organisations**	**Continuous improvement forms the foundation of a sustainable business network**

Table 36: Main themes of D_{13} – Continuous Improvement

5.5.3 Case Study Summary

During the summarising, relationships became more apparent between the dynamics, sometimes at different levels of maturity. This reflected the findings from the earlier action research phase where relationships were identified between dynamics within the definitions proposed. Of note in these relationships were a number of themes that tended to recur across a number of the implementation dynamics. For example, leadership involvement appeared to be central in catalysing and engaging the organisational entities in the development programmes. It appeared that a lack of involvement meant that the chances of success were greatly reduced. This led to the issue of strategy development, which formed a major part of the senior management remit. Strategy was seen as the mechanism for moving from a short to a long-term perspective on activities and decision making. Without the strategic direction, the operations tended to remain reactive in nature and dysfunctional in terms of competing both for resources and with each other. Developing a coherent approach required the appreciation of the business as a system of

interdependent parts. This significantly enhanced the impact of the strategy by encouraging the alignment and coordination of the relevant organisations and their resources. Underpinning this approach was the concept of processes as the main sustainable value-delivery mechanism. Processes, when viewed from a systems perspective, provided the means for moving and adding value across the extended enterprise in a seamless way. This effectively subordinated the traditional organisational customer-supplier structure of the supply chain to a convenient set of labels for the different parts of the value-creation processes.

The main relationships identified through analysis of the case study material are shown in Table 37. Only the strongest perceived relationships are listed. Attempting to list all of the relationships was not seen as a useful activity given the contextual influence that would have resulted in an almost infinite list of possibilities. Therefore, the presentation of this table is intended to indicate the interdependent and relational nature of the dynamics, further arguing that a system exists within which these dynamics operate.

Table 37: Relationships between the purchasing and supply management implementation dynamics

	Business Focus	Expert Leadership	Senior Management Sponsorship	Strategy Development	Purchasing and Supply Management Positioning	Change Management	Communication	Skill & Knowledge Development	Team Working	Rules of Engagement	New Ways of Working	Performance Measurement	Continuous Improvement
Continuous Improvement	Issues are managed at the business system level.	Continuous improvement is coordinated through an expert led steering group.	Senior management operate at a system level to define priorities.	Continuous improvement is embedded in the strategy to support sustainability.	Continuous improvement becomes a Purchasing core skill.	Projects are used as the main implementation approach.	Communication is used to inform the business system of the priorities for improvement.	People development is the foundation of the improvement approach.	Team working is acknowledged as a fundamental principle of continuous improvement.	Every employee has an actively managed personal development plan.	Processes are emphasised as the sustainable approach to improvement.	Measures cover both process performance and outcomes in support of continuous improvement.	
Performance Measurement	Performance is assessed at the business rather than operational level.	Experts are held responsible for the initial results generated.	Performance measures are agreed by senior management as a sub-set of the strategy.	The strategy contextualises the performance objectives.	Purchasing's explicit contribution is defined.	Performance is assessed against both need and the level of consumed resources.	Performance data is used to enable informed decision-making.	Competence needs to be demonstrated through performance improvements.	Team working contribution and performance is measured.	A standard system-wide measurement infrastructure is in operation.	Performance criteria are standardised across the business system and its processes.		
New Ways of Working	New processes are owned within the business systems.	Experts are used to develop new processes during the early stages.	New processes are endorsed and sponsored by the executive team.	New process developments are guided by the strategic priorities.	Purchasing processes become system-based and aligned to the aim of the wider system.	Change is focused on developing processes.	New process developments emphasise the need for integration and information sharing.	Business processes are mapped as the vehicle for identifying training and improvement needs.	Process are restructured and developed to enable and support team working.	Roles and processes are aligned to the system aim and clearly defined.			
Rules of Engagement	Improvements are developed from a business system perspective.	Experts are made accountable for their actions.	Projects are not launched without executive sponsorship.	Senior management collectively define the strategy.	Purchasing's senior manager sits on the executive board.	Senior managers are encouraged to remain engaged throughout the change process.	Communications are two-way and regular throughout the programme.	Training programmes need to be fully resourced and properly managed.	Team working rules are relaxed as the teams mature and become autonomous.				
Team Working	System wide team structures are encouraged.	Teams are led from a competence perspective.	Team working is sponsored.	The strategy aligns competing priorities in support of team work approaches.	Teams are used to operate the new processes and ways of working.	Teams are used to deploy changes.	Key individuals from across the system need to be engaged as advocates.	Training is aligned to process needs and encourages a team working approach.					
Skill & Knowledge Development	Training is used to align the individual with the needs of the business system.	Experts are used to initiate the learning process.	Implementation and leadership skills are the initial learning priority.	Training is a prerequisite of deploying the strategy.	Competence development is a prerequisite of repositioning.	Training in change management is required at all levels.	Communication is used to inform the development and competence needs.						
Communication	Communications are cascaded across the business system.	Experts are used to carefully manage communications content.	Two-way communication becomes an important leadership competence.	Communication is used to inform the business of Purchasing potential.	Communication is used to inform the business system of Purchasing's potential.	Changes are debated as a mechanism for developing effective engagement.							
Change Management	Organisational resources are targeted at the priority objectives.	Change management expertise becomes recognised as a critical enabler.	Leaders are the primary source of authority to remove roadblocks.	The initial strategy is designed to overcome inertia.	Changes need to be visibly demonstrated by Purchasing to influence perception.								
Purchasing and Supply Management Positioning	Purchasing is recognised as a core competence across the business system.	Purchasing leads the alignment of strategic suppliers.	Purchasing is represented at the executive level.	The strategy repositions the function within the business system.									
Strategy Development	Purchasing strategy forms a sub-set of the business level strategies.	Guidance on appropriate strategies is given by expert resources.	The whole senior management team are involved in the strategy development process.										
Senior Management Sponsorship	Senior managers prioritise improvements from a systems perspective.	Experts guide and mentor senior managers during the early stages.											
Expert Leadership	Experts are initially used to determine the potential opportunities and impact of improvements.												
Business Focus													

5.6 Findings Summary

Implementation dynamics are defined in this thesis as situational micro-level activities used to enable the implementation of change activities and the delivery of programme outcomes. To provide this definition with meaning and utility it has been demonstrated that the relationships with the content and process aspects of change need to be understood.

Alignment with the existing purchasing content models was made through the development of the maturity concepts of competence, cooperation, collaboration and coherence; each being framed within a systems perspective of generic organisational theory. These four levels of maturity both build on each other and relate closely within a network form to create the environment within which content can be successfully implemented.

The level of complexity encountered when reviewing the literature on change processes highlighted the need to segment the critical issues that enabled implementation of the content objectives to take place. Analysing these factors in real time through the action research phase of the study provided significant insight into the change activities that recurred regularly or were found to be critical in facilitating a successful outcome.

However, these findings related to organisational improvement projects and not purchasing and supply specific projects. Therefore, the case study material was used to develop the detail that populates the implementation dynamics model and contextualises it within a purchasing and supply management frame.

These results have been amalgamated to form the overall summary detailed in Table 38. In three instances no findings were generated from the interrogation of the case study material. However, it was decided to extrapolate a proposition for these areas by combining the themes that emerged from the relevant dynamic with the literature material previously generated.

No attempt was made to describe every issue identified within each dynamic maturity level as the resulting volume of information would have made the summary table too complex to offer additional insight.

Therefore, the purpose of the summary table (Table 38) is to balance the various themes that have emerged and place them across the model based on their relative strength of relationship to the respective dynamics. This effectively models the traditions of summarising informative research in table form as exemplified by, for example, Reck and Long (1988), Lamming (1993) and van Weele (2002).

Table 38: Implementation dynamics maturity development

	Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Business Focus (D_1)	Understand the business environment	Integrate practices into the wider business operation	Select and develop suppliers from a competence-based perspective	Coordinate network activities based on extended enterprise priorities
Expert Leadership (D_2)	Expertise is developed within the function	Improvements within the firm are guided by experts	Expertise is shared across firms for mutual benefit	Expertise is aligned and coordinated across the network
Senior Management Sponsorship (D_3)	New competence development is launched through effective & engaged sponsorship	The sponsors ensure that new practices cross organisational barriers	Sponsors promote and demonstrate the new approach to customer-supplier relations	Managers focus on the ultimate aims of the network to guide the alignment of its members
Strategy Development (D_4)	The objective is to overcome inertia and begin the change process	Functional strategies are aligned with the business strategy	Strategies are co-developed, being both sustainable & mutually beneficial	Strategy development is part of a pan-network management process
Purchasing & Supply Management Positioning (D_5)	Functionality develops to a business level	Purchasing expertise and processes are deployed across the firm as appropriate	Purchasing takes the lead in the management of supplier relations	Purchasing develops a network broker role to link suitable partners
Change Management (D_6)	Changes are agreed by the business and developed within the function	Projects are deployed using cross-functional teams to implement process-based changes	Change projects are jointly developed, coordinated and implemented by both partners	Change and project management becomes core competences for developing the extended enterprise
Communication (D_7)	Communication is used to inform and energise the change process within Purchasing	Information protocols are used to integrate working practices across the organisation	Communication is used to develop and coordinate bi-lateral relationships	Network members become self-aligning through the availability of relevant information
Skill & Knowledge Development (D_8)	Training focuses on the development of personal competence within a functional setting	Training is coordinated and integrated cross-functionally to meet firm needs	Training is used to develop and align core business competences between partners	The focus shifts to knowledge and the identification of extended market opportunities
Team Working (D_9)	Team-working principles are taught within the function	The business is developed to deploy and support team working	Cross-business teams are co-developed and jointly sponsored	Purchasing coordinates the development of multi-firm teams
Rules of Engagement (D_{10})	People are developed as the core enablers of improvement	Protocols are defined within which the business must integrate & operate	Holistic rules of engagement and development are jointly agreed	Sustainable opportunities and objectives guide the network's aim
New Ways of Working (D_{11})	Competence development is used as a means of consolidating new ways of working	New practices are designed to leverage core competences across the firm	New ways of working influence the creation of a specific type of relationship between the two firms	New practices encourage the devolution of power and encourage cohesive autonomy
Performance Measurement (D_{12})	Measures focus on internal customer needs as the key driver of performance	Measures assess both efficiency and effectiveness in meeting business objectives	Measures are used to guide the actions of both parties within a relational framework	Customer satisfaction is used as the primary measure for guiding network activities
Continuous Improvement (D_{13})	Continuous improvement is developed as a core competence within staff members	Continuous improvement is a developed as a fundamental enabling process	Continuous improvement is used to mutually develop both organisations	Continuous improvement forms the foundation of a sustainable business network

Chapter 6: Discussion

6.1 Introduction

This section has been used to enrich the material presented throughout this thesis. This has been achieved through a process of extrapolation and contextualisation aimed at bringing the various threads developed in this research together and consolidating them into a coherent summary of the work undertaken and the significance of the findings generated.

6.2 Positioning the Research

The work with the supplier process improvement consultants conducted during the Action Research phase of the study led to the development of an original conclusion proposing that the behaviours of these individuals were critical to the successful implementation of improvement projects. This was the premise upon which the initial research work was conducted. However, a number of incidents occurred that raised questions concerning this theory and ultimately led to its evolution into the definition of implementation dynamics posited in Question One. Of particular note was the following example;

A purchasing manager was attempting to implement an improvement programme within his part of the organisation. The directors demonstrated scepticism with regard to the ability of Purchasing to deliver any meaningful level of organisational performance improvement. This grew into a mix of constant prevarication and active sabotage of both the manager's reputation and improvement efforts. A senior purchasing executive, operating at group level, commented on the problem and indicated that he could not understand why the manager was not making progress when it was obvious what actions needed to take place and how they should be implemented. He articulated his frustration in terms of listing the steps he would take: understand the business priorities, develop a strategy, sell the strategy, engage the senior managers as sponsors, train people in change management, start projects, etc...

The issue being illustrated above argues that, irrespective of the manager's true competence, the appropriate enabling actions had not been taken to prepare the organisation or its internal stakeholders for the changes that

needed to take place. This does not imply that behavioural capabilities are unimportant traits for a leader to possess, it simply emphasises that for the 'occupational' aspects of implementing development programmes, a more practical competence set is required (Cheetham & Chivers 1996, p.21). Analysis of the manager's situation resulted in the observation that the issues the senior executive had raised covered a broader spectrum of issues than just human dynamics. Technical activities were also included in this list and thus it became apparent that the original concept had only identified a subset of the true range of dynamics that existed.

This is important given that the original concept of 'implementation dynamics' was driving the research toward a contextual leadership model based on the specific peculiarities of purchasing. Although this may have been useful, it could be seen as a repetitious subset of what was already known within the field of leadership. The move toward enabling activities provided the opportunity to develop a unique piece of research that stood alone within the field of purchasing knowledge. The operational practices that needed to be adopted by Purchasing had been adequately mapped, and remapped, over the previous twenty years and numerous leadership models explained the traits needed by the individual destined to lead these programmes. The research was now proposing that the knowledge gap covered a description of the actions that the change leader should take in order to support the implementation of new purchasing and supply management practices.

Upon reflection, it appeared that the initial research approach may have been the result of analysing problems associated with development programmes from a specific, rather than phenomenological perspective, and assuming that the root-cause was predominantly resistance to change (*as discussed by* Salminen 2000, p.26). This was compounded by the observation that the original trigger for the research was the disparate performance of the supplier process improvement consultants, who had all been taught the same approach to development work. This led to the assumption that the root-cause lay in something they, or those they worked with, weren't (or were) doing. This, in turn, led to the theory that the issue was centred on behavioural and

organisational inhibitors and not technical issues (Pinto & Kharbanda 1995, p.70). Published research seemed to support this point of view, which reinforced this theory. For example, Miles (1997, p.27) observes that 'to generate the energy necessary for change, transformational leaders must understand the personal dynamics of change, both for themselves and for the people throughout the organisation.' While this is accepted as a valid view point, this research argues that successful implementation requires the understanding and ability to use a range of dynamics that includes personal dynamics as just one subset. The approach that led to a better understanding of the issues involved analysed change from the perspective of the causes that result in opposition and the drivers that overcome those causes (Kaufman 1992, p.85; Kotter 1996, p.15; Barker 1998, p.554; Turner 1999, p.58). This resulted in the multi-faceted view of change as proposed by Gibb (1991), Cicmil (1999) and Tzortzopoulos *et al,* (2005). It also reinforced the view that the research should focus on practical examples of implementation, which led to the pluralistic approach of using Action Research and Collective Case Study analysis.

6.3 Defining 'Implementation Dynamics.'

Implementation dynamics were defined in Section 5.2 as 'context specific micro-level actions used to enable the delivery of change related content as a prerequisite of achieving predefined improvement programme objectives'. For commercial organisations this can be argued to focuses on improved financial performance; with not-for-profit organisations it may be assumed to emphasise the optimum use of available resources in pursuit of the aims of the organisation. Therefore the distinctive characteristic of implementation dynamics is that they are not the primary objectives of the programme; instead they are the essential enablers of its successful deployment.

Context has been seen to play an important role in both the selection and definition of the dynamics. The case studies clearly demonstrate that different situations call for the use of different dynamics and combinations of dynamics. Within these situations, the nature of the dynamic is defined as a response to the situation and the enabling role that the dynamic will play. For example,

communication may be used as a means of informing and engaging people in the change effort. Alternatively, it may be used to report progress and support the refinement of the improvement strategy. Both scenarios call for the use of the same dynamic in different contexts and with different purposes. Indeed, the principle can be taken further by proposing that time also plays a role in influencing the nature and use of the dynamics. This introduces a certain degree of fluidity within the model and its meaning. While this may be considered a weakness from the perspective of creating a fixed definition of each dynamic across the four levels of maturity, it is nevertheless important in terms of illustrating the nature of complex change situations as rejecting the presence of absolutes. This rejection is deliberately reflected in the model in an attempt to make perspective practitioners evaluate their responses to situations and selections from the model. Professor Liker (*private conversation*, Oct. 2006) positioned this hypothesis of an amorphous model in terms of the difference between the Eastern and Western approaches to deploying Lean concepts. In the East, according to Liker, they identify the problem and then select or design an appropriate improvement tool in response. In the West we learn all the tools currently available and then go out and look for problems to use them on.

Content also seems to play a role in influencing the selection and manifestation of the dynamics used. However, this influence can be argued to be contingent on the extent of the system. At the lowest level, competence is found within the functional system while at the highest level, coherence spans the extended enterprise. This emphasises the distinct issues that must be tackled when working from the level of an autonomous function through to the level of a coherent network of autonomous organisations. This contrasts with the purchasing content models that make distinctions between characteristics such as strategic focus or financial return (van Weele, 2002).

A potential issue might be the confusion that could result in the dynamics being perceived as either process or content characteristics. As Tzortzopoulos *et al*, (2005) demonstrate, implementation activities, or dynamics as they are described in this research, act as the operational

integrators of both content and process aspects of the change initiative. This argues that implementation dynamics will naturally exhibit characteristics that reflect both of these aspects of change while maintaining a unique position in terms of enabling the organisation to overcome inertia. The proposition, therefore, became one of viewing implementation dynamics as the aggregate that holds the *context*, *process* and *content* together to deliver the *outcome* framed during the initial *triggering* event.

6.4 The Concept of Dynamic Maturity

The current perception of maturity levels is demonstrated within the content models. Here the approach tends to be one of defining or characterising ever increasing levels of complexity that result in a consequential increase in the level of related performance. However, the systems view of organisations emphasises the importance of the constituent parts and their relationship. This is at odds with the content view of maturity that reflects the state of the parts themselves. Hannan and Freeman (1977, p.938) perceive the development issue of organisations as one of acknowledging the death of the old entity and the birth of a completely new form. Developing this idea in terms of the relationship of the whole to its parts it is proposed that it is the whole that gives context to the maturity of the parts and therefore defining maturity of the parts out of context becomes meaningless as anything other than an abstract measure.

The definition of maturity within this research was based on a systemic philosophy and therefore emphasises the importance of the dynamics in terms of their interaction within a given context; including the development processes, content-based objectives and situational issues. This raises a further difference in that while the content models focus on outcomes to describe maturity, the dynamics model focuses on the transitional state between outcomes. As James (1996, p.263) argues, 'what really exists is not things made but things in the making.' Positioning the dynamics in this way was key in terms of targeting the specific area of implementation weakness identified during the Action Research phase.

6.5 Development of the Maturity Perspective

The theoretical foundation behind the interactive nature of the four levels of maturity came from combining two models. First, the learning model developed by the Canadian Imperial Bank of Commerce was significant as it states that 'each of the levels acts as a foundation for the next level' (Fitz-Enz 1997, p.208). In addition, it demonstrated an ever increasing 'footprint' or sphere of influence (Roemer 1977) as the level of learning increased and was disseminated throughout the organisational system, as demonstrated in Figure 25. This provided insight into the dynamic nature of the model being developed in this research. The second model, shown in Figure 19, provided a foundation for determining the relationships between the various areas of the business system that needed to be considered from a purchasing perspective. Cox's view argues that 'a properly grounded understanding of what causes business success' is the guiding principle for the development of procurement and supply competence (Cox, *in* Lamming & Cox (*Eds.*) 1999, p.17). Combining the concept of an evolving competence having a direct impact on the level of influence with the idea that development is the result of understanding what leads to success in different areas of the business system, led to the development of Figure 87.

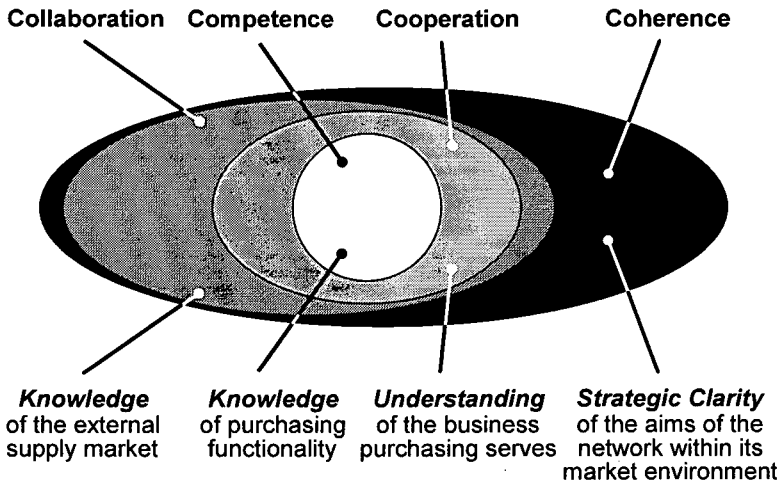


Figure 87: Expanding spheres of maturity from a purchasing perspective

This model builds on the work of Wheatley (1994, p.133) who observed that 'fluctuations, randomness, and unpredictability at a local level, in the presence

of guiding or self-referential principles cohere over time into definite and predictable form.' Therefore, as each stage of maturity becomes consolidated, the potential to embrace the next level becomes more of a realistic proposition. This can be considered to be analogous to the concept of the survival of the fittest, the stronger implementation dynamics becoming embedded in the change system and influencing the definition of its characteristics (Nelson & Winter 1982, p.14). These characteristics ultimately become part of the core change competence of the organisation and consequently affect its ability to evolve within the wider business system as illustrated in Figure 88.

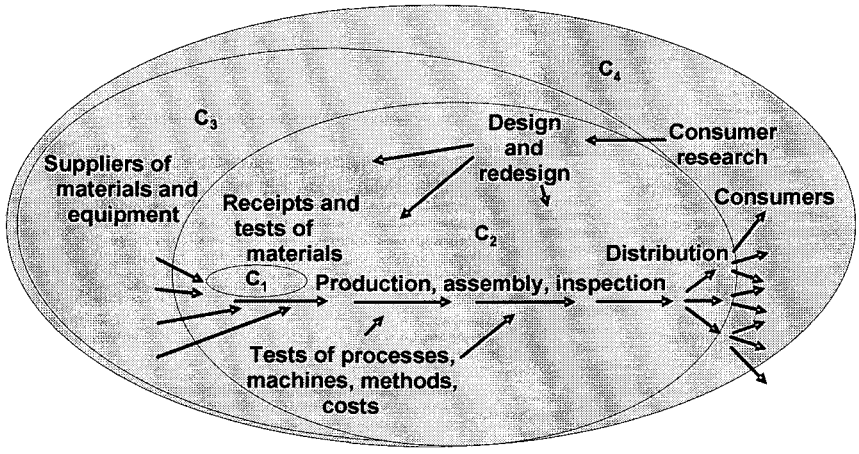


Figure 88: Maturity levels aligned to Deming's 'Production viewed as a system' model

This, in turn, influences the choice of future options as the viable alternatives are balanced against the systemic issues that prevail. As a result, successive levels of maturity development are dependent, to some degree, on what has happened and the way in which activities have been implemented previously (Veludo *et al* 2006, p.205). Hence, to remain viable over time requires the development of cumulative capabilities (Keough 1993, p.45), further reinforcing the need to be able to understand the impact that different development and implementation approaches will have on the future options of the business system and, therefore, navigate wisely with a view to the future.

6.6 The Systems Perspective

The implementation dynamics model is effectively a system of possible activities aimed at supporting the deployment of the content objectives of an improvement programme. These are not implemented in isolation but form part of a broader change management system that is developed in response to the needs of the organisational system within which the change is targeted. This holistic system view illustrates the importance of the relational links between the different aspects of the change programme and the fundamental principle that all must be considered if the response is to be appropriate.

The approach taken to reducing the complexity created by the environment described above focused on aggregating each type of content objective in terms of the breadth of impact it has across the organisational system. This recognised the belief that organisations are inherently open systems and therefore strongly influenced by their environments (Scott 1992, p.118). Structuring this environment in systems terms, and then aligning the dynamics model to this structure, provided the means for reducing the complexity and creating a frame of reference within which implementation decisions could be made. Figure 89 shows the aggregated view of the system used in this research.

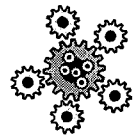
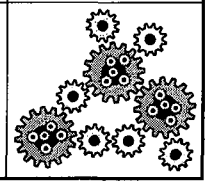
Maturity Designation	Title	Description	Systemic Perspective	Graphical Representation
C_1	Competence	Development of Purchasing and Supply management within a functional context.	Functional System	
C_2	Cooperation	Development of Purchasing and Supply Management as a set of processes that operate across the firm.	Organisational System (The firm and functions)	
C_3	Collaboration	Alignment of autonomous customer and supplier strategies aimed at delivering mutually beneficial outcomes through the adoption of synchronised processes.	Enmeshed System (The firm and individual suppliers)	
C_4	Coherence	Alignment of partners within the extended enterprise is guided by the principle of satisfying the needs of the final customer. This approach is enabled through the adoption of competence-based leadership amongst the partners.	Integrated System (The firm as part of a network of equitable partners)	

Figure 89: Systemic perspective of the maturity levels

The dynamics are deliberately not organised into a model that enables a change leader to simply apply them as a prescriptive list in order to move from

one maturity level to the next in an attempt to progressively work through any given content model. Indeed, this is not perceived to be an achievable objective. To move between levels of content maturity it is incumbent upon the change leader to be able to assess the situation, identify the inhibitors to progress, and evaluate the best dynamics to overcome the relevant obstacles.

6.7 The Iterative Nature of the Maturity Levels

The systems perspective was expanded within the research to cover the development of the implementation dynamics in addition to understanding the organisational issues that emerge from a change initiative. In defining the nature of the interdependencies between the maturity levels use was made of an example drawn from Wynstra *et al* (2001, p.164) as a framework to develop and test theories. The example described the three most critical issues in managing supplier involvement in product development. These are:

1. Identifying the management tasks in achieving an integrated product development and sourcing (IPDS) approach;
2. Forming an organisation for the execution of these tasks;
3. Staffing the organisation with people that have the right skills.

Each of these issues was evaluated and the level at which the activity was implemented was assessed. Through a simple analysis of these issues the following links were made with the Expanding Spheres Model presented in Figure 87:

1. 'identifying management tasks' ≈ competence-based activity (would initially be performed by a change management working group working under the sponsorship of an executive or senior manager);
2. 'forming an organisation' ≈ cooperation-based activity (this would involve, as a minimum, cross-functional cooperation between Purchasing and Design Engineering);
3. 'staffing with skilled people' ≈ competence-based activity (would involve building a capable group of people into a single organisational entity that could operate the IPDS approach.)

These steps are shown in Figure 90.

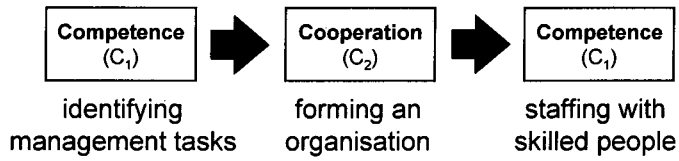


Figure 90: The sequence of purchasing involvement in product development (*following* Wynstra *et al*, 2001)

The re-analysis of the sequence in terms of their implementation is based on the proposition that 'forming an organisation' is the next logical step after 'identifying management tasks'. However, in the model above, the logical link between 'identifying management tasks' and 'staffing with skilled people' is broken and so Figure 91 is proposed:

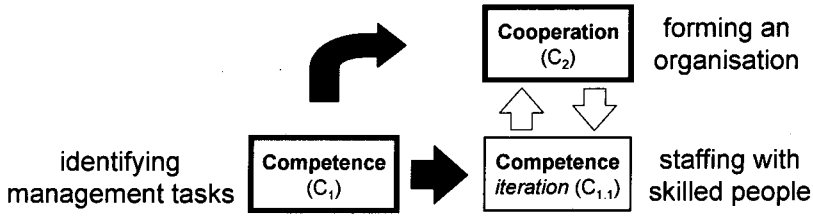


Figure 91: The modified sequence of purchasing involvement in product development

Not only does this restore the links between the related parts, it also begins to demonstrate the increasing levels of complexity that must be managed as different levels of maturity become co-existent.

Using a different example, from Wagner *et al* (2002, p.259), it was possible to illustrate how a state of coherence was used to enable the development of competence. Extrapolating this relationship across the spectrum of maturity levels proposed by the implementation dynamics model, it appears that the relationships between each element are simultaneously causal as each maturity level acts as a foundation for the development of the next and is dependent in that a legacy from previous activity exists that may enable or constrain future activities (echoing Wheatley 1994, p.63). If this is the case,

then the model shown in Figure 92, which incorporates all of the maturity levels, is proposed.

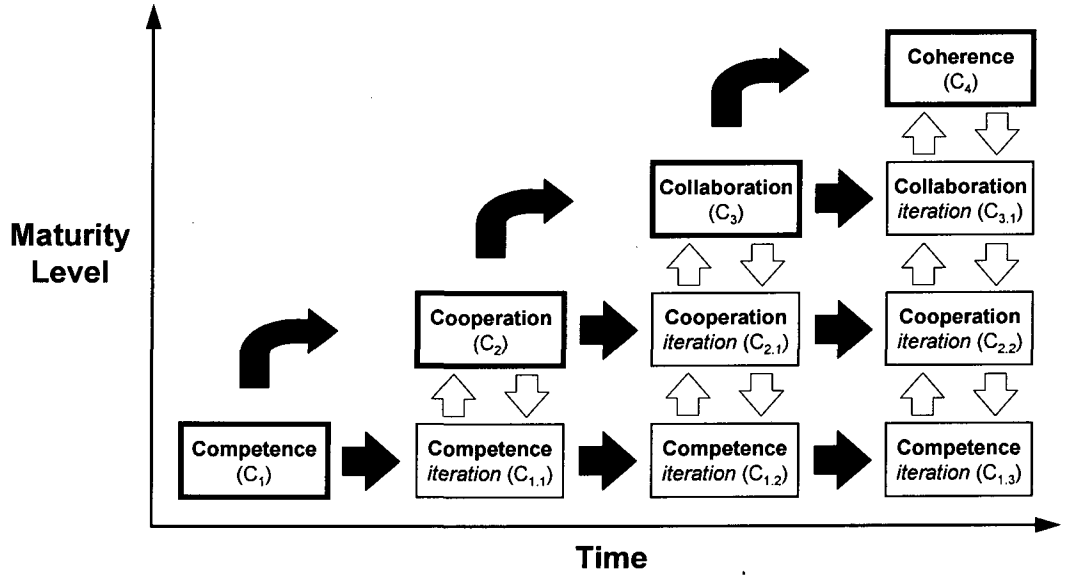


Figure 92: The legacy of developing maturity

The key point raised by this model is the presence of evolving iterations that occur at multiple levels within and across the various dynamic entities, not unlike the approach proposed by the Plan-Do-Study-Act cycle of Shewhart (Deming 1993, p.132). This provides the mechanism for the dynamics and their use to remain relevant in enabling the business system to keep pace with emerging changes in the surrounding environment (Ashby 1956, p.206; Bessant *et al* 2003, p.167). The dynamics also become increasingly difficult to coordinate successfully as the numbers of interactions and relationships expands exponentially. The above picture is further complicated by the need for other firms within the extended enterprise to follow a similar path that is in strategic alignment with the rest of the network members.

It appears that progression through the four stages of maturity should be carefully considered, the benefits of early implementation decisions only being experienced at later stages of the change programme as higher levels of maturity are reached. As an example, Wagner *et al* (2002, p.262) make the observation that 'Both organisations recognised that implementing an alliance would be slow and painful and demand critical analysis of internal systems

and procedures.' This implies that for collaboration to exist both parties need to have first undertaken a programme of competence and cooperative development within their own firms.

The development of the maturity levels from this research is significant in terms of how they position the implementation dynamics. Many of the existing maturity models tend to describe either achievement milestones or events that are then used as comparators to assess progress against the real world situation. As a result of this comparison a maturity level is identified. The model developed in this research uses maturity levels as the starting point, assessing the objectives in terms of the diversity of the system being addressed. The systems perspective ranges from the function, up to and including the extended enterprise. In this way maturity is not used as an outcome of the model; instead it is an input into the process of selecting appropriate dynamics that enable change to occur. This focus on change influences the description of each dynamic. Instead of emphasising a state of existence, the purpose of the dynamics is to progress the organisation from one state to another. Therefore, the dynamics are actually transitional in nature and logically sit at the transition between the maturity levels, as shown in Figure 93.

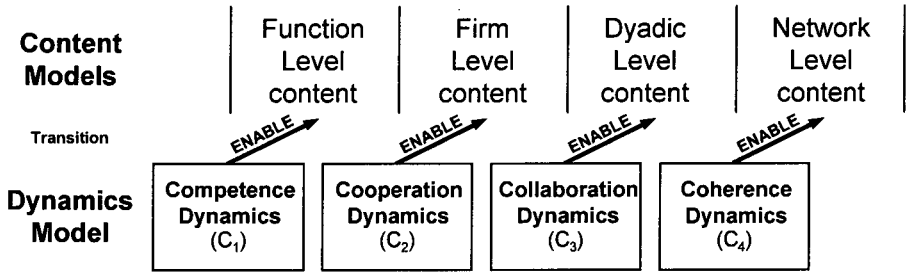


Figure 93: The position of maturity levels

The picture is further complicated by the different issues that need to be addressed within different organisational systems. As the change events move along the systemic spectrum of function, firm, dyadic relationship, to extended enterprise, the dynamics will need to change in response to the evolving implementation issues. For example, communication within the

function is dealt with differently from communication between firms. The relationship effect demonstrated by this example has been described in this research as the 'legacy effect' of implementation and outcomes. This can have both positive and negative connotations for the development programme. If managed effectively the result can be a robust framework upon which future work can be built. If mismanaged the consequences can be a significant impediment to future implementation success as previous work is first deconstructed and then rebuilt in order to facilitate the deployment of the necessary enablers. This indicates an iterative process of studying the issues, planning a dynamics-based intervention, deploying the intervention, assessing the outcomes and then deciding what steps to take in response.

6.8 The Implementation Dynamics

The implementation dynamics were created as a response to the need for an organising mechanism for the diverse range of implementation activities that were found within the case study material. Each dynamic has already been the subject of research from a generic perspective. However, the generic definition of each dynamic was not important in this research given the purchasing emphasis that was required. This meant that the dynamics had to be redefined in terms of the implementation needs of a purchasing development programme.

The starting point was the development of the potential dynamic themes from the supplier development programme. The purpose of starting from a loosely connected area was to provide some insight into what areas of implementation may be peculiar to Purchasing. The supplier development improvements were centred upon the supplier's own organisation and covered a wide breadth of issues that tended to have their root-causes deep within each supplier's business system. This provided the opportunity to develop a generic foundation that could be built upon and refined using the purchasing specific case study material. Any differences that were found between the supplier development dynamics and the purchasing dynamics thus constituted an opportunity to generate new insights and learning.

Using this approach, two particular findings were found to be noteworthy. Within the supplier development population, project positioning was seen as critical to enabling successful deployment and execution. When translated to the case study population, projects were no longer seen as the priority, being replaced by Purchasing as a functional entity within the organisation. Analysis of this difference seemed to imply that while the project issue related to competing for finite resources, the focus on Purchasing emphasised the lack of credibility with which peers seemed to perceive the ability of the function to improve and increase its contribution to the business.

The second issue surrounded the use of the terms 'process improvement' and 'ways of working'. Throughout the research a systemic view was taken as to the nature of organisations. This naturally promoted an orientation toward the development of processes as the means for sustainable improvement. However, the research found that determining how activities were linked together and executed within the organisation covered issues that were much broader than viewing processes as mechanical sets of repeatable actions. To reflect this finding, 'ways of working' was introduced as a substitute term in an attempt to reflect the breadth of issues that need to be considered when implementing a purchasing development programme.

As an example, 'communicating regularly' could mean sending out an email once a week. However, the research found that it was much more important for sponsors to be visibly promoting the programme and engaging in a dialogue with the people involved. This requires much more than a clinically defined and executed process; socio-emotional issues begin to play a much more prominent role in facilitating the successful implementation of the planned activities. The risk in using the term 'process' was that this nuance would become lost within the mass of information contained in this thesis. Given the importance of the balance between technical and social issues, this would present a significant loss. Therefore, the term 'process improvement' was substituted for 'ways of working' to emphasise the importance of considering the full spectrum of technical and socio-emotional issues.

6.9 Interrelationships between the Dynamics

During the research investigation and the development of the implementation dynamic groups it became apparent that a number of themes seemed to recur on a regular basis across the different dynamics. The most significant of these was strategy development. This appeared to provide both context and direction to the implementation programme as a whole. Of equal importance with regard to this research is the concept of strategy as a guide to the implementation of changes. Power (2005, p.104) acknowledges these two view points, cautioning that they require two completely different skill sets and are not necessarily co-existent. Scott (1987, p.502) argues that these skill sets reside within different organisational groups or management levels. If this is the case then the importance of strategy stretches beyond issues relating exclusively to *content,* identifying the importance of expanding its horizon to include *process* and *context.* However, part of the issue constraining implementation appears to be a lack of knowledge concerning what to do. To be able to diagnose and resolve these problems it is necessary to understand the aim of the change programme or activity in question (Nolan & Provost, *in* Langley *et al*, 1996). Therefore, while strategy has been argued to reside within the domain of senior management (Freedman 2003, p.26) it is a critical enabler for implementing current improvement objectives and should be translated throughout the organisational system to enable the appropriate change activities and changes to take place.

Analysis of the relationships between the dynamics demonstrated that multiple connections could be made at both the definition and detail level. Applying different contextual frames to this process demonstrated that different relationships could be formed and led to the theory that relationships were contextually sensitive and therefore not fixed. This meant that it would be a meaningless task to attempt a codification of these relationships and the approach was abandoned. However, it was concluded from this work that if the dynamics were closely related, and even overlapped in some cases, then it was probable that they would be more successfully employed when in combination with each other than when used in isolation. This reinforces the systemic paradigm as being relevant at the implementation, as well as

organisational, level. While this demonstrated a potential strength in the model, it also raised issues of complexity.

The legacy effects of implementation (described in Section 2.10) imply the need to understand and effectively manage the interactions and their consequences on the programme as it is implemented in order to ensure that an appropriate outcome is achieved and that barriers are not created to future progress. While these issues need to be considered across the spectrum of dynamics, they also need to take account of the contextual, content and process factors that influence their selection and use.

6.10 Selection of dynamics for implementation

Figure 94 takes the holistic perspective proposed above, arguing that the selection of dynamic is dependent on multiple factors. If this is the case then the specific implementation being faced will determine the selection of a different set of dynamics. This point is further complicated by the possibility that levels of maturity could vary across the organisational entities or operational activities. The consequences of this are that Figure 94 would be repeated multiple times in order to develop a fully responsive proposal for the scenario under investigation.

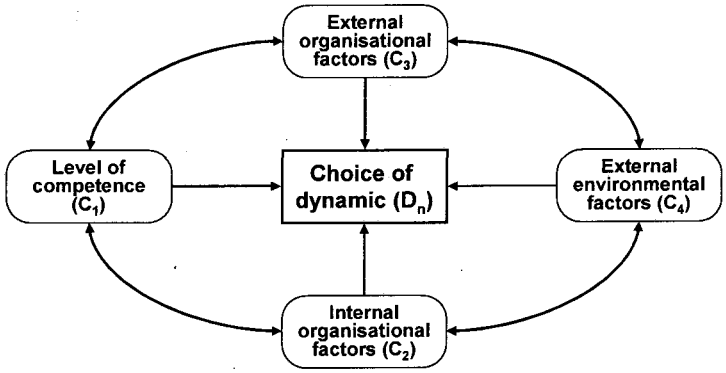


Figure 94: The influence of multiple factors on the selection of dynamics

Under these circumstances, the selection of appropriate dynamics becomes a process of compromise and best fit, constrained by the individual's capacity to understand the situation, their ability to employ numerous dynamics

simultaneously and the system's availability of dynamics in terms of resources and skills. This would probably result in the implementation dynamics described in this research being used as a reference set, the reality being an ongoing process of accommodation and compromise as the realities of the change programme constrained the deployment of appropriate responses. Macbeth explains the reasons for this through his discussion of the nature of complex systems. The chaotic nature of the situation described above is succinctly described in terms of the leader being 'part of the process of failure and discovery, to shape, evaluate and introduce the new model...' (Macbeth 2002, p.732). This acknowledges the problem faced by many leaders who have been taught absolutes in the classroom and find only ambiguity when they come to the point of practising their craft in the workplace.

6.11 Discontinuities in the Model

Across the four levels of maturity it was found that a number of problems exist that could not be resolved through the research process. As a result, these have been left within the model presented in Table 38 and explained below.

In this thesis, competence is argued to be the foundational level upon which all other development activities are based. Within the literature it tends to be argued that the individual is the focus upon which competence development is based. However, people are increasingly mobile with regard to employment location and work role. This implies that a competence built on people will always be a fragile state of existence and wholly dependent on the actions of the individuals concerned, although experience implies that this is often the case.

The systemic view places the onus on the development of robust processes as the foundation for a capable operating system. This focusing on the development of competence at a functional level could have the added advantage of improving the perception of Purchasing by its peer functions and the senior management team. In the case study material a lack of perceived competence was found to be a significant inhibitor to starting the process of development. From the people perspective, if competence is developed at a

functional level, then the migration of people through Purchasing has a reduced impact in terms of the sustained ability of the function to operate at a consistently high level of performance.

Development through the levels of maturity presents a quandary in terms of choosing the optimal approach. If the development of Purchasing is systemic, and therefore process based, then evolving to a cooperative level and disseminating relevant processes into the wider business environment becomes an easier proposition. The alternative perspective argues that moving competent people across the firm may be a simpler option. However, risks are associated with this second approach in that people often rely on support structures and networks to perform their roles. These may not be present in their new work location and may be compounded by the potential impact of peer pressure to conform to incumbent, sub-optimal, ways of working.

Within the Competence level, the objective is to develop the capabilities of Purchasing as an organisational entity. This means consuming resources such as money and time to invest in training and development of individuals within a systemic functional framework. Simply learning new skills and knowledge is not enough, it requires time and practice to be able to embed these competences into an optimum form, based on the aims of the system.

As the firm moves into the Cooperation phase, Purchasing is encouraged to reconstruct its new found competence based on the needs of the firm as a business system. This often means restructuring processes and activities across the firm to the locations where they logically, rather than functionally, exist. The impact of this restructuring activity will often mean significant disturbance to the functional system that has evolved to a relatively high level of competence. Potentially this can have a detrimental impact on the performance of Purchasing and therefore appears to be counter-intuitive as an improvement action. However, taking a combined strategic and systemic view it becomes a natural development from the functional success already achieved.

The strategic view argues that short-term losses are acceptable as long as the longer-term gain outweighs any cumulative loss experienced. At the functional level, Purchasing will have a finite capability for contributing to the business. This concept is explained by the sigmoid curve (Figure 95), which can be used to symbolise a slow start followed by rapid growth that flattens out toward some nominal asymptote. The implication of this model is that, to generate further improvement, a new approach is required leading to the next sigmoid curve. This highlights the importance of the four levels of maturity used within the dynamics model. These concepts are shown in Figure 95.

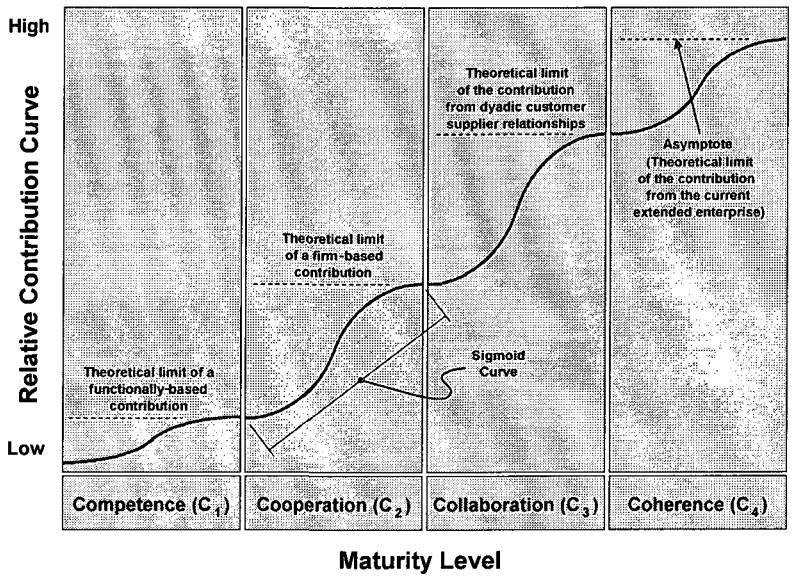


Figure 95: Contribution asymptotes

The sigmoid curve has been considered to represent the life cycle of anything that can be considered in terms of a biological metaphor. The curve itself has been characterised as starting with a period of learning or investment that progressively yields growth and returns. Inevitably, that growth will slow and eventually start to decline (*see* Handy 1994).

The systemic view rejects the historical paradigm of the organisation as a federation of functions. Instead, Purchasing is seen as a system at the competence level that becomes transformed at the cooperation level into a set of purchasing processes and competences that are appropriately dispersed across the whole firm. This aspect of the system view is discussed

in more detail later in this chapter.

The collaboration phase appears to reconcile some of the issues raised above with regard to the dilemma between an emphasis on people or processes. In many situations the historical legacy of adversarial relationships with suppliers will have created a culture of mistrust and defensiveness. The purpose of collaboration is to create mutual dependency and this cannot be achieved without an open and honest bilateral relationship.

The first stages in what can be described as a healing process involve personal contact between the senior management teams. Signals are required that old practices will cease and credible commitments need to be made indicating that a more equitable approach to business dealings will prevail in the future. These commitments can only come from the most senior people within the organisation if they are to carry any weight. This clearly indicates a focus on the development of people competences in order to know how to approach and execute this rather delicate task.

Assuming that some form of agreement can be reached, the next issue becomes one of honouring the commitments made in terms of demonstrating the new ways of working on a day-to-day basis. This is not a critical problem in itself. However, during times of crisis it is often found that people revert to ways of working that have proven successful in the past. Supplier-related problems may therefore result in a confrontational stance from the customer, quickly damaging the relationship building work that has taken place. A process-based approach can be used to overcome this problem by defining the appropriate responses to problematic situations. This removes much of the emotion that is at the root cause of many confrontational situations as the path for resolving problems is clearly laid out before the relevant actors. Ultimately, it becomes apparent that for collaboration to be successful, a mix of personal and process-based competence development is required across both organisations.

At the level of the extended enterprise the role of Purchasing appears to make

a step-change in favour of the development of personal relationship-based competence. The network-broker approach will have processes to guide it, such as those proposed by the six network management roles (Harland & Knight 2001, p.482). However, the question has to be asked as to whether the operational processes can be meaningfully and usefully developed at such a high level of multi-organisational aggregation. The fluidity and complexity of the environment is at its most extreme at the enterprise level and therefore makes some of the process-based opportunities redundant in favour of the intuitive responsiveness provided by competent individuals.

Rather than proposing an impediment to the successful deployment of development programmes, it appears that the tension between the technically-oriented process approach and the socially-oriented people approach should not be viewed as contradictory (Gibb, 1991). Instead, the context should be used to provide the signals that guide the selection of the most useful implementation approach.

From the discussion presented above it appears that the emphasis between technical and social aspects of change shifts as progress is made and the level of maturity increases. The critical issue therefore becomes one of understanding the needs of the situation and balancing the response so that an optimum implementation proposal is developed. As a general schema, the following sequence is suggested from the findings of the research:

1. Develop individuals' competences in systemic change;
2. Develop people-based competence at the functional level, reinforced by robust process development;
3. Develop process-based cooperation at the firm level, supported by social skills development amongst staff;
4. Develop relational collaboration through strong inter-personal competence and integrated operational processes;
5. Develop relational competence within the network broker role supported by high-level strategic, coordinating and deployment skills.

The constant shift between technical and social issues implied that there may also be a certain degree of interaction between them. This reinforces the importance of the issue of managing complexity in a dynamically changing environment, but also raises the problem of accommodating and forward planning for the legacy effects of proposed implementation activities.

6.12 Step-Changes across the Dynamics

A review of the summary model presented in Table 38 highlighted the observation that a number of the dynamics appeared to change their focus as progression was made along the maturity axis. Although this did not appear to raise any issues concerning the integrity of the model, these phenomena are highlighted below in order to present a complete record of learning.

Expert Leadership (D_2) is seen as a resource that should be brought into the organisational system to provide a skills and knowledge base upon which to build internal capabilities. At the Coherence level (C_4) this expertise becomes an internal resource that is coordinated across the extended enterprise to meet the network's aims and objectives.

Senior Management Sponsorship (D_3) acts as the power broker during the early stages of development, ensuring that progress is enabled and the objectives become embedded within the new organisational systems. At the Coherence level (C_4) it appears that this role may have become redundant as the focus shifts toward ensuring that the activities of the network system remain aligned to achievement of its ultimate aim. The subtlety of the new approach seems to argue a move from an insurance to an assurance role.

Strategy Development (D_4) undergoes a step-change very quickly. The first priority of the strategy appears to focus on the need to overcome inertia and create an environment that is conducive to accepting change. This is clearly a prerequisite role that is designed to enable the organisation to implement change with the minimum of trauma. In itself this first step does not necessarily yield significant and tangible benefits. Therefore, from the Cooperation level (C_2) onwards, it appears to be quickly followed by a move

toward defining and structuring a programme that will meet the needs of the organisation.

Purchasing and Supply Management Positioning (D_5) begins with a clear acknowledgement of poor historical performance as a result of low relative competence. This has caused the need for a period of recovery actions to place the function on an equal footing with its peer functions. Only when this has been completed can Purchasing move to the Collaboration level (C_3) where it can assume the role of managing supplier relationships as a precursor for its eventual role as network broker within the extended enterprise.

Communication (D_7) follows a similar path to Strategy Development. The initial purpose of this dynamic is to inform the key stakeholders of the changes that are being proposed and to engage them in dialogue in an attempt to energise support for the initiative. At the Cooperation level (C_2), the emphasis on communication moves toward an enabling role from a more operational perspective. The development of purchasing from a functional to an enterprise-wide role means that effective communication becomes a critical enabler in coordinating the ongoing activities across the network.

Skill and Knowledge Development (D_8) focuses heavily during the first three phases on the creation of internal capabilities that align with the needs of relevant stakeholder groups. Once this has been achieved the focus transfers at the Collaboration level (C_4) toward an external focus on the needs of the market being served by the extended organisational system. The underlying logic appears to argue that it is necessary to create the ability to serve the end customer robustly and sustainably before their expectations are raised through a process of direct engagement.

Team Working (D_9) seems to have developed from the premise that it is not a natural activity within most organisations. This is reinforced by the first three levels of maturity being used to develop, consolidate and then institutionalise team-working approaches across the business system. This three stage

approach seems to be required at all levels of the systemic spectrum from the functional level, across the firm and then through relationship building with suppliers. At the Collaboration level (C_4) this moves toward the brokering role where it is a case of bringing appropriate groups together, based on the aims of the extended enterprise, rather than bringing groups together and then teaching them how to work together. This dynamic relates closely to the Purchasing and Supply Management (D_5) in that both emphasise the importance of relationship building and operational integration across the business system.

Rules of Engagement (D_{10}) can be argued to act as a constraint across the first three levels of maturity. This is clearly the case, but is approached from the concept of providing a framework within which the new system should operate. Therefore, it should be construed as more of a guide than an inhibitor. This is important for the sustainable success of any programme that involves fundamental change. Although the changes may be defined and communicated clearly, it is almost impossible to create frames of reference that cover all contextual eventualities. By setting boundaries within which activities should be conducted, a reasonable attempt can be made to provide a pathway along which individuals and groups can progress and embed their new capabilities. At the Collaboration level (C_4) the rules of engagement become significantly less prescriptive in nature. Instead, they emphasise the need to focus on the development of a sustainable business plan developed at the extended enterprise level. This moves from a prescriptive set of rules to a guiding principle within which all activities and opportunities can be evaluated.

New Ways of Working (D_{11}) centres attention on the need to create a process-based system that has the effect of embedding the changes being deployed. This is achieved through a combination of people and process development. As the Collaboration level (C_2) is reached, the intent shifts from consolidating the new approaches to encouraging and enabling further developments to take place. These are centred on relationship building and the devolution of power and are based on core competence alignment. Initially, the new ways

of working act as constraints and for consolidating. As this process embeds the changes into the system the emphasis moves toward ensuring the long-term viability of the extended enterprise.

Upon first view it might be proposed that the step changes should occur at the same maturity level. However, two issues preclude this from becoming a viable improvement option. First, it has been clearly demonstrated that relationships exist between the various dynamics and these will have a sequencing impact in terms of where each should logically appear. This point is further supported by the use of the case study material in generating the dynamics as they provide an implementation-based foundation upon which the model was developed. Second, the selection of appropriate dynamics is significantly influenced by the contextual and content objectives that frame the implementation situation in question. These issues are often 'messy' and therefore result in a disparate cocktail of dynamics that match the needs of the situation rather than the ordered framework of the model.

6.13 Implications for Theory

This research has examined the area of implementing change programmes from a purchasing and supply management perspective. Change management, as a field of knowledge within organisational development has been extensively researched. Indeed, the dynamics identified in this research have all been researched as discrete areas of knowledge within their own right. However, the innovation offered by this research is the specific purchasing context and the framing of this context as part of a much broader change system.

The literature review highlighted the importance of the relationships between the different aspects of a change event. Despite this, research on them has tended to be fragmented. This research concludes that the relationships are important based on their interdependent nature. The consequences of this proposition indicate that more work should be undertaken from a systems-based perspective to understand not only the discrete aspects of change but also their relationship over time.

The maturity profiles developed from this research emphasise the systemic nature of organisational change. Although this perspective has also been developed by other researchers, it appears that none has theorised on what the full spectrum of organisational entities might look like. This research has examined organisational constructs from the functional level to the extended enterprise. Part of the thesis generated within this research argues that change is only conducted successfully when implemented through the successive levels of organisational aggregation mentioned above. If this is the case, then identifying the full range of aggregates may be an important step in understanding how improvement programmes are successfully deployed.

Each of the implementation dynamics has been researched and described within the available literature. Despite this, many authors still lament the lack of knowledge relating to their successful deployment in change situations. What is of note is that the general literature appears to treat the dynamics as discrete fields of research. This issue is further compounded by the attempts to relate them often being contextually constrained. The result is that, unless the situation being investigated relates closely to the situation defined in the literature, the opportunity to learn from existing research is greatly diminished.

The implications of the above issues are that theory should be informed to a greater extent by a more collective understanding of related issues. This not only adds richness to the knowledge available but also provides a clear context within which the knowledge can be assimilated and related to practical issues facing the reader. This description indicates that a systems-based approach to research might result in a more informative outcome.

Although academic research is inherently 'narrow and deep', a tipping point must exist where the quest for further knowledge is tempered by the need to turn the available knowledge into a useful and utilitarian form for more general consumption.

6.14 Implications for Practice

This research was born out of a need to understand implementation problems in an attempt to improve implementation practice. While the change literature appears to emphasise the context, process and content of change, very little work seems to have focused on the activities necessary for their successful implementation. Therefore, this thesis has examined the practical aspects of change management with specific regard to enabling operational deployment.

Given the wider spectrum of dynamics developed within the research it became apparent that a collective approach needed to be taken to the selection and deployment of implementation activities. Context was seen to have a predominant influence on the type of dynamic that might be appropriate for a given situation. However, this would be further informed by the change process being used, the implementation step currently being deployed and the content objective defining the desired outcome. All of these issues are important in the diagnostic and selection processes.

The level of complexity described above indicates that any potential solution will be multi-faceted. The consequence of this is the need to deploy multiple dynamics in combination to collectively resolve the implementation issues being faced. This concept can be characterised as a portfolio approach to the use of the dynamics. However, this does not imply any form of prescriptive deployment, the selection of dynamics is clearly contextual and therefore the research model developed must be viewed by practitioners as informative rather than directive.

While it appears that many practitioners would indicate a preference for a step-by-step model that provides some form of mechanical application, the research concludes that this is not a viable proposition. This seems to reflect some of the criticism made of existing models regarding their generic ambiguity, arguing that practitioners require detailed guidance. This research concludes that such a provision is unachievable unless constrained by clearly defined contextual limitations. Even then the validity and utility of the output may be questionable.

It can be argued that the model does respond, to some extent, to the needs of practitioners for a clear approach to the deployment of change programmes. The model provides an overview of the main characteristics needed for successfully implementing a development programme within a purchasing environment. If the practitioner is experiencing problems then the model can first be used as template against which to check what is and what is not in place. Any gaps can then be assessed in terms of their contextual relevance and potential impact. If gaps are found to be significant then the model can be used in a secondary way to indicate the nature of the activity required to close the gap.

6.15 Further Research

This thesis was designed with the objective of identifying the implementation dynamics that enabled the successful deployment of purchasing and supply management development programmes. In identifying and defining these dynamics, further issues requiring detailed research were found and these are described below.

The design research model covers both the development of a hypothesis and its testing. Given the lack of information relating to the area of knowledge covered in this research it was not possible to both construct and test a model. Therefore, a phenomenological approach was taken as a means of building a relevant model using research questions rather than a hypothesis. The next stage would require further research to test the model perhaps using a positivist approach.

Although the examination of a large number of case studies can be argued to indicate a significant sample research population, the findings can only be defended from the perspective of interpolated data. It can be argued that using a sample negates the ability to robustly extrapolate all possible findings using qualitative methods. Therefore it may be considered appropriate to conduct further research using either a different sample population or methodology in order to verify, qualify or add to the dynamics already identified.

During the literature review it became apparent that significant problems appeared to exist surrounding the area of research application by practitioners. The research process also indicated that application of the model would be significantly enhanced through the development of an operational process. Not only would this enhance its utility, it would also consolidate the appropriate use of the model within 'real world' situations. As mentioned above, of particular interest would be the diagnosis of problem situations and the development of structured interventions using the dynamics.

6.16 Summary

The dynamics describe the transitional activities that could be implemented as enablers to successful change management. While they all have considerable foundations in existing research, their collective use within this research, and the purchasing specific context, provide new insight and knowledge.

They appear to be particularly sensitive to contextual influence and derive meaningful application from both the change processes employed and the content-based objectives being pursued. Two distinct characteristics of the model have been identified as a result. First, the dynamics appear to undergo a step-change in focus as progress is made. This deviates from the normally linear progression often described in the literature. Second, their contextual sensitivity has an iterative effect on the whole model. This changes the nature of the dynamics as the context changes, including that of the dynamics that have already been deployed.

During the research the importance of a systemic approach was continually reinforced. The model itself appears to act as a micro-system as the dynamics and maturity levels interact to enhance their meaning and provide contextual relevance. The influence of context, process and content indicate that the implementation dynamics model forms part of the wider change management system. Finally, the organisation is viewed at different system-based levels in order to generate meaningful connections between the 'real world' situation and the framework used to construct the research model.

Chapter 7: Thesis Conclusions

7.1 Introduction

This section is intended to close the thesis by restating the questions generated from the original research problem and then presenting the core answers generated as a result of the investigation. The background information that supports these answers can be found in the main body of this work and in the appendices that accompany it.

7.2 Question 1:

What characteristics may be used to describe implementation dynamics?

Implementation dynamics are context specific micro-level actions used to enable the delivery of change related content as a prerequisite of achieving predefined improvement programme objectives.

7.3 Question 2:

What are the implementation dynamics of purchasing and supply management development programmes?

The implementation dynamics are presented in Table 38 overleaf, which summarises the core theme that runs through each dynamic. The detail that exists behind each of these summary statements can be found in the Findings Section and takes the form of a causal network and supporting narrative. Both should be reviewed if the reader intends to gain a full understanding of the dynamics and the relational context of their constituent parts.

Table 38 (*repeated*): Implementation dynamics and maturity development

Stage of Maturity / Implementation Dynamics	Competence (C_1)	Cooperation (C_2)	Collaboration (C_3)	Coherence (C_4)
Business Focus (D_1)	Understand the business environment	Integrate practices into the wider business operation	Select and develop suppliers from a competence-based perspective	Coordinate network activities based on extended enterprise priorities
Expert Leadership (D_2)	Expertise is developed within the function	Improvements within the firm are guided by experts	Expertise is shared across firms for mutual benefit	Expertise is aligned and coordinated across the network
Senior Management Sponsorship (D_3)	New competence development is launched through effective & engaged sponsorship	The sponsors ensure that new practices cross organisational barriers	Sponsors promote and demonstrate the new approach to customer-supplier relations	Managers focus on the ultimate aims of the network to guide the alignment of its members
Strategy Development (D_4)	The objective is to overcome inertia and begin the change process	Functional strategies are aligned with the business strategy	Strategies are co-developed, being both sustainable & mutually beneficial	Strategy development is part of a pan-network management process
Purchasing & Supply Management Positioning (D_5)	Functionality develops to a business level	Purchasing expertise and processes are deployed across the firm as appropriate	Purchasing takes the lead in the management of supplier relations	Purchasing develops a network broker role to link suitable partners
Change Management (D_6)	Changes are agreed by the business and developed within the function	Projects are deployed using cross-functional teams to implement process-based changes	Change projects are jointly developed, coordinated and implemented by both partners	Change and project management becomes core competences for developing the extended enterprise
Communication (D_7)	Communication is used to inform and energise the change process within Purchasing	Information protocols are used to integrate working practices across the organisation	Communication is used to develop and coordinate bi-lateral relationships	Network members become self-aligning through the availability of relevant information
Skill & Knowledge Development (D_8)	Training focuses on the development of personal competence within a functional setting	Training is coordinated and integrated cross-functionally to meet firm needs	Training is used to develop and align core business competences between partners	The focus shifts to knowledge and the identification of extended market opportunities
Team Working (D_9)	Team-working principles are taught within the function	The business is developed to deploy and support team working	Cross-business teams are co-developed and jointly sponsored	Purchasing coordinates the development of multi-firm teams
Rules of Engagement (D_{10})	People are developed as the core enablers of improvement	Protocols are defined within which the business must integrate & operate	Holistic rules of engagement and development are jointly agreed	Sustainable opportunities and objectives guide the network's aim
New Ways of Working (D_{11})	Competence development is used as a means of consolidating new ways of working	New practices are designed to leverage core competences across the firm	New ways of working influence the creation of a specific type of relationship between the two firms	New practices encourage the devolution of power and encourage cohesive autonomy
Performance Measurement (D_{12})	Measures focus on internal customer needs as the key driver of performance	Measures assess both efficiency and effectiveness in meeting business objectives	Measures are used to guide the actions of both parties within a relational framework	Customer satisfaction is used as the primary measure for guiding network activities
Continuous Improvement (D_{13})	Continuous improvement is developed as a core competence within staff members	Continuous improvement is a developed as a fundamental enabling process	Continuous improvement is used to mutually develop both organisations	Continuous improvement forms the foundation of a sustainable business network

7.4 Question 3

How can the implementation dynamics from Research Question 2 be aligned with the existing purchasing and supply management content models?

The implementation dynamics are aligned to the existing content models through the maturity axis using a systemic perspective as its frame of reference. The process of alignment involves reviewing the characteristics of the content objective, relating this to the closest definition of maturity and then reviewing the dynamics that fall within the relevant maturity category.

The *competence* phase emphasises the need to develop skills and knowledge that are perceived to be of sustainable value to the firm and recognised as such by peer functions.

The *cooperation* phase emphasises the development of cross-functional alignment based on mutually compatible objectives and a systems-based approach to the deployment of resources and practices throughout the business processes of the firm.

The *collaboration* phase emphasises the development of mutually beneficial long-term dyadic relationships that are built on interdependence through the alignment of core competences and deeply embedded processes.

The *coherence* phase emphasises the systems view of optimising the whole business network through the development of symbiotic relationships based on the aim of the network rather than simply the customer-supplier connections found along the linear supply chains.

7.5 Question 4

How can the implementation dynamics from Research Question 2 be related to the process aspects of change management?

The implementation dynamics are related to the process aspects of change through being defined as a set of generic implementation activities. This approach facilitates their incorporation into the generic change process descriptions that tend to prevail.

Business Focus (D_1) describes the use of a wider systems perspective that defines the priorities, objectives and actions to be undertaken using business terminology and protocols. This approach is initially used to overcome the inertia experienced at the commencement of many development programmes and then to act as a common frame of reference from which diverse stakeholder objectives and expectations can be consolidated.

Expert Leadership (D_2) covers the areas of business analysis, priority and target setting and improvement implementation. These areas need to be available to the organisation but not necessarily from a single source or individual. The importance of this dynamic is prominent during the early stages of the programme. In many cases a lack of available and relevant expertise prevents all but the most basic progress to be made. As the programme matures it becomes incumbent on the organisational stakeholders to develop internal expertise as a means of creating a sustainable infrastructure.

Senior Management Sponsorship (D_3) is a largely promotional role coupled with interventions to ensure organisational alignment and engagement with the objectives of the improvement programme. Without the support of the executive team it is unlikely that any form of meaningful engagement will be achieved. These people also form the group who tend to have invested a great deal in creating the current situation and it is therefore often prudent to engage them as the primary internal stakeholder group.

Strategy Development (D_4) is a long-term perspective on the needs of the business and is used to guide the deployment of resources and shorter-term projects directed toward the business delivery. The lack of a clear strategy often leads to a lack of clear direction. This forces tactical and opportunistic behaviour that precludes the development of many of the practices associated with advanced levels of performance and operational maturity. The presence of a strategy also acts as a reference point from which disputes or ambiguity can be contextualised as part of the resolution process.

Purchasing and Supply Management Positioning (D_5) defines the function in a way that references the contextual and business issues as a means of communicating its relative importance and contribution within the wider system. A legacy of relatively poor contribution to the firm can mean that the Purchasing function often starts from a position far behind its peers. To progress toward an equal standing within the firm and a more strategic focus it is necessary for the function to market itself as a means of enabling its often self-driven advancement.

Change Management (D_6) involves all levels of the organisation and emphasises the implementation of robust business improvement proposals using best practice techniques and an underpinning process improvement methodology. The foundation of any development programme is the creation of a strong infrastructure and supporting methodology. Change is both complex and resource intensive. For any programme to succeed, both the theoretical and practical aspects need to be understood and embedded within the fabric of the organisation.

Communication (D_7) focuses on the dissemination of information to both guide and protect the integrity of the programme as it is implemented within the wider business system. A development programme necessitates changes within the organisation. For many this is an unsettling process that often leads to psychological stress resulting in ineffective or inappropriate coping strategies. Communication is a primary tool in overcoming these problems through a process of two-way dialogue and information sharing.

Skill & Knowledge Development (D_8) relates to the transfer of relevant competences to the focus organisation with the aim of creating a self-sustaining and autonomous improvement system. Competence development underpins the whole process of change and acts on two perspectives. The process of change is complex and requires individuals who have practical expertise to energise and direct change teams. The results generated by these teams often involve new working practices and this requires the development of new competences by the people who will operate these practices.

Team Working (D_9) involves the mutual alignment of individuals' competences toward a common objective that the group are empowered and capable of collectively achieving. The systems perspective necessitates the need for stakeholders to work as part of a collective group. Functions become largely irrelevant as processes are restructured in line with the needs of the system and the staff who operate the processes move around the organisation to the logical point where their activities can be integrated with those of their neighbouring process steps.

Rules of Engagement (D_{10}) define the initial framework, ways of working and behaviour norms that should be used to encourage the development of a process-based improvement system. Change causes ambiguity as stakeholders attempt to make sense of the new order of things. This can be difficult when their only frame of reference is what has gone before. To prevent problems occurring it is important to provide guidance in the form of operational protocols and, initially, constraints. As learning takes place and people become knowledgeable the reliance on rules diminishes significantly.

New Ways of Working (D_{11}) involves a collaborative approach to the development and implementation of improvements based on an enabling environment that introduces improvements through collective agreement. Change often implies a new order of things. From a systems perspective it often centres on the development of processes. However, it is much more than this and involves the development of new behaviours to support the

more collective approach to doing business. New ways of working thus becomes a symbiotic combination of the social and technical aspects of the organisation.

Performance Measurement (D_{12}) develops in-process, systemic and outcome data in such a way that inferences and relationships can be made between them in support of an improvement strategy. As changes take place it is important to assess progress being made in addition to the traditional outcome measures. A systems perspective encourages this approach further to the point of adding both hard and soft measures to the portfolio of business performance indicators.

Continuous Improvement (D_{13}) is the underpinning methodology that ensures a sustainable and targeted improvement competence is developed within the organisational system. For the development programme to develop a sustainable momentum it is critical for an underpinning approach to be adopted that is flexible enough to accommodate the evolution of both the internal and external business environment without the need for continual reinvention.

7.6 Summary

This section summarises how this thesis satisfies the requirements for the award of a PhD qualification from The University of Southampton and is structured around the criteria described on pages 24 and 25 of the Regulations for Higher Degrees 2005/2006.

The creation and interpretation of new knowledge has focused on the problem of implementing development programmes within a purchasing and supply management environment. The outcome of this research was the development of a model that has drawn on successful practices to create a reference that can be used by both academics and practitioners when attempting to understand impediments to change. This has been partly facilitated by the development of a maturity perspective, new to the area of purchasing, that positions situations based on the sphere of influence of the

implementation activity or its outcome.

The systematic acquisition of a substantial body of knowledge can be viewed from two perspectives. First, the lack of available literature meant that related subjects had to be explored and constructed into a reference frame that could be used to articulate the existing knowledge gap and guide the development of themes explored within the thesis. Second, the research methodology explored substantial amounts of data; consolidating them in response to the issues raised by the research problem, guided by the conclusions drawn from the literature.

The research problem identified an area of change management that appeared to be little understood within either the literature or practice. This resulted in a phenomenological approach to the research, given the need for *a priori* knowledge in the positivistic hypothesis testing approach. The research environment was organisational in nature and therefore exhibited aspects of technical and social relevance. The complexity and presence of significant people-oriented issues led to the adoption of a qualitative design. The design itself was pluralistic, using action research and collective case study. Implementation of the research was conducted over two phases that reflected the two research methods. The action research phase was executed within a supplier development programme and highlighted the need for both careful and sympathetic management of the people involved. The collective case study enquiry was predominantly desk based and therefore presented a different set of research issues to be managed at a more personal level.

The research problem, while calling for guidance on implementation issues, was informed by the literature on contextual, emergent and complexity issues. The abductive phase of the research used action research as the means of working closely with practitioners to develop a deep understanding of the implementation problems they faced. This 'immersion' approach was particularly pertinent given the general lack of competence in identifying and defining the root-causes of implementation problems by the research population. The deductive phase of the research used the collective case

study approach to examine a large number of purchasing related case studies as a means of developing a generic model. The two research traditions were informed and aligned by the design research methodology, each tradition generating a specific area of new knowledge.

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