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MANAGING AND DEVELOPING SUPPLIERS: CAN SCM BE ADOPTED BY SMES?

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Abstract

Primary Objective: The aim of the research is to investigate whether it is possible for the smaller organisation to undertake supplier development activities. A review of the literature identifies that the furniture industry, which this paper focuses, has been overlooked in terms of supply chain (SC) research.

Research design: This research adopted a case study approach, which included both with the lead organisation (assembler/customer) and a number of their suppliers.

Methods and Procedures: Semi- structured interviews were conducted with various personnel within the lead organisation and their suppliers. Company documentation and field notes were also employed.

Main outcomes and results: A three-stage model was used to communicate the different activities that the assembler employed in order to engage their suppliers. This model details the internal and external drivers for change and the outcomes in terms of approved suppliers, preferred suppliers and eventually working towards strategic partners. The findings include the benefits of SC activities can bring the smaller organization but also considers the issues around limited resources.

Conclusions: The paper concludes that Supply Chain Management is appropriate for the smaller organisation and recommends further testing of the generic model proposed by this study.

Keywords:

Supply Chain Management, Small and Medium sized Enterprises, supplier development, change

1. Introduction

Much of the previous Supply Chain Management (SCM) literature has focused on larger organisations operating in sectors such as automotive, electronics, grocery and more recently aerospace. This paper attempts to consider SCM from the perspective of the smaller organisation by reviewing the experiences of an office furniture manufacturer located in the UK. Previous studies have largely been from the perspective of the supplier, whereas this paper focuses on a SME that acts as the lead supply chain member (customer) who has introduced a programme that enables them to communicate with and develop their suppliers (both large and small). Specifically the research examines the management of supplier relations and the introduction of development and evaluation activities. Ultimately, this research aims to understand the challenges and opportunities that exist for the smaller organisation when endeavouring to undertake supply chain management activities by facilitating the improvement in the performance of their supply base.

The term SCM was initially used in wholesaling and retailing to describe the integration of logistics and physical distribution functions with the goal of reducing delivery lead-times (Wisner and Tan, 2000). Manufacturers and service providers have used the same term to describe integration and partnership efforts with suppliers to reduce cost and improve quality and delivery times.

Despite the popularity of the term of SCM, there exists no widely accepted description of SCM or its activities. Stevens (1989:3) simply defines the Supply Chain as:

> "The connected series of activities which is concerned with planning, co-ordinating and controlling material, parts and finished goods from suppliers to the customer."

and supply chain management can be defined as:

> "The integration of these activities through improved supply chain relationships, to achieve a sustainable competitive advantage." Handfield and Nichols (1999:2)

The short-term objective of SCM is primarily to increase productivity and reduce inventory and cycle times (Wisner and Tan, 2000). Its long-term strategic goal is to increase key deliverables such customer satisfaction, market share, and profits, but ultimately, improving the total process efficiency and effectiveness for all SC members.

The benefits of managing and developing supplier networks are reported as increased market share, inventory reductions, improved delivery service, improved quality and shorter product development (Corbett et al., 1999). Grove (1998) provides some additional benefits that he has linked to the specific functions within SCM (see table 1).

[Insert table 1 about here]

Supplier development has been described as activities undertaken to improve the current or future relationship between buyers and suppliers; these activities can be either short- or long-term in nature (Dunn and Young, 2004). In addition, Krause (2002) contends that supplier development is any systematic programme established to create and sustain a network of competent suppliers. Successful supplier development initiatives have been associated with major automotive firms such as Toyota and Honda (Likert and Wu, 2000), who recognise the value of investing time and money in the development of suppliers. According to Quayle (2000) the likely outcomes of a supplier development initiative include improved communication, joint problem solving and risk sharing, and reduced costs.

Despite the increase of SCM research in both the business and academic press, according to Wisner and Tan (2000) there is little empirical research that clearly defines SCM and its impact on the firm and its trading partners. This research aims to investigate how Supply Chain Management has been employed within the furniture industry. Specifically, this case study research examines the activities undertaken by an office furniture manufacturer in collaboration with some of its key suppliers.

The case study approach adopted for this research includes data from semi-structured interviews conducted with the manufacturer's purchasing and supply chain personnel. In addition, a number of key suppliers were interviewed, along with field notes compiled from observing meetings and collating documents associated with SCM activities.

As a result of this research, a three-phase framework has been proposed which identifies the key elements of SCM. The framework aims to assist the smaller organisation in managing their supply base in terms of buyer/supplier relations and development activities. This exploratory research identifies areas of further research that are required to validate the SCM three-phase framework and enhance our understanding of the important role that SMEs have to play within the supply chain. Jenner and Johnsen (2002) identified a number of problems that a typical SME are likely to experience when trying to adopt best practice supply chain activities. These include limited resources and lack of influence.

2. Background

The background to this study is divided into two sections. The first provides a brief overview of the industrial sector that features within the paper, namely the UK furniture industry. The second section examines previous studies associated with SCM and this selected industry.

2.1 The UK Furniture industry

The furniture industry is described as a 'traditional' industry that requires relatively low levels of investment to set up to manufacture. "Competition is often 'ruthless' and this has a tendency to result in a narrow inward looking approach to business" (FIRA and DTI, 1999:14). Although some of the larger organisations have invested in sophisticated technologies, generally, the industry is reported to lag behind more advanced manufacturing industries such as electronics, automotives, and aerospace in both the development of processes and products. According to recent competitiveness study for the industry, the average lead-time from order to delivery for the whole furniture industry is reported to be 5.6 weeks (39 days) (FIRA and DTI, 2002). However, anecdotal evidence suggests lead times for household furniture can vary from six to ten weeks. In addition, nearly two thirds of furniture manufacturers are reported to make more than 90% of furniture to order (FIRA and DTI, 2002).

In terms of the structure of the industry, it might typically be described as small family businesses engaged in traditional techniques producing handcrafted products (FIRA and DTI, 2002). However, beneath this semblance is a large, mature industry, which consists of high volumes and makes a significant contribution to the economy, with manufacturing sales estimated around £9.4 billion in 2000 and employing some 155,000 people (FIRA and DTI, 2002). The industry can be segmented into three sub-sectors: domestic, office and contract.

The lead organisation involved in this case study research is referred to (for the purpose of this paper) as Office & Co. This organisation is a manufacturer of office furniture and is located within the UK. Pseudonym has been used to protect the anonymity of the organisations involved in this study, mainly the office furniture manufacturer. It is important to state that the concealment of organisation names does not compromise the validity of the results and the contribution of this research. Interview scripts and field notes were validated by interviewees. The importance of this paper is the ability of the smaller organisation to manage their supply chain. This paper reports on the experiences of a small and medium sized enterprise in operationalising supply chain activities.

2.2 SCM and the UK Furniture industry

The majority of previous research associated with the U.K. furniture industry has been conducted by trade associations and has focused on design, material and technical issues. Specifically, the focus has been on design for manufacture (DFM) and the use of techniques such as design for assembly, value analysis and quality function deployment (Huang and Mak, 1998). It was concluded that DFM techniques were relevant to the industry and companies could improve competitiveness in terms of time compression, quality improvement and cost reduction. Nonetheless, the concept of

DFM was not widely understood or adopted within the U.K. furniture industry, with cost and risk being the main concerns of managers.

International research includes a DFM study with Australian furniture manufacturers (Watson, 1997), a report on the growth and globalisation of the South African Furniture market (Kaplinsky et al., 2001) and a U.S. furniture industry study that identified the relationship between the performance on New Product Development (NPD) activities and overall business performance, which concluded that improvements in product development activities required greater input and leadership from design, engineering and manufacturing (Calantone et al., 1995).

American researchers, Bramorski et al., (2000), have noted the success of ready-to-assemble (RTA) furniture as a low cost alternative to conventional (fully assembled) products. Vickery et al., (1999) also examined the flexibility of U.S. furniture supply chains which focused specifically on volume and launch flexibility. A taxonomy of environmentally-friendly SC best practices was generated by examining the environmental practices of five furniture companies (Handfield et al., 1995). This concluded that, in order to be successful, all environmental management strategies must be integrated into all levels of the supply chain, including product design, procurement, manufacturing, packaging, and distribution.

An assessment of supply chain measurement systems was conducted with members of the Swedish, home furnishing multinational IKEA's supply chain. Conclusions were drawn on the common measurement problems. These included the weak connection between measurement systems and strategy, the strong reliance on financial measures and a confusing number of isolated measures (Holmberg, 2000).

It would appear from this review that SCM research has not been widely associated with the furniture industry. In addition, this paper aims to examine how the smaller organisation, which make up a significant proportion of the SC players both in this industry and many others, can adopt a progressive approach to managing and developing their suppliers. Frequently, the lack of resource and skills are cited as major barriers to implementing any form of improvement or development mechanism. Although it is recognised that limited resource is usually available within the small to medium sized organisation this is not to say that some action can be taken. This may require inviting those supply chain members that are better than ourselves to help make the changes.

3. Research Methodology

The case study methodology is a common feature in SCM research and it can be used to review both intra- and inter-organisational interactions and relations (Yin, 1994). Typically, the case study employs a combination of research methods – and these may be qualitative, quantitative or both. In addition, case study researchers may also acquire other sources of data within the organisations, such as documentary materials and attendance at meetings (Hartley, 1994).

3.1 Case study organisation

A theoretical sampling procedure was used to select the case study setting for this research. The selection criteria were based upon the lead organisation (Office & Co) holding a central position within the supply chain ('hub' within the network) allowing access to supply chain members, and employing and evolving Supply Chain Management. Office & Co employed 120 full-time-equivalent staff and is located at the centre of the supply chain focusing on the assembly of high quality, branded office products. Office & Co's product range is extremely varied. The brand portfolio consists over 60 product ranges, with over 2 million variations being available for their top-selling product. This complexity is likely to increase as the company extend their product range and outsourcing activities.

3.2 Data collection and analysis

The methods of data collection employed for the case study included interviews, direct observation and company and documentary sources. The importance of using multiple sources of evidence is noted within case study research (Yin, 1994). These multiple sources enable researchers to focus on wider historical, attitudinal and behavioural issues. Furthermore, it provides a method of data triangulation and strengthens the 'construct' validity (multiple sources measuring the same phenomenon) of the case study). The collection of data extended over a 18 month period and was completed in several phases

- The first phase was content analysis of the supplier assessment form which was introduced and completed by suppliers during the early stages of the development programme. The main areas of the form included general company information, accreditations (quality and environmental), technical capability and new products, capacity, logistics and trading references.

- The second phase involved semi-structured interviews with a sample of 22 approved suppliers. These included perceptions of the supplier assessment activities, SC relationships and the introduction of a supplier development programme.

- The third phase included the observation of both internal meetings of Office & Co's SC and procurement team and external meetings initiated as part of the supplier conference and supplier development pilot activities. Semi-structured interviews were also held with the suppliers participating in the pilot activities. These interviews focused on understanding what was involved in theses pilot activities and identifying the benefits and issues for the suppliers in participating in such activities.

- The final phase focused on the development of the supplier rating and performance assessment matrix developed during the latter stages of the supplier development programme. Company documentation and observation data were collected from attending team meetings within Office & Co.

The analysis of the data was performed using content analysis and identifying key themes that emerged during the development of the programme. A summary of the results was presented to the Office & Co and its strategic suppliers.

4. Results & Discussion

The longitudinal case study research reported in this paper examined the supply chain activities undertaken by a leading office furniture manufacturer, Office & Co, with its direct suppliers. These activities were documented over an 18 month period and as a result of the emergence of data a generic framework is proposed to assist smaller organisations with limited resource in taking a stage approach to managing and developing their supply base. Figure 1 illustrates the framework which consists of three distinct stages of activities that have been identified. It also includes the external or internal drivers that impact on the process. The main objectives of each stage are recorded, as are the outcomes in terms of selecting the suppliers to be associated with future activities.

[Insert figure 1 about here]

The first stage of the framework mainly refers to the early stages of data collection and a review of the existing supplier practices is completed.

The second stage documents the main SC activities and could include the launch of a supplier development programme and some pilot improvement activities with suppliers.

The final stage provides details of future activities that are aligned to the lead organisation's supply chain strategy and overall business mission statement or business plan. These have usually been communicated with the supply base during the annual supplier meetings/ conference. Where possible, information on development activities and the roll out of pilot programmes are provided.

The next section of the results examines the framework in greater detail by identifying the specific drivers for change and outcomes associated with the case study company and its suppliers.

4.1 Office & Co and SCM framework – stage one

The case research provided an opportunity to gather data concerning Office & Co's development of SCM within their business and among their supply base. Using the generic model described in the previous section it is now possible to provide some examples of each component of the framework and for each stage a more detailed account.

The first stage of the framework refers to Office & Co's early examination of the supply base which identified problems with overstocking, obsolescent stock and inconsistencies in supplier performance. There was no formal purchasing or SC strategy in place, and fire fighting was common. In terms of the company's long term objective, the message was consistent from the new team of directors, sustainable, profitable growth was required. It was the role of the Purchasing Manager (PM) to ensure that the members of the supply chain could satisfy these demands to ensure Office & Co could meet its objective.

Office & Co commenced implementing a supplier development programme. The first element of the programme addressed some basic assessment procedures to measure supplier performance. This three-phase programme was initiated and managed by the PM (see figure 2):

[Insert figure 2 about here]

The first phase was to draft a written quality assurance specification, which was then issued to all suppliers for their review and approval. The second phase was to compile a supplier assessment form that asked fundamental questions for review during the selection process. These were issued to and completed by all existing suppliers. The final phase involved the actual measuring of supplier performance on a quarterly basis. This focused on delivery performance, quality, price competitiveness, lead-times and accreditations. An example of the supplier rating and performance assessment scheme is shown in table 2.

[Insert table 2 about here]

The first column of the form indicates the product family to which the supplier was classified. Office & Co classified their materials into 21 product families/ categories. Each supplier has a dedicated contact within Office & Co that was ultimately responsible for processing and controlling material requests. Generally, Office & Co's material controllers would act as the main point of contact for the suppliers for day-to-day activities. The grouping of suppliers for material controllers was based on product type. For instance, all dealings with fabric suppliers were managed by one material controller.

The next two columns on the form indicated whether suppliers had formal quality and environmental accreditations. Those suppliers that offered a warranty of their products were noted in the next column. The column SQAS (Standard Quality Assessment Scheme) referred to the quality audit undertaken by Office & Co during the selection process. As part of this assessment process material contollers were encouraged to benchmark their suppliers at regular intervals. If service levels had been agreed with suppliers this would also be recorded as part of the assessment criteria and monitored accordingly. Service levels could refer to the reliability and responsiveness of suppliers, for example, whether suppliers responded to problems within the agreed timeframe.

The scoring measures used for the assessment were based on price, rejects and deliveries and were classified from A to D. For the reliability of delivery, Class A denoted 100% of deliveries on time and in full according to agreement and order. Class B and C referred to 95% and 90% of deliveries being on time and in full respectively. Class D was allocated when more than 20% of the deliveries were delayed and the orders required continuous follow up. In terms of defects, Class A was allocated if none were received during the period, Class B for one, Class C for two and D for three or more. The final column denoted the financial spend to date with the suppliers. Notably, suppliers that presented C and D scores were monitored closely and where appropriate advised of corrective action. Ultimately, Office & Co aimed to reduce their supply base in order to provide an approved list of suppliers, which could include a number of suppliers for one product or service. As supplier performance improved the assessment criteria for suppliers improved which also controlled additions being made to the approved list. This process also resulted in some suppliers being removed from the list, for some products and services alternative suppliers were already listed but for others new sources of supply needed to be found, assessed and approved.

4.1.1 Rationalising the supply base

From the introduction of the supplier assessment scheme the Purchasing Manager and his team of material controllers were able to identify areas of good and poor practice. The scheme provided a base in which to commence the measurement of supplier performance. Office & Co set targets and requested written corrective actions and evidence where there were gaps in current and required performance. Reductions were made in the company's supply base by retaining the good suppliers and removing those that were considered to be consistently unreliable. From introducing the supplier performance ratings on a quarterly basis Office & Co identified approved suppliers and later developed preferred suppliers. The performance ratings partly identified the approved suppliers along with other criteria such as annual spend, product type and offering and future developments in products and service levels.

4.1.2 Drivers for change

Since a Management Buy Out (MBO) during the latter part of the 1990s, there have been changes in all areas of the business. Previously, much of the internal functions were centralized and the culture was described as slow, bureaucratic and inflexible. Since the takeover, the directors of the company had focused on changing the culture to be flexible and responsive to the changing needs of the customer.

Office & Co employed a PM from outside of the furniture industry. He was tasked to develop a supply chain that could support the company's sustainable growth strategy and address the main problems of overstocking and obsolescent stock. Office & Co favoured a local sourcing policy where possible.

Office & Co is a customer focused and sales led organisation. They recognise the demands of mass customisation, short-lead times, increased in-house design and the need for continuous improvement as the organisation's key components. In response, Office & Co has removed the traditional lead times associated with their top selling products to enable the customer to select their delivery time. The Managing Director believes that lead times are 'old hat'.

The success of Office & Co in their environmental improvements has been well recognised. Their commitment to produce environmentally responsible products has proved to be beneficial financially, commercially and morally. Further benefits can be accrued from extending this best practice to their key suppliers.

4.2 Office & Co and SCM framework – stage two

The second stage of the framework (see figure 3) was examined through the results of the face-to-face interviews conducted with 22 direct suppliers to Office & Co. The aim of these interviews was to review the relations that had developed between Office & Co and their suppliers, and to assess whether the environment within the supply base would be receptive to a supplier development programme. This action builds upon the assessment activities within stage one and the identification of approved suppliers. The aim of this second stage was to identify preferred suppliers which could be included in the company's supplier improvement programme.

[Insert figure 3 about here]

4.2.1 Supplier improvement programme

In 2001, Office & Co launched the Supply Chain Improvement (SCI) programme, when 35 of the preferred suppliers were invited to attend. These suppliers were identified from the approved list as being important to Office & Co in terms of continuity of existing supplies or potential new product development. These suppliers were producing either large volumes of 'common' parts or bespoke parts for Office & Co. For example, suppliers of key components such as foam, fabric, bases, and plastic mouldings (arms and backs) were invited to attend, along with transport carriers and packaging suppliers. The initial activities of the programme were implemented on a pilot to prove basis. These trial activities focused on the introduction of a Kanban system, environmental management programme and a Partnership Empowerment and Trust (PET) project. The final stage of the case study describes the supplier development activities that followed the pilot programmes as Office & Co progressed to identify their strategic suppliers.

Drivers for change

There was a number of drivers for change associated with this second stage of the framework. First relates to the success of a Kanban pilot scheme, which reported some notable benefits for both the supplier and Office & Co in terms of reduced stocks and improved utilisation of resources.

The environmental improvements previously implemented by Office & Co had received formal accreditation and an external award. Within this framework Office & Co started to disseminate this success to the supply base. The mentoring process adopted for this environmental pilot scheme proved to be highly successful with the participating supplier.

A cross-functional supply chain and procurement team was formed by Office & Co. The main objective of this team was to assess the supply base in terms of them being strategically aligned with the company's future requirements. The formation of the team was mainly influenced by the company's decision to increase substantially their new product development capability. The sourcing from 'non-traditional' furniture suppliers was a recommendation from the team when looking for new, innovative suppliers. Clearly, there are materials within Office & Co's supply chain that can be sourced from those companies that have acquired best practice from other sectors. However, this is likely to be at the detriment of what were once traditional suppliers to the furniture industry. .

The launch of the SCI programme enabled Office & Co to communicate their future direction and corporate strategy with its key suppliers. The future expectations and requirements of suppliers were also presented. This event provided suppliers with the opportunity to meet the senior directors of Office & Co. Prior to this occasion, the majority of attendees had not met the Managing Director (MD), Sales Director or the Technical Director. Networking was also encouraged among suppliers.

4.3. Office & Co and SCM framework – stage three

The third and final stage of the framework focuses on the future development activities that were being initiated by Office & Co (see figure 4). From observing the meetings of the supply chain and procurement team, it was possible to identify future requirements and potential activities.

[Insert figure 4 about here]

4.3.1 Future development activities

Office & Co was in the process of making fundamental changes to its business by substantially increasing in-house product design and development. Limited collaboration in terms of new product development had taken place with existing suppliers, so there was a need to identify strategic suppliers for key commodities such as sub-contracted injection mouldings. As part of this process, the Technical Director and PM Manager have determined a supplier self-assessment matrix to initially be completed by all new and potential suppliers. This expanded upon the original scheme and included variables such as management alignment, continuous improvement programmes, financial position, culture (for example, customer focus, strong team environment and strong employee relations), capacity of (2^{nd} tier) suppliers, total acquisition cost targets and IT capabilities.

To update suppliers with developments and encourage them to network, Office & Co have created a supplier extranet website which suppliers have exclusive access. Contact and company details are included on all supplier members. Information about past and future supplier development activities is posted onto the site. Aggregated results of the supplier ratings are shown, along with statistics relating to supplier development. One section is dedicated to the environmental improvements made by suppliers.

4.3.2 Drivers for change

The majority of the supply chain development work undertaken by Office & Co has focused on the supply base. Those members downstream from Office & Co have not been engaged in the improvement process. This framework needs to be extended to reach other members of the supply chain.

Supplier competition is one area that is continually being addressed by Office & Co, mostly these activities are considered outside the SCI programme. Yet, the programme did assist one supplier to become more competitive after Office & Co had performed a global benchmarking exercise. The existing supplier was facing cheaper competition from the Far East. Through the SCI programme a value stream mapping exercise was undertaken which focused on removing non-value adding activities from the supplier's key processes such as the order fulfilment process. As a result of this collaborative exercise the supplier identified savings that could be realised over a three-year period. This enabled them to retain their position in the supply chain and improve their overall level of competitiveness.

The participation of suppliers in SCI programmes is largely on a voluntary basis. This is a highly competitive industry and therefore to continually engage companies will require the support of open and collaborative SC relations.

Previous studies have recommended that supplier associations are limited to 15 members (Hines, 1995). Office & Co clearly have exceeded this number, but in some extreme cases the lead organisation has included all their suppliers (Gullander and Aitken, 1998). Falling between these two indicators, Office & Co extended an invitation to the SCI launch to 35 suppliers, of which 34 attended. All of these suppliers at that time were categorised in the preferred supplier status. The management of this extended network is likely to be more intensive on resources and, possibly, less productive. In addition, the development of closer and more collaborative relationships is likely to be hampered due to the volume of companies that the PM Manager needs to interact with. Undoubtedly, the success of the supplier extranet as a vehicle of communication has been recognised among suppliers and external bodies. Still, this is no substitute for face-to-face contact with suppliers. The dissemination of information, particularly feedback in terms of supplier performance, is highly recommended. However, the technology has not been used to transfer critical forecast or customer demand data. Clearly, as the complexity of Office & Co's supply chain increases (with the increase of branded products) the value of these data is much greater.

The mid-term supplier development activities will focus on improving transparency among supply members. There is certainly a need to improve communication of forecast and demand data.

5. Conclusion

This case based research provides a three stage framework which was employed by a small to medium sized manufacturer of office furniture as a mechanism for supply chain management and development. The first stage referred to the early stages of the supply chain strategy and identified the supplier selection and evaluation processes introduced to assess the capabilities of the supply base. The challenge for Office & Co was to translate these demands clearly into internal and external strategies that would assist in the development of a flexible and responsive supply base.

The second stage examined the "environment" of the supply base in preparation for the SCI programme and pilot development activities. Relationships and attitudes were considered as key components to support Office & Co's supply chain strategy. The introduction of a supply chain and procurement team led to a review of the supplier selection and evaluation processes.

The final stage of the framework summarised the future development activities planned by Office & Co to address areas of adding value, removing waste and understanding the concept of total acquisition costs. The way forward for Office & Co was to identify the strategic suppliers and to work with these in order to improve the overall SC performance. In addition, the PM was in the process of identifying areas of further improvement and, possibly, exemplars operating within their supply base.

The three-stage framework used to present this case study research suggests a linear process in the deployment of the supply chain strategy, and subsequent development activities and initiatives. However, in reality, this was not necessarily the case, and the emergence of what Office & Co termed their "adaptable supply chain programme" often resulted in some activities overlapping two stages. For example, the supply chain and procurement team was established during stage two, but the selection and evaluation criteria for the strategic suppliers were being employed during the latter part of the research.

'Office & Co identified that supply chain co-operation and trust was critical as the office furniture market quality expectations increased, lead-times reduced, product variety increased and time to market for new products became ever more demanding. SCI is a long-term programme identifying opportunities in the supply chain resulting in customer satisfaction and sustainable growth. The business is continually seeking best practices and is fully supported by the Office & Co team.' (PM)

The empirical evidence presented in this paper suggests that Office & Co has gained significant advantage through the implementation of a supplier development programme, and stand to gain even more in the future. The research also indicates that SCM can be successfully undertaken by smaller organisations. A stage approach as presented in this paper provides a framework in which resources and timings can be planned. This structured approach also provides a checking mechanism which enables the lead organisation to evaluate their progress and to identify the main drivers for change.

It is recommended that this generic framework is tested with other small to medium-sized organisations both within and outside the furniture industry.

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Table 1 Benefits of Supply Chain Management

Specific function of SCM	Benefits
Continuous improvement	Increased competitiveness for all customers
Shared strategic vision	Implementation of medium/long term planning actions
Cost reduction/efficiency improvements	Increase profitability
Integrated design process	Design excellence
Closer working relations	Improved supplier self-understanding

Source: Grove (1998:53-54)

Table 2 Example of Approved Supplier Ratings and Performance Assessment Scheme

Product family	Vendor name	Contact	ISO 9000	ISO 14000	Warranty	SQAS	Service Level	Price	Reject	Delivery	Spend £k
Carrier	A Ltd	AR	N	N	N	Y	N	B	A	A	57
	B Ltd	AR	N	N	N	Y	N	A	A	A	175
Fabrics	C Ltd	TS	Y	N	N	Y	Y	C	D	B	12
	D Plc	TS	N	N	N	Y	Y	B	A	A	46
	E Plc	TS	Y	Y	N	Y	N	A	B	A	117

Key: Y=Yes, N=No, A to D = supplier ratings

SQAS – Office & Co's Standard Quality Assessment Scheme

NB: This table provides an example of the assessment scheme due to the anonymity of the case details no real data is provided.

Figure 1 Three stage supply chain management framework

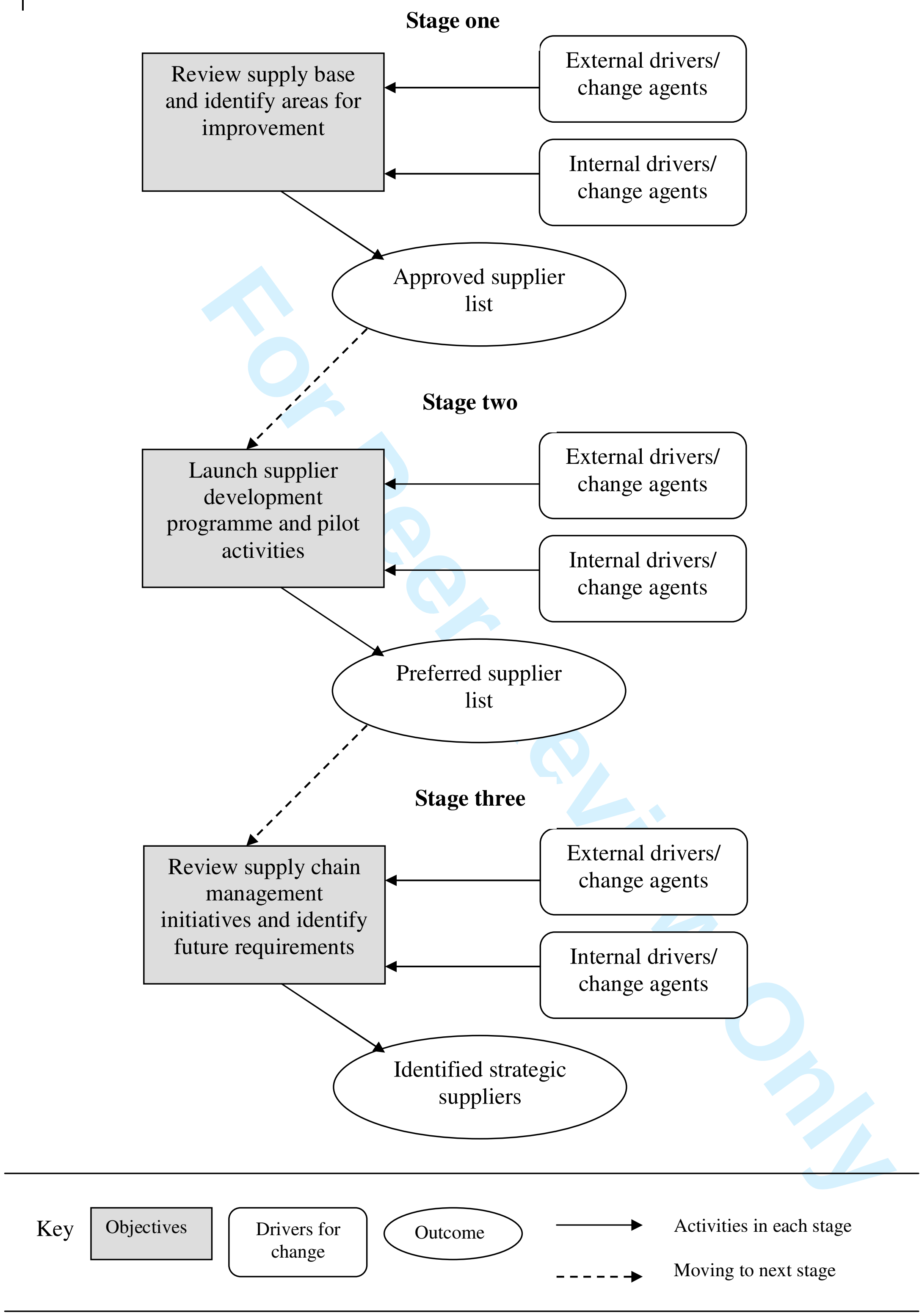
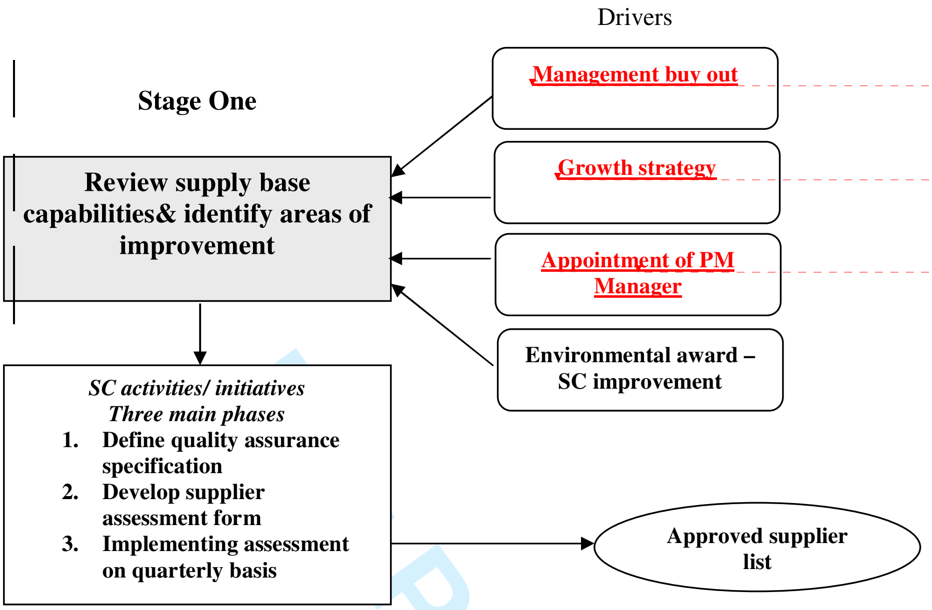


Figure 2 – Detailed view of stage one of the supply chain management framework



Deleted: Appointment of PM Manager

Deleted: Appointment of PM Manager

Deleted: Growth strategy

Figure 3. Detailed view of stage two of the supply chain management framework

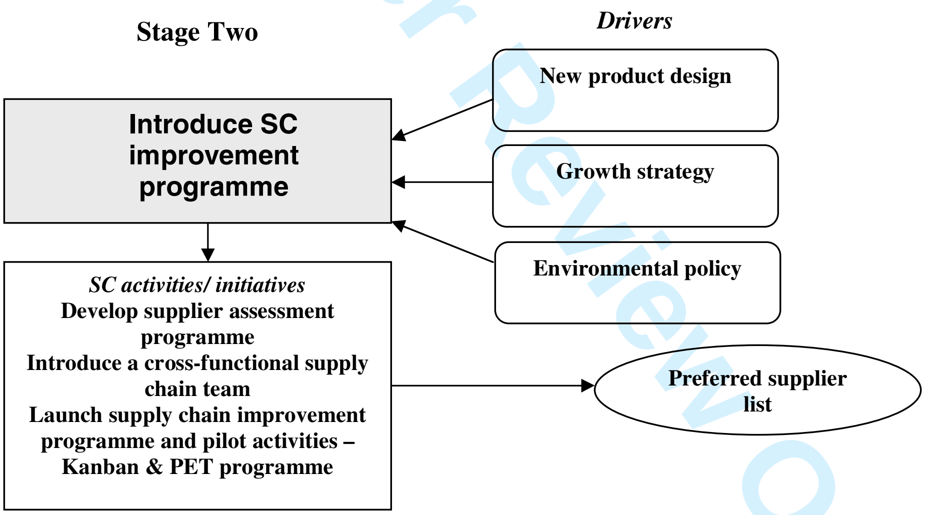


Figure 4. Detailed view of stage three of the supply chain management framework