

Lead Buying:  
Setting up an international commodity based purchasing network

- work in progress -

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**Abstract**

In many industries, globalisation of markets and increasing cost pressure has forced companies to organise themselves on a global basis. In order to grow and develop new markets or to tap wage potentials, companies have raised plants in international locations or bought themselves into competitors from these regions (Trent and Monczka, 2003). Traditionally focused on the Triade markets, the automotive sector as also other industries is increasingly investigating opportunities in emerging markets (Wildemann, 2000). Due to local content obligations, companies are often forced to purchase a specified percentage of the end product value in particular countries. These developments impact strategy and organization of purchasing and logistics departments (Trent, 2004; Corswant and Fredriksson, 2002).

To address this challenge from an organizational point of view, many companies have established lead buying organizations for their purchasing departments. This relatively young form of organizational structure has achieved significant success in the industry. The purpose of this paper is to show a path for consequent further development of the lead buying concept towards an integrated international purchasing organization. The paper will briefly describe the cornerstones of developing an international purchasing network. Based on this it will illustrate potential pitfalls in setting up a lead buying organization as well as identifying key success factors (definition of roles and responsibilities, suitable purchasing tools, controlling instruments, human resource and IT prerequisites, etc.) for further development towards enhanced international collaboration.

## Introduction

In many industries, globalisation of markets and increasing cost pressure has forced companies to organise themselves on a global basis. In order to grow and develop new markets or to tap wage potentials, companies have raised plants in international locations or bought themselves into competitors from these regions (Trent and Monczka, 2003). Traditionally focused on the Triade markets, the automotive sector as also other industries is increasingly investigating opportunities in emerging markets (Wildemann, 2000). Due to local content obligations, companies are often forced to purchase a specified percentage of the end product value in particular countries. These developments impact strategy and organization of purchasing and logistics departments (Trent, 2004; Corswant and Fredriksson, 2002).

In addition many companies try to achieve additional cost savings by purchasing parts from emerging countries at favourable prices. As shown in a current survey of the Fraunhofer Institute for Production Technology, a key success factor for purchasing of direct material in emerging markets especially in China and South-East Asia is the setting up of local purchasing presence (Schuh, 2007). Consequently, this leads to a subdivision of the purchasing department into several local units. In order to ensure that all local units pursue the same strategies and objectives and that the whole purchasing organisation speaks with one voice to the suppliers, a stringent global coordination of all local purchasing units is necessary.

Key foci of current research in the area of purchasing are B2B networks, relationships between buyer and seller, the value of suppliers and the growing strategic importance of purchasing (Bartsch 2005; Cousins and Spekman, 2000; Chen and Paulraj, 2004; Homburg and Werner, 1998). However, following the above mentioned trend towards international subdivided purchasing organizations, the network between the buyers of one company becomes more and more important for the operational and strategic effectiveness of the purchasing organisation as well as for buyer / seller relationships. Hence this article will focus on success factors for setting up an intra-company purchasing network. Various papers already exist on key account management exploring the seller side of the business (Millmann, 1996; McDonald, 2000; Holt and McDonald, 2000).

Concepts for intra-company based purchasing networks are often referred to as “lead buying” or “commodity management”. Mentioned in publications as early as the 1990’s (Keough, 1993), lead buying has since been applied to many international companies of the manufacturing industry. Thereby lead buying seeks to

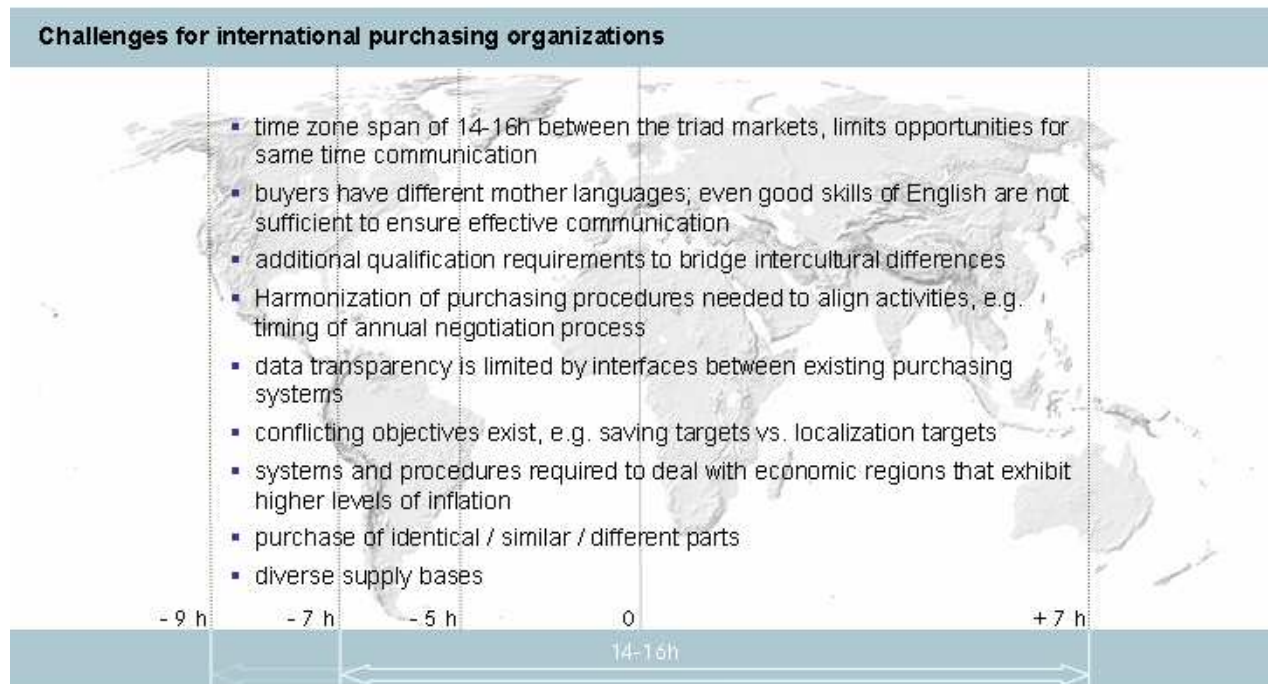
- achieve transparency about sourcing opportunities,
- coordinate purchasing activities of international locations within one commodity,

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- use volume bundling, to be more attractive to the supply base and also achieve lower purchasing prices and
- define common purchasing strategies.

At the same time, the lead buying organisation is typically challenged with the characteristics of an international purchasing network, as shown in Figure 1.



**Figure 1: Challenges for international purchasing organizations**

The above mentioned boundary conditions lead to typical shortfalls of international purchasing networks as observed in practical application.

### **Critical aspects to be considered setting up an international purchasing organisation**

Based upon the findings of a benchmark study of 115 European purchasing organizations conducted by the Fraunhofer Institute for Production Technology and several detailed analysis workshops with international companies in the manufacturing industry certain critical aspects could be identified for successfully setting up an international purchasing organisation (Schuh and Moeller 2007).

At first the survey's main topics were identified together with several experts from different companies. Together with these experts the Fraunhofer IPT identified following four main survey topics:

- Low Cost Country Sourcing
- Supplier Management
- Forward Sourcing
- Organisational aspects for a global purchasing organisation

In the next step success factors for all four categories were derived as well as success factors to describe the overall success for a purchasing organisation (e.g. average achieved savings combined with the increase of the savings, part of managed purchasing volume,...). Based on these success factors 30 companies from the 115 returned questionnaires could be identified as potentially successful practices in purchasing. As a result of a more detailed analysis considering former defined plausibility checks 15 companies were sorted out. Further analysis – which also included telephone interviews - indicated that 13 of the remaining 15 companies could be regarded as successful purchasing organisations. The profiles of these successful purchasing organisation were presented to the industrial consortium and lastly five companies were selected which were visited afterwards. The results of the survey are therefore based on the statistical analysis of 115 purchasing departments, detailed telephone interviews and 5 one day visits of the most successful purchasing organisation.

As boundary conditions influence the formation of company specific collaboration models it is not the intention of this article to define an ideal case example of how to set up a purchasing network and describe corresponding deficits of other concepts. Rather guiding questions will be formulated in this chapter to pinpoint at potentially critical aspects for an international purchasing network. Furthermore the basic framework for successfully implementing an integrated purchasing network will be presented.

- I. Are there several categories of lead buying distinguishing levels of more central respectively decentral responsibility?
- II. To what extend does the lead buying approach cover all commodities?
- III. To what extend are the relevant purchasing locations included into the lead buying concept?

All three questions relate to the coverage of lead buying. Using different models of lead buying increases flexibility and allows to cover also commodities with lower global synergy potential with a reduced expectation towards the lead buyer. However at the same time different lead buying models add complexity to the organization and inherit the risk that expectations and roles of lead and local buyer are not fully clear to the employees and hence limit the effectiveness of the organization. In practical application there are several examples of organizations that seek for complete coverage of

commodities by the lead buying approach. Thereby the theoretical synergy potential for lead buying is maximized as well as the effort for lead and local buyers and associated management functions. Therefore a selection of most promising commodities for international collaboration (as described in following) is suggested. In a similar approach it is necessary to analyse the participating purchasing locations.

- IV. Does the lead buying concept comprise a focus on coordinating activities or does it go along with clear accountability for the lead buyer?
- V. To what extent do organizational measures guide lead and local buyers to ensure that the implementation is less dependent on individuals but on the concept itself?

A coordinative approach is used in many cases as the starting point for setting up a lead buying structure. During further advancements of the organization and going along with more significant changes to the organization the accountability for the results of lead buying activities is allocated to the lead buyer.

- VI. In case of a high number of local buyers, is there a substructure between the local buyers to minimize the number of interfaces to the lead buyer?

A trade off decision needs to be made between the benefits of direct communication on the one side and on the other side giving the lead buyer the opportunity to concentrate his resources on few locations and therefore allocating his main focus on purchasing strategy development instead of mainly considering information exchange and data update for a multitude of locations.

- VII. To what extent is the engineering organization coordinating their international activities and what structure (e.g. commodities) is used for the formation of international engineering teams?

### **Success factors for an integrated international purchasing organizations**

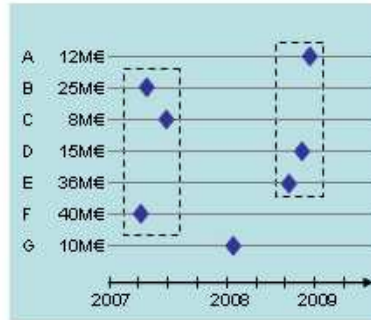
Regardless of the type of organizational structure and the level of centralization / decentralisation the following three cornerstones can be identified as key enablers for working together in an international purchasing network (see Figure 2).

**Cornerstones for successful international collaboration**

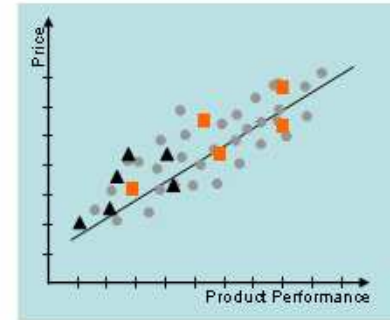
**Base data transparency**



**Sourcing transparency**



**Price transparency**



**Figure 2: Essential tools for purchasing networks**

Transparency obviously is a fundamental basis for working together in a network. In the case of an international purchasing network, this can be specified to three categories of transparency. First, base data needs to be accessible at all purchasing locations through one computer system. So, regardless of a specific location, each buyer can easily monitor for all commodities relevant to him, parts prices, current status of electronically submitted RfQs (Request for Quotation), contracts etc. Therefore common commodity codes with properties like roll up and drill down (Carter and Petersen, 2005) are essential. Especially in international companies grown by M&A (Mergers and Acquisitions) activities it is a major challenge to define a standard purchasing system and roll it out to the various locations. In addition to pure system availability, pricing mechanisms (e.g. raw material surcharges) of the different locations need to be analysed and assessed for harmonization to facilitate the negotiation of cross location contracts with international suppliers. A complete harmonization will in most cases not be realistic due to differences in the end customer market (e.g. warranty terms). However especially for price adaptations, e.g. according to stock market fluctuations, the setting of international standards supports transparency and comparability between purchasing locations.

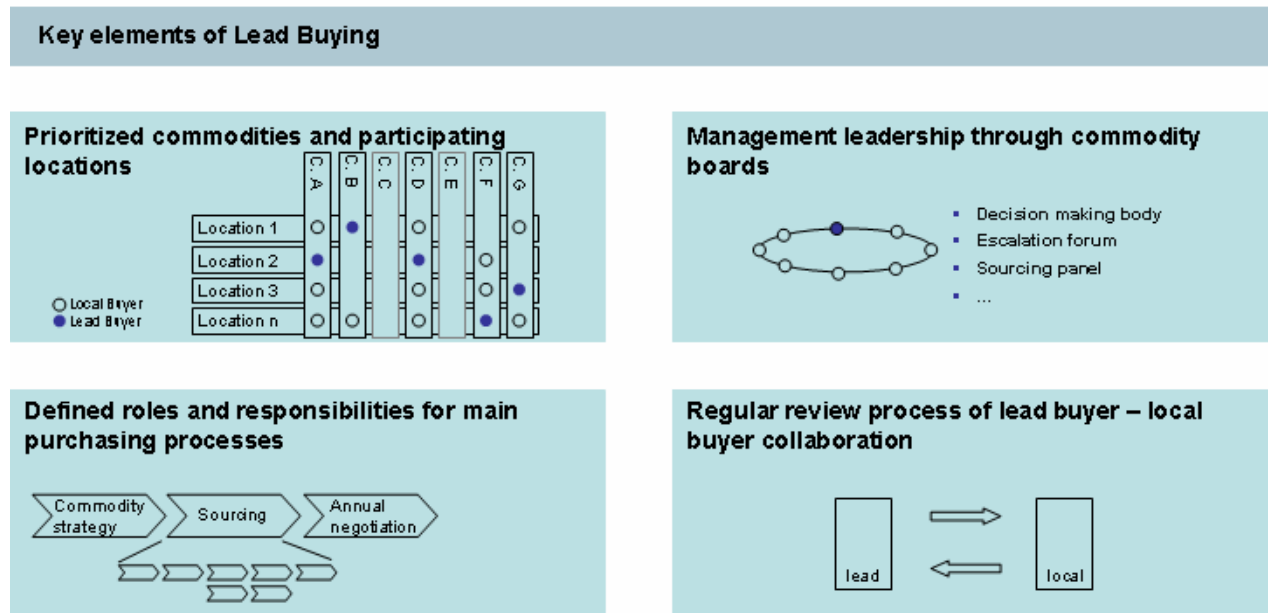
Second, sourcing transparency is vital to identify volume bundling opportunities: Hence appropriate tools are required that visualize sourcing packages of one commodity, the respective supplier sets, associated volumes of buy and timing. Ideally these tools also allow to display the data not only on a commodity basis but also filter sourcing opportunities for a given supplier.

Third, pricing transparency is a fundamental requirement to all purchasing activities. In the case of an international purchasing network, pricing transparency allows to identify negotiation opportunities, price benchmark suppliers, economic regions especially

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suitable for sourcing certain commodities, etc.. As a tool to support this, price performance analysis has proven to be very useful in practical applications (Guethenke and Moeller, 2007).



**Figure 3: key elements of lead buying**

Based upon the above mentioned transparency, key findings of an integrated international purchasing network can be described. Figure 3 gives an overview of the 4 pillars for successful lead buying and each of these pillars will be described in detail in the following subchapters.

**Prioritized commodities and participating locations**

In a network of several individual purchasing locations, a selection of commodities for close cooperation is necessary. Efforts that aim at similar levels of collaboration in all commodities and locations of an inter-company purchasing network are challenged by the implementation of rules and procedures as the payback of coordination efforts for locally driven commodities is low. Hence the criterion of additional purchasing leverage respectively the possibility to address an additional target to the lead buying team is used to identify suitable commodities for international collaboration. Typically, high overlap in the supply base, comparable technologies, common respectively similar product design either in the current state or in development are indicators. Once the commodities for lead buying are defined, for each of the commodities a lead buyer



needs to be allocated considering the availability of experienced and available personnel as well as a balanced spread of purchasing responsibility over the participating locations. The clarification of centralizing purchasing tasks and thereby reducing the number of locations needs to be addressed independently and upfront. When defining whether a location should participate in lead buying or not, purchasing volumes and the number of already participating locations need to be considered. A maximum number of 4-5 local buyers should be considered to ensure efficient cooperation within the lead buying team; otherwise lead buying teams might be more focused on data exchange than the development of negotiation strategies. Especially during the introduction of a lead buying approach a limited number of participating locations will help to focus activities and to more quickly implement tangible results.

A selection of commodities and locations based on the above mentioned guidelines is not static. Changes in the supply base, the development of common parts for different purchasing locations, etc. can result in defining new lead buying commodities or taking certain commodities out of focus. On average about 50-60% of the annual volume of buy should be covered by the lead buying approach (Gelderman and Albronda, 2004)

### **Clear responsibilities in key purchasing processes**

In most industries of the manufacturing sector the following core processes of purchasing can be identified:

- a) commodity strategy process
- b) sourcing process
- c) annual negotiation process

Hence a definition of the roles and responsibilities of lead and local buyers is based along these processes (see Figure 4). Clearly, the lead buyer is responsible for developing the commodity strategy. In doing so he has to utilize the know-how of his local buyers and also to involve engineering counterparts in the strategy formulation. Based upon an approved commodity strategy the lead buyer ensures its global execution and monitors external and internal influencing factors that might require strategy reviews and / or updates.

The commodity strategy lays the ground for upcoming sourcing decisions by the definition of strategic supplier sets as well as sourcing bundles. Few commodities are suitable for centralised sourcing processes. In many cases the technical complexity of the components as well as interfaces to logistics and production processes require the involvement of local interdisciplinary sourcing teams. Therefore the leading role in the sourcing process as well as the responsibility for target cost achievement is allocated to the local buyer. However, to ensure global coordination the lead buyer is giving approval

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at key milestones of the sourcing process and thereby employing volume bundling and leverage back opportunities to benefit in the annual negotiation process. Achieving the annual price reduction targets is a main responsibility of the lead buyer. In addition to the above mentioned lever of upcoming sourcing decisions he is the authority to detail his commodity target to the different suppliers and locations of his commodity. Further, negotiation strategy and timing are defined by the lead buyer. He also selects suppliers which are addressed centrally by the lead buyer instead of several individual local negotiations. Local buyers have a supporting role in the negotiation process.



**Figure 4: Roles of Lead and Local Buyers**

The description of the roles and responsibilities of lead and local buyers is of a general nature. The different backgrounds of local purchasing organizations and especially cultural differences of e.g. European, American and Asian buyers require further detailing of the roles and responsibilities. It is recommended to use process analysis to subdivide each of the three described purchasing processes in series of sub-processes. For each of the sub-processes the expected activities and assigned responsibilities for lead and local buyer need to be described. This is then documented in a lead buying handbook that serves as a day to day guideline for the buyers in the different locations. Following his semantic meaning the lead buyer leads a team of local buyers. To be successful in performing this task, the skill set of managers and hence lead buyers should not be allocated at staff level. In addition to the question of the right management level, for both local and lead buyer a specific skill set is required. Obviously, intercultural

competence, language skills and purchasing experience are key elements of a company specific definition of the skill set of lead and local buyers. Based upon the skills of the available personnel, appropriate training measures are necessary to accompany the implementation of a lead buying organization.

### **Management support in commodity boards**

A clear definition of roles and procedures for lead and local buyers builds the foundation for international cooperation. However, to achieve an integrated purchasing network, the different levels of hierarchy also need to be considered. Therefore a number of commodities is grouped and will be managed by a commodity board. For automotive OEMs (Original Equipment Manufacturers), the categories chassis, interior, exterior, powertrain and mechatronic offer suitable levels of aggregation to form five commodity boards.

The commodity boards act as a decision making body and also as an escalation means, if the lead buying team is not able to resolve issues (e.g. local optimum vs. global optimum). Each commodity board is lead by a purchasing senior executive from one of the regions and its members are the responsible senior managers from the main purchasing locations. For organizations active in the triad markets regular physical meetings are necessary as the time difference between the location does not allow for extended video- or teleconferences.

Following the structure of the roles and responsibilities of the lead and local buyer also the commodity board tasks are defined. Regarding the commodity strategies the commodity board at first defines the strategy roadmap and therewith the timing of commodity and / or supplier specific strategy work. Secondly, the strategies are approved together with engineering and the committed action plans undergo regular reviews. In terms of the sourcing process, the commodity board approves the sourcing roadmap for the operative planning period as well as executes major sourcing decisions. The annual negotiation process is also supported by the commodity board. Typically top down derived targets for different locations need to be broken down to individual commodities. Further the commodity board reviews the negotiation progress and physical meetings of the commodity board members offer opportunity for joint escalation negotiations.

In addition, the ramping up of international collaboration needs to be monitored and measures for further support, e.g. launching of exchange programmes, need to be defined. Experience shows that short term exchange programmes of about 4 weeks already provide significant insight into foreign purchasing locations and form building blocks for personal relationships between international buyers.

### **Regular review between lead and local buyers**

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The experience from practice shows that setting up an international lead buying network takes a significant amount of time. To support the learning process of the organization, to clarify mutual expectations of lead and local buyer (e.g. push or pull of information) and to more quickly identify weak points regular formalized feedback between lead and local buyer can be employed. It is suggested to execute this feedback at least twice a year. Figure 5 gives an example for a feedback form that covers relevant aspects of lead buying.

Review of Lead Buying Activities 2007					
Lead Buying Commodity: <u>Wheels</u>		Expectations are met at: <span style="border: 1px solid black; padding: 2px;">110%</span>			
Lead Buyer: <u>Mr. Lead Buyer</u>		[50 - 150%]			
Feedback for: <u>Mrs. Local Buyer</u>					
Date: <u>06. Feb 07</u>					
		Success factors, positive examples <span style="float: right;">+</span>	Things to improve <span style="float: right;">-</span>	Agreed activities for the next 6 months	Status (for next review)
Processes	Strategy development	<i>great contribution, especially insight on competitor sourcing</i>	-	-	
	Sourcing process	-	<i>quote comparison was not sent for lead buyer approval</i>	-	
	Annual negotiations	<i>preparations on track, finish multi year contract negotiation with suppl. xy</i>	-	-	
Tools	Commodity Code usage	<i>code clean up quickly done</i>	-	-	
	Price Transparency	<i>contributed to price performance analysis</i>	-	<i>negotiate identified gaps with suppliers during next 2 month</i>	
	Sourcing Transparency	-	<i>please use intranet based purchasing tool</i>	-	
	Documentation of purchasing measures	-	-	<i>please use intranet based purchasing tool; fill in data by end of next month</i>	
Soft Facts	Meetings / Preparation of workshops	<i>great contributions in lead buying work shop</i>	-	-	
	Telephone conferences	<i>regular participation</i>	-	-	
	Mail / Responsiveness	-	<i>information flow could be more pro active</i>	-	
		Date, signature Lead Buyer	Date, signature Local Buyer	<b>COMMENTS:</b> <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	

Figure 5: Example of feedback form

Applying this feedback procedure in an international environment needs to be carefully considered due to cultural differences in the attitude of delivering feedback. It is recommended especially during the first applications to undertake thorough preparation and pre-discussions with local management. The gathered feedback information is used for identifying general weak points within the purchasing network (e.g. capacity allocation, missing software tools, etc) and as one input to the performance appraisals of lead and local buyers.

## **Conclusions**

In an international organization purchasing is typically tasked to seek for global leverage between the local entities of the company. The formation of an integrated purchasing network based on lead buying principles serves as a means to achieve this objective. Setting up such an international purchasing network requires at first transparency regarding base data, sourcing decisions and price worthiness of parts. On this basis and central leadership a purchasing network with the following characteristics can be set up:

- prioritised commodities and locations
- clear definition of roles and responsibilities for lead and local buyer
- involvement of all levels of purchasing hierarchy through commodity boards
- formalized feedback between lead and local buyers

This article provides a framework for further developments of lead buying in research as well as practical application.

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