

Quality in Materials Procurement and Logistics

by Alan Travers

Procurement, internationally, is at an interesting developmental stage. Globalisation is now a hot topic politically and opinions are sharply divided as to the whether the opening of world markets are the best or worst current trend in world economies. Whatever the outcome of this debate an increasingly unhindered flow of goods and services between countries is inevitable. Only how we as an international society can limit the potentially adverse impacts of globalisation is worthy of debate.

Even on a local trade basis the focus of the last decade's enthusiasm for the procurement or outsourcing of almost all business functions has spawned as many failures as successes.

This paper concentrates on the issues that surround international procurement, which is to say organizations in developed countries purchasing product from developing countries. These international and intercultural issues mirror, albeit in an exaggerated fashion, the difficulties of procurement in any arena.

Some fundamental developments have occurred in recent times, which have facilitated international procurement activities.

Not long ago manufacturing organizations in developing countries that maintained *management systems to the ISO9000* or other international recognised Standards were a rarity. ISO9000 accredited organizations are now commonplace. Without a doubt the original impetus for many companies adopting these systems was to seek superficial marketing advantage. The maintenance of these system Standards and the market driven achievement of the third party certification to Product Standards has systemised manufacturing in countries where traditional methods of managing businesses was the norm. That's not to say that aspects of long standing traditions do not remain. As a Chinese friend in Hong Kong once explained, when it comes to hiring in his organization they use the "FBI principal - Family, Brothers and In-laws".

The organisational approaches inherent in the ISO 9000 Standard are generally considered highly desirable and often the underlying principles of controlled, documented processes are treated with a less cynical attitude than in businesses in some western countries. In China in particular the Japanese presence in business and the significant influence of international auto manufacturers has had a major influence.

An even more pervasive factor in recent times in international business has been the *Internet*. As a starting point for research on what others are doing in the world the Internet has no equal. Whether the information being sought concerns competitor activity, potential suppliers, customers, business or cultural background information the Internet's only draw back is coping with the bulk of information and making judgements on its veracity.

Ultimately, even more important to the issues behind procurement, is the fact that the Internet brings communication with little cost but also communication of high quality and depth. Specifically I am referring to the ability to transfer files between businesses. In most cooperative ventures between businesses the transfer of spreadsheets, drawing files or other digital data is now almost a daily issue and the fact that this is now so simple, immediate and inexpensive brings an ease to communications that could not have been achieved just a few years ago.

The international market place in action can be seen in the multitude of Internet "Bulletin Boards"¹ that exist to bring together buyers and sellers. For those interested in locating suppliers these are a starting point but very much a "scatter gun" approach. Unfortunately such methods bring forward a number of responses that will not meet your supplier criteria, refer below.

¹ Those interested in bulletin boards orientated towards the building industry can visit <http://www.constructionasia.com>, <http://www.aecasia.com/> or <http://www.ecplaza.net> as examples of a growing category of trade based websites. Be warned that placing an entry on these sites, expressing an interest in buying products will usually bring forth a torrent of emails, many of which will not be relevant to your specific enquiry.

Communication and travel have brought an increased commercial sophistication to the approach of third world suppliers. This is particularly the case in architectural supplies. Suppliers from China and India initially entered Western markets with products designed to meet the tastes of their own internal markets but now work with importers to present products which reflect the requirements, both aesthetically and in terms of certification issues, of their target markets.

As clichéd as it may seem the single most important precursor to success in procurement are the *people* involved. As in marriage the choice of a partner is critical. Thanks to the Internet, as discussed above, any organization with orders to place is likely to be inundated with potential vendors. Sorting through candidates and making sourcing decisions is a difficult and fraught exercise but usually the problem is not a lack of potential partners. A planned approach is imperative and an ideal supplier profile must be developed and applied in the evaluation process.

Much of the exporting in third world countries is carried out through Trading Houses. Although this structure appears to add an extra layer of cost to purchasing, the right Trading House can bring considerable value to the transaction. Without such organizations there are many smaller businesses in developing countries that would have no opportunity to trade outside their national borders. Apart from financing transactions these facilitators often bring specific technical as well as language and organization skills that all international business requires. Trading Houses that represent a diverse range of products are of less assistance, as they are unlikely to have the depth of skills or experience in any specific product area. In some third world countries it is not uncommon for Trading Houses to be set up by local government to represent manufacturers in a particular geographic area. Such organizations are often not of great assistance in communication concerning technically complex issues. Trading Houses and manufacturers are often present at trade exhibitions², which are another useful way of meeting potential suppliers.

The early interactions between buyer and potential supplier unfortunately are negotiations and, with the focus being almost entirely on price, an impression can be formed in the supplier's mind that price is the most significant issue. Communications at every stage needs to give a *balanced view of the full needs of the purchaser and the supplier*.

An issue to be addressed both in planning and negotiations is *terms of payment*. Almost invariably with a new trading relationship the supplier will insist on letter of Credit (L/C)³. This cumbersome financial instrument ensures that, so long as the documentation presented by the supplier is in accord with the stated conditions of the L/C, then payment will be made. L/C's can include a delay in payment and this delay is usually stated as a set number of days after the Bill of Lading⁴ date (e.g. "Bill of Lading plus 90 days"). As a relationship develops with a supplier it is usual to move to trading on Documentary Sight Draft (payment is made through the banks against the shipping documents) or Documentary Term Collection (payment is made a negotiated period after shipping documents are made available through the banks). Once a relationship has a sound history behind it then trading on open account becomes possible (payment a predetermined time after the arrival of goods).

Visits to the potential *suppliers' facilities* must be part of the process and such visits need to be carried out by both technical and management staff. Although a thoroughly skeptical approach is called for initially, one of the pleasures of such visits is the way that a common interest and experience in technical issues overcomes what initially appear to be major communication barriers. Often translators are left well behind, to a comical degree, in conversations regarding technical issues and a "language" consisting of sketches, jargon and gestures allows a surprisingly fluent and productive level of communication.

² For information on trade exhibitions internationally visit the site <http://www.exhibitions.com>.

³ Letters of Credit, apart from providing a level of security, are also often used to provide the manufacturer with working capital. An L/C can be discounted by a bank i.e. a proportion released by the bank to the manufacturer who requires the cash.

⁴ The Bill of Lading is the document issued by the shipping company to acknowledge their receipt of goods. The date on this document is used rather than receipt date as it is most easily confirmed by the bank.

The subtext of such interactions is also the establishment of who amongst those present has the required technical expertise - a useful lesson for a purchaser seeking to understand the roles of members of the supplier's staff (not always obvious from titles).

Suppliers, assuming the correct partner is chosen, can bring a great depth of *experience* and know-how and a good supplier should be considered a valuable resource. These organizations have survived in a vastly different manufacturing environment with government and social issues outside of your experience. The supplier's contribution should be sought and considered on a range of aspects of the sourcing process including design for manufacture issues, covered later in this chapter.

The social interactions in international business are also an important part of the communication mix and should not be overlooked or fast-tracked. In cultures where traditionally relationships were the deciding factor between success and failure, the importance of social networks remains. This view of business still has great relevance in international business relationships today. With the best communications and frequent visits to the facility of your supplier, there will always be the necessary element of trust when purchaser and supplier are separated by thousands of kilometres.

One of the pleasures of doing business internationally lies in developing an understanding of other cultures and the ways in which they go about their lives and conduct their business. The friendships that develop out of long-term business relationships are all the more interesting because of the cultural differences.

A particular aspect of intercultural communication that is important in this context is the manner in which *quality issues* surrounding supplied product are expressed. In some cultures admitting an error can be difficult and damage to the standing of an individual, at least in their own eyes, or loss of "face" of an individual may result. A proven method of dealing with these sensitivities with regard to quality issues is to systemise this communication. Quality feedback, non-conformance information and supplier responses (positive and negative) need to become an ongoing dialogue. In this context images from a digital camera sent by email are also a powerful communication tool.

When a focus is maintained on the most important aspects of the supply process, incidents and trends - backed up by data - are dispassionately discussed, and communication is less likely to be inhibited. De-personalising and systemising in this way inevitably brings a level of professionalism and an understanding by both parties of the core issues.

Organisations seeking to source product must be aware of the manufacturing environment in which a potential supplier operates and the limits of the capability of suppliers. Many do not give this area sufficient attention. A manufacturer in a developed country may wish to duplicate their current range in a country with lower labour costs but, in many cases, this tactic is far less likely to bring success than *re-engineering* a product for production in a different industrial environment. An obvious area where this is the case is manufacturing tolerances.

Notwithstanding a vendor's natural tendency to promise anything, antiquated, highly modified, non-automated manufacturing equipment is unlikely to consistently achieve the same results as purpose built Computer Numeric Controlled machinery. Recognition of this fact in the tolerances specified in designs and specifically expectations regarding the interaction of components is important to reducing issues with final products.

Often this area of specification of difficult to meet tolerances can highlight quite different views in the minds of buyer and seller. Whereas the buyer may assume that tighter tolerances can be achieved with improvements in manufacturing techniques or more attention to detail often the seller sees tighter tolerances as only indicating a potentially higher level of rejects. Negotiations should encompass an understanding on both sides of the manufacturing techniques and outcomes expected rather than a focus entirely on price.

An interesting and beneficial outcome of a more comprehensive understanding of manufacturing in a low labour cost environment is the recognition of opportunities that arise from a reassessment of your product.

Conventionally product design evolves under the influence of market forces, commercial issues and available manufacturing techniques. Once labour, as a cost item, diminishes then incremental increases in labour usage can be used to add features or otherwise improve the marketability of products.

In the research phase, *location*, of a potential supplier is an element to be given some weight. In developing countries there are a number of factors, related to location that will determine your supplier's ability to be a long term reliable and cost effective supplier. Research, independent of the suppliers advice, is required to assess the factors mentioned below.

Proximity to available, appropriate, raw materials supplies can have an important influence on your supplier's reliability. Inland transport in many countries is potentially uncertain and internal trading in cash poor economies is difficult enough without the added dimension of inland logistical issues.

Similarly skilled labour in certain industries is often only readily available in regions where these industries have an historical base. The cost of labour can also vary significantly from one district to another. In China for example labour in the Guandong region of Southern China can be as much as 100% more expensive than Northern regions of China. The manner of working may also differ from one region to another. As an example in many rural districts holidays and working hours are set by the agricultural cycle with breaks in production planned to coincide with planting and harvest timing.

The Supplier's closest port can also influence the efficiency of your supply arrangements. Ports differ widely in the regularity of international shipping and goods leaving certain ports, depending on destination, are subject to transshipping, a potential cause of delays and longer lead times.

Packaging (for export shipment) in international business is an important often neglected area requiring the development of agreed specifications. Once goods are shipped the purchaser will have plans in place for utilisation of the goods and replacement of items that arrive unfit for use is problematic and usually expensive. Many importers have experienced receiving a container load of goods only to have items tumble out of the container door as it is opened. The protection of items stowed in a container is one issue. The material utilised in packaging is another. Delays can result and extra costs incurred if containers are not prepared in ways that are acceptable to the Customs Authorities in the receiving port. Australia for instance requires (amongst other things) fumigation of wooden items including pallets and this fumigation must be carried out and certified by an organization acceptable to Australian authorities.

Location has been discussed but it also can be a factor in where and how items are packed. Factories without easy access to shipping containers, due to their distance from commercial centres, may send goods by road to be repacked in containers at the Port. This re-packing by a third party is often unsatisfactory and should be avoided if at all possible as it adds both delays and a higher potential for damage arising from inappropriate packaging.

In simplified form the process of commencing international procurement is as follows:

Step		Points for consideration	Resources
1.	Develop a profile of ideal offshore supplier	<ul style="list-style-type: none"> • Suppliers Experience • Skill base • Location • Accreditation level • Communication skills 	<ul style="list-style-type: none"> • Experience of other importers • Specialised consultants
2.	Research into potential suppliers	<ul style="list-style-type: none"> • Compare candidates with profile • Visits to supplier's sites • Review supplier's history with similar products • Prices and terms offered 	<ul style="list-style-type: none"> • Internet (for finding suppliers) • References from supplier's existing clients
3.	Re-Engineering of product where necessary	<ul style="list-style-type: none"> • Ensuring tolerances are within manufacturing capability • Opportunities for product improvement considering lower labour costs 	<ul style="list-style-type: none"> • Technical assistance from potential supplier • Purchasers technical staff
4.	Negotiation with supplier	<ul style="list-style-type: none"> • Sustainable pricing • Payment terms • Shared view for the future • Include formal review periods 	<ul style="list-style-type: none"> • Use personal with experience, empathy and patience
5.	Commence transactions	<ul style="list-style-type: none"> • Start with small quantities and grow as confidence increases 	
6.	Monitoring of performance	<ul style="list-style-type: none"> • Feed back to be systemised regular and non-accusative 	<ul style="list-style-type: none"> • Data gathered from both supplier and purchaser

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