

# Understanding the benefits of e-Procurement

Over the last twenty years information technology has radically changed the way most businesses operate. Those that have implemented it successfully have enjoyed the benefits of substantial increases in operating efficiency.

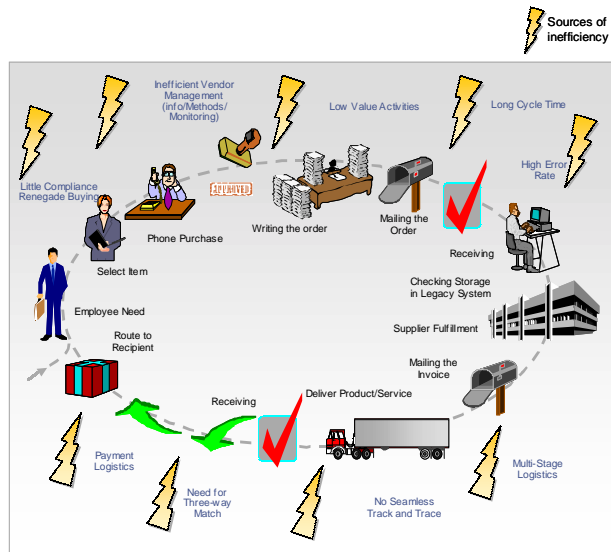
More recently, network technology has enabled fast and low cost communications and, increasingly, the ability to carry out commercial activity through relationships forged over computer networks including the Internet.

The application of technology is usually focused on a business's core profit generating activities. However, the costs of many secondary activities, in support of an organisation's primary business, can often also be greatly reduced by the introduction of appropriate technology. In particular, our own experience shows conclusively that traditional procurement processes and cycles harbour substantial inefficiencies that can be removed by the introduction of network-based electronic procurement (e-Procurement) systems. In financial terms, the benefits of introducing e-Procurement systems in appropriate areas can be significant.

## Who can benefit from e-Procurement?

Our experience shows that organisations of almost every size or structure suffer from inefficiencies in traditional procurement processes. This is true regardless of the type of commercial activity involved and the actual nature of the

### Traditional Procurement Cycle Inefficiencies



goods and services being procured. These inefficiencies occur at stages throughout the procurement process, from the point when goods or services are initially needed to the moment of delivery to the end user and beyond into the payment for those goods and services.

## Sources of inefficiencies in traditional procurement processes

A comprehensive list of sources of inefficiencies is impossible to draw up in general terms since it will necessarily vary from organisation to organisation. In general terms, the most common and important sources of inefficiencies include:

- Ordering unapproved or non-essential items and poor compliance with corporate contracts, leading to unnecessary administrative overhead and payment costs;
- Failure to order through approved suppliers, reducing the ability to negotiate lowest prices and resulting in overall cost creep;
- High error rates and long purchase cycle times caused by the many stage nature of existing procurement processes, involving staff in lengthy reconciliations and other non-value-adding activities;
- Unnecessarily complicated and time wasting logistics and fulfilment procedures involved in taking delivery of goods and services to delivering them to end users; especially the need for the 'three-way match' to tie together purchase orders, invoices and delivered goods.

E-Procurement enables organisations to create efficient workflows and processes that eliminate these inefficiencies without disrupting their primary business activities.

## Economic benefits of e-Procurement

According to industry benchmarks e-Procurement can lead to benefits in five key areas:

- Lower transaction costs – reduced from \$107 to \$30 per order
- Shorter order cycle time – reduced from over a week to two days
- Higher compliance levels – increased from 70 per cent to 95 per cent
- Lower inventories – reduced by 20 - 50 per cent
- Lower prices – reduced by 5 - 10 per cent

### Benefits Promised Through E-Procurement

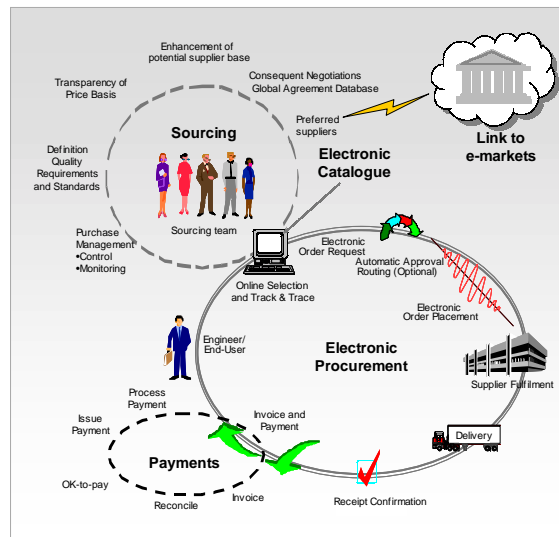
Illustrative

	Transaction Cost	Cycle Time	Compliance	Inventory	Cost of Goods
Traditional / Manual	\$107 per order requisition	7.3 days	70%	100%	100%
E-Procurement	\$30 per order requisition	2 days	95%	20% to 50% reduction	5% to 10% reduction

To understand how these benefits are realised, it is necessary to visualise the overall buying process as three distinct cycles:

- **Sourcing:** The sourcing cycle involves negotiating prices for the products and services required. Our experience shows that consistent savings of between 10 per cent and 20 per cent of current costs can be achieved in large organisations through rigorous application of the Aggressive Sourcing methodology;
- **Procurement:** The actual process through which orders are raised and fulfilled. Most e-Procurement efforts today focus on reducing transaction costs, order cycle times, inventories and non-compliant buying by introducing the use of electronic catalogues and order management systems;
- **Payments:** This includes the back office functions of collecting invoices and arranging payment. Our research shows that for a large company spending billions of dollars on indirect goods and services, some 50 per cent of invoices received are for sums of \$100 or less. At an average invoice processing cost of around \$10 per invoice, the administration costs of paying an invoice alone amount to about 10 per cent of the invoice value.

**Electronic Procurement – Catalogue Based Three Cycles**



**How do the Procurement and Sourcing cycles work together?**

**Procurement?**

At first glance the most striking savings that e-Procurement can realise are transactions costs in the Procurement cycle – individual order costs can be cut by over 70 per cent (from \$107 to \$30). However, the overall impact of such savings can be small. In a recent client study, transactions costs in the Procurement cycle were reduced by \$35 million on a total spend of \$2.5 billion. The cost of implementing the changes necessary is relatively high (compared to implementing a sourcing function), but the (moderate) cost savings are likely to be sustained over time.

### Sourcing?

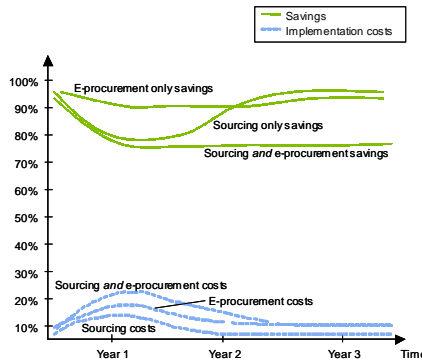
The cost savings from improving the activities in the Sourcing cycle alone may be very great but, crucially, these savings are only likely to be realised in the short term. Unless the entire procurement process, and associated organisational behaviour, is changed in a systemic way which addresses compliance and the other problems mentioned above, these Sourcing savings can be rapidly eroded over time.

### Sourcing and Procurement combined

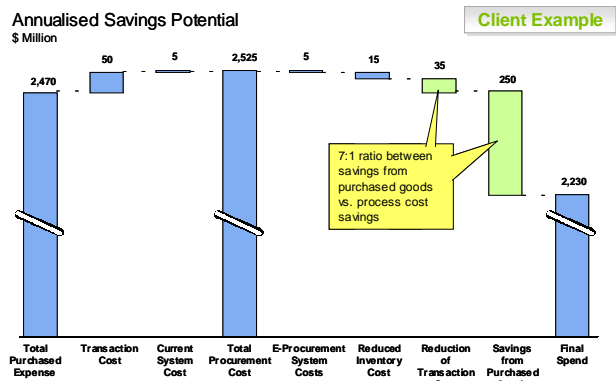
To achieve maximum cost savings, an organisation must reorganise the Sourcing cycle and Procurement cycle holistically; technology helps us today by offering the solution in the form of e-Procurement systems. When addressed holistically, the impact of combined change can deliver *substantial cost savings that are sustainable over time*.

### Impact of Timing on Savings

Expense as Percentage of Original Baseline



In the client situation mentioned above, we established that the total sustainable savings by introducing such an e-Procurement system could exceed \$280 million annually, or eight times the reduction in transaction costs alone.



## Formulating an e-Procurement strategy

## In what product and service categories can e-Procurement successfully be implemented?

e-Procurement is only possible when the goods and services required are available for purchase over the Internet (ignoring legacy EDI-type facilities which have only really been open to rather exclusive buyer/vendor groups). Clearly, any e-Procurement strategy will only be successful if it aims to manage the procurement of goods which are available or are likely to become so in the near future.

Accepting that within a short period of years, all e-Commerce will become Commerce, two key factors determine the speed that categories of products and services will become available online:

### Propensity to Move On-line

Illustrative

Buyer Approval Process Complexity	Can Go On-line if ...
<ul style="list-style-type: none"> <li>Product Specification →</li> <li>Vendor Quality/ Service →</li> <li>Purchasing Frequency →</li> <li>Perceived Corporate Value →</li> <li>Authorisation Process in Place →</li> </ul>	<ul style="list-style-type: none"> <li>Clear standards exist or can be defined</li> <li>Vendor service level criteria are definable</li> <li>Orders frequency is high</li> <li>Relatively unimportant</li> <li>Systems are bypassed regularly</li> </ul>
Transaction Inefficiency	Can Go On-line if ...
<ul style="list-style-type: none"> <li>Information Flow/ Price Transparency →</li> <li>Number of Supply Points →</li> <li>Number of Purchasers →</li> <li>Distribution Channel →</li> <li>Contract →</li> </ul>	<ul style="list-style-type: none"> <li>Pricing is bundled and info unclear</li> <li>Competitors are numerous</li> <li>(In)direct buyers are numerous</li> <li>Supply chain fragmented with numerous middlemen</li> <li>Terms are clear/standard</li> </ul>

**The complexity of the buyer approval process:** Buyer approval combines elements of Sourcing (through compliance to cost effective corporate contracts, and the day-to-day authorisation of individual order requests. Complex approval processes, especially those with a very high relationship, or subjective 'comfort' are very difficult to codify in software. In essence, then, the simpler the required process to approve a purchase for a particular category of purchase, the easier it is to put the process on-line. In practice, this means that the types of goods which can be easily approved include:

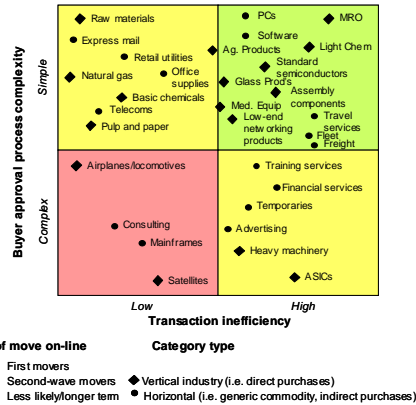
- Commodity items with well recognised and stable specifications
- Strongly branded goods with stable specifications
- Items of low perceived corporate importance
- Items which are ordered frequently

**The inefficiency in the current purchasing process:** E-Procurement will only realise cost savings if the existing purchasing process is inefficient and automation can remove that inefficiency. The more inefficient the process, the greater the benefits of e-Procurement can be. Low value items, where the transaction and other procurement costs are high relative to the actual invoice value, are often the most inefficiently purchased items in an organisation. Other sources of inefficiencies include:

- Unclear or "bundled" pricing
- Numerous uncoordinated buyers and sellers
- A fragmented supply chain with numerous middlemen

Examining these two factors, the likelihood of various categories of goods and services becoming available online can be forecast, and an e-Procurement strategy devised.

**Category Examples**



The figure above shows the distribution of goods and services within decision space we outlined above. Categories in the top right quadrant, such as MRO, with simple approval processes and high inefficiency, are the most likely to be offered online earliest. This has been borne out by experience: MRO was one of the first categories to be offered online. In the bottom left quadrant, large capital value items with complex specifications put out to competitive tender, such as satellites and locomotives, are likely to be some of the later categories to move online.

**Defining a suitable e-Procurement system**

Before formulating an e-Procurement strategy it is vital to recognise that the nature of the products and services to be procured and their pricing basis will have a significant impact on the way they should be sourced and procured in terms of technology, organisation and processes to maximise the benefits of the proposed system.

**E-Procurement Category Take-on**  
Suitability for B2B E-commerce

Suitability
5 High
1 Low



Example Categories	E-Procurement System Examples				Electronic Bill Presentation/ Authorisation/ Payment
	E-markets	Catalogue Based		Usage Reconciliation	
		Workflow			
• <b>Commodities with UPC/SKU</b> - Office Supplies	1	5	1	1	5
• <b>Specified products</b> - Distributed Computing H/W	3	5	3	1	5
• <b>Metered services</b> - Telecoms	5*	1	1	5	5
• <b>Labour</b> - Cleaning	1	1	3	1	5
- Temps	5	2	5	1	5
- IT Contractors	5	1	5	1	5
• <b>Bundled services</b> - Media	4	1	3	1	5

For example, IT contractors, who are usually billed monthly in arrears, require a system that can manage the life-cycle of the contractor and can deliver efficiency improvements throughout the process. This is a very different procurement need from commodity items with well-recognised stable specifications such as office supplies, or metered services such as telecommunications costs which benefit more from a system that links pricing to an industry index and allows reconciliation of recorded usage against billings.

## Conclusion

Most organisations, irrespective of size or principal business activity, have considerable scope for realising cost savings in the area of procurement. These savings can be achieved by eliminating inefficiencies in the sourcing, procurement and payment cycles of their overall procurement process, by the introduction of e-Procurement systems. The specific benefits an e-Procurement system can be expected to bring include:

- Lower transaction costs
- Shorter order cycle time
- Higher compliance levels
- Lower inventories
- Lower prices

If implemented appropriately and part of a holistic procurement vision, a suitable e-Procurement system will realise substantial long term cost savings for the host organisation

**Andy Gueritz, Jan 2001**