

Supply chain issues

Consider this simple supply chain model:



At each step, e-Business is changing the way we access, choose, pay for and receive goods, services and information. Historically, most companies create fixed product lines, which represent their best guess about what the market wants, and generally buyers have learnt to make do with what is available.

Consequently, customer frustration is inherent in the system because the manufacturing process must begin long before accurate information about demand is obtained.

But e-Business will change this. Over the next decade the market will evolve from a supply driven to a demand-driven system. Even now, it is now possible for customers to specify their requirements for a motor vehicle precisely and directly to the manufacturer, eg in Australia 26% of new Ford motor vehicles are bought over the Internet. This potential is fast spreading to a wide range of everyday products, eg computers, toys, investment portfolios, sports equipment etc.

This trend has major implications for the wholesale and retail sectors and their role in the supply chain. Businesses in these sectors must recognise the danger and learn to adapt in order to stay in business. Every part of a supply chain must add “value”. Businesses risk losing a large percentage of their customer base, if customers do not appreciate or consider the service worth paying for or if competitors provide a better, faster, cheaper service as a result of leveraging the benefits of e-Business principles, techniques and technologies.

The major types of electronic interactions, which allow firms to modify their business processes are:

- Electronic Data Interchange (EDI).
- Exchange of regular business documents.
- Electronic Funds Transfer (EFT).
- Exchange of monies in commercial transactions.
- Electronic Forms.
- Online completion and transfer of forms.
- Integrated Messaging.
- Email and fax documents and forms through a single system.
- Shared databases.
- Information shared and accessible by trading partners.



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The main business processes affected by the e-Business model are:

- Procurement.
- Production.
- Warehousing.
- Delivery.
- Payment.
- Administration.

Also, important benefits will be seen in:

- Productivity.
- Cost savings.
- Resource use, and ultimately profitability.

Supply chain management

Supply Chain Management (SCM) is about moving goods and services up the supply chain from supplier to customer and then payment from customer back to the supplier in the most efficient way possible. Its benefits include:

- Improved inventory control.
- Accurate order fulfillment.
- Minimising data entry.
- Shipment tracking.

Thus wholesalers, retailers and businesses generally can compete with manufacturers by creating interactive, online systems, which provide a user friendly menu of information and delivery options, which put greater choice and control in the hands of the customer. Businesses will also be able to retrieve far more detailed information about their customers, pinpoint the needs of individual customers and aggregate information to guide the evolution of entire product lines through early identification of new opportunities.

It also follows, however, that these businesses must have their own procurement, assembly, warehousing and delivery systems in tune to quickly satisfy the order.

Therefore, developing an e-Business strategy, determining customer requirements and understanding the limits of the e-Business system are necessary before implementing Internet services.

Whether acting alone or in collaboration with other businesses (eg geographically, by industry or other common interest), small and medium businesses can create strong customer relationships through the use of attractive choice-rich, interactive web sites, and will consequently attract strong relationships with suppliers, equally in need of accurate and timely information about demand.

Accordingly the balance of power in any industry will most likely go to those businesses with the best-designed choice-rich web sites, the most responsive supplier networks and the closest customer relationships.



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The e-Business model will allow traditional supply chains to be shortened or sometimes eradicated. Shipping goods directly from manufacturer to customer is certainly not new (eg catalogues, mail order etc), but e-Business makes this process far more practical in terms of both costs and time delays.

The reduction of costs in a business transaction is substantial with e-Business, eg the cost of an over the counter bank transaction is \$6 compared to an ATM transaction at \$1.17, compared to an internet-based banking transaction at 10c. Novel business opportunities also arise including network supply and support services, information services, directory services, contact services etc.

The business to consumer (B2C) side of e-Business may offer tremendous opportunities, but business to business commerce (B2B) is even more enticing.

The electronic integration of back end business processes, coupled with an attractive, choicerich, interactive web site at the marketing end can lead to some major benefits for both businesses and industry. Such benefits include reduction in labour and overhead costs, improved cash flow, greater efficiencies, increased productivity and ultimately increased profitability.

Raw materials, Packing and Shipping, Printing and Copying are costs which can all be reduced using the Internet, through buying direct, and asking for expressions of interest and quotes electronically.

Working collaboratively with other businesses can significantly reduce purchasing costs through bulk buying and through ordering from less expensive suppliers from anywhere in the world.

Small and medium businesses can also reduce their overhead costs using the Internet and some of the above systems. Rent, staff amenities, phone, fax, postage, travel expenses, hotel expenses, printing, copying, couriers, membership dues, subscriptions, publications, books and consultants are just some of the areas ripe for reduction with clever use of the Internet and e-Business tools. BPAY, e-BILL and other such Internet based bill payment facilities reduce the cost of paying bills, EFT reduces the cost of money transfers and EDI systems save much on time and postage costs. Also the use of Net Meeting, Chat rooms and other Internet tools can reduce long distance phone costs, video and tele-conferencing costs. Further details are contained in InternetProfit.com.au – the Profit Improvement Manual available from your local State Development Centre.

e-Business is not just about selling products over the Net, but about lowering sales and customer service costs, procuring cheaper raw materials, benefiting from supply chain efficiencies and avoiding market share loss to competitors. In essence, e-Business is the use of Information Technology to support any and all business activities to produce greater profitability.

The issues

Purchasing

The Internet has opened vast opportunities for businesses to source materials, services, supplies, resources, labour and information from intraState, interState and Internationally. The Internet offers facilities such as searching, email and shopping direct as means of accessing these opportunities.



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By learning to correctly use a Browser's Search Engine, a business can locate many suppliers in many different world regions. Tenders can then be sent and responses received quickly and cheaply using email. Manufacturers, retailers and wholesalers alike can greatly improve their competitiveness by accessing the global wealth of supplier information, including supplier profit margins. For small firms, the increasing use of electronic procurement systems by larger customers means that they will have to become e-Business ready or lose valuable customers and business.

Shopping Cart software is also proving popular, particularly with retailers. It allows customers to point and click their mouse to add and remove selected items from a shopping cart list and make payment to complete the transaction. It is generally an enjoyable and easy experience for customers.

Once the request is sent, the fulfilment process begins. An information management system can capture the customer's information producing an order and mailing label. Staff can then pick, pack and dispatch the goods. The customer database can then be updated and credit card payment processed. The customer will receive a confirmation email with shipping details and can even monitor/track shipment progress with some firms, eg Fedex and DHL. The supplier now has valuable customer intelligence, which can be used for direct marketing purposes to capitalize on impulse purchases.

Warehousing

The ability to quickly and easily capture intelligence about customer's locations, purchasing habits and interests and other demographics can have profound effects on the need for and type of storage. Some businesses have found they are able to refine the type of inventory required by market sectors and have changed their inventory mix to suit. In some cases this has also resulted in a change to the size, location, resourcing and orientation of warehousing space.

Indeed some businesses have been able to relinquish any need for warehousing facilities, and through careful planning and close relationships with their suppliers, have adopted "just in time" delivery systems.

Production

The ability to source materials that are cheaper, more readily available, more reliable, is one of the main benefits of using the Internet. This reduces production costs and often production time. There can also be flow-on benefits in streamlining human, technical and raw material resources.

Some firms have dramatically reduced the "time to market" by co-developing products or engaging their marketing and supply activities throughout the product development process. In this latter case, product packaging, marketing and distribution issues can be assessed and managed concurrently.

Payment

Online payment systems using EFT or Credit Card are now well known features of electronic transactions between business and consumers, but to ensure security and build consumer confidence and loyalty, a business must implement a secure payment system. Examples such as



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Netscape's Secure Socket Layer (SSL) or Telstra's SureLink™ or Verisign ensure that all personal, order, pricing and credit card details are encrypted while being sent from the customer's Internet Browser to the supplier, even if the customer is another business.

Research shows that consumers will only take risks with relatively small amounts of money and require strong evidence of security, variety, service and delivery to feel confident about engaging in regular transactions and providing personal consumer information. Your business could assist in building trust by prominently displaying information about your security systems or encouraging clients to use credit cards dedicated to e-commerce transactions with smaller limits to minimise their exposure.

Administration

e-Business has a significant impact on the streamlining of administrative processes resulting in the lowering of costs and improvement in cashflow. In the classified advertising business for example, an e-commerce system can receive, process and approve more advertisements per hour than a phone operator. Such systems automate workflows producing greater efficiency, the ability to accept and process more orders and allow payment for goods at the time of ordering.

The Queensland Government for example, uses online staff timesheets. The data then feeds into an online payroll system. Staff can access some areas of this system at any time to access or update personal information as required.

For businesses generally, the linking of staff scheduling systems to payroll also helps streamline wage costs. Further, when front-end and back-end systems are linked, information from customer orders can flow seamlessly throughout all business processes enabling the correct resourcing of labour, time and materials.

Delivery

As telecommunications, business and domestic Internet infrastructure grows, so too will the number of people regularly using the Internet for purchasing. Accordingly, the need for fast, cheap delivery systems will also rise rapidly. Already we see a significant increase in the number of logistics (courier and transport) companies focusing more of their operations on deliveries of Internet ordered products and services.

Further information

The following fact sheet provides further information about these issues:

- Benefits of e-commerce