

# **e-Business Adviser Handbook**

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A handbook for business advisers assisting small and medium sized enterprise entering or improving e-Business.

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**Section – 2.2 – Business to Consumer (B2C)**

## 2.2. BUSINESS TO CONSUMER (B2C)

This section focuses on Business-to-Consumer (B2C) applications and implications with particular emphasis on the knowledge and information that can help business advisory practice.

### 2.2.1. Introduction on B2C

B2C is one of the main categories of e-business applications and concerns business transactions with consumers through the Internet. An SME can consider implementing B2C applications, but should take into account several factors such as:

- ☞ The nature of its activities
- ☞ The nature of its products
- ☞ The B2C applications of its competitors
- ☞ The risks of not introducing B2C.
- ☞ The marketing opportunities that might exist through B2C.
- ☞ The increase of sales through Internet.
- ☞ The added value of products and services through Internet, for which the customers might pay.
- ☞ The potential for improved customer service and support.

The above factors should be considered by an SME because the introduction and maintenance of B2C applications requires significant allocation of resources. A business plan and a cost-benefit analysis should be undertaken before moving towards B2C investment and implementation. B2C implementation entails a set of applications like Web Marketing, Sales, Payments, Order Fulfillment and Logistics, Customer Service, Inventory Management, Supply Chain linking etc. The quality and the cost of these applications are two significant factors which influence the competitiveness of a B2C enterprise.

An enterprise that introduces B2C and e-business practices and wants to maintain and enhance its market share must take into account the international nature of the new e-market. In the future, as Information and Communications Technology (ICT) infrastructure improves, more distribution channels and more e-business applications will appear and so the global e-market will increase. Customers, suppliers and competitors from all over the world with different cultures, behaviours and expectations will be brought closer together. Those who can better envisage this new situation will have a better chance of success.

The following diagram shows B2C basic applications and flow of information & materials in a fully integrated e-business solution.

An overview of these B2C applications follows together with consideration of the issues which are important for business advisory practice for B2C.

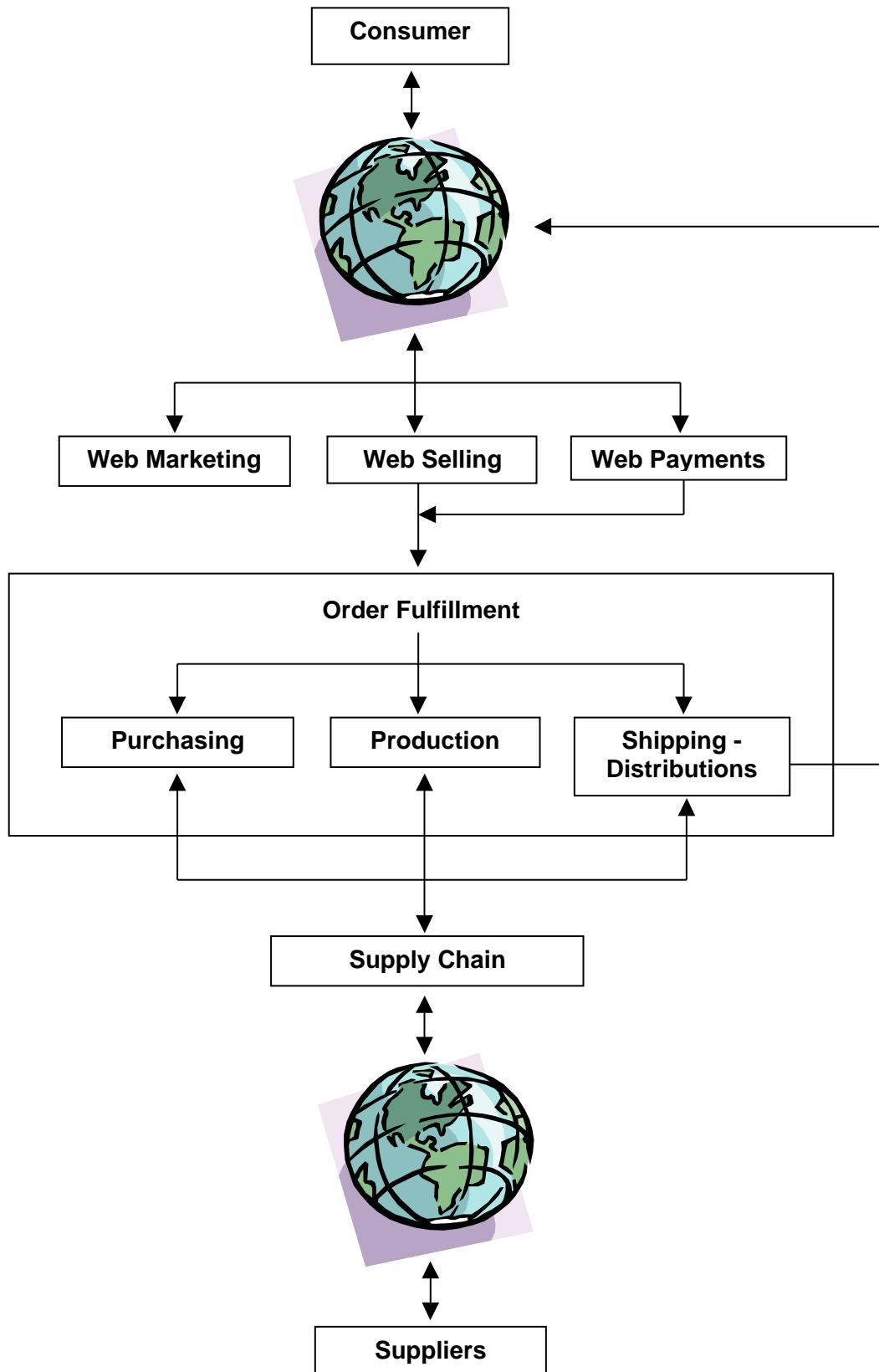


Diagram 2.2.1. Information & material flow in an integrated B2C e-business

### 2.2.2. B2C Web Marketing

The development and maintenance of a successful B2C Web Marketing Plan (WMP) is a critical factor for B2C development and forms a core part of the overall business plan of the enterprise. The WMP is based on methods and principles of general Marketing, but special issues that arise from use of the Internet need to be considered. These can be classified in two categories:

- a. Optimized use of Internet Technologies: There are a range of internet facilities which can be used in the implementation of the WM Plan. Some thought should be given as to how maximum result can be achieved at minimum cost. Search engines, directories, reciprocal links, banner ads, on-site customer feedback, newsletters, traffic analysis (log files), etc. can all be considered as tools for successful Web Marketing.
- b. Customer Relationship Management (CRM): CRM for B2C includes processes that are different from traditional CRM. Web customers behave differently from non-Web customers, they are more demanding, move faster and have more expectations. These customer attributes should be considered carefully when building relations between a B2C enterprise and its customers. Data mining methods and personalization methods should be applied to show trends and behaviors of consumers. With data mining methods it is possible to estimate trends concerning demand and customer needs using customer and other marketing data. Personalization is a compilation of detailed information about individuals and/or groups of individuals with certain similar characteristics and the use of that information to personalize a customer's online experience.

The above issues form the skeleton of the Web marketing processes and they should be applied to the particular attributes of the enterprise and its products/services.

More information concerning Web marketing can be found also in section 2.6 of this Handbook.

### 2.2.3. B2C Sales – Order processing

Sales and order processing include a set of processes by which the customer interacts with the Web store, searches for products and services, makes his/her choices, and finally places an order. The processing of orders follows next which triggers the fulfillment. Sales and order processing form the core of 'front office' B2C activities.

The quality and functionality of these processes influence customer choice and their decision to proceed with the order. Friendly user interfaces, product catalogues with detailed information, shopping carts, prices, taxes and shipping costs should be included in the Web site. This information helps the customer to assess the product and its total cost and to place the order easily with no errors.

A careful analysis and design of these B2C front office applications should take place before the development / installation of the relevant software modules. It is very important that the software applications are adjusted and customized to the requirements, because these show how a company wants to promote, present and sell its products through the Internet.

A well-designed B2C Web site is like the front view of a physical shop, together with its interior product shelves, its salesmen and its cashiers.

#### 2.2.4. B2C Payment processes

Payment of a customer order could be considered as part of sales and order processing, but since, through Web, it is a rather complicated task it is considered separately here.

One of the main reasons that many consumers do not trust the Internet for shopping is that they are worried about the security of their payments. On the other hand many SMEs, do not sell through the Web because they are not familiar with the processes necessary for Web payments.

Security is the main issue for preparation and implementation of payments. The main goal of a B2C enterprise concerning financial transactions over the Web is to ensure the security of its own and its customers money. As e-business becomes more mature, it is possible for several payment methods to be used within a secure environment. With the proper precautions, online purchases are no more dangerous than credit card purchases made in the physical world. E-commerce systems can keep credit card information secure via encryption.

Security standards like SSL (Secure Sockets Layer) can be applied which encrypt data and protect information as it travels over the Internet. For applying such a standard a Web business must acquire a Digital Certificate (DC) that can be issued by a Certification Authority (CA). The DC contains the name of an entity/person, a public key of the entity/person, serial number, other information and signature of the CA. For further details see <http://www.belsign.com/> and <http://www.globalsign.net/> which are web sites of Digital Certification authorities in Europe.

Another security standard is Secure Electronic Transactions (SET). SET encrypts a credit card number so that only designated banks and credit card companies can read the information and supports “e-wallet” transactions. The e-wallet software allows customers to input all of their purchasing information (credit card, address, shipping address, etc.) once and then move merrily through numerous Web sites that accept e-wallet, doing “one-click” shopping and avoiding the task of filling out individual Web sites’ purchase forms.

The next generation e-wallets will use a new standard – the ECML (Electronic Commerce Modeling Language) – that works with any Web security software and allows e-wallets to automatically feed customer information into the payment forms of participating Web sites. Implementation of the ECML standard was led by Visa, MasterCard, and American Express, with support from America Online, CyberCash, IBM, Microsoft and Sun, as well as numerous Web-based businesses. ECML is changing the landscape for e-wallet companies and can be used with any security standard, including SSL, and Visa and MasterCard’s own version of SET.

So that it can accept credit card payments, an e-business enterprise should also set up a merchant account at a financial institution. This account will act as a clearing account for credit card transactions. The type of financial institution, usually a bank, and the terms and conditions of cooperation should be considered before choosing where to set up the account. The possibility of real-time credit card authorization and required transaction speed should also be considered before deciding on a software solution. For real-time credit card authorization another account is needed with an organization which provides real-time card processing services.

Finally, generally the more payment options that are provided by an e-business the more competitive it will be, since there are customers who do not trust using credit cards for Internet shopping. An alternative type of payment can be offered: using cheques - but this

transaction is rather slow, since clearing process for the cheque must be applied. Customers can provide information about their cheque account by filling in a form, and after the account is checked, the money is transferred from the customer's account to the account of the e-business enterprise.

To summarize, web-based businesses must go beyond the security provided at the router and firewall level. They must incorporate such features as encryption of credit card information and other personal data, digital signatures and trust of identity of network users, hosts and applications, to secure their transactions, their applications and the information of their customers.

### **2.2.5. B2C Inventory Management**

A B2C enterprise that promotes its products through the Internet must take account of inventory management. As in a traditional selling company, an e-business company must manage its inventories at minimum cost. The costs of inventories constitute a significant part of the overall cost of an enterprise and special care should be taken because in e-business the re-order time periods are short. For a successful presentation in e-business and especially in B2C, an enterprise must be able to satisfy the demand from the Web 24 hours per day and 7 days per week. Not sending products out to the customers on time or not sending them at all may result in lost customers. On the other hand keeping additional quantities of stock for all products causes a significant increase in overall costs, making the enterprise less competitive.

The inventory costs for each type of product include:

- a. Cost to place purchasing order or to set-up production.
- b. Purchasing or production cost (This cost includes also transportation cost, receipt cost and quality control cost).
- c. Cost to carry working stock.
- d. Cost of safety stock.
- e. Cost of not satisfying the demand.

The solution to the problem of finding the Economic Order Quantities (EOQ) and the re-order time periods is based on balancing the expected cost of acquisition for stock against the expected costs to hold the stock, satisfying the anticipated demand with minimum risk. Since uncertainty factors, which originate mainly from the demand, exist in such models some safety stock should be held to cover eventualities.

The problem of trying to optimize these costs over a specific time period (usually in a year) is a rather complicated problem that must also take into account the special characteristics of the enterprise. The most important factor that influences the results in such problems is the estimation of the expected customer demand over a specific period. Forecasting methods should be applied that forecast the future demand. These are based on historical and marketing data and can be linked to Data Mining and CRM information. The smaller the forecasting error, the better management of inventories will be accomplished and the risk of not satisfying demand on time will be limited. Using the right forecasting outputs, several models of inventory management can be applied that depend on the characteristics and policy of the e-business enterprise and of its suppliers.

### **2.2.6. B2C Order Fulfillment and Logistics**

For a B2C transaction to be completed, the order should be fulfilled and should be delivered to the customer in the time that was announced/agreed. The fulfillment of the order is one of the most important tasks in e-business and requires the application of an integrated Logistics Plan (LP).

Besides the management of inventories and the control of the stock, packaging, shipping and delivery of the product should be accomplished within quality standards and cost limits.

What are the processes involved in this aspect of B2C?

What issues should a B2C company consider to succeed?

The answers to the previous questions are valuable to a B2C enterprise because they are needed for an integrated Logistics plan to be developed, applied and controlled continuously. A B2C company should be involved in the following processes:

- a. Operation of a warehouse or multiple warehouses.
- b. Pulling inventories from shelves.
- c. Packing them for shipment.
- d. Retaining a delivery service.
- e. Helping customers to track their order.
- f. Dealing with returns.

Also the company must always take account of and try to improve the integration of the above processes with its supply chain. In fact the integration of the front with the back office processes is a critical factor in determining a more efficient operation of the whole enterprise. Using ICT as a tool for this integration, the procurement time (for purchasing or production) can be minimized. Integrating B2C front office processes with financial services and ERP processes, like Master Production Scheduling (MPS), Capacity Planning Scheduling (CPS), MRP (Material Requirements Planning) and Production (or Purchasing) Orders Release (POR), the chain of the processes of the whole enterprise will be unique, bottlenecks and queues will be reduced, inventories minimized, set-up and waiting times reduced and productivity and lead times improved. Also in this chain the delivery and distribution processes should be considered thus extending it right up to the door of the customer. The degree of integration and the processes to be integrated depend on the size, the type and the activities of the enterprise. For example, for a small shop, the integration could involve a limited number of processes like packaging, shipment and re-ordering from its suppliers. But on the other hand a SME with both commercial and production activities must consider seriously the integration of its processes that may include warehousing, inventory management of large quantities, production planning, MRP, etc.

A Logistics Plan (LP) includes all activities from the receipt of the customer's order to the final delivery to the customer. As the LP is prepared and its processes are designed the following issues should be considered:

1. Types of products and packaging.
2. Average orders.
3. Ways of shipping.
4. Delivery quality standards.
5. Inventories.
6. Returns.
7. International orders.
8. Seasonal demand.
9. Relations with suppliers.
10. Possible functions of B2C S/W (order tracking, priorities, linking with warehouse / distribution operations, integration with back office, etc.)
11. Types of warehousing and fulfillment centers.
12. Insurance.
13. Handling of exceptions.
14. Management of multiple suppliers and distribution channels.

Another very important factor that influences significantly the cost of order fulfillment is the cost of shipment. It is determined mainly by the shipping distance, the package weight and the delivery time. In general the B2C enterprise should calculate precisely the whole cost of order fulfillments and should be able to allocate these costs (both direct and indirect) to each delivery package.

Finally a very important issue, that a B2C enterprise should consider, is to what degree should it outsource certain activities/processes from the total fulfillment process. The answer to this question is not simple and depends, among others, on the size of the company, its warehousing and distribution infrastructures, its business and investments plan and its general policy for B2C involvement. As a general assertion we can say: the smaller a company is the more outsourcing it will need.

Summarizing the following basic models can appear for B2C order fulfillment:

- a. Full in-house order fulfillment.**  
(Purchasing/Production, Warehousing, Deliveries are accomplished by the B2C company)
- b. Partially in-house order fulfillment.**  
(Certain activities of the whole value chain are outsourced. Such activities may concern production, warehousing, distribution channels, customer order tracking and status information, customer payments, etc.)
- c. Completely outsourced order fulfillment.**  
(The application of this model implies that the B2C company maintains mainly the Web site that interacts with the customers and almost all the other activities are outsourced. This model is implemented basically by B2C companies that are small and did not exist before as brick-and-mortar enterprises).

### 2.2.7. B2C Customer Service

Customer service is an important factor for a B2C business. The better the service provided to a customer the more loyal this customer will be and the more often he will come back to shop in the future. It is considered that good customer service is one of the best marketing tools that a Web site can have.

A customer service strategy depends on the size of the company, on the type and variety of products and services offered, on the type of customers, on the after sales service and support that is offered and generally on the level of service that the company intends to apply.

B2C companies require an infrastructure for e-mail queries, online ordering and telephone support. The Web site should also include detailed information about product & service description, technical manuals, articles and any other information that could help the customer to get better picture of the company and its products/services. Additionally many Web sites include also a Frequently Asked Questions (FAQ) section, which provides answers to the questions most commonly asked by customers.

As e-business grows and customer numbers increase, more automation in customer service processes should be introduced. Among others, this automation may include: EMS (E-mail Management Systems), automatic knowledge collection/update and call centers through the Internet or the regular telephone network. Finally the possibility of using multimedia for communication with the customers should be considered, to make communication more productive and attractive.

Whatever the degree of automation in customer service, human contact should be available to support the customer if automation fails. It is true that automatic answering services, robots and other non-human customer service applications cannot answer everything and cannot realize the real needs and service of the customers. Therefore human customer service representatives should be present in the front office and standing alongside technology to provide the best customer service.

There is another parameter that should be considered as customer service is designed. This parameter originates from Total Quality Management (TQM) principles concerning customer satisfaction and interaction with a business. There is the opportunity for e-businesses, and especially B2C, to apply such TQM principles while they design their Web site and more specially their customer service processes. Such principles are summarized in the following lines:

1. Continuous improvement of business processes is a factor of continuous survival.
2. A Quality control plan and a TQM responsible for the Web site are necessary.
3. Be close to the customers by:
  - a. Communicating with them more often.
  - b. Spending more time with them.
  - c. Sharing information.
  - d. Targeting loyal customers.
  - e. Making your customer's goal your own.
  - f. Being ethical towards them.
  - g. Getting more people in the company to understand the customers.
  - h. Agreeing performance improvement plans with them.
  - i. Providing customers with additional products or services.
  - j. Integrating your business with theirs.
  - k. Making the buying process more convenient for them.
4. Improve customer service quality by:
  - a. Having a vision.
  - b. Getting information.
  - c. Accessing and examining customer service processes.
  - d. Creating an action plan.
  - e. Setting standards.
  - f. Monitoring standards and making adjustments.

The consideration and application of the above principles, in conjunction with the possibilities that technology offers and the vision and will of the e-business itself, can help the company to be more competitive and attractive to its customers and to increase its market share.

Besides the TQM sources mentioned at the bibliographic references the reader is encouraged to access also the web site:

<http://www.wilsonlee-cambridge.co.uk/Knowledge/PC%20TQM/index.htm>.

In this Web site a very interesting tutorial presentation is given with the title: "Total Quality Management – A Continuous improvement culture for e-Business".

### **2.2.8. Summary - Conclusions on B2C**

Closing this section on B2C and summarizing we conclude that B2C trading is the transition between traditional trading and consumer trading of the future. The B2C companies and transactions will increase in the future and all retail commerce will be influenced by B2C e-business. What retail businesses need at this time is to make the necessary steps to move towards the retail trading of the future. Technology has changed and keeps changing, consumers are changing, competitors are changing, legislation is changing and trading

companies should adjust accordingly to survive in the global business environment of the future.

As described in the previous paragraphs, B2C includes sets of processes (like web marketing, selling, payments, order fulfillment, supplies, etc.) that should be adjusted and implemented in the new technological and business environment. For the successful implementation of these processes, the new business conditions and the possibilities that technology offers should be considered very carefully, otherwise negative results will be achieved due to high cost, bad quality and no revenues from the B2C investment. New technology and new business conditions should be considered as the means for success rather than a goal. Business plans, Cost-Benefit Analysis, Business Process Re-engineering (BPR) methods and principles should be applied while designing and implementing a B2C plan. Also Quality principles should drive the whole effort, because from now on because customers have more information/knowledge and will become more demanding and hard to keep.

The world is changing and so does retail trading and those who adjust their businesses to the new conditions will have more chance to survive in the future world. And as the quality Gurus have said: **“survival is not obligatory”**.

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