"E-COMMERCE AND WEB TECHNOLOGIES: CREATING VALUE THROUGH CUSTOMER-FOCUSED DIGITAL BUSINESS MODELS"

Sitora Narmuradova

Senior Officer on Personnel Affairs Westminster International University of Uzbekistan Email: snarmuradova@wiut.uz

Abstract: *Nowadays, it is the fact that most companies are trying to change themselves to e-business in order to attract more customers and get more profit. Accordingly, creating web business is becoming number one key to success in business environment.*

In this following report, the author made research on the use of e-commerce as well as Internet Technologies to help a company to build a customer-focused business. It explains the strategic issues to be considered before starting the project. The descriptions include selling products and services through the web and the qualities of an effective web business presence. Then types of e payments and meeting the needs of Web site visitors are described. Finally, identifying and attracting new customers to the business is discussed in this report.

INTRODUCTION

In the century of modern technologies Internet is the major tool to transmit information as well as commerce. It helps to reach a worldwide audience. In most of countries customers are getting prepared to purchase electronically. They have instant access to goods, services and knowledge and have ability to buy and communicate globally (Morath, 2000). Business owners can send information and latest news about their products via Internet in an easy and quick way by brochures, e-mails, and others and it the best and cheapest way of gather new customers. Around millions of people make everyday purchases through the Internet. However, most purchases still come to pass by conventional channels; e commerce keeps on rising quickly, it changes the forms of the companies' business styles (Morath, 2000).

1.0   Selling products and services on the web

Another name of selling products and services on the web is called Electronic commerce. E-commerce refer to the use of the Internet and the Web to transact business (Laundon & Laundon, 2010). More formally, e-commerce is about digitally enabled commercial transactions between and among organizations and individuals. Commercial transactions involve the exchange of value (e.g., money) across organizational or individual boundaries in return for products and services (Amor, 1999). Amazon, eBay, Expedia, and Google companies are the most widen e-commerce websites (Laundon & Laundon, 2010).

1.1. Online selling terminology

In 21st century people sell and buy in a different ways, for instance online selling. Online selling is doing business, selling products and services through Internet website. It is very cheap, simple, and broadly spread way of selling. E-commerce began in 1995 when one of the first Internet portals, Netscape.com, accepted the first ads from Major Corporation and popularized the idea that the Web could be used as a new medium for advertising and sales (Laundon & Laundon, 2010). Nobody thought after some period time electronic business would grow exponentially (Laundon & Laundon, 2010).

1.2. Business models and strategy

Business model is a plan for gaining profit from doing business in the future, without business plan it could not be reach any success in a marketplace. Business strategy is the way of reaching this plan. Before selling product or service on the web, an entrepreneur chooses one of the business models. Here are given a list of some business categories of internet business model in the below:

1. Virtual storefront. It trades physical products directly to consumer or to individual businesses. Amazon.com and RedEnvelope.com websites use this model (Laundon & Laundon, 2010).

2. Information broker. This model makes available information about product and pricing to individuals and businesses and generates revenue from advertising or from directing buyers to sellers. Examples are Edmunds.com, Kbb.com, Insweb.com (Laundon & Laundon, 2010).

3. Transaction broker. It supports data about rates and terms, also accumulates currency and occasion of users through online sales business and account payment for every operation appears. Examples are Etrade.com and Expesia.com (Laundon & Laundon, 2010).

4. Online marketplace. It is most widely spread model and Priceline.com, eBay.com use it. Purchasers and vendors can meet, search for product, exhibit product and set charges by its digital environment. It organizes online auctions which buyers present bids to multiple sellers to purchase at a buyer-specified price as well as bargaining pricing (Laundon & Laundon, 2010).

5. Content provider. Games.com, Getty Image.com's business model generate revenue through digital content, digital news, music, photos, videos over the Web and income is generated by selling advertising space (Laundon & Laundon, 2010).

6. Social network. This model offers an online meeting place where a group of people with similar interests can come across together and be in touch, discover and exchange useful information with each other. MySpace.com and iVillage.com use from this model (Laundon & Laundon, 2010).

7. Portal. The model which Yahoo.com, StarMedia.com used, supports entrance to the Web by the side of specific content and services and takes profits from promotion (Laundon & Laundon, 2010).

8. Service provider. It supplies storage, backup data and Web 2.0 application such as photo, video sharing, and user-generated content. It uses a subscription or advertising revenue model. Examples are Photobucket.com, Google Maps, Xdrive.com and YouTube.com (Laundon & Laundon, 2010).

1.3. Types of electronic commerce

There are three typesof electronic commerce applications:

Business -to-business electronic commerce transactions occur between two business entities. For example, Wal-Mart stores organized business to business system in 1980. It spent half a billion dollars in computer and satellite communications networks such as bar code system, scanners and other equipment. Wal-Mart permitted individual stores to order directly from overseas suppliers, reducing inventory restocking time six weeks to thirty-six hours. The system increase sales and high service qualities and reduced inventory costs (Tesone, 2005).

Business -to-consumer electronic commerce includes selling products and services to individual shoppers (Laundon & Laundon, 2010). Selling books, software, music, video and film to individual users is an example for it. The purpose of intra-organizational applications is to facilitate a company to preserve the relationship that is critical to delivering superior customer value (Tesone, 2005).

Customer -to-business electronic commerce helps s customers to learn about product through electronic publishing, purchase with electronic cash and have information goods delivered over the network. Electronic commerce supports clients with convenient shopping methods, from online catalog ordering to phone banking (Tesone, 2005).

2.0   Characters of an effective Web business presence

E-commerce began in 1995 and in 15 years period it grown so rapidly. The reason is the Internet and e-commerce technologies are more powerful and rich than last technologies such as television, radio, telephone and mass media. The breathing of e-commerce offerings grows, especially in the services economy of social networking, information clearing houses, travel, retail apparel, entertainment, home furnishings and appliances (http://www.smashingmagazine.com). Pure e-commerce business models are refined further to achieve higher levels of profitability, whereas traditional retail brands, such as Sears, JC Bean and Wal-Mart use e-commerce to retain their dominant retail positions (http://blog.pixelboxdesign.co.uk).

2.1. Description of web presence

In the present day global market is changing rapidly. Every single business should have an effective web presence in order to strive in a full market. Online presence is setting up a computer generated version of business with a welcoming 24 hour availability website. Many years and effort will be spent for the developing business (http://chron.com).Web presences is   starting a conversation with customers and explain why they should buy from you (https://www.slideshare.net).

2.2 Website design

When creating website it should be very carefully analyzed for each element. Website is not created just for attracting new customers, but also it can make customers friendly to the business. There are some features of it;

• An easily-navigated site map- keeping a consistent navigational structure helps people visualize their current location and options and minimizes guesswork. Changing navigation is like removing stepping-stones while users are still in midair; when they land, it's not where they expected. Good navigation is expected and makes people consider comfortable exploring the site. It does not need to be studied or memorized because it affects their impression of how information should be represented in Web space (Jakob Nielsen, 2006).

• Typography-Artistic elements such as typography and color schemes play an important part in making a good first impression with your Web site. The right typography gives people a feeling for your company and conveys information about what they can do on your site. The size of the print should not be difficult to read, it should be easy to visible, sustainable with background, simple words for understanding. Smaller text quickly diminishes readability, smaller letters simple do not look as distant, even for people with normal eye sight. There is given recommended text sizes for users in the below:

Audience Type	Point Size
General audience	10-12
Seniors citizens & people with visual impairments	12-14
Young children & other beginning readers	12-14
Teenagers & young adults	10-12
Table 1: Recommended text sizes for users.

Recommendation: it is better to use common fonts sized at or above 10 points, to keep away from busy background, to use black text on white backgrounds (Jakob Nielsen, 2006).

• Background color- Every person has a different taste and so choosing a right color for your product and website is very essential. Bright colors attract people immediately and stay in memory easily and longer. For instance, red color of Coca Cola drink is very suitable for the product and its website is also in red (Jakob Nielsen, 2006).

• Multimedia components- it includes video conferencing, chatting, photo sharing and others. For attracting new and large numbers of audience these multimedia components should be exist in the company's web site. By multimedia components the company communicates with its customers directly (Jakob Nielsen, 2006).

• Fresh and quality content- content is the first key element of web design. It should be attractive, clear and understandable. Also, the content should be everyday updated for the new information seekers and the information is clear and reliable (Jakob Nielsen, 2006).

• A secure hosting platform- security system plays very essential role in controlling the web site. While the company adding new information about its product and services, it should be aware of the protecting data secure system. If the secure system of web site is very reliable, the number of web visitors will increase (Jakob Nielsen, 2006).

• A design and style that's friendly to online readers- Chaotic design leads to dead ends and wasted effort. Hastily thrown-up Web sites without effectual data schemes avoid users from getting to the information they look for. Navigation and menus, category names, links and information architecture are the important things, which determine how easily it is to find things by clicking around a site (Morath, 2000).

3.0   E-commerce payment systems

The heart of e-commerce is electronic payments. E-commerce payment system is paying for online transactions by electronic payment. For example, PayPal, Visa, Sofort, Sepaandothers.

3.1.Types of e –commerce payment

1. Credit cards

There is credit, debit, prepaid cards and mostly people use a plastic card with a magnetic stripe. Plastic card is entered to the terminal, data is sent to the computer, and The CVN system detects fraud by comparing the CVN with the cardholder's information as supplied by their bank. 80% of online payment are made by credit or debit card (http://www.ehow.com).

2. Digital wallets

Digital wallet saves information about personal information and payment in your PC. For using it, firstly the software is saved in digital wallet, and then all private information about the user is entered, attached it to the bank and created the account. While the customer is buying something online, he should enter the check-out page of the website and digital wallet can enter all information about you and pay the bill mechanically (http://www.ehow.com).

3. E-cash

Money is swapped electronically by e-cash system. For using e-cash the personal account should connect to bank account like PayPal and supply it from private bank account. You can take bond from bank or other person's account if he agrees and for this the other person's bank details should be sending to the bank (http://www.smashingmagazine.com).

4. Person to person payments

One individual pays to another with an account. PayPal is broadly spread payment system and it increased from 105 million to 1.4 billion transaction in a 3 year period(from 2002 to 2005) (www.blogger.com).

5. Mobile payment

Mobile phones are used paying for online transactions instead of credit cards. The software is downloaded from the company' website in the phone , then connect the credit card or mobile billing information to that software (http://www.ehow.com). Customers send an SMS message, transmit a PIN number, and use WAP to make online payments, or perform other segments of their transaction with the phone (http://www.smashingmagazine.com). As phones develop further, consumers are likely to be able to use infrared, Bluetooth and other means more frequently to transmit full account data in order to make payments securely and easily from their phone (http://www.ehow.com).

3.2 Shopping cart options

All of us just enter the site and buy something; however it works with some process. Companies use some programs for selling and buying transactions online such as X-cart (230USD), Cubecart(400USD) Zencart(free), OSCommerce(free). They provide very easy access between customer and company. For example, customers push the button "Buy" on the website, the order changes to digital codes and sent to the payment processor, clients pay for the product by Paypal or Google Checkout account and then the product is transmitted where users can download it (http://www.smashingmagazine.com).

3.3. Cost of selling products

Before starting e –commerce there are some fees which should be paid. First of all, the company should find domain name for its website.

1. Domain Name

The company must buy its own domain name which is no similar with others and it costs approximately $10 every year. The strength and prolonged existence of the website belongs to its domain name and it should be very attractive and easy remembering by heart (http://www.thesitewizard.com)

2. Web hosting

There is also a commercial web host and it is around $10 every month for new and no traffic or data websites, also if the company pays it 12 months payments beforehand they give a discount.

On the other hand, students or people who have low income can use free web host that supports free domain hosting for creating personal and hobby websites. Such web hosts permit the users to host your domain with them without charging you any hosting fees and they may put on advertisements on your website to recover the charge of hosting. However, if you run a web-based business or earning by online advertisement free web host is very risky with its inaccessibility from time to time (http://www.thesitewizard.com).

3. Software

According to the form of the website, the correct software should be chosen. If you want to control the website from a web browser, CMS or Content Management System helps you. CMS is a computer program and you can easily set up on your

website. With the help of it, you can build web pages, change its look and control it by browser. Also FTP client is necessary for transferring files from computer to the website. There are KompoZer, Blue Griffon or Nvu free softwares and mostly recommended with high quality software is Dreamweaver, expensive one around $399.

If you want to edit photos and graphics, most popular program Photoshop will be helpful for your business and it costs $649 (http://www.thesitewizard.com).

4. Advertising

After creating the website, full it with pictures of products, it should be promoted accurately. You can advertise your website by affiliate networks. These networks show your website promotion on the Internet with working other websites.

Moreover, the company should buy SSL CERTIFICATE to avoid fake and protecting data and it costs $150 per year. Next step is Payment Gateway system such as Paypal, Authorize.net, Sterling (http://www.thesitewizard.com).

To sum up, when choosing e-commerce web designer should pay attention to its business size, budget, product or service and future plans for business growth. There is some expenditure for setting up website for the company and you should be able to pay these payments beforehand (http://www.thesitewizard.com).

3.4. Security

In person-to-person transaction in either the B2B or B2C markets, security and fraud are rarely considered. On the Internet it is much more difficult to assess the safety of a business. Also, because serious security threats have emerged, becoming aware of the risks of Internet-based transactions and acquiring the proper technology solutions that overcome those risks is essential (Amor, 1999). There are some dangers related to e-commerce and security:

1. Spoofing- the low cost associated with Web site design and ease of copying existing pages makes it all too easy to create illegitimate sites that appear to be published by established organizations (Ravi Kalakota, 1997).

2. Unauthorized Action- a competitor or disgruntled customer can alter website and it rejects services to potential clients or malfunctions (Ravi Kalakota, 1997)

3. Unauthorized Disclosure-when transaction information is broadcasted, hackers can cut off the transmissions to obtain customer's sensitive information (Ravi Kalakota, 1997)

4. Data Alteration-user names, credit card numbers and dollars amounts sent are all vulnerable to such alternation (Ravi Kalakota, 1997)

3.5. Data protection

Secure sockets layer (SSL) technology is used for serving web based communication. Web servers are constructed to work with a server ID, with the server automatically starting SSL. It protects communication channel between server and customer's browser. When SSL is activated and in combination with server ID, it starts supporting following components of secure online transaction:

• Authentication. It means that customers can validate the Web site is a real one not a fake. While customers are submitting confidential information, this bolsters its confidence for using (Ravi Kalakota, 1997).

• Message privacy. SSL converts all information into its bar code between web server and clients such as credit card numbers and personal data by using session key. Each session key used once during transmitting the session to consumer (Ravi Kalakota, 1997).

• Message integrity.   The sending and receiving computers organizes a code on the message content. A single character in the message content is altered en route, the decoding computer will generate a different code and make aware the addressee that its message is not appropriate (Ravi Kalakota, 1997).

4.0   Meeting the needs of Web site visitors

Before creating website, the company should make a far-reaching segmentation strategy about who is visiting to its site and a long-term view that goes further than an easy picture of site guests at a moment in time. After modifying the site content for assembling the desires, needs and preference of the site patrons, the company will increase customer approval, relationship and loyalty (http://hotelexecutive.com).

Attracting new customers and sustaining them is up to forms of website. There are some websites, an user enters once and never ever comes back to this site, because of bad design and content. It may be badly designed website or its background color is too bright and you will not be able to read what is written there. Also, design is not appropriate, no upgrading every day. For that reasons it should be carefully designed by web designers. Successful website included these features:

• Content
• Easy to use
• Every day update
• Good design
• Easy to assess
• Full of information
• Well structured
• Data security
• Linked with social networks like Facebook

J&R Electronics is a good example with thousands of clients. It is a mom-and pop shop with technical equipments and 30% of revenue come from its website. Its price is competitive, content is full of photos, videos, catalogs of products, they sell latest version of electronics. Customers chose J&R for its brand quality, customer service and leading-edge technology offerings (Laundon & Laundon, 2010).

Most people pay more attention to content, so the content of website should be reliable and accurate.

4.1 Understanding customers

The first key element of success in business is to know the customers' needs and wants. Understanding the demand of clients gives chances of selling more and targeting them with right offers. Moreover, prospective patrons persuade new ones and companies can sell more similar products for similar users. The businessmen can forecast future selling according to potential customers' demand and connecting customer management to purchasing can get better radically productivity (http://www.infoentrepreneurs.org/en/).

4.2 Absorbing about customers

Customers are a source of information and in order to know what they want you should make segmentation about their age, gender, income, likes, dislikes, and it lets you recognize your customers and their behavior. For opening business you should know this information for what industry they operate in and their size. Customers' ideas about the business' product and services help to increase productivity. From time to time the surveys and feedbacks should b taken from potential users, for instance what they like and dislike, why they choose this company and so on. If the business sells online, the company's website confines information automatically and collected data are accumulated by central database

(http://www.infoentrepreneurs.org/en/)

5.0   Finding and attracting new customers

Every business has its prospective clients and they are more profitable than other new comers. For being successful entrepreneur every individual should have the ability of recognizing its potential customer beforehand. These kinds of users differ from others through their purchasing size or managing account and salespeople should create friendly atmosphere with them, motivate to bring new customers to the business stay longer with them (http://www.infoentrepreneurs.org/en/). There are given the list of ways how to attract customers to the business:

1. Evaluate customers
2. Interests of customers
3. Improve customer experience, effective market
4. Find new customers

.1. Three theories will be basic for analyzing your customer:

• Who they are - the demographic information about customers like age, gender and it helps to organize the business size.

• Opinions-their thinking and believes about your company and product.

• Purchasing power- what they buy, when, how, where they buy and how much they afford for pay for your product.

By differentiating customers in groups you can attitude independently to them, for instance personalized product and services for dissimilar groups. Also, specific IT software supports you collected and analyzed statistics. For example, linking customer records to your accounting system makes it easier to see how profitable different customers are.

2. Analyzing your customers allows you to identify those who best fit your business priorities. These will depend on your strategy - for example, if you are launching a new product your aim might be to build sales as quickly as possible, whereas if you have cash flow problems you might value customers who pay quickly.

However, most businesses want customers who are as profitable as possible. Customers tend to be more profitable if they:

- pay full price without negotiating discounts
- place a small number of large orders rather than many small orders
- do not cancel or amend orders
- pay on time, without being chased for payment
- do not require extensive after-sales service

By analyzing your records you can assess how profitable each customer is. In some businesses, just a few customers are responsible for almost all the profits. Some of your largest customers might be among your least profitable. You may even find that there are some customers you would be better off without (http://www.infoentrepreneurs.org/en/).

3. More information about customers lead to more effective promote to them. You should make certain client get the right marketing messages, at the right time. For instance, the promotion should be in the type of text messaging, emails, or sponsored music events for younger customers 15-24 years old.

Sellers should decrease the prices somehow from their competitors for a while until new customers will be gathered. Also, Sellers should be able to up-sell with clearing up why a higher priced product would suit them better. You should have excellent communication skills and understanding customer's behavior. If the purchaser is buying a exacting product, you can tell which other products he may also need. Moreover, with the help of e-commerce software you can send "e-coupons" discounts to a special group of customers (http://www.infoentrepreneurs.org/en/).

4. Before finding new customers, the sellers should identify who is their important clients and then seek for new and similar ones. However, it is very risky; a change in one condition can badly affect others. For example, five large customers are from Russia, the inflation could increase and their orders will decrease significantly. Also, customers help to increase new and more developed products and services (http://www.infoentrepreneurs.org/en/).

6.0   Conclusion

To sum up, the Internet technologies is changing the atmosphere of the business very dramatically and with the help of it the businesses reach customers globally. For selling products and services internationally, the company firstly should create its own web site, chooses one of the electronic commerce type. By promoting and selling products by web site is more profitable and easy. In order to find and attract new customers the website should be creative, attractive and full of sources.

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