

Section – V

Role of ICT for SMES: eBusiness & Office Automation



Executive Summary

- **What is ICT?**
- **Importance of ICT in SMEs**
- **Role of ICT in the Digital Economy for SMEs**
 - Office automation
 - Productivity
 - Competitiveness
 - Skills Development
 - E-Business
- **Challenges for ICT adoption in SMEs in eBusiness**
- **mCommerce**
- **Applications of mCommerce for SMEs**

Authors

Ms. Dolly Bhasin is the CEO of a knowledge enterprise – SPH Consultants. She has designed and developed the award winning knowledge initiatives (Golden Icon Award, eGovernance 2005) for SENET, Ministry of SSI, GOI and Integrated Treasury operations, MP Govt. (Golden Icon Award, eGovernance 2007). She has over 21 years of experience in applying information technology to businesses

Mr. K. J. Singh, is a Director of Mobile Mantra Pvt. Ltd. He has headed companies as Director India Operations, COO, CEO for more than 15 years in IT industry. The views expressed in this paper are his own and not of Mobile Mantra. He can be reached at kj.singh@mobilemantra.com

Role of ICT for SMEs: eBusiness & Office Automation

Dolly Bhasin, SPH Consultants

Small Enterprises in developing countries can use Information Communication and Telecommunications (ICTs) very effectively to streamline business activities and create links with trade development partners across the globe. This paper deliberates the use of ICT to develop the connectivity, productivity and enhance the competitiveness of SMEs. It explores the multidimensional framework that combines three different dimensions of organizational change through ICT adoption - change in processes, change in content and reasons for change in SMEs.

Background

With the event of Internet technologies the ICT adoption in SMEs has taken a dramatic turn. Prior to Internet era, the office automation applications dominated the usage by SMEs.

In the pre-internet days, SMEs used ICT for office productivity tools like office automation tools, databases and standalone applications only. With the advent of LAN, these individual computers started to get connected and use of computers started percolating to the main line business activities. Applications for Payroll, MIS, Accounts and Human Resource management, etc. became an integral part of the SME business set-ups. Later the ERP systems, SCM, CRM, Financial Planning and Business intelligence have in some form been adopted by SMEs.

In the early stages of Internet adoption SME organisations used the access to the internet (www), followed by the use of relatively simple technologies (e.g. e-mail) to Send/receive and gather information. In the later stages they started to develop a simple static home page containing basic information about them. However, now the businesses have started to publish a wider range of information and make an attempt to market their products and provide some after-sales supports, through the web.

E-commerce deployment is yet nascent, currently allowing the users of the site to order and/or pay for products and services. Shopping carts and online catalogs are already in place and integration to various back office systems such as enterprise resource planning (ERP), customer relationship management (CRM) and integrated supply chain management (SCM) applications are slowly ready for take off.

ICT as an Enabler

The ICT can be the biggest enabler for the SMEs, when applied with careful evaluation and right implementation. The major ICT enablement in SMEs can be categorised in two areas -

1. Office Automation

Office automation delivers to the SMEs a means to support his day to day operations with ease. The ICT tools that can be used SMEs ⁽¹⁾ to perform better and faster are:

Computers: A computer on every desk is the first step that an SME enterprise needs to have to start taking the benefit of the technology.

Internet: Connectivity to the Internet is another fundamental building block for the SME. The Internet is not just an information resource, but can be a powerful marketing tool.

Internet enables the SMEs

- To reach out to potential customers, partners and competitors
- Getting access to industry directories and niche publications
- Search engines can be good, cost-effective marketing platforms.
- Provide email and messaging options at fraction of alternate communications.

Open-Source Software: Open-source software now creates an option for affordable solutions to SME's. The use of open source software (OSS) paves the way from expensive per seat based product-centred software supply towards new business approaches that focus on services linked to that software. This approach called ASP model is very useful and appropriate for SMEs.

Broadband: High-speed connectivity to the Internet and across an enterprise's offices is very critical for business. It helps the SME to get connected to a larger and use more of internet/connectivity at affordable price.

Wireless: Perhaps, the biggest visible technology revolution that is going to help SMEs is the proliferation of wireless networks. GSM and CDMA networks are making cell phones available to millions who were previously deprived of telecom services. SMS (Short Message Service) has already become a choice of communications for the SME on the move.

Instant Messaging: The other communications revolution that has helped the SMEs is the instant messaging. These direct online one to one interactions offer closure of deals amongst SMEs in real-time across locations through both voice and chat interfaces. The new releases of the instant messengers also support video via web cams.

Office Automation Software: Word-processing, Excel and Database applications on every desktop of the SME entrepreneur helps him to support his office operations smoothly. His presentation skills are enhanced by applications like power point. Calendar and Personal information manager enhances the personal productivity of the SME.

Small Business Accounting Software: These applications help SMEs to track the business transactions and help in managing the cash flow in electronic form.

2. E-Business

Use of electronic mediums for enabling business is e-business.

The word "**E-Business**" was coined by Prof. Nicolas Negroponte, to represent the shift from physical products to digital products and processes. For e.g. from print media delivered in paper form at the newsstand to digital information delivered via a website over computer networks.

E-Business = EC + BI + CRM + SCM + ERP ⁽²⁾

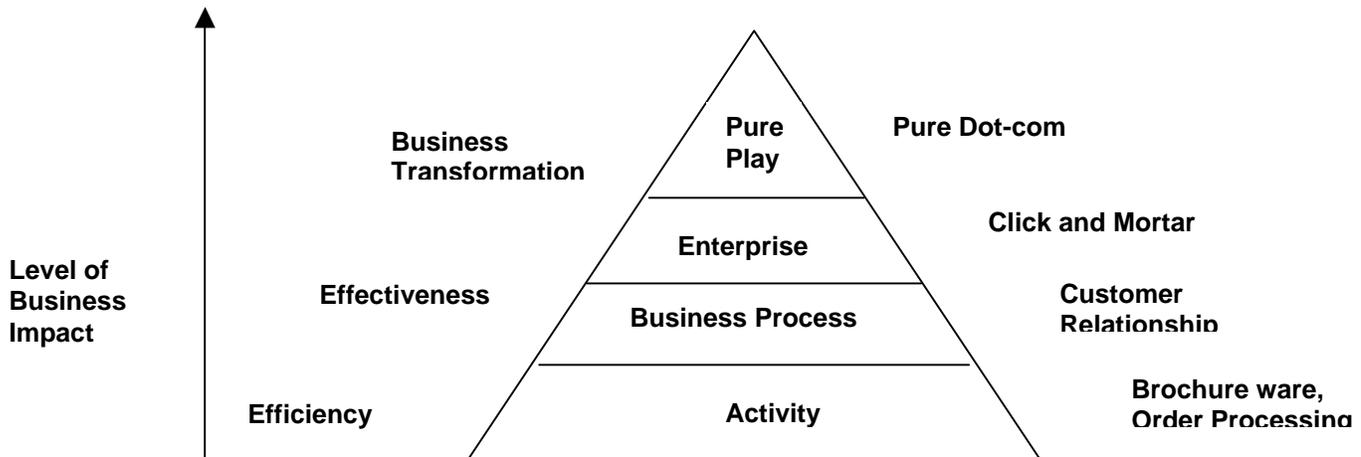
EC= E-commerce uses digital technologies such as the Internet and barcode scanners to enable the buying and selling process. In other words, e-commerce is about transactions. E-commerce involves distribution channels and e-tailing. Normally people confuse E-commerce as E-business, but in actual it is a sub-set of e-business.

BI = Business Intelligence refers to the gathering of secondary and primary information about competitors, markets, customs and more. The Internet is a good BI tool.

CRM=Customer Relationship management involves retaining both business and individual customers through strategies that ensure their satisfaction with the firms and its products. CRM uses digital processes and integrates customer information collected at every customer “interface point” – mail, telephone, Internet, web and direct. The result of these interactions is integrated to build a complete picture of customer characteristics, behaviors and preferences. The interactions of customer records are held in databases in electronic environment for effective CRM.

SCM=Supply Chain Management involves co-ordination of distribution channels to deliver products and services effectively and efficiently to customers. For e.g., when a customer fills up a form for ordering a product over the web, the instruction is passed to the warehouse, to pick up the product and ship it to the customer fast. Also, the inventory is reduced by one automatically, and if the inventory falls below the defined minimum level, requests new products for the warehouse to the manufacturing unit. These processes called integrated logistics are enhanced by Information technology.

ERP=Enterprise Resource Planning also refers to back office operations such as order entry, purchasing, invoicing, inventory control, etc. ERP systems allow organizations to optimize business processes while lowering costs.



E-Business can be approached in many different ways depending on the specific business processes that a SME company requires for its particular business context and strategy. The e-commerce approaches that are universally adopted by SMEs are:

1. Public relations
2. Company promotion
3. Pre/post sales support
4. Order processing; and
5. Payment management

Benefits of ICT for SMEs

Although companies in the SME sector utilise IT and e-business in their business, ICT also plays a significant role in the way that their product is produced, promoted and provided. Online channels have become key for marketing, communication and interaction with customers. A necessary requirement for such services is a powerful ICT infrastructure, such as a broadband connection between service providers and users. Whereas, the benefits of ICT in office automation are quite evident, we would try to examine the benefits that SME accrues from using ICT for eBusiness.

E-Business Benefits:

Power shift from Sellers to Buyers

Both individual and business buyers are more demanding than ever because they are just one click away from plethora of global competitors, all vying for their business. In the new environment buyer attention is a scarce commodity and customer relationship capital a valuable asset.

Increased Velocity

Change in digital economy is lightning fast. In the transparent environment of e-business, competitors know instantly what the others are doing and imitation is easy.

Death of Distance

Geographic location is no longer a factor when collaborating with business partners, supply chain firms and customers.

Global reach

Internet and web creates a borderless global economy where marketers can reach an incredibly larger number of people than with the traditional media. This creates challenges as well as opportunities to distribute products worldwide and provide support at lower costs and time.

New Channels

Buyers and sellers bypass the traditional intermediaries by creating new channels for distribution and marketing, through Internet and other electronic mediums.

Time Compression

With e-initiatives time is no longer a deterrent factor in communication between firms and stakeholders. Online stores can be open 24x7, and people can communicate asynchronously as their schedule permits. Time zones disappear for managers needing to collaborate with business partners, half way across the globe.

Knowledge Management is the Key

Marketers have better information about their customers, which they gather from the channels and third party sources. Enterprises gather this information and build databases about the consumer behaviour, buying habits and transaction records. This when interpreted through business managers and consultants lead to valuable knowledge, which can drive the business strategies.

Market Deconstruction

In the absence of time and space constraints traditional product bundling no longer holds. This is especially true when physical products can be separated from information with which they are associated. For e.g. traditional consumers visit an individual car dealer for buying a car, but in the digital arena, consumers may also visit an auto metamediaries to find information about all

brands of cars and gain referral to dealers with the best price. This structural transformation of markets opens the possibility for unlimited combinations of products and services worldwide.

Interpretability

Use of open standards in the software design creates systems, which will work together and interoperable.

Interdisciplinary focus

Marketers have to understand the technological capabilities in order to harness its power. The result is that the not only should know about how to market and reach the customer, but what kind of message should be delivered in which media and how to manage the demand-supply balance with the manufacturing unit. This requires multidisciplinary skills.

Intellectual Capital

Imagination, creativity and entrepreneurship are more important resources than financial capital. Intangible assets such as intellectual capital and knowledge draw investors more quickly than tangible assets. However, it takes marketing savvy to turn intellectual capital to profits.

Challenges for ICT adoption in SMEs in eBusiness

To make e-business more suitable for SMEs, there is a need for ⁽³⁾:

- Improving their technical and management skills: training and managerial change are key issues
- Making available appropriate e-business solutions for SMEs
- Addressing the high cost of ownership of ICT equipment
- Addressing security and privacy issues
- Making available SME-specific information on the uses of e-business, to help them in their investment decisions

A study ⁽³⁾ by European Union pointed out that, in addition to specific SMEs policies aiming to promote the use of ICT and e-business, SMEs need:

- a stable legal and regulatory framework, notably for cross-border trading;
- full liberalisation of the telecommunications market, resulting in lower prices for Internet access and improving the quality and speed of Internet access
- e-government services, which reduce companies' administrative overheads and thus create an incentive for enterprises to engage in e-business.

An e-assessment done for SME's by Mr. Pankaj Jain ⁽⁴⁾, SIDO, DCSSI concluded some major governmental interventions desired to promote ICT in SMEs:

- Legal and institutional framework for Facilitation
- Regulatory framework for telecom and internet
- Pricing structure for telecom and internet
- Providing information electronically
- Focus on implementation
- Connectivity in under serviced pockets
- Tax incentives
- Special projects
- Promote E-commerce portals
- Sub-Contracting Exchanges
- E-learning
- Offline training

Summary

To summarise, ICT helps SMEs in the areas of enhancing

Connectivity:

- Better and faster communications
- Global connectivity
- Networking
- Access to global markets

Productivity:

- Just in Time Production
- Knowledge driven
- Enhanced learning
- Separates the Information about product from physical product.
- Distribution and Logistics

Competitiveness:

- Creation of Virtual Value chain
- Supply Chain Management
- Bring Buyers and Suppliers together
- Faster Reach and Response
- Collaboration amongst small service providers to deliver larger orders

References

- (1) Rajesh Jain's Web log on Emerging Technologies, Enterprises and Markets
TECH TALK: SMEs and Technology, www.emergic.org
- (2) E-women: Business Strategies, E-enabling SME's, EDECAD, New Delhi, 2004
Ms. Dolly Bhasin, SPH Consultants.
- (3) Strategy paper for ICT Challenge in SMEs, European Union
http://ec.europa.eu/comm/enterprise/ict/policy/doc/com_2003_148_en.pdf
- (4) Indian SMEs: E – Assessment Report, EU Asia Conference on E-enabling SME's,
EDECAD, New Delhi, 2003, Mr. Pankaj Jain, SIDO, Ministry of SSI, Government of India.
- (5) Indian SMEs in Global Economy, Dolly Bhasin, www.sphconsultants.com/icsi

Mobilizing Your Enterprise – Business Applications

Mr. K. J. Singh, Mobile Mantra Pvt. Ltd.

Preamble

The continuous increase of mobile penetration worldwide has created an amazing opportunity for businesses to be connected with their target market on real time basis. Business applications, mostly for official and less likely for home use have now moved into a different space. You can now be online always, anytime and anywhere with your business or personal applications using a multiple usage digital device, which enhances user productivity while on the move. In today's competitive business environment, seamless access to information creates immense value for its users.

Large companies operating across the globe have their key executives on the move most of the time, which necessitates virtual office environment wherein they are connected to their core business systems on real-time basis. Devices such as Tablet PCs, PDAs, Blackberry, Symbian and Smart mobile phones and mobile networks (GSM, GPRS, 3G, 4G, WIMAX etc.) have enabled users to achieve the aim at reasonably low cost.

Enterprise Mobility Strategy

Through mobile technologies, companies have the potential to catalyze changes ranging from incremental productivity improvements to a radical redefinition of business processes. The enterprise mobile strategy comprises of three key elements:

Define Mobility Framework

Enterprise at corporate level needs to define business case for the mobility, policies and guidelines for usage and the suite of applications, which need to be mobilized. Detailed architecture covering the technologies, digital devices and the transport layer also needs to be part of the strategy document.

Strategize Mobile Application and Device Management

There has to be a definitive strategy for application support and device management that outlines how the corporate IT department would manage mobile devices and support applications remotely.

Plan Mobile Application Security

Define security guidelines that outline what processes and technologies to be used to secure the data on devices and the transport layer. Security is key to the mobility strategy as mobile applications work on wireless communications over public data networks.

There is however a word of caution, though mobilizing enterprise applications requires mapping of the existing processes, there might be a need to re-engineer the business processes. Hence, it is prudent to adopt pilot approach and select a business process that requires minimal changes, has high visibility and quantifiable gains, if mobilized.

Enterprise Mobile Application Categories

Enterprise mobile applications are broadly divided in two categories, viz. Out-of-the-box and custom. Out-of-the-box applications include typical applications of email, unified messaging, personal information management (PIM) with collaborative scheduling, and remote timesheet entry. There are several out-of-the-box solutions for field sales and field service management but they haven't caught the fancy of users due varied reasons. Typically these applications are available from mobile service providers, device makers or third parties and these are often available as hosted solutions.

Custom applications are specific to a business process or an industry. There are wide-ranging applications in this space covering all aspects of business like marketing and sales, field service, customer relationship management (CRM), asset tracking, and supply chain management (SCM). Most of these enterprise level mobile applications need to be integrated with the backend line of business systems or an ERP to leverage maximum value through real time connectivity.

Typical Enterprise Mobile Applications

Enterprise mobile applications provides its users flexibility to carry out online activities from wherever they are and whenever they always. The useful mobile solutions for everyday business processes and issues are:

- Push your Web Content to Mobile / Hand-held devices.
- Give mobile workers access to files and online services.
- Provides an efficient solution for field salespeople who need to perform their tasks quickly and productively.
- Enable field service engineers to react quickly to customer needs and update vital information in Real Time.
- Empower delivery personnel with the tools to service customers and manage relationships.

On-Demand Email and Personal Information Management

Typically On-Demand Email and PIM Enterprise solution is designed to provide an end-to-end secure corporate Email management with mobile or handheld devices.

The solution is hosted and managed by the corporate IT staff. Corporate data is accessed directly from the Email data store while maintaining seamless integration with corporate network, all behind the corporate firewall.

Enterprise users have complete liberty to use their mobile devices interchangeably with their desktop based Email application and expect complete access for old and new messages, with attachments, across their corporate network with end-to-end security.

Enterprise Server interfaces with corporate Email store and can be used with:

- Microsoft Exchange
- Lotus Notes
- Novell GroupWise
- Oracle Collaboration Suite
- Any IMAP4 or POP3 compliant mail server

Users can also perform the following activities on their personal information:

- Synchronize contacts
- Access to enterprise-wide relationship intelligence
- Look-up or create contacts
- Automatically create relationships with your contacts

Mobile Field Force Automation

Mobile Field Force Management Solution allows enterprise to extend business-critical information to mobile users in real-time enabling the execution of field activities and efficient management of remote employees. The employees synchronize their mobile device in the beginning of the day wherein they are provided the list and route for the scheduled tasks. Employees can further access all the customer information thru over-the-air synchronization with the backend LOB systems to ensure prompt and efficient service. On resolution of the complaint, the engineer can file an individual or consolidated service reports from the field, which enhances the efficiency and economy of operations.

Service task can be scheduled / re-scheduled as per priority from the back-end and you can monitor all these from back-end in real-time. Field service executive can make mobile query for parts etc., renew an AMC or can capture customer signature in the handheld device.

Mobile Sales Force Automation

Mobile sales force automation application enables field sales representatives to plan and automate pre and post-sale customer engagement and consultation activities. Primarily a sales activity management and reporting application, it assists field sales representatives in contact management and scheduling sales efforts whereas their managers can dynamically launch promotions, incentives and help resolve customer complaints

This could act as a sophisticated planning tool allowing field sales representatives to more efficiently manage his/her customer appointments, create customer profiles and tailor each sales call to each customer. This results in improved customer service and more productive sales calls.

Mobile Van Sales and Delivery Management

Provide your van sales delivery personnel with the tools needed to quickly and efficiently deliver orders using a mobile handheld device, accessing backend LOB / ERP data anytime, anywhere. This enhances the customer satisfaction and field sales staff efficiency through mobile delivery management software. Mobile delivery management software allows for quick order booking with customer signature capture, delivery, tracking, payment collection and inventory management, all from a handheld mobile device.

Benefits

Today's competitive work place demands its key personnel to have a virtual office wherein they are connected to vital corporate information on real-time basis. While Internet contributed quite a bit in the endeavor, mobility has provided the unhindered last mile connectivity. By introducing mobile business solutions and extending the enterprise, business-critical data contained in corporate portals and applications is made available to its corporate citizens on their mobile devices. This helps in:

- Providing executive management with a dashboard with key EIS information allowing them to monitor and control operations while on the move.
- Providing field sales and service personnel with real-time access to customer related information in Sales and Field Force Automation applications.
- Improving the business processes, scheduling and workflow management for enterprises with field force or executives on the move.
- Increasing productivity by providing access to real-time server-side information to enable on-the-spot decision-making.
- Improving employee satisfaction and increase productivity by providing continuous, real-time access to HR and finance self-service functions.
- Enhancing customer relationships by increasing the time spent by employees and customers.

References

- 1 <http://www.ianywhere.com>
2. <http://www.extendedsystems.com>
3. <http://www.jataayu.com>
4. <http://www.newspage.com.sg>
5. *Broadbeam*
Largest and oldest mobile applications company was which is now acquired by mobileaware.com
6. *Orsus from Israel at <http://www.orsus.com>*
8. <http://www.derdack.com>

Typical Enterprise Mobile Solutions Deployment

