

EMPOWERING BUSINESS ORGANIZATIONS THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

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Abstract

Over the past decade, commercial enterprise businesses had been compelled to re-look at the role of information and communication era (ICT) as a assist tool within the agency and receive that it has become a major driving force for business trade. E-business is now not non-obligatory and has emerge as the preferred mode of running no longer simplest in financial services, publishing and retail wherein we have already visible fast and worthwhile advancement but anywhere enterprise is conducted. Records conversation and era (ICT) refers to a powerful collection of elements which encompass pc hardware, software, telecommunication networks, workstations, robotics and clever chips.

This paper has a look at how ICT and e-business could be use to empower an enterprise to achieve their set desires. The paper discusses issues in enforcing e-commercial enterprise, ICT and e-enterprise, strategic evaluation for e-business solutions and levels for empowering the corporation via ICT and E-business, and end with discussion of ICT and e-commercial enterprise as critical equipment in modern-day enterprise.

Key words: Information Communication and Technology (ICT), e-business, financial services networks, workstations, robotics, element.

INTRODUCTION

Statistics conversation and technology (ICT) refers to a powerful collection of elements which consist of computer hardware, software, telecommunication networks, workstations, robotics and clever chips.

This paper look at how ICT and e-business will be use to empower business enterprise. The paper discusses issues in imposing e-business, ICT and e-enterprise, strategic analysis for e-enterprise answers, and levels for empowering the organization through

ICT and e-business and end with dialogue of ICT and e-commercial enterprise as important gear for empowering contemporary business corporation to achieve their goal.

ISSUES IN IMPLEMENTING E-BUSINESS

Organizational issues

As is probably anticipated, putting structures in location throughout establishments requires consideration of a much broader variety of human and technical factors— and therefore greater management planning—than managing the desires of a single enterprise. A simple model illustrates this. If a unmarried working figure has one infant and that infant attends a single faculty, there are issues of wherein and while to buy uniforms and package, the way to set up delivery among domestic, faculty, outside venues, and buddies' homes, and the want to devise holidays and depart around the faculty yr. while a own family has running mother and father and several children attending special faculties, no longer always inside the identical country, the problems of powerful control emerge as extra complex. Several uniforms may be wished, those are not exchangeable across children and the faculty timetables and calendar can be extraordinary. The variety of issues, tools required, and want for coordination is substantially extended (Burn and Hackney, 2000).

As firms searching for to increase their reach and/or effectiveness through the use of alliances, partnerships and an increasing number of near approaches of operating together, this collaboration calls for the established order of carefully tied communications and records systems among the establishments, inclusive of but not restricted to extranets.

Collaboration requires the decision of a extensive variety of strategic, social and warfare management regions. earlier than an interorganisational working gadget (IOS) may be put in area as the premise for an e-business, the price of communications and the price of the technology wanted should be justifiable to all events, whilst any implementation have to rest on congruence with lengthy-range strategic planning. An organization may also have created a strong business case for its very own generation and might have stayed on the right track with its strategic plans, however forming alliances or partnerships modifications its panorama of opportunities and strengths, and radical rethinking about this landscape may not be avoidable (Deise et al., 2001).

in opposition to this background, a shared approach to warfare management might also need to be formalized, as present implicit strategies won't suffice. you may recognize that the approach of resolving a battle in a organization founded, owned and run through a single dynamic man or woman will be far distant from the ones employed through a

publicly owned multinational with partly impartial sub- sidiaries. Even inside a unmarried language organization or united states, many business models may also exist. Such troubles advantage even more importance as organizations of all sizes recall forming transnational or worldwide alliances. Conflicts and disjunctions call for taken into consideration investigation and resolution, lest unspoken distinct assumptions break collaboration unnecessarily (Karnel-silver, 1998a, b).

Even regions of agreement may also want to be plotted: companions might not have the same assets to throw at a venture, they will have broadly one of kind perspectives on the appropriate tiers of obligation inside their reporting systems, and unstated beliefs inside the commercial enterprise and social value of era will have an effect on implementation. Introduced on to these troubles are the ones relating to the generation to be deployed inside any e-business? Any discussion of requirements, equipment, networks and so on will fast throw up the reality that generation isn't impartial. What's taken for granted in one business enterprise —a perceived fee of a networking generation or adherence to proprietary standards—may be disregarded out of hand in another. The choice among proprietary EDI and net-enabled EDI alone is one calling for cautious attention and mutual information on the outset of any e-enterprise venture. The value of the resulting desire is not likely to be symmetrical across companions, with a concomitant want for battle decision —and so it is going on (Davenport, 1997).

Technical issues

Agencies these days spend an increasing percent in their IS/IT budget on IOS, this is, packages extending beyond agency barriers. As we have visible in Block One, those usually create a complex net of relation- ships among a agency, its partners, clients, providers and its markets. IOS will develop due to the want to integrate disparate organizations or people within the identical IT-enabled methods, irrespective of formal obstacles. simply as manner control methodologies have a look at a system as a hard and fast of associated activities (independently of functional barriers), facts generation now encourages us to remember and integrate complete cost chains independently of geographical or organizational boundaries (Moore, 1997).

Traditionally, those integrations known as for high-quit, specific and often proprietary technologies (inclusive of EDI systems, cost-introduced networks and unique in- residence trends). New technology are presently smashing the price of building such inter-enterprise systems, thereby providing smaller organizations with the opportunity to derive big business blessings from crossing organizational obstacles to encompass their customers, suppliers or partners in their tactics.

These new technologies are much less complicated to stand and use, therefore stressful less within the manner of professional personnel to control them. The cost of possession of these systems is likewise reducing, thanks to widespread-based patron-server technology and open networks replacing mainframe-based, often proprietary technology. The characteristics of inter-enterprise exchanges are the (noticeably) few companions involved however the high significance of the information exchanged. The required reliability and safety of the hyperlink is proportional to the importance of the link to each companions' groups. As a widespread rule, one have to remember the security and reliability necessities of the move organizational IT systems same to the ones of internal operational systems. This indicates the IT structure assisting the IOS should offer cozy connections (authentication, get right of entry to manage, cryptography) reliability (commit-rollback type of connections, restart after failure, etc.) accountability, and service that is monitored each day, 24 hour a day (Kaplan and Norton, 2001).

Proprietary technologies

Lotus Notes is the application that helped popularize the time period groupware: that is, pc equipment supporting people paintings collectively and speak successfully across time or space barriers. Although there are competitors, it is still the primary and main tool in this location and illustrates the inter-corporation aid technologies. There are possible approaches of looking at groupware: commercial enterprise-orientated and technically-orientated. Business users typically see Lotus Notes as a set environment which improves their get admission to data (through shared replicated databases) and helps teamwork alongside (through communiqué capabilities and workflow). For the technically minded, Lotus Notes can be described in terms of its components (Tapscott, 1998).

1. A dispensed file database (a document being a shape containing text, photos, sounds, videos or any other object)
2. A improvement environment, allowing customers to construct programs (among them workflow programs)
3. An e mail device, well included with the rest of the system safety mechanisms, consisting of encryption, authentication and access manipulate
4. A replication mechanism, to synchronize databases on remote websites
5. A set of interfaces to external applications (email, databases, and so forth.)
6. A platform-independent GUI.

It must be noted that what attracts most customers to Lotus Notes are the combination among most of these additives. This software offers a unbroken operating environment in

which the technical components are hidden. Lotus Notes has been used to construct groupware environments, to guide teamwork via shared report databases, dialogue databases, workflow systems and not unusual project control. It has also been used to build precise applications together with customer support, documentation systems or workflow management systems.

Non-proprietary internet technologies

In a proper experience, the internet isn't always a set of technology however a wide-region community made up of thousands of web sites around the arena. Nevertheless some technology had been created especially for the net and is specifically used in that environment nowadays.

Technology in use on the net include communication, resource sharing and navigation tools. Verbal exchange equipment are specifically e mail and discussion forums (Usenet information); resource sharing includes report switch (FTP) and faraway terminal emulation (Telnet); navigation gear encompass Gopher (a text-based totally hypertext system) and the world-wide net (WWW), a image-orientated hyper-media system. The net has been a main driving pressure behind the explosive growth of net use. The net today is the primary the front-end tool utilized by internet and on line-provider customers, integrating all other tools below a common umbrella. The internet seems to the consumer via a graphical the front-end viewer, permitting him/her to seek advice from multimedia documents saved on servers round the sector. These documents can consist of hypertext links pointing to other documents at the identical servers, or on other servers. Popular servers at the net consist of displays of groups, electronic catalogues, information database services and gateways to present offerings.

Open technologies and convergence

One essential distinction between the 2 units of technologies presented earlier than is the openness of every environment. Lotus Notes can be considered proprietary albeit open surroundings. The technology related to the internet are most often non- proprietary (having usually been built by way of volunteers and located in the public area), although commercial carriers at the moment are regularly taking up. in the context of rapid-evolving technology, being proprietary is occasionally a bonus, as it permits a corporation to impose requirements and provide advanced capability. That is the case in regard to the security and reliability of the Lotus Notes surroundings, compared to internet technology.

As such, it flawlessly serves the want of inter-business enterprise systems, which demand inherent safety and monitoring.

Security issues

Technical issues of security stand up for anyone seeking to put into effect an extranet. There have to be communication with outsiders, but this should be limited— troubles of getting admission to manipulate, confidentiality and authentication are past the scope of this unit, yet will want to be addressed. While the net technologies had been designed to be sturdy, reliable, inexpensive and go- platform, they were no longer designed with high safety in thoughts, and approaches of addressing this omission are below development, albeit hampered by way of governments which agree with they've a proper to eavesdrop on communications.

Managerial issues

Technological problems are hardly ever the most effective or even most important motive for e-enterprise screw ups. Failure is a long way much more likely to stand up in which there was a lack of know-how of the managerial, social and cultural problems involved and no clear e-commercial enterprise approach.

With a view to develop such techniques, control wishes to review the subsequent:

1. Has there been a clear identity and evaluation of business opportunities for e-business (intranets and extranets) looking at clients, providers, competitors and new entrants?
2. Has the brand new e-commercial enterprise solution been 'bought' to all customers?
3. Has there been appropriate training and schooling? Do employees have a feel of ownership?
4. Is there an assessment of the proper technological infrastructure (considering things like faraway or global access)?
5. Have all the costs been considered and reviewed in opposition to blessings (go back on income may be taken into consideration in more depth in Block 8)?
6. Have all the safety and control problems been identified?
7. Have all components of implementation been completely evaluated and the quality solutions— in-house, specialists or outsourcing— been agreed upon?

A primary trouble is the evolution of e-business offerings once they're first created. it's far not often possible to foresee all opportunities and weaknesses that can subsequently

emerge from a brand new or changed device; consequently staying flexible is the name of the sport. while encouraging companions and clients to sign up for the IOS, whilst discussing the carrier with customers, when calling for comments and imposing adjustments, agencies ought to emphasize flexibility. Although these technologies can, and must, serve to guide a approach, it is possibly that new strategy options will emerge from possibilities uncovered by pilot initiatives in those areas. Such surprises come from the problem of making plans the final use of very new technology whose capability users cannot are expecting their call for an unknown product or service (Tapscott et al., 1998)

Making the business case

Because extraordinarily few extranets produce a coins drift that may be diagnosed, effective strategic making plans and making the commercial enterprise case for using the sort of machine typically is predicated on identifying regions where savings will waft from an extranet. The subsequent tick list may be used to begin company wondering within the right route (Seybold, 1998):

1. Reduced paper cost: digital documentation can be posted extra unexpectedly and at a lesser price. Data- heavy agencies are capable of quantify those charges easily.
2. Removed private network costs: big financial savings are viable where non-public networks may be dismantled or supplemented. When get entry to to the internet is extended and moved.
3. Technique performance: Workflow remodel is promising vicinity for savings; companies can quantify such regions as automated ordering, reduced transmission time of records, and so on.
4. Outsourced functions: rapid and inexpensive communications can permit for the outsourcing of intermittent or time-established projects; collaborative extranets make this route attractive.
5. Decreased customer service fees: If clients can discover the solutions to their own troubles at a time in their choosing, then body of workers time, workplace area and confined provider may be largely replaced through web websites and database get admission to.
6. Decreased phone and fax charges.
7. Decreased inventory: supply chain extranets can lessen inventory protecting instances and garage prices. Supply chain control is confirmed in lots of fields to dramatically improve cash float at the same time as imparting better service.
8. Reduced procurement time and value: A secure internet- based totally order gadget, in all likelihood mixed with electronic delivery of associated documentation, can keep cash.

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9. Faded schooling fees: on line training structures are every other supply of savings.
10. Extended existence of legacy systems: In location of replacing legacy structures, many groups are building web interfaces to increase the useful existence of antique systems.

The aforementioned are quantifiable—those arguments may be used to gain while arguing for other, much less- without problems quantifiable advantages to be anticipated from an extranet.

Those are valid, even when the driving pressure may additionally in reality be such intangibles as constant real-time access to statistics, an extended information pool, satisfied customers and partners, retention of satisfied body of workers, quicker time to marketplace, and so on. Turban et al. (1999) classify the advantages from extranets beneath five headings:

- a) Greater verbal exchange
- b) Productivity upgrades
- c) Enterprise improvements
- d) Value reduction
- e) Statistics transport

Now not all extranet programs will offer all of these advantages, but the agency needs to focus on which of those is the maximum vital for the meant strategic path of the organization and how this may affect the corporation personnel, their customers and their suppliers. The company also wishes to pick out how this can provide a sustainable competitive advantage within the electronic market.

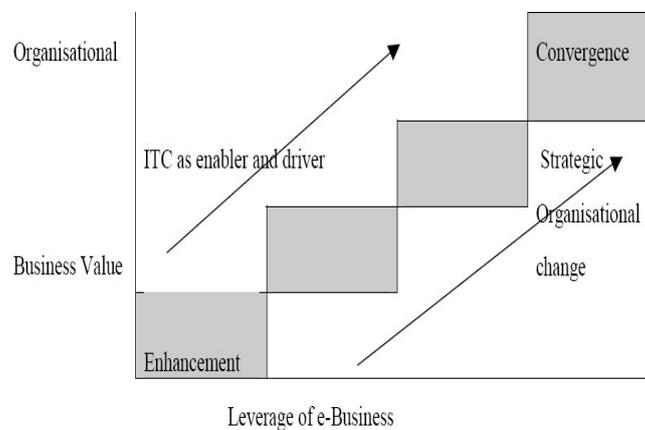


Figure1: Empower E-Business

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AND E-BUSINESS

Over the last decade, organizations have been compelled to re-look at the role of ICT as a support device in the enterprise and realize that it has become a primary driving force for enterprise alternate. E-enterprise is now not non-obligatory and has come to be the same old mode of operating no longer most effective in economic offerings, publishing and retail wherein we've got already visible speedy and profitable development however everywhere commercial enterprise is performed. E-commercial enterprise is essential to business approach and technique execution, but new standards of value require executives to re-examine strategic methods and ways thru which they are able to take advantage of the power of e-business. A landscape of e-enterprise trade that may be used to redefine corporate method in preference to simply as a tool to re-engineer and improve procedures. This landscape encompasses 4 levels of exchange.

- i) Use of ICT to beautify income or buying channels through some form of e-trade.
- ii) The aforementioned degree is followed by means of the utility of ICT within and throughout fee chains, inevitably main to enterprise transformation as
- iii) Networks of companies are fashioned via e-enterprise.
- iv) Subsequently, there will be a convergence wherein many companies come together and work in the equal e-space.

The reason is illustrated with the diagram in discern

As businesses circulate from left to proper throughout this panorama they are probably to advantage introduced cost but also to come upon a great deal extra danger. Empowering e-business is far less than it's far assumed to be approximately technology application, far extra about equipping the folks who use it with the business competencies to make their commercial enterprise lives greater efficient and the organization more successful. Organizations moving via those tiers will be looking to make upgrades in sales enhancement, price reduction and courting management.

STAGES FOR EMPOWERING THE ORGANISATION THROUGH ICT AND E-BUSINESS

Stage one: Channel enhancement

Normally organizations will appearance to ICT to beautify promoting or shopping for channels. Those who engage more often than not in B2C trade will possibly provide priority to their sell side to generate increased sales, better control client relationships and reduce expenses. This is mainly real of the dot-com companies that typically have

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negligible supply chains and which are pushed through a need to benefit marketplace proportion unexpectedly.

Businesses that interact ordinarily in B2B trade will tend to provide precedence to lowering the prices of selling, shopping for, or each.

Elevated revenue and enhanced client relationships are bonuses. B2B e-commerce consists of the creation of:

1. E-procurement structures for purchasing non-production items
2. Digital channels to hyperlink distribution networks extra tightly.

Stage two: Value chain transformation

Having analyzed your organization's fee chain, it is now time to observe how you could combine your cost chains and facts structures extra carefully with the ones of providers, logistics vendors, distributors and stores to maximize efficiencies and decrease expenses. In a mature nation, cost chain integration allows businesses to percentage real-time making plans, price and production facts between organization aid making plans (ERP) structures consisting of SAP. Such integration allows for the advent of a 'completely enabled extraprise,' a time period used to characterize a prolonged agency which includes the organization and its price chain companions. The predominant choice that the company has to make at this stage is to pick its most powerful and strategic partners and determine a way to hyperlink with them.

Let us remember a case where a organization employs a



Figure 2. The cell value chain.

huge sales force working from one of a kind department workplaces throughout Asia. They source products from a large number of manufacturers in mainland China in numerous extraordinary provinces and at some stage in India. The headquarters is in Hong Kong and all monetary, buying and income approaches are routed via the HQ. These busy communication channels reason long delays in managing transactions. The organization has a centralized laptop machine linking to the department workplaces and now desires to increase this machine into their suppliers in China and India. They nonetheless, but, assume delays among the inbound logistics (order processing from sales pressure and product procurement from suppliers) and outbound logistics (delivery of products to customers). One apparent technology which is probably applied is mobile era. Imparting the income pressure with hand-held computer systems can permit less difficult float of facts across the whole community, as shown in determine 2.

Stage three: Transformation

As businesses collaborate alongside their cost chains, the nature of the enterprise begins to alternate as enterprises decide to outsource a number of their conventional functions and focus best on their center talents. The term 'going to market' will not be defined as the way a organization enters the market however alternatively it will characterize the way an included organization of organizations creates a set of cascading values to transform the marketplace right into a network of value companies. At this level, businesses will make a aware attempt to orient their techniques towards turning into understanding-primarily based or physical goods-based totally companies. This is not commonly a whole transformation however rather an orientation in the direction of one or the other. Knowcos will focus on building manufacturers, shooting ownership of the purchaser-cease market courting, and investing in knowledge-based totally center talents such as advertising and service or product improvement. They will well extend into supplying purchaser knowledge control offerings to other groups of their market. Phycos turns into hubs of processing expertise. Their achievement can be based totally on pace, fine and shipping. So what version should a organization adopt, and how will they put together for this modification?

Stage four: Convergence

Convergence is the approaching collectively of businesses in unique industries to provide goods and offerings to clients and is as much a function of deregulation and globalization as it is of ITC enabled e-commercial enterprise models. An instance is the merger of AOL and Time Warner. Virtual commercial enterprise networks might be the ultimate result of

an e-enabled economy. These e-markets could be differentiated via the services they provide and may be continuously creating new services based on their digital assets. On this digital international the enterprise that owns the client courting and the consumer knowledge will be king. These demanding situations have to be diagnosed via businesses wishing to be triumphant and prosper within the twenty first century and some primary guidelines need to be borne in thoughts.

E-business employs disruptive generation. it is able to both beautify and disrupt the price chain by way of changing interactions among organizations. E-business achievement isn't always approximately technology; it's far about organizational trade management and management. E-commercial enterprise and e-markets will become increasingly complex. The agency that survives can be a expertise-based, approach-targeted corporation.

CONCLUSION

This paper identifies four ranges for empowering enterprise employer thru ICT and e-commercial enterprise. Typically a company will look to ICT to enhance selling or shopping for channels. people who have interaction more often than not in B2C trade will in all likelihood deliver priority to their promote aspect to generate increased sales, better control purchaser relationships and reduce expenses. Having analyzed your organization's cost chain, it's now time to take a look at how you can combine your cost chains and records structures extra carefully with those of suppliers, logistics companies, vendors and stores to maximize efficiencies and decrease prices. As groups collaborate alongside their value chains, the character of the enterprise begins to change as companies decide to outsource a number of their traditional functions and cognizance best on their middle capabilities. The term 'going to marketplace' will no longer be defined because the manner a enterprise enters the market but rather it'll characterize the way an integrated institution of groups creates a set of cascading values to convert the marketplace right into a network of value carriers. Convergence is the coming collectively of groups in exceptional industries to offer items and offerings to customers and is as a great deal a function of deregulation and globalization as it's miles. ICT enabled e-business models. For all the levels to be completed there's need for ICT in any other case all kinds of automation that's the backbone of e-commercial enterprise will no longer be feasible.

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