Virtual Desktop Infrastructure: A Reachable & Reimbursable Innovation to Increase Business Efficiency

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\textbf{ABSTRACT}

Growth to global generates new prospects for business development, as well as new challenges. One of the most widespread challenges is the ability to create new products and services in accordance to diverse customer needs and requirements, as well as implementation of new technologies in future lines of products. Consequently, business houses struggles to achieve greater level of cross-functional integration within the interface, by overcoming barriers to integration, and improving the quality of internal services by utilizing computer based Information Systems (IS). The role of IS in supporting cross-functional work environment is growing, thus business houses of all size make investment in IS. Nonetheless, these investments very often fail or not bear expect results, due to lack of alignment of the investment with the business. The existing work routines turned out to be inadequate to maintain international expansion and growth. Therefore, the Business house realized a need to isolate and eliminate them, and further foster the cross-functional integration and information flows within the interface by implementation of a computer based Information System. The comparison made it possible to indicate areas for potential future improvements. The proposed change needs aimed at enhancing the internal customer satisfaction. The proposed functionality corresponds to the current, as well as anticipated needs of the interface that has been derived based on requirements of the actors to fulfill goals and satisfy organizational processes.

\textbf{KEYWORDS}
Word processing, Spreadsheets, Virtual Desktop Infrastructure (VDI), Internet Messaging (IM), Office Communication Server (OCS)

\textbf{1. INTRODUCTION}

Things are varying swiftly as the world is moving ahead. In this progressive world people are using advanced & sophisticated machines to do their work. Computer is the foremost advanced machine that people use to do their work. This particular machine is used in every field of life. Advanced techniques are used with help of computers to diagnose dangerous diseases. Advanced manufacturing techniques are used with the help of computers to manufacture the products. Computers are extensively used in the field of engineering.

In modern business environment computers have special importance. A huge amount of time is saved due to multitasking. In business terms time is money, so if we can save time we can save money as well. Due to multitasking the costs of businesses have reduced. Thus, the entire world is fully dependent on computers. Due to this factor demand of computers has been increased.

With the advancement of technology many applications are evident for the Business Technology. The advancement of technology has opened up newer fields for the Business development. One such fields, which is having tremendous potential and fall under the broad preview of Computer, is virtual desktop infrastructure, may be the tool of Tomorrow.

\textbf{2. HOW COMPUTER FACILITATE BUSINESS}

Every area of business has felt the impact and worth of computers. Banks, insurance companies, manufacturing firms, retailers, utilities, government agencies, airlines, accounting firms and departments, securities firms and stock exchanges, transportation companies, all have found important uses for computers. Within a business organization, virtually every department uses the computer as an indispensable tool. In thousands of offices, the computer reduces the costs and time involved in written communications.[1]

\textbf{2.1 WORD PROCESSING}

The spectacular increase in written communications coupled with uprisng costs create a need for more efficient methods of handling communications. Word processing provides the solution to this problem. Word processing is the use of computers to store, retrieve, view, edit, and print various types of documents. By typing information on a word processor instead of on the traditional typewriter, the user can easily revise sentences, check spelling, correct errors, and print out individual letters or reports as needed. Personalized letters designed to respond to customer inquiries or to remind credit purchasers of overdue accounts can be created by combining stored sentences and paragraphs. Although many firms use special-purpose computers, called dedicated word processors, designed exclusively for this purpose, desktop and laptop computers are used as word processors. This is made possible through the use of such special software packages as Microsoft Word and WordPerfect.[2]
2.2 SPREADSHEET ANALYSIS

The presence of a microcomputer in an executive's office is almost a guarantee that the manager uses electronic spreadsheets as decision-making aids. Electronic spreadsheets are special computer software used in answering "What if?" questions. They are the computerized equivalent of a manager's work sheet. The electronic spreadsheet, like its paper counterpart, is a grid of columns and rows that enables the manager to organize information in a standardized, easily understandable format. Spreadsheet eliminates the tedious assignment of recalculating and revising figures by hand [1].

2.3 PRESENTATION TOOLS

These tools provide facilities to incorporate images, text and graphics in slideshows. These slideshows can be displayed on-screen by the presenter for work presentations. As the owner of a business from home, you may need to make presentations about your products or services to your clients. Presentation tools are largely used by business proprietors to exceed client expectations and requirements in order to gain product orders. The slides can also be employed for web casts to reach a larger audience of the target customer base [3].

2.4 OTHER BUSINESS APPLICATIONS

Computers are used everywhere in business from marketing research to product design for eg.

- Accounting
- Customer Interaction
- Scheduling
- Communication
- Websites and Advertising etc

In a nutshell, if one can say, it is Tremendous. Most of the Businesses today eat, breathe, live, see and do everything else thru or around computers. For example, consider - can a business stand without having a computer to send a small piece of mail to its client. The Answer is a Big No. More or Less, all businesses need it. Computers and computer networks act as the central nervous system of today’s enterprise. Today's regular business people are not just relying on them even they are directly administering, monitoring, and configuring them. While IT staff with specialized skills may focus on application development, integration, and support, today’s business professional requires information technology knowledge to navigate and operate IT systems, to design, customize, and test systems for competitive advantage, and to seek out and identify new solutions that can transform their business[4].

As computerized and electronic equipment becomes smaller, more efficient, and less costly, small businesses and individuals are increasingly able to purchase such items. The result has been a rise in the number of people working at home, in the field, or using their cars or vans as portable offices. Such developments include laptop computers, cellular phones, electronic mail, and fax machines. These give the executive the opportunity to maximize time both inside and outside the office. In short, the separation between work and home is growing less distinct [1].

Enterprises today are continually looking for ways to provide business and operational innovation that can increase their productivity, flexibility, and agility, while better serving their users and lowering costs [5]. Thanks to the growth of technology, computers and the Internet, new methods have been developed for processing everyday business activities easily [6]. The trends are shifting again with the availability of free web hosted applications such as Google Apps, Microsoft Online Services, Salesforce.com, & many more. Many IT executives looking for opportunities to reduce the cost and increase the security of their desktop environments are evaluating virtual desktop infrastructure (VDI) technology. [5] VDI solution provides a collaborative experience of unified communications to meet the business communication requirements by ensuring seamless connectivity. VDI solutions help businesses to easily connect customers, employees, suppliers, and business partners, thereby increasing business efficiency and make business critical decisions. Businesses can cut costs on Desktop Infrastructure charges and enhance employee productivity by effectively integrating instant messaging (IM), presence awareness and web conferencing.

3. ADVANTAGES OF USING VDI

VDI can significantly enhance business efficiency, resource utilization, and reduce operational costs.

3.1. Proven cost savings: Free or paid web-based messaging and collaboration apps require no hardware or software and need minimal administration, creating tremendous time and cost savings for businesses.

3.2. More storage than the industry average: Each employee gets more than average storage for his/her data, so that they can keep important messages and find them instantly with built-in search.

3.3. Mobile email, calendar and Internet Messaging access: Several web-based options for accessing their information while on the go, employees can be productive with VDI even when they’re not at their desks.

3.4. Approximately 100% uptime reliability: It has been guaranteed that VDI will be available at least 99.9% of the time, so employees are more productive and so owner of business can worry less about system downtime.

3.5. No Interruption in Service: Business data is simultaneously preserved in multiple secure data centers. If one data center is unable to serve one’s requests, the system is designed to instantly fall back to another data center that can serve one’s account with no interruption in service[7].

3.6. Improved Business Competence: VDI gives the user the ability to see online availability of other users thereby reducing the cost of unnecessary phone calls. OCS provides ability to employees to share information quickly thereby reducing the time and cost of traveling to meetings. The real-time communication enabled through...
data collaboration using file transfer, application/screen sharing and white boarding ensures seamless communication interchange between employees. These features provide communication mediums to enhance responsiveness, decision-making, and customer service that further increases the business competence and productivity.

3.7. Sudden Comeback and Decision: Distributed organisations can immensely benefit from the instant messaging feature that helps to get instant response to quick queries. The collaboration features of VDI allows smooth transition from IM conversations to a voice call allowing online data sharing for further clarification of information. This easy interchange of information helps in quick decision making.

3.8. Provide Improved Service: One of the key aspects of unified communications is providing better service to clients, business partners, suppliers etc. Instant response to quick queries achieved through real-time communication is a rewarding experience for the customers, suppliers, business partners etc. Immediate service can give businesses a competitive advantage over other organisations that still rely on legacy systems like emails. Federation with partners, customers and vendors enables similar functionality to be available between consenting companies and users allowing for an extension of the excellent collaborative features beyond the confines of the internal organisation in a controlled and safe environment.

3.9. Simple Integration: VDI provides for seamless integration with core business applications. The online presence including telephony presence of the users can be known through VDI. Also, VDI enables other employees to contact these users through IM across these various applications. Effective cohesion between various business applications results in effective information interchange and faster decision making.

3.10. Information security and compliance: Data security holds an important place in information interchange. VDI provides an enterprise grade robust communications platform with secure and trusted federation links for communication between businesses and other organizations. VDI also includes features to protect against virus attack. Also, security of sensitive information is ensured while its leakage can be tracked. [8]

3.11. Full administrative and data control: Administrators can deeply customize Google Apps, Microsoft Online Services etc to meet their technical, branding and business requirements. Integration options let one’s connect VDI to business’s existing IT infrastructure[8].

With VDI business houses gain a couple of benefits including things like:

- The ability to provide a unique environment for each and every user.
- Each of these environments can be completely customized with different apps and settings without impacting other users.
- Users can be granted more control of their own “virtual” desktop to allow them to install and modify applications if needed.
- Applications that were not multi-user friendly can be run in this environment since each instance is just like installing the app on a new desktop. [9]

4. FUTURE SCOPE

VDI started as a customer-built solution to rapidly deploy Windows desktops and has ballooned into a full product offering. However, VDI is still in its infancy, and we have not yet realized the full potential of virtual desktops. Over a number of years, a range of ways to provide business and operational innovation that can increase their productivity, flexibility, and agility, while better serving their users and lowering costs tools have been developed and research is ongoing to meet the need for even more of such tools. This paper will surely help those researchers that involved in the study of innovative techniques to increase business efficiency.

5. CONCLUSION

VDI solution is a cost-effective option that helps to reduce operational costs by removing the need to invest in infrastructure and the new Software licensing model. It allows enterprise customers to pay on a monthly basis for only the number of end user licenses used during that period. VDI provides a better communication platform that enables employees to communicate with others at different locations or
time zones more effectively thereby increasing employee productivity. VDI solution can free the IT infrastructure that can be deployed on business-critical projects. VDI can be used to integrate meetings and conferences with clients in real time.

REFERENCES
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