

The Impact of Information Technology on Productivity: Dell Inc., Wal-Mart, MicroSoft

Module 6

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Teaching Notes in Notes Page View

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DELL Inc.

- One of the earliest companies outsourced in India

2001, the 1st customer service in Bangalore
2003, the 2nd customer service in Hyderbrand

-To save labor cost

Corcoran, Elizabeth (2004, May). Unoutsourcing;. Forbes, 173(10), 050-051. Retrieved , from ABI/INFORM Global database. (Document ID: 629341981).

Dell was among one of the earliest companies to route Customer Service to India.

Dell developed call centers to decrease their labor costs

In 2001, Dell completed construction on their first Indian location
which was in Bangalore.

In 2003, Dell completed construction on their second Indian location
which was in Hyderbrand.



DELL Inc. (cont.)

- The offshore customer service resulted in saving in labor cost, however, generated some complaints:
 - A. Language problem
 - B. Seems to be reading a script
 - C. Cultural misunderstandings
 - D. The Texas Attorney General's 504 complaints against Dell Inc. and Dell Financial

Business: Lost in translation; Offshoring. (2003, November). The Economist, 369(8352), 58. Retrieved , from ABI/INFORM Global database. (Document ID: 466914401).

The off shoring of customer service was successful in decreasing labor costs but the move also generated some complaints.

- a. In 2003, The Texas Better Business Bureau logged 3,726 complaints against Dell's customer service techniques.

Language problems were among one the largest complaints among customers.

Customers stated that Customer Service Representatives were seemingly unwilling to *depart from a script*.

Cultural misunderstandings were cited as office logged troublesome

The Texas Attorney General's 504 complaints against Dell Inc. and Dell Financial



DELL Inc. (cont.)

- Following great pressure from its customers, in November of 2003, Dell's Customer Service was re-routed back to the Austin, TX
 - Customer service to large and medium sized businesses was brought back
 - Small sized business and consumer support still remain in India
- DELL plans to setup and operate more Indian call centers

The company does seem to be working to eliminate customer frustrations and regain that portion of market share which has been lost to their off shoring decision.

Following great pressure from its customers, in November of 2003, Dell's Customer Service was re-routed back to the Austin, TX.

Customer Service to large and medium sized businesses was the only support that was brought back but Dell has stated that they are uncertain as to whether or not such a move is permanent.

Small sized businesses and consumer support remain in India and there have been no announcements regarding its ultimate fate.

Dell's administrative staff meets with the Texas Better Business Bureau quarterly to make themselves aware of problems and then address them.

There are currently plans to setup and operate more Indian call centers and demand for customer service will require increased productivity.



DELL Inc. (cont.)

- Productivity in an Indian corporate environment
 - 69% of all U.S. software companies outsourced to India - Sand Hill Group
 - Productivity is not as efficient in India as in the U.S.
 1. High cost of attrition
 2. Relocation of U.S. managers and increased salaries
 - Dell take advantage of economies of scale which allow them to affordably outsource and out compete startup companies

Murphy, Richard McGill (2005, July). Pulling the Plug on Outsourcing. FSB : Fortune Small Business, 15(6), 22-24. Retrieved , from ABI/INFORM Global database. (Document ID: 864997321).

Productivity in an Indian corporate environment

According to a survey by the Sand Hill Group, in 2004 69% of all U.S. software companies outsourced some aspect of their production to India.

Productivity is not as efficient in India as in the U.S. so startup companies typically cannot afford to outsource their labor.

The high cost of attrition can typically force smaller companies to remain domestic.

Relocation of U.S. managers and increased salaries of those managers also contribute to a lack of ability to outsource in small companies.


Large corporations like Dell take advantage of economies of scale which allow them to affordably outsource and out-compete startup companies.

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WAL-MART
ALWAYS LOW PRICES. *Always.*
<http://www.walmart.com/>

Wal-Mart

- **RFID (radio frequency identification)**
 - Increases its employee's productivity
 - Replenish shelves up to three times faster
 - Keep tracks on the products
 - Help keeping the inventory cost low
 - Make customers happy



<http://www.retailingworks.com/map.htm>

Sullivan, L (2005, October). Wal-Mart Brings The RFID Proof. InformationWeek,(1060), 22. Retrieved August 27, 2006, from ABI/INFORM Global database. (Document ID: 916384741).
<http://www2.lib.purdue.edu:2060/pgdweb?index=0&did=916384741&SrchMode=1&sid=7&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1156695723&clientId=31343>

Wal-Mart uses RFID to increase its employee's productivity.

Wal-Mart is experimenting with a radio-frequency identification system.

With the use of RFID information technology, employees can replenish shelves up to three times faster than with the old bar code technology.

Products have a radio frequency that a scanner and detect determine the amount of products and where they are located.

Employees can also find products stored in the back room of the store quicker, helping to make the employee more productive and the customer happier.

Using RFID technology also helps to keep inventory costs down.

RFID can automatically tell when products need to be reordered, which is more efficient than being recorded when the employee determines the product needs to be restocked.

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ASDA
part of the WAL-MART family

Wal-Mart (cont.)

<http://www.asda.co.uk>

- Wal-Mart uses computers to help further educate and to train their employees
 - 1.2 million employees in the U.S. are offered e-learning programs
 - offers classes that help to increase productivity at both work and in employees personal lives. Including:
 1. Time management
 2. Goal setting
 - Asda (owned by Wal-Mart in UK) offers e-learning for both its store employees and people who work in HQ

Howell, J (2004 April). Wal-Mart invites 1m staff to study. *ITTraining*. Retrieved August 25 2006, from <http://www2.lib.purdue.edu:6992/bsi/detail?vid=4&hid=104&sid=113b2d66-16f6-4f5e-a5da-29f3562a77a2%40sessionmgr101>

Wal-Mart uses computers to help further educate and to train their employees.

Wal-Mart's 1.2 million employees in the U.S. are offered e-learning programs to help develop their personal skills.

Using this information technology Wal-Mart offers classes that help to increase productivity at both work and in employees personal lives.

Wal-Mart's e-learning training includes times management and goal setting courses.


In the United Kingdom. Wal-Mart owned, Asda stores also offers e-learning.

Asda not only offers e-learning for its store employees but also to their 1,800 employees who work at their headquarters.

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Microsoft-Production of Employees

- Elixer
 - Integrates different computer programs
 - CRM Database
 - Microsoft Outlook
 - Helps Sales force
 - Customer Satisfaction
 - Overall Production



Production of Employees

1. Microsoft has developed a project to help its customer sales force by integrating different computer programs together. Code named Elixer, it ties together the CRM database of the company to Microsoft Outlook. This will allow the sales employees to access customer's records much faster and easier. This advancement in information technology should help not only productivity, but also customer satisfaction.
2. "Personal Productivity and Enterprise Interfaces Starting to Merge, says Microsoft." (May 2005) Manufacturing Business Technology. 23(5), 26. Retrieved from Business Source Premier. August 26, 2006. (Document ID: 16997537)
<http://www2.lib.purdue.edu:6859/login.aspx?direct=true&db=buh&AN=16997537&site=bsi-live>

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Microsoft-Working in Different Countries

- Involved in major antitrust suit from the European Union
- Microsoft was fined \$625 million
- Packaging of Media Player
- Forced to write an operating system manual for competitors

Microsoft is currently involved in a major antitrust suit in Europe that deals with the how software is packaged together. The European Union (EU) has previously ruled against Microsoft, says that it has created an unfair advantage in the software industry and fined the company \$625 million. Microsoft feels as though they are being unfairly targeted because they are a foreign company.

- One reason Microsoft has been ruled against is because the EU has decided that since its Windows program (which runs on roughly 90% of all computers) dominates the market, it makes it very difficult for any rivals to compete.

Another reason they were ruled against is because of how Windows Media Player is tied packaged together for free with Windows. Other companies were unable to make music programs that could tie into Windows, creating another monopoly.

Microsoft was previously ordered to make a manual of its operating system in order to make it easier for rivals to write music programs that were compatible to Windows. They then were told to re-write the manual because it was too complicated for the rivals to understand.

EU Beefs Up Fines on Antitrust Activity.” (June 28, 2006) The Wall Street Journal, B.2. Retrieved from ProQuest. August 26, 2006. (Document ID: 1068090981).
<http://www2.lib.purdue.edu:2048/login?url=http://www2.lib.purdue.edu:2060/pqdweb?did=1068090981&sid=3&Fmt=3&clientId=31343&RQT=309&VName=PQD>

“Second Front: Why Microsoft Battles Europe years after settling in US.” (May 5, 2006) The Wall Street Journal, A1. Retrieved from ProQuest. August 26, 2006. (Document ID: 1032293161).
<http://www2.lib.purdue.edu:2048/login?url=http://www2.lib.purdue.edu:2060/pqdweb?did=1032293161&sid=3&Fmt=3&clientId=31343&RQT=309&VName=PQD>

Resources

- Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, *Official Journal of the European Communities*, 23 November 1995 No L. 281, 31
- Federal Trade Commission (2006). *Complying with the Telemarketing Sales Rule*. Retrieved August 27, 2006 from <http://www.ftc.gov/bcp/online/pubs/buspubs/tsrcomp.htm>
- Federal Trade Commission (2005). National Do Not Call Registry. Retrieved August 27, 2006 from <http://www.ftc.gov/donotcall/>
- Federal Trade Commission (2006). The CAN-SPAM Act: Requirements for Commercial Emailers. Retrieved August 27, 2006 from <http://www.ftc.gov/bcp/online/pubs/buspubs/canspam.htm>

Resources

- Simmons, G (2006). Government Data Thefts Raise Privacy Protection Concerns. Retrieved August 27, 2006 from <http://www.foxnews.com/home/politics>.
- Swartz, N. (2006). Canada Seeks to Protect Citizens' Privacy. *Information Management Journal*. July/August 2006 40(4).
- The European Union Privacy Directive and Its Impact on the U.S. Privacy Protection Policy's Year 2003 Perspective. *Northwestern Journal of Technology and Intellectual Property*. 2(1) Fall 2003.

Acknowledgments

The author wishes to acknowledge the support from the Society for Manufacturing Engineers - Education Foundation, SME-EF Grant #5004 for "Curriculum Modules in Product Lifecycle Management."

