



Title: Strategic and Policy Issues on "Information Technology"

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Abstract: The role of information technology organization and the way it is structured and managed is changing rapidly as information technology takes an ever increasing role in the competitive position of the company. This paper briefly discuss the critical issues and strategic implications facing information technology organizations as it enters into the new millennium.

Strategic and Policy Issues

Information Technology

EMGT 520, Management of Engineering & Technology



IT Overview

Most Large corporations have complex internal systems and made extensive use of telecommunications networks and satellites.

According to the Internet Society, as of January of 1996, there were 10 million servers on the Internet, with growth expected to reach 100 million by the year 2000.



IT Overview (continues)

The most invested areas (Potential Growth)

- Network Technology
- Wireless Technologies
- Internet Software In an Organization



Network Technology

Speed up Telecommunications

- Global Communication
 - Video Teleconferencing
 - E-mails, WWW, FTP
 - Digital Interactive TV
 - Home Banking, ATM



Wireless Technology

Global Remote Access

- Wireless Portable Phone (PCS, Digital,...etc)
- Economic contribution
 - LAN (Local Area Network)
 - Satellite Technology (DirecPC, Interactive Digital TV, ..etc)



Internet Software in Organization

Constant Development of Software applications

- Data Security Purpose
 - Firewall
 - Anti-Virus
- Internet Software for telecommunications
 - email, WWW, FTP,etc



Critical Issues

- Unauthorized illegal Penetration
- Disclosure
- Denial of Services



Critical Issues (continues)

Unauthorized illegal Penetration

- Hackers, spies, or criminals
- data integrity
- Misguided security systems

Disclosure

- confidentiality
- data protection
- privacy
- data theft



Critical Issues (continues)

Denial of Services

- Crash or hang hardware and software
- Prevent legitimate use of services
- Resource Flooding
- Educate employee via seminars, workshop, ...etc periodically



Strategic Implications

- Appropriate use of IT
- Electronic Commerce
- Competitive Advantage
- Implementation of IT Strategy



Appropriate Use of IT

- Rapid changes in IT have led to changes in the labor market demand : from low/middle wage occupations to high skills high rewards jobs
- IT used by companies to improve production processes, product quality and increase efficiencies



Appropriate use of IT (cont.)

- To take advantage of IT: Organization must improve not only Hardware/Software combination but also their work force skill level and education.
- Investment in IT should be complementary to changes in other aspects of the organization



Electronic Commerce

- IT is changing the way companies do business
- Electronic commerce used to reinvent the business, and enable new business
- Electronic commerce opens a new network based sales and distribution channels
- Electronic commerce provides a good customer data analysis



Electronic Commerce (cont.)

- IT is the central enabler for electronic commerce
- Electronic commerce is an area where IT investment is recognized as profitable
- Example: Amazon.com



Competitive Advantage

- Determining the appropriate IT investment in accordance with the company goals and business strategies
- Internal IT organization should consider themselves as a vendor to the other workgroups and business units, so they can compete with external IT organizations (outsourcing)



Competitive Advantage (cont.)

- IT organization should anticipate changes in the external environment, and consequently prepare their customers (workgroups, business units) by providing the infrastructure and tools to meet the business plan



Implementation of IT Strategy

- Effective implementation is crucial
- Strategic IT infrastructure should include:
 - Definition of data and technology platform
 - Design of an effective development capability plan
 - Plan to ensure that the core applications are up to date



Conclusion

- To stay competitive business has to take advantage of innovative IT solutions
- Invest in IT wisely and smartly
- Hire the right people for the job
- IT organizations should know their capabilities and their limits



Conclusion (cont.)

- Companies should develop an ongoing review program and a set of metrics to keep track of their investment in IT

