

Chapter 1

Technology Transforms the Organization

Key Themes in the Management of Information Technology

Theme	Issues
Organizational Transformation	Technology is bringing about dramatic changes in organizations, markets, industries and economies
IT and corporate strategy	Strategy and technology are now inseparable
Value	How to demonstrate value from investing in information technology
Management of technology	Incredibly powerful technology is available; the limits on its use are managerial, not technical

IT Value Proposition

- **Transformation technology provides value to organizations in the following forms**
 - **A firm that is more competitive**
 - **Greater efficiencies in operations**
 - **A more effective organization**
 - **An improved work environment for employees**

Metrics For IT Value

- **New lines of business**
- **Market share**
- **Sales per employee**
- **Gross margins**
- **Employee satisfaction**
- **Employee turnover**

The Role of the Manager

- **Management and not technology determines return on IT investments**
 - Successful organizations have strong IT leadership
- **Key management decisions related to IT**
 - Strategy
 - Value of IT
 - Investing in infrastructure
 - Deciding on applications
 - The role of knowledge
 - E-business
 - Options for service
 - Change management
 - Managing value nets

IT Decision	Nature of the Decision
Strategy	How to develop strategy and technology interactions to create competitive advantage
The value of IT	How to estimate the value of an investment in IT; how to measure return
Investing in infrastructure	Defining what is in infrastructure; developing budgets and investment guidelines
Deciding on applications	How does the firm allocate scarce resources among competing needs for technology initiatives
The role of knowledge	All organizations rely on knowledge in some way to survive and flourish; how do you gather, store and disseminate that knowledge
E-business	If all businesses will become e-businesses, how does the firms move in this direction?
Options for service	The firm can obtain IT services from a variety of places. What should it outsource?
Change management	How do you successfully manage change in the organization? Technology initiatives are undertaken in order to change and improve the status quo
Managing value nets	How do you manage this different organization structure?

IT in Perspective: Contributions of IT

- **New ways to design organizations and new organization structures**
- **New relationships between customers and suppliers**
- **Opportunities for electronic commerce**
- **Efficiencies through EDI**
- **Changed basis of competition and industry structure**
- **Groupware**

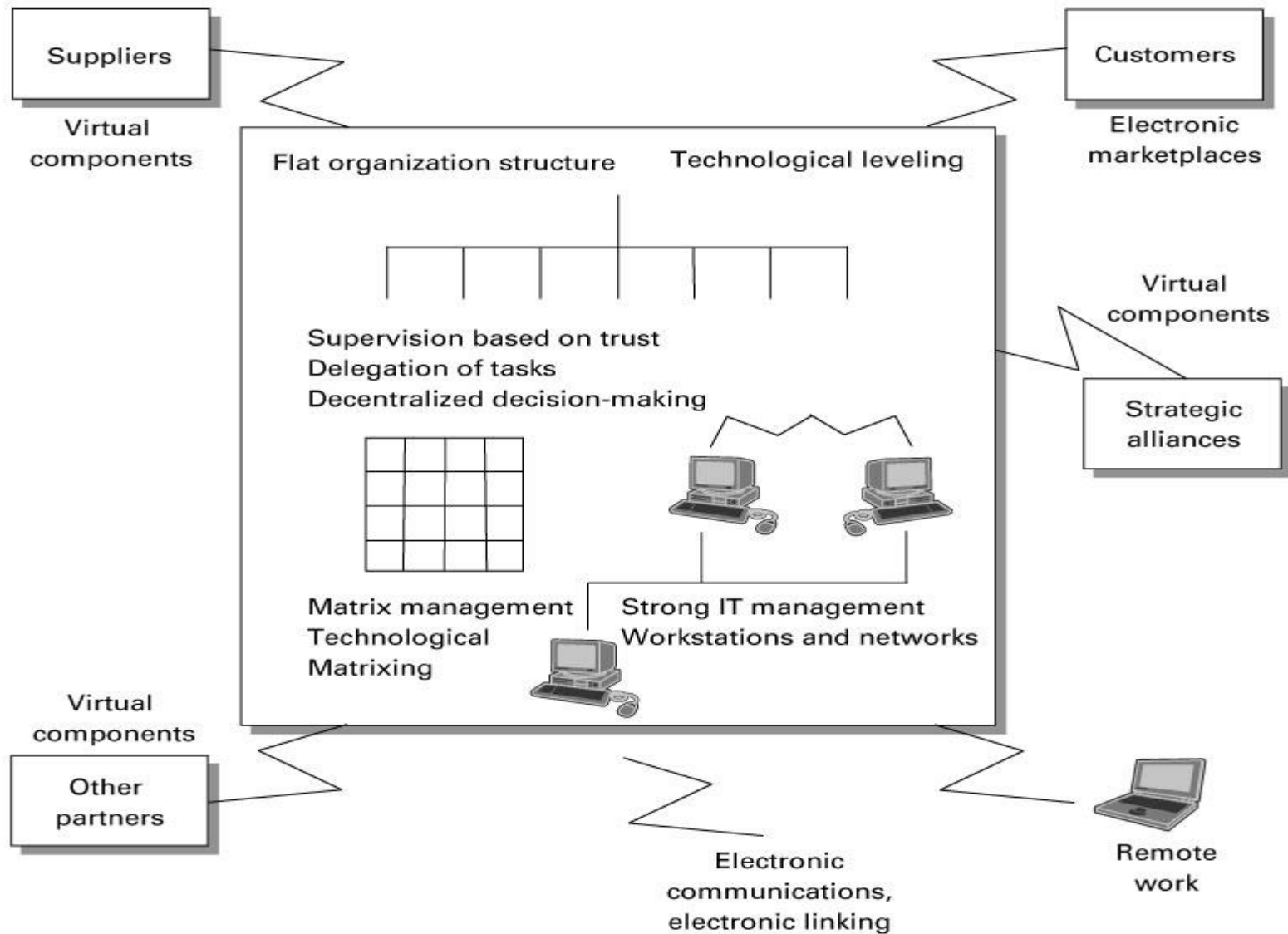
IT in Perspective: Contributions of IT (Continued)

- **Knowledge capture and accessibility**
- **Increased productivity and flexibility of knowledge workers**
- **Electronic alternatives for communications and supervision**
- **Improved opportunities of competition among nations**

Transforming Organizations With Information Technology

- **A Technology-Form organization uses IT to become highly efficient and effective through**
 - **Electronic communications and linkages among employees**
 - **Trust based supervision**
 - **Delegation of tasks, data, and decision making**
 - **Networked computers**
 - **Highly automated production and electronic information handling**
 - **Virtual teams**
 - **Electronic linkages with customers and suppliers**

FIGURE 1-1 The T-Form organization.



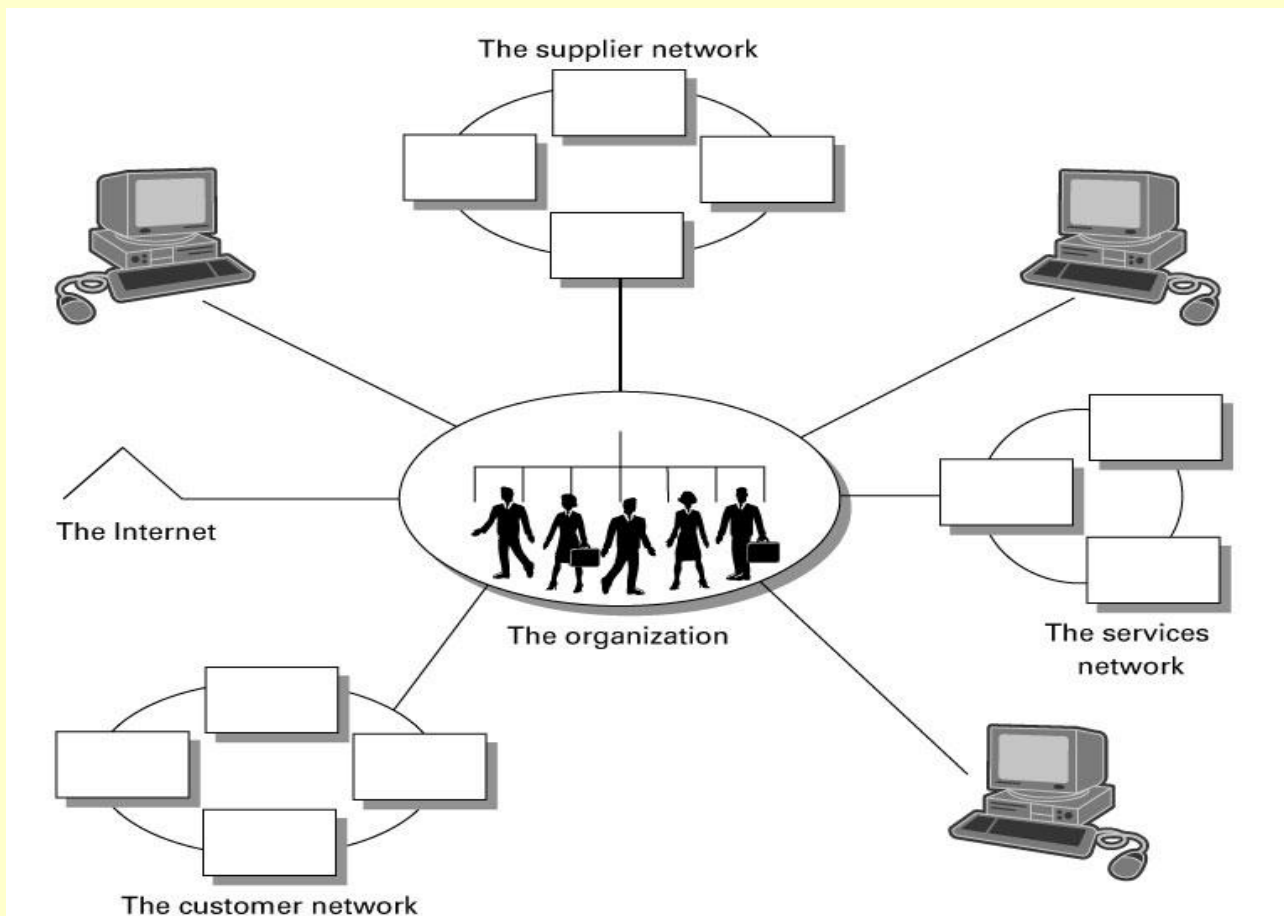
The Challenge of Change From IT

- **Within organizations**
- **Organizational structure**
- **Interorganizational relations**
- **The economy**
- **Education**
- **National development**

Trends in IT and IT Management

- **The use of IT to transform organizations**
- **Technology as a part of corporate strategy**
- **IT as a pervasive part of the work environment**
- **The use of technology to support knowledge workers**
- **The evolution of the computer from a computational device to a communications medium**
- **The tremendous growth of the internet and the web**

The Netcentric Organization



Summary

- The IT revolution will have an impact equal to or greater than the industrial revolution
- Managers regardless of their functional affiliation have to make decisions about IT
- Successful firms in the 21st century will use IT widely for many purposes
- The internet and networks are quickly becoming ubiquitous
- Managers are responsible for finding creative, strategic uses of IT for competitive advantage
- Managing technology is challenging