Managing and Using Information Systems: A Strategic Approach – Fifth Edition

Keri Pearlson & Carol Saunders

Chapter 3

Organizational Strategy
&
Information Systems

Learning Objectives

- Understand how the use of information technology impacts an organization.

  co xu huong
- Identify the type of organizational structure that tends to be most

  san sang   nam lay   tinh te
  willing to embrace technological change and sophistication.

- List the advantages and disadvantages of the networked organizational

  co cau to chuc mang
  structure.

- Discuss how IT has changed the way managers monitor and evaluate

- Define and explain the concept and importance of virtual organizations.

- Identify the challenges that are faced by virtual teams.

Real World Example

- Cognizant Technology Solutions grew fast to become a $1.4 billion
  loi tuc
  revenue company providing IT outsourcing services.
  tai tao lai
- A quick growth required that they reinvent their organization – move
  from a cost based to a **relationship** based structure.

- Managers had to interact with customers and developers in different
  locations.
  cang thang to lon
- A tremendous strain was put on managers because they had to work day
  and night.
  chia se
- Some of the units adopted a matrix structure sharing managerial
  responsibilities.

Real World Example - (Cont.)

- Tata Consultancy Services (TCS), the largest outsourcing company and software exporter in India, chose a different organization structure designed to focus on **customers** and boost revenue growth.

  thuc day tang truong doanh thu

- Added a new layer of leaders to oversee the businesses and free up the CEO's time to work on strategy.

  trong nom

- Different **organizational structures** reflect different **organizational strategies** that are used by organizations to implement their **business strategies** and accomplish organizational goals.

3-4

Organizational Strategy

- Includes the organization's **design**, as well as the managerial choices
  that define, set up, coordinate, and control its **work processes**.

  lua chon quan ly

  phoi hop

- Optimized organizational design and **management control systems** support optimal business processes which reflect the firm's values and culture.

- Figure 3.3 summarizes complementary design variables from the managerial levers framework.

- Three types of managerial levers:: **organizational, control, cultural**.

3-5

Figure 3.1 Organizational design variables.

Variable	Description
Organizational variables	
Decision rights	Authority to initiate, approve, implement, and control various types of decisions necessary to plan and run the business.
Business processes	The set of ordered tasks needed to complete key objectives of the business.
Formal reporting relationships	The structure set up to ensure coordination among all units within the organization.
Informal networks	Mechanism, such as ad hoc groups, which work to coordinate and transfer information outside the formal reporting relationships.
Control variables	
Data	The information collected, stored, and used by the organization.
Planning	The processes by which future direction is established, communicated, and implemented.
Performance measurement and evaluation	The set of measures that are used to assess success in the execution of plans and the processes by which such measures are used to improve the quality of work.
Incentives	The monetary and non-monetary devices used to motivate behavior within an organization.
Cultural variables	
Values	The set of implicit and explicit beliefs that underlie decisions made and actions taken.

IS and Organizational Design

- IS in the organizational designs:
    - Defines the flow of information throughout the organization.
    - Facilitate management control at the organizational and individual levels.
- Culture impacts IS and organizational performance.
- IS in the organization's physical structure is designed to facilitate the thuan loi **communication** and **work processes** necessary to accomplish the organization's goals.
- The organization structures of Cognizant and TCS, while very different, reflect and support the **goals** of each company.

Decision Rights

- Who in the organization has the responsibility to initiate, supply
  cung cap thong tin
  information, approve, implement, and control various types of
  decisions.
    ly tuong la nguoi nam thong tin va o vi tri phu hop
- Ideally the person with the most information and in the best
  position should have these rights. (i.e. senior leaders).
- Organizational design focus on making sure that **decision rights**
  are properly allocated.
- Zara - decision rights moved to the **store managers**, providing for
  quicker responses to their local customer base.

Formal Reporting Relationships and Organization Structures

- **Organization structure** is the way of designing an organization so that
  quyen quyet dinh duoc phan bo chinh xac
  decision rights are correctly allocated.

- The structure of **reporting relationships** typically reflects the flow of communication and decision making throughout the organization.

- Traditional organizations are **hierarchical**, **flat** or **matrix**. (Fig. 3.4).

- The **networked** structure is a newer organizational form.

- **Social networks** and **virtual communities.**

Figure 3.4 Comparison of organizational structures

	Hierarchical	Flat	Matrix	Networked
Description	Bureaucratic w/ defined levels of management quan lieu	Decision-making pushed down to lowest level	Workers assigned to 2 or more supervisors	Formal/informal communication networks that connect all
Characteristics	Division of labor specialization, unity of command	Informal roles, planning and control; often sm.,young orgs.	Dual reporting based on function/purpose	Known for flexibility and adaptability
Type of Environment Best Supported	Stable Certain	Unstable Uncertain	Unstable Uncertain	Unstable Uncertain
Basis of Structuring	Primary function	Primary function	Functions and purpose	Networks
Power Structure	Centralized	Centralized	Distributed	Distributed
Key Tech. Supporting this	Mainframe, centralized data and processing	Personal computers	Networks	Intranets and Internet

Hierarchical Organizational Structure

- Growing need to devise systems for processing and storing information (clerical workers).

- Max Weber developed the bureaucracy model.

- **Hierarchical** organization structure - an organizational form based on the concepts of division of labor, specialization, spans of control, and unity of command.

  phan cong lao dong, chuyen mon, nhip dieu khien va su thong nhat

- Key decisions are made at the top and filter down through the organization.

- Middle managers do the primary information processing and communication.

Hierarchical Organizational Structure - (Cont.)

- At the new TCS, control was lowered by adding a new layer with only a few leaders reporting directly to the CEO.

- **Unity of command** - each person has a single supervisor, who in turn has a supervisor.

- **Rules** are established to handle the routine work performed by employees of the organization. Workers turn to rules for guidance, or to the supervisor.

- Key decisions are made at the top and filter down through the organization in a **centralized** fashion.

- IS supports this hierarchy.

- Appropriate for stable organization, where the top-level executives are in command of the information needed to make critical decisions quickly.

Hierarchical Organizational Structure and IS

- IS are typically used to **store and communicate** information along the lines of the hierarchy in **a centralized** structure.
- IS facilitates the decisions of top managers downward and provide a **hierarchy of reports** to support organizational operations.
- Data from the operations is sent upward through the hierarchy using IS.
- Data from operations that have been captured at lower levels need to be consolidated, managed and made secure at a higher level.
- The data is **integrated** into databases that are designed to enable employees at **all levels** of the organization can see the information that they need when they need it.

Flat Organization Structure

- **Horizontal**, less well-defined chain of command.

- Fewer employees, everyone does whatever needs to be done in order to complete business.

- Respond quickly to dynamic, uncertain environments.

- Appropriate for **entrepreneurial** and **smaller organizations**.

- **Teamwork** is important to increase flexibility and innovation.

- Decision rights may not be clearly defined, often **decentralized**.

- IS is utilized to off-load certain routine work in order to avoid hiring additional workers and supports **intra-firm communications**.

Matrix Organization Structure

- Work is organized into **small work groups** and integrated regionally and nationally/globally.

- Each supervisor directs a different aspect of the employee's work.

- Difficult for managers to achieve their business strategies

- Managers are flooded with more information than they can process.

- Decision rights are **shared** between the managers.

- Appropriate for **complex decision making** and dynamic and uncertain environments.

- IS **reduces operating complexities and expenses** by allowing information to be easily shared among different managerial functions.

3-15

Networked Organization Structure

- Feel **flat** and **hierarchical** at the same time.

- Appropriate for dynamic, unstable environments.

- Highly **decentralized** decision rights.

- Utilize **distributed information and communication** systems to replace inflexible hierarchical controls with controls based in IS.

- Employees **share their knowledge** and **experience**, and participate in making key organizational decisions.

- IS are fundamental to **process design**, improve process efficiency, effectiveness, and flexibility.

Networked Organization Structure and IS

- Data are gathered and stored in **centralized data warehouses** for use in **analysis** and decision making.

- Decision making is more timely and accurate because data are collected and stored instantly.

- Extensive use of **communication technologies** and networks.

- IT is used primarily as a communication vehicle.

- IT ties together people, processes, and units.

- Technological leveling - technology enables individuals from all parts of the organization to reach all other parts of the organization.

3-17

Informal Networks

- Organization chart reflects the authority derived from formal reporting relationships in the organization's formal structure.

- Some **informal relationships** are designed by management:
  - ○ Working on a project.
  - ○ Job rotation program
  - ○ Call upon their past co-workers when a situation arises
    mang ngoai y muon
- **Unintended networks** are formed throughout an organization :
  - ○ Work proximity
  - ○ Shared interest
  - ○ Family ties
  - ○ Politics crossing organizational boundaries.

Social Network

- Computer and information technologies facilitate **collaboration** across distances, social networks and virtual communities are formed.

- Useful in getting a job done, even if not all of the members of the network belong to the same organization. (i.e. LinkedIn)

- Social network is an **IT-enabled network** that links individuals together in ways that enables them to find experts, get to know colleagues, and see who has relevant experience for projects across traditional organization lines.

IS and Management Control

- Concerned with how planning is performed in organizations and how people and processes are monitored, evaluated, and compensated or rewarded.

- Senior leaders ensure the things that are supposed to happen actually happen.

- Management control systems must respond to goals established through planning, periodically adjusted.

- IS plays three important roles in **management control processes**:
  - o Data collection, Evaluation, and Communication.

- IS collect, evaluate, and communicate information, leaving managers with more time to make decisions.

Planning and Information Systems

- Information technology can play a role in **planning** in three ways:
    - IS can provide the necessary data to develop the **strategic plan.**
        - Collecting data from organizational units and integrating the it into information for the strategic decision makers.
    - Provide scenario and sensitivity analysis through simulation and data analysis.
    - Automate the planning process where appropriate.
    - IS can lie at the heart of a strategic initiative.
    - IS can be used to gain **strategic advantage.**

Data Collection and IT

- Monitoring work using information technologies:
- IS make it possible to collect data by:
  - Number of keystrokes.
  - Precise time spent on a task.
  - Exactly who was contacted.
  - Specific data that passed through the process.
- Organizational design challenge in data collection :
  - Embed monitoring tasks within everyday work.
  - Reduce the negative impacts to workers being monitored.

Monitoring and Performance Software

- Software collecting **monitoring data** directly from work tasks, or embedding the creation and storage of **performance information** into software used to perform work is more reliable.
- Monitor "**cyberslacking**" and "**cyberslouching**."
- Monitoring is ethical and in the best interest of business.
- Employees must be informed about monitoring software.
- **Reward** increase in productivity derived from monitoring information.
- Balance employees' right to **privacy** against the needs of the business to have surveillance mechanisms in place.

Performance Measurement, Evaluation, and IT

- IS make it possible to evaluate actual performance data against reams of standard or historical data.

- Use models and simulations.

- Managers can easily understand work progress and performance.

- **Analysis paralysis** - analyzing too much or too long

- How the information is has significant organizational consequences.

- Information collected for evaluation may be used to provide feedback
    - Worker can improve **personal performance**.
    - Determine **rewards** and **compensation.**

Performance Measurement, Evaluation and IT (Cont.)

- How feedback is communicated in the organization plays a role in affecting behavior.

- Many companies do a "360-degree" feedback, into which the individual's supervisors, subordinates, and coworkers all provide input.

- IS enables soliciting feedback from anyone who has access to the system and report it anonymously.

- Quick feedback enables faster improvements.

Incentives and Rewards and IT

- Enables organizations to encourage **good performance**.

- Done properly, can make **employees feel good** without paying them more money.

- Organizations use their Web sites to **recognize high performers**.
  - Using electronic badges that are displayed on the social network to identify the award recipients.
  - Reward with allocation of new technology.

- IS makes it easy to design complex reward systems (shared or team based).

- Managers must consider both the **metrics and qualitative data** in assigning compensation and rewards.

3-26

Information Systems and Culture

- Plays an increasingly important role in IS development and use.

- **Culture** is defined as a shared "set of values and beliefs" that a group holds and that determines how the group perceives, thinks about, and appropriately reacts to its various environments.

- **Culture** is a "collective programming of the mind" that distinguishes not only societies (or nations) but also industries professions, and organizations.

- **Beliefs** are the perceptions that people hold about how things are done in their community.

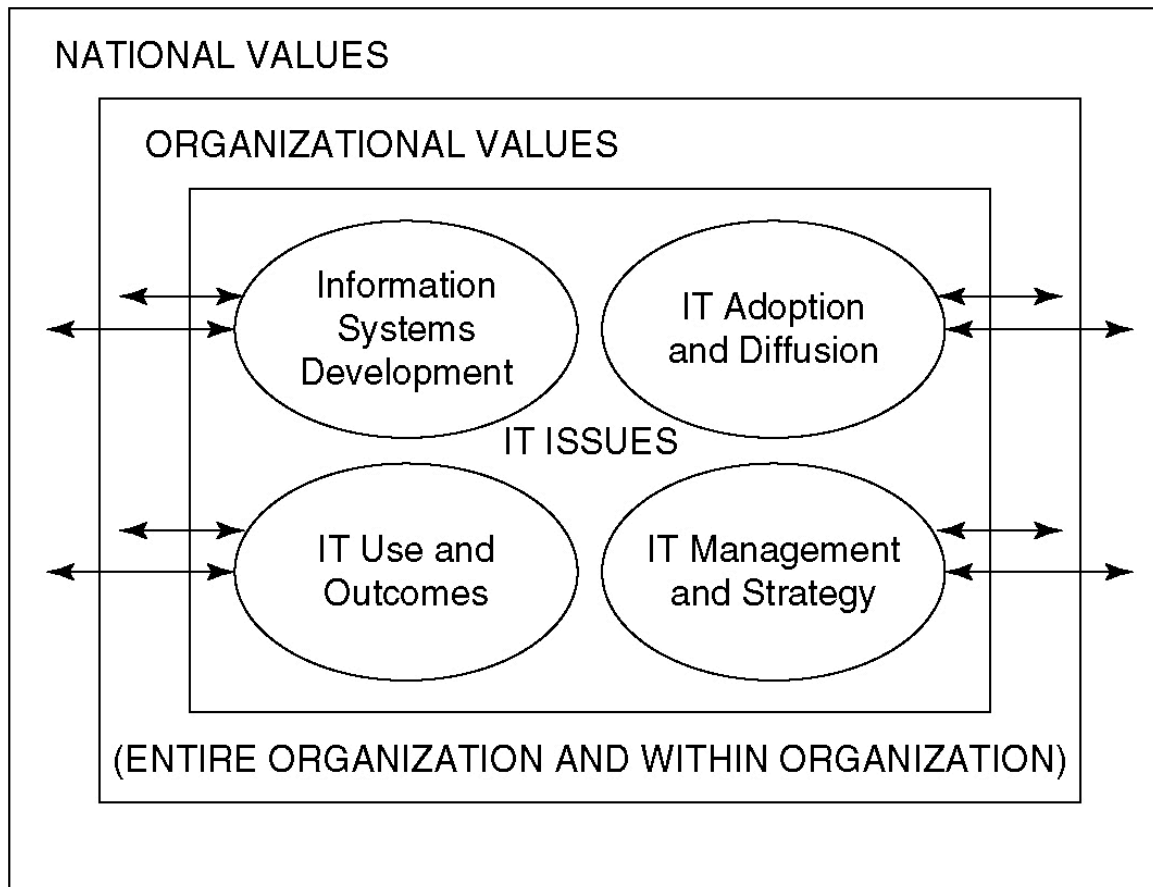# Information Systems and Culture - (Cont.)

- **Values** reflect the community's aspirations about the way things should be done.

- Culture may change over time depending on the environment and internal operations.

- Culture has layers: observable artifacts, values, and assumptions.

- **Observable and espoused values**.

- **Assumptions** are unobservable, reflect organizational values that have become so taken for granted that they guide organizational behavior without any of the group members thinking about them.

Levels of Culture and IT

- Culture can be found in countries, organizations, or even within organizations.

- IS development and use can be impacted by culture at all levels within the organization.

- Both **national and organizational cultures can** affect the IT issues and vice versa.

- Differences in national culture may affect IT in a variety of ways: impacting IS development, technology adoption and diffusion, system use and outcomes, and management and strategy.

- Figure 3.5 and describe the model for the impact culture of on IT issues.

Figure 3.5 Levels of culture.

NATIONAL VALUES

ORGANIZATIONAL VALUES

Information Systems Development

IT Adoption and Diffusion

IT ISSUES

IT Use and Outcomes

IT Management and Strategy

(ENTIRE ORGANIZATION AND WITHIN ORGANIZATION)

Organizatinal Culture and Information Technology Management

- Differences in culture result in differences in the use and outcomes of IT.

- At the organizational level, cultural values are often related to satisfied users, successful IS implementations, or knowledge management success.

- Culture affects planning, governance, and perceptions of service quality at the **national and organizational levels**

  - Having planning cultures at the top levels, signal that **strategic systems** investment is important.

National Cultural Dimensions and Their Application

- Hofstede originally identified **four** major dimensions of national culture:

  - Power distance
  - Uncertainty Avoidance
  - Individualism-collectivism
  - Masculinity-femininity
  - Confusian Work Dynamism (a new dimension) or "short-term vs. long-term orientation".

Hofstede Dimensions and the GLOBE Dimensions

- The **GLOBE** (Global Leadership and Organizational Behavior Effectiveness) research program uncovered **nine** cultural dimensions, six of which have their origins in Hofstede's pioneering work (Figure 3.6).

- Some **leadership traits** are seen as universally acceptable across cultures:

  - Being trustworthy Just and honest.

  - Having foresight and planning ahead.

  - Being positive, dynamic encouraging, and motivational.

  - Being communicative and informed

Figure 3.5 – National cultural dimensions

GLOBE DIMENSIONS	DESCRIPTION	RELATIONSHIP TO HOFSTEDE DIMENSION
UNCERTAINTY AVOIDANCE	EXTENT TO WHICH MEMBERS OF AN ORGANIZATION OR SOCIETY STRIVE TO AVOID UNCERTAINTY BY RELIANCE ON SOCIAL NORMS, RITUALS, AND BUREAUCRATIC PRACTICES TO ALLEVIATE THE UNPREDICTABILITY OF FUTURE EVENTS.	SAME AS UNCERTAINTY
POWER DISTANCE	DEGREE TO WHICH MEMBERS OF AN ORGANIZATION OR SOCIETY EXPECT AND AGREE THAT POWER SHOULD BE EQUALLY SHARED.	SAME AS POWER DISTANCE
COLLECTIVISM I: SOCIETAL COLLECTIVSIM	DEGREE TO WHICH ORGANIZATIONAL AND SOCIETAL INSTITUTIONAL PRACTICES ENCOURAGE AND REWARD COLLECTIVE DISTRIBUTION OF RESOURCES AND COLLECTIVE ACTION.	SAMES AS INDIVIDUALISM/ COLLECTIVISM
COLLECTIVISM II: IN-GROUP COLLECTIVISM	DEGREE TO WHICH INDIVIDUALS EXPRESS PRIDE, LOYALTY AND COHESIVENESS IN THEIR ORGANIZATIONS OR FAMILIES	TYPE OF COLLECTIVISM FOCUSED ON SMALL IN-GROUPS
GENERAL EGALITARIANSIM	EXTENT TO WHICH AN ORGANIZATION OR SOCIETY MINIMIZES GENDER ROLE DIFFERENCES AND GENDER DISCRIMINATION	MODIFIED VERSION OF MASCULINITY/FEMINITY
ASSERTIVENESS	DEGREE TO WHICH INDIVIDUALS IN ORGANIZATIONS OR SOCIETIES ARE ASSERTIVE, CONFRONTATIONAL AND AGGRESSIVE IN SOCIAL RELATIONSHIPS	MODIFIED VERSION OF MASCULINITY/FEMINITY
FUTURE ORIENTATION	DEGREE TO WHICH INDIVIDUALS IN ORGANIZATIONS OR SOCIEITES ENGAGE IN FUTURE-ORIENTED BEHAVIORS SUCH AS PLANNING, INVESTING IN THE FUTURE, AND DELAYING GRATIFICATION	SIMILAR TO CONFUCIAN WORK DYNAMISM BY HOFSTEDE AND BOND (1988)
PERFORMANCE ORIENTATION	EXTENT TO WHICH AN ORGANIZATION OR SOCIETY ENCOURAGES AND REWARDS GROUP MEMBERS FOR PERFORMANCE IMPROVEMENT AND EXCELLENCE	
HUMANE ORIENTATION	DEGREE TO WHICH INDIVIDUALS IN ORGANIZATIONS OR SOCIETIES ENCOURAGE AND REWARD INDIVIDUALS FOR BEING FAIR, ALTRUISTC, FRIENDLY, GENEROUS, CARING AND KIND TO OTHERS.	SIMILAR TO KIND HEAREDNESS BY HOFSTEDE AND BOND (1988)

3-34

Hofstede Dimensions and the GLOBE Dimensions - (Cont.)

- A generally accepted view is that the **national culture** predisposes citizens of a nation to act in a certain way along a Hofstede or GLOBE dimension. (i.e. individualistic way in England, collectivist way in China).

- The extent of the influence of a national culture may vary among individuals, and culturally based idiosyncrasies and individual experiences

Awareness of Cultural Differences

- **Effective communication** means listening, framing the message in a way that is understandable to the receiver, and responding to feedback.

- Effective **cross-cultural communication** involves all of these plus searching for an integrated solution that can be accepted and implemented by members of diverse cultures.

- Communication in meetings is also subject to cultural differences.

- Knowing that a society tends to score high or low on certain dimensions helps a manager anticipate how a person from that society might react.

- Without **awareness of cultural differences**, it is unlikely that IS will be developed or used effectively.

Chapter 3 - Key Terms

Assumptions (p. 90) - unobservable since they reflect organizational values that have become so taken for granted that they guide organizational behavior without any of the group members thinking about them.

Beliefs (p. 90) – perceptions that people hold about how things are done in their community.

Culture (p. 89) – a set of "shared values and beliefs" that a group holds and that determines how the group perceives, thinks about, and appropriately reacts to its various environments.

Decision right (p. 78) - indicate who in the organization has the responsibility to initiate, supply information for, approve, implement, and control various types of decisions.

Enacted values (p. 90) - the values and norms that are actually exhibited or displayed in employee behavior.

Espoused values (p. 90)- explicitly stated preferred organizational values.

Flat organization structure (p. 81) - has less well-defined chain of command.

Hierarchical organization structure (p. 80) - an organizational form based on the concepts of division of labor, specialization, spans of control, and unity of command.

Networked organization structure (p. 82) – characteristically feel flat and hierarchical at the same time.

Matrix organization structure (p. 82) - workers are assigned to two or more supervisors in an effort to make sure multiple dimensions of the business are integrated.

Observable artifacts (p. 90) –physical manifestations such as traditional dress, symbols in art, acronyms, awards, myths and stories told about the group, rituals, and ceremonies and so on.

Chapter 3 - Key Terms - (Cont.)

Organizational strategy (p. 78) - includes the organization's design, as well as the managerial choices that define, set up, coordinate, and control its work processes.

Value (p. 90) - reflect the community's aspirations about the way things should be done.

Copyright 2013 John Wiley & Sons, Inc.