Chapter 3
Organizational Strategy and Information Systems

Jason C. H. Chen, Ph.D.
Professor of MIS
School of Business Administration
Gonzaga University
Spokane, WA 99258
chen@jepson.gonzaga.edu

Learning Objectives

• Understand how the use of information technology impacts an organization.
• Identify the type of organizational structure that tends to be most willing to embrace technological change and sophistication.
• List the advantages and disadvantages of the networked organizational 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 Examples

• Cognizant Technology Solutions grew fast to become a $1.4 billion revenue company providing IT outsourcing services.
• This 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 with developers in different locations.
• A tremendous strain was put on managers because they had to work day and night.
• However, some of the units adopted a matrix structure that shared managerial responsibilities.

Who/What Delivers IT Value?

IT Value is a function of **people, process, and technology**.

IT Value is also a function of **organizational** value.

Organizational Ware

- Strategy
- Structure
- Infra-structure
- Culture (SOS)
  - SOM (Social Operating Mechanism)
  - Reward Assessment

SOM is a key process to help groups come together to plan and take effective action for change.
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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.
• Added a new layer of leaders to oversee the businesses and free up the CEO’s time to work on strategy.
• Different organizational structures reflect different organizational strategies that are used by organizations to implement their business strategies and accomplish organizational goals.

Organizational Strategy

• the organization’s design, as well as the managerial choices it makes to define, set up, coordinate, and control its work processes
• Optimized organizational design and management control systems support optimal business processes which reflect the firm’s values and culture.
• Models used: business diamond and managerial levers (see chapter 1)
• This chapter builds on the managerial levers model discussed in chapter 1.
  – Three types of managerial levers: organizational, control, cultural.

Key Characteristics

• Includes the organization’s design, as well as the managerial choices that define, set up, coordinate, and control its work processes
• Optimized organizational design and management control systems support optimal business processes which reflect the firm’s values and culture
• This chapter builds on the managerial levers model discussed in chapter 1.
• Figure 3.1 summarizes complementary design variables from the managerial levers framework.

Figure 1.5 The Leavitt Business Diamond

(Source: Hammer et al., 1994)
Decision Rights

- **Who** in the organization has the responsibility to initiate, supply information, approve, implement, and control various types of decisions.
- 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 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 in design (Fig. 3.2).

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 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.
Networked Organizational Structure

- Made possible by new information systems.
- They feel flat and hierarchical at the same time.
- Decision rights are decentralized in this structure.
- Defined by their ability to promote creativity and flexibility while maintaining operational process control, which is achieved by substituting hierarchical controls with controls based on IS.
- Extensive use of communication technologies and networks also makes it easier to coordinate across functional boundaries.

Other Organizational Structures

- An organization is seldom a pure form of one of the four structures described above (i.e., hierarchical, flat, matrix and networked).
- It is more common to see a hybrid structure in which different parts of organization use different structures depending on their information needs and desired work processes.
- Adaptive or zero time organization
  - a newer organizational design is designed to be highly flexible, agile and responsive so that resources can be configured quickly to respond to changing demands.

Informal Networks

- Informal relationships exist and can play an important role in the functioning of an organization.
- Some informal relationships are designed by management:
  - Working on a project.
  - Job rotation program, etc.
- Unintended networks are formed throughout an organization by:
  - Proximity
  - Shared interest
  - Family ties, etc.
- Some even cross organizational boundaries.
**What is Organization Transformation?**

- Organization transformation is a comprehensive organization-wide change initiative that results in change in the “deep structure” of the firm, **radically** altering strategy, structure, systems, processes, human resource requirements, and core values and beliefs.
- With the overall change initiative resulted in radical change, the implementation process proceeded through overlapping episodes of **incremental** and **radical** change consistent with the change process.

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**Dilemma in Organization Design**

<table>
<thead>
<tr>
<th>Complex</th>
<th>Simple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable</td>
<td>Environment</td>
</tr>
</tbody>
</table>

| Hierarchy (Control) | Entrepreneurial (Autonomy) |

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**The Emerging Information Age Organization**

<table>
<thead>
<tr>
<th>Complex</th>
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**Transitions in Organization Design**

- From **Control** to **Learning**
  - Promote flexibility, creativity, and learning while continuing to enable tight control of operating process
- From **Autonomy** to **Collaboration / Co-operation**
  - Line managers are **empowered** to make decisions
  - Timely, quality distributed **information** and new communication technologies (e.g., video conferencing) are important factors that are enabling dramatic changes in organization redesign.
The Organization Design Challenge

- **Hierarchy**: centralized intelligence control
  - complex organization in stable environment
  - mainframe
- **Entrepreneurial**: autonomy decentralized intelligence
  - simple organization in dynamic environment
  - microcomputer
- **Information/K. Age**: distributed intelligence collaboration
  - complex organization in dynamic environment
  - networked IT architecture
  - flat, fast, flexible and focused on areas of core competency

Lessons of the Information Age

- **Speeds** count, but not at the expense of control.
- **Empowerment** is not anarchy.
- Transforming an organization requires more than just changing the structure.
  - Maximizing flexibility, innovation, and control.
  - Maximizing independence and interdependence: collaboration, the missing organization design criterion.
  - Organization transformation needs a comprehensive organization-wide change initiative that results in change in the “deep structure” of the firm, radically altering strategy, structure, systems, processes, human resource requirements, and core values and beliefs.

Formal Reporting Relationships and Organization Structures

- Organization structure is the way of designing an organization so that 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**.

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Figure 3.4 Comparison of organizational structures

<table>
<thead>
<tr>
<th></th>
<th>Hierarchical</th>
<th>Flat</th>
<th>Matrix</th>
<th>Networked</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Bureaucratic w/ defined levels of management</td>
<td>Decision-making pushed down to lowest level</td>
<td>Workers assigned to 2 or more supervisors</td>
<td>Formal/ informal communication networks that connect all</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td>Division of labor, specialization, unity of command</td>
<td>Informal roles, planning and control, often young org.</td>
<td>Mixed reporting based on function/purpose</td>
<td>Mobilizes flexibility and adaptability</td>
</tr>
<tr>
<td><strong>Type of Environment Best Supported</strong></td>
<td>Stable</td>
<td>Uncertain</td>
<td>Stable</td>
<td>Uncertain</td>
</tr>
<tr>
<td><strong>Best Supported</strong></td>
<td>Decentralization</td>
<td>Planning and control</td>
<td>Flexibility and adaptability</td>
<td>Networks</td>
</tr>
<tr>
<td><strong>Power Structure</strong></td>
<td>Centralized</td>
<td>Centralized</td>
<td>Distributed</td>
<td>Distributed</td>
</tr>
<tr>
<td><strong>Key Tech. Supporting this</strong></td>
<td>Mainframe, centralized data and processing</td>
<td>Personal computers</td>
<td>Networks</td>
<td>Informal and formal</td>
</tr>
</tbody>
</table>

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.
  - a form of **informal** network

INFORMATION SYSTEMS AND MANAGEMENT CONTROL SYSTEMS
INFORMATION SYSTEMS AND MANAGEMENT CONTROL SYSTEMS

- IT changes the way Managers **Monitor**.
- IT changes the way Managers **Evaluate**.
- IT changes the way Managers **Provide Feedback**.
- IT changes the way Managers **Compensate** and **Reward**.
- IT changes the way Managers **Control Processes**.

**Organizational Characteristics of Information Age Organizations**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational</td>
<td>Companies have benefits of small and large scale simultaneously.</td>
</tr>
<tr>
<td>Structure</td>
<td>Lg. organizations adopt flexible/dynamic structure</td>
</tr>
<tr>
<td></td>
<td>Centralized/decentralized control blur</td>
</tr>
<tr>
<td></td>
<td>Focus on projects/process vs. tasks/procedures</td>
</tr>
<tr>
<td>Human Resources</td>
<td>Workers better trained, autonomous, transient</td>
</tr>
<tr>
<td></td>
<td>Work environment exciting, engaging</td>
</tr>
<tr>
<td></td>
<td>Management shared, rotated, even part-time</td>
</tr>
<tr>
<td></td>
<td>Job descriptions tied to defined tasks non-existent</td>
</tr>
<tr>
<td></td>
<td>Compensation tied directly to contribution</td>
</tr>
<tr>
<td>Management Processes</td>
<td>Decision-making is well understood</td>
</tr>
<tr>
<td></td>
<td>Control separated from reporting relationships</td>
</tr>
<tr>
<td></td>
<td>Computers support creativity at all levels</td>
</tr>
<tr>
<td></td>
<td>IS retain corp. history, experience, expertise</td>
</tr>
</tbody>
</table>

**Management Control**

- IT profoundly affects the way managers control their organizations.
- People and processes are monitored in ways that were not possible only a decade ago.
- Managers need to control work done at the process level.
- The organizational structure will determine the level of control that a manager must exercise.
- IS plays three important roles in management control processes:
  - Data collection, Evaluation, and Communication.

**Fig 3.1 Organizational design variables (Managerial Levers)**

<table>
<thead>
<tr>
<th>Organizational variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision rights</td>
</tr>
<tr>
<td>Business Processes</td>
</tr>
<tr>
<td>Formal reporting relationships</td>
</tr>
<tr>
<td>Informal networks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data</td>
</tr>
<tr>
<td>Planning</td>
</tr>
<tr>
<td>Performance measurement and evaluation</td>
</tr>
<tr>
<td>Incentives</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural variables</th>
</tr>
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<tbody>
<tr>
<td>Values</td>
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</table>

**IT Changes the Way Managers**

- **Monitor**: IS makes possible new ways to track performance and behavior
- **Evaluate**: models are easily built, making it easier to understand progress and performance
- **Provide Feedback**: IS makes rapid feedback possible (e.g., through electronic forms)
- **Compensate & Reward**: team-based efforts can be evaluated and complex formulas used
- **Control Processes**: IS also used extensively in industrial processes, and makes it easier to collect, analyze and move information
Planning and Information Technology

• Information technology can play a role in planning in three ways:
  – IS can provide the necessary data to develop the strategic plan
  – Some IS actually automate the planning process
  – IS can lie at the heart of a strategic initiative and can be used to gain strategic advantage

Data Collection and IT

• Monitoring work can take on a completely new meaning with the use of information technologies.
• IS make it possible to collect such data as:
  – 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 is to:
  – 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 data against reams of standard or historical data.
• Managers can more easily understand work progress and performance.
• However, analysis paralysis (too much data/information) can cause managers to become overwhelmed.
• How the information is used is important to performance measurement.
• How feedback is communicated in the organization plays a role in affecting behavior.
• Key is making sure that the information is handled discreetly and appropriately.

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.
INFORMATION SYSTEMS AND CULTURE

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.

CULTURE

- Culture is the third managerial lever.
- Plays an increasingly important role in IS development and use.
- It is defined as a shared “set of values and beliefs about what is desirable and undesirable in a community of people” (also see TAM model in chapter 4).
- Culture is not static but always changing.
- Different levels of culture.
- Culture should be considered as the most important organizational strategic resources for improving its competitive advantage as it is non-imitatable.

CULTURE

- Hofstede is one of the best known researchers in the values across national cultures.
- Awareness of the Hofstede or GLOBE dimensions may help improve communications and reduce conflict.
- The GLOBE (Global Leadership and Organizational Behavior Effectiveness) research program was a team of 150 researchers who have collected data on cultural values and practices and leadership attributes from over 18,000 managers in 62 countries.
- The GLOBE dimensions and their relationship to Hofstede’s dimensions are found in Figure 3.5.
Organizational 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.

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.

Break

- Read end of chapter case on p.96 (#4 – Mary Kay, Inc.)
- Or
- Read Case Study 3-1: The Merger of Airtran by Southwest Airlines: Will the Organizational Culture Merge?

DQ #4 Mary Kay, Inc.

- a. How would organizational strategy need to change to respond to Mary Kay’s new business strategy?
- Ans: Organizational changes would need to be consistent with a revised organizational strategy. If no organizational changes were made, we’d expect the systems to be rejected by many of the workers. Managers would expect IBCs to use the systems, but IBCs are independent agents, so they would most likely delay in using the systems unless motivated to do otherwise.
- Thus the reward and compensation systems would need to be adjusted to accommodate the new systems. And unless business processes were also changed to accommodate the new systems, we would expect problems to occur that make it difficult for the new systems to be used (information entered into the system might be just printed out, if the processes are expecting paper-based forms rather than screen shots).
• a. How would organizational strategy need to change to respond to Mary Kay’s new business strategy? (cont.)
• You might also want to explore *business process* that would have to change to accommodate the new systems. The paper-based ordering system would have to be removed, if managers wanted IBCs to only use the new system, since running the older system discourages IBCs from using the new system.
• *Fulfillment and reconciliation processes* would be different with the use of mymk.com, since the order information was entered earlier into the system. If customers of IBCs place orders automatically, IBCs lose control over what is ordered, and will have to build new ways to keep track of their sales. If fulfillment processes are done using paper pick lists, then the process either needs to be redesigned to use electronic lists (shown on the screen or such) or to print out paper lists.

• b. What changes would you suggest Mary Kay, Inc. managers make in their management systems in order to realize the intended benefits of the new systems? Specifically, what types of changes would you expect to make in the evaluation systems, the reward systems, and the feedback systems?
• Ans: *Evaluation systems* would include a component of how well the systems were used by the Independent Beauty Consultants (IBCs). There would need to be an evaluation of the frequency and effectiveness of the use of the systems. That may translate into the *reward systems*, where IBCs are compensated for their use of the systems (direct bonuses, etc) or where they find that using the systems gives them advantages they didn’t get otherwise (faster orders, better book keeping, etc). IBCs might need incentive packages to encourage them to buy computers if they don’t have one already (such as discounts from a preferred vendor).

• b. (cont.)
• *Support processes* would be needed to help IBCs learn how to use the systems effectively, and to help them identify new ways to do their business better. The results of the evaluation process would have to be used to provide feedback to the employees. Possibly, in discussing an employees performance, it may be helpful to share with them average performance levels of other employees.

**Case Study 3-1: The Merger of Airtran by Southwest Airlines: Will the Organizational Culture Merge?**

• This case study allows the students to explore real world cultural issues related to the merger of two companies that basically offer the same services, but have two very different organizational structures and cultures.

• 1. Discuss the layers of culture that are evident in this case.
• Ans: The organizational values of both airlines are discussed. This includes the employees’ foundational values regarding their work processes.
• It also includes the expectations of customers. Each firm has built a reputation based on its values, so the assimilation of these divergent cultures can create some friction and confusion.

• 2. What are the similarities and dissimilarities between the cultures, values and beliefs of Southwest and AirTran airlines?
• Ans: Both airlines include “fun” in their value statements. They both want customers to have a pleasant experience.
• Southwest Airlines takes it a step further, emphasizing the “over the top” experience the company is noted for providing. AirTran includes safety and more serious notions as part of its value and belief statement. They want to have fun, but there are other things that are more important.
3. What problems could arise due to the different perspectives of both airlines towards online reservation systems? What do you recommend the managers do to solve these problems?

Ans: Depending on familiarity with the reservation systems, preference might be given to one system over the others. This could disadvantage some customers if they elected to use the other online system.

The outcome could be confusion and frustration for customers. Managers need to ensure that all employees are trained properly. They should also actively monitor the reservation process to check for any disruptions. They might even try pairing employees from the two airlines to work together, thereby overcoming any confusion in processing the reservations.

4. What would you recommend managers do to ensure a smooth integration of the information systems, given the culture differences?

Ans: The information systems should focus on efficiency and effectiveness standards. Ease of use would be important when designing the user interface.

Retain familiar features, as much as possible, and require the least amount of business process change. Open and constant communication is imperative for a smooth transition. Assess the results at regular intervals, and make changes as required.