Principles of Information Systems 12th edition Stair Solutions Manual

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Solutions – Chapter 2

Ethical & Societal Issues

Outsourcing Background Checks in the United Kingdom

Discussion Questions

1. Student responses will vary. Some may voice concerns about the security of the information that TCS now holds. Other concerns include whether or not the data will be managed at UK standards and what data policies are in place to protect the information.

2. Student responses will vary. Two of the major selling points of outsourcing are reduced costs and better service delivery.

Critical Thinking Questions

1. Student responses will vary. Note that it is the cloud service provider's responsibility to protect its data from physical disruptions and from cyber attacks. If the cloud provider fails to provide adequate data protection, its client is vulnerable.

2. Student responses will vary. One reason may be the substantial reduction in costs.

Information Systems @ Work

Discussion Questions

1. The modern CIO is a customer relationship manager, a strategic communicator, and a project manager, delicately balancing project portfolios, available resources, and governance.

2. Developing a diverse set of skills that allows a CIO to manage people effectively and keep up with innovations in technology can be challenging.

Critical Thinking Questions

1. Student responses will vary.

2. Student responses will vary.

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Review Questions

1. A value chain is a series (chain) of events that includes inbound logistics, warehouse and storage, production, finished product storage, outbound logistics, marketing and sales, and customer service. A supply chain is a network of suppliers, distributors, and retailers that participate in the production of a product.

2. Supply chain management (SCM) helps determine what supplies are required for the value chain, what quantities are needed to meet customer demand, how the supplies should be processed (manufactured) into finished goods and services, and how the shipment of supplies and products to customers should be scheduled, monitored, and controlled.

3. An information system can indirectly add value by summarizing the feedback from value-added processes for use by management and other organizational employees. The monitoring and control capabilities of an IS are excellent support features. A more contemporary view of the IS function holds that this system is an integral part of the value-adding processes and is key to providing input collection, product transformation, and output creation. In this way, an IS system can become a direct, strategic tool used to accomplish organizational goals and objectives.

4. Technology diffusion is a measure of how widely technology is spread throughout an organization.

5. Reengineering is radical redesign of business processes, organizational structures, information systems, and values of the organization to achieve a breakthrough in business results. Continuous improvement is constantly seeking ways to improve business processes to add value to products and services.

6. Quality is the ability of a product or service to meet or exceed the expectations of a customer. The intent of management to create quality goods or services is often operationalized through a commitment to a total quality management (TQM) approach to business. This means a collection of approaches, tools, and techniques are used throughout the firm to foster higher levels of quality. Key components in this approach are recognition of customer needs, employee empowerment, having a vision for quality, and developing a reward system. Six Sigma is a statistical term that means products and services will meet quality standards 99.9997% of the time. In a normal distribution curve used in statistics, six standard deviations (Six Sigma) is 99.9997% of the area under the curve.

7. Organizational culture consists of the major understandings and assumptions for a business, corporation, or other organization. The understandings, which can include common beliefs, values, and approaches to decision making, are often not stated or documented as goals or formal policies. For example, employees might be expected to be clean-cut, wear conservative outfits, and be courteous in dealing with all customers. Sometimes organizational culture is formed over years.

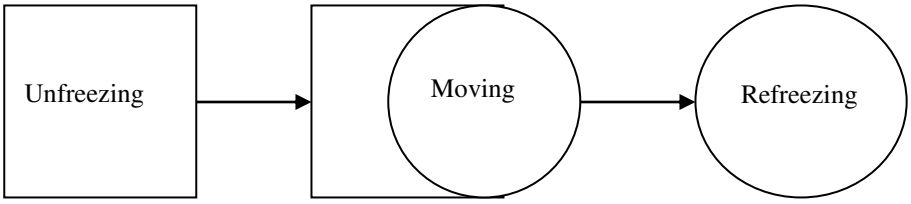
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Organizational change is the process used by both profit and nonprofit organizations to plan, implement, and handle change.

8. The following table summarizes the basic organizational structures:

Organizational Structure	Definition
Traditional	An organizational structure in which the hierarchy of decision making and authority flows from the strategic management at the top down to operational management and non-management employees.
Project	A structure focused on major products or services, with program managers responsible for directing one or more projects.
Virtual Team	A group of individuals whose members are distributed geographically, but who work as a coherent unit through the use of information systems technology.
Matrix	An organization structure in which an individual has two reporting superiors (managers)—one functional and one operational.

9. The change model has three basic components – unfreezing, moving, and refreezing. Unfreezing is the process of ceasing old habits and creating a climate receptive to change. Moving is learning new behaviors. Refreezing is the process of making the new behaviors a normal, accepted part of the job.



10. Downsizing is the planned reduction of a workforce used to reduce costs. It is sometimes called rightsizing. Outsourcing, on the other hand, is contracting with outside professional services to meet business needs. This means that organizational resources are focused on the primary business activity. Professionals handle secondary functions with more expertise in a particular area. In theory, the workforce is not reduced but instead reallocated.

11. Organizations employ various strategies to achieve a competitive advantage. Among these are the forming of alliances with other companies, developing a niche market, maintaining competitive costs, and creating product differentiation.

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12. Students who use the Internet and other nontraditional sources to find IS jobs have more opportunities to land a job. Many Web sites, such as Dice.com, CareerBuilder.com, TheLadders.com, LinkedIn.com, Computerjobs.com, and Monster.com, post job opportunities for Internet careers and more traditional careers.

13. The role of the chief information officer (CIO) is to employ an IS department's equipment and personnel to help the organization attain its goals.

Discussion Questions

1. Successful information system workers must enjoy working in a fast paced, dynamic environment where the underlying technology changes all the time. They must be comfortable with meeting deadlines and solving unexpected challenges. They need good communication skills and often serve as translators between business needs and technology-based solutions. They must have solid analytical and decision-making skills and be able to translate ill-defined business problems and opportunities into effective technology based solutions. They must develop effective team and leadership skills and be adept at implementing organization change. Last, but not least, they need to be prepared to engage in life-long learning in a rapidly changing field.

2. Student responses will vary. Perceived usefulness and ease of use can influence an individual's attitude toward the system, which also affects the worker's behavioral intention to use the system.

3. Student answers will vary based on their career choice.

4. To encourage innovation, some IS departments are creating separate groups that explore new, innovative ideas. Innovative companies include Apple, Facebook, Google, Amazon, Twitter, Kickstarter, and PayPal.

5. Technology diffusion is a measure of how widely technology is spread throughout an organization. An organization in which computers and information systems are located in most departments and areas has a high level of technology diffusion. Therefore, you would need to measure the use of the new system across the organization.

6. The purpose of this question is to encourage students to think about what the forces in Porter's model translate to in the real world. The following table provides guidelines and sample responses for the discussion. A company called New Wave Multimedia Desktop Computer Corporation was selected to illustrate the analysis.

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Company: New Wave Multimedia Desktop Computer Corp.

Competitive Force	Strategic Plan's Counter to Competitive Force
Rivalry among existing competitors	Develop new products and new looks to standard products.
Threat of new entrants	Develop strategic alliances with software/hardware producers to dissuade new startup companies.
Threat of substitute products	Differentiate the product line so that fewer substitutes are available: integrate high end speakers, monitors, audio and video components into computer system.
Bargaining power of buyers	Develop the high quality service reputation and maintain buyer profiles: make buyers desire a relationship with this corporation through high levels of trust and support.
Bargaining power of suppliers	Develop long term relationships with suppliers and integrate inventory systems with information technology.

7. A strategy that may serve New Wave Multimedia Desktop Computer Corporation well is the development of a niche market. This would help them build and protect their spot as a leading vendor of high-end multimedia computer systems. Students will respond to the discussion with a wide variety of responses. The best approach might be to encourage them to think in terms of strategic alliances, niche markets, competitive cost approaches, and product differentiation used either alone or in combination to protect the 'turf' of their example corporation.

8. Students who use the Internet and other nontraditional sources to find IS jobs have more opportunities to land a job. Most large companies list job opportunities on their Web sites. These sites allow prospective job hunters to browse job opportunities, locations, salaries, benefits, and other factors. In addition, some sites allow job hunters to post their résumés.

   Note that students are often warned to be careful of what they post on social media sites, including Facebook. Employers often search the Internet to get information about potential employees before they make hiring decisions.

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9. The CIO should be a customer relationship manager, a strategic communicator, and a project manager, delicately balancing project portfolios, available resources, and governance. He/she should also be a leader, not a dictator; a technologist, not a technician; a business person, not an accountant; and finally, a diplomat, not a politician.

Problem-Solving Exercises

1. Student answers will vary based on their chosen industry and firms.

2. Initial spreadsheet with ROI:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Capital	-$500					
Increased Revenue		50	75	100	115	130
Cost Savings		110	125	125	125	125
Total benefits		**160**	**200**	**225**	**240**	**255**
Operating and maintenance expense		75	50	50	50	50
Cash flow before taxes	-500	85	150	175	190	205
Accumulated cash flow (to calculate payback period)	**-500**	**-415**	**-265**	**-90**	**100**	**305**

All amounts in thousands.

Payback period = 4 + 90/190 = 4.5 yrs
Net Present Value = $144.42
Internal Rate of Return = 15.955%

b) Capital cost for the project now $750,000 and the cost savings and increased revenue now decreased by 25 percent each year:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Capital	-$750					
Increased Revenue		37.5	56.25	75	86.25	97.5
Cost Savings		82.5	93.75	93.75	93.75	93.75
Total benefits		**120**	**150**	**168.75**	**180**	**191.25**

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Operating and maintenance expense		75	50	50	50	50
Cash flow before taxes	-500	85	100	118.75	130	141.25
Accumulated cash flow (to calculate payback period)	**-500**	**-415**	**-315**	**-196.25**	**-66.25**	**75**

All amounts in thousands.

Payback period = 5 + 66.25/141.25 = 5.5 yrs
Net Present Value = -$286.37
Internal Rate of Return = -7.685%

3. Five popular job sites include whttp://ww.monster.com, http://www.careerbuilder.com, http://www.dice.com, http://www.indeed.com, http://www.simplyhired.com.

Team Activities

1. Students should interview a manager of a successful organization about organizational culture.

2. Students should research a firm that has achieved a competitive advantage.

Web Exercises

1. Student responses will vary. Note that a lean enterprise creates more value for their customers with fewer resources.

3. Students should search for information that compares the use of the internal rate of return and net present value method for the financial evaluation of projects.

Career Exercises

1. Students could conduct research about an entrepreneur that they admire.

2. The five fastest growing occupations are:
   - Industrial-organizational psychologists
   - Personal care aides
   - Home health aides
   - Insulation workers, mechanical
   - Interpreters and translators

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Case Studies

Case One: Tesco Uses Data and New Information Technologies to Stay Ahead

Discussion Questions

1. Tesco's Terradata database allows them to track and analyze customer information. This information can be used to achieve a competitive advantage.

2. Using augmented reality technology from Kishino AR, Tesco lets customers see products online almost as if they were physically in a store. Tesco is also putting computers in its U.K. stores that allow customers to check out more products than a store can stock, and view heavy, bulky items from all angles. In Korea, Tesco has opened a complete virtual store: Customers can view over 500 items, scan their bar codes using a special smartphone app, and order products. The products can be delivered later that same day if they order by 1 pm.

   Tesco has also developed a Facebook application in which Clubcard holders (or most of its regular customers, 16 million in the United Kingdom alone) can vote on products they want added to its Big Price Drop promotion.

Critical Thinking Questions

1. By analyzing historical data, Tesco will be able to discover patterns and trends. They will be able to identify products with high turnover rates, determine when shoppers buy certain items, which shoppers buy certain items, etc.

2. Responses will vary. Some students may be uncomfortable with the idea that their spending habits are being tracked.

Case Two: TUI Deutschland Uses Information Systems to Gain a Competitive Advantage

Discussion Questions

1. A firm's relationships with suppliers and customers.

2. TUI's new information system has made pricing much more fair. Traditional pricing methods are no longer appropriate for today's travel and tourism market. In the past it was practically impossible to set prices in a way that was flexible and customer-focused. This has all changed. The pricing specialist in effect becomes an expert in a particular customer group and knows exactly what a certain customer is prepared to pay for a certain travel service. This increases profits, but not at the expense of our customers.

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Critical Thinking Questions

1. Student responses will vary. Online travel sites include www.expedia.com, www.priceline.com, and www.travelocity.com.

2. Student responses will vary. The bookstore could develop a new information system to make the process more effective. Instead of punching cards, the system would track purchases and automate the reward process.

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