



In Semester Case Study and Presentation

Module: Information System Management (COMP1006)

Level: 2

Submission Date: 13th Week

Max. Marks: 100

Learning Outcomes:

1. Formulate the business rationale for an information system.
2. Explain how organizations' can be managed better by intelligent use of information systems.
3. Understanding information system security and reliability of the organization.

Instructions:

You are given 5 case studies. Choose any one of them and answer questions at the end of the chosen case study. Each case study has 5 questions, each one carries 15 marks. Every student should submit work proposal related to his/her case study till the end of 10th week (16th December 2017, 11:59pm). For more information about marks, please consult marking grid at the end.

1. Wyoming Medical Center, Los Angeles County, and Raymond James: End-Point Security Gets Complicated

Users say protecting network end points is becoming more difficult as the type of endpoint devices—desktops, laptops, smartphones—grow, making security a complex moving target. The problem is compounded by the range of what groups within corporations do on these devices, which translates into different levels of protection for classes of users on myriad devices. “Deciding the appropriate device defense becomes the No. 1 job of endpoint security specialists,” says Jennifer Jabbush, CISO of Carolina Advanced Digital consultancy. Depending on the device and the user’s role, end points need to be locked down to a greater or lesser degree. For instance, Wyoming Medical Center in Casper, Wyoming, has four classifications of PCs: “open PCs in hallways for staff use; PCs at nursing stations; PCs in offices; and PCs on wheels that move between patient rooms and handle very specific, limited applications,” says Rob Pettigrew, manager of technical systems and help desk for the center.

Pettigrew is deploying Novell ZenWorks to 850 of the center's 900 PCs in order to make sure each class has the right software. With 110 applications and 40 major medical software systems, that makes a huge matrix of machine types and restrictions to contend with, he says. In addition, physicians in affiliated clinics can access via SSL VPN (a kind of VPN that is accessible over Web browsers), but they are limited to reaching Web servers in a physician's portal, which is protected from the hospital data network. Some Citrix thin clients are also used to protect data from leaving the network but overall the strategy for unmanaged machines is a work in progress, Pettigrew says. "We're hoping to get more help desk to deal with the external physicians," he says. One concern that can be addressed by endpoint security is data privacy, which is paramount for the Los Angeles County Department of Health Services in California, says Don Zimmer, information security officer for the department. He supports about 18,000 desktops and laptops and operates under the restrictions of Health Insurance Portability and Accountability Act (HIPAA) regulations. "That means disk encryption," he says. "If it's not encrypted and there is a breach, then we have to start calling people," he says.

To avoid violating patients' privacy and a loss of public trust, the department encrypts the drives of all the PC end points with software from PointSec. Equally important is keeping sensitive information off movable media that can plug into USB ports. The department uses Safend's USB Port Protector product that either denies access to sensitive documents or requires that they be encrypted and password-protected before being placed on the removable device. Everyone's talking about the insider threat. But protecting data can't supersede the requirement to give users the access they need to do their jobs—otherwise, soon you'll have neither business data nor employees to worry about. Striking a balance between access and protection isn't easy, however.

In an *InformationWeek Analytics/DarkReading.com* endpoint security survey of 384 business technology pros, 43 percent classify their organizations as "trusting," allowing data to be copied to USB drives or other devices with no restrictions or protective measures. Still, IT is aware of the need to move from a stance of securing end points to assuming that laptops and smartphones will be lost, good employees will go bad, and virtual machines will be compromised. Instead of focusing on end points, let fortifications follow the data: Decide what must be protected, find out everywhere it lives, and lock it down against both inside and outside threats, whether via encryption, multitier security suites, or new technologies like data loss prevention (DLP). DLP suites combine network scanning and host-based tools to collect, categorize, and protect corporate intellectual property. These products can maintain an archive of data and documents, along with associated permissions by group, individual, and other policies. They then actively scan internal networks and external connections looking for anomalies. This takes data protection beyond perimeter or endpoint protection; DLP facilitates internal safety checks, allowing "eyes-only" data to remain eyes only and minimizing the risk that sensitive data will be viewed by the wrong folks, even in-house.

Zimmer says he is looking into DLP software as well that can restrict the access individual devices have to data. Although the technology can be effective, it also requires that businesses locate and classify their data so they can set policies surrounding it—a job that can seem insurmountable, depending on how data have been stored. For Pettigrew, this means finding the 5 percent of sensitive data stored outside the medical center's electronic medical records system. Rather than deal with many vendors for specific endpoint protection products, some businesses opt for endpoint security suites, such as those that evolved from the antivirus roots of vendors, including McAfee and Symantec.

Sam Ghelfi, chief security officer at financial firm Raymond James, opted for Sophos's Endpoint Protection and Data Security Suite, which offers firewall, antivirus, data loss prevention, antispymware, encryption, and network access control (NAC). The company wants tight control over the Web content that is available to users to minimize the malware coming in via basic Web browsing. The company uses a

Sophos Web proxy that filters sites based on reputation, but also the content that sites return. Mobile devices that could contain confidential company information are disk encrypted, again using Sophos agents. If a device is lost or stolen, the encryption key is wiped out, making it impossible to decrypt the contents of the hard drive. Ghelfi says he believes in personal firewalls on individual machines because they can stop groups of devices from talking to other groups. “Centrally managed, they can reveal network traffic patterns,” he says. He doesn’t use all of the features of the Sophos suite, though. For instance, he is just getting around to implementing NAC to let unmanaged guest machines get on the network but still minimize risk that they are infected. That will clear them based on authentication, access method and type of machine, but for contractors that require access to the main network, he also insists that they install the Sophos suite. Other unmanaged machines, such as those of guests, are allowed access only through a dedicated wireless network that leads to a limited set of servers in a network segment flanked by firewalls, he says. “Such endpoint security suites can be attractive financially,” Jabbusch says, “because customers can wind up with reduced agent, license and support fees and less management overhead.” There may be a certain amount of convenience if customers decide to layer on more applications within a suite. The newest class of devices—smartphones—is presenting ongoing challenges as organizations figure out how to deal with them. Particularly dicey is whether to allow employees to use their personally owned devices for business and to access the business network. The jury is still out, at least among state government chief information officers. A recent survey by the National Association of State Chief Information Officers says that of 36 states responding to a survey, 39 percent say they allow personal smartphones if they are protected by state security measures. Twenty-seven percent say they don’t allow personal smartphones on their networks, 17 percent say they are reviewing state policy, and 17 percent say they don’t have statewide control—each agency sets its own policies. A separate Forrester Research survey says that 73 percent of businesses surveyed are at least somewhat concerned about smartphones being authorized for business use.

According to DeviceLock, its survey of more than 1000 IT professionals found that fewer than 40 percent of respondents said yes to the question: “Have you taken any steps to secure your business against the security threat posed by iPhones?” Analyzing the responses by region, researchers found that only 25 percent of respondents in North America and Western Europe said yes to the question, suggesting this is a “back burner” security issue, says the endpoint data leak-prevention specialist. Jabbusch says the type of smartphone is a factor. “I can’t imagine allowing an iPhone,” she says. “A BlackBerry is somewhat better” because BlackBerries have a management infrastructure and the devices can be locked down to corporate policies. Mobile device security is one of those areas that should get more attention. However, it is likely that this topic will remain buried—until a lost or stolen iPhone leads to a visible and costly security breach.

CASE STUDY QUESTIONS

1. Explain why the endpoint security is not so much successful in business organizations. What should be the option for companies to overcome this issue in order to save their data and information? Describe the issues and their solutions in detail with appropriate examples. Support your answer with valid points.
2. Due to vulnerable nature of end-point security, the business organizations have adopted alternative approaches to endpoint security. Identify and explain the most common approaches used by multinational companies in 2014. Support your answer with at least 3 examples.

3. The business organizations come across new challenges to implement appropriate security measures in their information systems. Identify and explain the possible security challenges and their effects which any business organization may face in 2015. Support your answer with examples.
4. Some analysts argue that employees should be allowed to use mobile phones on organizations' network while some analysts do not favour this point of view. As a student which point of view you support, explain your answer with appropriate points.
5. Go online and find out which security technologies will be popular in 2015 for multinational companies. Explain your answer in terms of advantages, disadvantages, information system security and privacy.

2. DLA Piper, MetLife, PepsiCo, and Others: Telepresence Is Finally Coming of Age

Sprawling international law firm DLA Piper has upgraded from videoconferencing to telepresence, which will save the firm nearly \$1 million per year in reduced travel costs and lost productivity. The conferencing gear that simulates across-the-table meetings has “a provable and achievable return on investment over five years, and may actually pay for itself before then,” says Don Jaycox, CIO of DLA Piper U.S. This involves an “immersive video experience,” or technology that provides high-end, high-definition visual and audio communications in a completely integrated environment. The goal is to make anyone involved in these meetings feel as if they're actually in the room with the other meeting participants, regardless of where everyone is physically based. “Rescheduling half the firm's in-person board meetings as telepresence conferences and relying on at least two attorneys per week to use telepresence rather than travel accounts for significant savings when lost productivity for travel time is factored in,” says Jaycox. “If I look at my total telepresence project cost, which includes equipment, room construction, implementation services, maintenance contract, financing costs, etc., then amortize that over the expected five-year life of the system, it works out to be just a hair under \$500,000 per year for our six U.S. sites,” he says. “Our early experience suggests that a more accurate number of avoided trips is closer to four or five per week, so the \$970,000 projection almost certainly underestimates our actual savings,” he notes. The sites were selected so they put 80 percent of the attorneys within a one-hour drive of a telepresence room.

Jaycox says he has observed attorneys working together via telepresence conferences, and he was struck to see two workgroups formed at either end of the telepresence table, just as they might be if they were all working around the same physical table. “You had the sense all these people were in the same strategy room,” he says. With the economy in a downturn, it's no surprise that companies have been slashing travel budgets. But at MetLife, officials say the focus is also on employees' quality of life, keeping them home as much as possible. As a result, the insurance giant has recently made a big push into telepresence technology.

MetLife is using Cisco Telepresence in three dedicated conference rooms in Chicago, New York, and New Jersey, and soon plans to expand to other offices nationally and internationally. “Instead of having to take people away from their families, you walk down to the room and turn on the lights and have your three-hour meeting and it's extremely effective,” says Anthony Nugent, executive vice president of employee benefits sales. He regularly uses telepresence to communicate with his direct

reports in Chicago and Somerset, New Jersey, and the clarity is so good that he says with a laugh, “Everyone jokes around that they can reach a Coke across the table” from one location to another.

MetLife has seen a direct cost savings as well as better employee time efficiency and a way to help the company meet its “green initiative” goal of reducing its carbon emissions by 20 percent this year, says Nugent. The company finished its initial telepresence rollout a year ago and hasn’t yet determined an exact savings, but Nugent estimates the use of the systems will provide double-digit ROI in travel savings alone. At MetLife, the three Cisco telepresence systems cost just under \$1 million to install, according to Paul Galvin, vice president of enterprise services in the information technology group. Nugent says he uses both videoconferencing and telepresence, depending on his needs. Videoconferencing is a better choice for one-on-one situations, such as “if someone is going to do a quick presentation to me,” he says, but telepresence is ideal for meetings where participants are located in multiple offices. Telepresence gives him face-to-face contact with a broader group, “So it allows me to get to know people better,” Nugent says. He runs an organization with people based all around the country and used to require that his direct reports come to New York for quarterly reviews. Now they can stay in their offices and he can discuss business with a wider range of employees. “Using telepresence allows me to see and virtually interact with more people on my team instead of just my direct reports,” says Nugent. “When we use telepresence for meetings, people who wouldn’t normally be asked to travel to New York have the opportunity to make presentations and get valuable exposure to executive management. It really facilitates face-to-face interaction with a broader cross-section of employees on an economically efficient basis.” MetLife is considering putting a telepresence system at a business processing plant in India to avoid having employees fly over to see it. The company is also looking at ways to utilize telepresence with salespeople across the country. The idea is to have as many people using the system as possible, Nugent says. “Flying out of Boston for a meeting when I was 20 sounded great, but the sales pitch I always give is we’re respecting the time of the employee,” he says. “So if we can give a person the effectiveness of being there and then be home with his family, it’s two wins.” PepsiCo is deploying Cisco Telepresence systems in its major offices worldwide. PepsiCo CIO Robert Dixon says that using telepresence “will reinvent the way we work” while cutting down on travel, which, in turn, improves productivity and reduces the company’s environmental footprint. “In this day and age, it’s simply a smarter way of going about our business,” he adds. PepsiCo sells products from 18 different product lines in 200 countries and employs nearly 200,000 workers. The law firm of Lathrop & Gage, LLP, is using both high-definition videoconferencing and telepresence. Employees conduct more than 300 meetings every month at the firm’s Kansas City, Missouri, headquarters. “It’s a more meaningful way to conduct meetings than over the phone,” says CEO Joel Voran, who uses the system about three times a week. Although he still tries to make it to all of the firm’s offices twice a year, Voran says use of the Polycom systems has significantly reduced the need for lawyers to fly to Kansas City.

“The clarity has been impressive,” Voran says. “At one of our very first meetings at one of our offices I could see the brand of the beverage someone was drinking and that made the partner sit up and take notice.” “This is a billable-hour profession,” notes Ben Weinberger, CIO at Lathrop & Gage, who adds that one attorney alone can save more than \$1,500 in travel expenses and productivity loss by not having to fly somewhere to attend a meeting. Because many lawyers travel monthly, the Polycom system could represent a savings of more than \$30,000 in annual travel expenses and productivity loss for a single attorney, he estimates. Weinberger differentiates between high-end videoconferencing and telepresence by the size of the screens. The rooms that have 50-plus-inch screens and run high-quality, high-definition cameras are utilizing telepresence, he says. Making it possible for far-flung attorneys to work closely together via telepresence helps emphasize that the firm has offices around the world and should have an international focus—a benefit of the system that can’t be quantified in dollars

and cents. “When you work in one location, you tend to draw inward. We want people to think globally,” says Jaycox.

CASE STUDY QUESTIONS

1. The telepresence has many advantages and disadvantages in addition to high installation price. Identify the possible benefits telepresence can bring for large scale organizations. Discuss your answer in terms of performance and productivity. Support your answer with valid points.
2. Despite having great features, the utilization of telepresence is quite slow in large scale organizations. As an information system student, identify and describe the possible reasons which are causing slow telepresence utilization in multinational companies. Explain your answer with reasonable points.
3. “The telepresence systems can be deployed to create a virtual environment where researchers around the world can share knowledge with each other about various research projects to promote research culture”. As an information system student, identify the possible benefits which can be achieved by deploying telepresence in education sector. Explain your answer with examples.
4. Go online and find out the top 5 most popular telepresence systems in 2015. Provide details of each system with appropriate points. Discuss your answer in terms of price, features, advantages and disadvantages.
5. The security is one of the biggest concern in telepresence systems. Therefore, it is prime responsibility of information system managers to have appropriate measures in place in order to avoid any security issues in telepresence systems. Identify appropriate methods, measures or techniques which you consider are necessary for the security of telepresence systems. Illustrate your answer with appropriate details.

3. Cisco Systems, Black & Decker, and O’Reilly Auto Parts: Adapting Supply Chains to Tough Times

Whether it's a truck, a tsunami, or an economic downturn, the same general rule applies: You're better off if you can see it coming from a safe distance. There aren't many companies that understand this notion better than Cisco Systems Inc. White-hot during the 1990s, the company was pummeled after its vaunted inventory forecasting system could not—or did not—predict the dot-com bubble's collapse. The result of this miscalculation was that sales were halved, the company lost 25 percent of its customers in a matter of weeks, and it ultimately wrote off more than \$2 billion in inventory. After that experience, Cisco's supply chain team vowed that it would never get blindsided again. "There is a huge difference cutting head count between now and 2001," says Karl Braitberg, Cisco's vice president of customer value chain management. Back then, Cisco's supply chain model was built on a "push" system, where products were made and inventory was built up in anticipation of market demand based on best-guess forecasts. "Then, when demand dropped, the supply chain froze. Nothing happened," Braitberg says. "We knew we had to build a new system that reacts better than just 'push.'" Every company is tasked with matching its supply to consumer demand. In a normal business cycle, how well that job is accomplished determines whether the company is profitable. But this current economic downturn is anything but normal, and businesses are struggling to simply stay liquid. There are various strategies to help preserve working capital, including cutting head count, outlets, and manufacturing lines. But for most companies, the key to capital preservation will be how well they can reduce their inventory levels.

Largely, companies are in survival mode, and they're looking to their supply chain management team to free up precious capital to help them do that. While it may not fall directly on IT executives to make that happen, their role in the equation is very strategic. With globalization, outsourcing, and increased compliance and security concerns, managing supply chain operations becomes increasingly complex. And shorter, more frequent product cycles targeting more-sophisticated markets create a need to manage more products and parts from remote locations. Add the pressure of shorter cash-to-cash cycles—the time from when a business extends credit to build inventory until the time it gets paid—into the equation, and the need for an intelligent, nimble, and timely flow of information becomes critical. To have visibility as well as command and control, supply chain operations must be tightly integrated with the IT infrastructure. That isn't the case at many companies, and yet it may be the factor that determines success or failure as they endure and emerge from this downturn. Like bloodletting, reducing inventory is a delicate matter that most people would prefer to avoid. Inventory can range from materials, to parts, to fully assembled products.

Nobody wants to run out. If there's too little, customers won't get orders in a timely manner and market opportunities will be missed. Yet if a company carries too much and demand drops, then the inventory must be "bled down," or reduced in price, until it has a buyer. During a strong economy and when cash flow is loosened, many companies can get by without rigorous inventory management practices, says Larry Lapide, director of demand management at the MIT Center for Transportation & Logistics in Cambridge, Massachusetts. But during a recession, he adds, "companies had better bleed down inventory to reflect the downturn in sales. If they don't, it just sits there." Inventory optimization is so critical now because of its impact on available cash, Lapide says. In accounting terms, inventory is an asset.

So inventory that is on the books through manufacturing, assembly, and distribution represents credit-funded inventory. With credit at a premium, it's in a company's best interest not only to keep inventory levels tight, but also to sell goods as soon as possible. Reducing costs and squeezing maximum utility out of fixed assets is nothing new to Black & Decker Corp.'s Hardware and Home Improvement Group in Lake Forest, California. The unit supplies hardware to big-box retailers that have responded to the economic downturn with new low-price strategies. It now falls on Scott

Strickland, vice president of IS, to help the group squeeze down its own costs and maintain profit margins. “We had been loath to drive inventory down to this level,” Strickland says. However, the company had gained invaluable experience by deploying an integrated inventory management system prior to the downturn. The result was that the key decision makers throughout its supply chain were operating with the same information, planners focused only on exceptions, and supplier and material issues were quickly resolved. The system, Strickland says, does the heavy lifting, and as a result, the unit has cut planning cycles from weeks to days and improved forecast accuracy by 10.4 percent. “If someone had told us nine months ago that we could lower inventory as fast as we could to address a sales decline, we would not have believed it was possible,” Strickland says.

However, “because of the impetus on freeing up working capital, we have been focused on lowering our inventory and levels. We figured we could do this, and it turned out to not be the bad experience we had imagined.” The effort to lower inventory levels to free up working capital has proved so effective that the Black & Decker unit and its partners are jointly considering making it standard practice even after the economy recovers, Strickland says.

O’Reilly Auto Parts Inc. in Springfield, Missouri, uses inventory as a competitive differentiator, says Greg Beck, vice president of purchasing. One of the largest specialty retailers of automotive aftermarket parts, tools, supplies, and accessories in the United States, O’Reilly is responding to the recession differently than many other companies. “Business is increasing because of the downturn,” Beck says. “People aren’t buying new cars but instead are putting more money into fixing old cars.” This isn’t to say that O’Reilly lacks supply chain challenges or that it can let down its guard. As the result of an acquisition last year, the company increased its total store count to more than 3,300 and now operates in 38 states. To bolster its competitive advantage, O’Reilly’s strategy is to increase customer service levels and replenish inventory on a nightly basis, while at the same time managing an increasing number of products. The partnership between the supply chain operation and IT was critical to O’Reilly’s strategy. The company is using Manhattan Associates Inc.’s replenishment software to collect product data information on the half-hour, while updates from the distribution centers are transmitted nightly. The replenishment system uses this data to determine the forecast for these products. As a result, O’Reilly has increased inventory turns by 44 percent, and it still manages to fulfill 97 percent of customer requests immediately, with 3 percent handled through separate channels. At the same time, the company reduced its inventory levels, freeing up \$60 million.

Companies say that driving costs out of the supply chain is an important goal, but the big question is whether—especially during a recession—they can afford to invest in their supply chain IT infrastructures to help make that happen. Dwight Klappich, an analyst at Gartner Inc., calls that a short-sighted and, in the long term, costly approach. “If this trend continues,” Klappich stated in a report, “this myopic focus on short-term tactical issues, while necessary for many businesses, could widen the gap between the best-performing organizations and lower-performing organizations.”

Cisco understands this. After the 2001 downturn, it made major system investments to transform its “push-driven,” siloed supply chain model into an integrated “pull system” that can extract timely data from suppliers and downstream partners. This reorder data is sent to Cisco after being triggered by specified parameters and algorithms, to shape “demand signals.” The system doesn’t operate in a vacuum. Cisco has optimized its forecasting algorithms by bringing together representatives from its marketing, finance, sales, supply chain, and IT departments, and from key customers. As part of its sales and operations planning process, this group collaborates to create a common view of demand signals. This input drives an agreed-upon plan of action to align manufacturing capacity and inventory deployment and meet customer service levels. In short, they

work together with the same data to optimally match supply and demand. “Now, if there are no pull signals, nothing gets brought into the system,” says Cisco’s Braitberg.

Manufacturers don’t continue to source and build inventory that may sit in some warehouse waiting for customers who may never buy it. Cash is freed up for other purposes. While Braitberg acknowledges that even past history can’t be used as a template for this downturn, Cisco is confident that it has better visibility into market demand when it goes down, and that it will be ready when the green shoots emerge. “We now have the techniques in place to be hypersensitive to demand changes,” Braitberg says, “and we can manage our way through a downturn.”

CASE STUDY QUESTIONS

1. The supply chain management consists of all activities undertaken to finish a quality product on time to provide to the customer. Identify the guidelines which can be used by business organizations to achieve favorable levels of supply chains.
2. The multinational companies invest to achieve their strategic goals. In an era of economic downturn, do you think the business organizations should keep on investing in their IT infrastructure so that they can get optimum levels of sales, customer service etc. Support your answer with few real examples where information system might have played a pivotal role in this regard.
3. Describe different approaches for inventory management taken by business organizations these days. Your answer must cover at least two most popular approaches. Compare both of them and identify which one you will prefer and why. Support your answer with real life examples from industry.
4. The political unrest, civil war, natural disaster etc. can damage supply lines for multinational companies which will result in loss of growth, jobs, higher demand etc. Describe the guidelines which can be used by Cisco Systems, Starbucks Coffee etc. to maintain their optimum levels of supply chains.
5. Describe the role of supply chain management professionals, how they can prioritize, plan and organize their responsibilities under pressure and competitive customers who demands quick and speedy solution in global business environment.

4.Valero Energy, Elkay Manufacturing, J&J, and Overstock.com : The Move Toward Fact-Based Decision Making

It's 7a.m. in San Antonio, Texas, and Rich Marcogliese, chief operating officer of Valero Energy, is holding his usual morning meeting with the plant managers of 16 major refineries throughout the United States and Canada. On the walls of the HQ operations center are a series of monitors centered by a giant screen with a live display of the company's Refining Dashboard. Whether the executives are in the room or connected remotely, all eyes are trained on the Web-accessible gauges and charts, which are refreshed with the latest data every five minutes. "They review how each plant and unit is performing compared to the plan," says Valero CIO Hal Zesch, "and if there is any deviation, the manager explains what's going on at their plant." For Valero, a surprisingly little-known Fortune 10 (that's right, one zero) company with more than \$118 billion (with a "b") in revenue, just one dashboard needle moving from green to red might signal millions of dollars at stake. The point of the dashboard isn't to call managers out; it's to give executives timely information so they can take corrective action. Valero's Refining Dashboard is just the sort of cutting-edge decision-support tool that thousands, if not tens of thousands, of companies are now attempting to create. Those companies have embraced the idea that decisions based on fact will consistently beat those based on gut. Business bestsellers including "Competing on Analytics," "Super Crunchers," and "The Numerati" have documented that it's an approach that works. Financial analysts, board members, and even the news media increasingly expect sound, data-backed analyses from top management. And when things go wrong, regulators—and in some cases, even district attorneys—follow the numbers to trace bad decisions.

Plenty of obstacles stand in the way of better decision support, from backward-looking metrics and ill-advised goals to antiquated budgeting approaches and technophobic executives. For management teams that can make use of the data—and these days there's always plenty of data—there are huge opportunities to improve efficiency, develop innovative products, get closer to customers, and outsell competitors. Valero rolled out its dashboard in early 2008 at the behest of COO Marcogliese. He had launched a Commitment to Excellence program aimed at improving performance, and he wanted to see real-time data related to plant and equipment reliability, inventory management, safety, and energy consumption. Real-time performance data are compared against daily and monthly targets, and there are executive-level, refinery-level, and even individual system-operator-level dashboard views. It's rare among business intelligence deployments to get fresh data every five minutes, but Valero has tapped directly into "process historian" systems at each plant in a six-month deployment of SAP's Manufacturing Integration and Intelligence application. A major focus of Valero's Commitment to Excellence program is reducing energy consumption, so the company is rolling out separate dashboards that show detailed statistics on power consumption by unit and plant. "Based on the data, managers can share best practices and make changes in operations to reduce energy consumption while maintaining production levels," CIO Zesch explains. Estimated savings to date: \$140 million per year for the seven plants where the dashboards are in use, with expected total savings of \$230 million per year once the dashboards are rolled out at all 16 refineries. The terms "scorecard" and "dashboard" are often used interchangeably, but there's an important distinction. Scorecards are all about tracking against defined metrics, and most scorecards are attached to a methodology, such as the Balanced Scorecard or TQM, says Mychelle Mollot, VP of worldwide marketing, analytics, and performance management at IBM. "Top executives have actually laid out a map for where they want to drive the business, and they've created metrics that will drive the behavior that will get them there," Mollot says. Whether they call their decision-support tools

scorecards or dashboards, only a small percentage of leading companies have actually mapped out enterprise wide goals with a formal methodology. Some companies come up with their own

methodologies, but the key question is whether it's a comparative decision support interface: Does it track performance trends relative to predefined goals? A much larger chunk of companies use dashboard-style interfaces that simply monitor the health of the business. "These types of decision-support tools aren't often attached to a grand methodology or linked down to the bottom of the organization," Mollot says.

At Elkay Manufacturing, a \$1 billion plumbing fixture and cabinetry maker, the CFO has led the company to embrace new approaches toward evaluation and reporting. The conventional budgeting process, by contrast, often takes too long, it's a fixed contract, and "compensation schemes tied to it tend to encourage all sorts of bad behavior, like people sandbagging or just budgeting amounts based on last year's budget," says Adam Bauer, corporate planning manager at Elkay. Elkay's stated strategy is to grow profitably, so its sales related scorecards and dashboards include profit metrics so salespeople don't just drive revenue at the expense of the bottom line. Controller John Hrudicka says the company's decision-support tools have identified initiatives that produced more than \$13 million in hard-dollar profit improvements while "helping us transform our culture to a profit mind-set." Elkay put most of its decision-support technologies in place over the last two years. It tapped Host Analytics' software-as-a-service financial performance management system, which it uses for budgeting, planning, reporting, and end-of-quarter financial consolidation. The system also supported the move, completed in September, to 18 month budgeting and planning cycles. Elkay chose Acorn Performance Analyzer software for activity based costing: analyses that reveal the true cost of delivering products (including manufacturing, distribution, sales and marketing, and warranty claims), as well as the true cost of sustaining customers (including products purchased, discounts applied, and ongoing service and support costs). For decision support, Oracle Business Intelligence Enterprise Edition pulls information from multiple enterprise systems to deliver multilevel scorecards and dashboards. "It starts with the corporate scorecard and it rolls down from there to the divisions and all the way down to individual-employee goals that affect bonuses at the end of the year," Bauer says. Bottom-up feedback, he says, is gathered during quarterly strategy reviews. Few companies have worked as hard or as long at data driven decision making as Johnson & Johnson. There is an iterative process of assessing opportunities, developing goals, implementing improvements, and then monitoring their success with the aid of decision-support tools. Indeed, fact-based decision making is now "part of the culture at J&J," says Karl Schmidt, vice president of business improvement, who leads a nine-person internal management consulting group. J&J is decentralized, so there's no single, overarching corporate dashboard. There are separate dashboards—or in some cases, balanced scorecards—within the pharmaceutical, consumer, and medical device and diagnostics product divisions, as well as the dozens of companies in each of those groups.

The key performance indicators include a mix of financial metrics (revenue, net income, cash flow); customer metrics (satisfaction, loyalty, market share); internal process metrics (product development, manufacturing efficiency, fulfillment); and employee metrics (engagement, satisfaction). "It comes down to fact-based decision making," he says. "In tough economic times, you want the best available data and analysis to make better decisions."

Some of the most decision-support-savvy executives can be found in e-commerce. For example, Patrick Byrne, CEO of Overstock.com, is said to use dashboards to help set his daily schedule. If the problem of the day is gross profit margins, that will drive who he calls in for a discussion. "If you get invited into a meeting with that kind of metrics-oriented CEO, you better have your hands on the data, including the detail at the next level down," says David Schrader, director of strategy and marketing at Teradata, the vendor behind Overstock's data warehousing environment. Overstock can roll up its profit

and loss statement every two hours, “which is absolutely world class,” Schrader says. That capability gives executives accurate, up-to-date insight into the financial results they can expect, and it also drives operational decisions such as spot buys of TV advertising. Whether a company is an e-commerce

powerhouse or not, digital marketing channels like e-mail, social media, and online advertising networks are increasingly important. Thus, top executives should be watching forward-looking, upstream measures such as Web site performance, Web driven lead generation, and sales pipeline information. Here, again, you must be careful to select the right metrics. “A lot of people are measuring the wrong thing, like how many people came in the door,” Schrader says. “What you really want to measure is how many people came in the door and became qualified leads.”

And once prospects become customers, you’ll want to know if they are good or bad customers. That’s where analyses such as activity-based costing and customer segmentation come in. Lessons learned should come full circle and be reapplied to lead-generation campaigns and marketing offers. Considering all the IT systems now in place, the growing dominance of Internet-based marketing, and the intensely digital nature of services-based industries, there’s no doubt that data-driven decision making is the way forward. But the key questions are: How prepared are these organizations to synthesize and share key performance indicators? How prepared are executives to draw insight from information?

CASE STUDY QUESTIONS

- 1- Explain the importance of decision making in business organizations. How decision support systems can be used to achieve strategic goals for organizations. Explain your answer with examples.
- 2- Appropriate decision making requires exact information from all departments in multinational companies. Identify other components which must be used for successful decision making. Explain your answer in terms of society, culture, human resources and technology.
- 3- The multinational organizations initiate different projects to bring improvement in their decision-making and business analysis systems. Each year many organizations start various projects aimed at ensuring accuracy of information. Explain the mostly widely used tools for accurate information analysis in business enterprises. Discuss your answer with examples.
- 4- Decision support systems have many types which are used in corporate world. As an information system student, identify the most commonly used decision support system for choosing different options available for a problem. Discuss your answer in terms of decision analysis, scheduling and deployment of such systems.
- 5- Explain the features of executive support system. Explain your answer in terms of its components, features, advantages, disadvantages etc. Explain your answer with examples.

5. Cogent Communications, Intel, and Others: Mergers Go More Smoothly When Your Data Are Ready

When Cogent Communications eyes a company to acquire, it goes into battle mode. Two miles north of the Pentagon, across the Potomac in Washington, Cogent sets up what it calls the War Room, where it marshals eight top executives to evaluate the target company. Among those on the due diligence squad are the IS director and IT infrastructure manager. Cogent, a midsize Internet service provider, understands what far too many companies do not: Its ability to integrate and, in some cases, adopt an acquired company's IT systems and operations can determine whether a merger flourishes or founders. For one thing, unanticipated IT integration costs can offset merger savings. Imagine the business lost when orders vanish, accounts payable go uncollected, and customer information goes AWOL because the acquiring company gave short shrift to the IT challenge ahead.

As 2006 came to a close, it broke records for the number of mergers and acquisitions, but now IT managers have to step up and make sure their data centers can help make those deals a reality. "A well-run data center with reduced complexity makes mergers and acquisitions much easier," says Andi Mann, senior analyst at Enterprise Management Associates (EMA). More than 11,700 deals were done. As the dust clears, experts and IT managers agree that companies will feel the full impact of this merger and acquisition (M&A) frenzy directly in their data centers. So they advise organizations to prep now or risk experiencing downtime if they have to merge mission-critical assets. "Today, the most downtime companies can afford for critical data center infrastructure is measured in minutes." Merged and acquired infrastructure "has to be available right away," says Ryan Osborn of AFCOM, a data center industry group. Observers agree that the key to M&A success from a data center perspective is to focus on virtualization, documentation, and logistics.

Osborn says these three areas will help companies get ahead of the game and turn a time of crisis into one of opportunity. "You won't spend your time just moving infrastructure from one data center to another. You can actually do a technology refresh, get newer equipment and come out ahead," he says. For John Musilli, data center operations manager at Intel in Santa Clara, California, the most critical piece is knowing about basic logistics. "I don't always have to know what a server does, but I do have to know how to keep it alive," he says. "It's getting something moved from Point A to Point B and it doesn't matter whether the logistics deals with putting servers on a truck or transferring data over a line." Musilli has been through a handful of acquisitions in his eight years at Intel, and he says that he has it down to a science. "As part of the acquiring company, it's my job to provide the skeletal environment to accept any company's assets that come to us," he says. As such, he keeps a healthy amount of generic racking, generic cabling, extra bandwidth on the network, and generic power. "I go generic because I probably won't know what servers, how many slots, or what type of power we'll need beforehand.

With generic, I can configure whatever I need in minutes, he says. For instance, he uses a universal busway for power so that he doesn't have to be concerned about the particular electrical needs of the acquired equipment. "We acquired a company and needed to integrate them in a short period of time because their building lease was up and they had to get out of there," Musilli says. One team was sent ahead of time and spent a year trying to identify each server on 30–40 racks. "None of their applications matched our operating systems," he says. As time dwindled, Musilli told them to pack up all the servers and send them to him. "In the end, it took two mandays to move them intact and get them up and running in our data center," he says.

As companies begin to contemplate future mergers or acquisitions, they must look inward at

their own processes and procedures. “Just as important as technology is documentation of processes—you have to know what people are doing with the systems,” says EMA’s Mann. He warns that one of the first obstacles to having a successful merger or acquisition is the reliance on what he refers to as tribal knowledge. Companies that have data centers where the employees hold all the knowledge suffer greatly when, after a merger or acquisition, those people are let go.

“You have to document the knowledge from those people and figure out how to make the processes work with only a handful of employees,” he says. Mann recommends creating a workflow chart that outlines who’s responsible for each part of the data center. He suggests considering who handles network management, systems management, application management, and storage. “This will also help you spot redundancies in skill sets or areas where you are lacking in the event of a merger,” he says. John Burke, senior analyst at Nemertes Research in Minneapolis, says that in addition to knowing who is responsible, IT groups must know which systems perform which processes. “You have to have really good information about what goes on in your data center in terms of systems and how they interact with each other and how they interface with the business. You should always know what services you offer and how much it costs to offer them,” Burke says. As part of this effort, many organizations employ a configuration management database and asset management tool to help track elements within the data center. “You need a clear and concise view of the data flow within the data center. If you don’t know what has to move together, you might disrupt business during a merger or acquisition,” he says.

Companies must also develop guidelines for governance to be referenced during a merger. For instance, if two law firms are merging and have competing clients, then IT groups must ensure that data are protected and there is sufficient access control. AFCOM’s Osborn says that good documentation helps the discovery process that companies go through before a merger or acquisition. “If the company you are acquiring has good documentation and good processes in place, the acquisition goes much more smoothly,” he says. “In some cases, you might be able to lower your software costs if you use a more robust server with fewer processors, but if the application license doesn’t allow for that, then you can’t,” Osborn says, and adds: “How much money you’re going to have to spend to merge technology can weigh heavily on the decision to acquire a company.” Nemertes’ Burke suggests that one major step to M&A success is to make sure your data center has virtualization tools running on both servers and storage. Virtualization is important not only for scaling the data center but also for creating a standardized execution environment. “With a well-virtualized data center, you can hide the fact that things are moving around multiple servers and storage devices,” Burke says. Rob Laurie, CEO at virtualization-software provider Dunes Technologies in Stamford, Connecticut, says that virtualization is useful for companies that want to test application and infrastructure integration before they put their merged or acquired assets into production. It’s also helpful for companies that must integrate assets that can’t be physically moved, he says. He warns, however, that for virtualization to be most effective, merging companies must decide on a uniform platform for their virtual environment. “That way, whatever is virtualized in one company could run in the other company’s data center without problems,” he says. If they don’t have the same environment, they must at least have a compatible data format to gain any benefit. Intel’s Musilli suggests that IT’s natural attention to detail can sometimes overcomplicate matters. “Mergers and acquisitions aren’t always as difficult as people make them. They’re simply about the ability to assimilate any two environments,” he says. M&As create stress for both acquirer and acquiree, but early involvement by IT can minimize the trauma. Otherwise, you’ll need to do too much in too little time. As software engineering guru Frederick Brooks once said, “You can’t make a baby in a month using nine women. Plan ahead.”

CASE STUDY QUESTIONS

1. Explain the data protection and access control measures which must be taken when companies merge. Identify those measures in detail. Explain your answer with examples.
2. Early IT involvement is critical in merging organizations to ensure smooth merger execution. Explain the role IT can play in all activities of merger and acquisition from premerger to post-merger. Explain your answer with examples.
3. Different companies have different processes for their operations. When companies merge, it becomes really important to integrate those processes in underlying business processes. Identify the role of IT in business processes integration, how IT can ensure smooth business processes integration. Explain your answer with examples.
4. The documentation of underlying business processes is important for companies. If the company which is to be acquired has good documentation, the acquisition process goes quickly. Discuss the guidelines which can be used to make good documentation for underlying business processes.
5. Virtualization is an important part of data centers in business organizations because it provides scaling and creating standard execution environment across organizations. Explain the role of virtualization in business organizations. Explain your answer with reference to hardware and software cost and infrastructure integration.

Provide the following information in the report:

- ✓ Description of all cases relevant to the chosen case study
- ✓ Appropriate details with example(s) should be provided
- ✓ The literature should be correct, accurate and up to the date
- ✓ Diagrams, tables, figures, metrics etc. can be provided
- ✓ Appropriate number of Harvard style references should be provided

Assignment evaluation criteria

Students will be evaluated on the following points

* Case study work proposal submission:

Submit a work proposal for this case study by the end of week 10th, which must include:

* Selection of Case Study

* Understanding of deliverables – a detail description of deliverables

* General overview of proposed plan - initial understanding of solution to all the tasks

* Resources identified

* Each student will submit the Case Study work proposal in the form of word document in Moodle.

- ✓ Originality of answer, i.e. Writing in your own words with some amount of referenced material
- ✓ Correct information and presentation in document form
- ✓ Adequate referencing and citation provided
- ✓ The last submission date is **13th Week**.
- ✓ Case Study/Presentation: Case study and presentation marks are based on the presentation/VIVA which will be conducted upon submission of assignment. **ZERO marks** will be awarded to the student if he/she is **absent for Case Study Presentation and VIVA**. **Good performance on presentation and VIVA would result in good marks**. The students must come for presentation and VIVA in or before **week 14th**. After this, no presentation will be held and **zero marks** will be awarded to the students. For presentation students should prepare 10-12 slides. Duration of presentation is about 15-20 minutes.

GUIDELINES

- ✓ The report should have **5000-6000** words approximately. Each answer should have 1000-**1200 words**
- ✓ The document should be well presented and neatly done
- ✓ Assignment should be **computer typed** using Calibri 12 font and the **soft copy should be submitted through Moodle, duly checked by Turnitin to check the similarity of work**.

Please note the time mentioned above and also go through the *Middle East College plagiarism policy given below.*

- ✓ The report must have a Title Page, table of contents (optional), reference/bibliography and page number. Every page must have header & footer.
- ✓ Proper Harvard style references should be used.
- ✓ References should be from research papers, white papers, articles and from other related case studies.
- Heading should be with Font Size 14, Bold, and Underline.
- ✓ You are welcome to discuss about the assignment with the lecturer in his/her office hours.

PLAGIARISM POLICY

Clarification on Plagiarism Policy

As per MEC policy, any form of violation of academic integrity will invite severe penalty. Plagiarised documents, in part or in whole, submitted by the students will be subject to this policy. A. First offence of plagiarism

a. A student will be allowed to re-submit the assignment once, within a maximum period of one week. However, a penalty of deduction of 25% of the marks obtained for the resubmitted work will be imposed.

b. Mark deduction: When the work is resubmitted, the marking will be undertaken according to the marking criteria. In compliance with this policy, the 25% deduction is then made on the marks obtained. For example, in an assessment that carries a maximum of 50 marks, suppose a student were to obtain 30 marks for the resubmitted work, the final marks for that assessment will be 22.5 (after deducting 25% of the marks actually obtained for the resubmitted work).

c. Period of resubmission: The student will have to resubmit the work one week from the date he or she is advised to resubmit. For example, if the formal advice to resubmit was communicated to the student on a Sunday (latest by 5 pm), the student will have to resubmit the work latest by next Sunday 5 pm.

d. If the re-submitted work is also detected to be plagiarized, then the work will be awarded a zero.

e. Resubmission of the work beyond the maximum period of one week will not be accepted and the work will be awarded a zero.

B. Any further offence of plagiarism

a. If any student is again caught in an act of plagiarism during his/her course of study (either in the same module, same semester or in any other semester), the student will directly be awarded zero for the work in which plagiarism is detected. In such cases, the student will not be allowed to re-

submit the work.

2 C. Guidelines

a. Type 1: In case plagiarism is detected in any component or part submission (submitted at different times) of one assessment (assignment), the deduction in marks will be applicable for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted.

b. Type 2: In case plagiarism is detected in a group assessment, all students of the group will be considered as having committed an act of plagiarism irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all students.

c. Type 3: Combination of Type 1 and Type 2: In case plagiarism is detected in any component or part submission (submitted at different times) of a group assessment (assignment), the deduction in marks will be applicable for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted. All students of the group would be considered as having committed an act of plagiarism irrespective

of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all the students of the group.

d. Type 4: Variation of Type 1 and Type 2: In cases where the assessment consists of components or part submissions that could be a group assessment component (e.g. group assignment) and an individual assessment component (e.g. individual reflection), the following will be applicable:

1. If plagiarism is detected in the group assessment component, all students of the group will be considered as having committed an act of plagiarism, irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all students of the group. In such cases the group assessment component will be resubmitted as per the policy.

2. If plagiarism is detected in the individual assessment component, the individual assessment component will be resubmitted as per the policy. The policy will then be applied to that student

alone.

3. In both cases (a) and/or (b), the deduction in marks will be applicable for the whole assessment (assignment).

3 D. Amount of similar material

a. The total amount of similar material in any form of student work from all sources put together should not exceed 30% (including direct quotations).

b. The total amount of quoted material (direct quotations) in any form of student work from all sources put together should not exceed 10%.

c. The total amount of similar material in any form of student work from a single source should not exceed 7 percent. However, cases having a similarity of less than 7 percent in such cases may still be investigated by the faculty depending on the seriousness of the case.

d. If faculty member find enough merit in the case of a student work with a similarity (with a single source) of more than 7 percent as not a case of plagiarism, the faculty member should provide detailed comments/remarks to justify the case.

Late Submission policy:

Penalty for late submission - 5% of the maximum mark specified for the assessment will be deducted for each working day.

Assessment documents submitted beyond a period of one week after the last date of submission will not be accepted and will be marked as zero for that assessment.

Rules & Regulations

If two assignments are similar in all aspects then marks will be deducted from both the assignments.

Your source of information should be mentioned in the reference page clearly. (For example: If it is from book, you have to mention the full details of the book with title, author name, and edition and publishers name. or if it is from internet you have to mention the correct complete URL).

FEEDBACK TO STUDENTS

Feedback on assignment, will be provided to the students (through moodle/emails/oral) within **ONE week**, after the **submission date**.

RULES & REGULATION

If two assignments/essays are similar in all aspects then marks will be deducted from both assignments.

Your source of information should be mentioned in the reference page clearly. (For example: If it's from book, you have to mention the full details of the book with title, author name, and edition and publishers name. Or if it is from internet you have to mention the correct complete URL)

Note: If you have any questions, please ask (during class timings or office hours).



In Semester Case Study Presentation Fall 2017

Module: Information System Management (COMP 1006)

Max. Marks: 100

ID: Name:

Deliverables	0	1-3	4-5	6-8	9-12	13-15	15
Question 1: Discussed according to the case study with appropriate details	Incomplete / Plagiarized	Poor description, the information are not to the point	Few details are given which are not enough the literature needs more details, no examples given	Acceptable explanation, literature needs more details, 1 example given	Good explanation, information need more accuracy, at least 1 example is given	Perfectly explained literature supported with appropriate examples and properly referenced. Information are correct and up to the point.	
Deliverables	0	1-3	4-5	6-8	9-12	13-15	15
Question 2: Discussed according to the case study with appropriate details	Incomplete / Plagiarized	Poor description, the information are not to the point	Few details are given which are not enough, the literature needs more details, no examples given	Acceptable explanation, literature needs more details, 1 example given	Good explanation, information need more accuracy, at least 1 example is given	Perfectly explained literature supported with appropriate examples and properly referenced. Information are correct and up to the point.	
Deliverables	0	1-3	4-5	6-8	9-12	13-15	15
Question 3: Discussed according to the case study with appropriate details	Incomplete / Plagiarized	Poor description, the information are not to the point	Few details are given which are not enough, the literature needs more details, no examples given	Acceptable explanation, literature needs more details, 1 example given	Good explanation, information need more accuracy, at least 1 example is given	Perfectly explained literature supported with appropriate examples and properly referenced. Information are correct and up to the point.	
Deliverables	0	1-3	4-5	6-8	9-12	13-15	15
Question 4: Discussed according to the case study with appropriate details	Incomplete / Plagiarized	Poor description, the information are not to the point	Few details are given which are not enough, the literature needs more details, no examples given	Acceptable explanation, literature needs more details, 1 example given	Good explanation, information need more accuracy, at least 1 example is given	Perfectly explained literature supported with appropriate examples and properly referenced. Information are correct and up to the point.	
Deliverables	0	1-3	4-5	6-8	9-12	13-15	15
Question 5: Discussed according to the case study with appropriate details	Incomplete / Plagiarized	Poor description, the information are not to the point	Few details are given which are not enough, the literature needs more details, no examples given	Acceptable explanation, literature needs more details, 1 example given	Good explanation, information need more accuracy, at least 1 example is given	Perfectly explained literature supported with appropriate examples and properly referenced. Information are correct and up to the point.	
Deliverables	0	1-2	3-4	5-6	7-8	9-10	10
Presentation	Incorrect answers	Poor	Average	Good	Very Good	Excellent	
Deliverables	0-10						10
Work Proposal	Objectives of the Case Study clearly identified, Initial understanding of all the tasks, Sources of data are clearly identified, credibility of the research sources are established , time line given						
Deliverables	0	1			2	3-5	05
Proper referencing, literature review, conclusion and report format	Incomplete /Poor	Average/Good			Very Good	Excellent	

Total Marks	
Penalty	
Marks Final	