

## Chapter 1 Simulation—Instructor Guide

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### Overview

In this simulation, students explore the role and responsibilities of the CIO in a company. The goal is to show the different kinds of people who may be qualified to be the CIO for various organizations, and how their backgrounds in business, information systems, computer science, social science, or other fields can be applied to the challenges that face a CIO. The organization in this case is a wildlife preserve, and the student takes on the role of a volunteer and donor who has been invited by the director to interview candidates using video phone.

During the simulation, students provide input about the questions to ask, the strengths and weaknesses of each candidate, and other elements. At the end, students receive feedback on their choices, and can enter responses to discussion questions.

“You volunteer at the World of Mammals, the region’s largest enclosed animal preserve. Far more than a zoo, the non-profit preserve provides a reasonably natural habitat for many endangered mammal species, and puts the visitors in the “cages” rather than the animals. Miles of paths protected by chain link fencing crisscross the preserve so people can safely view the animals behaving normally, not pacing back and forth in cramped exhibits. Visitors can also drive around in specially protected jeeps equipped with night vision goggles for after dark tours. The zoo’s revenue comes from ticket and concession sales, special events, and donations, but veterinary bills keep rising, and personnel costs for the 200+ employees continue to outpace what the zoo takes in.

“The preserve’s Chief Information Officer left abruptly under cloudy circumstances, and executive director Yolanda Whalen is eager to get someone in place as soon as possible. She asked you—a longtime volunteer, donor, and supporter—to help interview the three finalists for the CIO position.” (Wallace 25)

### Suggestions for Use

#### Solo Learning

- **TRADITIONAL:** All simulations may be assigned as homework for individual students. Scores would be recorded on their performance for evaluation and grades. Knowledge of the chapter content is required to successfully complete each simulation.
- **STUDY LABS:** The simulations may also be used as lab work at the start of class. In this case it is valuable to follow the activity with lectures, exercises, and/or discussion of the topics covered in the chapter.

- **FLIP-THE-CLASS:** In this learning approach, the students are required to study the text and recorded lecture with PowerPoint slides prior to the class session (conventionally done in class). At the start of class a short, timed quiz on the chapter is recommended to encourage prior study, to assess learning achieved, and to identify problem areas. The simulation is then completed during class, solo or group, and followed by a discussion and reinforcement of identified problem areas.
- **ONLINE:** The simulation is particularly useful in online or hybrid classes since it provides an interactive learning exercise without an instructor. However, in order for the instructor to assess difficulties with the topic, it is suggested that the simulation be accompanied by a short quiz and/or online discussion topics. Discussion topics would be posted in a shared forum, and students would be required to post their responses as well as replies to other student comments. The simulation serves as the catalyst for the discussion, and the posted topics should have open solutions rather than right or wrong answers.

## Group Learning

- **TRADITIONAL:** Students are assigned to small groups of 3 to 5 and should complete the simulation in class together. It is recommended that instructors avoid using this approach outside class because students may not participate as well. During the simulation, students are asked to identify 3 to 5 key decisions based upon the simulation that companies must make in developing their competitive strategies. These decision points are submitted as a group upon completion of the activity.
- **WALK-THRU:** In this approach, the instructor presents the simulation to the class as a whole. As each decision point is reached in the simulation, the presentation is paused, and the instructor opens a discussion for the solution to the class. In order to maintain progress and engagement, points of difficulty, contention, or tangential ideas are noted on the blackboard for follow-up discussion.
- **PARSING-THE-LECTURE:** The simulation proceeds in segments divided by interactive participation. The instructor divides the lecture and PowerPoint slides into matching segments. Each micro-lecture or segment should be no longer than seven minutes (about 2-3 slides). The instructor introduces the topic and initiates the simulation. At each decision point, the instructor gives the micro-lecture on that subject, and the class then selects their preferred decision(s). It is important that the instructor not correct wrong solutions at this time but allows the simulation to continue and score. During the feedback section, the instructor clarifies any difficulties or errors and then closes the lecture.
- **ONLINE:** Each of these group learning approaches may be given in an online interactive session. The Traditional approach could also be assigned to groups off-line for submission.

## Student Applied Questions

### Questions

1. Why is it important for the CIO to have ideas to increase the profitability of the company—even at the initial interview? What influence can information systems have on a company's financial performance?
2. Because the CIO is responsible for the organization's information resources, why don't they simply provide the information that the other executives request? What is the CIO's primary responsibility to an organization? Where do information resources fit into that responsibility?
3. Assume that you are not going into a career in information systems, how important will those resources be to your area of responsibility? How informed do you think the CIO should be about your area and its information needs? How informed should you be about information systems even though they are not your chosen career area? Can knowledge of information systems give you a competitive advantage in your career? Why or why not?
4. Suppose that you were going to apply for the CIO position at World of Mammals. How would you prepare for the initial interview? What qualifications would you want in order to win the position? What would you offer to differentiate yourself from the other candidates?
5. Presume that you are selecting the CIO for a hospital. What different qualifications would you look for in a good candidate? Should they have ideas to improve the hospital's profitability? What other areas would you want the candidate to improve? How much medical experience would you require, if any?

### Solutions

1. Profitability is one of the pivotal drivers in every decision that a CIO makes. The entire future of the organization depends upon increasing revenues and/or decreasing expenses. Information systems play a critical role in all aspects of this effort. As a candidate CIO, this is a central concern, especially when coupled with your ability to lead the organization in the information area. Even at the initial interview, you would be expected to have ideas and experience that demonstrate your ability and willingness to lead the company to improved profitability.

Every part of an organization uses information to achieve its goals and execute its operations. Information systems not only provide that critical resource, but they also enable the integration and coordination of information across the enterprise. The influence of information on financial performance is wide-spread throughout the

organization, and it is commonly accepted that the health of the information systems is a key determinate in the health of the enterprise.

2. Each senior executive is responsible for their area of the organization, and conflicts often arise among them about the priorities of their needs. Only the CIO looks across the entire enterprise and balances these conflicting information priorities. This larger view of the company's information needs requires skillful leadership and compromises among the business areas. It often requires the needs of one area to adjust to the overall needs of the enterprise. Simply fulfilling requests cannot meet the challenges of this strategic responsibility, and it can result in the success of one part at the expense of the whole.

The primary responsibility of the CIO is to the growth and well-being of the entire enterprise, which often is expressed as its financial performance. Although there remains some argument about which is the top priority, most CIO's agree that they must first ensure overall growth and health before considering individual needs.

Because information is needed for the success of all the parts of a company, it is often referred to as the life-blood of the enterprise. Information resources ensure that the company is effective, efficient, and well-coordinated in their efforts. The CIO does this by providing each part with their needed information and by providing information systems that monitor and account the enterprise's performance as a whole.

3. No matter the career area you choose, information systems will be an essential part of both the overall and daily responsibilities. Without accurate, timely, and reliable information systems, performance in your chosen area is at high risk of failure. It is one of the key responsibilities of your area to ensure that the CIO is well-informed and current on your objectives, plans, and problems. Without that information, the CIO cannot properly balance the operations and growth of the information systems. Unless you know about the information systems, you cannot provide the CIO with that critical feedback. The more you know about your own information needs, the more likely you will get exactly what is needed when it is needed.

Whether seeking advancement or new employment, knowledge of information systems and how they are used to ensure the success of your business area are critical today. Candidates who have a broad understanding and are able to communicate their information needs effectively are much preferred over those who cannot. Such knowledge is a key competitive advantage, especially when it extends beyond familiarity with web-browsing and office automation systems.

4. A CIO candidate is expected to have done their due diligence on the prospective company; they will have researched it as thoroughly as possible through the web and

their professional networks. In preparation for the first interview, the candidate will have prepared some good ideas about how to influence the growth and profitability of the enterprise. The candidate should have a reasonable idea of the current financial performance of the company and its critical challenges. Most importantly, a strong candidate will be able to link these needs with their experiences and knowledge, giving evidence of their ability to deliver and lead.

Besides common competencies in personal computing and office automation systems, the candidate should be familiar and experienced in the principal information systems of the prospective company including its financial, service, marketing, and operational systems. At minimum, the strong candidate will have knowledge and experience in similar systems. A strong candidate will know the business and either has direct experience in that industry or in a similar one. Business knowledge today is essential for the CIO—knowledge specific to that type of business rather than in general.

Several differentiating competencies are valued in modern business. These must be in addition to the required competencies in the industry. The knowledge and use of collaborative systems is highly valued, as is experience with organization transformation and development. The real secret to selecting a differentiator is to choose something that is business-related rather than technology specific, and then to be able to communicate how this difference delivers improved business performance.

5. While the general qualification areas would remain the same, hospitals would expect much greater knowledge of the healthcare industry and its specific current challenges. An awareness of legislation and regulations governing hospitals would be expected along with a thorough familiarity of the terms and jargon of that industry. Prior healthcare experience would be essential though actual medical certification is not necessarily needed. Education in healthcare administration would be highly desired.

Profitability is a top priority in hospitals, but patient care is still dominant. The conflicts between these two priorities are the challenges that CIO's in this industry must tackle and balance. Each requires the other to succeed. The CIO candidate should have clear ideas on how to reduce expenses and improve revenues using information systems, and the candidate will be able to tie these ideas to past experiences and achievements. The stronger candidates will also have ideas on improving patient care and increasing satisfaction with the service experience using modern technologies and information.

Medical experience as a care provider is not necessarily required, however, experience and knowledge of the healthcare industry is essential. Education should cover both healthcare administration and information systems. Because of the serious financial and time constraints on most hospitals today, they have little opportunity to train the unprepared candidate.

## Discussion Points

1. One of the special attraction animals at World of Mammals is about to give birth to a new baby, and marketing wants to promote this event as a fund-raiser and increase zoo attendance. The new CIO comes to you because of your experience and asks for your ideas about how information systems might contribute to this promotional event. What suggestions could you offer? How would these ideas support the goals of the promotion campaign? The CIO points out that your ideas will require funding and that means increasing expenses. How would you justify doing them?
2. You are the CIO at World of Mammals, and they are about to launch a new children's website that allows children of all ages to meet and learn about the animals at the zoo. The website is really well-designed and attractive, and the marketing team has done a great job promoting it. How will such a sight improve the profitability of the zoo? Identify one ethical concern that you have about the website and its use? What might you do to protect the children from this concern? What might happen to the zoo if there were an ethical violation in this area?
3. Today's business demands place an extreme importance on short-term profits. Consider the CIO's responsibilities regarding all of the information resources including new technologies, maintenance, staff development, and operations. How does this demand challenge the CIO? What compromises would be required, if any? Do such demands lessen or increase the power of information in a company? Why or why not?
4. After a successful first year at World of Mammals, things are going very well, and the new CIO wants to make a major change in the information systems to add a powerful new collaborative system that enables people to work together without actually meeting face-to-face. Of the four information systems components the technology, processes, and data are clear, but the people component is not understood. How would such a change affect the people? Would you expect any resistance to such a change? What needs to be done to ensure that these changes are successful with this component? Suppose you were in charge of the people component change, what would you do?
5. While in college, you are preparing for a career in business today. Only one information systems course is required in your major area. Is this sufficient for you to compete today? What other courses in information systems would you take? Why or why not? Is it really all that important to increase your knowledge about information systems today? What are the very least competencies that you think you should have to be successful in your career?

## Answers for Simulation

Sample feedback for correct student choices during the simulation follows.

Please note that for some questions, more than one choice might be acceptable. In those cases, students might receive full or partial credit for answers other than those shown in the sample.

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### Works Cited

Wallace, Patricia. Information Systems in Organizations. Upper Saddle River: Pearson, 2013.

**1. Choosing Interview Questions****Points:** 10 out of 10

Question	Your Choices	Correct Choices	Comments
1. How long have you been working in this field?			Good choice not to select this one. This question is answered on the resume, so no need to ask it here.
2. How do your Qualifications compare to those of the other candidates?			Good choice not to select this one. Candidates will generally not know who else applied or be familiar with their qualifications.
3. What ideas do you have for helping the zoo manage operations and reduce costs?	✓	✓	Good choice. This question will show more about the candidate's understanding of how ICT contributes to operations management.
4. What kinds of privacy or ethical risks related to information systems do you think the World of Mammals might face?	✓	✓	Good choice. The CIO is largely responsible for securing information systems, and should know about the possible perils involving privacy and ethics.
5. How do you define information and what makes it valuable?	✓	✓	Good choice. This will reveal how broadly the candidate thinks about the valuable asset that the CIO oversees, which is much more than the value of the computers it resides on.
6. What role do you think information systems should play in decision-making?	✓	✓	Good choice. This will reveal the extent to which the candidate understands data-driven decision making, and how information systems contribute to it.
7. Acronyms are so common for techies. Can you tell us what IT stands for?			Good choice not to select this one. No need to ask questions that tap rather trivial knowledge.
8. If we hired you, would you perform your duties ethically?			Good choice not to select this one. Everyone will answer "yes".
9. What ideas do you have for helping World of Mammals achieve its mission?	✓	✓	Good choice. This question will help reveal how the candidate thinks about aligning ICT strategy with the organization's strategic goals. It will also show whether the candidate did some homework to understand the organization's mission before coming to the interview.
10. What is your current position?			Good choice not to select this one. No need to ask a question that is answered on the resume.



## 2. What do you think is most important for the World of Mammals CIO?

Points: 5 out of 5

You chose **Education**.

Education is important. CIOs do come from varied educational backgrounds, so relevant experience can make up for whatever might be lacking in education, especially if the person shows motivation for continued professional development. The field of ICT changes very quickly, so keeping up with the field is valuable. CIOs need a mix of skills, however, and all the criteria should be taken into account.

## 3. Initial Poll

Points: 5 out of 5

You initially voted for **Jen**.

Jen and Kasey are both well qualified for this position, bringing somewhat different skill sets.

## 4. Rating the Candidates

Points: 5 out of 5

		Education	Relevant Experience	Innovative Ideas	Communication Skills	Leadership Abilities	Knowledge of ICT	Total Points
Elon Jonik	Yolanda	1	2	5	3	2	2	15
	Doug	2	3	4	3	1	3	16
	Rasika	2	2	2	2	2	2	12
	Totals	5	7	11	8	5	7	43
Jen Rolands	Yolanda	4	4	2	4	3	5	22
	Doug	3	4	2	2	3	5	19
	Rasika	5	5	5	5	5	5	30
	Totals	12	13	9	11	11	15	71
Kasey Lopez	Yolanda	4	5	3	4	5	3	24
	Doug	5	4	4	4	4	4	25
	Rasika	3	3	3	3	3	3	18
	Totals	12	12	10	11	12	10	67

While Doug and Yolanda didn't agree on everything, they did recognize that Elon Jonik was not ready yet for a position with this level of responsibility. They also were correct in rating Jen as having an edge over Kasey on knowledge of ICT, and Kasey with an edge over Jen on communication abilities. Doug placed more importance on Kasey's business experience and his MBA, while Yolanda was impressed with Jen's relevant experience in a demanding ICT environment. Those two candidates will bring different strengths and weaknesses to the role, but based on the interviews and resumes, they would both be well qualified for this position.

## Total Points for Scored Choices

You received **25 out of 25 points**, or **100%**.

### ***Discussion Questions***

1. Do you agree with the traits the group used to rate each of the candidates? Are there other traits you think will be important for the CIO of World of Mammals?

2. Compare and contrast the qualifications of the three candidates.

3. What kind of training do you think the new CIO should undertake to be better prepared for this position?

4. Would you have selected the same candidate if the organization were a financial institution instead of an animal preserve? Why or why not?