

# CHAPTER 1

## Introduction and Competitive Advantage



### Chapter Objective

- At the end of this chapter students will gain an understanding of the technology they will use in their career and competitive advantage.

### Learning Objectives

- Gain an overview of IT within a career path
- Understand the importance of IT
- Understand your personal strengths and weaknesses
- Gain an understanding of developing a business strategy
- Understand what sets you apart
- Obtain a long-lasting strategy

### Chapter Introduction

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## Interview

Laura Habina is assistant director of revenue management at the InterContinental New York Barclay.

### 1. What do you do now?

With news of the Waldorf Astoria New York closing for renovations, I was fortunate to have the time and resources in order to plan out the next best step for myself and my career. In January 2017, I accepted a position as the assistant director of revenue at the InterContinental New York Barclay, a part of the IHG portfolio. I work on a team of three at the newly renovated property, collaborating, developing, and implementing both short- and long-term strategies to achieve and exceed the \$70 million rooms' budget all the while gaining share versus our competitive set in an extremely dynamic and unpredictable New York City market. I focus on strategies for both Transient and Group rooms revenues and ensure that the entire organization is focused on our goals from each step of implementation and execution: from sales to events, to housekeeping and front office.

### 2. What technology do you use in your everyday life?

We have a corporate property system where we manage our inventory and rate plans. This system syncs with our property management system (PMS), OPERA, which is used across multiple different hotel brands around the world. In a world that is constantly evolving, we have migrated our key systems to a web-based platform, so we are able to constantly access our data in real time and make strategy adjustments from a laptop, tablet, or smartphone. Subscribing to market and competitive data warehouses is vital in my everyday life. With assistance from STR (Smith Travel Research) as well as TravelClick, I have all different technologies and resources to help make better decisions to drive revenue.

### 3. What is a typical day for you?

The best part about working on property at a hotel in New York City is that no two days are the same. My mornings generally begin with reviewing all the night audit reports from my overnight manager and then diving into my daily report that provides me a snapshot of where we stand for the next 365 days. It's vital to understand where our mix of business stands and how our revenues are pacing versus ourselves, our competitive set, and our market, so we can make necessary adjustments to capture demand and pick up room revenue where we need to. While the majority of my day is spent monitoring price points and inventory, I also spend my day coordinating with my front office team to ensure the day's strategy is carried out as well as working with my sales team to provide the most optimal rates for both the client and the hotel in order to win the business from our competitors and achieve our internal goals.

### 4. What resources do you use to keep current?

I am constantly reviewing STR data and publications as well as TravelClick's "Demand and Rate 360" to stay current to my immediate competitors in the New York City market. CBRE Hotels is also a good resource I use to gain more insight about domestic market conditions and trends, as well as to stay informed on overall forecast predictions for future years with PKF publications. I enjoy keeping current with LinkedIn for hospitality updates and news and seeing what my colleagues are reading and posting. There are so many developments and announcements in the hospitality industry, so it's great to see what people are passionate about in their network in the world of hospitality.

### 5. What technologies would you recommend that future managers study?

I would recommend that future managers study and take note of the changing platforms and applications when it comes to hospitality. More and more hotels are integrating technology into the operations process, so it's important to understand the functionality of these kiosks, programs, booking apps, in-room technology, and so on to help guests throughout their entire experience. Every company is different when it comes to what technologies are relevant to its everyday operation, but the important thing is to understand that technology is always evolving so we must evolve as well.

### 6. What other advice do you have for future managers?

My advice for future managers is to make the most of your time, both professionally and personally. Try new experiences and challenge yourself. You never know where

life may take you, but being open and willing to try new things may open the door for something truly incredible that you never thought of.

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## 1. Overview

Laura provides some great insight here for our opening chapter and its career focus. At the start of each new academic term, the number of students enrolled in our classes seeking careers in hospitality information technology (IT) is generally small. Yet, after comparing IT salaries to those for traditional positions in hospitality operations (e.g., management, sales, and human resources), one may want to rethink his/her career path. Money aside, the reality is that for most careers, IT is an integral and necessary component. Thanks to the convergence of various forms of technology (e.g., computers, software, and cloud technology), the rise in electronic business (e-business), and a growing number of enterprise-wide technology initiatives, technology is a critical aspect of almost any job (see Table 1-1), disrupting functional silos and creating the need for boundary spanners. Simply put, IT is changing everything—from guest expectations and needs to industry structure to how we perform our jobs and what skills we will need to be successful. In fact, it is changing the very nature of how services are delivered. Consequently, IT is inescapable and must be a core skill for any aspiring hospitality manager or executive. Management guru Peter Drucker often stated that everyone in the firm is responsible for marketing the firm and ensuring customer satisfaction. In a similar vein, because of the confluence of business process, competitiveness, and technology, everyone in today's organization, by default, must be responsible for IT and think and act like a **chief information officer** (CIO). Congratulations, you have just joined the IT team—whether you like it or not!

It's true. Take marketing, for example. It is tough to be a great marketer without IT. In today's high-tech era, IT is a prerequisite to marketing and must go hand in hand. One cannot make marketing decisions in a vacuum without in-depth knowledge about the capabilities and limitations of IT. Global distribution, supply chain management, customer relationship management (CRM), electronic commerce (e-commerce), digital marketing, social media, customer segmentation, revenue management, and so on are all underpinned by IT applications. Thus, a good marketer, by default, must be well versed in IT.

The same could be said for every other discipline, including human resources, finance and accounting, management, and operations. You can't make decisions about the business without using IT (or information generated from IT systems) and without factoring in IT considerations. Front desk managers must be intimately familiar with property management system (PMS), revenue (yield) management, central reservations system (CRS), review sites, call accounting and the private branch exchange (PBX), voice messaging, guest locking systems, mobile concierge systems, energy management systems, and more. Similarly, restaurant managers must be proficient in point-of-sale (POS) technology, inventory management systems, menu engineering, mobile applications, and the like, and all managers must be intimately familiar with the risks of using technology in business and appropriate ways (including policies, procedures, and training) to safeguard against these risks.

How can a hospitality executive determine how to maximize value for the firm if he or she is faced with resource constraints and must decide between, say, a new cloud-based sales and catering system and the renovation and re-theming of a restaurant outlet? How can one possibly estimate cash flows, assess risks, assign risk premiums, and calculate returns on investment (ROI) without fully comprehending IT? It would be rather difficult to evaluate the pros and cons, quantify the benefits, and understand the strategic opportunities associated with each option to make a well-informed business decision without having a solid grasp of IT. From your perspective as an aspiring manager or executive, how can you lead others, make hiring decisions, and mentor and develop people without understanding the technological future of the industry?

**TABLE 1-1**

IT Is Important to Every Hospitality Position

Position	Brief Description of Duties	IT Knowledge Requirements
General Manager (GM)	Responsible for overseeing the entire operation.	<ul style="list-style-type: none"> <li>• Operational systems, business intelligence, and reports to manage, control, and direct the business</li> <li>• Technology to track and communicate with customers, suppliers, employees, regional and corporate management, and owners</li> <li>• Balanced scorecard</li> <li>• Big picture knowledge related to all aspects of the business and systems used throughout the business in order to make decisions and determine how best to allocate resources</li> <li>• Microsoft Office/Google Apps</li> </ul>
Director of Finance (Controller)	Responsible for the accounting and financial aspects of the operation. Establishes and manages budgets, maintains the books, prepares financial reports, acquires funding for capital projects, and controls against theft and waste.	<ul style="list-style-type: none"> <li>• Spreadsheets</li> <li>• Data analytics</li> <li>• Business intelligence tools</li> <li>• Balanced scorecard</li> <li>• Project management software</li> <li>• Back-office accounting system</li> <li>• Security surveillance and audit trails</li> <li>• Time and attendance</li> <li>• Payroll</li> <li>• Microsoft Office/Google Apps</li> </ul>
Director of Rooms Operations	Responsible for all guest service functions in a hotel, including front desk, reservations, bell staff, housekeeping, concierge, and telephone operators.	<ul style="list-style-type: none"> <li>• Property management system</li> <li>• Reservation system</li> <li>• Revenue management system</li> <li>• Distribution and channel management</li> <li>• Customer relationship management and loyalty program</li> <li>• Telephone and call accounting systems</li> <li>• Guest lock system</li> <li>• Guest response system</li> <li>• Concierge system</li> <li>• In-room guest amenities (e.g., movies, high-speed Internet access, mini bars, and guest safes)</li> <li>• Inventory systems</li> <li>• Microsoft Office/Google Apps</li> </ul>
Revenue Manager	Responsible for setting rates, restrictions, and selling strategies for hotel rooms and managing room inventory allocated to the various distribution channels used by the hotel.	<ul style="list-style-type: none"> <li>• Revenue management system</li> <li>• Reservation system</li> <li>• Distribution and channel management</li> <li>• Property management system</li> <li>• Sales and catering system</li> <li>• Business intelligence</li> <li>• Microsoft Office/Google Apps</li> </ul>

Position	Brief Description of Duties	IT Knowledge Requirements
Director of Sales and Marketing	Oversees the sales and marketing activities of the operation and its advertising and promotion materials; is typically responsible for group business (i.e., corporate accounts, reservations involving 10 or more guestrooms, meetings, and conventions).	<ul style="list-style-type: none"> <li>• Sales and catering system</li> <li>• Lead generation and tracking databases</li> <li>• Sales force automation</li> <li>• Customer relationship management and loyalty program</li> <li>• Web site and e-commerce</li> <li>• Reservation system</li> <li>• Content management system</li> <li>• Social media</li> <li>• Reputation management</li> <li>• Distribution and channel management</li> <li>• Revenue management system</li> <li>• Meeting room layout and design software</li> <li>• Microsoft Office/Google Apps</li> </ul>
Food and Beverage Director	Oversees all food and beverage operations. Manages day-to-day operations, purchasing, and inventory management.	<ul style="list-style-type: none"> <li>• Point-of-sale technology</li> <li>• Inventory management</li> <li>• Recipe management</li> <li>• Purchasing and receiving system</li> <li>• Table management</li> <li>• Restaurant reservations</li> <li>• Labor forecasting and scheduling</li> <li>• Menu engineering</li> <li>• Microsoft Office/Google Apps</li> </ul>
Director of Human Resources	Responsible for all aspects of staffing and team building. Duties include hiring and termination decisions, benefits administration, payroll, policy compliance, training, promotions, special programs, and succession planning.	<ul style="list-style-type: none"> <li>• Human resources information system</li> <li>• Labor forecasting and scheduling</li> <li>• Time and attendance</li> <li>• Payroll</li> <li>• Benefits</li> <li>• Online training</li> <li>• Intranet</li> <li>• Microsoft Office/Google Apps</li> </ul>
Director of Security	Oversees the security operations for the organization to ensure the safety of guests and workers alike.	<ul style="list-style-type: none"> <li>• Access control systems and guest locking system</li> <li>• Surveillance systems</li> <li>• Fire alarm system</li> <li>• Biometrics</li> <li>• Microsoft Office/Google Apps</li> </ul>
Director of Engineering	Oversees the facility, maintenance, and equipment.	<ul style="list-style-type: none"> <li>• Heating, ventilation, and air conditioning (HVAC) system</li> <li>• Energy management system</li> <li>• Preventative maintenance system</li> <li>• Work order management system</li> <li>• Microsoft Office/Google Apps</li> </ul>
Director of Housekeeping	Oversees the cleanliness of the facility, including all public space, administrative offices, and guestrooms.	<ul style="list-style-type: none"> <li>• Property management system</li> <li>• Labor forecasting and scheduling</li> <li>• Inventory systems</li> <li>• Microsoft Office/Google Apps</li> </ul>

Position	Brief Description of Duties	IT Knowledge Requirements
IT Manager	<p>Oversees, maintains, and secures the various computer systems used throughout the organization; provides support to end users; and assists with the selection, procurement, and implementation of computer applications and hardware.</p>	<ul style="list-style-type: none"> <li>• Operating systems</li> <li>• Hardware platforms</li> <li>• Programming languages</li> <li>• Network and communications architecture (both wired and wireless)</li> <li>• Project management software</li> <li>• Electronic mail (email) server</li> <li>• Systems security</li> <li>• Antivirus and malware detection tools</li> <li>• Backup and recovery</li> <li>• Database/Big data administration</li> <li>• Report writer tools</li> <li>• Analytics</li> <li>• Social media</li> <li>• Technology trends</li> <li>• All systems used throughout the business</li> <li>• Microsoft Office/Google Apps</li> </ul>

Just think about this question for a moment. Many are quick to say that they don't need to become proficient in a particular area because they can hire someone else to handle those responsibilities or because they can outsource those functions. Generally speaking, this type of thinking is short-sighted, and when it comes to IT, it can be outright dangerous—especially considering the stakes involved. IT tends to rank among the top expense categories of most firms. It also tends to be one of the most pervasive and enabling—or confining—resources in the firm. Therefore, every manager or executive must strive to understand how to use IT, see its strategic potential, and recognize its limitations so as not to be bamboozled by it, led astray, or be constrained by the limitations of the firm's IT infrastructure. While hiring experts or outsourcing may be a viable approach and help reduce the amount of expertise you must have in this area, it does not completely absolve you from having proficiency and a solid understanding of what technology can and cannot do and what questions to ask. Like anything, understanding and using IT require investment (of both time and money), commitment, and diligence. Your knowledge in this area will reduce your dependence on others and improve your ability to ask the *right* questions so you can properly lead your firm.

## 2. Welcome to the World of IT!

The discussion in the previous section suggests a very clear message. IT is one of the greatest forces driving change in almost any industry, especially the hospitality industry—so get used to IT! Unfortunately, human bandwidth, that is, people's ability to grasp IT and understand how to effectively use it and apply it in business, is one of the greatest barriers to a firm's ability to successfully adopt IT and realize its many benefits. The IT wave will likely continue for the foreseeable future for several reasons. First, the pace of change and the expected number of technological advances continue to grow at alarming rates. Second, the technological demands of guests continue to rise. This is especially true of the Millennial Generation (Gen Y) and Generation Z, which have practically been reared on technology. Third, the competitive environment is growing in intensity with increased investment in and emphasis on IT. Fourth, labor issues continue to plague the industry. Both the cost of labor and the scarcity of people willing and able to fill industry positions require greater focus on technology as a viable alternative to run the business and service guests. For these reasons,

**FIGURE 1-1**

IT pervasiveness creates the need for boundary spanners and IT-savvy individuals.

IT is quickly becoming one of the most important skills industry managers and leaders need to possess and one of the most important competitive methods a hospitality firm can exploit to gain advantage in an increasingly competitive business. These advantages come in many forms including, but not limited to, differentiation, efficiency (economies of scale), resource capabilities, cost reduction, and information asymmetry. Despite their diversity, these advantages all have one thing in common; they are all enabled by IT. Thus, whether you are interested in pursuing a career in IT or not makes little difference. The underlying premise is the same; no matter what you choose to do as a profession, you need to become proficient in IT at the personal, intraorganizational, and interorganizational levels.

By default, your career will involve IT. IT transcends today's organizations by crossing and blurring all traditional departmental, organizational, and geographic boundaries. This is especially true with large-scale initiatives such as e-business, enterprise resource planning (ERP), CRM, and analytics. The illustration in Figure 1-1 helps bring this reality to life. IT-related decisions require input from multiple perspectives within the organization since IT is pervasive throughout the firm's **value chain**, all of the primary and support activities of the firm required to produce products and services that generate revenues and drive profits. Consequently, if the organization is to exploit IT for competitive advantage, business leaders, regardless of the discipline (e.g., management, marketing, finance, accounting) they represent, must (1) focus on enterprise-wide solutions, (2) be able to serve as **boundary spanners** (people who can cross multiple disciplines or areas of knowledge), and (3) become technologically savvy. Decisions involving IT cannot be made in a vacuum, and because of their reach, cost, and strategic implications, they should *not* be delegated to others. They require commitment from the top, insight from all aspects of the business, and the involvement of those possessing specific expertise in IT.

### 3. Managing Your Career

Unquestionably, this is an exciting time to pursue an IT career within the context of the hospitality industry, and our chapter interview gave us some good advice. Hospitality and tourism are among the largest and fastest growing employers worldwide and they offer a rich, yet diverse, set of possibilities. IT is among the fastest growing areas of employment and one of the economy's great contributors, a trend expected to continue well into the future. The intersection of these great industries offers much excitement, opportunity, and new careers for those who seek and would like to take advantage of them. Are you interested?

Moving forward, IT will continue to be one of the greatest forces driving transformation in almost any industry, including hospitality. Consequently, everything will continue to change—from how we work and learn to how we transact business with our guests and employees to the technological amenities and infrastructure found in our establishments. Moreover, technology will redefine the very nature of what constitutes good service and how services are delivered. With the rise in e-business, self-service, and mobile technologies, these changes have only become more pronounced and more commonplace—moving the industry to new heights technologically while expanding the globalization of the hospitality industry. Certainly for those seeking careers in this industry, exciting opportunities abound, and because of IT, many new career possibilities have surfaced.

To excel at your career, you need to have passion and enjoy what you do. You also need to continue to develop yourself and your skills. Learning should be a lifelong journey and a regular part of your job. The hospitality industry has become so complex and continues to change at a rapid pace. Thus, you, too, need to change, adapt, and stay current with all aspects of the business—and especially with IT. One of the nice things about IT is that there is a built-in mechanism or incentive that forces you to stay current if you want to stay employed—the very desire to stay marketable and relevant.

Remember that career paths for most people seldom resemble straight lines. They often take many twists and turns, but these twists and turns are largely up to you and often offer many wonderful developmental opportunities that can lead to new, exciting, and very different career opportunities than what you may have initially thought possible. It is your responsibility and obligation to yourself to manage your own career. While others can help you with this important task, no one can do this for you as well as you can do it for yourself. After all, you know yourself best, particularly your interests, goals, and what motivates you and gives you personal satisfaction.

At this point in your career, one of the best things you can do is to conduct a self-assessment or **SWOT (strengths, weaknesses, opportunities, and threats) analysis**. Determine what you like and what you don't and inventory your skills and core competencies. Be sure to think about what you would like to do long-term and what skills will be required to achieve your goals. Where are you strong, and where is there room for improvement? What skills are you lacking, or which ones need further development? How prepared are you for the digital economy? What are the job opportunities like presently, and where will they be in the next five, ten, or fifteen years? In essence, you want to create your own personal balance sheet that identifies your assets (strengths) and liabilities (weaknesses) relative to the marketplace you will enter. Then, just as you would do if you were managing a firm's balance sheet, figure out how to improve your assets through value creation (adding something for which people are willing to pay that wasn't there before and will provide a noticeable advantage) while reducing, and hopefully eliminating, your liabilities. Look for jobs that will serve as springboards to new opportunities and help you progress and achieve your ultimate career dreams. Each position you take should help you acquire new skills and serve as a stepping-stone or springboard to the position you ultimately desire. When it comes time to interviewing for a job, be prepared to address with conviction the question, "What value do you bring to the table?"

## 4. Strategy

After having aligned your IT needs and your career, next in importance is its strategic use. IT is an important resource for any firm. In today's era, it is hard to imagine how any business, especially a hospitality business, could operate without the assistance of IT. IT applications are seen throughout an entire firm—integrated with almost every business discipline and process, a useful resource for decision making, and increasingly a key ingredient in driving business value. As such, IT must be viewed holistically with the business in mind and be a topic of discussion in nearly every business decision, particularly those involving business strategy, marketing and distribution, operations, and future growth planning. Also, all business leaders should have some proficiency working with IT and an understanding of how to use it effectively to solve business problems, serve business needs, and create new opportunities. As such, the IT function should be represented at the executive-suite level

with the chief information officer (CIO) occupying a seat at the decision-making table with visible support and participation from all top-level executives. These factors will ensure that IT is factored into decisions early on and for the right reasons—to create business value and advantages.

Within the hospitality industry, IT represents one of the largest areas of capital expenditure. To some, IT might be viewed as a rather large expense, but it should be viewed as a strategic opportunity. In reality, IT is both a support tool and a strategic enabler. IT should never be used for the sake of IT itself or just because it is the latest and greatest. Instead, IT should be used purposefully with the end business goals in mind. It should be used to solve business problems. If not used correctly, IT can become nothing more than an unwanted expense, a source of frustration, or an inhibitor to change, but when used correctly, many exciting possibilities can result—from service enhancements and product differentiation to new revenue streams. Moving forward, hospitality executives must continually look toward the strategic opportunities technology offers and use technology as a **competitive method**—or as a tool—to differentiate and create **competitive advantage**. Thriving in today's competitive world is all about doing things better, faster, cheaper, and differently than anyone else.

The creation of competitive advantage must involve multiple aspects of the firm coming together. In this chapter, we want to explore the use of IT for creating—or at least contributing to—competitive advantage in a hospitality firm. If you look at history across the general business landscape, you can find many great companies that have creatively and strategically deployed IT to create competitive advantage. Some of the many examples include American Airlines and its reservation system, SABRE; FedEx and its shipping and package tracking software, PowerShip; Wal-Mart and its supply chain management technology; Hertz and its system for driving directions and use of mobile technology to support quick car returns; and Dell Computer's self-ordering system for customized personal computers. More recent technology innovations include McDonald's kitchen production and management system to support efficient and low-cost operations, Marriott's reservations and revenue management systems to achieve rate premiums and higher occupancy rates than industry averages, Mandarin Oriental's in-room guest technology to create memorable guest experiences, Southwest Airline's Ding! application to push special promotions to customers and sell distressed (i.e., last-minute) inventory, Harrah's customer relationship management (CRM) to personalize services and promotions, InterContinental Hotel Groups' use of mobile technologies to enable and support guest services for people on the move, or Uber and Airbnb's app and Web site. These are just a sampling of some of the many creative and successful applications showing how technology can drive competitive advantage and differentiation. They illustrate how crucial technology has become in driving the competitive and very dynamic landscape. The magnitude of these initiatives also suggests the need for a great deal of vision, competencies, and capital resources to make things happen through IT.

Our challenge as hospitality managers is to find new opportunities—just as these exemplar companies did—in which IT can be used to solve business problems, create better service experiences, provide cost and/or informational advantages, and create distinction in the marketplace. Ultimately, technology should be used to lower cost structure, increase revenues and market share, create unique value propositions for guests, and generate unprecedented returns for investors or shareholders. Certainly, these sound daunting—and they are! Creating competitive advantage requires creative, out-of-the-box thinking. Like Apple's former CEO, Steve Jobs, one must think differently. This requires seeing the future first, taking some calculated risks, and doing things that no one else has attempted. To do so requires dedication, determination, focus, and consistent allocation of resources. Sometimes, one can stumble from time to time, but if one learns from his or her mistakes, progress can be made. If creating competitive advantage were so easy, then every manager would have already thought of all the great ideas possible, and every company would have implemented them by now. Creating competitive advantage requires you to see things that others cannot or do not see and then act on these opportunities to make them happen, but it does not stop there. Once the competitive advantage has been created, the challenge shifts to sustaining that competitive advantage or destroying it and either reinventing it or replacing it with something else before anyone else has time to

copy it and catch up to your lead. There is no resting on your laurels. This is a complex and never-ending game. Therefore, you, as a manager, must be prepared to play aggressively, think quickly and creatively, and be in the race for the long haul. Are you ready? Will you think differently, and act quickly?

## 5. Achieving Competitive Advantage

Competitive advantage sounds really awesome, but what does it mean? Understanding this concept is vital to the success of future hospitality leaders, especially given the competitive and volatile nature of the hospitality industry, the high stakes of competition, and the growing trend toward commoditization—where products blur and become indistinguishable from and, therefore, interchangeable with one another. In simplistic terms, competitive advantage is derived from one or more unique capabilities of the firm and brings value to the firm. These capabilities set one firm apart from others within the industry and within its competitive set. These single out the firm for some reason, making it *different* from others competing in the same space. Typically, this differentiation comes from the firm's resources and capabilities, is established as part of the firm's strategy, is reinforced by the firm's culture and mission statement, and is supported by the firm's budget. Competitive advantage results from doing things faster, better, cheaper, or different than anyone else. It can be measured in many ways; for example, in terms of product or service quality, market share, brand recognition, customer loyalty, employee loyalty, profitability, and cost structure.

Traditional sources of competitive advantage come from gaining leadership positions in one or more of four arenas: price and quality, timing and know-how, stronghold creation, and deep pockets (D'Aveni, 1994). To properly put things in perspective, consider that everyone (i.e., employees, customers, investors, or franchisees) has a choice in today's competitive marketplace. Oftentimes, this choice can be made between multiple competing, yet similar, offerings. With information being so readily available, these people can do their homework and make more informed choices. They can be picky and extremely demanding. Are you positioned well to win their attention and to get them to select your company's offerings? What makes your firm a better choice over other options in the marketplace? What is the deciding factor, the thing that really makes the difference? This is what competitive advantage is all about.

IT provides competitive advantage if it helps a firm reduce the firm's cost structure, generate profits, make better and faster decisions, or differentiate its products and services. Competitive advantage results when a firm gains an advantage (typically in the form of economic rents, increased market share, or information asymmetries) over its competitors by exploiting its strengths relative to those of its competitors (Ohmae, 1992). In this context, competitive advantage from IT results when the technology itself helps a firm in achieving economies of scale, reducing costs, differentiating the firm's products and services, creating barriers to entry, building **switching costs** (things that lock in or bind a consumer to a product or company—discussed more in Chapter 3 under subscriptions), changing the basis of competition, adding customer value, altering the balance of power with suppliers, providing first-mover effects, or generating new products (see also Applegate, McFarlan, and McKenney, 1996; Hitt and Brynjolfsson, 1996; D'Aveni, 1994; Bakos and Treacy, 1986; Clemons and Kimbrough, 1986; Porter and Millar, 1985; Cash and Konsynski, 1985; McFarlan, 1984; Ives and Learmonth, 1984; Parsons, 1983).

Based on Porter's teachings, a series of questions can be raised (see Figure 1-2) to help evaluate the strategic potential and ultimate competitive advantage that can be derived from a technology-based initiative. This list is not exhaustive, but it is representative of the types of considerations one should have. It is suggested that these questions be raised often when defining strategy and setting priorities involving IT.

### Resource-Based View of the Firm

The assessment of competitive advantage is an important step in the IT investment decision-making process, and internal efficiency can provide one source of competitive

- Can IT create entry barriers to keep out potential new competitors? If so, how?
- Can IT create switching costs to lock in customers and make it difficult or undesirable for them to seek out other alternatives?
- Can IT help the firm understand its customers better, use information to provide unique experiences and customer service, and build lasting relationships that lead to loyalty and more spending?
- Can IT be used to lower the firm's cost structure, streamline operations, or to create economies of scale?
- Can IT be used to create new business opportunities and revenue streams?
- Can IT be used to differentiate the firm's products and service offerings? If so, how?
- Can IT be used to improve product or service quality or ensure consistency?
- Can IT be used to build better alliances or strategic partnerships to help the firm gain access to new markets or access to resources and skills it does not presently have?
- Can IT be used to provide an edge in dealing with suppliers or enable better negotiating leverage?
- Can IT change the nature of competition and the dynamics within the industry, shifting them in the firm's favor?
- Can IT help the firm sustain its competitive advantage in the market place?
- Can IT better equip employees to be more productive and capable, perhaps by providing information to them or providing faster access to information to help them do a better job and outperform the competition?
- Can IT help to provide informational advantages, namely more and better information than what suppliers or competitors may have to make faster decisions, negotiate better prices, and so on?
- Can IT help a firm do more with less?
- Can IT help to create a “wow” experience that is memorable and will be recounted to others?
- Is IT aligned with the strategic objectives of the firm?
- How can IT be better used to help the firm achieve the firm's strategies?

**FIGURE 1-2**

Key questions to ask of all IT projects.

advantage (Sethi and King, 1994). According to Sethi and King (1994), the two prevailing approaches to assessing competitive advantage are the following:

1. **Outcome approach**—This approach places great emphasis on competitive efficiency, business value, and management productivity, and uses such measures as revenue growth rate, ROI, return on assets, profits, and net worth. It takes a macro-level perspective by focusing on aggregate measures that address performance of the firm.
2. **Trait approach**—This approach identifies specific attributes of an IT application that are known to contribute to competitive advantage. These are reflected in concepts like competitive forces, strategic thrusts, value activities, and the customer resource life cycle. This approach takes on a more micro-level view since the focus is on an individual IT application and the role it plays in enhancing the firm's competitive advantage.

To assess competitive advantage derived from a single IT application, Sethi and King (1994) define a construct called Competitive Advantage Provided by an Information Technology Application (CAPITA). **CAPITA** is defined by five dimensions: efficiency (the extent to which an IT application allows a firm to produce products and services at prices lower than its competitors), functionality (the extent to which an IT application provides the functions and capabilities required by users), threat (the impact of an IT application on the balance of power between suppliers and buyers), preemptiveness (early adoption of an IT application to usurp the market), and synergy (the degree of integration between an IT application and the firm's goals, strategies, and environment).

Because of the commodity-like nature of IT, Cho (1996) presented an alternative view of competitive advantage grounded in theory pertaining to the **resource-based view** of the

firm as studied by Clemons and Row (1991) and Mata, Fuerst, and Barney (1995). Using this framework, Cho suggested that a company achieves competitive advantage through the culmination and convergence of a series of events, resources, experiences, and underlying management processes. Alternatively stated, competitive advantage is the result of not only how a firm competes (or plays the game) but also the assets it has in which to play or compete. The competitive advantage is derived collectively from a variety of firm assets that make up its resources and capabilities. These include its people (and their skills and expertise), financial assets, IT portfolio and infrastructure, corporate culture, portfolio of products and services, competitive methods, strategic alliances, and so on. There is no one contributing factor but a series of ingredients or idiosyncratic resources that when combined provide a competitive edge in the marketplace. Plimpton (1990) termed this hidden or **tacit** competitive edge as the *X Factor*. It's like a secret ingredient in a recipe. For many organizations, the integration of software applications and IT with the organizational structure and its staff provides the source of competitive advantage (Adcock et al., 1993). Because of its tacit nature, the competitive advantage and its contributing factors are difficult to identify and, therefore, hard to duplicate. The resulting competitive advantage can then be sustained for as long as it remains inimitable and not obsolete, a period that is becoming shorter all the time in today's hypercompetitive marketplace.

Finding sources of competitive advantage that are unique and inimitable is important, especially in the service industry where barriers to entry tend to be relatively low and because service concepts can be easily copied. One of the reasons so many Internet firms failed in the Dot.Com era is because many Internet entrepreneurs underestimated the ease and speed in which their concepts could be copied. Thus, their concepts became undifferentiated and indistinguishable among their competitors, and competition grew at a much faster rate than what was anticipated. A small customer base at the time (recall that Internet access was not as prevalent and that the number of users was a much smaller percentage of the overall population as it is today) was diluted. Customers spent their time shopping for the best price, causing everyone's profitability to fall. Therefore, barriers should be erected whenever possible, and sources of competitive advantage should be embedded in the organization and should comprise the firm's unique factors (or what is known as idiosyncratic resources). This will create tacit competitive advantage. Finally, firms should protect their competitive advantage and discourage employees from talking with outsiders regarding the sources of competitive advantage. Doing these things will make it harder for others to copy, and allow firms to prolong their advantages.

## Past Examples of Competitive Advantage Derived from IT

Throughout the hospitality industry, there are many examples where firms are creatively using IT to create competitive advantage. The following are some examples seen across the hotel industry in the context of global distribution systems (GDSs) but whose reach goes beyond to include service delivery and customer relationship management (CRM). Although described in the context of GDS, the examples of competitive advantage derived through (1) economies of scale, (2) functionality, (3) accuracy of information, and (4) proprietary technology are readily transferable to other technology applications and areas of the hospitality industry.

1. **Economies of scale** have been among the most significant sources of competitive advantage derived from GDSs. Building a GDS is a costly, time-consuming, and difficult venture. It requires great expertise, both technical and operational. Not all companies have the resources, expertise, and wherewithal to develop a GDS. Moreover, the costs have exceeded the reach of many organizations. In chains and affiliate organizations that provide reservation systems technology and services to their member hotels, the incremental cost to add new hotels is pretty minimal relative to the core investment required to build the system. As such, the initial investment and fixed costs can be allocated over a wider base, thereby providing greater economic efficiencies and decreasing the participation cost for each hotel in the network. These efficiencies appeal to franchisees that seek access to global distribution channels but lack the capital and expertise to develop their own. Ef-

ficiencies and economies of scale lead to lower deployment costs, operating costs, and transaction fees. Hence, a GDS is a primary selection criterion for companies interested in affiliating with a franchisor or a management firm. As the franchise network and number of hotels under a single umbrella grow, so do market penetration and market share. Size then becomes an important factor that can be leveraged to gain additional economies and clout with external entities.

2. Another source of competitive advantage comes from the functionality of the GDS, its links to external systems, and its flexibility to adapt to an ever-changing business environment. For the hospitality industry in particular, this means having the ability to control inventory and rates (including booking rules, restrictions, and selling strategies), to distribute this information seamlessly and in real time to a multitude of access points (e.g., travel agents, airline GDSs, reservation call centers, sister properties or products, other member hotels), and to generate instant confirmations continues to separate the capabilities of competing hotels. Access and links to external systems extends the reach of the hotel GDS, thereby attracting a broader audience from all over the world.

Functional advantages also include ease of use and the GDSs' role in supporting the selling process (i.e., the conversion of inquiries to bookings at the best possible rates). These advantages are typically measured in terms of the number of room-nights or revenue generated by the GDS, occupancy, REVPAR (revenue per available room), REVPOR (revenue per occupied room), and guest loyalty. An example of a temporary competitive advantage resulting from GDS functionality is Marriott International. At a time when the industry was in recession, Marriott turned to strategic and disciplined discounting as a means to increase occupancy. Borrowing pricing strategies from the airline industry, Marriott created a twenty-one-day advance purchase promotion. In order to receive these low rates, a guest was required to meet certain conditions and comply with certain rules or restrictions (called "fences") (Hanks, Noland, and Cross, 1992). In order to enforce these fences, Marriott's Automated Reservation System for Hotel Accommodations (MARSHA) needed to contain sophisticated functionality to manage room inventory and to monitor customer purchase patterns. Since many competing chains lacked similar functionality at the time, they had difficulty in copying Marriott's promotion. Thus, Marriott enjoyed a competitive advantage until such time that other chains could modify their reservations systems to accommodate the same type of practice. Recognizing the short-lived nature of its competitive advantage, Marriott continued to develop its MARSHA reservation system and enhance its integration with its hotel property management and demand forecasting revenue management systems to develop more sophisticated pricing strategies that allowed higher rate premiums and occupancy percentages than industry competitors. Thus, Marriott managed to stay ahead and outperform its competition. A key lesson for all to take away is the need to continue to improve or develop new competitive advantages because they seldom last. More than likely, they will be short lived before someone figures out how to copy or build a better solution as seen in newer OTA models or even social networks.

Flexibility is another important consideration. GDSs must be able to effectively adapt to changing market needs at a moment's notice. Cycle times are too short to tolerate long lead times. Because of the systemic nature of a GDS environment, a change in one area (which could be either functional or technical) will most likely constitute a domino effect. For example, many hotel companies are looking to deploy mobile applications (mobile apps) to support reservation inquiries and bookings, guest profiles, loyalty account balances, online check-in, keyless room entry, and more for guests on the go via their smartphones. The development and implementation of mobile applications require a great deal of thought to systems enhancements to many core systems (including GDS, PMS, and the hotel's Web site), usability (i.e., user interface design), platform considerations (i.e., hardware and operating systems), system interfaces, security, the guest experience, and the overall service delivery process. Mobile apps represent just one of many areas that

could be used to illustrate the need for flexibility in design and programmability of the information systems and interfaces comprising the GDS to accommodate new business needs and guest expectations. In a hypercompetitive environment, changes like this will become more common, more frequent, and more necessary for one's competitiveness. They will be driven by new consumer trends, more capable technologies, advances in mobility and the Internet, and competitor moves. Like in the Marriott example previously cited, companies that can capitalize on these functional advantages can gain competitive advantage as long as other firms cannot easily copy or acquire the functionality.

3. A third source of competitive advantage is less tangible. It relates to the accuracy of the information (i.e., content) and the hotel's ability to track the guest. From a guest's perspective, a hotel's ability to meet his or her expectations and provide the correct room type, features, amenities, and services requested at the time of reservation distinguishes the hotel from its competitors. Regardless of what channels are used to book a reservation, each guest should find convenience, hassle-free service, and reliable information. The distribution channel should convey a sense of confidence to the guest that the information being shared is indeed accurate and current and that all of his or her requests for services (i.e., location, room type, features, and amenities) will be honored upon arrival. This confidence and convenience, in turn, builds guest loyalty. From the hotel's perspective, tracking the guest plays an important role in guest recognition and delivering customized services. Since each guest interaction represents an opportunity to learn more about a guest, data collection, storage, and retrieval are critical to building strong relationships, creating unique and personalized experiences, and developing customer switching costs. Being able to mine the reservations database will be a new source of value and advantage.
4. Another form of competitive advantage comes as the result of proprietary technologies or patents, which create barriers to entry or duplicate capabilities. Although patents present challenges, patents are common throughout the software industry, because they represent intellectual capital. Their presence in hotel GDSs is less common. Hyatt Hotels and Radisson Hotels are two companies that currently enjoy patents for functional features contained in their GDSs. Hyatt (U.S. Patent 5,404,291) patented an inventory control process and revenue maximization routine used by its SPIRIT CRS. Radisson's patent (U.S. Patent 5,483,444) protects the company's innovative "Look to Book" program and "World of Winners" sweepstakes program, which provide incentives to travel agents and others who provide electronic bookings at Radisson hotels. Under the "Look to Book" program, agents are awarded points or credits, which can later be redeemed for prizes, for each reservation booked. The "World of Winners" sweepstakes program randomly provides prizes or rewards to booking agents. The technology implemented by Radisson administers this program over a diverse network, where multiple computer systems and travel agencies are involved.

Although these sources of competitive advantage continue to remain viable, they are not sufficient in today's hypercompetitive world, especially since hotel products are becoming more commodity-like. In the future, as the concept of branding erodes, hotels will need to find new sources of competitive advantage. This text builds on these past examples and looks at new evolving ones.

## 6. Sustainability

There is great debate as to whether or not competitive advantage—from IT or some other source—can be sustained. In other words, how long can a firm enjoy competitive advantage? What is its life expectancy? While there are no easy answers to these questions and while the answers would be context-dependent, there is consensus among management gurus and industry leaders that competitive advantage is not, by itself, sustainable for long periods of time. Some forms of competitive advantage (e.g., ones that involve patents or

steep learning curves) can provide periods of sustainability. However, in all cases, competitive advantage can be lost or become obsolete with time. This is especially true with IT since it becomes obsolete so quickly. Moreover, as IT becomes more affordable, more standardized, and more easily copied, what once only the big chains could afford is now accessible by small chains and independents, albeit at slightly higher costs. Just consider how software as a service (SaaS) and cloud computing (where browser-based computers access computer programs housed remotely via the Internet) are making software functionality available and affordable to the masses.

It is possible that, in some cases, competitive advantage can be sustained over periods of time, particularly if it is not easily copied, if it alters industry structure, or if it has some protective parameters such as a noncompete contract or a patent, but in most cases, competitive advantage will be short lived. Therefore, hospitality leaders should always be thinking about their next competitive move or next big thing. Porter (1985, pp. 171–172) suggests four tests of desirable technological change that can lead to periods of **sustainable competitive advantage**:

1. The technological change lowers costs or enhances differentiation and provides a sustainable (i.e., inimitable) technological advantage.
2. The technological change shifts cost or uniqueness drivers in favor of a firm.
3. Pioneering the technological change translates into first-mover advantages besides those inherent in the technology itself.
4. The technological change improves overall industry structure.

Copeland and McKenney (1988) noted that economies of scale and experience (i.e., the learning-curve phenomenon) are important but insufficient in establishing long-term success and competitive advantage; management foresight and attitudes also play vital roles and are necessary to building lasting advantages. Hopper (1990) agreed that sustainability of competitive advantage from IT is difficult, if not impossible, to achieve. He further observed that once the competitive advantage is lost, the industry's sophistication (i.e., the minimum stakes needed to compete and maintain competitive parity) becomes greater. This, in turn, increases the costs of doing business and the complexity of competition for all players in the entire industry (Weill, 1991). We see this today. The hospitality industry is capital intensive due in part to the sophistication of technology and the number of systems required to operate a business to maintain parity with competitors.

For illustrative purposes, consider property management and point-of-sale systems. At one time, the earlier adopters of these technologies enjoyed competitive advantages. Over time, however, as these systems became more affordable and commonplace, the advantages were minimized, and these systems changed from ones that provided strategic advantage to ones of competitive parity. Today, if an operation does not have these core systems, it is at a noticeable competitive disadvantage.

To prolong competitive advantage, Hopper (1990) recommended shifting the focus of IT to *how* IT is used rather than on the tools themselves. Assume that whatever technology is being used, it can be easily acquired and implemented by a competitor. Therefore, the competitive advantage will come, not from the technology itself, but how the technology is used, what it can do, and how it enables employees to perform their jobs. Hopper (1990) predicted that competitive advantage will be derived from the information collected and shared throughout the organization. Technology can always be purchased, but this is not necessarily the case when referring to knowledge (Copeland and McKenney, 1988). Therefore, competitive advantage will be a function of the ability of a firm's workforce to creatively exploit the capabilities of IT to create new products and services that sell well, to personalize products and services, and to create memorable experiences that wow guests while charging premium prices. Competitive advantage will come in the form of (1) innovations that result from a firm's ability to effectively leverage its unique resources, (2) competitive asymmetry or differences between firms as a result of their unique resources, and (3) the ability to preempt competitive responses and, thereby, maintain technological superiority (Cho, 1996; Clemons and Row, 1991; Feeny and Ives, 1990; Segars and Grover, 1995).

To achieve sustainable competitive advantage, most scholars and industry leaders agree that a firm must continuously invest in its resources and capabilities to build core

competencies and a culture that encourage learning, innovation, and risk taking so that new advantages can be created. The following chapters in the book offer examples of new innovations in technology that can be used strategically. Deep pockets, know-how, and technology are however not enough to ensure long-lasting advantages. In fact, D'Aveni (1994) advised firms to continually seek ways to destroy their competitive advantages (creative destruction) and create new ones before the competition does this for them. He even recommended multipronged approaches (sequential thrusts) to make it more difficult for competitors to react with counter responses. Successful firms continuously innovate and reinvent themselves. In doing so, these leaders stay out in front while others are several steps behind trying to play catch up with some previous initiative. Which ones will you choose? How will you use them strategically? Read on and welcome!

## 7. Summary

As professors and industry professionals, we are often asked what skills are required to succeed in the hospitality industry. There are five principal areas we always advise our students to consider, regardless of specific career focus. These include (1) developing business acumen and leadership skills, (2) establishing a strong-technical skills foundation (i.e., financial and statistics, communications, and interpersonal), (3) becoming technologically savvy, (4) understanding the art of service management (the craft elements of the business), and (5) being socially and ethically responsible. The industry is highly complex and extremely competitive. Customers and investors are becoming increasingly more demanding. Keeping pace with the demands and making sound business decisions to respond accordingly require strategic thinking, strong analytical and financial skills, and a keen sense as to where the business is heading. Leadership, interpersonal, and communication skills are also essential since we are in a people business. Remember, human resources are our most important strategic assets. We need good, capable, and caring people to accomplish what we do. The thesis of this chapter focused on the technology aspects and why you must master these to be a successful business professional and industry leader. Because the hospitality business is service oriented, the customer or guest must take center stage in all that we do and plan. In order to create unique, memorable experiences, we must also understand the dynamics of service management and how to blend high tech with high touch to provide the right information at the right time to the right people to create the right experience or service as required by the guest at any given circumstance. We are solution providers. As such, it is up to us to make what is seemingly impossible possible—and with ease. In the end, we, as leaders and business professionals, need to know how to use the many business tools (technology or otherwise) available to us to flawlessly execute our service mission in an ethical and socially responsible manner and with an eye toward profits

and shareholder value—every time and with every guest. To do this, we need to be well rounded and understand as many aspects of the business we can to know how to lead and direct. Your skills assessment and career planning are vital to your future and making sure you are well prepared, so get started on these immediately.

Next one needs to actively seek ways to gain competitive advantage through IT. It is not enough to be first to market. For example, Marriott International was the first hotel company to implement in-room checkout in conjunction with the now defunct Spectradyne. Unfortunately, it failed to develop this technological amenity under terms of exclusivity with its vendor. Consequently, it was not long before this functionality started to appear in its competitors. Now, it is an industry standard. Alternatively, Carlson Hospitality, parent of Radisson, has sought patents to protect some of its technology initiatives and give the company some time advantages, however slight. Everything that can be done to create an uneven playing field in your favor (so long as it is legal and ethical) should be actively explored. Let's learn from these experiences and see what new sustained competitive advantages we can find in the following chapters.

Please remember that IT itself is seldom the source of competitive advantage because it can be easily acquired and copied. Rather, it is how IT is implemented and used within a firm (i.e., what people do with it) that leads to competitive advantage. The degree to which competitive advantage can be attained will be a function of how well IT is integrated within the firm, from the culture to the business processes to the systems themselves. The specific competitive advantages derived will be based on how a firm chooses to allocate its resources to implement IT, its overall effectiveness in doing so (e.g., its ability to cost-effectively harness the capabilities provided by the IT tools and applications), its portfolio of resources and capabilities, and the employees' willingness to embrace the technology itself. Integration of all of these points is needed for success. Good Luck!

## 8. CASE STUDY AND LEARNING ACTIVITY

### Case Study

Let's talk with Laura again from the beginning of the chapter:

#### 1. Can you tell me about your background?

I have always enjoyed taking care of people. At my favorite job in high school, I worked in a studio kitchen where I learned basic culinary skills, easy (and delicious) recipes, and safe food-handling procedures. We frequently hosted private events during the evenings in the kitchen, where we helped people create their own meals and provided demonstrations for more advanced items for customers to take home. The idea of people taking care of other people, and providing that unforgettable experience sparked my love for hospitality. So, by being a native of the Pennsylvania and having an interest in hospitality, there was no other option then to apply to the Hospitality Management School at Pennsylvania State University. During my time there, I became intrigued in the strategic and analytical side of the business, and pursued a career path where I could combine my love for the two worlds and that is how I got into the world of revenue management.

I graduated from Penn State and accepted a position with the Waldorf Astoria New York in their Management Development program with a concentration in revenue maximization. During my nearly four years at the Waldorf Astoria, I spent my first two years in operations; I learned the ropes of front office, housekeeping, and group services. My last two years, I worked as a revenue analyst and was then promoted to revenue manager. As revenue manager, I was on a team of three individuals with a primary responsibility in group sales and catering revenues while also contributing to the overall transient room's strategy.

#### 2. Where do you see your career path heading?

My hopes are to eventually move up into a more regional leadership role within IHG or another large hotel brand to

have more exposure to other big cities outside of New York City. I enjoy working collaboratively. I feel that it's best to always bounce ideas off different people to have the best thought-out and creative strategy. By being in this position, I would be able to work with different minds and work with them to implement their strategies to achieve their individual and companywide goals.

### Learning Activity

1. What are the key learnings you take away from this story? How can you apply them to your own career planning?
2. Scan industry job postings from a variety of online and offline sources in search for hospitality managerial positions, IT and non-IT alike. What positions are available? For each position, list and discuss the stated qualifications, skills, job duties, and IT expertise required to perform the job. Which positions are most appealing to you and why?
3. Interview a hospitality business professional in the area of the industry that interests you most and find out in what ways IT affects his or her job and abilities to effectively manage and compete in today's complex and challenging world. What advice can this person offer you in terms of developing your skills and preparing yourself for a future industry career?
4. Define and develop what you would consider to be the ideal career path for you. What steps will you need to take to achieve your goals?
5. Debate with a group of friends or classmates the chapter's thesis that IT is an essential part of every hospitality business professional's career. Do you agree with the chapter's premise? Why or why not? What evidence can you provide to support your position? How would you counter the opposing view?

## 9. Key Terms

Boundary spanners

CAPITA

Chief information officer

Chief technology officer

Competitive advantage

Competitive method

Economies of scale

Resource-based view

Sustainable competitive advantage

SWOT analysis

Tacit

Value chain

## 10. Chapter Questions

1. Identify at least three examples of hospitality businesses that rely heavily upon technology. For each example, discuss how technology is used, why it is used, and the benefits it affords each organization.
2. What does it mean to be a boundary spanner?
3. What are the different career options available within the hospitality industry for those wishing to explore a career involving IT? How do these options and the skills required vary across industry segments?

4. How would you advise someone interested in pursuing a career in (a) hospitality IT and (b) hospitality management? For each, what steps should he or she take to prepare? What schooling and coursework would you recommend? What types of work experience or jobs would you advise? What skills should be developed and why?
5. Define what the hospitality industry might be like in twenty years. How will business be conducted? What roles will technology play? What will be the hot issues keeping managers awake at night? How will you prepare for these?