

## case study

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# *The Case of the Tower Cafe: Identifying the Right Technology for a Small Independent Restaurant*

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### Introduction

The use of technology in restaurant operations has proliferated in both front and back of the house operations. Restaurant managers are continually looking at ways of implementing technology to manage their operations efficiently and effectively. Merriam-Webster Dictionary defines technology as “the practical application of knowledge or manner of accomplishing a task using technical processes, methods or knowledge” (Merriam-Webster, 2018). Some technology adoptions are human-to-human, some human-to-machine and some completely automated. Restaurant front-of-the-house technology adoptions include managing guest profiles, utilizing social media and providing creative menu presentations to the guests. Restaurant back-of-the-house operations’ adoption of technology ranges from inventory and purchasing systems to human resource issues to data security (Lutrario, 2016).

The growth of technology applications in the past decade has transformed restaurant operations. A concern is that much of the explosion of technology application is driven by misspending and an effort to have the latest and greatest (Guxman, 2003). The key is to identify what the restaurant goals are, such as how to affect sales, control labor cost or develop guest profiles in the most effective and efficient manner (Sanson, 2016) and select technology that will help reach organizational goals.

The National Restaurant Association reports that members have identified guest ordering, loyalty programs and payment options as those technological developments having the greatest industry-wide impact (National Restaurant Association, 2016). In that same report, it was discussed that relatively few consumers strongly agree (13%) that a restaurant they recently visited used technology to improve their service experience (National Restaurant Association, 2016).

While companywide technologies are being implemented, the smart phone has become the center of “consumer commerce, branding, social interaction and attention” (Dutton, 2017, p. 1) and needs to be considered for technology adoption. The ability to search restaurant offers, read reviews, order menu items, provide options for service deliv-

ery and pay online are pivotal to restaurant patronage (Technomic Inc., 2016). Today’s restaurant challenge is to balance technology with guest service, employee considerations and organizational objectives.

### Current History

In today’s current restaurant landscape, few businesses can successfully compete based solely on operational effectiveness over an extended period. The identification of a unique position must strength fit between organizational objectives and identifying guests value perception for those the offerings (Porter, 2011). Selecting and implementing a competitive position that is sustainable, operational, difficult to emulate and meets the vision/mission of the organization are critical components of successful operations (Collins & Porras, 1996). The most successful restaurants are those that have identified a unique competitive position and are able to leverage the right technologies to ensure long-term viability. The challenge is identifying needed technology to support the goals and maximize business resources in an often confusing and complex landscape of technological innovations and offerings.

### *The Adoption of Technology*

The adoption or barriers to adoption of new technologies, is impacted by age, gender, education, experience and evolving personal needs (Naicker & Van Der Merwe, 2018). Core variables in adopting a specific technology include affordability, applicability, and perceived usefulness and ease of use by employees and guests. Technology adoption or barriers may also be driven by; stakeholder needs and interests (Beuder, 2014; Muller, 2010), return on-investment (Lim, 2009), and management awareness (Lim, 2009). These variables form the basis for considering, acquiring and successfully implementing the technology while mitigating the inherent barriers/challenges associated with it (Garces, Gorgeman, Sanchez, & Perex, 2004).

Technology can help operators control costs, improve efficiencies in labor and operations, and increase service levels and attention to the guest. Adoption of the “right” technology can help independent restaurant operators compete with the chains by leveling the playing field (Sanson, 2016). Along with access to financial or human resources required to implement the technology, management access and attitude toward technology also plays a pivotal role in successful

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implementation and use (Bhattacharjee & Harris, 2009; Lim, 2009). Choosing technology is impacted by the purchaser perception of relevance to organizational goals, risk and impact on the customers and employees (Mokhtarzadeh, Mahdiraji, Beheshti, & Zavadskas, 2018).

In addition to identifying management adoption barriers, there is a need to look at guests' needs and behaviors. A Restaurant Hospitality Exclusive insights panel in 2016 posited that food safety, lower prices and discounts take preference over online ordering, digital menus, and loyalty programs (National Restaurant Association, 2016). Identifying priorities in technology adoption based on specific needs of the restaurant operations and their stakeholders is important in sustainable business operations.

### ***Restaurant Technology Applications***

The evolution of technology applications in restaurant operations has transformed the way restaurants are managed and operated (Muller, 2010). Back-of-the-house operations range from purchasing systems, to human resource management software to HACCP controls and operations security. Front-of-the-house operations focus more on guest interactions from an employee-guest (ordering, bill paying, etc.) perspective and a virtual (web site, reservation systems, etc.) perspective. Technological advances do not always require a total implementation of a new system. Often technology applications can be bolted on top of existing software (Sansou, 2016). Others may be imbedded into operations regardless of whether they are operations or guest focused (Sansou, 2016).

The bigger question seems to be how much is too much. Technological advances can be exciting but can often provide services that are not necessary or beyond the needs of the business. An important consideration is that technology does not necessarily replace the need for knowledgeable employees, but it may help them excel (Giebelhausen, Robinson, Sirianni, & Brady, 2014). There are also privacy concerns and cyber security to consider when adopting certain technologies. There is technology capable of tracking a guest's visits with/without their knowledge, including purchase behavior. For example, once a guest has signed into a public Wi-Fi at a restaurant and has agreed to policies included with its use, management can continue to track them every time they return without a renewal of acceptance. There are also physical technologies like surveillance cameras typically installed for safety and security. Employees and guests do not need to be notified if there is surveillance technology in place (Kajalo & Lindblom, 2016). Finally, data collection through multiple sources can provide valuable insight into meeting the needs of stakeholder but can also come with costs such as time and resources to analyze the data, and issues of guest/employee rights and privacy (Kshetri, 2014).

### ***Future Implications***

The challenge for any business owner today is the selection of technology that maximizes performance and customer retention. The

pervasive nature of constant technological innovations and advances makes it difficult to keep up with all of the latest tools. Leaders in the restaurant field will need to become adept at selecting technology that enhances their business performance, not just embracing every new technology because it is the next new thing.

### **The Case: Tower Cafe**

The Tower Café is a fictional restaurant based on typical features of a small to medium sized independent restaurant. It is a 155-seat restaurant located in a metropolitan area across the street from a university campus in Michigan. The restaurant features burgers, pizza, salad, and alcoholic beverages with Greek and Curacao island influence. The café is open for lunch, dinner and late night bar business. Patrons have distinct demographics based on day parts. Lunch is split evenly between university related business and delivery to local businesses (local health care providers and other service operators). Students visit midday enjoying burgers and studying with friends; followed by early dinner with families. The evening will find students whom walk to the café to enjoy theme nights such as Karaoke, live music, or sports on TV. Pizza deliveries dominate dinner and evening orders. The Tower Café delivers to a 5-mile radius and 35% of its evening sales come from delivery or take-out orders.

There are an average 300 guest checks per day and sales have grown to slightly to over \$2,000,000 per year. This represents a 400% growth in revenue over 20 years. Staff fluctuates to between 45 and 50 employees of which 21 are full-time. Employee turnover had been traditionally low but lately there has been an increase in employees leaving to go to work for several competing restaurants in the area. Currently, customer satisfaction is high but the owners have been hearing comments from some of their customers about the new tech features that some of the competing neighborhood restaurants are implementing. The café is now facing some challenging decisions if it is to continue to grow. As its guest and employees have become more tech savvy, their expectations are changing. The owners recognize the need to evolve. The challenge is how much technology they need to continue to be viable without overspending and eroding profitability. The paragraph and mission included in the menu and on their website sums up their commitment to the community and to being the best restaurant in the market: "We graduated from the local university in 1990 and in 1997 and we bought the Tower Café where we had our first date. Our food is made with lots of love and we are trying to win your hearts every single day. Thank you for visiting us and we hope to see you again soon. Morgan and Samantha." Mission Statement:

"Creating delicious memories through impressive service, food, and drinks, from each of us consistently...to each and every guest."

Since taking over the restaurant operations in 1997 there have been multiple changes in technology applications with some be-

Figure 1

## Current Financials

### Summary Operating Profit and Loss Statement

	Next Year Projections	Current Year	Previous Year
<b>Revenues:</b>			
Food Revenue	\$1,210,000.0	\$ 1,100,000	\$ 900,000
Beverage Revenue	\$ 660,000.0	\$ 600,000	\$ 700,000
Other Revenue	\$ 330,000.0	\$ 300,000	\$ 200,000
<b>Total Revenue</b>	<b>\$2,200,000.0</b>	<b>\$ 2,000,000</b>	<b>\$ 1,800,000</b>
<b>Expenses:</b>			
Food Cost	\$ 508,200.0	\$ 462,000	\$ 360,000
Beverage Costs	\$ 165,000.0	\$ 150,000	\$ 161,000
Labor Cost (include benefits)	\$ 726,000.0	\$ 660,000	\$ 648,000
Paper Supplies Cost	\$ 88,000.0	\$ 80,000	\$ 54,000
Cleaning Supplies Cost	\$ 33,000.0	\$ 30,000	\$ 27,000
Technology Maintenance Fees	\$ 44,000.0	\$ 40,000	\$ 40,000
Laundry and Linen Costs	\$ 39,600.0	\$ 36,000	\$ 38,700
Administrative and General Costs	\$ 160,600.0	\$ 146,000	\$ 126,000
Maintenance Costs	\$ 33,000.0	\$ 30,000	\$ 28,000
Utility Costs	\$ 66,000.0	\$ 60,000	\$ 54,000
Other Costs	\$ 30,800.0	\$ 28,000	\$ 32,000
<b>Total Costs</b>	<b>\$1,894,200.0</b>	<b>\$ 1,722,000</b>	<b>\$ 1,568,700</b>
<b>Gross Operating Profit</b>	<b>\$ 305,800.0</b>	<b>\$ 278,000</b>	<b>\$ 231,300</b>

Note: Expenses and obligations including mortgage, insurance, taxes, capital expenditures, etc. not included.

ing successful and some not as successful as hoped for. The owners are very visible in the restaurant; greeting guests and helping their employees provide attentive quality service. Morgan describes himself as a technology junkie while Samantha would rather spend her efforts directly in the day to day operations but both realize that the right investment in technology will result in greater sales leading to better guest service; leading to greater profits both in the short and long term. The deciding factor on selecting technology is based on Return-on-Investment and on the potential improvements in current processes. Outsourcing/managing technology would also play a role in the decision.

#### *Tower Café Current Technology*

In 2009, the owners implemented the Connecting Point-of-Sale (CPOS) technology software. CPOS allows servers to enter guest orders in the restaurant, process online orders input by guests through Tower.com and process orders entered through a 3rd party referral company (Grub Hub). A positive regarding the software is that orders flow directly to the cooks in the kitchen. Meals are prepared based on the information provided through CPOS. A negative of the system is that it not effective in managing manual inventory items such as primary perishables, which are counted three times a week. Alcohol is another

manual inventory, done nightly by the shift manager and takes approximately 45 minutes. Finally, a physical inventory of all perishables is taken monthly and completed by management staff. Each of these inventories is calculated manually and kept on Excel spreadsheets. The servers like the ease of entering orders using this software. It has improved communication between the front and back of the house.

Tower Café's web site (towercafe.com) was developed by Morgan around 2006. While it had basic functionality, it needed to be more robust. In 2016, the decision was made to outsource the web site development and maintenance, along with menu design-layout to a third party. The challenges that have resulted by outsourcing is turnaround time and lack of consistent, sustainable third party service providers.

Seeing a need to be part of the social media conversation, Morgan created a Facebook page for the restaurant. He currently sees the oversight of the page. He is responsible for posting regular updates on menu specials, events and food trivia. He also spends several hours a week on social media sites responding to guest feedback on Yelp, Facebook and Trip Advisor. This has started to take up more time that Morgan has and he is getting concerned that he will not be able to keep up with his customers.

With over 45 employees now, payroll operations was outsourced

to a company different from the accounting firm used for restaurant operations. 7Shifts.com software application provides the employees the ability to “clock-in/out” using a computer tablet in the restaurant. Another feature allows communications between employees and management in the form of texts. This is used to manage shift changes, post shift availabilities and related information. In addition, this software has the ability to produce payroll checks, pay taxes, and provide government documents with “real-time” assistance when needed. It seems to be meeting the basic needs for now but one of the potential employment issues that Tower Café is facing is providing some type of benefits for the employees. This current software is not able to support any type of benefits management. The employees like the features that this software adds but they get frustrated at the antiquated way that the Tower Café handles their benefits.

Safety and security monitoring through use of cameras began in 2000 with continual annual upgrades as needed (longer storage times, more monitors, visual clarity, etc.). Monitoring of HVAC systems including refrigeration with text alerts for systems failures was also added in 2011.

Credit card transactions account for over 90% of sales and data encryption has become important to safeguard both guests and restaurant financials. Currently mobile pay is not available at the Tower Café, which has become an immediate concern. Regulatory compliance paperwork has slowed the adoption, but the plan is to have mobile pay in operation by end of the year. The servers continually complain about the lack of mobile pay availability. Many of their customers are younger and want to be able to use mobile pay and since they can't, they tend to complain to the servers.

Part of Tower Café's loyalty program is targeted emails sent to guests on their birthdays or special celebrations, which include some type of coupon for food or beverage. Guest email contacts have been gathered during prior restaurant visits or through delivery orders. This data is then sent to an external marketing service (constantcontact.com), who sends out the actual promotions to the guests. Using redemption rate data, the impact of outsourcing this marketing activity is tracked. To-date the redemption rate has been low, so changes need to be made. The customers do not find value in this program. It is difficult to understand and use. Customers want something simple, mobile and specific to their needs.

Table Top Technology is currently under consideration as a way to provide an entertainment element to the dining experience. Guests would be able to play video games with dining companions or with virtual dining companions via Web site such as Buzztime.com or Ziosk.com. Part of the calculation for determining whether to implement this technology is the amount of potential revenue that could be derived from “pay to play” and incremental sales on food and beverage items ordered during the expanded seat time of guests. The concern is that guests may stay longer without making additional food/beverage purchases resulting

in having to turn away new guests due to lack of available seating. The servers see this as a loss in tips for them and are against it.

Table Top Ordering, a feature many competing restaurants have implemented, where guest are given an electronic tablet to select and order their food and beverage was not pursued because the owners felt this would not assist in living their vision and mission. They felt that the advantages of the technology including ease of updating menu items and providing detailed visuals of the items did not outweigh the negative affect of removing much of the interaction between guests and servers. A recent consideration is the use of electronic tablets where servers would enter orders electronically, tableside to eliminate errors and expedite orders into the kitchen more quickly. Customers are mixed on this. Some customers want the ease of ordering themselves while other want the personal touch of a server. Servers see this as another way that they could loses tips and decrease their income.

Credit Card Payment at Table technology allows the server to use a credit card reader to swipe credit cards for payment and complete payment transaction tableside. The owners feel this is a necessary addition to their restaurant. The benefit of eliminating the waitperson taking the credit card from their guest and leaving the dining room to process would provide guests more security over their credit card. This along with mobile pay are perceived by both the customer and the server as a win.

Currently the Tower Café provides Wi-Fi to its guest through two different systems. Both are free to their guest including a standard Wi-Fi that is connected through Facebook and through a newer system called Zenreach. The challenge with both systems is that they require guests to sign in initially and asks for some basic contact information. With Zenreach, however, every time the guest returns to the Tower Café, the system takes attendance. Then if a guest has not been in the restaurant for a prescribed period, a coupon is auto generated and sent as a text or email to their account inviting them to return. This system is not connected to the POS system. Currently, data related to times visited and individual orders are not integrated. There needs to be some research to see if customers are willing to take the time to sign in or if the better option the Tower Café customers is to provide free Wi-Fi without all of the extra requirements.

The Tower Café's annual tech budget is around 2.5% of total revenue. In doing their research, the owners determined that about 60% of their budget is being spent to maintain all of their systems and another 20% to outside vendors managing their social and online presence. The remaining 20% of their tech budget is earmarked for purchasing new technology or replacing current outdated ones. Any additional increase in the tech budget has to deliver at minimum a 6% ROI (Return on Investment) for the restaurant to warrant purchasing it. See Figure 1 for a summary of their current financials. These numbers can be used to

determine which areas can be improved through technology.

The owners are now at a point where they need to re-assess their technology and determine next steps. Their decision rests on how much technology they need to be efficient and profitable while providing the type of service that their customers expect. Part of that service comes from their employees and the other part by providing technology that customers have come to expect. The have contracted with you to provide them with the research and a recommended plan for them and the Tower Café. To do this, the following questions need to be answered first.

### ***Discussion Questions:***

- How has technology transformed the Tower Café? Is this experience like other independent restaurant operations that you have worked at or patronized?
- How does the restaurant vision and mission affect technology adoption?
- Are some of technologies more important to restaurant success versus others?
- Where do restaurant managers find out about potential technology adoptions?
- Do guests and employees have expectations regarding technology in the dining experience?
- Are there any barriers to usage of the current technology? Are any of the technologies currently being used unnecessary?
- In reviewing the Tower Café's current technology, should any of it be retired or replaced with different software?
- Based on online research of technology for the restaurant industry, are there any new trends in technology or social media that they should be adding to their Café? If so, what and why?

### ***Recommendations for the Owners:***

- Based on answers to the questions above, what would recommend to the owners of the Tower Café?
- What current systems would you eliminate?
- What current systems would you update?
- What new systems would you add?
- What benefits/challenges/barriers do you see for the owners if they implement your recommendations?
- What benefits/challenges/barriers do you see for the employees of the Tower Café if the owners implement your recommendations?
- What benefits/challenges/barriers do you see for the guests of the Tower Café if the owners implement your recommendations?

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