Guest-Facing Technology and Service-process Automation:

The Future of Full-service Dining

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Introduction

As digitization becomes more common in the hospitality industry, restaurants have increasingly looked to technology-based cashless payment systems to enhance efficiency, improve the service experience, and help mitigate labor-shortage-related issues. Despite numerous benefits of cashless payment systems, many restaurants and their guests resist adopting such systems, partly for fear that technology will take away from or even replace the human nature of service. To better understand how cashless payment systems operate within full-service restaurants (FSRs) and to answer the eight research questions set out here, our team interviewed a number of stakeholders and reviewed existing literature on the implementation of cashless payment systems across various segments of the industry. On balance, we found that the proliferation of cashless payments is inevitable industrywide, and further that cashless payments are becoming more positively received. As a majority of restaurant operators and guests become more comfortable with using cashless technology in conjunction with their restaurant experiences, it should be noted that roughly 20 percent of restaurant guests remain resistant to the use of guest-facing technology.[1]

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[1] Alex M. Susskind and Benjamin Curry (2019). "A Look at How Table Top Technology Influences Table Turn and Service Labor Usage in Table-service Restaurants." *Cornell Hospitality Quarterly*, 60 (3), 233-236. Alex M. Susskind and Benjamin Curry (2016). "An Examination of Customers' Attitudes About Table-top Technology in Full-Service Restaurants." *Service Science*, 8(2), 203–217.

The Research Questions

Research Question 1: What is the relationship between the guest and restaurant team with a technology-enabled system supporting ordering and cashless payments? What will this improve, and where is there potential for additional or new friction?

Research Question 2: What do restaurants need to do to educate guests on how to order using cashless technologies? How do they sell cashless experiences? What are the core benefits, advantages, or challenges?

Research Question 3: How do restaurants manage upselling when guests are in control of ordering? What can be done to trigger a higher check?

Research Question 4: What supporting technology stack will be required to manage a cashless operation? Is the cost of this achievable or reasonable for most restaurants? What are the short- and long-term implications?

Research Question 5: What needs to be added to the experience to make it feel more human to offset the potential coldness that comes with the use of technology?

Research Question 6: How do restaurants need to rethink the server role for this new paradigm? What behavior changes will be needed in staff to manage ordering and delivering food and beverage orders to tables? What operational changes are needed?

Research Question 7: How can traditional interactions be reimagined to improve the experience for both guests and staff?

Research Question 8: What happens when restaurants move tipping from "my table/ my guest" to a shared ownership and responsibility for all guests that everyone benefits from?

To adapt to this inevitable new demand, and to better implement these new systems and technologies, FSRs will need to make changes in existing service design, service flow, and service processes. These adjustments (e.g., having servers focus less on tasks like placing orders and processing payments) will create opportunities and encouragement to build and sustain stronger interpersonal connections with the guests. In addition, to make sure the technology is serving its intended purpose in the service experience, management and line-level staff will need to ensure that all guests understand what they should expect from the technology underlying their service experience, and what they need to do with regard to ordering, tipping, and requesting support and engagement during their meal.

It is essential to note that not all restaurant constituents will find initial success with novel technology in their restaurants. In this regard, we note that restaurants that are most likely to see the highest initial rates of adoption, use, and satisfaction are those located in prosperous urban areas and those that are populated with young consumers.[2] Anticipated benefits are increased satisfaction as guests have more direct control over parts of the service experience, fewer steps in the service process, increased sales due to automatic upselling and simplified ordering, and a better work experience for servers who will have more time to make the service experience more personal and customized for guests instead of focusing on POS data entry and payments (the management of which currently accounts for roughly 30 percent of server time).[3]

Research Question 1: *What is the relationship between the guest and restaurant team with a technology-enabled system supporting ordering and cashless payments? What will this improve, and where is there potential for additional or new friction?*

The restaurant industry has adopted technology-enabled systems to manage orders and handle cashless payments. As a result, the traditional relationship between servers and guests has changed and continues to do so. Traditional systems required guests to wait at essentially every stage of the service experience. That is, they had to wait to be greeted, wait to be seated, wait to order, wait to reorder beverage refills, and wait for the check—not to mention waiting to correct any problems with the order. Long wait times at each phase of the service experience, inaccuracy with orders (both input and output), and

[2] *Ibid.*

[3] *Ibid.*

gaps in service delivery have always been a source of frustration for guests and a challenge for operators and their staff to manage.

With the right technology in place, however, restaurants can reduce service failures and miscommunication, as well as create and foster seamless relationships with guests focused on greater efficiency, better information sharing, improved productivity, and better service delivery. Planned investments in service-based technology are intended to help operators manage costs (i.e., cost of goods and labor), improve performance, and create a new way of interacting with and engaging guests during their restaurant experiences. Using technology to manage orders and service delivery allows restaurants to collect and aggregate data on guests' ordering and consumption patterns, preferences, and reactions. Such historical data are key to helping manage processes such as inventory, but can also help with building and creating loyalty among guests, the better to cement guest engagement with the restaurant and the brand.

A primary concern regarding implementation of a high-tech restaurant environment is that it will lead to or create a low-touch (or reduced touch) service model that will further distance guests from the service staff. As we explain in this article, however, we believe the contrary is true. With appropriate automation, guest relations can be improved as servers can begin to shift their focus from repetitive, transactional tasks toward more meaningful interpersonal engagement with guests. Guest-facing technology can help move more of the focus of the guest-server exchange to what is critical—that is, bonding and interacting with guests during their service experience. Moreover, the server can "enlist" guests to assist with ordering and payment, thereby reducing the time servers must devote to those activities. With updated technology, this administrative work can now be shared with guests, instead of forcing them to wait for a server to initiate and complete each step.[4] Guest satisfaction should increase, because guests will have more control over critical aspects of the service experience. Implementing the new technology can lead to reduced wait times, with orders being more accurately entered and communicated (through the technology).[5] Finally, during peak times, systems can be adapted to adjust the information guests receive and how they navigate the system (e.g., different, limited versions

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of menus, different messaging regarding timing and delivery) to smooth out demand and operations during busier hours, help to control bottlenecks, and properly set guest expectations for what is to come in the service experience. As an example, during busy hours, beverage menus can be adjusted to promote relatively simple cocktails and bottled or canned beverages, as opposed to complex, multi-ingredient cocktails that have lengthy preparation and delivery times.

The QR dilemma. Despite the potential benefits, technology-enabled systems have led to new points of friction in the service delivery equation, notably, with menus that apply QR codes. In a Technomic survey, for instance, 88 percent of respondents shared that they preferred paper menus over digital ones, with 57 percent arguing that the use of QR-code menus feels like a chore.[6] That said, we have seen notable differences across demographic groups' view of QR codes. In Daily Provision locations in the Upper West Side of Manhattan, for instance, where target guests tend to be older, the restaurant relies more on paper menus. However, locations further downtown tend to attract a younger demographic, and thus there is more active engagement with QR-code-based menus.[7] Technology-enabled ordering can reduce difficulties in communication with people who may not speak the dominant local language as their first language, who have anxiety with servers, or who simply prefer to control more of their transactions in restaurants. The way forward is to integrate QR codes into both the selection and ordering processes. To be clear, merely having a QR-code accessible menu is not innovative at this point, and, further, that

[4] Alex M. Susskind, K. Michele Kacmar, and Carl P. Borchgrevink (2018). "The Relationship of Service Providers' Perceptions of Service Climate to Guest Satisfaction, Guest Return Intentions, and Firm Performance." *Cornell Hospitality Quarterly*, 59 (4), 390-396.

[5] https://cadabrastudio.medium.com/technology-in-the-restaurant-industry-why-it-is-important-and-types-to-use-55837acd2590

[6] https://edition.cnn.com/2022/08/20/business-food/qr-code-menus/index.html

[7] Seth Frankle and Dino Lavorini, Interview conducted by team, 03/10/2023

Given the ease associated with technology-enabled ordering, restaurants have experienced a significant jump in order volume.

single feature alone will neither modernize nor transform how guests and staff members engage in the FSR dining experience.

Server-guest interaction. The utilization of cashless technology in restaurants has also resulted in increased friction in the role of servers, as some guests have become unsure on how to engage with servers without direct guidance. For some guests, asking a server for guidance can be uncomfortable or feel impolite. Others have found it awkward not to be immediately greeted by a person when entering an establishment. Given these nuances in how guests react to and prefer to use guest-facing technology (and a shift in how service staff engage with guests), it remains crucial for restaurant operators to thoroughly train both their staff and guests on the tech-based service process. However, we are not suggesting that operators and staff members abandon critical touch points with guests, such as sincere greetings and farewells when guests arrive at and exit the restaurant and a prompt, warm greeting tableside once the guest is seated. These remain important features of a full-service dining experience.

The new technology can also create uncertainty around tipping and how tipping will work. The at-table ordering app provider me&u has found that tipping levels have decreased from 19 percent to 18.5 percent, but it also found that the overall volume of revenue produced by its cashless services is higher, resulting in an overall net gain for restaurant workers. In another study of FSR guests using guest-facing technology, tipping levels remained consistent whether the guests used the guest-facing technology or not.[8]

Despite its advantages, the use of cashless technology has made tipping interactions quite awkward in many instances. Servers flip the screen and guests are forced to input a tip amount for servers who are standing right in front of them (perhaps uncomfortably looking away). As a remedy, me&u offers its Flex-pay system, which encourages servers to engage with guests, but puts the payment process in the hands of either the server or the consumer, as either one may close the check. These types of features are important to ensure guests remain comfortable with their servers and continue to reward servers with tips for their evolving role. If the guest-server exchange remains positive and is viewed as added value in the technology-enabled service exchange, tipping levels should remain consistent and guests' reactions to tipping should remain positive. As noted above, this will require the restaurant to train both the guests and staff to ensure that everyone understands the process.

Operational issues. Given the ease associated with technology-enabled ordering (e.g., for takeout), restaurants have experienced a significant jump in order volume. In some instances, the increase in orders has congested kitchens and dining rooms alike, forcing operators to shut down app ordering for periods of time, or making it difficult to fully capitalize on the technology during periods of extremely high demand.[9] The restaurant industry has a long way to go to help restaurants better deploy guest-facing ordering systems to ensure the process is seamless at each touch point. Limited or imperfect system functioning frustrates staff and guests alike, highlighting another point of friction. Most technology systems have a

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[8] Alex M. Susskind and Benjamin Curry (2019). "A Look at How Table Top Technology Influences Table Turn and Service Labor Usage in Table-service Restaurants." *Cornell Hospitality Quarterly*, 60 (3), 233-236; and Alex M. Susskind and Benjamin Curry (2016). "An Examination of Customers' Attitudes About Tabletop Technology in Full-Service Restaurants." *Service Science*, 8(2), 203–217.

[9] https://www.wsj.com/articles/americans-are-gobbling-up-takeout-food-restaurants-bet-that-wont-change-11674882022

"throttle" system that allows operators to control the volume and timing of orders. For example, while they do not deploy "tabletop technology" in their restaurants, Daily Provisions has been able to alleviate the pressure associated with fluctuating order volume with mobile or web orders by building functionality into the system whereby product prep and service minutes are assigned to each menu item. This helps the restaurant understand exactly how much food they can produce and serve in a given time window.[10] In addition, me&u has suggested redesigning restaurant spaces so server sections or stations are designed to optimize the service staff's ability to engage fully with the guests and still have access to the needed operational elements in the bar or restaurant (e.g., bar and service bar, expo, or dish drop).

Research Question 2: *What do restaurants need to do to educate guests on how to order using cashless technologies? How do they sell cashless experiences? What are the core benefits, advantages, and challenges?*

To ensure the effectiveness of cashless technologies in restaurants and to properly execute such capabilities for guests, restaurants must educate consumers on the technology and its functionality to avoid confusion, pain points, and resistance. A multifaceted training and communication process is needed to ensure that HR practices, service design, and service flow all align with the guests needs and demand, restaurant needs and supply, and production and service capacity.

As a start, restaurant signs, such as table tents and other collateral material, can inform consumers on how to use the existing technology. If appropriate, this collateral material could even include a QR code which leads guests to online content and tutorials detailing step-by-step instructions for the technology and addressing commonly asked questions and problems. A successful online presence will require that all guest-facing collateral material for operations, marketing, and ordering be flawlessly curated, designed, and positioned.

Regarding HR practices, staff will also need to be trained on how to answer common questions about the technology and be comfortable with assisting guests who are unfamiliar with using these systems, especially older guests who may be resistant to adopting the technology

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(often because they see no benefit), as well as any guest who requires more assistance to have a positive experience with using the technology. Servers will need to be patient with guests as they learn how to use the technology, and managers will need to be prepared to undergo a long adjustment period. Operators need to take better advantage of the support offered by firms like me&u, which have specialized knowledge on how to train users on their systems and can identify the points of resistance commonly faced during implementation to speed adoption.

Perhaps the core benefit of cashless technology for restaurants is a potential to decrease costs and to better collect and capture guest data, preferences, and consumption behavior. With regard to cost management, the National Restaurant Association has revealed that restaurant operators continue to deal with intense food- and labor-cost pressure as inflation has continued to push prices up. Specifically, in a National Restaurant Association survey, 94 percent of restaurateurs shared that food costs pose a significant challenge, while 89 percent identified labor costs as a challenge.[11] With cashless technology, restaurants can be better positioned to predict ordering patterns, decrease food cost through less waste and better product utilization, and reduce wage pressure, given that

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[10] Mark Maynard, interviewed by team, 01/26/2023 and Seth Frankle and Dino Lavorini, Interviewed by team, 03/10/2023.

[11] https://www.nrn.com/print/419018

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automation can assist with streamlining operational processes for both culinary and service staff. There are also benefits associated with the elimination of cash handling, such as a reduction in theft or loss, saving time handling, counting, and storing cash, improved accuracy in transaction capture and reporting, and, of course, the added safety and security that results from not having cash on the premises.

With technology-enabled ordering systems, such as me&u, information is collected about all parties who are present in the service experience, and this information can be aggregated to better inform decision making. The core challenges associated with any new technology are adoption and rollout. Moreover, it is imperative that the technology and its features enhance the experience for both guests and the restaurants themselves.

Research Question 3: *How do restaurants manage upselling when guests are in control of ordering? What can be done to trigger a higher check?*

The use of guest-facing technology opens the door to data-collection and artificial-intelligence capabilities that can assist restaurant operators in upselling products and services. On a simple level, such systems can provide suggestions for items that would complement those which a guest has already selected or examined. If a guest orders a burger, for instance, the system could propose

French fries as an add-on, or offer options for extra meat or toppings. Likewise, the system can provide suggestions to guests for upgrades, such as using a call tequila rather than a less expensive well spirit. There is also the potential to improve beverage sales by prompting guests for initial beverage purchases to complement their meals and then prompting guests to order beverage refills. This type of platform also allows operators to promote and sell retail merchandise to guests (e.g., clothing, signature products).

With systems like me&u (paired with server support), guests reportedly spend an average of 27.5-percent more, based on suggestions for add-on purchases. For example, in a bar location with no server, me&u reported that 29 percent of guests ordered additional rounds of beverages when prompted through the app, primarily because guests did not have to wait for a server to initiate the reorder. This type of technology-prompted communication surrounding beverages has been shown to generate 12 percent of additional sales.[12]

The design of the actual menu on the apps can also be used to boost sales. Including enticing photos next to written descriptions of food and beverage products—a simple matter on electronic menus—increases the likelihood of a guest ordering a particular dish.[13] Data can also be used to generate custom menu prompts for guests based on their previous orders. As an example, guests could create accounts (prompted for reward or loyalty purposes) and log on directly into the app before ordering, allowing the system to use previous guest consumption data to frame the purchase for the guest.

Finally, the privacy offered to guests by in-app purchases and guests' direct control over ordering and spending lead to higher average checks and more spending. It has also been reported that average checks are higher through apps like me&u because people often feel embarrassed, rushed, or pressured while ordering aloud in front of their party. There is also added security because credit card information is entered directly into the system, rather than handing a ca to a server to process. This technology helps guests to control these consumption dynamics, creating an ordering and payment process that is streamlined and perceived as more safe, secure, and private.[14]

[12] Martin Briant, Interview conducted by team, 03/17/2023.

[13] https://www.linkedin.com/pulse/impact-photos-food-delivery-apps-performance-manon-paulet/?trk=public_profile_article_view

[14] Alex M. Susskind and Benjamin Curry (2019). "A Look at How Table Top Technology Influences Table Turn and Service Labor Usage in Table-service Restaurants." *Cornell Hospitality Quarterly*, 60 (3), 233-236. Alex M. Susskind and Benjamin Curry (2016). "An Examination of Customers' Attitudes About Table-top Technology in Full-Service Restaurants." *Service Science*, 8(2), 203–217.

Research Question 4: *What supporting technology stack will be required to manage a cashless operation? Is the cost of this achievable and reasonable for most restaurants? What are the short- and long-term implications?*

The restaurant industry in the United States has been one of the slowest sectors to adopt and integrate consumer-facing technology into their operational models. While the pandemic accelerated technology adoption and use in the restaurant industry, FSRs still lag behind their peers in the quick-service (QSR) and fast-casual domains. As consumer-facing technology becomes more commonplace, restaurants need to keep pace with innovations to ensure that they can capitalize on the benefits offered by technology, especially since an expanding group of consumers is becoming accustomed to using guest-facing technology. Also, the use of technology by guests in quick-service and fast-casual restaurants will likely prime guests for FSRs' technology.

Pandemic effects. It is an understatement to say that the pandemic affected consumer preferences and dining habits, notably, with an increase in takeout. Following rapid technological advancements within the food and beverage industry over the past several years, a variety of third-party platforms now exist to be used by restaurants to aid in everything from supply-chain management, revenue management, credit-card processing, labor scheduling, accounting and payroll, human resources, and marketing, up to and including delivery. Third-party platforms are available to operators using pricing models that differ based on the size and scope of the operation and the features and services desired. An interconnected technology stack compiled in a cost-effective manner is key to giving a restaurant a competitive advantage within the marketplace.

Securing the right technology stack is essential when dealing with cashless payment. As a starting point, one must select the correct point-of-sale system (POS). Such a system would be a cloud-based POS that is accessible via Wi-Fi, with an encryption tool and the capacity to interface with other desired systems, particularly a well-defined delivery system. Such a system will facilitate off-premises sales and will include technology for ordering, payment, delivery, and takeout.

While firms like Domino's, Panera, McDonald's, and Chipotle have invested a large amount of resources into proprietary POS and delivery systems, many restaurants do not have the time, capital, or economies of scale to be able to do the same.[15] Fortunately (or unfortunately), there

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are a multitude of third-party delivery-system providers that offer systems that connect well with a large number of POS products. These third-party delivery firms do, however, charge a handsome price for their hardware, software, and services. Prices range from $5,000 per year for cloud-based software (with an additional estimate of $10,000 for installing hardware and training) to a remarkable total of $50,000 for some legacy delivery systems.[16] The investments made in technology (and the contracts signed) need to be strategically planned to ensure that the outcomes will match the expectations of guests and the needs of the restaurants.

POS and delivery systems are just the start. Additional components within a food-service firm's or restaurant's technology stack include a website for the restaurant (which can also function well on smartphones and other devices), a dedicated phone line to call the establishment, a suitable voicemail program to capture phone messages, and solid internet or Wi-Fi service within the restaurant. Also needed are supply-chain software, payroll and labor scheduling software, accounting programs, and kitchen and service display systems. Restaurant operators, especially independent ones that do not have the benefit of having large amounts of capital on hand to invest in new systems, must choose their battles wisely regarding which software and systems they elect to purchase.

Research Question 5: *What needs to be added to the experience to make it feel more human and to offset the potential coldness that comes with the use of technology?*

Most of the technological advances we see today within the food-service industry emerged from the QSR

[15] Sandland, Meredith, and Carl Orsbourn. 2021. *Delivering the Digital Restaurant: Your Roadmap to the Future of Food*. Herndon, VA: Amplify Publishing.

[16] "How Much Does a Restaurant POS System Cost? | Toast POS." n.d. Pos.toasttab.com. https://pos.toasttab.com/blog/how-much-does-a-restaurant-pos-system-cost.

One outcome of improved technology is that guests can better control when they order food and drink.

and limited-service segments to help streamline and shorten ordering and production processes and to reduce labor use at cash registers. As part of this strategy, guest interaction with staff was heavily deemphasized and efficiency was prioritized with the incorporation of, for example, smart drive-through systems, kiosks for ordering and payment, and other advanced mobile ordering systems. While full-service restaurants are finally implementing POS and delivery technology, they nevertheless must retain their emphasis on maintaining and enhancing meaningful guest interactions, rather than eliminating or reducing them. So, the challenge for FSR operators is to incorporate advanced technology within their operations through a quality technology stack, while still giving guests warm hospitality.

As me&u surveys and other research have revealed, a typical FSR server spends roughly 30 percent of their time taking orders, dropping checks, and processing credit cards.[17] The incorporation of cashless technologies thus frees up time for servers to assist guests more attentively on other aspects of the dining experience while still reaping the benefits of convenience, increased spending, and shortened turn times that emerge from the use of guest-facing technology.[18] While guest-facing technology can free up a significant portion of a server's time, guests still assign significant value to the order-taking process and conversations with service staff. The question then

becomes, how can the human element of an FSR restaurant experience with table-top technology be amplified to offset the potentially cold efficiency of cashless technology? The answer lies in making full use of the technology to personalize interactions. As me&u states, the personalization of tabletop technology (e.g., knowing what guests have previously ordered) will help operators engage with guests in an approachable technology-driven format. The data thus collected can aid servers and operators in creating and curating a more intimate experience for guests with targeted engagement and interaction.

Research Question 6: *How do restaurants need to rethink the server role as the use of technology grows? What behavior changes will be needed in staff to manage ordering and delivering food and beverage orders to tables? What operational changes are needed?*

Guest-facing technology can allow servers to manage larger sections in a restaurant's dining room. This could mean that fewer servers are needed to successfully operate the restaurant, and potentially yield a lower labor cost. The idea of larger server stations is based on the premise that servers will have fewer data-entry and check-processing duties, allowing them to focus more on the service itself. Servers should be trained to focus on a role of liaison with the goal of creating and maintaining meaningful personal engagement with guests. This shift in role focus would result in servers interacting more deeply with guests, which should lead to a higher level of job satisfaction and simultaneously create more memorable experiences for guests.

One outcome of improved technology is that guests can better control when they order food and drink. However, this will require some operational changes. In the past, a server would come to the table and ask for the drink order, leave the table and enter the drink order into the POS system, return a couple minutes later and ask for the appetizer order, leave the table and punch this into the POS system, and then return yet another time to ask for an entrée order and again leave the table to punch that order into the POS system. Each of these steps acts as natural buffers that remove the server from the dining room and render the server inaccessible to guests. This means that staffing levels need to be adjusted to maintain some access and to ensure that food and beverages can be efficiently and quickly served. The way by which stations are defined and located in the restaurant needs to be carefully re-examined to make sure that food and beverages ordered can be promptly delivered to guests regardless

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[17] Alex M. Susskind and Benjamin Curry (2019). "A Look at How Table Top Technology Influences Table Turn and Service Labor Usage in Table-service Restaurants." *Cornell Hospitality Quarterly*, 60 (3), 233-236. Alex M. Susskind and Benjamin Curry (2016). "An Examination of Customers' Attitudes About Tabletop Technology in Full-Service Restaurants." *Service Science*, 8(2), 203–217. Alex M. Susskind and Mark Maynard-Parisi (2019). "The Next Frontier of Restaurant Management: Harnessing Data to Improve Guest Service and Enhance the Employee Experience." Cornell Hospitality Management Best Practices Series. Cornell University Press: Ithaca, NY.

[18] *Ibid.*

of how the products are ordered. A move to guest-facing technology can add to pressures among the kitchen and bar staff, as the speed and frequency of orders might increase. This may require adding more service and production points in the operation to ensure that guest demand for products and services can be properly met.

In concert with the addition of guest-facing technology, restaurants are also looking at new production equipment, technology, and processes to help manage the production and service flow from the guests' point of access to service and product delivery. For example, in addition to adding their guest-facing technology, Chili's Bar and Grill has implemented enhanced cooking technology (i.e., with automation and production equipment innovations) to help match the increase in ordering efficiency in their dining rooms, as well as the increase in online delivery and takeout orders. These front- and back-of-house technology solutions added concurrently can help to relieve staffing pressures, while also reducing labor cost and improving production capacity and revenue flow.[19] A final important aspect of a cashless system is the ease of closing activities for staff and management. Managers only need to press "one button" to close out a shift for all staff and sales.

Research Question 7: *How can traditional interactions be reimagined to improve the experience for both guests and staff?*

While some of the interactions between guests and staff will stay the same with the introduction of guest-facing ordering systems, others will be changed. The first interaction a guest has in any restaurant, for instance, is typically with the host. This initial interaction between the guests and staff remains important and should be the foundation for future interaction. In restaurants that use me&u, the host is the one who introduces guests to the ordering system and shows them how to use the app. This step is essential, because if the host makes the explanation too complicated or long, this could result in decreased guest satisfaction.[20] What remains important is that the engagement that takes place matches the guests' needs and expectations.

In particular, the host should immediately outline the differences in the tech-based process, compared to a low-tech experience. At this point, the host can introduce the idea of a service concierge who will assist the guest in the dining room (rather than a server). A service

[19] https://www.nrn.com/casual-dining/how-casual-dining-restaurants-are-leveraging-technology-enhance-their-kitchens

[20] Martin Briant, interview conducted by team, 03/17/2023

The role of the service concierge is to guide the guests' meal, make them feel well cared for, and keep track of the timing and execution of their experience.

concierge will replace a traditional server, will be primarily guest-facing, and will be the human point of contact for the guests as they create and consume the dining experience. Once the guests are greeted and seated, the service concierge should visit the table, offer water, and note that this first dialogue will set the stage for the rest of the dining experience. This will also give the guests an opportunity to ask any clarifying questions about using the technology.

The role of the service concierge is to guide the guests' meal, make them feel well cared for, and keep track of the timing and execution of their experience (i.e., what and when they ordered and what and when they received it). Additionally, after the food and beverages are served during the meal, the service concierge should ask the guests how the food and beverages taste to elicit feedback. Last, and most important, when guests are ready to leave, the service staff should be on hand to wish the guests a fond farewell before they depart. Personal touchpoints at the beginning of the experience (host engagement), and during and at the end of the experience (service concierge engagement) are needed as "service excellence bookmarks" to ensure guests are well cared for during their entire in-restaurant experience.

Research Question 8: *What happens when restaurants move tipping from "my table/my guest" to a shared ownership and responsibility for all guests, which everyone benefits from?*

With the introduction of guest-facing technologies, restaurants have an opportunity to capitalize on and

The stage is now set for full-service restaurants to embrace an entirely tech-driven, cashless model.

introduce a model of shared service delivery. This model can use the technology to allow servers (i.e., service concierges) to not only engage more fluidly with guests in the dining room as they consume the service experience, but with their peers in the dining room. A shared culture for service is well-suited to tip pooling, which will institutionalize the restaurant's commitment to using technology to offer enhanced service to guests. When servers have a shared ownership and responsibility for the guests, they are more likely to help a guest who is not "their table" or in "their section." This leads servers in pooled tip systems to help each other more than they would in non-pooled restaurants. Servers in pooled systems hold each other more accountable due to a feeling of shared ownership. If there is a server who is slacking and not pulling their weight, other servers will be more likely to let a manager know, so that the issues can be resolved.

Pooled tipping also helps balance out tips across varying business levels. On a slower day, pooled tipping is beneficial to the dining room employees because they do not have to fight over tables. Pooled tipping is more straightforward and transparent for everyone involved. In non-pooled restaurants, bussers and food runners rely on the servers properly tipping them out, which can lead to discrepancies, including servers not adequately tipping some people out. However, in a pooled system, the potential for these discrepancies is eliminated because each role has a percentage of the tip pool they will receive and how that is assigned to staff is fully transparent.[21]

Conclusion

Based on our research, we believe that FSRs will continue to find success with guest-facing technology and cashless payment systems. The FSR market is ready for a complete shift to guest-facing technology and cashless payment systems. This is a step to help reimagine how

FSR dining experiences are created, delivered, and consumed.

No halfway approach. The success of existing mobile ordering and cashless systems in FSRs is predicated on a 100-percent commitment to the systems by management and staff. This commitment should be total and non-negotiable. A phase-in period or a hybrid model, where options remain to transact with a paper menu or pay with a card or cash, will dilute the effectiveness of the tech-supported system and impede the enhancements in efficiency and service delivery. A hybrid process will create an environment where team members or guests can "opt-out" of the process and not support the system. That approach will disrupt order flow and processing, create complications in order flow, and, ultimately, lead to confusion in creating and sustaining the inter-connected roles that staff, management, and guests play in producing a memorable restaurant dining experience. Moreover, a hybrid approach will undermine the time savings and financial benefits of a total guest-facing system. An interactive, seamless experience for the staff and guests will only feel effortless and beneficial when all stakeholders understand the process, feel supported, and have the confidence and empowerment to act as advocates of the process.

To make a guest-facing, cashless technology system a reality for FSRs, all operators need to be willing to make a sufficient investment of human and financial capital to ensure that the systems are in place and understood by all. This needs to be an all-in investment on the part of the operator.

After that "all in" investment, the next step is for managers to ensure that: **(1)** employees are properly trained to work with and understand these systems; **(2)** management thoughtfully, actively, and adequately redesigns the service process as needed; and **(3)** management is spending the time to teach the service staff how to educate their guests on how to use the system and help build guests' understanding about and excitement for the service experience. These conclusions come with the caveat that restaurants must make these changes with a full understanding of their guests' needs, as certain groups of consumers may require a higher level of attention and guidance to buy into using the new system. If these investments are made, restaurants can see a significant improvement in sales and guest and employee satisfaction as a result.

In sum, the stage is now set with this new technology approach for FSRs to embrace an entirely tech-driven, cashless model. This is an important first step to disrupt and innovate in the FSR segment to build and create a sustainable high-touch, high-tech full-service dining experience. ∎

[21] Mark Maynard, Interviewed by team, 01/26/2023. Alex M. Susskind and Mark Maynard-Parisi (2019). "The Next Frontier of Restaurant Management: Harnessing Data to Improve Guest Service and Enhance the Employee Experience." Cornell Hospitality Management Best Practices Series. Cornell University Press: Ithaca, NY.

ABOUT THE AUTHORS

Darius Pahlavi Ganji is a food and beverage-focused student with a passion for kitchen operations, corporate food and beverage (F&B) operations, and restaurant development. Darius recently completed his BS degree at Cornell University's Nolan School of Hotel Administration in 2023 and completed the dual degree program with Cornell's Hotel School and The Culinary Institute of America (CIA) in Hyde Park, where he earned an AOS degree. Darius has accepted a position with Hillstone Restaurant Group where he will continue his career in corporate food and beverage industry.

Liraz Pirouzian is a 2023 graduate from the Cornell Nolan School of Hotel Administration, where she explored her passion for hospitality and minored in Real Estate. Currently, she is working as an Investment Banking Analyst at J.P. Morgan's Real Estate, Gaming and Lodging group. This role has given Liraz the opportunity to leverage her financial expertise while staying connected to her love for the hospitality and real estate sectors. Liraz also has a passion for food and beverage management and spent her time at Cornell University exploring various culinary experiences and phenomenons. Long term, she aspires to truly integrate all her passions by creating innovative solutions that will enhance the profitability of food-related businesses.

Darius Pahlavi Ganji is a food and beverage-focused student with a passion for kitchen operations, corporate food and beverage (F&B) operations, and restaurant development. Darius recently completed his BS degree at Cornell University's Nolan School of Hotel Administration in 2023 and completed the dual degree program with Cornell's Hotel School and The Culinary Institute of America (CIA) in Hyde Park, where he earned an AOS degree. Darius has accepted a position with Hillstone Restaurant Group where he will continue his career in corporate food and beverage industry.

Vikas Kolli Reddy is a Class of 2023 graduate of Cornell University's School of Hotel Administration, originally from Palatine, IL. Having majored in Hotel Administration and minored in demography, Vikas is interested in topics surrounding tourism, consumer behavior, marketing, and consulting. After graduation, Vikas will be working as a full-time consultant at Oliver Wyman in New York City.

Fiorenzo Sapia found hospitality to be his passion when he was just 10 years old working as a server at his family's restaurant. Growing up in a family of restaurateurs, it came as no surprise when he chose to get his bachelor's degree in hospitality management from the Culinary Institute of America. He pursued his master's degree from Cornell University directly afterwords, and will be graduating in December of 2023.

Alex M. Susskind joined the faculty at Cornell's School of Hotel Administration in 1998. He is a Professor of Food and Beverage Management and the Director of the Cornell Institute of Food and Beverage Management. Professor Susskind is currently serving as the Nolan Senior Director of Programs at the School. Professor Susskind earned his Ph.D. in Communication from Michigan State University with a specialization in organizational communication and his MBA with a concentration in personnel and human relations. A graduate of Purdue University, he is also a trained chef with a degree in Culinary Arts from The Culinary Institute of America in Hyde Park, New York. Prior to starting his career in academe, Alex worked as a chef and restaurant operator for both independent and multi-unit restaurant companies in the Northeastern and Southeastern United States.

At Cornell, Professor Susskind teaches undergraduate and graduate courses addressing the operational and strategic elements of the food and beverage business. He also teaches managers and executives in the Hotel School's Executive Education Program and has recently developed and launched an eight-course online certificate program in Food and Beverage Management for eCornell.

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