

INSPIRES

INFORMS

INSTRUCTS

K-12 FOODSERVICE

# TECHNOLOGY in the AGE OF COVID

BY  
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Certain emerging technologies really came into their own during the pandemic—and they are likely to have an impact on life at work and at home.

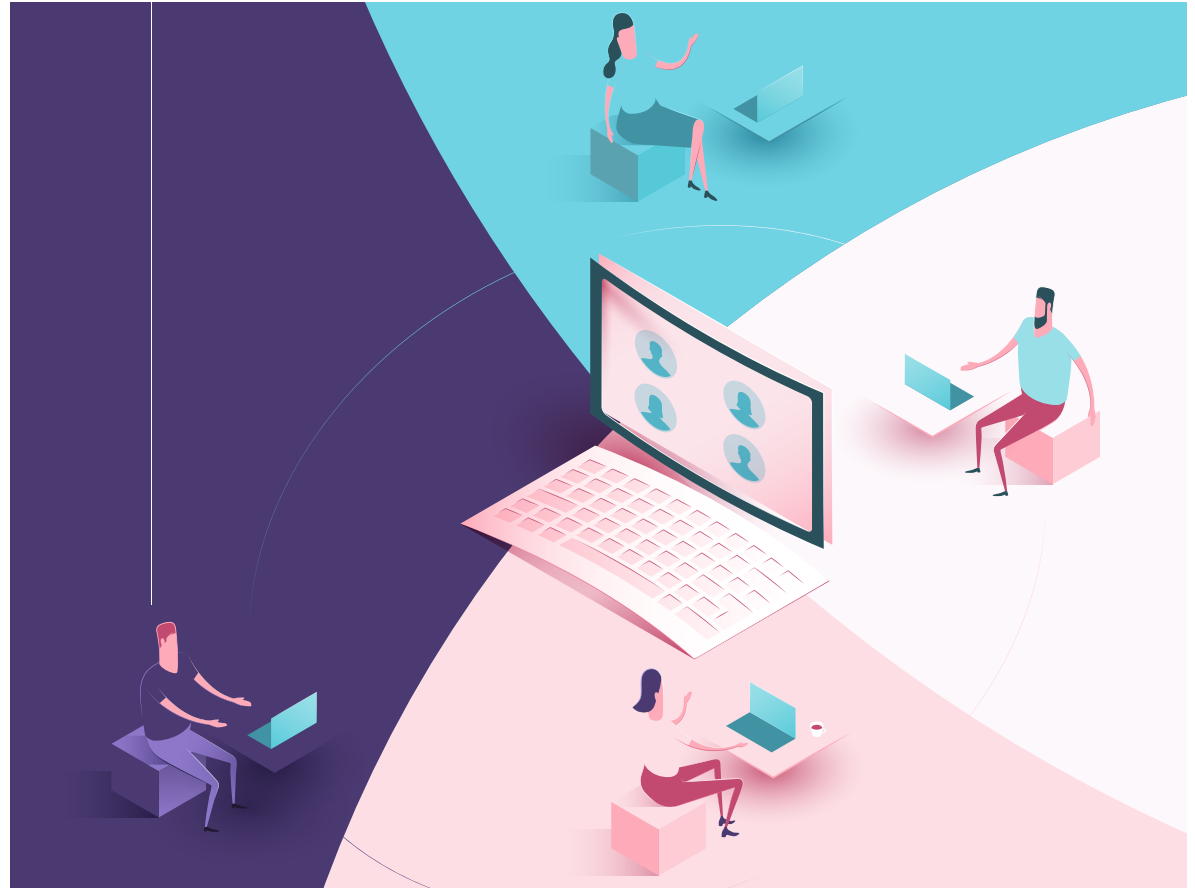
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**THE COVID-19 PANDEMIC RESHAPED THE PROFESSIONAL ENVIRONMENT OF NEARLY EVERY INDUSTRY**, and one of the most noticeable changes has been the growth of various digital technologies that have become commonplace in our work and personal lives. From front-end experiences, like Zoom meetings and Uber Eats deliveries, to back-end improvements to supply chains and general management, advancements have come at an unprecedented pace, in large part as a response to the constraints placed on us by the global health crisis. While quite a few of these advancements had emerged before 2020, they all experienced unprecedented growth while the world was frantically trying to find its footing in an unfamiliar and uncertain landscape.

*School Nutrition* has identified several technologies to keep an eye on. You can safely bet on these technologies to continue to play more and more of a role in how we interact with the world around us. We are in an age where convenience and speed are of utmost importance for the average consumer and is therefore the top priority for those whose aim is to meet such needs and find success in the upcoming post-pandemic era.



# 1.

## **VIDEO CONFERENCE TECHNOLOGY**

One of the earliest and most impactful changes of technology in the COVID era was the widespread adoption of platforms such as Zoom and Microsoft Teams to conduct meetings remotely. As workplaces shut down across the country to prevent the spread of disease, organizations were faced with the task of finding ways to keep their employees connected

without having them physically in the office, and video conferencing was an obvious solution. From small team meetings or trainings to organization-wide presentations to virtual conferences and events, the ability to participate from anywhere in the world became a game-changer.

After the availability of vaccines slowed the worst effects of the pandemic, public and private spaces began reopening. Still, many workplaces have been slow to return to pre-lockdown practices, and even now, with mask mandates and social distancing requirements largely rescinded, many companies are not requiring their entire labor force to return to a physical office or workspace five days a week. While job requirements vary and organizational priorities may change, remote video conferencing is assuredly not the flash-in-the-pan tech that it may have been deemed to be at the start of 2020. The flexibility it provides is something that people have grown accustomed to over the years and many now see as a valuable asset when trying to coordinate team members.

When it comes to the K-12 school nutrition segment, staff who work in school cafeterias and central production/warehouse facilities have been back in person for some time, and most district-level team members, too, are likely to be required to work in the office. But video meeting technologies still

have their place! Especially for school districts spread across a wide geographical distance—or even those with smaller boundaries but in busy, commuter-heavy suburban settings—video meeting platforms have transformed activities like monthly managers' meetings and mandatory and elective training courses. Staff no longer have to travel to central locations to participate.

A number of SNA state affiliates and their regional chapters similarly have continued to use video conferencing for board and committee meetings. And while most associations and state agencies have eagerly embraced the return of in-person events for signature conferences (and school districts for end-of-school/back-to-school inservice gatherings and team celebrations), there's no denying that the virtual format of some of these allowed participation by those routinely constrained by the financial and logistical barriers associated with out-of-town travel.

Across the business spectrum, it will be interesting to see in the next three to five years how organizations continue to balance the respective benefits of in-person and remote work—especially given different employee preferences and employer requirements and costs. Some of these decisions will be predicated on how the technologies themselves evolve—both in functionality and cost.

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## 2. MOBILE ORDERING SYSTEMS

Food ordering apps (and delivery services) are another example of technologies that grew substantially in response to pandemic restrictions, and they have remained a staple for many consumers, especially in urban and suburban communities. When restaurants had to close their doors to dine-in guests, a wide variety of establishments turned to services like Postmates, DoorDash, Grubhub and Uber Eats to maintain their ability to reach their customers. Other foodservice operations opted to use platforms that didn't require paying commissions to third-party delivery apps; these included ChowNow, Clover and FreshBytes.

Delivery, a service offered predominantly by pizza joints and Chinese restaurants with their own fleet of drivers, has now become a consumer expectation, one that's been honed not only by the rise in meal deliveries, but for the ease of ordering and receiving virtually

any other requested item, thanks to Amazon, Instacart and many, *many* individual store sites. (And we mean *any* item: Carvana, an online car dealer, introduced touchless vehicle purchase, delivery and pickup in March 2020 in response to the pandemic.)

But let's stay focused on foodservice ordering (whether for delivery or personal pickup). Even after brick-and-mortar restaurants fully reopened without COVID restrictions, mobile orders still scroll across the dedicated tablets that populate food-service kitchens across the country. Most mobile order platforms provide for scheduled delivery, meaning consumers can place lunch orders at breakfast and not think about the process again until the meal is delivered at the prearranged time.

Even if a consumer is forgoing actual meal delivery, mobile ordering allows them to bypass service (and, typically, payment)

lines and have more time to, you know, actually eat.

This expectation has huge implications for school cafeterias, where sufficient time to eat has been a longstanding frustration at every grade level. Now that students of all ages have become accustomed to mobile ordering other foodservice meals, whether in the company of family or friends, they are likely to view operations that don't provide this point of convenience with exasperation and dissatisfaction. It's an opportunity and challenge all school meal operations should consider exploring, especially those with a low average daily participation and particularly at the secondary school level.

Of course, the technology is only a part of the equation; there are a wide variety of

operational logistics that also must be put into place to ensure safe and proper food handling that also deliver the best flavor experience. (This remains a challenge for many commercial restaurants. Timing and packaging are critical; mistakes are difficult to rectify; and mobile apps often don't offer the full range of modifications a customer may wish or need to make.)

To remain competitive with discerning students, school nutrition operators are advised to make the exploration of the options a priority in SY2022-23. Start by checking with your current technology vendor; there may be a module you haven't purchased that is easy to integrate with your POS and back-of-house software systems.



### 3.

## DIGITAL PAYMENT PLATFORMS



Continuing with the theme of quick and easy access, one very noticeable change in commerce is the rise of electronic payment systems that don't require a unique physical card for use. The leading example of this is Apple Pay, a service available on an iPhone that allows the user to simply tap their phone against a compatible card reader in a store, eliminating the need to carry around cash or credit cards. Samsung and Google have come out with their own versions of this service, as well, in response to the success of Apple Pay, so expect to see more and more signs by cash registers promoting acceptance of this payment service.

Third-party payment services, meaning those that aren't directly provided by your bank, credit union or credit card provider, are not entirely new in the eCommerce sphere. PayPal is by far the most prevalent example; for decades, it has served as a way to purchase items online without directly giving your payment information to the vendor. Venmo (now owned by PayPal) is an easy and popular way for friends and family members to exchange "cash" (from providing kids their "allowance" to splitting the restaurant bill). Similarly, Zelle facilitates external bank-to-bank transfers among individuals, using a network of several of the largest national banks.



The growth of contactless in-person payment, however, is the more recent advancement, moving forward the trend of going cashless to going cardless. The ability to tap your phone to pay instead of fumbling through a wallet is an attractive proposition for most consumers. And these systems are increasingly available for all manner of internet orders, whether you're using your phone or not.

For more than a decade, most school nutrition operations have transitioned away

from cash transactions, using payment systems that withdraw from a student's account for meals or a la carte sales. Many of these require parents to use a credit card to add funds to their child's account, with associated fees being paid either by the district or the parent, depending on the policy established in that school system. You—and your technology vendors—may already be fielding requests from parents to allow alternate forms of digital payment, like Apple Pay or Google Pay.



## 4. INTERNET OF THINGS DEVICES

You likely have seen increased references to “smart homes” features in recent years. These generally refer to the network of devices within your home that allow you to monitor and manage various activities without even being present. Doorbell cameras, motion sensors, climate control and even your refrigerator can all be connected to each other, allowing you to access real-time updates via your phone and take in-the-moment action, such as locking doors or turning down the heat. This type of network is called an Internet of Things (IoT) and it has numerous applications beyond the household.



IoT is said to be one of the most important technological advancements in the business world, due to the information, flexibility and efficiency it provides. It can completely change the way that problems are identified and resolved within a supply chain through use of sensors, software with processing ability and other technologies that connect and exchange data between the devices and systems within the network.

Take a factory, for example. In the past, when equipment malfunctioned, the failure would be identified by onsite workers, then notification made to a technician, who might not be available right away to appear on site, assess the equipment, diagnose the problem and make repairs (potentially waiting for necessary parts). Meanwhile, productivity would grind to a halt, with everyone forced to sit on their hands until the line was back up and running. In a factory with IoT integration, however, some of these steps can be avoided. The moment there is any sign of current—or even impending—malfunction, sensors can issue a warning that details exactly where and what the problem is, allowing much faster

and more efficient solutions that limit production disruptions. Management can now take preventive measures, such as ordering replacement parts in advance, scheduling a technician visit to coincide with normal down or slow periods for the line, adding a shift to a different line, etc., all in an effort to minimize the effects of a problem and keep it from turning into a catastrophic and expensive delay or disruption.

This is just one basic example of the benefits of an IoT system in the business world. School nutrition operations are seeing more of this with various kitchen equipment that can alert a designated staff person to, say, a refrigerator or freezer failure or automatically record temperatures for HACCP documentation or remind staff when maintenance is required on a steamer or combi oven. It's safe to say that you can expect IoT technologies to continue to grow and have a positive impact on improving efficiency, reducing costs and centralizing management for school foodservice in the next few years.



## 5. DOCUMENT SHARING PLATFORMS

In a similar vein to the benefits IoT provides, the benefits of a cloud-based document sharing system have become very obvious—and necessary—in recent years. The abrupt switch to remote work that was forced by the pandemic made online document access a top priority for organizations. With offices sitting empty, countless filing cabinets and storage closets filled with paperwork became virtually obsolete overnight, and businesses needed a way to let their employees collaborate without sharing a physical space.

This is where services like Dropbox, SharePoint and Google Drive became vital in day-to-day operations. Not only can a document be accessed by multiple people without the need for scanning/emailing separate copies, but with connections to different software, it can now be edited simultaneously, with each person being continually updated as to the changes that others have made. Instead of repeatedly emailing updates of a document back and forth each time a change is made, no matter how small, all parties now can connect with the most recent and current version at all times.



The convenience provided by online document sharing is too considerable to disappear even if remote work becomes significantly less common. Indeed, many organizations have begun the process of moving *all* their documents onto the cloud, making online document sharing a primary means for office employees to collaborate. In combination with technologies like remote video conferencing and Internet of Things, we can see outlines of what the office workplace will look like in the near future. Focusing on flexibility and collaboration will very likely be the best

way to ensure your organization is on top of its game moving forward.

For school nutrition operations, this could mean giving employees greater computer access—such as wireless tablets—so they can document HACCP steps, check off delivery protocols, manage inventory, follow new process/procedure changes, be informed of policy updates and assist with Administrative Review steps. Document sharing systems also can facilitate training and certainly is a cost saver in office supplies like paper, ink and binders.

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## 6. CYBERSECURITY TECHNOLOGY



The common theme linking all the technologies that have grown substantially over COVID is their integration with the cloud and the internet as a whole. Naturally, this increased usage and reliance on information through the internet has led to the need for heightened security of personal information, as well as proprietary organizational data that is as costly an asset as any physical one. The pandemic saw a sizable increase in cyberattacks and data breaches—15% more in 2021 than in 2020.

What has remained constant in the field of cybersecurity is the importance of making sure individuals and organizations are following the proper protocols for keeping their information secure. For individuals, for example, safety measures such as password length and symbol requirements, as well as ensuring the regular changing of passwords, can be small but massively effective steps toward protecting personal information.

Ensuring that cybersecurity is taken seriously should be a top priority for any organization using cloud services. As school districts are entrusted with student and family data—from accounts, as well as meal benefits applications—school nutrition operators should be proactive in raising their own awareness of the various protections put in place by any current and prospective technology vendors.

### WHY DOES ALL OF THIS MATTER?

The constant evolutionary flow of technology can seem especially daunting to those who aren't immersed in its development or who may be reluctant to adopt new approaches. It can often feel like the point you *finally* understand a particular program, you learn that it's been replaced by something newer—and initially more confusing. Nonetheless, it is the world we live in, and fear of change, particularly technological change, cannot be a barrier in business.

A commitment to overcoming such roadblocks and attitudes is an important pillar for leaders of all types of organizations, including school nutrition operations. Take the time to acknowledge and understand the tech trends that are emerging today, as well as those maturing into common applications. You don't want to fall behind, as it can take a

toll on customer expectation, business efficiency and operational costs. And remember that outside the business sphere, these new technologies will also have considerable impact on your personal life.

This article provides a very brief overview about six areas of technology, and a deeper dive into these (and others that have risen in the years since the start of the pandemic) can prove a valuable use of your time. In fact, it will leave you better positioned to apply them at work and at home, leveraging their advantages and helping you to get in front of the *next* transformative technologies that are just around the corner. **SN+**

***Charles Gryder is a freelance writer based in Seattle.***

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