



**LEADING-EDGE DIGITAL INNOVATIONS
FOR DINING PROGRAMS AND INTEGRATED
FACILITIES MANAGEMENT**

aramark 

The coronavirus pandemic changed the world nearly overnight, impacting everything from foodservice to integrated facilities management (IFM). Organizations are searching for new ways to manage critical operations while responding to shifts in consumer behavior. The result is a transformation of business processes — innovative, new technologies are now being deployed with new ones poised to come online soon.

Healthcare organizations, higher education institutions, schools and businesses are forerunners in the search for new solutions to meet consumers' new demands — especially for safer, no-contact operations. Several new technologies that leverage leading-edge capabilities are paving the way for organizations to embrace a widespread digital transformation.

80% of revenue growth will hinge on digital offerings and operations by 2022.

— KPMG

80%



Digital Innovation Dominates Today's Business World

The COVID-19 pandemic has showcased the advantages of digital operating systems. To meet the demands, innovation is exploding through acceleration of new technologies that were already in the pipeline. Leading-edge companies are ready to embrace the potential. Positive results are likely to inspire many more companies to speed up their digital transformation.

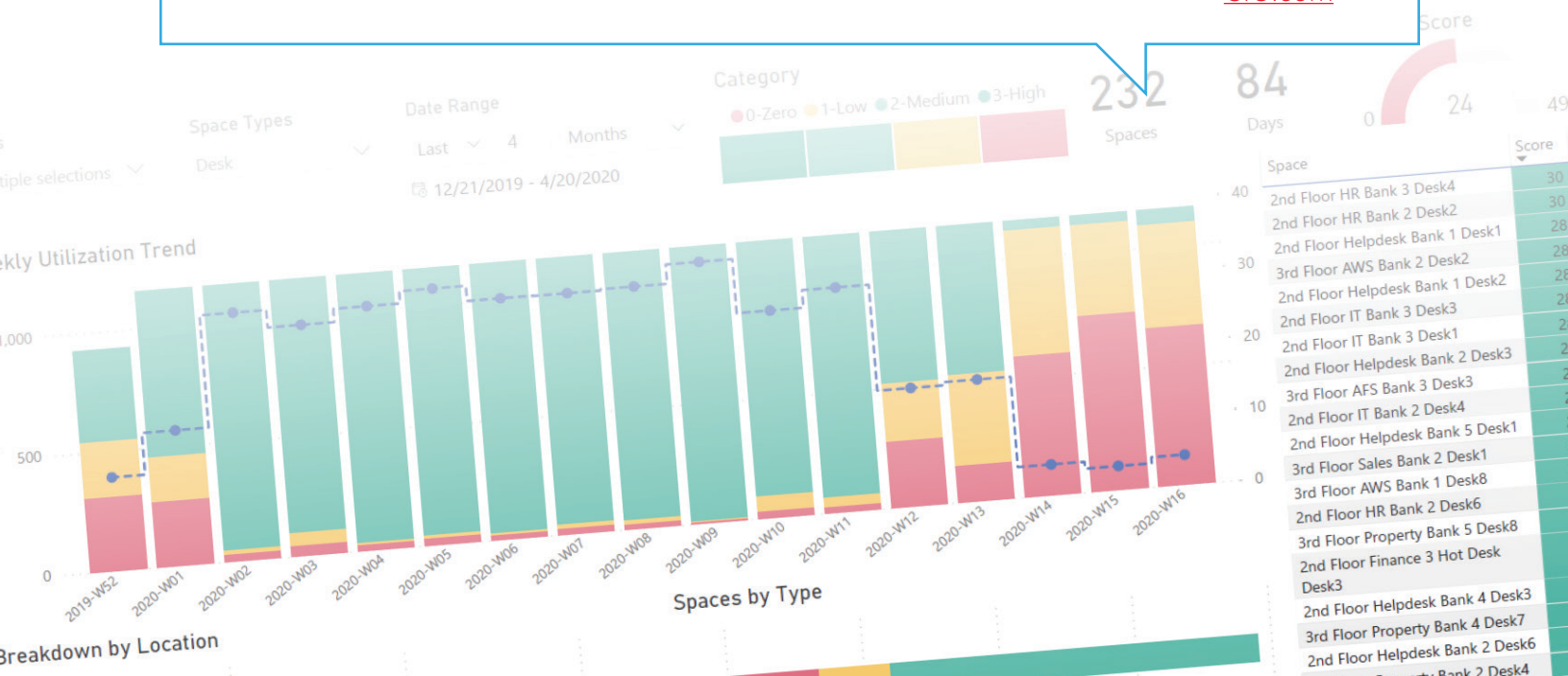
New research highlights the critical demand for more digital innovation to meet rapidly changing business needs, including:

- 48% of executives say adopting new business models is one of their top five concerns [Source](#)
- Businesses tend to prioritize investments in software and R&D, even during recessions [Source](#)
- Since 2018, the number of mobile augmented reality (AR) users has nearly doubled [Source](#)
- More than 1 billion smartphones and tablets can already deliver AR experiences [Source](#)
- By 2021, 100 million consumers are expected to shop using AR online and in stores [Source](#)
- In 2020, 46% of retailers plan to deploy AR or virtual reality (VR) [Source](#)



CIOs opting to hunker down and wait out COVID-19 should think again. By revving up their digital business strategies, they position themselves for growth when the pandemic subsides.”

— [CIO.com](#)





Technologies Innovating the Dining and Integrated Facilities Management (IFM) Spaces

At Aramark, we have our finger on the pulse of the wide array of digital innovations underway to better serve dining programs and integrated facilities management — and we're already using numerous leading-edge technologies right now and pushing boundaries with new developments every day.

1

Digital Platforms and Touchless Technologies

Many people want to follow social distancing guidelines and limit their physical interaction with others, especially while ordering food. But they often lack convenient and efficient ways to place orders in ways that don't compromise their health. Digital platforms provide an ideal solution to quickly and conveniently pre-order and pick up food, while limiting physical contact with restaurant workers and guests.

Digital platforms provide several capabilities, including:

- Better and safer access to meals and snacks
- Users order and pay online
- Limits physical contact
- A better overall dining experience

In addition, touchless technologies have the power to deliver better customer experiences thanks to minimized interactions. In foodservice, the demand for off-premise takeout and delivery has never been higher than it is in the age of a pandemic.

New pickup technologies, like two-sided food lockers and mobile POS, will fulfill this demand for many businesses. The innovation will give busy students, employees and guests the ability to get fast access to self-serve orders with minimum human contact from a website and pick it up in a touchless secure, compartment.

Innovations in facilities management

In facilities management, touchless technologies innovations include foot pedals to open doors or call for the elevator, touch-free service requests and lights turned on by occupancy sensors and wave technologies in restrooms.

Touchless technologies deliver these capabilities:

- Recognize items simultaneously placed on its surface
- Display the cost of each item and the total cost of the transaction
- Continually learn through integrated data systems
- Multiple times faster than traditional cashier checkout and other scanning solutions
- Give customers a quick, cashless takeout option
- Integrate with existing POS and e-commerce systems
- Prevent contact on high touchpoints
- Report metrics on productivity improvements, increase sales and more



Automated food service table delivery bots reduce the need for direct wait staff contact.

2

Autonomous Cleaning and Disinfecting Technologies

Maintaining clean facilities is more important than ever to employees and customers. In fact, the coronavirus has driven greater recognition of autonomous vehicles for cleaning. Robotic technology can be used for vacuuming and cleaning hard surface floors. The addition of ultraviolet light with robotic technology can be used to disinfect floors in healthcare settings, as well as education (locker rooms and classrooms) and sports and entertainment (locker rooms).

Autonomous machines are small and agile and can navigate complex and changing environments. They can often maneuver around obstacles, while staying out of the way of pedestrians. However, they do require human intervention, such as opening doors, removal of debris and maintenance.

Autonomous cleaning technologies deliver these capabilities:

- High-quality, efficient cleaning in certain spaces
- Navigate complex and dynamic environments
- Consistent level of cleanliness and frequency
- Performance data and analytics
- Improve touch-free cleaning
- Allow existing staff to focus on areas needing greater cleaning frequency



Workplace Performance Solutions and Space Utilization Technologies

Creating an intelligent facilities management operation today means deploying advanced technologies that help optimize workloads and deliver better outcomes. One example is workplace performance systems that provide real-time building and space insight and management. These systems monitor space utilization via room-based motion detectors. Data collected is then used to improve scheduling, planning and energy management. Using sensor technology, organizations can capture and better understand the data behind their space usage. Through remote monitoring, reporting and alerting, this information can also identify whenever too many people are in a given space. This could be a breakthrough in helping organizations maintain social distancing ordinances and changing the way to clean based on space utilization.



Additionally, workplace performance systems deliver performance data that can greatly improve operations. Knowledge of occupancy and usage supports more effective use of cleaning staff. For example, data analysis can identify labor resources, like those for cleaning, that can be redeployed from areas of low-utilization to those that have high utilization or need increased cleaning frequencies. These sensors can also be used to monitor indoor air quality with temperature and humidity, energy consumption, and other variables. All of these improve operational and financial decision-making.

Workplace performance technologies deliver these capabilities:

- Data intelligence into space usage, density, and other operational variables
- Improved resource allocation decisions based on data insights
- Customizable remote monitoring
- Multiple data options with numerous sensor types (Ex: temperature, water leakage, pest control, and more)
- Provides data visualization on digital dashboards
- Single sensor types, such as space utilization to address multiple solutions such as space management, planning, cleaning on demand, and or energy management
- Instant messaging, alerts and actionable outcomes with integration into a workflow
- Sends alarms and actions when indoor air quality does not meet standards

Aramark is working to use space density monitoring and its associated data to deploy demand-driven cleaning and maintenance staff to the most heavily used areas.

The future capabilities of space density monitoring allow users to:

- Better manage spaces
- Increase productivity
- Reduce operating costs

4

Fresh-Food-Making Robots

Imagine the opportunity to offer your dining program customers the option to have their meals made-to-order not by human hands, but by intelligent robots. By early 2020, fresh-food-making robots were the latest and greatest addition to food delivery. Leading cloud-based solutions can, for example, serve customers a wide variety of fresh, customizable, made-to-order meals such as salads, bowls and snacks. Consumers love the convenience and the minimized risk of foodborne illnesses.

Fresh-food-making robots deliver a range of capabilities including:

- Keep food fresh in a fully refrigerated unit, extending the shelf life
- Hundreds of meal options, including chef-inspired recipes
- Operate 24/7, so meal options are available any time of the day or night
- Payment options through credit card terminal, meal plan and payroll deduction
- Report on purchases, usage times, sales data and machine status



5

Autonomous Vehicles and Robot Food Delivery

Autonomous vehicles have also been tested for essential deliveries. For example, a prototype of an autonomous 24-hour convenience store vehicle that has no staff and no registers was tested in Shanghai in 2019. It was designed to eventually drive itself to customers for deliveries and to warehouses for restocking. To use the store, customers download an app onto their phones. As they shop, they scan what they want to buy or place it in a smart basket that tracks purchases. When they leave, the store automatically charges their card.

Autonomous vehicles deliver these capabilities:

- Convenience of shopping for food and household staples
- Cheaper to build and operate than a typical convenience store
- Brings better food access to food deserts
- A fast, frictionless process that improves customers' experience



Innovations are changing food access in many ways, too — including via autonomous robotic food delivery. For example, one option provides robots parked outside of food establishments waiting patiently to be deployed in the service of food delivery to preprogrammed destinations. Upon their arrival, consumers simply flip open a lid, pull out their orders and close the lid. The robots then return to home base to pick up the next order. Early reports indicate that the robots deliver more food faster and safer than traditional manned delivery services.

The future capabilities of robot-driven foodservice delivery include:

- Help foodservice operations get more food to more consumers safely
- Lower the cost of operating conventional delivery services
- Faster, with top speeds of about 15 mph
- An easy alternative that's also safer for employees
- Self-cleaning between deliveries with UV sterilizing lights in the food compartments

Adopting leading-edge innovations to improve dining services and facilities management offers campuses, schools, healthcare organizations and businesses new windows of opportunity — today and tomorrow. They deliver an opportunity to meet consumers' intensifying demands, improve customers' experiences and optimize business operations — including operational impact, efficiency, productivity, consumer impact and labor impact.



Learn more about Aramark's adoption of leading-edge digital solutions and how they can boost your dining services and facilities management programs. Don't wait until tomorrow. [Contact us today.](#)