



WHITE PAPER

How Implementing Pandemic-Management Software Can Shape Your Company's Future

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Introduction

Managing a large workforce is always a logistical challenge. Trying to do it safely during a pandemic is even more of a feat.

*At the beginning of 2020, no employer was prepared to survey employees on their physical wellness and check temperatures on a daily basis, nor were they prepared for the administrative efforts that it takes to perform these tasks. Employees, who are already burdened with the new disruptions to their day-to-day workflows, **are skeptical about entrusting their employers with their personal health information**. Employers find themselves dedicating extra resources—people, time and money—to the tedious, and often invasive, task of tracking symptoms while complying with ever-changing government regulations.*

Since employers have no precedent to follow, many have been forced to make sweeping changes, such as keeping all workers home, closing offices or drastically cutting capacity at worksites.

By integrating the appropriate technology with existing workflows, businesses can simplify and improve the accuracy of manual tasks while minimizing disruption to workers during the COVID-19 pandemic and beyond.



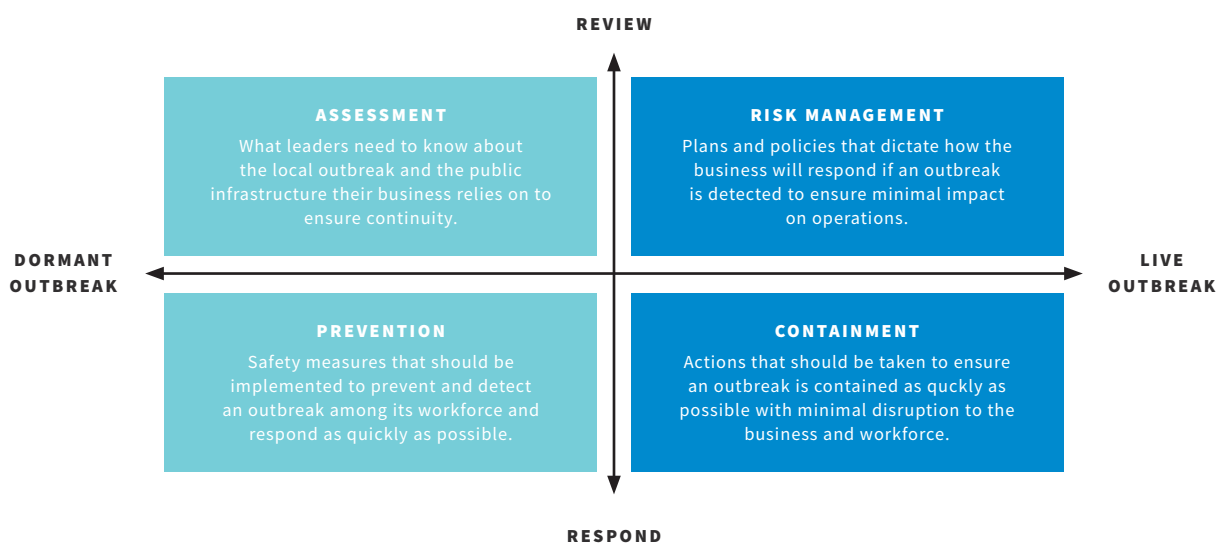
Ensuring Business Continuity

Employers need to have a comprehensive overview of the COVID-19 cases in their local areas in order to ensure that they can keep their workforce safe and productive.

In responding to the pandemic, businesses need to be prepared for multiple scenarios in order to maintain control. With a dormant outbreak, they should be continuously monitoring the situation and putting safeguards and contingency plans in place. With a live outbreak, employers should shift their focus to containing infections and mitigating immediate risks. At any given time, their activities should be a mixture of both reviewing and responding to the situation.

In order to be prepared best for a potential outbreak, your business's leadership team needs to take steps in all four areas:

- **Assessment:** Keep track of the local outbreak and the public infrastructure your business relies on to ensure employees stay healthy and your business can continue uninterrupted. Understand the environmental risk facing the community by staying on top of local infection rates, data protection requirements and hospital capacities.
- **Prevention:** Implement safety measures to prevent and detect an outbreak among the workforce and respond as quickly as possible. Measures such as temperature screening, social distancing practices, employee training, remote working and sick leave policies fall into this category.
- **Risk Management:** Put plans and policies in place to dictate how the business will respond if an outbreak is detected, ensuring minimal impact on operations. Think about when each employee should be tested, be prepared for staffing interruptions, and track who is coming into contact with whom.
- **Containment:** Take action to ensure an outbreak is contained as quickly as possible with minimal disruption to the business and workforce. Notify people that may have been exposed and roll out contingency plans to ensure the business stays in operation, so employees' jobs are protected and clients and customers can continue to be served.



Look For Comprehensive, But Simple Tools

As we entered 2020, no one had pandemic management included in their technology budget. Unsure about how long the outbreak will last and hopeful for a quick resolution, many are simply planning to sit it out and make do with piecemeal, stop-gap solutions to avoid unnecessary spending on temporary solutions.

Pandemic management software does not have to be a short-lived investment. Deployed judiciously, the systems can form the foundation of workforce management tools that greatly increase productivity and resiliency during and after the pandemic. They can be used to automate shift allocations, set up contingency plans for replacing absent workers and open up direct communication channels with employees whether they're at or away from the workplace.

To avoid unnecessary spending on short-lived solutions, companies should implement tools that fit their needs right now, are quick to deploy, seamlessly blend with existing processes and can be useful in the future. Without employee compliance, the tools will have no value, so keeping workers confident and comfortable is also a high priority.



Look For Comprehensive, But Simple Tools

EXACTLY THE RIGHT FEATURES.

Each employer has unique needs. Top-down shift planning would work on a construction site but feels draconian and inflexible in an office full of financial services professionals. One-size-fits-all apps suffer from feature bloat, making it hard for employees to do the few most critical tasks that are required of them. Narrow solutions often aren't expansive enough to meet the entirety of a company's needs. Semi-custom—a solution that already has a solid foundation but can be customized to meet your business's needs—is a great middle ground that achieves the best of both worlds.

QUICK ROLLOUT, QUICK RETURN TO PRODUCTIVITY.

Workplaces have already been significantly disrupted, and it's unclear how much longer the pandemic will continue. Employers need a tool that can be deployed quickly, almost out-of-the-box, that doesn't sacrifice necessary features for their workforce.

SEAMLESS INTEGRATION WITH EXISTING BUSINESS PROCESSES.

Managers already have a lot on their plate; wrangling tools that don't integrate with their existing workflows shouldn't be another task. Any digital tools and processes should integrate seamlessly with the existing business infrastructure.

USEFUL EVEN OUTSIDE OF A PANDEMIC.

Some features of pandemic-management software—tracking when people come and go, monitoring their temperature at all times—feel draconian. That's far from the reality. When data is managed carefully, this software has the potential to increase flexibility. To get the most out of their investment, leaders should consider a tool's effectiveness after the pandemic. Temperature and crowd monitoring tools could be deployed during flu season. Self-scheduling tools can be repurposed to add more autonomy into employees' work lives. By being smart about how you spend, you can get a tool that will provide value far into the future.

COVID-19 VICTIMS KEEP THEIR PRIVACY AND AVOID STIGMA.

Patient privacy is critical to ensuring everyone feels confident sharing their health status through the app. Employers need to know whether their employees are safe to work, but they should not have access to private health information. Any workforce management solution should follow international best practices to keep a company's workforce safe. For this reason, it's vital to ensure any tool your business adopts is GDPR- and HIPAA-compliant.

Features Needed to Manage a Large Workforce

With a suite of well-integrated digital touch points, leaders can establish protocols that keep the entire workforce safe—without imposing extra effort on employees—and that help them long after the pandemic has subsided but seasonal illnesses have not.

Your business’s pandemic management software should help you do the following activities:

Symptom Tracking: Managers need to identify symptoms of illnesses among their employees, so they can quickly be isolated. Daily self-reporting, temperature checks and even wearables that monitor heartbeat, oxygen levels and body temperature can all work together to support this effort.

Distancing: Leaders must create an environment where social distancing is normal and easy to do. Setting up distanced workspaces and distributing personal protective equipment (PPE) are good places to start. Technologies—such as crowd-monitoring cameras in common areas, IoT equipment, and apps or wearables that sense when individuals come too close to each other—can give in-the-moment nudges that support compliance.

Contact Tracing: Should an employee become infected, employers need to trace and isolate who they have been in contact with. Blended technological solutions—including both smartphone apps and wearables—can help track with whom employees have met, greatly increasing the accuracy of contact tracing.

Contingency Planning: Employers should be poised to quickly reallocate shifts and replace critical workers if they fall sick. Like the other features listed, this is critical to ensuring business continuity not only throughout the pandemic but for any future event.

PANDEMIC RESPONSE	FUTURE EXTENSION
Reallocate shifts if someone becomes ill	Automated shift planning
Contingency planning	Automate shift allocations during peak demand or flu season
Frequent communication about shift changes	More flexibility around shift planning
Shift allocation tools	Let employees request shifts and easily trade shifts
Common space booking tools	Add flexibility to workers’ day
Symptom-checking wearables	Ensure employee health in strenuous conditions and tasks

A Multitude of Touchpoints

A comprehensive solution should include multiple user touchpoints to meet workers' and employers' needs in diverse settings.



MOBILE APP

Employees use their personal or company-distributed devices to automatically track who they have been in contact with and communicate important information to their employer, including health status, symptoms or shift choices.



EMPLOYER DASHBOARD

Through a desktop dashboard, employers monitor the health status of employees, plan shifts and common space usage, and see data about which teams or areas are at high risk for spreading.



HEALTHCARE PROVIDER DASHBOARD

Company healthcare providers should be equipped with a software that lets them see the population health data and securely disseminate test results to employees.



TEMPERATURE MONITOR GATES

Gates installed at every worksite entrance can measure the temperature of passersby and—with the scan of an app or wearable—log their health status to their personal records.



WEARABLE DEVICE

Multiple wearable options can be used to track temperature, oxygen levels and heart rate. Different options are available depending on the employer's specific needs around price, battery power, durability and scale.



SHARED TABLETS

Shared tablets placed in common areas serve as an interface for employees who have opted to use a wearable, rather than their personal phone for contact tracing.

Industry-Specific Challenges

Each industry has its own unique challenges for managing the pandemic.

- **Place-based** jobs heavily rely on their workers being on site to accomplish their tasks. Here, there's a specific onus on making it safe to be in close proximity to each other.
- **COVID-19-facing** workplaces and those with **vulnerable populations** should have extra protection in place to ensure safety. These employers must have more rigorous controls in place to balance privacy with safety.
- Employers of **essential workers** need to focus on continuity, ensuring that they have plans in place to replace workers that do fall sick while also protecting healthy workers.
- Workplaces with **guests or visitors** on site could benefit from real-time data analysis and notifications for expected peak times in order to organize staff appropriately.
- **Shift-based workplaces** need to be able to limit how many people are in the workplace at any given time and reduce crowding at the start and end of shifts and breaks.
- **Autonomous workplaces**, where workers have control over their own schedule, also need to control overcrowding but employ solutions that allow for more autonomy.

	PLACE-BASED	COVID-19-FACING	VULNERABLE POPULATIONS	ESSENTIAL WORKERS	GUESTS / VISITORS	SHIFT-BASED WORK	AUTONOMOUS WORK
SHIPPING PORTS	X	X		X	X	X	
AIRPORTS	X	X		X	X	X	
WAREHOUSES	X			X		X	
CONSTRUCTION SITES	X					X	
FACTORIES	X					X	
FOOD PRODUCTION	X			X		X	
LARGE RETAIL ENVIRONMENTS	X			X	X	X	
HOSPITALS	X	X	X	X	X	X	X
NURSING HOMES	X		X	X	X	X	
SCHOOLS (K-12)	Semi				Students	X	X
UNIVERSITIES	Semi			X	Students		X
CORPORATE CAMPUSES						Semi	X
AMUSEMENT PARKS	X				X	X	
STADIUMS	X				X	X	

Privacy Considerations

Employers need to be extremely careful to respect their employees' privacy. Regulations like GDPR and HIPAA dictate how personal and medical information are processed in certain geographical areas.



ZERO KNOWLEDGE

Employers should be able to track if employees are safe to work without accessing any details about their exact symptoms or conditions. As much as possible, personal data—like contact history—should be stored on employees' devices. Employers can gain access only with workers' consent and only when necessary.



DATA PROTECTION

A robust data protection framework allows employers to manage staff consent at every interaction and guarantee transparency on the purpose and scope of data collection. Employers can keep workers up-to-date on when data consent expires and send confirmation of data deletion. Further, employers can log data access for auditing purposes.



FOUR-EYES PRINCIPLE

Certain decisions need to be approved by at least two people to increase both transparency and security. When labelling a worker as infected, for example, only a manager or healthcare worker could change the status. Only after the employee accepts the change can any communication or contingency plans be put into action.

ABOUT EPAM

Since 1993, EPAM Systems, Inc. (NYSE: EPAM) has leveraged its software engineering expertise to become a leading global product development, digital platform engineering, and top digital and product design agency. Through its 'Engineering DNA' and innovative strategy, consulting, and design capabilities, EPAM works in collaboration with its customers to deliver next-gen solutions that turn complex business challenges into real business outcomes. EPAM's global teams serve customers in more than 30 countries across North America, Europe, Asia and Australia. As a recognized market leader in multiple categories among top global independent research agencies, EPAM was one of only four technology companies to appear on Forbes 25 Fastest Growing Public Tech Companies list every year of publication since 2013 and was the only IT services company featured on Fortune's 100 Fastest-Growing Companies list of 2019.

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