



Sharing What We've Learned: A Blueprint for Businesses

Last Revised April 21, 2020
KrogerBlueprint.com



A Note from Rodney

As America's grocer, we have taken extensive measures across our business to safeguard our associates and customers throughout the COVID-19 pandemic.

Our stores are at the center of our communities and face a higher rate of exposure than most Americans. But as an essential business, we've learned how to operate safe and open environments in retail stores, food production facilities, and distribution centers.

Our Purpose is to Feed the Human Spirit, which means we are driven to do more and help make the lives of those around us better.

During this time, we have also held true to Our Values of integrity, honesty, diversity, inclusion, safety and respect. To live Our Values means we lead by example even when it's hard, encourage collaboration and active involvement with everyone, and ensure our associates and customers feel valued and safe.

As an extension of Our Values, we decided early on to be transparent – share what we've learned, what went well and where we could improve.

We learned a lot from others as well – many companies and government officials have partnered with us to share valuable insights. And we learned that being proactive in our decision making helped us keep our business open safely and continue to do our part to flatten the curve.

In the same spirit, we want to share what we've learned and best practices with other businesses, so they can take steps now to develop protocols and procedures to reopen safely and continue to flatten the curve.

This first installment of *Sharing What We've Learned: A Blueprint for Businesses* includes recommendations, insights, best practices and [downloadable creative assets](#) to help businesses navigate the next phase of this unprecedented pandemic. We will continue to update the Blueprint in the coming days and weeks, providing additional resources, tools and templates for other industries to leverage.

We recognize that not all businesses are the same. What worked for us may not work for you. And while there is no “one thing” that makes all the difference, taking a holistic approach to safety will lead to better outcomes.

And importantly, working together, we can all support our communities and help reopen businesses safely.



Rodney McMullen
Chairman and CEO Kroger





Section 1

Retail Operations



Flattening the Curve in Retail Stores

As America's grocer, we've spent the past six weeks focused on actions to help slow the spread across our footprint of nearly 2,800 retail stores.

In every decision we make, we strive to balance our most urgent mission—to provide a safe environment for our employees and customers—with being here for our communities when they need us most.

To help other retailers prepare to safely reopen their doors to customers, we're sharing the steps we've taken in our stores to promote physical distancing, enhance cleaning procedures, encourage healthy habits and more.

[Click here to download signage and audio files.](#)

Healthy Habits

As the crisis evolved, so did our methods. However, the safety of our employees and customers has remained the number one priority when making business decisions throughout the pandemic. This often meant being flexible to quickly adapt to new ways of working. At other times, it meant a refresher on the basics, including proper hand-washing techniques and other hygiene practices. You can follow the tips below to promote healthy habits in your facilities:

Educating Employees

We all know we should wash our hands often throughout the day, but when we get busy at work, a quick reminder is always helpful. Regularly encourage employees to practice hygiene recommendations from the CDC and other government agencies through your communication channels. Here are few options to consider:

- Post signage at time clocks, in breakrooms and employee restrooms about the importance of following healthy habits.
- Prepare huddle guides or talking points for leaders to use that encourage employees to follow recommended hygiene practices.
- Also, don't underestimate the power of your external messages to reach your employees as well.

Consider this...

- What internal and external channels do you have to reach employees and customers?
- What tools do leaders need to reinforce these behaviors with their teams?





Educating Customers and Visitors

Employees often aren't the only ones in your locations. You may have customers, vendors or other guests who should take steps to protect others. Here are some ways you can reinforce healthy habits for anyone - including employees - who enter your facilities:

- If you have **in-store audio messaging** capability, consider using it to remind employees and customers to follow physical distancing and hygiene guidance published by the CDC.

Adapt along the way: We originally had messaging played every 30 minutes, but as customers reduced their time spent in stores, we moved to every 15 minutes to ensure we could reach all of our customers during their shopping trip.

- Post signs at entrances notifying customers to STOP if they are sick and ask them not to enter our stores.
- Increase the availability of hand sanitizer, wipes and cleaning of frequently touched surfaces (including carts) for both customers and employees.

Create a plan for how you will acquire and distribute these items. Sourcing of supplies can be a challenge in the current environment. If supplies are in short supply, consider adding an employee to sanitize cart or frequent touch points during all hours of operation.

Consider this...

- **Do you have proper signage to ensure employees and customers know what's expected?**



Educating Customers and Visitors continued...

- Add labor to cover additional breaks for employees to wash hands and sanitize stations regularly, including registers, hand-held devices, credit card terminals, food service counters, door handles, conveyor belts, restrooms, shelves and other surfaces.
- Consider suspending or modifying your return policy.
 - Kroger has temporarily halted returns. We continue to make it right for customers if a product is defective or falls under our Fresh Guarantee.
- Encourage customers to clean their reusable bags frequently through in-store signage
 - Guided by evidence suggesting likelihood of disease transmission through reusable bags is low, and also by our Zero Hunger | Zero Waste social impact plan principles, we decided to continue permitting reusable bags.
 - However, to keep employees safe, we ask customers to bag their own purchases if they choose to use reusable bags and encourage frequent cleaning of bags.



Encouraging Physical Distancing

Beyond good hygiene, all of us – employees, customers and leaders – are encouraged to maintain a six-foot physical distance from others to reduce the spread of illness. Being open to the public can make it hard for customers and employees to keep a safe distance. These actions can help:

- Install protective plexiglass screens at service counters, including checkouts.
- Display signage at entrances, check lanes and registers to remind customers of physical distancing at every opportunity.
- Promote physical distancing where customers may linger by adding floor decals at registers and service counters, placing signage on patio and furniture displays, and limiting waiting areas.
- Close in-store bars or public sitting areas.

- Discontinue sampling.
- Close self-serve bars (salad, olive, bakery, candy bars, etc.) and bulk-bin options.
- Close fitting rooms or limit capacity.
- Adopt capacity limits based on the size of your facility, and be prepared to queue customers outside while still maintaining physical distance.

Consider this...

- **Do you have available technology to help with monitoring capacity limits? If not, prepare for labor to physically monitor traffic in and out of stores.**
- **Are there spaces in your store or facility where people tend to congregate? What steps can be taken to reduce the number of people in those areas?**



Step Up Cleaning Procedures

Maintaining a clean work environment will help control the exposure and spread of COVID-19. Consider how these practices can help keep your business sanitized and clean:

- Enhance your daily sanitation practices, including registers, hand-held devices, credit card terminals, food service counters, door handles, conveyor belts, restrooms, shelves and other surfaces.
- Assign dedicated employee to wipe down carts with sanitizer and paper towels in the lobby during store hours.
- Assign extra staff to allow for frequent hand-washing rotation for front-end employees.
- Clean and stock bathrooms more frequently.
- Instruct employees to wipe down equipment, including pallet jacks, ladders and supply carts, between every use.
- Procure options for third-party cleaning companies to assist with the increased cleaning demand as needed.

Consider this...

- **Are extra staff or outside vendors needed to meet the new cleaning demands?**
- **What steps can you take now to procure supplies, including masks, wipes, sanitizer and cleaning supplies?**



Adjust Hours to Support Healthy Habits

Long hours serving customers along with heightened cleaning guidelines can lead to exhausted teams. Consider adjusting your operating hours, balancing the needs of your employees and your customers. We adjusted our hours and here are benefits we realized:

- Employees had more time to rest, clean and replenish inventory.
- We were able to offer exclusive early hours for seniors (60+) and other higher-risk individuals.

- We were able to increase Pickup hours to serve more online customers, promote physical distancing and reduce the size of crowds in store.

Consider this...

- **Would altering your hours of operation create benefits for your teams?**



Employee Safety

Keeping your teams safe and healthy is a critical priority to ensure your business remains open. Without a healthy, trained staff, you'll struggle to meet the needs of your customers. In addition to supporting physical distancing and heightened sanitation, which protect everyone in your facilities, here are few tips focused specifically on keeping your employees safe while working.

Encourage Personal Protective Equipment

Personal Protective Equipment (PPE), including facial coverings, masks and gloves, can be useful in reducing the spread of illnesses. Our “new normal” likely means that these items will become a common, even expected, sight in public places for some time to come. Here are a few recommendations related to PPE:

- Encourage employees to use masks or approved facial coverings and gloves while working and provide them if you can. If you allow employees to bring their own, be clear about what is appropriate.
- Make sure team members know how to properly use and safely dispose of these items.
- Knowing that these items alone are not enough, educate employees on good personal hygiene and other healthy habits like hand-washing that can make PPE more effective. Review the Healthy Habits section for more details.

Consider this...

- **Are you able to provide PPE on a consistent basis? If not, will you allow employees to wear their own?**

Monitor and Support Employee Health

Employees should only be working if they are healthy and symptom free. There are steps you can take to encourage employees to protect others by taking care of themselves, including:

- Checking temperature at the beginning of each shift requires a fair amount of coordination so be sure to have a fully thought out protocol before beginning this process. Make sure to consider the equipment needed, role and safety of staff performing the checks, employee privacy and protocol for when elevated temperatures are discovered.
- Encourage employees who feel sick to stay home. Consider revising paid time off options to support this behavior.

While Kroger was quick to offer Emergency Leave Guidelines to affected employees at the start of the pandemic, we learned early on that extending the same coverage to employees experiencing symptoms was necessary to ensure they felt supported in prioritizing their health and updated our policy as such.

- Have a well-defined protocol for employees who may be ill or who have been exposed.

Consider this...

- Can you cross-train employees to work in different areas if needed due to illness or to meet demands in other areas?
- What steps can you take now to be able to perform temperature checks on site?





Prepare Employees for Difficult Situations

In many ways, the pandemic has brought out the best in people, but the stress and fear can lead some to be confrontational. Prepare your employees to respond to these situations carefully to help ensure their safety. We prepared de-escalation tips for our employees and our store leaders, as well as ensured our leaders had talking points to use when communicating COVID-19 information to their teams, vendors and customers.

Ensure Easy Access to Information

Employees must be aware of the latest safety protocol in order to follow it. Regular communications and easy-to-access resource documents will help ensure your guidelines are understood and followed.

Consider this...

- What steps can you take now to communicate and train employees and leaders on new safety procedures?



Vendor and Visitor Safety

Managing the safety of non-employees in your workplace presents a different set of challenges. In addition to the education and cleaning actions explained previously, here are a few steps to help protect your employees and others who may enter your facilities.

Office Locations

- Temporarily suspend visitors from all office locations unless business critical.
- Suspend business travel and encourage the use of digital meetings where possible.
- Encourage those who can successfully perform their work from home to do so until further notice.

Retail or Other Locations

- Temporarily suspend all non-employee truck drivers from entering stores, warehouses and manufacturing plants.
- Move to contactless signatures for deliveries.
- Expand direct store delivery window to spread out deliveries and prevent overcrowding.
- Ask vendors who are required to enter your locations to have their employees follow the guidance of local, state and federal governments in regard to wearing masks and other PPE equipment.

Consider this...

- **Who are regular visitors or vendors in our locations?**
- **How can we adjust our business to limit direct contact with them?**



Embrace Digital Options

Digital capabilities allow us to maximize physical distancing practices, utilize contactless transactions and continue to provide an excellent shopping experience. Evaluate your business model and available technology to see where you can increase your digital presence and increase contactless payment options. Here are some options to consider:

Contactless Payments

Technology solutions are available to minimize the contact your customers have when completing purchases. Consider leveraging your own technology like Kroger Pay or third-party services, to allow customers to shop and pay without touching a pin pad or handling cash. Also, if you have self-checkout at your locations already, consider increasing availability or support staff to allow more customers to check out independently.

Consider this...

- If you don't already have this capability, are there third-party vendors who can quickly provide virtual services for your business?



Alternative Ways to Get Purchases

Along the same lines as contactless payments, consider options for customers to do their shopping and get their purchases with minimal contact, including pickup and delivery. If available, these suggestions can help support digital options:

- Offer free or reduced fees on pickup or delivery services.
- Encourage employees to practice physical distancing during pickup and delivery by talking with the customer through a passenger window, loading items directly into the customer's trunk without contact, or leaving items at their door.

- Be prepared for demand and adjust online availability if items become unavailable or place limits if appropriate.
- Make some locations pickup or delivery only to minimize employee/customer contact.

Consider this...

- **How will your staffing need to change based on virtual offerings?**
- **Is there additional training that employees or leaders will need to support these options?**
- **How will you respond to long wait times or product availability issues?**



[KrogerBlueprint.com](https://www.krogerblueprint.com)

Version 1.04 Revised 04/21/2020



hello there storylovers,

How are you? What have you been up to? Have you started anything new?

Over the past few weeks, on this journey of forced quiet, I have created a new "*Storytelling for Business*" workbook, organized my home office, cleaned up my hard drive, edited dozens of videos, started a garden, played cards with my teenage son, re-organized the house, re-finished some furniture, and connected with friends and clients through video conferencing.

AND, I have helped a number of people get "unstuck". Friends and clients have reached out to me to work through roadblocks that were holding them back. They called seeking to jump start a big idea or to move past a big problem.

Distilling Calls

I have found these one-on-one "distilling" calls to be rewarding and exciting. Every time an idea is distilled into a plan and a plan is transformed into action, I celebrate. From working together to create a plan to pursue her dream job and then taking the steps to make it happen, to brainstorming the chapters for his first book and then walking through the story for each one, it has been a joy to be a part of the results. From overcoming the distance and drafting their business plan together, to creating a personal daily motivation ritual, I have been touched by the joy in these connections. I get to witness greatness.

And so, I am now offering one-on-one video “distilling” sessions to help YOU distill your ideas into actionable steps that make sense. What do you desire to create?

Why do these sessions work?

As a story coach, I listen to all of the details and help storytellers focus on the parts of their story that convey the theme. Then, I ask questions to uncover the missing links that create the largest impact. As a business process improvement specialist, I evaluate the big picture and break it down into discernible parts that can be streamlined and improved. As a project manager, I break large projects into a step by step plan, with dependencies and responsibilities.

As your ally, I combine these skills, developed over years of practice, to help you distill your ideas, projects, plans, or problems into actions that work.

Start for Free

So, if you are ready to jump start your big idea or tackle that big problem, set up a free session with me. I sincerely cannot wait to witness the greatness.

Bridget Flaherty

Founder
LORE



Guidance on Preparing Workplaces for COVID-19



Occupational Safety and Health Act of 1970

“To assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health.”

This guidance is not a standard or regulation, and it creates no new legal obligations. It contains recommendations as well as descriptions of mandatory safety and health standards. The recommendations are advisory in nature, informational in content, and are intended to assist employers in providing a safe and healthful workplace. The Occupational Safety and Health Act requires employers to comply with safety and health standards and regulations promulgated by OSHA or by a state with an OSHA-approved state plan. In addition, the Act’s General Duty Clause, Section 5(a)(1), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm.

Material contained in this publication is in the public domain and may be reproduced, fully or partially, without permission. Source credit is requested but not required.

This information will be made available to sensory-impaired individuals upon request. Voice phone: (202) 693-1999; teletypewriter (TTY) number: 1-877-889-5627.

Guidance on Preparing Workplaces for COVID-19

U.S. Department of Labor
Occupational Safety and Health Administration

OSHA 3990-03 2020



U.S. Department of Labor

Contents

Introduction	3
About COVID-19	4
How a COVID-19 Outbreak Could Affect Workplaces	6
Steps All Employers Can Take to Reduce Workers' Risk of Exposure to SARS-CoV-2	7
Classifying Worker Exposure to SARS-CoV-2	18
Jobs Classified at Lower Exposure Risk (Caution): What to Do to Protect Workers	20
Jobs Classified at Medium Exposure Risk: What to Do to Protect Workers	21
Jobs Classified at High or Very High Exposure Risk: What to Do to Protect Workers	23
Workers Living Abroad or Travelling Internationally	25
For More Information	26
OSHA Assistance, Services, and Programs	27
OSHA Regional Offices	29
How to Contact OSHA	32

Introduction

Coronavirus Disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. It has spread from China to many other countries around the world, including the United States. Depending on the severity of COVID-19's international impacts, outbreak conditions—including those rising to the level of a pandemic—can affect all aspects of daily life, including travel, trade, tourism, food supplies, and financial markets.

To reduce the impact of COVID-19 outbreak conditions on businesses, workers, customers, and the public, it is important for all employers to plan now for COVID-19. For employers who have already planned for influenza pandemics, planning for COVID-19 may involve updating plans to address the specific exposure risks, sources of exposure, routes of transmission, and other unique characteristics of SARS-CoV-2 (i.e., compared to pandemic influenza viruses). Employers who have not prepared for pandemic events should prepare themselves and their workers as far in advance as possible of potentially worsening outbreak conditions. Lack of continuity planning can result in a cascade of failures as employers attempt to address challenges of COVID-19 with insufficient resources and workers who might not be adequately trained for jobs they may have to perform under pandemic conditions.

The Occupational Safety and Health Administration (OSHA) developed this COVID-19 planning guidance based on traditional infection prevention and industrial hygiene practices. It focuses on the need for employers to implement engineering, administrative, and work practice controls and personal protective equipment (PPE), as well as considerations for doing so.

This guidance is intended for planning purposes. Employers and workers should use this planning guidance to help identify risk levels in workplace settings and to determine any appropriate control measures to implement. Additional guidance may be needed as COVID-19 outbreak conditions change, including as new information about the virus, its transmission, and impacts, becomes available.

The U.S. Department of Health and Human Services' Centers for Disease Control and Prevention (CDC) provides the latest information about COVID-19 and the global outbreak: www.cdc.gov/coronavirus/2019-ncov.

The OSHA COVID-19 webpage offers information specifically for workers and employers: www.osha.gov/covid-19.

This guidance is advisory in nature and informational in content. It is not a standard or a regulation, and it neither creates new legal obligations nor alters existing obligations created by OSHA standards or the *Occupational Safety and Health Act* (OSH Act). Pursuant to the OSH Act, employers must comply with safety and health standards and regulations issued and enforced either by OSHA or by an OSHA-approved State Plan. In addition, the OSH Act's General Duty Clause, [Section 5\(a\)\(1\)](#), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. OSHA-approved State Plans may have standards, regulations and enforcement policies that are different from, but at least as effective as, OSHA's. Check with your [State Plan](#), as applicable, for more information.

About COVID-19

Symptoms of COVID-19

Infection with SARS-CoV-2, the virus that causes COVID-19, can cause illness ranging from mild to severe and, in some cases, can be fatal. Symptoms typically include fever, cough, and shortness of breath. Some people infected with the virus have reported experiencing other non-respiratory symptoms. Other people, referred to as *asymptomatic cases*, have experienced no symptoms at all.

According to the CDC, symptoms of COVID-19 may appear in as few as 2 days or as long as 14 days after exposure.

How COVID-19 Spreads

Although the first human cases of COVID-19 likely resulted from exposure to infected animals, infected people can spread SARS-CoV-2 to other people.

The virus is thought to spread mainly from person-to-person, including:

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

Medium exposure risk jobs include those that require frequent and/or close contact with (i.e., within 6 feet of) other people who may be infected with SARS-CoV-2.

It may be possible that a person can get COVID-19 by touching a surface or object that has SARS-CoV-2 on it and then touching their own mouth, nose, or possibly their eyes, but this is not thought to be the primary way the virus spreads.

People are thought to be most contagious when they are most symptomatic (i.e., experiencing fever, cough, and/or shortness of breath). Some spread might be possible before people show symptoms; there have been reports of this type of asymptomatic transmission with this new coronavirus, but this is also not thought to be the main way the virus spreads.

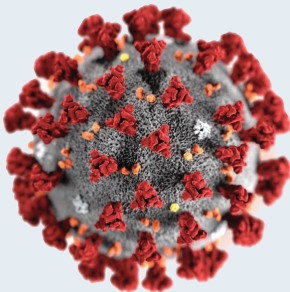
Although the United States has implemented public health measures to limit the spread of the virus, it is likely that some person-to-person transmission will continue to occur.

The CDC website provides the latest information about COVID-19 transmission: www.cdc.gov/coronavirus/2019-ncov/about/transmission.html.

How a COVID-19 Outbreak Could Affect Workplaces

Similar to influenza viruses, SARS-CoV-2, the virus that causes COVID-19, has the potential to cause extensive outbreaks. Under conditions associated with widespread person-to-person spread, multiple areas of the United States and other countries may see impacts at the same time. In the absence of a vaccine, an outbreak may also be an extended event. As a result, workplaces may experience:

- **Absenteeism.** Workers could be absent because they are sick; are caregivers for sick family members; are caregivers for children if schools or day care centers are closed; have at-risk people at home, such as immunocompromised family members; or are afraid to come to work because of fear of possible exposure.
- **Change in patterns of commerce.** Consumer demand for items related to infection prevention (e.g., respirators) is likely to increase significantly, while consumer interest in other goods may decline. Consumers may also change shopping patterns because of a COVID-19 outbreak. Consumers may try to shop at off-peak hours to reduce contact with other people, show increased interest in home delivery services, or prefer other options, such as drive-through service, to reduce person-to-person contact.
- **Interrupted supply/delivery.** Shipments of items from geographic areas severely affected by COVID-19 may be delayed or cancelled with or without notification.



This illustration, created at the Centers for Disease Control and Prevention (CDC), reveals ultrastructural morphology exhibited by the 2019 Novel Coronavirus (2019-nCoV). Note the spikes that adorn the outer surface of the virus, which impart the look of a corona surrounding the virion, when viewed electron microscopically. This virus was identified as the cause of an outbreak of respiratory illness first detected in Wuhan, China.

Photo: CDC / Alissa Eckert & Dan Higgins

Steps All Employers Can Take to Reduce Workers' Risk of Exposure to SARS-CoV-2

This section describes basic steps that every employer can take to reduce the risk of worker exposure to SARS-CoV-2, the virus that causes COVID-19, in their workplace. Later sections of this guidance—including those focusing on jobs classified as having low, medium, high, and very high exposure risks—provide specific recommendations for employers and workers within specific risk categories.

Develop an Infectious Disease Preparedness and Response Plan

If one does not already exist, develop an infectious disease preparedness and response plan that can help guide protective actions against COVID-19.

Stay abreast of guidance from federal, state, local, tribal, and/or territorial health agencies, and consider how to incorporate those recommendations and resources into workplace-specific plans.

Plans should consider and address the level(s) of risk associated with various worksites and job tasks workers perform at those sites. Such considerations may include:

- Where, how, and to what sources of SARS-CoV-2 might workers be exposed, including:
 - The general public, customers, and coworkers; and
 - Sick individuals or those at particularly high risk of infection (e.g., international travelers who have visited locations with widespread sustained (ongoing) COVID-19 transmission, healthcare workers who have had unprotected exposures to people known to have, or suspected of having, COVID-19).
- Non-occupational risk factors at home and in community settings.

- Workers' individual risk factors (e.g., older age; presence of chronic medical conditions, including immunocompromising conditions; pregnancy).
- Controls necessary to address those risks.

Follow federal and state, local, tribal, and/or territorial (SLTT) recommendations regarding development of contingency plans for situations that may arise as a result of outbreaks, such as:

- Increased rates of worker absenteeism.
- The need for social distancing, staggered work shifts, downsizing operations, delivering services remotely, and other exposure-reducing measures.
- Options for conducting essential operations with a reduced workforce, including cross-training workers across different jobs in order to continue operations or deliver surge services.
- Interrupted supply chains or delayed deliveries.

Plans should also consider and address the other steps that employers can take to reduce the risk of worker exposure to SARS-CoV-2 in their workplace, described in the sections below.

Prepare to Implement Basic Infection Prevention Measures

For most employers, protecting workers will depend on emphasizing basic infection prevention measures. As appropriate, all employers should implement good hygiene and infection control practices, including:

- Promote frequent and thorough [hand washing](#), including by providing workers, customers, and worksite visitors with a place to wash their hands. If soap and running water are not immediately available, provide alcohol-based hand rubs containing at least 60% alcohol.
- Encourage workers to [stay home if they are sick](#).
- Encourage [respiratory etiquette](#), including covering coughs and sneezes.

- Provide customers and the public with tissues and trash receptacles.
- Employers should explore whether they can establish [policies and practices](#), such as flexible worksites (e.g., telecommuting) and flexible work hours (e.g., staggered shifts), to increase the physical distance among employees and between employees and others if state and local health authorities recommend the use of social distancing strategies.
- Discourage workers from using other workers' phones, desks, offices, or other work tools and equipment, when possible.
- Maintain regular housekeeping practices, including routine cleaning and disinfecting of surfaces, equipment, and other elements of the work environment. When choosing cleaning chemicals, employers should consult information on Environmental Protection Agency (EPA)-approved disinfectant labels with claims against emerging viral pathogens. Products with EPA-approved emerging viral pathogens claims are expected to be effective against SARS-CoV-2 based on data for harder to kill viruses. Follow the manufacturer's instructions for use of all cleaning and disinfection products (e.g., concentration, application method and contact time, PPE).

Develop Policies and Procedures for Prompt Identification and Isolation of Sick People, if Appropriate

- Prompt identification and isolation of potentially infectious individuals is a critical step in protecting workers, customers, visitors, and others at a worksite.
- Employers should inform and encourage employees to self-monitor for signs and symptoms of COVID-19 if they suspect possible exposure.
- Employers should develop policies and procedures for employees to report when they are sick or experiencing symptoms of COVID-19.

- Where appropriate, employers should develop policies and procedures for immediately isolating people who have **signs and/or symptoms** of COVID-19, and train workers to implement them. Move potentially infectious people to a location away from workers, customers, and other visitors. Although most worksites do not have specific isolation rooms, designated areas with closable doors may serve as isolation rooms until potentially sick people can be removed from the worksite.
- Take steps to limit spread of the respiratory secretions of a person who may have COVID-19. Provide a face mask, if feasible and available, and ask the person to wear it, if tolerated. Note: A face mask (also called a surgical mask, procedure mask, or other similar terms) on a patient or other sick person should not be confused with PPE for a worker; the mask acts to contain potentially infectious respiratory secretions at the source (i.e., the person’s nose and mouth).
- If possible, isolate people suspected of having COVID-19 separately from those with confirmed cases of the virus to prevent further transmission—particularly in worksites where medical screening, triage, or healthcare activities occur, using either permanent (e.g., wall/different room) or temporary barrier (e.g., plastic sheeting).
- Restrict the number of personnel entering isolation areas.
- Protect workers in close contact with (i.e., within 6 feet of) a sick person or who have prolonged/repeated contact with such persons by using additional engineering and administrative controls, safe work practices, and PPE. Workers whose activities involve close or prolonged/repeated contact with sick people are addressed further in later sections covering workplaces classified at medium and very high or high exposure risk.

Develop, Implement, and Communicate about Workplace Flexibilities and Protections

- Actively encourage sick employees to stay home.
- Ensure that sick leave policies are flexible and consistent with public health guidance and that employees are aware of these policies.
- Talk with companies that provide your business with contract or temporary employees about the importance of sick employees staying home and encourage them to develop non-punitive leave policies.
- Do not require a healthcare provider's note for employees who are sick with acute respiratory illness to validate their illness or to return to work, as healthcare provider offices and medical facilities may be extremely busy and not able to provide such documentation in a timely way.
- Maintain flexible policies that permit employees to stay home to care for a sick family member. Employers should be aware that more employees may need to stay at home to care for sick children or other sick family members than is usual.
- Recognize that workers with ill family members may need to stay home to care for them. See CDC's Interim Guidance for Preventing the Spread of COVID-19 in Homes and Residential Communities: www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread.html.
- Be aware of workers' concerns about pay, leave, safety, health, and other issues that may arise during infectious disease outbreaks. Provide adequate, usable, and appropriate training, education, and informational material about business-essential job functions and worker health and safety, including proper hygiene practices and the use of any workplace controls (including PPE). Informed workers who feel safe at work are less likely to be unnecessarily absent.

- Work with insurance companies (e.g., those providing employee health benefits) and state and local health agencies to provide information to workers and customers about medical care in the event of a COVID-19 outbreak.

Implement Workplace Controls

Occupational safety and health professionals use a framework called the “hierarchy of controls” to select ways of controlling workplace hazards. In other words, the best way to control a hazard is to systematically remove it from the workplace, rather than relying on workers to reduce their exposure. During a COVID-19 outbreak, when it may not be possible to eliminate the hazard, the most effective protection measures are (listed from most effective to least effective): engineering controls, administrative controls, safe work practices (a type of administrative control), and PPE. There are advantages and disadvantages to each type of control measure when considering the ease of implementation, effectiveness, and cost. In most cases, a combination of control measures will be necessary to protect workers from exposure to SARS-CoV-2.

In addition to the types of workplace controls discussed below, CDC guidance for businesses provides employers and workers with recommended SARS-CoV-2 infection prevention strategies to implement in workplaces: www.cdc.gov/coronavirus/2019-ncov/specific-groups/guidance-business-response.html.

Engineering Controls

Engineering controls involve isolating employees from work-related hazards. In workplaces where they are appropriate, these types of controls reduce exposure to hazards without relying on worker behavior and can be the most cost-effective solution to implement. Engineering controls for SARS-CoV-2 include:

- Installing high-efficiency air filters.
- Increasing ventilation rates in the work environment.
- Installing physical barriers, such as clear plastic sneeze guards.

- Installing a drive-through window for customer service.
- Specialized negative pressure ventilation in some settings, such as for aerosol generating procedures (e.g., airborne infection isolation rooms in healthcare settings and specialized autopsy suites in mortuary settings).

Administrative Controls

Administrative controls require action by the worker or employer. Typically, administrative controls are changes in work policy or procedures to reduce or minimize exposure to a hazard.

Examples of administrative controls for SARS-CoV-2 include:

- Encouraging sick workers to stay at home.
- Minimizing contact among workers, clients, and customers by replacing face-to-face meetings with virtual communications and implementing telework if feasible.
- Establishing alternating days or extra shifts that reduce the total number of employees in a facility at a given time, allowing them to maintain distance from one another while maintaining a full onsite work week.
- Discontinuing nonessential travel to locations with ongoing COVID-19 outbreaks. Regularly check CDC travel warning levels at: www.cdc.gov/coronavirus/2019-ncov/travelers.
- Developing emergency communications plans, including a forum for answering workers' concerns and internet-based communications, if feasible.
- Providing workers with up-to-date education and training on COVID-19 risk factors and protective behaviors (e.g., cough etiquette and care of PPE).
- Training workers who need to use protecting clothing and equipment how to put it on, use/wear it, and take it off correctly, including in the context of their current and potential duties. Training material should be easy to understand and available in the appropriate language and literacy level for all workers.

Safe Work Practices

Safe work practices are types of administrative controls that include procedures for safe and proper work used to reduce the duration, frequency, or intensity of exposure to a hazard. Examples of safe work practices for SARS-CoV-2 include:

- Providing resources and a work environment that promotes personal hygiene. For example, provide tissues, no-touch trash cans, hand soap, alcohol-based hand rubs containing at least 60 percent alcohol, disinfectants, and disposable towels for workers to clean their work surfaces.
- Requiring regular hand washing or using of alcohol-based hand rubs. Workers should always wash hands when they are visibly soiled and after removing any PPE.
- Post handwashing signs in restrooms.

Personal Protective Equipment (PPE)

While engineering and administrative controls are considered more effective in minimizing exposure to SARS-CoV-2, PPE may also be needed to prevent certain exposures. While correctly using PPE can help prevent some exposures, it should not take the place of other prevention strategies.

Examples of PPE include: gloves, goggles, face shields, face masks, and respiratory protection, when appropriate. During an outbreak of an infectious disease, such as COVID-19, recommendations for PPE specific to occupations or job tasks may change depending on geographic location, updated risk assessments for workers, and information on PPE effectiveness in preventing the spread of COVID-19. Employers should check the [OSHA](#) and [CDC](#) websites regularly for updates about recommended PPE.

All types of PPE must be:

- Selected based upon the hazard to the worker.
- Properly fitted and periodically refitted, as applicable (e.g., respirators).

- Consistently and properly worn when required.
- Regularly inspected, maintained, and replaced, as necessary.
- Properly removed, cleaned, and stored or disposed of, as applicable, to avoid contamination of self, others, or the environment.

Employers are obligated to provide their workers with PPE needed to keep them safe while performing their jobs. The types of PPE required during a COVID-19 outbreak will be based on the risk of being infected with SARS-CoV-2 while working and job tasks that may lead to exposure.

Workers, including those who work within 6 feet of patients known to be, or suspected of being, infected with SARS-CoV-2 and those performing aerosol-generating procedures, need to use respirators:

- National Institute for Occupational Safety and Health (NIOSH)-approved, N95 filtering facepiece respirators or better must be used in the context of a comprehensive, written respiratory protection program that includes fit-testing, training, and medical exams. See OSHA's Respiratory Protection standard, 29 CFR 1910.134 at www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134.
- When disposable N95 filtering facepiece respirators are not available, consider using other respirators that provide greater protection and improve worker comfort. Other types of acceptable respirators include: a R/P95, N/R/P99, or N/R/P100 filtering facepiece respirator; an air-purifying elastomeric (e.g., half-face or full-face) respirator with appropriate filters or cartridges; powered air purifying respirator (PAPR) with high-efficiency particulate arrestance (HEPA) filter; or supplied air respirator (SAR). See CDC/NIOSH guidance for optimizing respirator supplies at: www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy.

- Consider using PAPRs or SARs, which are more protective than filtering facepiece respirators, for any work operations or procedures likely to generate aerosols (e.g., cough induction procedures, some dental procedures, invasive specimen collection, blowing out pipettes, shaking or vortexing tubes, filling a syringe, centrifugation).
- Use a surgical N95 respirator when both respiratory protection and resistance to blood and body fluids is needed.
- Face shields may also be worn on top of a respirator to prevent bulk contamination of the respirator. Certain respirator designs with forward protrusions (duckbill style) may be difficult to properly wear under a face shield. Ensure that the face shield does not prevent airflow through the respirator.
- Consider factors such as function, fit, ability to decontaminate, disposal, and cost. OSHA’s Respiratory Protection eTool provides basic information on respirators such as medical requirements, maintenance and care, fit testing, written respiratory protection programs, and voluntary use of respirators, which employers may also find beneficial in training workers at: www.osha.gov/SLTC/etools/respiratory. Also see NIOSH respirator guidance at: www.cdc.gov/niosh/topics/respirators.
- Respirator training should address selection, use (including donning and doffing), proper disposal or disinfection, inspection for damage, maintenance, and the limitations of respiratory protection equipment. Learn more at: www.osha.gov/SLTC/respiratoryprotection.
- The appropriate form of respirator will depend on the type of exposure and on the transmission pattern of COVID-19. See the NIOSH “Respirator Selection Logic” at: www.cdc.gov/niosh/docs/2005-100/default.html or the OSHA “Respiratory Protection eTool” at www.osha.gov/SLTC/etools/respiratory.

Follow Existing OSHA Standards

Existing OSHA standards may apply to protecting workers from exposure to and infection with SARS-CoV-2.

While there is no specific OSHA standard covering SARS-CoV-2 exposure, some OSHA requirements may apply to preventing occupational exposure to SARS-CoV-2. Among the most relevant are:

- OSHA's Personal Protective Equipment (PPE) standards (in general industry, 29 CFR 1910 Subpart I), which require using gloves, eye and face protection, and respiratory protection. See: www.osha.gov/laws-regs/regulations/standardnumber/1910#1910_Subpart_I.
 - When respirators are necessary to protect workers or where employers require respirator use, employers must implement a comprehensive respiratory protection program in accordance with the Respiratory Protection standard (29 CFR 1910.134). See: www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134.
- The General Duty Clause, Section 5(a)(1) of the Occupational Safety and Health (OSH) Act of 1970, 29 USC 654(a)(1), which requires employers to furnish to each worker "employment and a place of employment, which are free from recognized hazards that are causing or are likely to cause death or serious physical harm." See: www.osha.gov/laws-regs/oshact/completeoshact.

OSHA's Bloodborne Pathogens standard (29 CFR 1910.1030) applies to occupational exposure to human blood and other potentially infectious materials that typically do not include respiratory secretions that may transmit SARS-CoV-2.

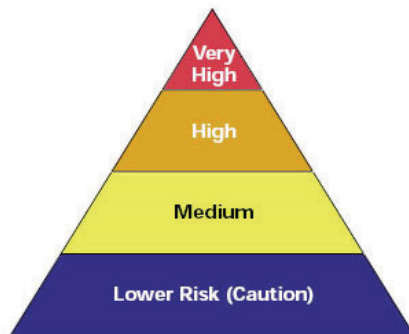
However, the provisions of the standard offer a framework that may help control some sources of the virus, including exposures to body fluids (e.g., respiratory secretions) not covered by the standard. See: www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030.

The OSHA COVID-19 webpage provides additional information about OSHA standards and requirements, including requirements in states that operate their own OSHA-approved State Plans, recordkeeping requirements and injury/illness recording criteria, and applications of standards related to sanitation and communication of risks related to hazardous chemicals that may be in common sanitizers and sterilizers. See: www.osha.gov/SLTC/covid-19/standards.html.

Classifying Worker Exposure to SARS-CoV-2

Worker risk of occupational exposure to SARS-CoV-2, the virus that causes COVID-19, during an outbreak may vary from very high to high, medium, or lower (caution) risk. The level of risk depends in part on the industry type, need for contact within 6 feet of people known to be, or suspected of being, infected with SARS-CoV-2, or requirement for repeated or extended contact with persons known to be, or suspected of being, infected with SARS-CoV-2. To help employers determine appropriate precautions, OSHA has divided job tasks into four risk exposure levels: very high, high, medium, and lower risk. The Occupational Risk Pyramid shows the four exposure risk levels in the shape of a pyramid to represent probable distribution of risk. Most American workers will likely fall in the lower exposure risk (caution) or medium exposure risk levels.

**Occupational Risk Pyramid
for COVID-19**



Very High Exposure Risk

Very high exposure risk jobs are those with high potential for exposure to known or suspected sources of COVID-19 during specific medical, postmortem, or laboratory procedures.

Workers in this category include:

- Healthcare workers (e.g., doctors, nurses, dentists, paramedics, emergency medical technicians) performing aerosol-generating procedures (e.g., intubation, cough induction procedures, bronchoscopies, some dental procedures and exams, or invasive specimen collection) on known or suspected COVID-19 patients.
- Healthcare or laboratory personnel collecting or handling specimens from known or suspected COVID-19 patients (e.g., manipulating cultures from known or suspected COVID-19 patients).
- Morgue workers performing autopsies, which generally involve aerosol-generating procedures, on the bodies of people who are known to have, or suspected of having, COVID-19 at the time of their death.

High Exposure Risk

High exposure risk jobs are those with high potential for exposure to known or suspected sources of COVID-19. Workers in this category include:

- Healthcare delivery and support staff (e.g., doctors, nurses, and other hospital staff who must enter patients' rooms) exposed to known or suspected COVID-19 patients. (Note: when such workers perform aerosol-generating procedures, their exposure risk level becomes *very high*.)
- Medical transport workers (e.g., ambulance vehicle operators) moving known or suspected COVID-19 patients in enclosed vehicles.
- Mortuary workers involved in preparing (e.g., for burial or cremation) the bodies of people who are known to have, or suspected of having, COVID-19 at the time of their death.

Medium Exposure Risk

Medium exposure risk jobs include those that require frequent and/or close contact with (i.e., within 6 feet of) people who may be infected with SARS-CoV-2, but who are not known or suspected COVID-19 patients. In areas without ongoing community transmission, workers in this risk group may have frequent contact with travelers who may return from international locations with widespread COVID-19 transmission. In areas where there *is* ongoing community transmission, workers in this category may have contact with the general public (e.g., schools, high-population-density work environments, some high-volume retail settings).

Lower Exposure Risk (Caution)

Lower exposure risk (caution) jobs are those that do not require contact with people known to be, or suspected of being, infected with SARS-CoV-2 nor frequent close contact with (i.e., within 6 feet of) the general public. Workers in this category have minimal occupational contact with the public and other coworkers.

Jobs Classified at Lower Exposure Risk (Caution): What to Do to Protect Workers

For workers who do not have frequent contact with the general public, employers should follow the guidance for “[Steps All Employers Can Take to Reduce Workers’ Risk of Exposure to SARS-CoV-2](#),” on page 7 of this booklet and implement control measures described in this section.

Engineering Controls

Additional engineering controls are not recommended for workers in the lower exposure risk group. Employers should ensure that engineering controls, if any, used to protect workers from other job hazards continue to function as intended.

Administrative Controls

- Monitor public health communications about COVID-19 recommendations and ensure that workers have access to that information. Frequently check the CDC COVID-19 website: www.cdc.gov/coronavirus/2019-ncov.
- Collaborate with workers to designate effective means of communicating important COVID-19 information.

Personal Protective Equipment

Additional PPE is not recommended for workers in the lower exposure risk group. Workers should continue to use the PPE, if any, that they would ordinarily use for other job tasks.

Jobs Classified at Medium Exposure Risk: What to Do to Protect Workers

In workplaces where workers have medium exposure risk, employers should follow the guidance for “[Steps All Employers Can Take to Reduce Workers’ Risk of Exposure to SARS-CoV-2](#),” on page 7 of this booklet and implement control measures described in this section.

Engineering Controls

- Install physical barriers, such as clear plastic sneeze guards, where feasible.

Administrative Controls

- Consider offering face masks to ill employees and customers to contain respiratory secretions until they are able leave the workplace (i.e., for medical evaluation/care or to return home). In the event of a shortage of masks, a reusable face shield that can be decontaminated may be an acceptable method of protecting against droplet transmission. See CDC/NIOSH guidance for optimizing respirator supplies, which discusses the use of surgical masks, at: www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy.

- Keep customers informed about symptoms of COVID-19 and ask sick customers to minimize contact with workers until healthy again, such as by posting signs about COVID-19 in stores where sick customers may visit (e.g., pharmacies) or including COVID-19 information in automated messages sent when prescriptions are ready for pick up.
- Where appropriate, limit customers' and the public's access to the worksite, or restrict access to only certain workplace areas.
- Consider strategies to minimize face-to-face contact (e.g., drive-through windows, phone-based communication, telework).
- Communicate the availability of medical screening or other worker health resources (e.g., on-site nurse; telemedicine services).

Personal Protective Equipment (PPE)

When selecting PPE, consider factors such as function, fit, decontamination ability, disposal, and cost. Sometimes, when PPE will have to be used repeatedly for a long period of time, a more expensive and durable type of PPE may be less expensive overall than disposable PPE.

Each employer should select the combination of PPE that protects workers specific to their workplace.

Workers with medium exposure risk may need to wear some combination of gloves, a gown, a face mask, and/or a face shield or goggles. PPE ensembles for workers in the medium exposure risk category will vary by work task, the results of the employer's hazard assessment, and the types of exposures workers have on the job.

High exposure risk jobs are those with high potential for exposure to known or suspected sources of COVID-19.

Very high exposure risk jobs are those with high potential for exposure to known or suspected sources of COVID-19 during specific medical, postmortem, or laboratory procedures that involve aerosol generation or specimen collection/handling.

In rare situations that would require workers in this risk category to use respirators, see the PPE section beginning on [page 14](#) of this booklet, which provides more details about respirators. For the most up-to-date information, visit OSHA's COVID-19 webpage: www.osha.gov/covid-19.

Jobs Classified at High or Very High Exposure Risk: What to Do to Protect Workers

In workplaces where workers have high or very high exposure risk, employers should follow the guidance for “[Steps All Employers Can Take to Reduce Workers’ Risk of Exposure to SARS-CoV-2](#),” on page 7 of this booklet and implement control measures described in this section.

Engineering Controls

- Ensure appropriate air-handling systems are installed and maintained in healthcare facilities. See “Guidelines for Environmental Infection Control in Healthcare Facilities” for more recommendations on air handling systems at: www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm.
- CDC recommends that patients with known or suspected COVID-19 (i.e., person under investigation) should be placed in an airborne infection isolation room (AIIR), if available.
- Use isolation rooms when available for performing aerosol-generating procedures on patients with known or suspected COVID-19. For postmortem activities, use autopsy suites or other similar isolation facilities when performing aerosol-generating procedures on the bodies of people who are known to have, or suspected of having, COVID-19 at the time of their death. See the CDC postmortem guidance at: www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem-specimens.html. OSHA also provides guidance for postmortem activities on its COVID-19 webpage: www.osha.gov/covid-19.

- Use special precautions associated with Biosafety Level 3 when handling specimens from known or suspected COVID-19 patients. For more information about biosafety levels, consult the U.S. Department of Health and Human Services (HHS) “Biosafety in Microbiological and Biomedical Laboratories” at www.cdc.gov/biosafety/publications/bmbl5.

Administrative Controls

If working in a healthcare facility, follow existing guidelines and facility standards of practice for identifying and isolating infected individuals and for protecting workers.

- Develop and implement policies that reduce exposure, such as cohorting (i.e., grouping) COVID-19 patients when single rooms are not available.
- Post signs requesting patients and family members to immediately report symptoms of respiratory illness on arrival at the healthcare facility and use disposable face masks.
- Consider offering enhanced medical monitoring of workers during COVID-19 outbreaks.
- Provide all workers with job-specific education and training on preventing transmission of COVID-19, including initial and routine/refresher training.
- Ensure that psychological and behavioral support is available to address employee stress.

Safe Work Practices

- Provide emergency responders and other essential personnel who may be exposed while working away from fixed facilities with alcohol-based hand rubs containing at least 60% alcohol for decontamination in the field.

Personal Protective Equipment (PPE)

Most workers at high or very high exposure risk likely need to wear gloves, a gown, a face shield or goggles, and either a face mask or a respirator, depending on their job tasks and exposure risks.

Those who work closely with (either in contact with or within 6 feet of) patients known to be, or suspected of being, infected with SARS-CoV-2, the virus that causes COVID-19, should wear respirators. In these instances, see the PPE section beginning on [page 14](#) of this booklet, which provides more details about respirators. For the most up-to-date information, also visit OSHA's COVID-19 webpage: www.osha.gov/covid-19.

PPE ensembles may vary, especially for workers in laboratories or morgue/mortuary facilities who may need additional protection against blood, body fluids, chemicals, and other materials to which they may be exposed. Additional PPE may include medical/surgical gowns, fluid-resistant coveralls, aprons, or other disposable or reusable protective clothing. Gowns should be large enough to cover the areas requiring protection. OSHA may also provide updated guidance for PPE use on its website: www.osha.gov/covid-19.

NOTE: Workers who dispose of PPE and other infectious waste must also be trained and provided with appropriate PPE.

The CDC webpage “Healthcare-associated Infections” (www.cdc.gov/hai) provides additional information on infection control in healthcare facilities.

Workers Living Abroad or Travelling Internationally

Employers with workers living abroad or traveling on international business should consult the “Business Travelers” section of the OSHA COVID-19 webpage (www.osha.gov/covid-19), which also provides links to the latest:

- CDC travel warnings: www.cdc.gov/coronavirus/2019-ncov/travelers
- U.S. Department of State (DOS) travel advisories: travel.state.gov

Employers should communicate to workers that the DOS cannot provide Americans traveling or living abroad with medications or supplies, even in the event of a COVID-19 outbreak.

As COVID-19 outbreak conditions change, travel into or out of a country may not be possible, safe, or medically advisable. It is also likely that governments will respond to a COVID-19 outbreak by imposing public health measures that restrict domestic and international movement, further limiting the U.S. government's ability to assist Americans in these countries. It is important that employers and workers plan appropriately, as it is possible that these measures will be implemented very quickly in the event of worsening outbreak conditions in certain areas.

More information on COVID-19 planning for workers living and traveling abroad can be found at: www.cdc.gov/travel.

For More Information

Federal, state, and local government agencies are the best source of information in the event of an infectious disease outbreak, such as COVID-19. Staying informed about the latest developments and recommendations is critical, since specific guidance may change based upon evolving outbreak situations.

Below are several recommended websites to access the most current and accurate information:

- Occupational Safety and Health Administration website: www.osha.gov
- Centers for Disease Control and Prevention website: www.cdc.gov
- National Institute for Occupational Safety and Health website: www.cdc.gov/niosh

OSHA Assistance, Services, and Programs

OSHA has a great deal of information to assist employers in complying with their responsibilities under OSHA law. Several OSHA programs and services can help employers identify and correct job hazards, as well as improve their safety and health program.

Establishing a Safety and Health Program

Safety and health programs are systems that can substantially reduce the number and severity of workplace injuries and illnesses, while reducing costs to employers.

Visit www.osha.gov/safetymanagement for more information.

Compliance Assistance Specialists

OSHA compliance assistance specialists can provide information to employers and workers about OSHA standards, short educational programs on specific hazards or OSHA rights and responsibilities, and information on additional compliance assistance resources.

Visit www.osha.gov/complianceassistance/cas or call 1-800-321-OSHA (6742) to contact your local OSHA office.

No-Cost On-Site Safety and Health Consultation Services for Small Business

OSHA's On-Site Consultation Program offers no-cost and confidential advice to small and medium-sized businesses in all states, with priority given to high-hazard worksites. On-Site consultation services are separate from enforcement and do not result in penalties or citations.

For more information or to find the local On-Site Consultation office in your state, visit www.osha.gov/consultation, or call 1-800-321-OSHA (6742).

Under the consultation program, certain exemplary employers may request participation in OSHA's **Safety and Health Achievement Recognition Program (SHARP)**. Worksites that receive SHARP recognition are exempt from programmed inspections during the period that the SHARP certification is valid.

Cooperative Programs

OSHA offers cooperative programs under which businesses, labor groups and other organizations can work cooperatively with OSHA. To find out more about any of the following programs, visit www.osha.gov/cooperativeprograms.

Strategic Partnerships and Alliances

The OSHA Strategic Partnerships (OSP) provide the opportunity for OSHA to partner with employers, workers, professional or trade associations, labor organizations, and/or other interested stakeholders. Through the Alliance Program, OSHA works with groups to develop compliance assistance tools and resources to share with workers and employers, and educate workers and employers about their rights and responsibilities.

Voluntary Protection Programs (VPP)

The VPP recognize employers and workers in the private sector and federal agencies who have implemented effective safety and health programs and maintain injury and illness rates below the national average for their respective industries.

Occupational Safety and Health Training

OSHA partners with 26 OSHA Training Institute Education Centers at 37 locations throughout the United States to deliver courses on OSHA standards and occupational safety and health topics to thousands of students a year. For more information on training courses, visit www.osha.gov/otiec.

OSHA Educational Materials

OSHA has many types of educational materials to assist employers and workers in finding and preventing workplace hazards.

All OSHA publications are free at www.osha.gov/publications and www.osha.gov/ebooks. You can also call 1-800-321-OSHA (6742) to order publications.

Employers and safety and health professionals can sign-up for *QuickTakes*, OSHA's free, twice-monthly online newsletter with the latest news about OSHA initiatives and products to assist in finding and preventing workplace hazards. To sign up, visit www.osha.gov/quicktakes.

OSHA Regional Offices

Region 1

Boston Regional Office
(CT*, ME*, MA, NH, RI, VT*)
JFK Federal Building
25 New Sudbury Street, Room E340
Boston, MA 02203
(617) 565-9860 (617) 565-9827 Fax

Region 2

New York Regional Office
(NJ*, NY*, PR*, VI*)
Federal Building
201 Varick Street, Room 670
New York, NY 10014
(212) 337-2378 (212) 337-2371 Fax

Region 3

Philadelphia Regional Office
(DE, DC, MD*, PA, VA*, WV)
The Curtis Center
170 S. Independence Mall West, Suite 740 West
Philadelphia, PA 19106-3309
(215) 861-4900 (215) 861-4904 Fax

Region 4

Atlanta Regional Office
(AL, FL, GA, KY*, MS, NC*, SC*, TN*)
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Room 6T50
Atlanta, GA 30303
(678) 237-0400 (678) 237-0447 Fax

Region 5

Chicago Regional Office
(IL*, IN*, MI*, MN*, OH, WI)
John C. Kluczynski Federal Building
230 South Dearborn Street, Room 3244
Chicago, IL 60604
(312) 353-2220 (312) 353-7774 Fax

Region 6

Dallas Regional Office
(AR, LA, NM*, OK, TX)
A. Maceo Smith Federal Building
525 Griffin Street, Room 602
Dallas, TX 75202
(972) 850-4145 (972) 850-4149 Fax

Region 7

Kansas City Regional Office
(IA*, KS, MO, NE)
Two Pershing Square Building
2300 Main Street, Suite 1010
Kansas City, MO 64108-2416
(816) 283-8745 (816) 283-0547 Fax

Region 8

Denver Regional Office
(CO, MT, ND, SD, UT*, WY*)
Cesar Chavez Memorial Building
1244 Speer Boulevard, Suite 551
Denver, CO 80204
(720) 264-6550 (720) 264-6585 Fax

Region 9

San Francisco Regional Office
(AZ*, CA*, HI*, NV*, and American Samoa,
Guam and the Northern Mariana Islands)
San Francisco Federal Building
90 7th Street, Suite 2650
San Francisco, CA 94103
(415) 625-2547 (415) 625-2534 Fax

Region 10

Seattle Regional Office
(AK*, ID, OR*, WA*)
Fifth & Yesler Tower
300 Fifth Avenue, Suite 1280
Seattle, WA 98104
(206) 757-6700 (206) 757-6705 Fax

*These states and territories operate their own OSHA-approved job safety and health plans and cover state and local government employees as well as private sector employees. The Connecticut, Illinois, Maine, New Jersey, New York and Virgin Islands programs cover public employees only. (Private sector workers in these states are covered by Federal OSHA). States with approved programs must have standards that are identical to, or at least as effective as, the Federal OSHA standards.

Note: To get contact information for OSHA area offices, OSHA-approved state plans and OSHA consultation projects, please visit us online at www.osha.gov or call us at 1-800-321-OSHA (6742).

How to Contact OSHA

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to help ensure these conditions for America's working men and women by setting and enforcing standards, and providing training, education and assistance. For more information, visit www.osha.gov or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.

**For assistance, contact us.
We are OSHA. We can help.**





U.S. Department of Labor

For more information:

OSHA[®] **Occupational
Safety and Health
Administration**

www.osha.gov (800) 321-OSHA (6742)

MANAGING MANUFACTURING

Through Covid-19

A TP³ Framework

Ananth V Iyer, Angus McLeod, Roy Vasher, Steve Dunlop

DCMME, Krannert School of Management, Purdue University, West Lafayette, IN 47907

A TP³ Framework for Recovery

Intro

How should we manage during and after the Covid-19 pandemic? TP³ (Products, Process, People and Technology) is a framework for managing through the pandemic. And building a Smart Lean Eco-system is a way to develop a solution. For the last three years, our team has been working with over 250 manufacturing companies, through a project at the DCMME (Dauch Center for the Management of Manufacturing Enterprises) center at Purdue University. The goal is to create a smart lean manufacturing ecosystem across these firms by leveraging technology to enable competitiveness. Our proposed framework leverages feedback and learning from these interactions.

Manufacturing managers in the US and key participants in the supply chain are faced with how to manage three crucial stages of this crisis, each requiring different rules of operation. Figure 1 shows capacity utilization across the three stages.

The first Stage is to **manage productive operations during the pandemic**. This applies to 'essential' businesses that are permitted to operate, and will have real concerns about virus transmission between employees.

The second Stage is to **manage during a shutdown of operations**, while the pandemic-related 'shelter-in-place' rules are in effect. The third Stage is a **restart of operations**, when the pandemic-related rules are relaxed; the situation moves a little closer to a new normal.

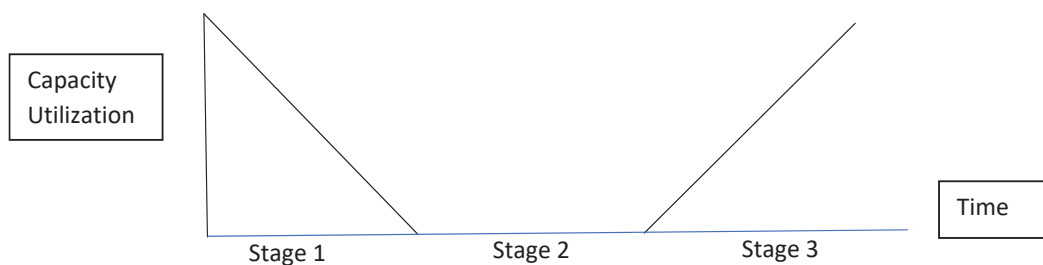


Figure 1: Capacity across the stages



At the close of these three stages, should we not take the opportunity to emerge stronger and more competitive? How can managers build a team focused on emerging more competitive than before the pandemic? We suggest that a focus on creating a **Smart Lean Ecosystem** can help guide the actions that will ensure enhanced competitiveness. Management, operation-decisions and practices, described below, will impact all levels of the

workforce: a) senior management, b) middle management, including supervisors and, c) line employees. Let's start with the three 'P's and how they might change across the stages. Figure 2 provides a summary of the decision framework we recommend which are described in the following sections.

	PEOPLE	PROCESS	PRODUCT
STAGE 1	Communicate	Infection Control	Ramp Down, Supply Chain Effects
STAGE 2	Furlough/Paid Employees	Remote Training	Inventory, Technology roles
STAGE 3	Ramp Up & the New Normal	Adjustments in Infection Control	Ramp Up Capacity, Product Variety

Figure 2: Three stages and associated actions



A TP³ Framework for Recovery

Managing Triggers for Stages:

Should operations be kept open during the pandemic, shut down or ramp up? This is a key decision for senior management and primarily focuses on the **“Product”** capacity. A surge in orders and wanting to stay a reliable supplier of components or finished products, would be clear reasons to continue remaining at Stage 1 (and manage the health threat). During Stage 1, it is important to prioritize customer needs and supply reliability. Stage 1’s duration triggers are different from business to business; it may be the case that some suppliers can shut down well in advance, while others remain operational. We surveyed several job shops and distributors and found that a choice to keep operations open were driven by their customer needs and worries about failing to maintain their role in the supply chain. They worried that premature shutdown, which could leave their customers in the lurch, would have adverse consequences for the long-term business survival.

A decision to move to Stage 2 may be forced by employee-absences due to pandemic-related symptoms and needs to quarantine (up to 14 days). Since companies often request employees to focus on minimizing spread, it is reasonable to expect significant variability in production capacity from day to day. Absences may significantly impact production rates and make continued operation uneconomic. Some survey respondents claim that a defined

MANAGING THROUGH THE PANDEMIC, COMPANY A:

Employing 26 people, this successful company does metal fabrications for an automotive OEM and other tier #1 and tier #2 companies. The company also has a consumable supply revenue stream selling cleaning solutions to the same market. In stage #1 the metal fabrications business was shut down for two weeks and all staff furloughed. The cleaning supplies business was maintained. The temporary closure of the fabs business was the trigger for stage #2. In stage #2, the CEO sourced sanitizer in volume and added this line to the consumable supplies range. The CEO also sourced a surface-cleaner that leaves a virucidal film. It reportedly is active for many days on solid surfaces including metals. Both these products satisfy the urgent needs of his



MANAGING THROUGH THE PANDEMIC, COMPANY A CONT'D:

existing customers so, he rapidly increased sales value, while planning stage #3. Stage #3 is a reduced start-up of the fabs business, timed to begin one week in advance before their largest customer commences production again.

The lesson here, is that during crisis, both agility and flexibility are needed to keep cash-flow through the business. Without cash-flow, a business will succumb to the pandemic.

shutdown, with both associated furloughs and a commitment to rehire, may help them retain employees and conserve cash, while protecting employee health. Carefully-managed shutdowns also allow the build-up of inventory to satisfy customers, at least in the short-term. In Stage 2, should we place employees on furlough or pay them? If paid while in Stage 2, employees can be asked to acquire specified new skills, using remote learning; this would help support an objective to be more competitive at Stage 3 when we start operations once more.

Stage 3 requires the business to be ready for increased product competition and very likely, greater business agility. It may require new products to be offered, greater reliance on technology and redesigns (including possible new processes) to save costs. It may also mean managing the system while rules of management are being rewritten in real-time, based on shifting factors including new virus infections. Infection control may remain a key component of management attention during this period, as we try to get maximal productive outputs where there are real challenges and restrictions due to infection threats. How quickly to ramp up remains an important decision which is going to be multifactorial and unique for every business.

Management of Communications and Transparency

How should information be disseminated during the three Stages? Management of **"People"** demands careful communications planning; the nature of those communications vary by Stage. A key reason to manage across all Stages is that the ability to ensure you get your best staff to return; achievement of this will in part be directly related to your ability to communicate effectively during

A TP³ Framework for Recovery

Stages 1 and 2. Firstly, we need to identify the channels of communication available to reach every employee; these may be several and require perfect managing to keep everyone in the loop: cell phone messages, app-based information repositories and web-based platforms such as Microsoft Teams and Google Hangouts. During Stage 1, while maintaining social distance, we need to reassure our staff. Messages should ensure they feel confident, not uncertain; specifically, address paid sick leave during quarantine and the policies that will protect both employee and their family from cross-infection, including the restriction of public access to the work areas, PPE and sanitization. Moving all communications to an app enables information to be posted for asynchronous meal-breaks, avoiding the posting of documents on factory pillars – a common sight in many factories. Before staff worry that management will be moving to reduced operations or temporary closure, management needs to have communications that are ahead of their concerns. Concerns can quickly become a tidal-wave of negativity, so act sooner rather than later. Their worries will include corporate policy regarding lay-offs, furloughs, medical coverage and likely time-lines to re-opening.

During Stage 2, the plant is shut and employees work remotely if they are still on the payroll. However, remote work decreases the serendipitous sharing of ideas and collaboration

that happen in physical workspaces. To offset the lack of co-generated ideas caused by separation from work-colleagues, we need to compensate by creating more opportunities to share ideas based upon shared planning and execution checklists. This shared of goals and successes each week (or appropriate interval) will ensure that independent units of the firm remain synchronized with their plans. Many surveyed managers we spoke to, stated that ‘communication’ is their top priority. There are benefits in continuous touch points; they ensure synchronization of efforts across management and the whole supply chain, maintaining trust and destroying doubts. Clarity of the messaging underpins the attainment of trust.

Collaboration meetings often get enhanced with video sharing by all participants, because a lot more is conveyed during meetings than what is said; body language and gestures enhance communication. Video-sharing allows richer content to be seen by all; marked-up documents, shared whiteboards and pictures, enable a richer communication stream. Check out access to bandwidth and be proactive in improving individual's data-speeds, rather than leaving this to chance. This action alone says, ‘you are important and we want to see and hear what you have to say.’

Stage 2 may also be the time when aims to introduce new technology are developed. There



may be plans to introduce more automated transfer equipment, automated cleaning, cobots and augmented reality-based tools that speed up the move towards digitization. The speed and efficacy of business-recovery and competitiveness during Stage 3 will depend on investment now: factors include team-based planning, the importance of sharing and making sure that staff feel that they are valued and part of the solution, not the problem.

In stage 3, supply-chains have to be primed in order to get back up to speed; component manufacturers at and below tiers 1 and 2, need to have continuous supply in order that the EOMs can produce; to further drive the economic recovery. The pace of ramp up, has to be synchronized with both the demand downstream and available supply upstream. Once again, the quality and timeliness of communications with your supply chain partners will be critical - to the most cost-effective move towards full production. People will also need to be smart in thinking and performing with agility; rapidly adjusting production plans and employee allocation to function will help ensure that the business is fit for purpose in challenging times. None of this will go smoothly or cost-effectively if you have not already secured employee goodwill during Stages 1 and 2. Support the goodwill by having supportive policies and timely, clear communications at all times. Now, at Stage 3, the time spent on communications and transparency will engender a spirit of trust and

MANAGING THROUGH THE PANDEMIC, COMPANY B:

Employing over 3,500 people, this successful, large manufacturing company in Lafayette, Indiana has aggressively implemented several infection-control mitigation activities. Communication with employees is a key, so they have developed a mobile phone app that provides for two-way, real-time communication for employees.

They have mapped the plant workstations to identify the proximity of workers. As a result, they have either separated them by at least 6 feet, or require workers to wear a plastic face shield (fabricated urgently, in-house from clear, plastic sheets). They have implemented comprehensive cleaning and sanitization across the facility.

The lesson here, is at the start of the crisis, both agility and flexibility are needed to not only develop a method to communicate with a large workforce, but also how to quickly implement actions to mitigate the infection-control risks within a large factory.

A TP³ Framework for Recovery

purpose and will make your job easier and faster. These same factors will also help you stay ahead of other competitors, who may fail the test.

Managing Operations Within Stages

Infection control, termed here as “I”, will need to be explicitly managed during Stages 1 and 3 of operations. How should managers convert this requirement into a process based view? Value Stream Mapping (VSM) is a first step towards implementing a lean process. We propose **VSMI** (Value Stream Mapping with Infection control), as a methodology to manage operations during Stages 1 and 3. We further propose the infection control layer as implementing rules regarding social distancing between employees, rules regarding surface touch-time between employee contact, appropriate ventilation, staggered arrivals and departures, staggered use of common areas and so on. Thus, **VSMI** is a tool to positively manage and affect ‘**Processes**’ that vary across Stages. Please see the Appendix for an example of a VSM process followed by a VSMI process.

During Stage 1, when the pandemic worries are still in effect, protecting employees at work requires immediate mapping of the internal supply chain, to understand employee-separation and contact-surface interactions. This map will require a close understanding of time and motion associated with manufacturing, including steps that include supplier receipts at the loading dock, multiple workers at

close proximity, required transfer of material between stations, shipping dock handling, and transfer to trucking as examples. This mapping task can best be supported by implementing a lean 5 S, especially the first 3 S's: **1. Sort** through all materials in each work area and move out everything not needed at each work area, **2. Set in Order** all tools and suppliers that are used in each area based on frequency of use, **3) Shine** all equipment to ensure it is clean and free of contamination.

During Stage 1, distancing can be accomplished by adjusting the number of shifts (to reduce the number of employees in each shift), but likely decreasing production rate. Alternately, if a shift is added, the same production output can be spread across multiple shifts. More shifts, with fewer employees per shift, may reduce infection transmission, but may increase cost of utilities, such as monitoring. This may be an option to keep daily production on track.

It will be important to practice social distancing when conducting daily team meetings – some companies are drawing circles on the floor to show people where to stand. To reduce aggregation of employees during lunch time, consider shifts with staggered starts; reduce queuing at plant entry and workwear change and elsewhere, as necessary. Other changes could include staggered plant shift completions. Where more shifts are introduced, different methods of shift handoff may be necessary including



the possible use of PA broadcasts. Packaging materials may require attention due to the prevailing research on virus-viability duration on different surfaces; whether metal, cardboard or plastic. Increased monitoring of throughput in the packaging area may be needed at first; wait times will have an implication for inventory control and you will want to ensure there are no hold-ups that could affect production while maintaining your inventory policy, FIFO for example.

We already discussed some of the employee decisions we make to manage Stage 2 and their implications. If we could afford to keep employees on the payroll, then their time at home can be used productively and as an investment in the future effectiveness of the business. Their time at home can be used to explore process redesign (including new technology) with virtual collaboration. New collaboration tools enable quick sharing of ideas. We can ship prototypes to employee's homes to enable visualizations, use AR tools to communicate ideas; we can effectively create digital twins of the physical operation by continued, virtual collaboration.

Management of operations during Stage 3 may determine business survival. Yes, we have to efficiently ramp up capacity to match supply chain needs, but now, have to adjust to comply with current guidelines for managing infection control, and track everything too. Key decisions concern synchronization with supplier ramp-ups and customer ramp-ups. A single error may result



in severe demand mismatches. Further decisions may include new policies about flexible sourcing, the possible use of outsourced capacity and expedited shipping options. These considerations may help solve further demand mismatches.



A TP³ Framework for Recovery

Managing the New Normal of Pandemic Recovery: building a smart manufacturing eco-system

As the economy picks up and orders flow, for people at work, it may take many months (or years) until things return to how they were. A vaccine may take years, and inoculation programs to cover the globe's 8 billion people will take even longer; cheap, rapid antibody test kits may be a long time in coming. We can take a glass-half-empty view of the future, or glass-half-full. Let's adopt this second strategy to deal with the new Normal.

We recommend building a **Smart Lean Manufacturing eco-system** as a paradigm to a successful recovery from the pandemic. The basic concept is explained in Figure 3, and can be understood as consisting of three stages: i) Before the pandemic, assume that there is a cost of technology that is volume independent, and a cost of labor that is volume dependent, whose intersection point, labeled A, provides a breakeven point. ii) With the pandemic, and associated **VSMI requirements**, the variable cost of labor increases, thus increasing the slope of the labor-cost curve, and decreasing the breakeven point to a lower breakeven, volume B. iii) As technology is more widely deployed, the cost of the technology decreases; either because of new market entrants

(competition) or sales-volume cost-reductions; thus the breakeven point decreases even further, to a breakeven volume of C.

Figure 3 suggests that **Technology**, which is scale independent, may be justified as a tool to remain competitive, due to the lower, associated breakeven volumes. It suggests technology viability even for small-volume manufacturers managing through the pandemic. Relevant technology includes cleaning robots, assistive robots to check inventory counts, drones to count inventory status and sensors to track work progress. Cobots that enable enhanced performance by individuals (without the need for people to work in close proximity), could enable productivity to be improved and thus be justified on an **RoI** basis. These tools enable employees to be more efficient while maintaining **VSMI** process layouts.

Another use of technology would be a sensor-based smart system can also enable automated tracking of behavioral conformance. An application firm is one with large numbers of personnel, such as distribution centers or processing plants. These smart eco-systems can then be connected across a supply chain to ensure a safe chain of custody for items. Such systems can ensure that the health of employees involved in the supply chain is protected, and adherence to safety rules ensured.



¹Value is not all about take-home pay. People want acknowledgement, an appropriate level of autonomy and flexibility that suits the individual, a clean, safe and well-lit environment and relationships that are adult, respectful and trusted.

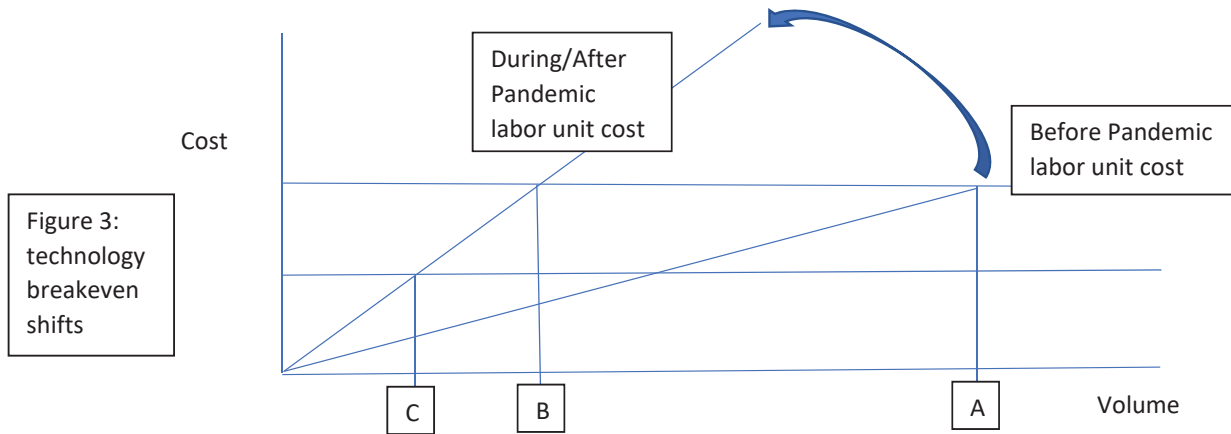


Figure 3: technology breakeven shifts

A significant change for many businesses will be to value their **People** more appropriately'. When the front-line workforce gets worried, there are commercial impacts. We see examples at Amazon and Instacart where staff went on strike because their companies were perceived as negligent in the care of staff safety (or that of their families). Many managers are working from home during the pandemic, leaving supervisors and operatives on the front-line. We have to make investments to heal and improve employee relationships, to make real gestures (and communicate these); to show that we value and care for employees and about their families. Communication, that front-line employees are the "heroes" of this pandemic, may be key message.

One thing we will all have learned from our pandemic experience, is how essential it is to have

multi-tasking employees that can cover for others (and maintain total productive effectiveness) when people are missing. When we certificate staff to do a task, they may be categorized on BOTH skill sets AND behavioral norms. Why both? Many companies around the world use both skills/performance AND behavioral norms. They know that work safety, work quality and staff-retention start with a healthy work-culture. Work-culture depends on behaviors, not outputs. Healthy work-culture does not happen automatically. Management should agree behavioral norms, refer to them in contracts of employment, Personal Development Reviews, Pay and Reward schemes, career-promotions and in notices and then people will get the message; it is not just what we do, but how we do it that matters to productivity.

A TP³ Framework for Recovery



Some customers may be looking for dual supply to manage risk. On the bright side, many OEMs will now be looking to switch overseas-sourced components and now look for home-produced sources to hedge future pandemics and other disasters. Price, quality, communication, safety-records, 5S, corporate certifications will all play in your favor if you leverage these. On the purchasing side, your key components will need to be dual-sourced and ideally where supplier-capacity can be ramped up as required. This suggests the need to carefully plan **products** offered, to satisfy supply chain demands.

Change should be the new normal. That cannot just be driven from the top; it needs all staff to get used to productive change and to feel that they own that change. To achieve that, staff at all levels need to participate in decision-making and be involved in the **process**. When people own the process of change, they feel responsible; with so many eyes looking out for issues (and not just at their own work-space), there are fewer failures and down-time incidents. Involvement in successful change will change the work-culture to one where productive change is the new normal. This agile mindset for change will help the whole business keep ahead of the competition.





Summary

A TP³ approach i.e., a focus on **People**, **Process** and **Products**, leveraged with Technology provides an approach to manage across three stages during a pandemic, i.e., the ramp-down, closure and ramp-up of capacity utilization of a facility. Agile deployment of the three **P's** across the three stages, and a plan that anticipates recovery, may provide a clear message for people across the organization. **VSMI** is here to stay, albeit with different manifestations across the stages. The new normal will offer opportunities to compete based on agility, with winning businesses able to adapt to service demands across the supply chain.

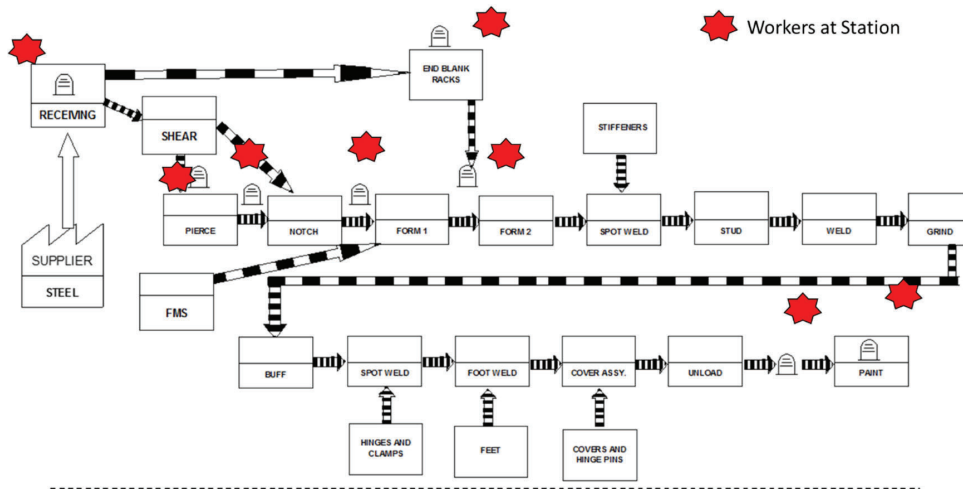


Appendix 1: VSMI

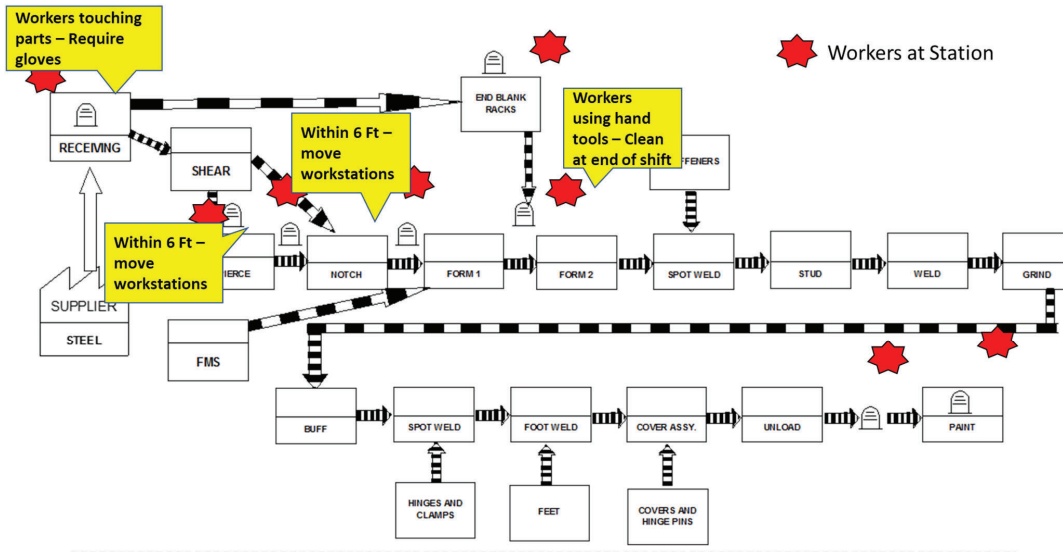
VSMI

VSMI is a new term that adds Infection control to the lean methodology of Value Stream Mapping (VSM). Below is an example of the material process flow through a manufacturing plant with the points of risk highlighted with a star. The second figure is the same flow with risk mitigation actions noted, for specific workstations.

Example: Material Flow: Process Level – Points of Risk



Example: Material Flow: Process Level – Risk Mitigation



Appendix 2: Checklists

INFECTION CONTROL CHECKLIST

- o **Advise** employees to stay home if sick. This may require a relaxation of sick time-off policy
- o **Clean** and disinfect common areas including restrooms as well as work areas, especially between shifts
- o **Restrict** or limit employee access to non-work areas such as: offices, conference rooms, break areas, cafeterias, etc.

OPERATIONS CHECKLIST

- o **Check** if all employees are separated by over **6 feet** at all steps in the operations, included material handling etc. This may involve identifying paths for each employee to follow, timing of transfers etc.
- o **Monitor** truck drivers' deliveries of supplies and pick-up of shipments. Some companies are preventing truck drivers from entering the facility and using restrooms. Others are requiring truck drivers to leave their truck doors open, with unloading and/or the loading performed by the company dock personnel.
- o **Reduce** aggregation of employees during lunch time, consider shifts with staggered starts to reduce the queuing to enter the plant and change to plant outfits, gather tools etc.



Ananth V Iyer (aiyer@purdue.edu), Department Head and Senior Associate Dean
Susan Bulkeley Butler Chair in Operations Management
Director, DCMME and GSCMI
Krannert School of Management
Purdue University



Angus McLeod (mcleod6@purdue.edu), Purdue WHIN Consultant, DCMME
Krannert School of Management
Purdue University



Roy Vasher (rvasher@purdue.edu), Purdue WHIN Consultant, DCMME
Krannert School of Management
Purdue University



Steve Dunlop (dunlops@purdue.edu), Managing Director, DCMME
Krannert School of Management
Purdue University

Contact Us
dcmme@purdue.edu

Website
dcmme.org

April 2020:

April 14, 2020 — –The Dayton Minority Business Assistance Center (MBAC) will be hosting **Business Orientation in Dayton**. This **FREE** workshop will provide an overview of business management and assistance services, financial and bonding resources, and regional contracting opportunities. For more information and to register, please call 937-333-1030.

April 15, 2020 — –Dayton SCORE NonProfit Team will be hosting **Board Development** in Dayton. This free workshop details the characteristics of high performance boards, and discusses appropriate board structure, membership and processes. **CANCELLED**

April 15, 2020 — –The Miami Valley SBDC will be hosting **Marketing Strategy: Be Deliberate About Reaching Your Market** in Greenville. This **FREE** workshop will delve into customer discovery, branding, marketing vehicles, and market planning. To learn more and register, please visit [here](#) .

April 16, 2020 — –Dayton SCORE and the Launch Dayton Launch Pad program will be hosting **Small Business Growth** in Dayton. This free workshop is designed for existing business owners and executives who want to compete aggressively and grow an already successful business but do not have a clear understanding of where to begin. This session provides some basic business and realistic marketplace perspective while identifying traditional and contemporary business success factors. **CANCELLED**

April 16, 2020 — –The Warren County SBDC will be hosting **Steps to Starting Your Own Business** in Springboro. This **FREE** workshop will discuss business plan tips, what licenses and permits are needed, entity selections, credit management overview, trending marketing, and more! To learn more and register, please visit [here](#) .

April 16, 2020 — –The Miami Valley SBDC will be hosting **Marketing Strategy: Be Deliberate About Reaching Your Market** in Eaton. This **FREE** workshop will delve into customer discovery, branding, marketing vehicles, and market planning. To learn more and register, please visit [here](#) .

Apr 17, 2020 01:00 PM — –The Dayton Better Business Bureau will be hosting a webinar **Updated Information on SBA Disaster Relief programs**. For this webinar, you register in advance. After registering, you will receive a confirmation email containing information about joining the webinar. To register, please visit [here](#) .

April 18, 2020 — –The Miami Valley SBDC will be hosting **New Business Information Session** in Dayton. This **FREE** seminar will provide an overview of issues related to starting and operating a business such as business and financial

planning, market demand and financing. To learn more and register, please visit [here](#) .

April 21, 2020 — –The Dayton Minority Business Assistance Center (MBAC) will be hosting **Business Orientation** in Dayton. This FREE workshop will provide an overview of business management and assistance services, financial and bonding resources, and regional contracting opportunities. For more information and to register, please call 937-333-1030.

April 21, 2020 — –Dayton SCORE and Rob Bunting, Google Czar at Cincinnati I-Marketing Group will be hosting **Use YouTube to Grow Your Business** in Dayton. This workshop discusses best practices for creating a YouTube Channel and compelling video content that promotes your products and services and drives engagement with your brand. **CANCELLED**

April 23, 2020 10:00 PM — –Dayton SCORE is pleased to offer a live online webinar on planning and goal achievement by Sarah Olivieri, developer of the **Impact Method™**. This is a live webinar and Sarah will answer questions on using the Impact Method. For this webinar, you register in advance. To register, please visit [here](#) .

April 28, 2020 — –The Dayton Minority Business Assistance Center (MBAC) will be hosting **Business Orientation** in Dayton. This FREE workshop will provide an overview of business management and assistance services, financial and bonding resources, and regional contracting opportunities. For more information and to register, please call 937-333-1030.

April 29, 2020 — –Dayton SCORE NonProfit Team will be hosting **Fundraising** in Dayton. This free workshop will define in detail the important fundamentals of the fundraising function of a nonprofit organization. **CANCELLED**

April 28-29, 2020 — –The SBA and the Ohio Development Services Agency will be hosting **Ohio Business Matchmaker** in Dayton. This event is an opportunity for small businesses to meet one-on-one with federal, state, and local buyers who represent billions of dollars in upcoming contracts. To learn more and register, please visit [here](#) .

A Remotely Awesome Economic Development Week

MAY 4 - 9, 2020

HOST YOUR EDW VIRTUALLY



SOCIAL MEDIA

- Highlight essential businesses in your community.
- Showcase companies that have switched their manufacturing to PPE.
- Encourage people to participate in local partner events such as Taco Tuesdays, Restaurant Take Out Days, etc.
- Engage with IEDC on social media. Use the hashtags **#EDW** and **#InternationalEDW**.



VIRTUAL EVENTS

- Host remote events to support Economic Development Week in your community via Zoom gatherings or FB Live.
- Host proclamation signings to promote businesses that have altered operations during C19 outbreak.
- Create a video series to promote local businesses within your community.



ARTICLES

- Write an article about companies your team has helped and send to local, regional and national news media, emphasizing : **SAVING COMPANIES, SAVING JOBS**.
- Talk about the role of economic developers in your community.
- Tell a story about a recent success or your efforts during C19 outbreak.



GATHER RESOURCES

- Create a list of funding resources at the local, county, state and federal level.
- Provide links to local Health Departments or State Health Departments with instructions on re-opening and safe social distancing in the work place.
- Provide resources on where to send donations.



INTERNATIONAL
ECONOMIC DEVELOPMENT
COUNCIL

Join the International EDW Challenge. Use the hashtag **#INTERNATIONALEDW** and **#YOURCOUNTRY** to participate.

Visit www.iedconline.org/EDW for more information on EDW 2020.

IEDC'S ECONOMIC DEVELOPMENT WEEK SCHEDULE

MONDAY 5/4

3:00 - 4:30 PM ET

Webinar: The Bottom-Line: How to Fund Your Organization Through the Pandemic and Beyond

4:30 - 5:30 PM ET

*Salon Discussion: Partnerships on a Regional Level

ALL DAY

#EconDevTalks: Post your questions to Reddit at bit.ly/edw_ama

TUESDAY 5/5

3:00 - 4:30 PM ET

Webinar: Reinforce Your Small Businesses and Commercial Districts

4:30 - 5:30 PM ET

*Salon Discussion: Economic Development on a State/Provincial Level

ALL DAY

#EconDevTalks: Post your questions to Reddit at bit.ly/edw_ama

WEDNESDAY 5/6

3:00 - 4:00 PM

Webinar: Rethinking BR&E in the COVID-19 Era

4:30 - 5:30 PM ET

*Salon Discussion: Workforce Engagement

ALL DAY

#EconDevTalks: Post your questions to Reddit at bit.ly/edw_ama

THURSDAY 5/7

4:30 - 5:30 PM ET

*Salon Discussion: Emerging Entities in Economic Development

3:00 PM ET

#EconDevTalks: Answers posted

FRIDAY 5/8

3:00 - 4:30 PM ET

Webinar: Measuring Economic Development Impact and Storytelling - Best Practices to Gain Grant Dollars

4:30 - 5:30 PM ET

*Salon Discussion: City/Municipal Economic Departments

*A "salon" is gathering of people for the purpose of sharing ideas and increasing the knowledge of the participants through conversation.



INTERNATIONAL
ECONOMIC DEVELOPMENT
COUNCIL

Join the International EDW Challenge. Use the hashtag
#INTERNATIONALEDW and **#YOURCOUNTRY** to participate.

Visit www.iedconline.org/EDW for more information on EDW 2020.

CELEBRATE INTERNATIONAL ECONOMIC DEVELOPMENT WEEK

JOIN THE # CHALLENGE!

#INTERNATIONALEDW #YOURCOUNTRY #IEDC



Share what economic development looks like in your community.
Post photos with the hashtag **#INTERNATIONALEDW** and
#YOURCOUNTRY to participate in our **International EDW Challenge**.