



COVID-19 Considerations for continuing manufacturing operations

Initial observations how to approach COVID-19 Crisis Management Support

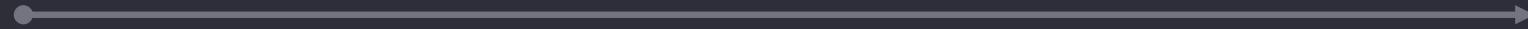
- ▶ There is no handbook for a pandemic-triggered, acute demand-drop business slowdown that affects human's health and well-being all at the same time. Enterprise Risk Management (ERM) or Business Continuity Planning (BCP) documents are not up to date, and do not capture the scope and extent of the COVID-19 crisis
- ▶ Unlike a typical transaction there is no milestone to target, it is driven by episodic events often not controlled by the company
- ▶ The fluid situation cannot be addressed with a pure-play plug and play solution
- ▶ Operational agility, on-site presence, connecting the dots on the go, identifying and acting on interdependencies are key to success
- ▶ Every day is a new day, and execution horizon is fluid: Short term is that moment, midterm is noon and long term is the end of the day



COVID-19 Strategic Considerations



Business continuity: What is "Mission Critical"?



Identify critical processes and people

- ▶ Rapid diagnostic - key processes and staff
- ▶ Scope effort required
- ▶ Consider work transference

Ensure effective delegation of tasks

- ▶ Shift / share workload
- ▶ Review succession
- ▶ Review operating procedures
- ▶ Use digital tools

Prepare for shutdown of offices

- ▶ Determine processes and services that can be paused
- ▶ Seek legal support to ensure regulatory compliance

Spotlight on: Leadership

Good leadership and role modelling will shine brighter than ever. Demonstrating agility and empathy in our communications and actions will:

- ▶ Unlock the potential for teaming, innovation and collaboration
- ▶ Create a springboard for our culture to set us apart
- ▶ Prioritise employee well-being
- ▶ Avoid unconscious bias
- ▶ Prevent discrimination in the workplace

Creating a safe working environment to enable continuity



- ▶ Ensure sites follow **Health boards / HSE guidance**
- ▶ Plan for how your **technology infrastructure** supports business
- ▶ **Manage inclusion** - how will you deploy the skills and capacity of staff with no option for remote working

Overnight, working from home has become our new norm so consider:

- ▶ Additional **IT equipment and support**, e.g., headsets
- ▶ Remote working **tools and capabilities**, e.g., Microsoft teams, mural,
- ▶ Remote working and well-being **guidelines and tips**
- ▶ **Flexible working** to facilitate childcare, cocooning, etc.

- ▶ Monitor **technology impacts** due to increased demand and respond
- ▶ Integrate with your **communications and wellbeing plans**
- ▶ Ensure **feedback channels** are open - we are all on a learning curve and we will need to continue to evolve

Lessons learned: China

The effectiveness of China's reaction to the epidemic was partially due to its use of digital tools.

China's government asked the country's tech companies for support; a sort of "call to arms against the epidemic".

Responding, Alibaba, Baidu and Tencent reacted by putting their best innovation on the table.

We need to do the same in our workplaces.

Clear communications strategy

Internal and external communication will be crucial during this crisis. There is no playbook, which means that the response is improvised and reactive.

The practicalities

- ▶ Put communications at the centre of your crisis management team
- ▶ Redeploy staff for this activity
- ▶ Your communications plan needs to include all your stakeholders
- ▶ Engage openly and regularly - it's ok to acknowledge that this is new territory

Communications channels

- ▶ Leverage traditional channels e.g. emails, bulletins
- ▶ Use collaboration tools and social media to support new working norms
- ▶ Put your leaders at the front of your communications
- ▶ Test emergency notification systems

Live your Culture

- ▶ Now more than ever it's key for your culture to be loud and clear when we do not have the luxury to stand shoulder to shoulder
- ▶ Put your culture and values at the heart of your messaging and actions
- ▶ Aim to convey confidence, empathy, humanity and realism

Spotlight on: Employee wellbeing and mental health

- ▶ Ensure employees know where to find information, e.g., Employee Assistance Programmes
- ▶ Plan resources for potential impacts on mental and physical health
- ▶ Encourage focus on communities, teaming and self development
- ▶ Enable employees to express concerns and know they are being heard
- ▶ Start with the right tone from the top and ensure that prejudice and unconscious bias are addressed and eliminated

COVID-19 | Lessons Learned from the Mediterranean

Europe is currently the epicentre of the coronavirus pandemic due to the rapid growth of cases in recent weeks and many companies have taken steps to manage this crisis even before governments and public bodies reacted decisively and adopted business management measures that are demonstrating successful results and can be considered best management practices.

Employee Safety

Maintain consistency between your stated company values and your actions in the face of crisis.

Leadership

Transparent communications which demonstrate empathy and a measured approach are key.

Productivity & Engagement

Initial enthusiasm around remote working quickly dissipates, establish structured check ins.

Organisation

Put teams in place to lead the organisations response to the COVID-19 crisis incl. legal, HR and comms.

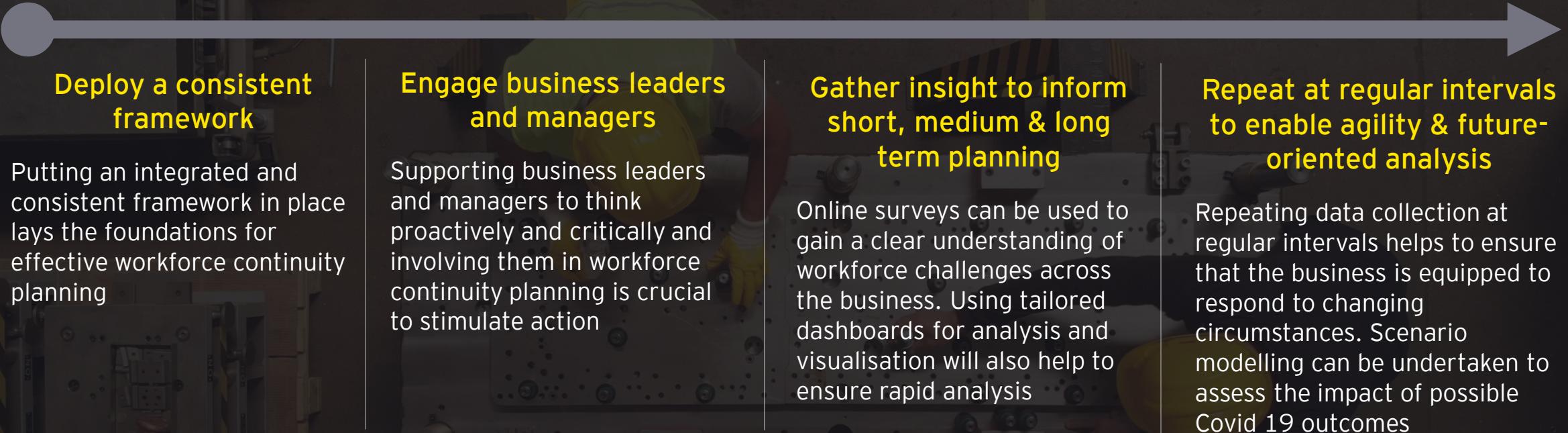
Immediate supply chain actions to take in response to COVID-19

Dynamic Network Optimization	Integrated Planning and S&OP	Supplier & Commercial Mgmt	Manufacturing	Financial & Risk Impact Mitigation
<ul style="list-style-type: none"> <input type="checkbox"/> Identify critical parts and associated first- to third-tier supplier locations required to maintain operations and anticipated production plans <input type="checkbox"/> Consider alternative transportation methods and trade routes throughout the supply chain based on facts and hypotheses. Develop activation plans accordingly <input type="checkbox"/> Determine production, transportation and storage constraints and capacity <input type="checkbox"/> Assess impact of transportation and production labor shortages driven by policy and travel restrictions <input type="checkbox"/> Evaluate channel signals (i.e., increase in retail, decrease in restaurant) <input type="checkbox"/> Plan for potential disruption due to 3PL shortage of refrigerated trucks 	<ul style="list-style-type: none"> <input type="checkbox"/> Reassess demand based on outbreak-driven market adjustments (e.g., increased demand from grocery stores, reduced demand from restaurants and fast food) <input type="checkbox"/> Review inventory levels to evaluate emergency inventory management strategies (e.g., pooling) <input type="checkbox"/> Adjust and optimize production plan focus to accommodate anticipated disruptions <input type="checkbox"/> Synchronize supply, manufacturing, logistics and fulfillment to meet demand in short- to mid-terms <input type="checkbox"/> Plan allocation strategy for future shifts in demand (e.g., supermarket rush ends or restaurants open again) 	<ul style="list-style-type: none"> <input type="checkbox"/> Identify supplier options and associated supplier locations required to maintain operations and anticipated production plans <input type="checkbox"/> Collaborate immediately with customers and suppliers to respond collectively from demand to supply <input type="checkbox"/> Identify and qualify alternative sources of potato supply and other key products <input type="checkbox"/> Monitor lead times to gauge performance <input type="checkbox"/> Build long-term implications and issue tracker to de-risk impact to business as usual after crisis <input type="checkbox"/> Support suppliers with contract compliance and update where possible <input type="checkbox"/> Assess contract financial obligations and actions 	<ul style="list-style-type: none"> <input type="checkbox"/> Develop risk assessment checklist for all sites to perform and action <input type="checkbox"/> Implement social distancing standards for site meetings, visitation, breaks/lunches, and interactions where broadly applicable <input type="checkbox"/> Implement remote work plans and adjust operating patterns and leadership support to optimize production and minimize risk <input type="checkbox"/> Develop "disinfect/restart" standard and obtain critical PPE <input type="checkbox"/> Understand cultural impacts and ways to support the workforce <input type="checkbox"/> Determine workforce planning for minimum staffing levels and risk mitigation <input type="checkbox"/> Governance and dissemination of regulations impacting manufacturing sites 	<ul style="list-style-type: none"> <input type="checkbox"/> Execute risk response strategy for at-risk suppliers and/or their respective Tier N suppliers <input type="checkbox"/> Prepare responses to supplier invocation of force majeure clauses <input type="checkbox"/> Anticipate for delayed payment requests from customers and plan procedure for handling these requests <input type="checkbox"/> Suppliers and vendors may potentially request accelerated payment terms <input type="checkbox"/> Continue risk and controls assurance as processes and operations shift globally <input type="checkbox"/> Identify current and future contract exposure <input type="checkbox"/> Identify any cash constraints and liquidity/working capital opportunities
SC Intelligence and Analytics				
<ul style="list-style-type: none"> <input type="checkbox"/> Highlight immediate gaps in current supply chain (manufacturing, suppliers, inventory, planning, logistics) <input type="checkbox"/> Quantify cost of current and potential issues driven by supply disruptions and changes in demand <input type="checkbox"/> Develop additional hypotheses on most likely courses of action and worst-case scenario planning 	<ul style="list-style-type: none"> <input type="checkbox"/> Command and decision-making delegation <input type="checkbox"/> Corporate and supply chain reporting 	<ul style="list-style-type: none"> <input type="checkbox"/> Workforce re-planning <input type="checkbox"/> Crisis playbook development 	<ul style="list-style-type: none"> <input type="checkbox"/> Define SC resiliency opportunities for long term <input type="checkbox"/> Assess readiness by function (people, process, technology) 	<ul style="list-style-type: none"> <input type="checkbox"/> Initiate communications protocols and reporting cadence <input type="checkbox"/> Validate current-state impact and understanding of COVID-19 <input type="checkbox"/> Overlay current supply chain to COVID-19 WHO tracker for future identification of challenge
Workforce Planning, Governance & Communications				

Managing the Workforce



Workforce Planning - Workforce Continuity



The EY Workforce Continuity Framework

1. Assessing the impact:

What impact will Covid 19 have on your workforce?

Customer impacts

- ▶ How will customers of your business be impacted and how will this change the way they interact with your business?

Staff impacts

- ▶ How will your staff be directly impacted by Covid 19 and how will this change how they engage with their work?

Business impacts

- ▶ How will the overall operations of the business be impacted and how will this change short-term business planning?

2. Prioritising workforce deployment:

How should work be prioritised to maximise workforce efficiency and effectiveness?

Critical

Business critical tasks that must be undertaken and completed to ensure business continuity

Required

Required tasks that have a significant impact on customer experience and business performance

Optional

Optional tasks that are important for business improvement, but not critical to operational performance

A. What are the tasks/activities that need to be completed to ensure business continuity?

B. What level of effort is required to complete these tasks/activities?

C. What teams are key to enable successful delivery?

D. What roles within these teams are critical for delivery?

E. What working arrangements are required to enable effective delivery?

F. What are the anticipated workforce challenges and likely points of failure?

G. What opportunities exist to redistribute current workforce if required?

H. What are the requirements to reshape the workforce?

3. Action planning:

What actions should be taken to minimise disruption?

Respond

- ▶ What actions need to be taken to respond to Covid 19 to address the Critical, Required and Optional tasks to be completed?

Sustain

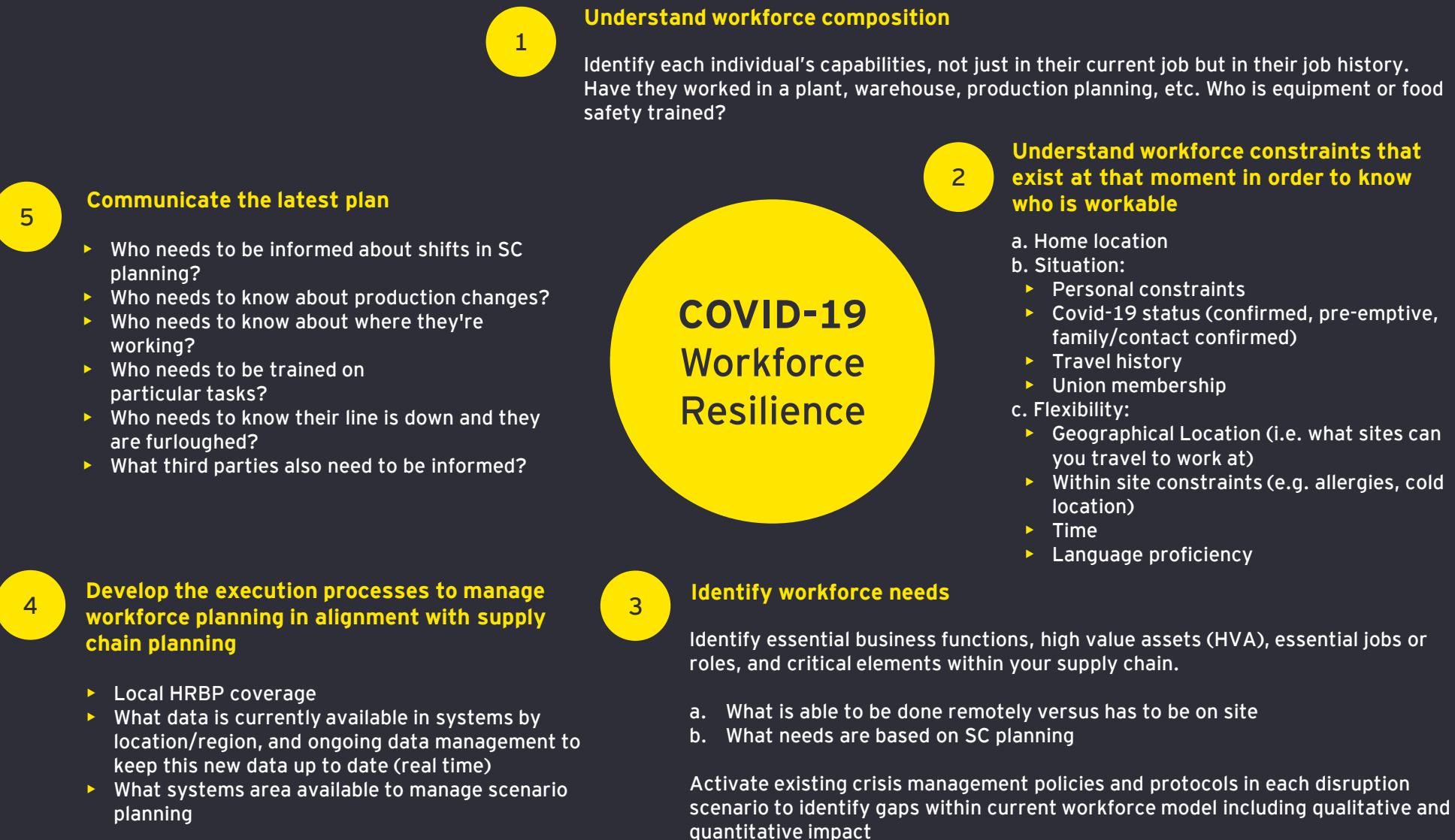
- ▶ What measures need to be taken to sustain the response to Covid 19, in the absence of known timelines?

Reset

- ▶ What actions need to be taken to prepare for the eventual reset?
- ▶ What groundwork needs to be laid today and tomorrow?

Tactical workforce planning - High level approach

Leadership alignment



Effective communication network

Specific Tactical Actions for the Plant

How should plant leadership better prepare and react to Covid-19 concerns?

Facilities preparation

- Medical tents and screening procedures have been put in place outside of the plant to assess employees' health
- Disinfectant stations have been placed through-out the plant, including in office areas
- Alternatives to fingerprint or keypad punch and security devices have been installed
- Automatic doors and gates have been installed for must-use entrances (ex: Shop-floor)
- Floor markings are in place to indicate social distancing where applicable

Safety and wellbeing

- Workers with any - even negligible - symptoms of the flu syndrome are not allowed to present themselves at the plant
- Checkpoints have been created at the beginning, along and end of each shift to monitor good health of the teams
- In-person internal meetings are only taking place with the minimum number of people, while following distancing guidelines
- Support is being offered to employees with special needs situations (elderly care, child-care, etc.)

Plant access

- Visits, even from headquarters or other company sites, have been cancelled or limited to the absolute necessity
- Non-essential contractors' badges and authorizations have been deactivated to prevent them from entering the site
- Standards have been established to monitor health of essential external presence (drivers, contractors, delivery services)
- Recruitment and training activities at the plant have been suspended unless necessary to support production

Leadership and Communication

- Management is acting as a model for good hygienic behaviors and monitors employee adherence to such practices
- Daily communications and updates to employees have been established to avoid rumors and panic spread
- Communication channels have been proactively adopted with all stakeholders, including investors and unions
- Covid-19 hotlines have been setup to answer employees' concerns and questions

Specific Tactical Actions for the Plant

How should plant leadership better prepare and react to Covid-19 concerns?

Sanitation and cleaning

- New tools and PPE cleaning standards have been developed and communicated to all employees
- New workstation cleaning operations have been scheduled at the beginning and ending of each shift
- Sanitation rounds frequency has been reviewed and adjusted throughout the plant, including offices, maintenance shop and warehouse areas. Execution is being closely monitored
- Sanitation material and resources have been secured to support activities in the short and long term

Production

- Essential SKUs have been identified and prioritized based on demand variations observed on the market
- Raw material and production inputs have been secured to support production activities in the short and long term
- Staggered shifts have been established per line or production area to reduce chances of cross contamination
- Production schedules have been adjusted to limit the number of changeovers on every production line
- Review staffing to reduce need for new employees

Maintenance

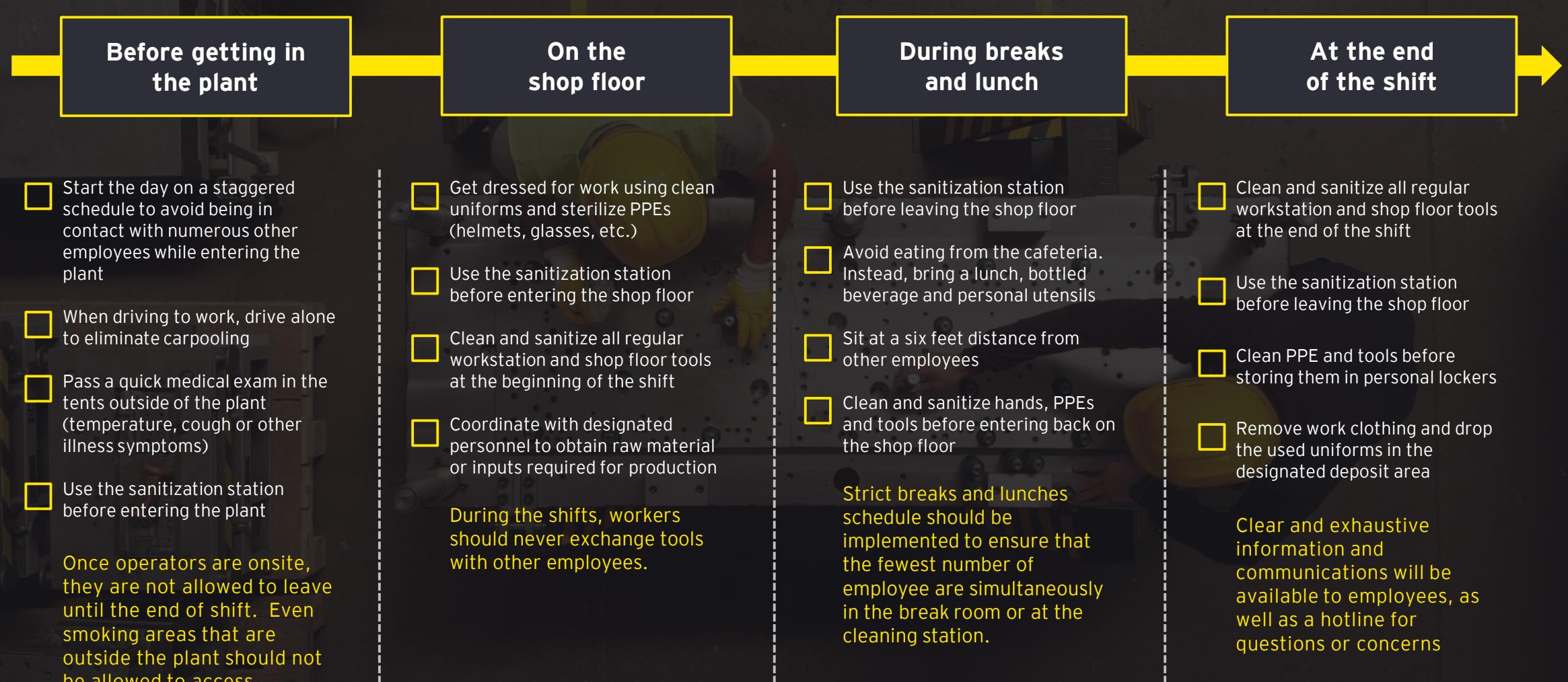
- Unnecessary maintenance and improvement projects have been postponed to reduce risk of unplanned downtime
- Critical spare parts have been secured to support production activities in the short and long term
- Essential work orders have been grouped, scheduled and assigned to a single mechanic per maintenance area or production line
- Sanitation stations have been put in place to clean all new inbound parts, tools and materials and standards have been put in place for its use

Shipping and receiving

- Warehousing and production area have been segregated as much as possible to reduce cross contamination risks. Only a minimal number of employees are allowed to travel between both areas.
- Transportation needs, both inbound and outbound, have been revised in relation to new production demands
- Communication channels have been put in place with logistic third parties to secure transportation needs
- Current logistics third party contracts have been evaluated and adapted to enforce new safety protocols and regulations

Specific Tactical Actions for the Plant

How should prevention measures impact the day of an operator



Specific Tactical Actions for the Plant

How should prevention measures impact the day of a maintenance employee

Before getting in the plant

- Start the day on a staggered schedule to avoid being in contact with numerous other employees while entering the plant
- When driving to work, drive alone to eliminate carpooling
- Pass a quick medical exam in the tents outside of the plant (temperature, cough or other illness symptoms)
- Use the sanitization station before entering the plant

Once mechanics are onsite, they are not allowed to leave until the end of shift. Even smoking areas that are outside the plant should not be allowed to access.

On the shop floor

- Get dressed for work using clean uniforms and gloves and sterilize PPEs (helmets, glasses, etc.).
- Use the sanitization station before entering the shop floor and the workshop
- Sanitize personal workshop space at the beginning of the shift
- Avoid moving with a tool cart. Bring the required tool to conduct workorders and sanitize it before getting on the floor
- Prepare and sanitize materials and parts used in repairs before conducting the workorder in order to limit contact with the production equipment

During the shifts, mechanics should never borrow or exchange tools with other workers.

During breaks and lunch

- Use the sanitization station before leaving the shop floor and the workshop
- Avoid eating from the cafeteria. Instead, bring a lunch, bottled beverage and personal utensils
- Sit at a six feet distance from other employees
- Clean and sanitize hands, PPEs and tools before entering back on the shop floor or in the workshop

Strict breaks and lunches schedule should be implemented to ensure that the fewest number of mechanics are simultaneously in the break room or at the sanitization station.

At the end of the shift

- Clean and sanitize all personal workshop place and commonly used tools at the end of the shift
- Use the sanitization station before leaving the shop floor or workshop
- Clean PPE before storing them in personal lockers
- Remove work clothing and drop the used uniforms in the designated deposit area

Clear and exhaustive information and communications will be available to employees, as well as a hotline for questions or concerns

Specific Tactical Actions for the Plant

How should prevention measures impact the day of a production supervisor

Before getting in the plant

- Start the day on a staggered schedule to avoid being in contact with numerous other employees while entering the plant
- When driving to work, drive alone to eliminate carpooling
- Pass a quick medical exam in the tents outside of the plant (temperature, cough or other illness symptoms)
- Use the sanitization station before entering the plant

Once supervisors are onsite, they are not allowed to leave until the end of shift. Even smoking areas that are outside the plant should not be allowed to access.

On the shop floor

- Get dressed for work using clean uniforms and sterilize PPEs and tools (helmets, glasses, CBs, etc.)
- Use the sanitization station before entering the shop floor
- Sanitize personal workspace at the beginning of the shift
- Train staff on prevention measures and monitor application
- Conduct line tours to confirm the proper execution of mandatory sanitation procedures
- Gather and transfer important information from one shift to another to avoid employees overlaps

During the shifts, supervisors should never borrow or exchange tools with other supervisors.

During breaks and lunch

- Use the sanitization station before leaving the shop floor
- Avoid eating from the cafeteria. Instead, bring a lunch, bottled beverage and personal utensils
- Sit at a six feet distance from other employees
- Clean and sanitize hands, PPEs and tools before entering back on the shop floor

Strict breaks and lunches schedule should be implemented to ensure that the fewest number of people are simultaneously in the break room or at the sanitization station.

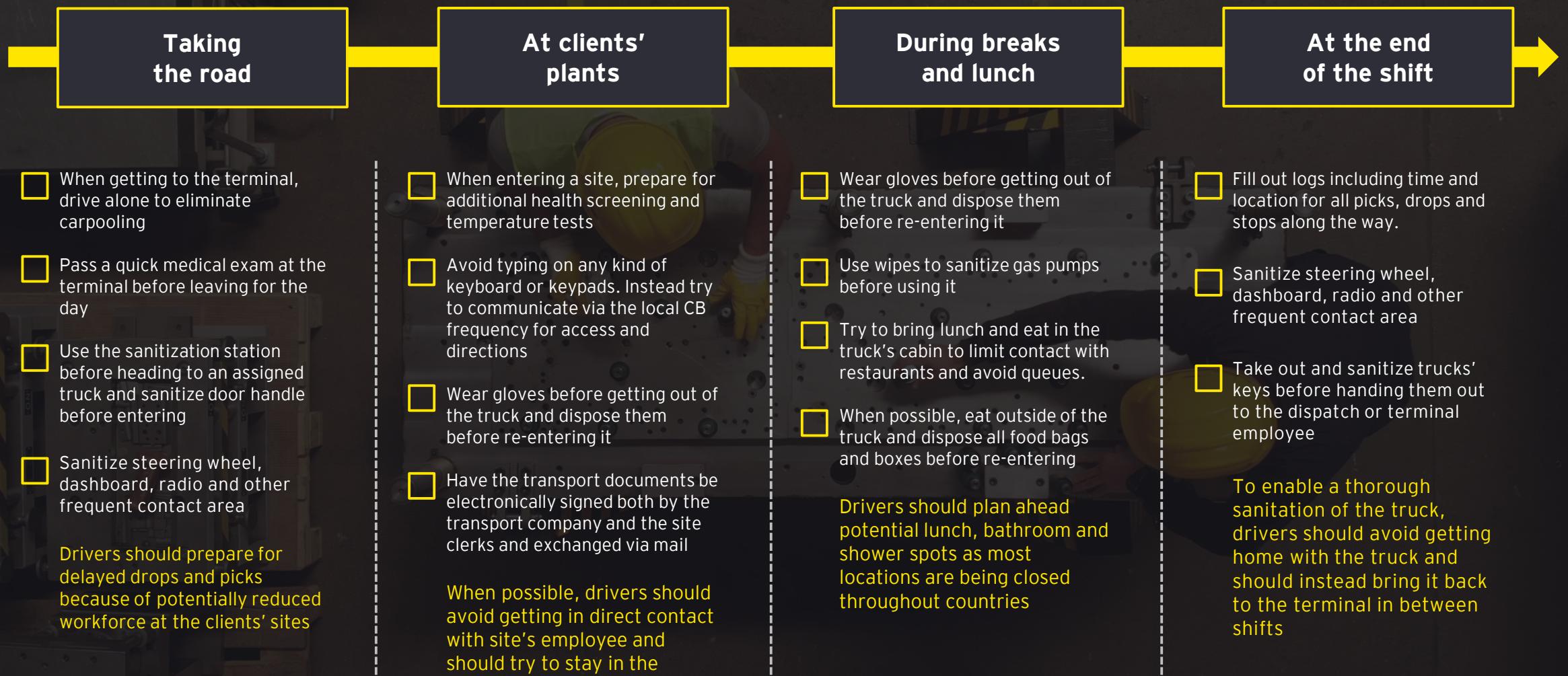
At the end of the shift

- Clean and sanitize all personal workspace and commonly used tools at the end of the shift (shared computer, phone, radio)
- Use the sanitization station before leaving the shop floor or workshop
- Clean PPE before storing them in personal lockers
- Remove work clothing and drop the used uniforms in the designated deposit area

Clear and exhaustive information and communications will be available to employees, as well as a hotline for questions or concerns

Specific Tactical Actions for the Plant

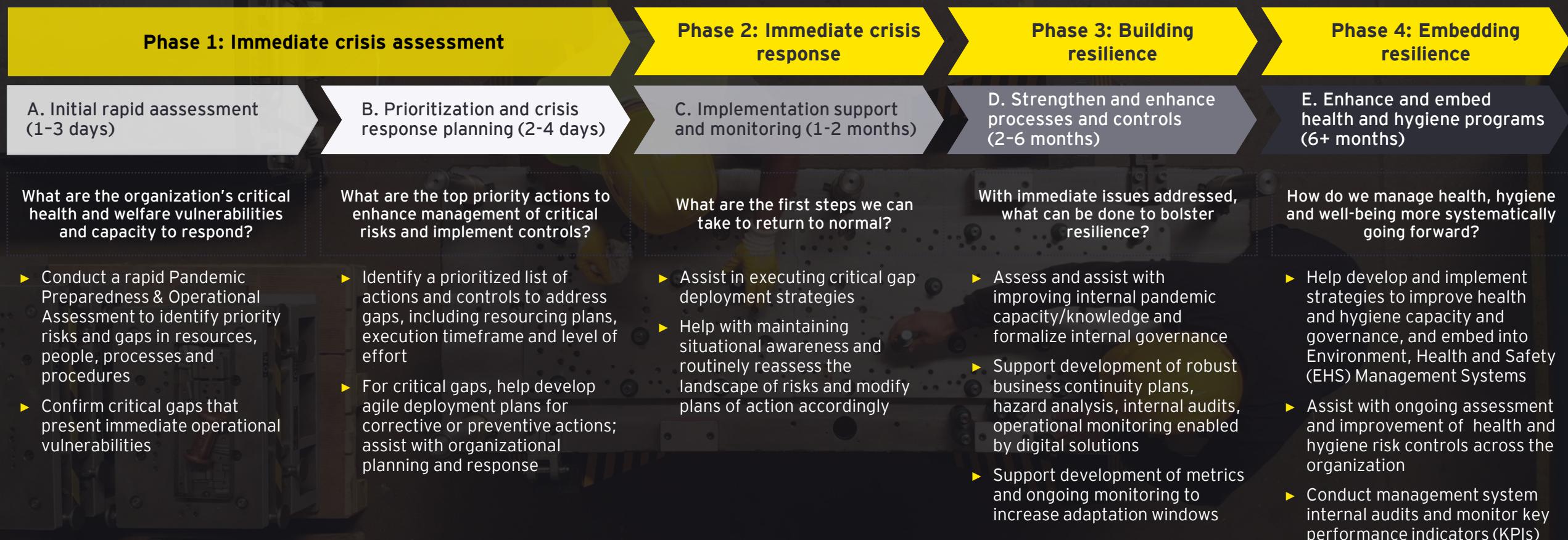
How should prevention measures impact the day of a truck driver



A close-up photograph of a man with a beard and mustache, wearing a blue baseball cap and yellow safety glasses. He is leaning over, focused on working on a large, dark industrial machine. His hands are gloved, and he appears to be adjusting or inspecting a component. The background is blurred, showing more of the machine's complex machinery and control panels.

Considerations for
the future

What Happens Next to build resilience in the future



What Happens Next - We are able to support this resilience across the various parts of the organisation

Example Areas	Immediate crisis response (1-2 months)	Building resilience (2-6 months)	Embedding resilience (6+ months)
Job Hazard Analysis and Industrial Hygiene	<ul style="list-style-type: none"> ▶ Assess high-exposure tasks for personal protective equipment (PPE) gaps (e.g., job duties that require travel and person-to-person contact) ▶ Assist with development and execution of an accelerated procurement and dissemination strategy for critical PPE and other infrastructure needs ▶ Assist with development and execution a communication plan for disseminating changes to standard work procedures and requirements, factoring in changing conditions 	<ul style="list-style-type: none"> ▶ Help establish a job hazard review team to regularly monitor exposure risks across the enterprise ▶ Help conduct and enable routine facility and work area assessments aimed at preventing exposure ▶ Assist with standardizing procedures for hazard analysis and communication ▶ Implement digital tools that support exposure tracking, corrective action and communication 	<ul style="list-style-type: none"> ▶ Help integrate industrial hygiene and disease prevention into standard work development ▶ Conduct internal audits to identify where and why controls are failing ▶ Facilitate and enable routine facility and work area hazard analyses to address changes in job duties and work environments ▶ Continuously monitor pandemic risks and integrate these risks into corporate risk management
Audits and Inspections	<ul style="list-style-type: none"> ▶ Conduct accelerated audits and inspections of work area conditions, including behavior-based safety observations, to identify exposure risks and controls ▶ Facilitate development of a strategic plan for an immediate response to critical findings and observations 	<ul style="list-style-type: none"> ▶ Facilitate development of an enterprise team focused on monitoring changing conditions and revising audit and inspection criteria ▶ Help establish procedures for addressing identified issues ▶ Help establish regional/site inspection teams responsible for continuous assessment and corrective actions 	<ul style="list-style-type: none"> ▶ Help align crisis management and business continuity risks into internal audit planning process
Business Continuity Management	<ul style="list-style-type: none"> ▶ Identify business continuity team, including backup personnel at the corporate, regional and site level ▶ Facilitate development short-term continuity management plans that address cyclical nature of infection rates/quarantine ▶ Help establish and test resilient lines of communication and a means to address emergencies in a coordinated fashion 	<ul style="list-style-type: none"> ▶ Support development of a medium-term business continuity plan that considers the potential for future disruption from COVID-19 or similar pandemics ▶ Implement digital tools to store and communicate business continuity procedures and facilitate emergency response 	<ul style="list-style-type: none"> ▶ Assist and enable continuous monitoring and revision of business continuity plans in light of changing conditions ▶ Support expansion of continuity plans to incorporate critical suppliers and collaborate with suppliers and industry peers to establish sector-focused plans ▶ Help conduct regular tabletop exercises to test and validate business continuity and crisis management plans



Thank you

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Urbanization, changing consumer expectations and emerging digital technologies are reshaping what's possible, from the production and distribution of goods to the transportation of people. To succeed in this new world of mobility and smart manufacturing, incumbents must transform themselves at unprecedented speed – to think like an innovative start-up, tap into new talent and engage the customer. With experience across the value chain and key technology alliances, our teams show clients how to create efficiencies now while adopting digitization and optionality for long-term growth. Automotive, transportation, aerospace, defense, chemicals and industrial products companies can draw on the strength of our network of cross-industry players and put our diverse range of approaches to use today to equip their businesses for tomorrow.

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ED None

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