COVID-19: Preparing for the restart and winning the fight

Private Sector Restart Discussion Document

APRIL 27, 2020

Preliminary
Context: Restarting and Winning the Fight in the new COVID-19 world

Navigating COVID-19 response is a multi-step process unfolding in three distinct phases (Flatten, Fight, Future)

Many companies have primarily focused on reacting to the initial shock and "Flattening" the impact thus far. Significant value is at stake as companies transition to the Fight phase and begin re-starting their operations over the next 12 to 24 months

Competitive dynamics will be altered as markets open slowly. Companies need to be nimble and agile and innovate the business model in very fluid environment, including:

- Preparing for a safe return of workers and customers
- Driving topline security and advantage through adversity
- Identify specific opportunity areas and risks across value chain and supply chain
- Reinforcing partnership and collaboration with governments and communities
Context: COVID-19 response likely to unfold in three phases; each demands strategic decision-making in a different context and at a differing pace

Flatten: Restart
- Economic activity
- HC system capacity
- Critical care patients
- Interventions

Fight: Interventions
- Economic activity
- HC system capacity
- Critical care patients
- Interventions

Future: Interventions
- Vaccine/treatment

Must make rapid, reactive changes amidst aggressive physical distancing, consumer demand shifts, and supply constraints

Competitive dynamics altered as markets open slowly; need to be nimble and agile and innovate the business model in very fluid environment

Industry returns to stable competition in fundamentally different environment vs. pre-COVID period

Source: BCG Henderson Institute; BCG analysis
## Context: What the world might look like at each phase of the journey

<table>
<thead>
<tr>
<th>Macro factors: Disease and Economy</th>
<th>Flatten (~2-3 months)</th>
<th>Fight (~12 - 24 months)</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aggressive actions to contain COVID-19; widespread lockdown and aggressive social distancing</strong></td>
<td></td>
<td><strong>Movement restrictions begin to ease; likely variation by geography</strong></td>
<td><strong>Disease mostly contained; vaccine developed</strong></td>
</tr>
<tr>
<td><strong>Rapidly increasing sick population</strong></td>
<td></td>
<td><strong>Potential for policy changes to respond to recurrences and regional outbreaks</strong></td>
<td><strong>Signs of economic recovery as impacted sectors restart in earnest (e.g. hospitality)</strong></td>
</tr>
<tr>
<td><strong>Steep job losses and business closures; GDP declines significantly</strong></td>
<td></td>
<td><strong>Economy slowly restarts but with high unemployment; continued contraction and uncertainty</strong></td>
<td><strong>Full return to ‘normal’ life, including travel and office</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consumer Demand</th>
<th><strong>Majority of people stay home, do not travel or go to work</strong></th>
<th><strong>People begin to return to normal routines, including work and limited leisure travel</strong></th>
<th><strong>Some permanently altered habits emerge</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Avoid other people (e.g. delivery vs. going to grocery stores if possible)</strong></td>
<td><strong>Continued heightened awareness and avoidance of large gatherings (e.g. sports stadiums, concerts)</strong></td>
<td><strong>Sports, events return with more muted attendance</strong></td>
<td><strong>Supply chain returns to normal consistency</strong></td>
</tr>
<tr>
<td><strong>Non-essential stores, ent. venues closed</strong></td>
<td><strong>Public-facing businesses begin to reopen, but with limited capacity (e.g., movie theaters)</strong></td>
<td></td>
<td><strong>Potential changes to retailers’ ways of working / demand</strong></td>
</tr>
<tr>
<td><strong>Do not attend events, spend time indoors/with close family</strong></td>
<td><strong>Continued anxiety and conservatism in spending and consumption</strong></td>
<td></td>
<td><strong>Soft market forces smaller, independent businesses close permanently</strong></td>
</tr>
<tr>
<td><strong>Prevailing sentiments inc. anxiety and boredom</strong></td>
<td></td>
<td></td>
<td><strong>Slack labor market</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply</th>
<th><strong>Essential services continue to run, but potential supply shocks / shortages continue</strong></th>
<th><strong>Most businesses come back online</strong></th>
<th><strong>Supply chain returns to normal consistency</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Labor shortages due to disease and lockdowns</strong></td>
<td><strong>Soft market forces smaller, independent businesses close permanently</strong></td>
<td><strong>Potential changes to retailers’ ways of working / demand</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Slack labor market</strong></td>
<td><strong>Supply chain, manufacturing, distribution affected differently in geographies</strong></td>
</tr>
</tbody>
</table>

Source: BCG Henderson Institute; BCG analysis
Context: Many companies are still in a reactive Flatten mode today, but preparing for the rebound and fight is becoming increasingly critical.

### Mode

<table>
<thead>
<tr>
<th>Measure</th>
<th>React &amp; Flatten</th>
<th>Fight &amp; Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set-up a digital information hub for all the latest policies and information</td>
<td>83%</td>
<td>8%</td>
</tr>
<tr>
<td>Update office hygiene program and environmental cleaning procedures</td>
<td>93%</td>
<td>4%</td>
</tr>
<tr>
<td>Modify travel policies - restrict travel in and out of highly impacted regions</td>
<td>96%</td>
<td>3%</td>
</tr>
<tr>
<td>Arrange flexible working plans and provide required infrastructure/solutions for enabling it</td>
<td>81%</td>
<td>15%</td>
</tr>
<tr>
<td>Introduce employee self-quarantine policy based on travel history/health status</td>
<td>87%</td>
<td>8%</td>
</tr>
<tr>
<td>Set-up a COVID-19 rapid response team</td>
<td>59%</td>
<td>18%</td>
</tr>
<tr>
<td>Identify alternatives and contingencies for critical components, operations, and logistics routes</td>
<td>53%</td>
<td>25%</td>
</tr>
<tr>
<td>Top-down scenario assessment, estimation of time point for a demand rebound</td>
<td>34%</td>
<td>44%</td>
</tr>
<tr>
<td>Plan to build supply chain readiness for a potential rebound</td>
<td>15%</td>
<td>46%</td>
</tr>
<tr>
<td>Change in marketing/communication plan given crisis and in anticipation of rebound</td>
<td>38%</td>
<td>34%</td>
</tr>
</tbody>
</table>

### Measures Taken

*Source: BCG Henderson Institute; BCG analysis*
How to Win: Key action areas for business leaders

Flatten: Tackle immediate priorities

**Immediate**

- Manage Cost, Cash, and Liquidity
  - Manage short term credit and debt commitment; build central team to simulate financials as per evolving scenarios; decisively take structural actions: TURN PMO, zero-based budgets, delayering/restructuring

Establish Crisis Management
- Create a rapid response & transformation team; develop a scenario based planning approach for future settings; take measures to ensure operational continuity and site readiness; ensure open and direct communication with employees

**Mid-term**

- Enable Safe Return & Reopen
  - Monitor safety & wellness; ensure effective context-adjusted work; establish IT/tech infrastructure for remote work; empower more local decision-making

- Drive Top Line Security
  - Assess changes in customers’ behaviors; adapt and transform channels (e-commerce), sales, marketing spend, pricing, and support

- Stabilize Supply Chain and Liquidity
  - Ensure quick and safe restart of facilities; drive centrally driven efficiency measures; set up capabilities to manage unstable supply chain

**Long term**

- Organize for the New Normal
  - Transform workforce (right size, increase flexibility, build in plans for variability); enhance wellness offering; accelerate digital, remote capabilities, and AI

- Emerge Stronger (Advantage in Adversity)
  - Ramp up commercial efforts to seize market shifts; leverage learnings to accelerate digital capabilities

- Reinvent Operations
  - Redesign and simplify supply chain network, define evolving production model, make capital investments with lower opp'ty cost in short-run

Future: Plan for the new reality post crisis

Focus of these materials

- Flatten: Tackle immediate priorities
- Fight: Prepare for the restart and rebound, Seek advantage in adversity
- Future: Plan for the new reality post crisis

**Ecosystem**

- Workers & Workplace
- Customers & Channels
- Supply Chain & Operations
- Enterprise

**Actively Engage Government and Society**
Engage stakeholders, capture stimulus value, determine how to contribute during the crisis
How to Win: Lessons from top performers during the Great Recession

- Be proactive: Get cash and cost out quickly to gain advantage and invest, opportunistically pursuing M&A.

- Stick to a clear vision: Pursue a clear vision aligned with that from before the crisis, based on a few key themes.

- Increase demand vitality: Adapt and innovate to capture new demand and achieve sustainable long-term growth.

- Create supply agility: Given uncertainty, build agility and flexibility in your supply base and supply chain.

- Build enterprise resilience: Build organizations to not only withstand, but also anticipate shocks, including streamlining operations and digitizing processes.

Start thinking about the Future now

Begin identifying potential sources of advantage to build now that will help in the Future:

- What is your starting position? Is it stressed, impacted, or among the lucky ones?

- How can you outflank your competition?

- Are there assets to buy, or contracts to execute, that are priced attractively now?

- What are the product and service innovations that you can pursue and perfect?
1a. Enable Safe Return/Re-Open

1b. Organize for the New Normal

2. Drive Topline Security and Advantage

3. Stabilize and Reinvent Supply Chain

Appendix
Framework to guide return to work planning

1. Under what context should employees be allowed to return to workplace?

2. Which employee cohort should return to workplace?

3. What interventions should be taken to ensure a safe work environment?

4. How will our policies and plans vary based on region, site, function?

Iteration as new data emerges
When: Timing for employees to return from work driven by both external and internal factors

Under what macro and company-specific context should employees be allowed to return to their workplace?

Initial recommendation:

- Leverage science and data to model local scenarios
- Monitor local policies and guidelines to understand earliest timeline
- Quantify company-specific risk tolerance for each region
- Determine time to re-open sites balancing government guidance, company risk tolerance, and business need
- Monitor for additional COVID-19 waves and revisit planning across geographies and over time
External factors will dictate the earliest time to return to work

External factors to monitor:

• Shelter-in-place orders are lifted
• Healthcare capacity is no longer constrained
• Infection risk falls below certain acceptable threshold
• A robust monitoring & containment system exists
  - High-quality testing readily available
  - New cases can be identified quickly
  - Mechanism in place for effective, targeted quarantines
• Certification sharing of seroconversion or negative test results is widely adopted
• Childcare solutions in place and/or schools reopened

These elements will dictate the earliest that a return to work could occur

Other company-specific elements should be considered to ensure plan to return to work aligns with company priorities

Key to remember that company cannot make a decision in isolation

Source: HBR 2020-04 A Detailed Plan for Getting Americans Back to Work; BCG analysis
Several countries have announced re-opening ambitions, yet uncertainty exists around right strategy

<table>
<thead>
<tr>
<th>Country</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
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</thead>
<tbody>
<tr>
<td>China</td>
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<td>Hong Kong</td>
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<td>South Korea</td>
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<td>Sweden</td>
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<td>Czech Republic</td>
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<td>Denmark</td>
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<td>New Zealand</td>
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<td>Austria</td>
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<td>Singapore</td>
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<tr>
<td>USA</td>
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</tbody>
</table>

As of April 17th

Summary

Staged reopening with mandatory monitoring, testing, and contact tracing with strict workforce guidelines (e.g., for manufacturing, groups of 20 work, eat, and live together)

Avoided lockdown with exception of schools (closed 2/3) because they consider schools as “high risk” areas

Avoided lockdown with exception of schools (closed 3/10) with high testing capacity and sophisticated tracing measures

“Low-scale lockdown” approach avoided total economic shutdown but increasing case counts suggest potential shutdown in near term

Sequenced re-opening based on transmission risk of activity (e.g., open small shops and open-air sports facilities first), with strict distancing rules and monitoring through testing and tracing

Early phases of reopening include a subset of schools and educational programs

Full containment and reboot approach enabled by tight border controls and early action (low case count);
Additional protections outlined for the vulnerable (e.g., over age 70 advised to stay home)
Gradual reopening of small shops first, then schools, with strict containment strategy restrictions and widespread testing and tracing
4-phased reopening while protecting at-risk populations. Initial opening 1 includes finance and tech given ability to enforce strict protective compliance employ 10% of population
Cautious exit with coordination with states, monitoring infection dynamics, and enforcing ongoing restrictions
Despite avoiding shutdown with testing and contact tracing, Singapore closed nonessential businesses and schools on 4/3
Proposed 3-phase approach mitigates risk, protects vulnerable, and implementable on state or county-level, based on governor’s discretion; states like FL, MN, MT, TX, and VT beginning to reopen week of 4/20

Notes: ‘ (Began…) ’ refers to the start date of a country’s lockdown, lockdown definition varies among countries but generally refers to date non-essential businesses were ordered to shut down.
Source: Lit search; Washington Post; USA Today; BCG Analysis

Proposed re-entry plans dependent on disease evolution in each country

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Government measures to re-open economy will play a key role in retailer actions

Businesses are re-opened in Stages
More critical businesses open first, businesses where social distancing is difficult/impossible stay closed

Different regions and cities are re-opened in Stages
Restrictions can be eased first in places with low infection rates or reduced risk of transmission, such as rural communities

Only certain workers are allowed back into society
Workers require proof that they have immunity or do not carry the virus in order to return to work

Countries already implementing these measures:

Countries discussing these measures:

Source: Press search
Under most staged re-opening plans in Europe, stores expected to open before restaurants and public events allowed

**Denmark**
- Mid-Apr: Kindergartens and schools
- May 10 or later: Shopping centers
- Aug: Restaurants, bars, cafés and hairdressers

**Austria**
- Apr 14: Small shops, DIY stores, garden centers
- May 1: All shops, shopping malls and hairdressers
- Mid-May: Restaurants and cafes
- July: Public events

**Czech Republic**
- Apr 9: Shops selling hobby goods and building materials
- After Easter weekend: More shops may be re-opened

Source: Press search
Within US, gradual re-opening beginning to occur with significant variation in announced re-opening steps (1/2)

**Florida**
- **Apr 18** Beaches re-open with restricted hours

**Minnesota**
- **Apr 18** Outdoor recreational activities allowed

**Montana**
- **Apr 20** State parks re-open for day use

**Texas**
- **Apr 20** Low contact businesses (e.g., construction, property mgmt) to re-open
- **Apr 22** Elective surgeries allowed
- **Apr 24** Retail stores can offer "to go" product pickup
- **Apr 30** Stay at home order concludes

**Vermont**
- **Apr 20** Farmers markets to reopen
- **May 1** Stay at home order concludes
- **May 15** Stay at home order concludes

Source: CNN; The Hill; NBC; Newsweek; Politico; USA Today
Within US, gradual re-opening beginning to occur with significant variation in announced re-opening steps (2/2)

Georgia

- Apr 21: Medical facilities provide nonessential care allowed to reopen
- Apr 23: Gyms, fitness centers, bowling alleys, body art studios, barbers, cosmetologists, hair designers, nail care artists, estheticians and their respective schools and massage therapists allowed to open
- Apr 27: Movie theaters, private clubs, and restaurant dining rooms allowed to reopen

South Carolina

- Apr 20: Beaches, public piers, docks, and wharfs
- Apr 21: Non-essential retailers allowed to reopen (e.g., furniture, clothing, jewelry, department stores, etc.) at 20% capacity

Not exhaustive  As of April 22nd

Source: CNN; The Hill; Vox; BCG analysis
Governments are implementing concrete measures to ensure public health after the economy re-opens

**Not exhaustive**  **As of April 20th**

- **Making masks mandatory**
  Austria, Slovakia, Czech Republic, and US states (CT, HI, MD, NJ, NY, PA, RI) are making the use of face masks in public mandatory to prevent further spread of the virus

- **Enabling health checks of citizens**
  China has implemented QR codes to enable officials to check the health of citizens and quickly quarantine everyone who has possibly come into contact with a confirmed case

- **Continued social distancing**
  Austria and US states (MN, TX) have made it clear that social distancing rules must continue to be adhered to as stores and businesses re-open

Source: Press search
BCG PLAN outbreak modeling can inform a potentially safe window for employees to return to their workplace

PLAN is a BCG developed tool that helps decision-makers visualize healthcare supply & demand imbalance scenarios for the US at the county level

PLAN produces 3 key outputs to project COVID-19 rates and healthcare capacity:

- Epidemiological model; current prevalence of disease based on deaths
  - Projected prevalence
  - Number requiring hospitalization, ICU, ventilators
- Capacity of hospital beds, ICU beds, and ventilators
- Interactive tool
  - Visualization and exploration of scenarios including different levels of public health intervention and adjustments to capacity (e.g., deferring non-essential use)
In addition to external factors, need to balance employee risk & patient impact to determine return to work timing

• What level of exposure risk to an employee falls below an acceptable threshold?

• What mitigation processes are in place to reduce risk to employee health if an exposure occurs?

• What level of legal liability is acceptable?

• How does a delay in return to physical work impact patient well-being?

• At what level is this patient risk beyond an acceptable level due to supply impact, trial impact, etc.?

• At what point does a prolonged delay begin to alienate your target patient population?
Who: On-site criticality can be used to determine waves of employees returning to work; ability to utilize risk profile likely limited in US

Potential recommendation:

- Potential segmentation of employees based on on-site criticality
  - E.g., manufacturing as high criticality, R&D medium, and IT as low

- Consider voluntary waves within each segmentation
  - Any mandatory waves or assessment and segmentation of employees based on risk profiles (e.g., evaluating risk by age and comorbidities as some companies utilized in China) limited by legal and feasibility constraints of the country/region

- Determine number and cadence of waves for employees to return to work

- Implement remote working best practices for later employee waves
On-site criticality can be assessed along six dimensions

<table>
<thead>
<tr>
<th>Job type</th>
<th>Technical endowment</th>
<th>Environment type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of interaction</td>
<td>Operational readiness</td>
<td>Company culture/ mindset</td>
</tr>
<tr>
<td>Individual work vs. interactive</td>
<td>Manual vs. digitized</td>
<td>Control vs. trust</td>
</tr>
<tr>
<td>Reach of work</td>
<td>Local proximity need</td>
<td></td>
</tr>
<tr>
<td>Fixed location vs. alternating</td>
<td>Laptop vs. add’l. infrastructure</td>
<td></td>
</tr>
<tr>
<td>Operational readiness</td>
<td>Industry readiness</td>
<td></td>
</tr>
<tr>
<td>Manual vs. digitized</td>
<td>Plant vs. field vs. office</td>
<td></td>
</tr>
<tr>
<td>Local proximity need</td>
<td>Company culture/ mindset</td>
<td></td>
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<tr>
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<td>Environment type</td>
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<td></td>
</tr>
<tr>
<td>Company culture/ mindset</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples:
- E.g., R&D vs. Recruiting
- E.g., Manufacturing vs. Sales
- E.g., R&D vs. Marketing
- E.g., PM vs. Manufacturing
- E.g., Drug supply vs. IT
- E.g., Traditional firm vs. start-up
How: Actions across people, infrastructure, and policies to ensure a safe return to work

What interventions should be taken at the individual, workforce, and enterprise level to ensure a safe work environment?

Initial recommendation:

3A Prepare sites for a return to workplace
   - Improve workplace hygiene
   - Embed new hygiene and health habits
   - Support and monitor employee health

3B Prepare individuals for a return to workplace
   - Identify & support critical roles with contingencies in place
   - Split into segmented teams
   - Establish new workforce norms

3C Communications & leadership engagement during the return to workplace period
   - Early, often, and transparent communication
   - Top leader behavior led
   - Two way / digital engagement

3D Leverage technology for contact tracing and to help prevent further outbreaks
   - Additional details in Appendix of BCG Digital's Safe@Work app (in development)

3E Develop a risk mitigation plan to address unforeseen events once work returns onsite
Preparing sites for a return to workplace

Improve workplace hygiene

- Provide hygiene tools, e.g., hand sanitizer
- Increase frequency of cleaning/decontamination cycles
- Consider closing facilities if risk becomes too high again
- Advise introduction of social distance (1.5 - 2 meters; 6 ft+)
- Minimize gatherings of groups, e.g., meetings, restricted elevator usage

Embed new hygiene and health habits

- Provide health instructions and nudges, e.g., regarding hand washing
- Revise/adjust social norms, e.g., shaking hands, work ethic when sick
- Relax sick day policy, e.g., sick day rollover, discretionary sick days
- Enable precautionary measures, e.g., unpaid sick leave for affected family members

Support and monitor employee health

- Monitor employee health, e.g., with daily temperature checks and installment of health apps or wearables (with employee consent)
- Leverage/install company medical officer/on-site doctors or nurses
- Provide thermometers and masks at facility entrance
- Delay work start to give employees time to commute without public transportation (i.e., walk, bike)
- Offer professional psychological support to address COVID-19 anxiety

Best practice examples

VW is combining several measures in China

- Door handles and elevator buttons are constantly cleaned
- Air conditioning is turned off
- Meetings are allowed only in rooms that enable distance of over 1.5 meters between participants
- Employees have to wear masks

SAP is providing thermometers and masks for employees at reception desk

Evonik is focusing on enabling individual hygiene and workplace adjustments

- Hand-washing instructions are provided in facilities and posters nudge employees
- Physical barriers are created in the lobby to mitigate risk of spread via receptionists

Source: Reuters; Bloomberg; BCG analysis
https://www.sueddeutsche.de/wirtschaft/coronavirus-notfallplan-quarantaene-unternehmen-1.4832570
https://www.askamanager.org/2020/02/how-can-we-stop-people-from-coming-to-work-sick.html
Preparing **individuals** for a return to workplace

**Identify & support critical roles with contingencies in place**
- Identify critical roles based on their criticality, interchangeability, and exposure
- Support critical roles with additional measures, e.g., increased team capacity and childcare opportunities (in case schools are closed)
- Introduce shadowing or tandem solutions
- Leverage existing staff: cross-skill people & build backup teams

**Split into segmented teams**
- Increase protection and precautions for critical individuals, e.g., give regular nudges reminding colleagues to protect themselves
- Decrease risk of team infection, e.g., separate teams in different buildings or split teams with A/B shifts (office/home)
- Require these colleagues to work remotely where possible

**Establish workforce norms**
- Implement pan-employee testing
- Encourage proactive social distancing
- Institute a workforce social contract (e.g., mask wearing)
- Advocate employees self-identify if ill and voluntarily work remotely

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1. Refine people health measures for critical functions
Source: Reuters; Bloomberg; BCG analysis
https://www.sueddeutsche.de/wirtschaft/coronavirus-notfallplan-quarantaene-unternehmen-1.4832570

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**Best practice examples**

- **Emergency plan to ensure business operations**
  - BU/regions asked to **identify critical roles**
  - Roles clustered by criticality
  - Talent bench analyzed to determine difficulty of backfilling essential roles & adjusted as necessary

  “We are working with **split teams** in important operational areas as a precaution against the coronavirus.”

- **VW screens the health of every truck driver** before they are allowed to enter **critical production site**
Preparing sites and individuals: Several countries can provide key lessons on how to prepare sites and individuals for the re-open

We have monitored re-openings in multiple countries and settings.

**Observed countries in process of re-opening economy:**
- Austria 🇦🇹
- Canada 🇨🇦
- China 🇨🇳
- Czech Republic 🇨🇿
- Denmark 🇩🇰
- Germany 🇩🇪
- Italy 🇮🇹
- United States 🇺🇸

**Monitoring responses across settings:**
- Offices
- Restaurants
- Essential Retailers
- Non-Essential Retailers
- Factories

### Across countries and settings, we have assessed tactical steps on logistics, customers, and employees

<table>
<thead>
<tr>
<th>Site Logistics 3A</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site Logistics</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Hours</strong></td>
<td>Are hours reduced?</td>
</tr>
<tr>
<td><strong>Days open</strong></td>
<td>Are locations open daily?</td>
</tr>
<tr>
<td><strong>Central A/C</strong></td>
<td>Is heating / A/C used?</td>
</tr>
<tr>
<td><strong>Cleaning</strong></td>
<td>Are cleaning measures in place?</td>
</tr>
<tr>
<td><strong>Additional measures</strong></td>
<td>Any additional measures?</td>
</tr>
<tr>
<td><strong>Protective measures</strong></td>
<td>Are gloves / masks / etc. required?</td>
</tr>
<tr>
<td><strong>Screening</strong></td>
<td>Are surveys conducted or temperatures taken?</td>
</tr>
<tr>
<td><strong>Shift overlap</strong></td>
<td>Are employee shifts overlapping?</td>
</tr>
<tr>
<td><strong>Employee wellness</strong></td>
<td>What measures are in place for sick leave benefits and employee well-being (e.g. mental health support)?</td>
</tr>
<tr>
<td><strong>Access to establishments</strong></td>
<td>Who can access? What is physical mode of entry?</td>
</tr>
<tr>
<td><strong>Additional measures</strong></td>
<td>Any additional measures?</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>How many customers allowed?</td>
</tr>
<tr>
<td><strong>Social distancing</strong></td>
<td>Is social distancing required?</td>
</tr>
<tr>
<td><strong>Protective measures</strong></td>
<td>Are gloves / masks / etc. required?</td>
</tr>
<tr>
<td><strong>Screening</strong></td>
<td>Are surveys conducted or temperatures taken?</td>
</tr>
<tr>
<td><strong>Additional measures</strong></td>
<td>Any additional measures?</td>
</tr>
</tbody>
</table>

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## Essential Retailers (In and Post-Lockdown): Example measures taken by essential retailers vary by country

<table>
<thead>
<tr>
<th>Category</th>
<th>China</th>
<th>USA &amp; EUR</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistics</strong></td>
<td>Closing early for cleaning Specific hours for senior citizens</td>
<td>Specific hours for senior citizens</td>
<td>Reduced hours for cleaning Specific hours for seniors and disabled customers</td>
</tr>
<tr>
<td>Hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days open</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central A/C</td>
<td>Store ventilation system regularly sterilized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaning</td>
<td>Door handles, carts, &amp; baskets sterilized every 2 hours</td>
<td>Increased disinfecting measures Providing disinfectants for carts &amp; baskets</td>
<td>Increased cleaning frequency</td>
</tr>
<tr>
<td>Addt'l measures</td>
<td>Employees provided with masks &amp; gloves</td>
<td>Cash registers equipped with plexiglass windows</td>
<td>In-store sampling and testers removed</td>
</tr>
<tr>
<td><strong>Employee well-being</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective measures</td>
<td>Employees provided with masks &amp; gloves</td>
<td>Employees provided with masks, gloves, &amp; visors</td>
<td>Cash registers equipped with plexiglass windows</td>
</tr>
<tr>
<td>Screening</td>
<td>Employees' temperatures checked before entry</td>
<td>Employees screened through temperatures &amp; questionnaires</td>
<td></td>
</tr>
<tr>
<td>Shift overlap</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee wellness</td>
<td>Chinese tech companies made free services available (e.g., mental health) to all Chinese citizens;</td>
<td>Providing mental health hotlines and telehealth options Attendance policies waived</td>
<td></td>
</tr>
<tr>
<td>Access to establishments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addt'l measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Customer experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>Customers limited; each customer exit allowed one customer entry</td>
<td>If no carts or baskets available, no new customers may enter stores</td>
<td>Customers in store limited, lines may form outside</td>
</tr>
<tr>
<td>Social distancing</td>
<td>Must maintain 3 feet between customers at checkouts</td>
<td>Must maintain distance of 1.5 meters Stickers on floors to maintain distance</td>
<td>Checkouts marked with 2 meter distances customers must maintain</td>
</tr>
<tr>
<td>Protective measures</td>
<td>Temperatures checked at door</td>
<td>Masks and gloves provided</td>
<td></td>
</tr>
<tr>
<td>Screening</td>
<td></td>
<td>Temperatures checked at door (EUR)</td>
<td>Verbal questions before entry, including symptoms, traveling history, and contact with COVID-19</td>
</tr>
<tr>
<td>Addt'l measures</td>
<td>Customers' personal health QR codes must be displayed to enter stores</td>
<td>No longer allowing reusable bags; employees often must bag groceries</td>
<td>No longer allowing reusable bags; One-way aisles to ensure customers don’t pass each other 25</td>
</tr>
</tbody>
</table>

Source: CNBC; Coop Denmark; IGA; Lidl; NPR; Times Telegram; WSJ; Desk research

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Non-Essential Retailers (Post-Lockdown): Measures for non-essential retailers post-lockdown appear to be less stringent vs. essential retailers

<table>
<thead>
<tr>
<th>Category</th>
<th>China</th>
<th>Austria / Czech Republic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>Reduced hours, often &lt;8 hours to allow for extra cleaning time</td>
<td>Hours limited to 7:40am-7pm to allow for extra cleaning time</td>
</tr>
<tr>
<td>Days open</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central A/C</td>
<td>A/C shut down</td>
<td></td>
</tr>
<tr>
<td>Cleaning</td>
<td>More frequent store cleaning, including dressing rooms</td>
<td>All carts / baskets disinfected after use; more frequent store cleaning</td>
</tr>
<tr>
<td>Addt'l measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employee well-being</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective measures</td>
<td>Masks required</td>
<td>Masks required in public spaces</td>
</tr>
<tr>
<td>Screening</td>
<td>Employees' temperatures taken before entry</td>
<td></td>
</tr>
<tr>
<td>Shift overlap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee wellness</td>
<td>Chinese tech companies made free services available (e.g. mental health) to all Chinese citizens</td>
<td></td>
</tr>
<tr>
<td>Access to establishments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addt'l measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Customer experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>Limiting amount of people within elevators</td>
<td>One customer allowed for every 20 square meters of building</td>
</tr>
<tr>
<td>Social distancing</td>
<td></td>
<td>Customers mandated to take carts to help with social distancing Must maintain distance of 2 meters</td>
</tr>
<tr>
<td>Protective measures</td>
<td>Masks required</td>
<td>Masks required</td>
</tr>
<tr>
<td>Screening</td>
<td>Customers screened by temperature before entry</td>
<td>Stores must provide plastic gloves for all customers</td>
</tr>
<tr>
<td>Addt'l measures</td>
<td>Customers' personal health QR codes must be displayed to enter stores</td>
<td>Masks required in public spaces</td>
</tr>
</tbody>
</table>

Source: Asia Times; Channel News Asia; NPR; The Guardian; World Economic Forum; Desk research

Operating in pre-COVID fashion
Offices (Post-Lockdown): China is first mover in office re-openings as well; several measures enacted to ensure employee safety

<table>
<thead>
<tr>
<th>Category</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics</td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>Shorter in-office schedules to reduce both employee overlap and reduce peak transit times</td>
</tr>
<tr>
<td>Days open</td>
<td></td>
</tr>
<tr>
<td>Central A/C</td>
<td>Central A/C and heating banned to limit spread</td>
</tr>
<tr>
<td>Cleaning</td>
<td>Continued spraying of germ-killing bleach</td>
</tr>
<tr>
<td>Add'tl measures</td>
<td>Limited lunchtime interactions with chairs separated by 6 feet and plastic screens separating workers; Meetings only allowed in rooms that enable distance of 1.5 meters between employees</td>
</tr>
<tr>
<td>Employee well-being</td>
<td></td>
</tr>
<tr>
<td>Protective measures</td>
<td>Masks required</td>
</tr>
<tr>
<td>Screening</td>
<td>Employees’ temperatures taken before entry</td>
</tr>
<tr>
<td>Shift overlap</td>
<td>Employees often put into shifts, only one shift allowed in office at a time to avoid contact across more people</td>
</tr>
<tr>
<td>Employee wellness</td>
<td>Some firms (e.g., WuXi) offering full salary coverage during employee quarantine time to discourage under-reporting and ensure a safe workplace</td>
</tr>
<tr>
<td>Access to establishments</td>
<td>No visitors allowed; Personal health QR codes must be displayed to enter; Buildings required to report all people who enter &amp; exit</td>
</tr>
<tr>
<td>Add'tl measures</td>
<td>&lt;50% of employees allowed into office each day; Employees seated in grids to ensure social distancing</td>
</tr>
</tbody>
</table>

Source: AdAge; Architectural Record; Financial Times; Desk research
## Offices: Example guidance for Preventive Actions—Work Area

### Must know for staffs

- **In the elevator** (high risk): Wear mask; avoid touching elevator buttons with bare hands; wash hands after coming out of the elevator
- **Dining Halls** (high risk): Do not take off your mask until eating; avoid taking a meal seating across the table with each other: avoid talking while eating; Wash hands after Dining
- **Office** (high risk)
  - Wear mask: Keep distance when talking: keep ventilation; EHS will provide ethanol for staffs to clean the work area
  - Keep the work area tidy; ventilation is recommended 3 times a day
  - Keep one meter distance from your coworkers; avoid face to face communication
  - Avoid touching door knobs or elevator buttons with a bare hand; wash hands immediately if touched; drink adequate amount of water

### Preventive actions

#### Logistics

- Sanitize public areas every day, such as foyers, hallways. meeting rooms, elevators, stairways, bathroom and etc., using bleach or 75% ethanol
- Provide liquid and solid hand soap in the bathroom
- Logistic staffs including security and janitors are required to wear masks during work and keep adequate distance from others
- Janitors will wear single-use rubber gloved and wash hands after work
- Sanitize public areas, labs, door knobs of bathrooms, printer surface, elevator buttons and other hot spots using bleach or 75% ethanol, four times a day. Buttons on the water dispensers will be cleaned once a day
- Floor of public areas and bench tops will be mopped or wiped with sanitizer twice a day
- Trash cans in the office area will be emptied timely every day and sanitized with sanitizer
- Other trash cans will be cleaned daily. Trash disposal areas will be sanitized twice a day
- Towel and mops will be sanitized with sanitizer after use in order to be reused

#### Sanitation of ventilation systems

**A. HVAC**

- The return air vent in the cleanroom will be sanitized with 75% ethanol every day
- The engineering department will clean the air outlet of the CNC air conditioner with 75% ethanol every day

**B. VRV air conditioner and other non-cleanroom air conditioner**

1. The engineering department will clean the ventilation system of VRV with 1:100-fold diluted bleach every day
2. For offices that are not in use, the engineering department will clean ventilation system of VRV with 1:100-fold diluted bleach once. Those offices will be labels as “Not in use”. If those offices are needed, the label will be removed. and the engineering department will be notified for daily sanitization operation
3. Bleach will be sprayed when opening VRV and other ventilation systems for sanitization

### Work area

- **Meeting Room**
  - Use online meeting if possible
  - If face-to-face meeting is necessary, wear masks during the entire course of meeting, wash hands before entering the meeting room
  - Attendees need to sit one meters away from each other. Ventilate every hour, if the meeting exceeds an hour
  - Sanitize the meeting room, furniture, office supplies after the meeting; tea sets also need to be sanitized

- **Sharing documents**: Wash your hands after delivery of documents; wear masks when reading shared paper documents

- **Physical exercise during break**: Moderate exercise is recommended

Source: Interviews with market participants; BCG experience and analysis
## Offices: Example guidance for Preventive Actions—Dining and leaving from work

### Must know for staffs
- Recommend staffs to come to dining halls at different time intervals to avoid gathering.
- At the dining hall, do not take off your mask until eating. Avoid taking a meal face to face across a table. Avoid talking while eating and avoid gathering. Wash hands before and after eating.

### Preventive actions

#### Overall strategy
- Recommend staffs to come to dining halls at different time intervals to avoid gathering.
- Sanitize the dining area at least once a day every day; sanitize the furniture and utensils.
- Keep the kitchen dry and tidy; put cooked and uncooked materials separately and especially avoid mixture of raw meat.
- Tightly control the resource of food ingredients; use the appropriate purchasing channel.
- Recommend balanced menu.

#### Before leaving work
- Before leave, wash hands and wear mask.
- On public transportation or company shuttle, wear a mask all the time and avoid touching objects on the vehicle with bare hands as much as possible.
- After taking off the mask upon arriving home, wash hands first and then sanitize your cellphone and keys with 75% ethanol or antiseptic wipes.
- Ventilate and keep tidy at home and avoid gathering.

#### Sanitize company shuttles with 75% bleach every day

#### Sanitation Log for Company Shuttle will be attached to the shuttle and maintained by the driver.

### Source:
Interviews with market participants; BCG experience and analysis
Factories (In and Post-Lockdown): Strict measures in place during factory re-openings to avoid spread

<table>
<thead>
<tr>
<th>Category</th>
<th>China</th>
<th>Austria / Denmark</th>
<th>Germany / Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>Single shifts rather than multiple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days open</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central A/C</td>
<td>Air vents sanitized daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaning</td>
<td>Increased disinfecting measures</td>
<td>More frequent cleaning intervals</td>
<td>Increased sanitation activities</td>
</tr>
<tr>
<td>Addtl measures</td>
<td>Limited lunchtime interactions with chairs separated by 6 feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employee well-being</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective measures</td>
<td>Masks required</td>
<td>Masks required</td>
<td>Masks and gloves provided</td>
</tr>
<tr>
<td>Screening</td>
<td>Temperature sensor cameras within production sites</td>
<td>Daily temperature checks</td>
<td>Daily temperature checks</td>
</tr>
<tr>
<td>Shift overlap</td>
<td>Only 50% of workforce on single shift</td>
<td>Assigned break times to ensure social distancing is met</td>
<td>Buffer period between shift changes to allow one shift to leave before next shift enters</td>
</tr>
<tr>
<td>Employee wellness</td>
<td>Some firms offering full salary coverage during employee quarantine time to discourage under-reporting and ensure a safe workplace</td>
<td>Italian government made free services available; otherwise no indication of employer-sponsored initiatives</td>
<td>Voluntary blood tests for employees who want to know if they’ve been exposed to COVID-19</td>
</tr>
<tr>
<td>Access to establishments</td>
<td>Provided chartered bus services and accommodations to facilitate worker return Personal health QR codes must be displayed to enter factory</td>
<td>One-way paths to enter and exit so people cannot run into each other in hallways</td>
<td></td>
</tr>
<tr>
<td>Addtl measures</td>
<td></td>
<td>1.5 meters of social distancing must be maintained</td>
<td></td>
</tr>
</tbody>
</table>

Source: Irish Times; Reuters; Wall Street Journal; Washington Post; Desk research

Operating in pre-COVID fashion
**Restaurants (Post-Lockdown):** China is a first mover in restaurant re-openings; most other countries still only allowing take-out and delivery

<table>
<thead>
<tr>
<th>Category</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistics</strong></td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>❇</td>
</tr>
<tr>
<td>Days open</td>
<td>❇</td>
</tr>
<tr>
<td>Central A/C</td>
<td>Keeping windows / doors open in place of A/C</td>
</tr>
<tr>
<td>Cleaning</td>
<td>Elevated cleaning protocols</td>
</tr>
<tr>
<td>Addt'l measures</td>
<td>❇</td>
</tr>
<tr>
<td><strong>Employee well-being</strong></td>
<td></td>
</tr>
<tr>
<td>Protective measures</td>
<td>Masks and gloves required</td>
</tr>
<tr>
<td>Screening</td>
<td>Temperatures taken before shifts</td>
</tr>
<tr>
<td>Shift overlap</td>
<td>❇</td>
</tr>
<tr>
<td>Access to establishments</td>
<td>❇</td>
</tr>
<tr>
<td>Addt'l measures</td>
<td>❇</td>
</tr>
<tr>
<td><strong>Customer experience</strong></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>Only allowed to accept 50% of max capacity</td>
</tr>
<tr>
<td>Social distancing</td>
<td>Tables / chairs separated by 1 meter</td>
</tr>
<tr>
<td>Protective measures</td>
<td>❇</td>
</tr>
<tr>
<td>Screening</td>
<td>All customers screened by temperature before entry, turned away if fever</td>
</tr>
<tr>
<td>Addt'l measures</td>
<td>❇</td>
</tr>
</tbody>
</table>

Source: Bloomberg; CGTN; Daily Mail; Forbes; MarketWatch; Desk research
Communications & leadership engagement during the return to workplace period

Early, often, and transparent communication
- Think ahead in the relevant time span (next 1-2 weeks are crucial)
- Learn from what others who are ahead are doing
- Stay positive, provide solutions, say what you will do and do it
- Develop a longer-term strategy for possible future developments

Top leader behavior led
- Establish strong role model through most senior leaders people (e.g., wear mask)
- Show top leader’s commitment - be seen and heard by
- Enable other leaders down the chain to multiply the message
- Repeat content and maintain consistent messaging

Two-way/digital engagement
- Provide opportunity to react and respond
- Collect input on what matters most and adjust coms accordingly
- Leverage digital tools to connect people and keep materials up to date
- Address “moments that matter” to people (e.g., illness of loved one)

Best practice examples
- **Single channel**: email by far the most leveraged channel by virtually all companies to communicate with people
- **High frequency but simple**: 2-3x / week, keeping steady inflow of communications in simple, concise, bullet points format
- **Repeated content**: a lot of reiteration on content; steadiness of email inflow more important than new content
- **Empathy driving tone**: emphasizing messages of resilience as a business, as a community and on the individual level
- **Several measures for business continuity**: thinking ahead and making changes to build confidence in business continuity
- **Highest ranked sender**: emails coming mostly from CEOs or left often from next in line
- **Outlining the greater good**: referring to government agencies guidelines, company’s broader purpose/values

Source: Microsoft, CNBC, BCG Analysis
Leveraging Tech: BCG DV's Safe@Work solution to support safe ramp-up of operations & business continuity

Safe@Work solution will include the following corporate use cases...

1. Covid-19 related communication/alerting
2. Employee self-reporting
3. Infection chain management
4. Automated infection chain and contact tracing
5. Contingency staffing
6. Workspace tracking
7. Crowd density alerting

... to unlock substantial advantages

- Safe and fast ramp-up of operations and business continuity
- Efficient and current transparency over Covid-19 status of workforce
- Ability to mitigate risk for second wave break out through smart/early steering
- Close monitoring of critical skill resources & fast contingent plan execution
- Targeted information and infection chain management in company structures
- Increased reputation as an employer and towards customers and business partners
- Linking to potential back-ends for contact tracing of infection chains as they become available

Note: Safe@Work app is currently in development
How BCG Safe@Work keeps your employees safe during the ramp-up journey

Adam updates his COVID health status with "healthy"

His app constantly tracks proximate devices via Bluetooth to trace potential infection chains

Adam receives and confirms an update on COVID guidelines for his location and function

On the app, he receives targeted instructions & tips and is required to confirm all locations in the past

Adam postpones his lunch after his phone informs him that the canteen is currently overcrowded

Later, he receives an alert, that he has been close to a COVID-positive employee and begins self-quarantine

Susan sees Adam’s self-reporting and confirms a complete shift

Susan ensures that everyone in contact with Adam gets in quarantine and initiates the disinfection of all the contaminated areas he visited

Note: Features are illustrative. Safe@Work app is currently in development
BCG Safe@Work with three critical advantages over other/public COVID-19 apps

**Focus on company use-case and safety at work**
Safe@Work is designed for specific company features to ensure employee safety during the ramp-up at scale

**Speed to introduction**
Safe@Work with fast speed to introduction of core functionalities and allowing fact company reaction

**Global, company-wide reach**
Safe@Work can be scaled across all sites and countries as it is relying on a custom, flexible backend

**Challenge of other solutions**
Official solutions focus on infection chain prevention for all its citizens

To prevent false reporting, COVID cases must be confirmed by official labs

Official solutions will typically be limited to single countries or regions

**Key development guidelines**
- Plan to connect to public solutions and drive standardization as they emerge
- Meet highest data security & privacy standards
Risk mitigation: Plan needs to be developed to address unforeseen events once workforce returns on-site

- What happens if the government once again restricts travel and people’s movement?
- What if employees refuse to go to work due to COVID-19 risk?
- How is [COMPANY] ensuring any on-site exposures are contained?
- How are employees informed of potential on-site exposures from an infected colleague?
- What if whole BUs need to shut down due to infections?
- What do we do if a colleague dies?
- What happens if one of our employees infects a business partner/customer, ... ?
- What cascade of communication in the event of COVID-19 related emergency?
**Where:** Return to work plan will need to continually flex according to where we are in the recovery curve and the local dynamics

**Plan needs to be adjusted dynamically based on recovery phase**

<table>
<thead>
<tr>
<th>Phase definition</th>
<th>Flatten</th>
<th>Fight</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extensive social distancing measures to cap infections below healthcare capacity</td>
<td>Surveillance to prevent, isolate and contain any future COVID-19 outbreaks</td>
<td>Emerged from COVID-19 state, potentially after release of an effective vaccine or therapeutic drug</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Return to work implication</th>
<th>Flatten</th>
<th>Fight</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>No return to workplace</td>
<td>Cautious return to workplace policies enacted</td>
<td>Employers play role in active surveillance</td>
<td>No government restrictions on employees returning to workplace</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example locations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>UK</td>
</tr>
</tbody>
</table>

**How will our decisions and go-forward policies flex based on geography?**
Where businesses re-open need to be guided on a national level and adapted to local realities

1. Establish and assign risk levels to local regions

2. Develop discretionary guidelines by regional risk level

3. Regions establish oversight and 'control tower'

4. Set specific policies at local level

5. Private and public actors develop unique playbooks

**National advisory guidelines** articulate a common framing of risk levels and provide practical advice on actions to take for each risk level (transportation, gathering size, PPE, etc.)

- Federal public health officials advise on disease management activities by risk level
- Risk levels a function of health care readiness (and in some instances public engagement)

Actual sequence of reopening activities needs to go from **de-averaged** and responsive to **locally driven**, customized to on-the-ground facts

- Result is decision-makers adopting different strategies for recovery by locality based on how to best meet requirements for the local risk level, and tailored to their local conditions

Governments should actively **involve the private sector** in creation of sector-specific playbooks to achieve guidelines including industry associations, trade and labor unions, chambers of commerce.
Where: China Mengniu Dairy Case Study

Re-openings scheduled based on infection footprint & across supply chain to mitigate COVID-19 impacts

Key steps to their approach:

- Segment re-openings based on
  - Regional and city COVID-19 recovery dynamics
  - Supply chain infrastructure
  - Salesforce density
- Shift planned supply from factories in severely impacted areas to factories in other regions
- To adapt to differences in regional recovery, consumer sentiment and needs, continually adjust:
  - Marketing activities
  - Messaging
  - Budget allocation

Decision impact:

- Facilitated compliance with local regulation and ensured employee safety
- Maintained customer supply chain
- Mitigated production decline and potential loss of customers

Source: HBR: How Chinese companies have responded to coronavirus; BCG analysis
1a. Enable Safe Return/Re-Open

1b. Organize for the New Normal

2. Drive Topline Security and Advantage

3. Stabilize and Reinvent Supply Chain

Appendix
New Normal: 7 people priorities for the New Normal

1. **Smart work**
   - 1-1: Remote working @scale and virtual collaboration
   - 1-2: Build new approach to work, balancing remote & onsite work
   - 1-3: Setting up smart workspaces
   - 1-4: Realizing cost upside of smart working

2. **Physical & mental health**
   - 2-1: Updating physical health
   - 2-2: Mental health & mindfulness
   - 2-3: Promoting wellbeing & resilience

3. **New talent & skill paradigm**
   - 3-1: Becoming an integrated learning organization
   - 3-2: Building (digital) capabilities@scale
   - 3-3: Refocused talent programs & platforms

4. **Flexible workforce**
   - 4-1: Dynamic workforce, cost & skill planning
   - 4-2: Tailored employee working models & gig economy
   - 4-3: New performance, rewards, & compensation systems

5. **Leadership with head, heart & hands**
   - 5-1: Develop streamlined & robust, 2-way communication platform
   - 5-2: Enable front line leaders
   - 5-3: Leading with empathy & direction
   - 5-4: Permanent employee centric change capabilities

6. **Deep value & purpose-driven culture**
   - 6-1: Support culture
   - 6-2: Aligned purpose, vision, and values
   - 6-3: Commitments to sustainability & social impact

7. **Bionic Organization**
   - 7-1: Data & digital platforms
   - 7-2: Close human-machine interaction
   - 7-3: Agile@scale
   - 7-4: New modular organization

Source: BCG
# New Normal: Quick assessment and suggested next steps (1/2)

<table>
<thead>
<tr>
<th>Area of Focus</th>
<th>BCG tools and expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smart work</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 1-1: Remote working @scale, virtual collaboration | • Collection of current remote working practices and tool landscape  
• Compilation of key fields of action based best practices  
• Prioritization of fields of action and roadmap for further development |
| 1-2: Build new approach to work, balancing remote & onsite work | • Identification of job families and organizational structures with potential for remote work@scale  
• Assessment of current context (e.g. employee contract types, equipment, desk sharing policies)  
• Definition of a target share of remote/on-site work  
• Prioritization of organizational structures to pilot smart work |
| **Physical & mental health** |                      |
| 2-1: Updating physical health | • Benchmarked overview of current health offerings  
• Pulse-check of the organization to prioritize areas of increased physical and mental health support needs  
• Initial concept for a future physical and mental health support  
• Suggestion of initial steps to implement the future support concept |
| 2-2: Mental health & mindfulness | • Future-proof of the current competency model  
• Identification of core digital capabilities  
• Rapid assessment of learning tools and offering & motivators  
• Definition of the learning ecosystem roadmap |
| 2-3: Promoting wellbeing & resilience | • Review of current talent programs & platforms focusing on the leadership and management skill for the new normal  
• Development of initial training measures |
| **New talent & skill paradigm** |                        |
| 3-1: Becoming an integrated learning organization | • Quick assessment of current workforce planning approach and tools  
• Validation with best practices and definition of adjustment needs |
| 3-2: Building (digital) capabilities@scale | • Quick assessment of potentials of increasing share of gig workers to increase flexibility of the workforce  
• Short analysis of current systems and derivation of adjustment needs for the new normal |
| 3-3: Refocused talent programs & platforms | • BCG internal and external PTO/Pulse check experience  
• BCG work smart live better toolkit  
• BCG mindfulness training kit |
| **Flexible workforce** |                         |
| 4-1: Dynamic workforce cost & skill planning | • BCG digital skill builder  
• Tailored learning journeys, e.g., digital  
• BCG client learning & enablement center |
| 4-2: Tailored employee working models & gig economy | • BCG global leadership & talent index  
• BCG talent mgmt. best practice collection |
| 4-3: New performance, rewards, & compensation systems | • BCG future of HR toolkit  
• BCG publications and studies on the future of work |

Source: BCG
## New Normal: Quick assessment and suggested next steps (2/2)

### Areas of Focus

<table>
<thead>
<tr>
<th>5</th>
<th>Leadership with head, heart &amp; hands</th>
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</thead>
<tbody>
<tr>
<td>5-1:</td>
<td>Develop streamlined &amp; robust, 2-way communication platform</td>
</tr>
<tr>
<td>5-2:</td>
<td>Enable front-line leaders</td>
</tr>
<tr>
<td>5-3:</td>
<td>Leading with empathy and direction</td>
</tr>
<tr>
<td>5-4:</td>
<td>Permanent employee centric change capabilities</td>
</tr>
</tbody>
</table>

- Definition of relevant stakeholders, information needs and channels
- Develop targeted communication plan
- Identify key leadership behaviors for recovery, building on strengths from the crisis response
- Behavioral interviews with selected managers to identify necessary context adjustments
- Identify and design key routines, tools and activation approach

<table>
<thead>
<tr>
<th>6</th>
<th>Deep value &amp; purpose-driven culture</th>
</tr>
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<tbody>
<tr>
<td>6-1:</td>
<td>Support culture</td>
</tr>
<tr>
<td>6-2:</td>
<td>Aligned purpose, vision, and values</td>
</tr>
<tr>
<td>6-3:</td>
<td>Commitments to sustainability &amp; social impact</td>
</tr>
</tbody>
</table>

- Quick diagnostic and (re)articulation of culture/focus behaviors, building on strengths from the crisis response
- Identify & design key routines, tools and activation cascade
- Assessment of purpose, vision, & value statements
- First workshops to refine key purpose components
- Conduct focus groups to substantiate findings
- Recommended modifications, commitments, and plans to act
- Create overview of sustainability and social impact activities
- Conduct belief audits with relevant stakeholders
- Suggest first potential modifications, extensions

<table>
<thead>
<tr>
<th>7</th>
<th>Bionic Organization</th>
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<tbody>
<tr>
<td>7-1:</td>
<td>Data &amp; digital platforms</td>
</tr>
<tr>
<td>7-2:</td>
<td>Close human-machine interaction</td>
</tr>
<tr>
<td>7-3:</td>
<td>Agile@scale</td>
</tr>
<tr>
<td>7-4:</td>
<td>New modular organization</td>
</tr>
</tbody>
</table>

- Rapid assessment of maturity along specific dimensions of bionic organization based on BCG Bionic organization framework
- Select core processes to strengthen human-machine interaction
- Identify potentials for implementation of agile teams and working principles
- Define the transition roadmap towards a Bionic company

### BCG tools and expertise

- BCG Communication Toolkit
- BCG Leader activation offering
- BCG Executive coaching cadre
- Front line leadership enablement offering
- BCG Smart Simplicity approach
- BCG Brighthouse—specialized company for purpose, vision, and values
- BCG Sustainability research and practice in collaboration with MIT
- BCG global Social impact network
- BCG culture transformation toolkit
- BCG Bionic organization framework
- BCG Digital ventures
- BCG Agile Training Playbook
- BCG Agile@Scale experience
Getting remote work at scale right or wrong matters

If getting it right, remote work can lead to …

... on par or better productivity level
... more engaged employees
... lasting capabilities
... reduced level of absenteeism
... higher retention rates
... savings through less travel
... effect on environmental sustainability

If getting it wrong, remote work can lead to …

... a loss in productivity
... frustration in the team
... a decline in well-being
... potentially a higher illness rate
... drop in personal development
... lack of energy and enthusiasm
... unprofessional appearance

Strong leadership
Preservation of culture
Established routines
Right tools
COVID-19 has increased the push for Remote@Scale

Analysis suggest that up to 70% of white collar jobs can successfully performed remotely

New ways of working
Increased demand for flexible, agile ways of working by generation y/z

Enhanced technology
Availability of enhanced technologies as key enabler for remote working

Increased ecological awareness
Reduction of daily commutes/business travels to protect environment drives remote working

COVID-19
Forced social distancing massively increase remote working globally

At least
~10x\(^1\)
~7x remote work\(^2\)
~20x WebEx usage\(^3\)

COVID-19 amplifies push to exploit option space & derive value beyond increased flexibility in REMOTE WORKING

1. Estimated increase of audio & video conferencing, online doc sharing, and online communication usage; 2. Google trend; 3. Cisco
Accelerate smart, remote work through digital infrastructure

Sustain remote working
- Codify remote working norms
- Create virtual social intimacy
- Determine steps & resources needed in different scenarios to enable remote work
- Provide best practices, tools, and guidelines

Ensure remote workers remain connected
- Decrease onsite & offsite events, conferences, external visitors & client meetings
- Pause catered lunches and close potential social hubs
- Provide virtual meeting best practices, trainings, tools & IT troubleshooting

Expand digital offerings
- Strengthen cyber security given increased network access points
- Scale remote collaboration tools
- Respond to feedback on common workforce IT obstacles
- Provide IT continuity by expanding support for increased volume

Source: Reuters; Bloomberg; BCG analysis

Best practice examples

“Apple Inc. CEO Tim Cook offers employees at most of its offices the ability to work from home.”

BCG adapted “smart” working in response to office closure in affected offices
- Guide: Smart working tips & tricks
- Provision of a diverse set of IT tools
- Introduction of virtual agile teams

EU Commission & EU Parliament switching to remote telework & virtual meetings

Twitter restricts external visits in offices

Restricting non-essential travel & introducing remote work due to the outbreak
Feasibility check of remote working along six dimensions

**Job type**
- Individual work vs. interactive
  - e.g., R&D vs. Recruiting
- Fixed location vs. alternating
  - e.g., Production vs. Consulting

**Technical endowment**
- Operational readiness
  - Manual vs. digitized
  - e.g., Shopfloor vs. Marketing
- Local proximity need
  - Laptop vs. addtl. infrastructure
  - e.g., Controlling vs. R&D

**Environment type**
- Industry readiness
  - Manufacturing vs. services
  - e.g., Automotive vs. Banking
- Company culture/mindset
  - Control vs. trust
  - e.g., Traditional firm vs. Start-up

Source: BCG analysis
Remote work is suited for a broad range of job types

**Feasibility index for remote work**

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasible</td>
<td>Partially feasible</td>
<td>Non-feasible</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Administrative**

Mainly transactional tasks e.g., Assistance, Accounting, business administration

*e.g., Sales representative*

**Manager**

Focus on delegation of work & management of others & their activities e.g., Line Mgmt., fct. Manager, General Manager

**Expert**

Topic specialist, knowledge-driven work w/ many interfaces, e.g., Center of Expertise, functional specialists

**Front-line**

Client/supplier-facing tasks e.g., Sales, Purchasing, SCM

**Blue collar**

Manual & often physical work e.g., Manufacturing, Custodial

**Enabler**

Ensuring basic operations e.g., Reception, local IT

**Immediate focus**

**Medium-term focus**

**Not in focus**

**Source:** BCG analysis
Choose tools that are easier to use on mobile to overcome hardware issues

- **Frequently used in corporate**
  - Chats and quick collective communication:
    - Slack, Telegram, Signal, WhatsApp
    - Instant messaging between members
    - Official communication on specific topic (e.g., new protocols for COVID-19)
  - Video conferencing:
    - Cisco Webex, Amazon Chime, Zoom, Circul, Skype, Google Hangouts
    - All meetings (up to 20 people)
    - Sharing screen for presentation
  - Collaboration and tracking progress:
    - JIRA, miro, Trello
    - Keep track of progress on main deliverables
    - Clear definition of ownership
  - Online doc sharing:
    - SharePoint, Confluence
    - Work simultaneously on same doc
    - Cloud repository accessible any time by everybody

Source: BCG analysis
1a. Enable Safe Return/Re-Open
1b. Organize for the New Normal

2. Drive Topline Security and Advantage

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Appendix
Topline: Companies are engaging in three primary business model shifts to drive top line security and emerge stronger post-COVID

1. Timelines indicative: Linked to stage of crisis in each market and level of impact on each industry

Companies primarily driving topline security and future via:
- Channel shift
- Portfolio mix shift
- New products
### Topline Security - Product and Portfolio: To drive top line security, companies are introducing new products and shifting portfolios

<table>
<thead>
<tr>
<th>Shift Type</th>
<th>Examples</th>
</tr>
</thead>
</table>
| New Product shift  | Restaurants introduced new products to encourage continued customer traffic and sales  
|                    |   • Jimmy John's: Selling individual bread loaves under drive-thru operations  
|                    |   • Subway / Panera: Launching grocery businesses, selling individual items (e.g. milk, bread, meat, cheese, produce) in addition to existing menu  
|                    |   • Shake Shack / Texas Roadhouse: Selling cook-at-home kits for typical in-restaurant items |
| Portfolio mix shift| Media companies introduced new programming variations to adapt to consumer preferences  
|                    |   • NHK: Adapting programming to include educational and home exercise content  
|                    |   • ESPN: Replacing live sports with documentaries and "best of" shows  
|                    |   • Hunan TV "Singer": Adjusting live competition format to have judges connect remotely by video without an in-theater audience |
| New Product shift  | Companies developed products specific to COVID-19 healthcare needs  
|                    |   • Roche / Hologic: Developing a molecular IVD test for testing usage in the US  
|                    |   • LVMH: Switching perfume factories to produce hand sanitizers  
|                    |   • Burberry: Using factories to manufacture hospital gowns and masks |

Source: AdAge; CNBC; Desk research; Interviews with market participants; BCG analysis
Topline Security - Channel: Companies are also shifting channel focus and mobilizing staff to capture Omnichannel and O2O sales opportunities during COVID-19

Engaging consumers staying away from stores

- Develop "online promoters" program, promote direct 1-to-1 engagement
- Convert offline consumers to "private domain traffic," accelerate CRM

Responding to drop in traditional offline channels

- Build and expand O2O/new platforms
- Accelerate social commerce, reduce reliance on traditional marketing and retail channels

One cosmetics company deploying beauty advisor to become online "KOL" and conduct live-streaming on multiple platforms

Confectionary company building 1-to-1 relationship with consumers on WeChat

Noodle shop adopting "Fast delivery + Swift canteen" model, offer rapid meal delivery from shops to compensate for traffic drop

Fresh retailer deploying store staff to target nearby residential communities and recruit consumers via WeChat

Source: Press release, expert interviews; BCG analysis
Selected topic currently related to consumers - "stay at home with our brand"

Invite consumers to DIY, enhancing an active sense of participation

Local beverage player initiated DIY campaign to stay connected with consumers

Online snack retailer customized marketing strategies based on epidemic theme

Promotion focused on epidemic theme, making consumers feel buying snack is helping Wuhan
  - Using “Go Wuhan!” as marketing slogan
  - Frequently update real-time progress on fighting outbreak

Source: Industry interview, lit research; BCG analysis
**Topline Security - Channel:** CPG companies diversified eComm promotions to drive exposure, trigger purchase and maximize basket size during COVID-19

- Participate in themed promotions with online platforms
  - Actively cooperate with platforms to participate in themed promo, such as campaign for “sweeties”
  - Esp. for those companies with narrower product portfolio
- Create virtual purchase triggers to drive conversion
  - Trigger consumption by creating impulsive prompts
  - Such as shopping cart add-ons, brand coupons pop-ups, etc.
- Utilize wide product range to maximize basket size
  - Utilize wide product portfolio in nearby demand space to conduct promotion on Tmall and JD
  - Supplemented by actively buying traffic from platform

Source: industry interviews, lit research, BCG analysis
Emerge Stronger - Channel: To emerge stronger with advantage in adversity, companies are taking innovative digital measures and expanding reach

<table>
<thead>
<tr>
<th>Shift Type</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel shift</td>
<td><strong>Automotive retailers developed digital / online solutions to drive continued engagement with customers and enable sales, amidst pandemic; early signals suggest continued stickiness</strong></td>
</tr>
<tr>
<td></td>
<td>• SAIC Motor / Maxus: Offering online purchase, test drive from home with door-to-door delivery, free sterilization of vehicles, and remote insurance renewal</td>
</tr>
<tr>
<td></td>
<td>• Great Wall: Providing online consultation and car viewing (high definition pictures and video) and free pick-up and delivery</td>
</tr>
<tr>
<td></td>
<td>• Geely Auto / Volvo: Offering virtual reality car viewing, test drives reserved through WeChat, and door-to-door maintenance and delivery</td>
</tr>
<tr>
<td>Channel shift</td>
<td><strong>Apparel and consumer brands strengthened online presence and digital marketing; early signals suggest continued investment given positive consumer sentiment and ROI</strong></td>
</tr>
<tr>
<td></td>
<td>• Lin QingXuan: Redeploying store beauty advisors to be online influencers on WeChat</td>
</tr>
<tr>
<td></td>
<td>• Les Petits Joueurs: Launching virtual show room with augmented reality options</td>
</tr>
<tr>
<td></td>
<td>• Adidas: Converting offline campaigns to online channels through celebrity guest streams and online games</td>
</tr>
</tbody>
</table>
**Emerge Stronger - eCommerce:** China retailers are continuing to promote and invest in online shopping as in-store sales expected to stay suppressed

<table>
<thead>
<tr>
<th>Measure</th>
<th>Observed best practices</th>
<th>Select examples</th>
</tr>
</thead>
</table>
| Digital marketing | - Continue to offer online livestreaming sales, virtual “try-on” videos, and virtual reality (VR) shopping  
- Promoting other digital services (e.g., apps) to drive customer engagement                                                                                     | Nike has promoted its fitness app in China and used digital channels strategically (e.g., promotion through apps) as stores re-opened |
| Clienteling    | - Optimize digital clienteling with store-specific recommendations, ~2 hour promo tactics  
- Tailor customer outreach with targeted messages                                                                                                                  | Gucci conducted personalized marketing, welcoming back repatriated students in China |
| Partnerships   | - Leverage tech and e-commerce retail for key commercial moments  
- Maximize selling on third party platforms                                                                                                                        | Lavin held VR presentation for Fall/Winter 2020 with a set of tech and retail partners; live-streamed through Yizhibo’s app; used iQiyi for VR show; fulfilled through e-tailer SECCO |
Emerge Stronger - eCommerce: New digital engagement model has emerged

Clientelling 2.0
- Mobilize and enable offline store staff sell on Wechat group or MP
- HQ deploy fast-iterating sales & promo tactics based on data analytics
- Encourage associates to become KOL’s on social platforms to promote

Go beyond products
- Use brand APP with tailored content to inspire, engage and acquire customers
- Keeps brand top of mind with: virtual try-on, runway video, relevant content
- Link to commerce with promos and newness

360 degree engagement
- New product launches on live streaming before offline stores
- Launch full virtual showrooms with AR options to try on
- Live streaming on ecommerce and social commerce platform to boost traffic

Leverage 3P platforms
- Luxury brands are accelerating presence and selling on 3rd party online platforms (Tmall)
- Leverage tech and e-tail for key commercial moments
- Create 360 degree branding across WeChat, Weibo, and Tmall

X13 Best-in-class social commerce YOY growth

+80% Best-in-class APP subscriptions year to date in China

RMB 500K Best-in-class 2-3 hour mass fashion live streaming sales

X2 Best-in-class online growth YOY growth
**Emerge Stronger - Reopening B&M Stores:** Retailers in China are promoting in-store sales through events, promotions and discounts, and exclusive offerings.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Observed best practices</th>
<th>Select examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Launch events</strong></td>
<td>- Host re-opening events&lt;br&gt;- Invite movie stars or other famous influencers to the events to drive attendance</td>
<td>Swarovski launched 125 year anniversary celebration and collection in China to boost foot traffic in stores</td>
</tr>
<tr>
<td><strong>Promotions and discounts</strong></td>
<td>- Offer discounts on in-store purchases&lt;br&gt;- Provide gifts to customers in-store</td>
<td>Hidilao, a popular hotpot restaurant chain, gave away bags of soup stock and snacks to diners</td>
</tr>
<tr>
<td><strong>Store activities</strong></td>
<td>- Sell limited edition and rare items in physical stores to encourage consumers to come in&lt;br&gt;- Implement in-store operational measures to increase customer confidence</td>
<td>SKP Beijing is hosting pop-up stores that will bring in brands that are extremely rare in China as well as limited-edition collaborations that will only be available at the physical stores</td>
</tr>
</tbody>
</table>
1a. Enable Safe Return/Re-Open
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Appendix
Supply Chain: As COVID-19 progresses, global supply chains can be impacted multiple times depending on product flows

Illustrative steps in computer manufacturing value chain

1. Metals imported, rare earth metals mined in China
2. Components like silicon wafers, chips, and pc boards made in SEA, China and US
3. Larger assemblies fabricated in the US, Taiwan, Japan, and Philippines
4. Final assembly and testing in Chongqing
5. Products shipped through Chongqing Port/Shenzen Port Worldwide
6. Final customer delivery in Italy

Note: Based on Dell/Apple laptop supply chains
Source: BCG research
Recommended approach: Put SC stakeholders at the center, set up emergency response team, and accelerate decision making

Differentiate actions over time

Set-up emergency response team

Pre-lockdown

Emergency response team

- Ensure real-time information transparency
- Accelerate planning cycles and scenario-based decision making
- Use accelerated planning to drive stakeholder management

In-lockdown

- People
  - Safety
  - Flexibility
  - Communication

- Planning
  - Collaboration
  - Prioritization

- Supply
  - Collaboration
  - Flexibility

- Warehousing
  - Safety
  - Collaboration
  - Flexibility

- Transportation & Logistics
  - Collaboration
  - Flexibility

Post-lockdown

Focus of this section

Note: Safety best practices apply to all functional areas. Safety measures have a special relevance for large and manual warehouses.

Source: BCG
SC Emergency response team: Example

Supply chain emergency response organization is part of overall corporate response leadership

Emergency response leadership
VP Global Supply Chain
Regions: Regional SC Leaders

Advisory expert group
- Consists of HR/Legal/Health care/Crisis Management experts
- Advises on legal, regulatory and health related matters

People
VP HR
Regions: HR managers

Supply chain planning
VP SC Planning
Regions: Regional demand and supply planners

Procurement
VP Procurement
Regions: Procurement directors

Warehousing
VP Logistics
Regions: Site logistics, warehouse managers

Transportation & Logistics
VP Logistics
Regions: Logistics procurement & steering

Note: Backup needs to be defined for every role. Roles may be duplicated and or split depending on size and complexity of site / operation. Virtual setup recommended, especially during lock-down periods.

Source: BCG
In-lockdown: **Recommended planning actions**

- Collaborate with key customers on core SKU portfolio and volume expectations
- Collect Demand Plan changes and consumption info by SKU/DC/Customer (e.g. daily forecast on top-selling/at-risk goods)
- Limit data gathering to bare minimum to make decisions, tap into local sources for up-to-date market assumptions
- Discuss incremental volumes by SKU - review weekly pacing and summarize unplanned demand or changes +/− 3%
- Track new or cancelled promotions including alignment on new market activity assumptions
- Implement order cancellation tracker
- Include abnormal demand changes due to new volume request from commercial

**Collaboration**

- Review current and planned inventory balances over the next 2-4 weeks, highlight potential service cuts and delays
- Review manufacturing, supplier and logistics capacity issues, material supply issues and change/increase lead times
- Present SKU prioritization/allocation options to commercial leads (align on simplified SKU mix for the next 2-4 weeks)
- Review aged stock issues (No demand / slow moving SKU), Stock coverage issues (Below / Over)
- Summarize and assess impacts from warehouse space, labor and transportation constraints
- Run multiple supply scenarios to optimize service, inventory and capacity utilization metrics

**Prioritization**

- Run daily war-room meeting of Exec S&OP meeting participants to manage escalation items
- Present 2-3 demand-supply scenarios for leadership alignment; ensure commercial / customer level decisions are communicated
- Ensure cross-functional attendance of Operations, SC, procurement, commercial and finance
- Review supply performance - Case Fill Rate / OTIF
- Identify mitigating actions by supply team for all ‘high supply risk’ (e.g., ‘red’ status)
- Finalize all escalation decisions in the meeting

**Emergency response team**

Source: BCG
In-lockdown: Recommended **supply** actions

- Review and adjust supplier orders, schedule lines, call offs based on new production plan on a daily basis
- Keep close contact with key suppliers on "logistics-to-logistics" level (e.g., suppliers for "single-point-of-failure" materials)
- Give daily updates on material call-off volume projections
- Activate switch to alternative shipment modes (e.g., switch to other carriers)
- Chase missing critical parts through a "missing parts hot desk", e.g., identifying inventories in the broader industry network

**Collaboration**

- Switch to manual material planning for critical parts
- Call-off materials from second/local source if necessary, switch to alternative parts
- Join daily roundtable with manufacturing to align material availability and production plans
- Manage inbound warehouse space to avoid shutdowns due to full warehouse, activate alternative space if required

**Flexibility**

- Continue monitoring supply performance (e.g., through forwarder T&T systems to discover disruptions from border closures early)
- Establish situation room to decide on alternative supply options
- Ensure steady supply of new pandemic-related supplies such as personal protective equipment (PPE)
- Support allocation, product prioritization, and production planning decision through providing supply situation in real time

**Emergency response team**

Source: BCG
In-lockdown: **Recommended warehousing actions**

### Safety
- Continue active screening and isolate personnel as merited
- Adjust shifts to distribute key personnel across different shifts to reduce risk and cover gaps (e.g., essential operators, key staff, etc.)

### Collaboration
- Increase planning frequency (e.g., weekly S&OP) to enable dynamic warehouse responses as conditions change
- Initiate enhanced communication plans and cadence with customers, suppliers, and internal teams (plants, planners, etc.) to manage product availability and supply chain constraints
- Assess opportunities to leverage community resources (e.g., staff from neighboring warehouse that has reduced demand, consolidated shipping across manufacturers to leverage constrained transport assets)

### Flexibility
- Identify staffing gaps and reinforcement options (flex workforce, temps, retired employees or re-assign personnel from other areas)
- Develop and deploy contingency planning (e.g., alternate sources, consolidated operations) as the situation evolves - consider options for worsening conditions
- Consolidate distribution locations to enable staffing and coordinate remaining supplies

### Prioritization
- Actively monitor inventory levels and implement product prioritization / allocation plans
- Implement product substitution plans to conserve critical finished goods
- Assess SLOB inventories and offer as alternatives (e.g., old graphics on packaging, prior model version that is compatible)

---

**Note:** SLOB= Slow-Moving and Obsolete

**Source:** BCG
In-lockdown: Recommended T&L actions

Collaboration

☐ Promptly warn providers about need to discontinue routes that are no longer needed (e.g., supplier or plant shutdowns)
☐ Discuss rate adjustments considering market conditions and cost dynamics (e.g., transit times, fuel cost, regulation impact etc.)
☐ Engage with other companies to reallocate efficiently the available resources in each local eco-system

Flexibility

☐ Identify resource shortages and excesses and activate temporary internal resource allocation mechanisms
☐ Provide quick on-line training to resources temporarily transferred
☐ Activate alternative transport modes when appropriate (e.g. move to rail/intermodal if road transport constrained by regulations)
☐ Activate alternative routings to deal with bottlenecks (disruptions at logistics nodes, interruptions of corridors/cargo routes)
☐ Reallocate volumes between carriers based on nominal capacity promise and actual recorded performance
☐ Manage shifts from FTL/FCL to LTL/LCL and vice-versa according to volume changes
☐ Reach for alternative carriers and activate spot solutions to overcome temporary capacity shortages
☐ Activate distributors or other companies likely to have spare distribution/collection capacity

Emergency response team

☐ Bring to virtual war room the monitoring of logistics flows on a day-to-day basis
☐ Activate sources of reliable information regarding status of logistics bottlenecks and of sending/receiving sites
☐ Activate goods-in-transit monitor and detect lead time anomalies and loads that remain stuck along the way
☐ Monitor demand and capacity availability day-to-day; capture and highlight anomalies in LSP performance

Source: BCG
Post-lockdown: **Recommended planning actions**

- Communicate ramp-up plans, needs, quotas, and target timeline to suppliers and partners
- Continue intense collaboration with customers to find all opportunities for substitution and resource maximization
- Evaluate levers for demand shaping towards unconstrained supply
- Implement SC changes to manage “new normal” demand (e.g. demand from online/DTC channel, changed product portfolio)
- Collaborate with supply, manufacturing, and commercial stakeholders to find all opportunities for substitution and resource maximization

---

**Collaboration**

- Review commitments and gaps by supplier and T&L partner, especially due to “bullwhip” during rebound
- Focus portfolio for rapid recovery, prioritize available supply while longer recovery underway (incl. potential wave 2 pandemic)
- Run allocation scenarios for working around constraints in demand and supply regions which are in earlier phases of lockdown
- Rework material routings in light of (potentially) very different market volumes compared to pre-COVID-19

---

**Prioritization**

- Prioritize key supply-demand decisions, based on Demand and Supply review output
- Identify option set for each decision, evaluate financial, customer, and org impact of each option
- Validate outputs with relevant tools (e.g., network modelling)
- Conduct trade off analysis by S&OP team, with feedback from cross functional team
- Decided on trade-offs in weekly Executive S&OP meetings
- Track implementation of selected options by S&OP team

---

**Emergency response team**

Source: BCG
Post-lockdown: Move S&OP and S&OE to a weekly / daily cadence in the In-lockdown phase

Sales and Operations Planning:
Continue with mid-term planning in weekly buckets (3-6 month horizon; accelerated alignment (months 7-18)

Sales and Operations Execution:
Institute a daily alignment process during the 'Response' phase to maximize SC performance

S&OP plays important role to update financial plans and make commitments to street to reflect reality

S&OE to optimize cash and cost in short term, prioritizing within set constraints

Source: BCG
Post-lockdown: **Recommended supply actions**

- Inform all suppliers about volume ramp up plans
- Define supplier ramp up limits and inventory buildup plan
- Continue daily forecast sharing with critical suppliers to anticipate and respond to changes
- Give input to manufacturing on critical materials in short supply (e.g., longer/more uncertain lead times)
- Continue reviewing and adjusting supplier orders, schedule lines, call offs based on new production plan on a daily basis
- Switch back to primary sources and materials
- Continue daily roundtable with manufacturing to align material availability and production plans
- Align with commercial stakeholders on core SKU portfolio that takes supply constraints into account
- Continue alternative transport modes where necessary to cover for capacity/speed gaps
- Ensure responsiveness for the supply of personal protective equipment (PPE); second wave readiness
- Implement close monitoring of suppliers to identify cases of bankruptcy, etc. early
- Manage cross-regional dependencies, e.g., with suppliers in regions at a different COVID-19 phase
- Create joint taskforce with procurement and engineering to support critical supplier ramp-up or qualification
- Monitor roll-back to primary sources and parts

Source: BCG
Post-lockdown: **Recommended warehousing actions**

### Safety / Communication
- Continue screening and sanitation practices - prepare for "waves" of recovery and resurgence of cases as people emerge from social distancing
- Continue frequent and open communications with workforce; update progress against recovery target
- Continue to communicate with customers, suppliers, and internal partners about ramp up status

### Collaboration
- Refresh demand forecasts and production plans as situation stabilizes to anticipate uptick in shipments
- Continue weekly production forecast and daily production planning to anticipate warehouse loads and respond to changes
- Re-establish daily meeting cadence (e.g., shift huddles, team meetings, all hands, trainings)
- Keep taskforce to support critical supplier ramp up
- Continue to support community relief efforts (partnering with other local operations) if you are able to recover faster than others

### Prioritization
- Monitor real time material status in warehouse
- Understand and anticipate production plan constraints due to materials in short supply
- Define warehouse ramp up limits and realistic daily rate that can compensate for short material supply disruptions
- Reset SLAs and relax allocation procedures as supply stabilizes

Note: SLA= Service Level Agreement
Source: BCG
Post-lockdown: Recommended T&L actions

Collaboration

☐ Keep track in real time of sending/receiving sites re-opening and acquire info on ramp-up plan
☐ Quickly inform forwarders and other supply chain actors about logistics flows that are going back-to-usual

Flexibility

☐ Plan resource level availability profile with HR for rebound phase
☐ Secure temporary hires where needed to accommodate for temporary rebound in volume
☐ Provide quick training to possible temporary hires
☐ Secure capacity on key high volume lanes (overseas and FTL land transport) and key distribution/collection basins (couriers/LTL)
☐ Restore transport routes as soon as receiving/sending sites are back in operation
☐ Keep broader supply base in place to increase options to fulfill potential rebound in volume
☐ Plan volume allocation among providers giving a fair share to those LSP who have been more responsive during peak crisis
☐ Adjust logistics system to permanent changes induced by crisis (e.g., some behaviors experimented during crisis might stay)
☐ Assess transport alternatives experimented during the crisis and review transport mode strategy for permanent cost advantage

Emergency response team

☐ Keep T&L war room in place for the whole recovery phase (to track logistics nodes’ status, regulation lifts by authorities etc.)
☐ Use fresh demand planning information to understand outbound logistics resource requirements
☐ Monitor actual volumes and capacity day-to-day and get daily updates about adjustments in demand/supply ramp-up plans

Source: BCG
Appendix

1a. Enable Safe Return/Re-Open
1b. Organize for the New Normal
2. Drive Topline Security and Advantage
3. Stabilize and Reinvent Supply Chain
Preparation of Individuals and Sites: In-Store Safety Measures Examples

<table>
<thead>
<tr>
<th>Category</th>
<th>Detailed action/best practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store cleanliness</td>
<td>- Loblaw's: introduced more frequent cleaning, particularly in 'high-frequency' areas e.g., cashier stations, self-checkouts, credit card terminals, extra hand sanitiser provided at check-out [Link]</td>
</tr>
<tr>
<td></td>
<td>- Walmart: has begun using two gallon sprayer kits they sell in stores to sanitize entire shopping carts quickly and effectively; planning to ship out these kits to stores that don't have them [Link]</td>
</tr>
<tr>
<td></td>
<td>- Carrefour: providing cleaning materials/disinfectants for supermarket carts and baskets [Link]</td>
</tr>
<tr>
<td></td>
<td>- Restricting opening hours to allow for more thorough cleaning e.g., Walmart, Albertson’s [Link]</td>
</tr>
<tr>
<td></td>
<td>- H-E-B: adding an extra manager in charge of Covid-19 response who ensures store cleanliness and social distancing [Link]</td>
</tr>
<tr>
<td>Store comms.</td>
<td>- Co-op (Italy): issue detailed communications to customers covering best practices around three key stages (before shopping, in-store and once back at home)</td>
</tr>
<tr>
<td></td>
<td>- Grocery websites outlining safety measures customers can expect in store e.g., Tesco [Link]</td>
</tr>
<tr>
<td></td>
<td>- Other confidential retailer solutions:</td>
</tr>
<tr>
<td></td>
<td>- Increased communications to reassure customer base and promote new safety measures, e.g., via video</td>
</tr>
<tr>
<td>Protective measures</td>
<td>- Mercadona: customers required to wear gloves before handling any products (distributed and disposed of at entrance) [Link]</td>
</tr>
<tr>
<td></td>
<td>- Stores in Vietnam have hand sanitizer outside the door with a polite note asking all shoppers to apply sanitizer before entering and after existing, all customers are required to wear a mask</td>
</tr>
<tr>
<td></td>
<td>- Companies like Waitrose and Hy-Vee are telling customers to stop using reusable bags, 5p charge on bags waived [Link, Link]</td>
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<tr>
<td></td>
<td>- Woolworths: customers asked to pack their own groceries to minimise contact and if a customer’s shopping bag is not clean, the supermarket will replace it for free [Link]</td>
</tr>
<tr>
<td></td>
<td>- Mercadona: implemented strict no-returns policy [Link]</td>
</tr>
<tr>
<td></td>
<td>- Cash-handling being reduced or prohibited, customers to pay by card or smartphone (e.g., Aldi, Tesco, Sainsbury’s) [Link]</td>
</tr>
<tr>
<td></td>
<td>- Walgreen's: stopped in-store sampling and removed availability of testers for perfume and beauty products (e.g., Aldi, Tesco, Sainsbury’s) [Link]</td>
</tr>
<tr>
<td></td>
<td>- FairPrice to limit number of people in its stores and urge shoppers to wear masks [Link]</td>
</tr>
<tr>
<td></td>
<td>- Wegmans announced Wednesday that it has secured enough masks for all of its employees to wear while at work [Link]</td>
</tr>
<tr>
<td></td>
<td>- Other confidential retailer solutions:</td>
</tr>
<tr>
<td></td>
<td>- Providing masks to customers at store entrance</td>
</tr>
</tbody>
</table>

Source: Desk research; Interviews with market participants; BCG analysis
### Preparing Individuals and Sites: In-Store Screening Measures Examples

Some retailers are pro-actively screening customers before they enter a store.

<table>
<thead>
<tr>
<th>Category</th>
<th>Detailed action/best practice</th>
</tr>
</thead>
</table>
| Customer screening measures | Starbucks HK: customer temperature screening before entering  
- The two hardest-hit regions in Italy, Lombardy and Piedmont, recommended that markets take shoppers' temperatures. Only some have done so, with others saying they cannot get hold of the scanners they need: [Link]  
- In Rome, Eurospin (retailer with 1000+ stores) has launched a pilot of taking temperature checks for customers. ([Link] in Italian)  
- Regional players in the US and Canada carrying out temperature testing on customers before entering store [Link], [Link], [Link]  
- In China, Alibaba and Tencent have created health QR codes in partnership with local government, users get a colour depending on their health & travel history, customers required to display QR code before entering store  
- Canadian players carrying out screening using questions:  
  - Toronto: Summerhill Market (see photo below) asked the following questions verbally to each entering customer:  
    - Have you travelled in past 14 days?  
    - Have you been in contact with someone who has travelled in past 14 days?  
    - Are you showing symptoms of COVID-19?  
    - Have you been in contact with someone who is showing symptoms of COVID-19?  
  - Montreal: Metro, Jean Coutu and Five Seasons asked the following questions verbally to each entering customer:  
    - Have you travelled?  
    - Do you have symptoms?  
    - Have you been in contact with anyone who has?  
    - Are you waiting for test results?  
- We are hearing that sourcing thermometers is currently challenging and will likely be increasingly difficult in the short term  
  - As of February, we were already seeing a huge surge in demand: [Link]  
  - Looking at Wal-Mart's recent announcement, they expect it to take ~3 weeks to have scanning up and running at each store just for employees: [Link]  
- The low global supply has led to unreliable manufacturers ramping up production leading to poor quality testing. In response, China released new regulations to try to limit poor quality goods from being exported |

Source: Desk research; Interviews with market participants; BCG analysis
Preparing Individuals and Sites: In-Store Social Distancing Measures Examples

Essential retailers in highly impacted markets are taking pro-active measures to keep stores safe for their customers

### Category: Detailed action/best practice

<table>
<thead>
<tr>
<th>Social distancing measures</th>
<th>Detailed action/best practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesco</td>
<td>introduced system of floor markings to help customers follow social distancing (<a href="#">Link</a>), disabled every second check-out lane</td>
</tr>
<tr>
<td>Danish and Dutch grocery stores made</td>
<td>use of a shopping cart (or shopping basket depending on size of the store) mandatory, limits on the number of available carts/baskets per store, if a shopping cart or basket is not available then no new customers may enter the store (<a href="#">Link</a>), the Netherlands are fining individuals who do not maintain social distancing within store €430</td>
</tr>
<tr>
<td>El Corte Inglés</td>
<td>limits on number of customers in store at any one time, customers must maintain min. distance as required by authorities (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>Mercadona</td>
<td>system of pavement markings for customers waiting to enter store, no entry unless minimum distance observed (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>E. Leclerc</td>
<td>access to stores limited to those who are alone, not in groups (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>Walgreens</td>
<td>introduced drive-thru shopping in select stores, which allows shoppers to get limited products without leaving their cars; the service is different than click-and-collect as shoppers do not need to pre-order (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>H-E-B</td>
<td>one dedicated entrance to help monitor customer flow; limited number of customers inside; floor decals at checkstand lines to inform customers on appropriate distance (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>Walmart</td>
<td>adding single-direction aisles to stores in the U.S. and Canada (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>Esselunga</td>
<td>the SMS model is being used for click and collect in some, small areas</td>
</tr>
<tr>
<td>Edeka</td>
<td>introduced Pepper, a robot to teach customers how to appropriately social distance during the coronavirus outbreak (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>Giant Food</td>
<td>joins Walmart, H-E-B, Hy-Vee and many other grocers rushing to implement measures that socially distance shoppers. Giant Food will limit the number of shoppers inside and set one-way aisles beginning April 9; occupancy will be limited to 20% (<a href="#">Link</a>)</td>
</tr>
<tr>
<td>Hubei</td>
<td>Government measures have also been used to enforce social distancing: every household was given 1 pass. At one point of time only one person from the household could be out. These would be checked.</td>
</tr>
<tr>
<td>Lombardy</td>
<td>Other confidential retailer solutions: hired professional security to enforce limits</td>
</tr>
<tr>
<td></td>
<td>• SMS system introduced, customers waiting in cars sent a message to let them know when they can enter the store (designed to limit numbers in store)</td>
</tr>
<tr>
<td></td>
<td>• Apps to inform customers of the crowd / lines outside the store</td>
</tr>
</tbody>
</table>

Source: Desk research; Interviews with market participants; BCG analysis
Preparing Individuals and Sites: Example modularization protocol

1. 30 minute gap between all shifts (including at the management level), with no employees being assigned across shifts until further notice. Managers need to decide which Operating shift they will be on-site with, and show up / leave with that shift.
2. Robust protocols need to be in place to wipe down machines upon shift starts.
3. Where operations are continuous, outgoing / incoming shifts assigned face masks and shields. Do not come closer than 6 ft, and incoming shift wipes down all surfaces, door handles, etc.
4. Within each area, designate pods of 15 people. Each pod is assigned specific areas they can occupy and visit dedicated to them for that shift, including the following. Pods can ONLY occupy their designated areas, and barriers will be erected to ensure compliance:
   a. Bathrooms/locker rooms (if used)
   b. Break rooms
   c. Meeting rooms
   d. Sinks + hand washing areas on-site
5. If there are not multiple break rooms or meeting rooms, the same one can be used however times must be agreed (e.g., A team gets break room from 1-2 and B team from 3-4) with cleanings in-between.
6. EACH TEAM MUST UNDERSTAND THEIR ROSTER, AND NOT PHYSICALLY INTERACT WITH MEMBERS OF OTHER ROSTERS. Team designations are applied to management as well. This is CRITICAL to avoid cross-team transmission.
7. Special rules must be applied to employees in at-risk categories (over 60 years of age, diabetes, etc.). These employees should get dedicated bathrooms and break areas where possible.
8. Full list of shift staff & pods must be shared with the Central Response Team with contact information for all employees (cell phones) so that potentially infected individuals can be notified immediately if another in the team tests positive for COVID-19.

Modularization ensures...
- Barriers to exponential transmission/infection
- Rapid ability to respond to, contain confirmed cases
- Protection of most critical staff members
- Ability to maintain production in event of shift-wide outbreak

Illustrative Protocol

Source: BCG analysis
### Preparing Individuals and Sites: Additional examples (1/2)

<table>
<thead>
<tr>
<th>Example</th>
<th>Response to COVID-19</th>
</tr>
</thead>
</table>
| **Chemical Plant** created alternative process to promote hygiene | • As a case is confirmed, all people in “close contact” are identified and notified to the national authority and put on quarantine  
• Enforce temperature checks at the entrance  
• Created the ability to control the continuous process from a different area, other than the main control room, allowing for deep cleaning of each room as teams rotate |
| **Steel distributor** implemented social distancing initiatives | • Limited gatherings of multiple people with workstations > 5 ft. apart  
• Enforcing no direct interaction between teams during shift changes to minimize cross-team contact  
• Implemented a “no-handshake” policy and maintain a 6 ft. distance  
• Limited overlap of shifts during shift changeovers (e.g., at most 1 person can interact with the next shift)  
• Lowered production level to decrease workforce utilization |
| **Paper Company** modified firm culture | • Forced vacations and layoff with wage compensation funds  
• Mandatory 14-day quarantine for any travel  
• Declare hygiene standards and social distancing as desired behaviors  
• Leadership leads by example, reinforce and reward role models  
• No outside visitors or contractors |

Source: Press release, expert interviews; BCG analysis
Preparing Individuals and Sites: Additional examples (2/2)

Example | Response to COVID-19
---|---
Auto manufacturer hygiene standard work | • Incorporated detailed cleaning steps into daily work instructions to drive consistency in operator behavior relevant to operator workstations cleaning and disinfection
• Added essential PPE requirements and discarding procedures to prevent infections from spreading across workstations
• Installed additional disinfectant stations in high traffic areas for accessibility

Auto manufacturer sanitation station guidelines | • Mandatory standards/guidelines defined on locating sanitation stations throughout facilities
• Compliance audits to ensure policy and standards in place and being consistently followed to reduce risk
• Clearly defined roles and responsibilities for replenishing sanitation supply to stations

Auto manufacturer introducing key processes to drive social distancing | • Improved visual factory noting requirements for safe operational distancing and flow at workstation level and at key shared spaces (e.g., offices, meal/ break facilities)
• Redesigned site wide material flow plan embedding new requirements for distancing
• Identified site shared spaces where flow/ pod restrictions can prevent future contamination

Source: Press release, expert interviews; BCG analysis

Impact
Increased hygiene to decrease risk of infection
Well defined standards and roles for sanitization requirements including process audits
Increased distance between workers to decrease risk of infection
How: WuXi Biologics Case Study

Key interventions adopted:

• People policies
  - **Full salary coverage** during employee quarantine time to discourage under-reporting and ensure a safe workplace
  - **PPE** with daily distribution to all employees
  - **2x/day body temperature** reporting and tracking

• Physical infrastructure
  - **Cafeteria reconfiguration** to maintain 6-ft distance
  - Frequent common spaces **disinfection**, strict employee cross-building access and staggered work schedule

• Digital infrastructure / communications
  - **Online tool** for employees to self-report their location and health status
  - Well-trained EHS team with **robust emergency response plan** and publishing of employee handbook

Decision impact:

• Zero infections among 5,500+ staff
• ~97% of staff are already back
• All three sites resumed operation immediately after Feb 12th (after the extended Chinese New Year break)
Leveraging Tech: BCG DV’s Safe@Work core product and implementation support project

A. Core product with defined company use cases
- Company use cases emerging along roadmap
- Basic configuration (i.e. logo, CI, core company data)
- Covid-19 best-practices for app communication e.g., guides

B. Implementation project support
- Initial data preparation & upload
- Stepwise roll-out & app deployment
- Content preparation (e.g. guidelines)
- Setup of support structure

C. Extended project support (optional)
- Selective add-on functionality
- Communication strategy
- Stakeholder management
- Training strategy for key users

Note: Safe@Work app is currently in development
Leveraging Tech: Safe@Work enables a "social contract" with benefits for all stakeholder groups

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company/Management</strong></td>
<td>Save ramp-up &amp; stable operations</td>
</tr>
<tr>
<td><strong>Employees</strong></td>
<td>Return to work-life and &quot;normal&quot; pay</td>
</tr>
<tr>
<td><strong>Workers council</strong></td>
<td>Protection of jobs through ramp-up</td>
</tr>
<tr>
<td><strong>Customers</strong></td>
<td>Reliability of orders/ deliveries</td>
</tr>
<tr>
<td><strong>Business partners</strong></td>
<td>Clear expectations on safety level</td>
</tr>
</tbody>
</table>

Note: Safe@Work app is currently in development
Leveraging Tech: Several official/state back-ends/frameworks in development, but little focused on corporate use cases

**PEPP-PT**

- Enable apps to trace German/EU citizens anonymously
- Records other users who were in close proximity via Bluetooth ("Digital handshake")
- If a user self-reports positive, all other user that were in close contact during the relevant time will be notified

**Apple/Google**

- Joint initiative to define secure standards for contact tracing
- Definition of Bluetooth, cryptography standard and tracing APIs
- Strong focus on public, government and health authorities

**...and others**

- Typically very narrow geographical scope e.g., national level
- Not covering any corporate use cases e.g., employee self reporting
- Partially unclear timelines

Source: Desk research; BCG analysis
**Driving Advantage in Adversity:** F&B player used COVID-19 pandemic as window of opportunity to further drive long-term enhancements

### Actions for near term

**Supply chain**
- **Ensured warehouse distribution**
  - Leverage business scale to sign temp. delivery contract with logistics company
- **Reallocated inventory to fulfill changing demand**
  - Monitor inventory level in different channels and assisted offline dealers/retailers to shift idle inventory to O2O channel

**Product & channel**
- **Adjusted production plan to respond to current demand**
  - Increased supply on bulk multi-packs since consumers wish to stock up but consume little each time
  - Increased quantity of imported products due to lack of confidence in domestic product hygiene

**CSR**
- **Shifting immediate channel focus to O2O and eCom**
- **Assisted government to coordinate resource**
  - Arranged Hubei employees to help government coordinate transportation of needed resources
  - Boosted “reliable & secure” brand image

**Initiatives for mid-long term**

- **Strengthened collaboration with Alibaba on “Cloud-based warehousing” program**
  - Program enables direct delivery from warehouse to offline terminal, enhancing stability of supply during emergencies
- **Elevated importance of building brand logistics system**
  - Already launched in US

- **Increase share of imported product in long term**
  - Consumer preference for imported product likely to sustain given rising concerns over quality

- **Increased focus on health-relevant products/category**
  - O2O and eCom remain strategic priorities

- **Established emergency response protocol to cope with future situation**

Source: industry interviews, Desk research, BCG analysis
Material/Supply Chain Management: Examples

<table>
<thead>
<tr>
<th>Example</th>
<th>Response to COVID-19</th>
</tr>
</thead>
</table>
| Fresh Food Co. adjusted sales channel to manage SC | • Company adapted its supply chain via a continuous tracking of retail outlets’ re-opening plans and demand  
• Developed demand and supply scenarios and contingency plans  
• Conducted joint-dispatch to support distributors, using its own logistics company to help |
| Medical supplier shift to high demand products | • Adapted supply chain to reroute 100% of production to the local Chinese market (vs. only 10% previously)  
• Worked closely with Chinese authorities to receive the “priority facility” status to remain open  
• Shifted all production in China towards medical gear versus typical product portfolio |
| Specialty Paper Co. built forecast model scenarios | • Understand top line and product mix shift impact on business  
• Assess associated demand recovery shape and supply constraints  
• Determine key business decisions based on the forecast model (e.g., CapEx, S&OP, etc.)  
• Increase frequency and cadence of S&OP reviews |

Source: Press release, expert interviews; BCG analysis

Impact

**Recovered** supply chain by more than 50%

**Supplied** 60% of the stores that were reopened

**Achieved** revenue close to targets by shifting to medical gear production

**Increased** alignment through S&OP reviews

**Scenario currently under review** by cross-functional owners
Prioritizing both supply and demand flows at Amazon:

Increase operational workforce in warehouses and for deliveries; prioritize shipments of essential products

Workforce re-allocation
- Employees diagnosed with COVID-19 placed in quarantine and would receive two weeks of sick pay. In addition, Amazon gave hourly workers unlimited unpaid time off through the end of March.
- Plan to hire another 100,000 US warehouse and delivery workers to meet the demand. Increased wages and also offered double pay to workers for >40 hrs on the job and paid time off.
- Prioritized orders for face masks for their warehouse employees. Reconfigured break rooms to promote social distancing.

Supply tradeoffs & demand prioritization
- Suspended shipments of all nonessential products to its warehouses to deal with the increased workloads. Most 2 day deliveries have been delayed to a month.
- Prioritized medical supplies, groceries, household staples, and other essential products. Amazon will be delivering and picking up testing kits to help medical centers.
- Changed logistics, transportation, supply chain, purchasing, and 3PL seller processes to prioritize stocking and delivery of high priority items.
- They shuttered European SC network for most inbound shipments and diverted non-essentials to distribution centers for parking as last-mile deliveries face bottlenecks.
- Huge increase in orders of certain products, like face masks and toilet paper, putting significant strains on Amazon’s supply chain, resulting in shipment delays, technical glitches, and labor shortages.

Source: Company website; Press search; BCG analysis
• Equip local/country organization with *appropriate level of autonomy* to take tactical decision on supply chain without HQ alignment

• Set-up *cross-functional supply chain war room* with fixed daily meeting cadence and agenda to create end-to-end transparency across *all channels*
  - Include sales team to early align on sales channels, SKUs, geographies to be prioritized

• **Shorten supply and demand review cycles** from monthly to weekly or daily if needed

• Early **engage with local and federal authorities** to understand implications on supply chain (e.g., road closures)

• **Join forces with sister companies and branches in surrounding geographies** to share information, exchange inventory if possible

• **Engage with 3PL companies as strategic partner** to ensure any residual demand during crisis can be met

• **Introduce roster for shifts** (e.g., A/B shift) both for blue and white color workers and strictly avoid physical contact among groups; offer dormitory in site for workers to avoid infection

• **Quickly identify 'high risk' employees** (e.g., travel history) and take appropriate measures (e.g., self quarantine, paid leave)

• **Introduce roster for shifts** (e.g., A/B shift) both for blue and white color workers and strictly avoid physical contact among groups; offer dormitory in site for workers to avoid infection

• **Halt all efficiency improvement and cost reduction (e.g., CapEx) initiatives** to focus efforts on crisis response and free-up cash flow

**Restarting at a global beverage company**

**Best practices to restart the business in China post-lockdown**

Source: BCG
Ramping-up at a German-Chinese automotive JV

Went from 0% to 95% capacity in 6 weeks after COVID-19 shutdown, and with zero internal infections

- Production shut down, government-mandated quarantine and strict social distancing enforcement
- Set up taskforce in place to manage daily status of infection and people (whereabouts and movement)
- Initiated work slowly (one shift) exclusively with people who had not travelled outside the area
- Ramped up production with very strict procedures: all returning employees (from other regions) with 14-day quarantine (paid by company in local hotel/accommodation) and frequent sanitization of production line/warehouse
- All employees to work with surgical mask, daily temperature checks, and with packed lunches instead of cafeteria
- Adjusted planning horizon to 3 days (from 8) with emphasis on flexibility - to produce from available parts
- Moved part quotas to alternative suppliers to minimize part shortages (taskforce tracked supplier capacity and quality)
- Ramped up production with returning employees (after quarantine), with flexible manning - to 95% capacity 6 weeks after initial shut-down
- Helped suppliers ramp up production with same practices
- Restored operations with zero infections to date

1. From other regions or provinces in China or abroad
2. Many orders suspended with only 1 part missing, these parts were prioritized for delivery (e.g. air)

Source: BCG
Implemented **Supply Chain Control Tower** for client to drive rapid decision making

Daily report to CEO on Supply Chain status across 10 Business Lines, 4 regions and 140+ plants

*Example of BCG Support*

**Supply Chain Control Tower**

- Resolving inconsistencies generated by customer order cancelations not reflected into client’s production systems
- Addressing shortage of critical components and excess inbound stock due to customer cancelations
- Providing transparency on status of plant shutdown and reopening
- Estimating financial impact of plants shutdown
- Preventing logistics extra costs due to customs holding penalties and urgent deliveries
- Tracking blocked ports and alternatives routes

Source: BCG
Government and Compliance management

Goals

Continuous adherence to regulatory requirements

Continuous alignment with social partners

Actions to be taken

**Regulatory Requirements Management**
- Evaluate potential government support, subsidies and aide and file requests
- Execute strategies and compensation models to retain workforce
- Assess regulatory requirements for manufacturing
- Check implications of restrictions on operations
- Investigate need for regulatory exceptions
- Proactively engage with authorities and regulators (e.g., for handling of COVID-19 cases)
- Continuously monitor regulatory requirements
- Re-schedule auditing activities in line with restart scenarios

**Social Partner Alignment**
- Investigate need for alignment/exception handling with social partners
- Manage alignments with social partners
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COVID-19

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