COVID-19
BCG Perspectives

Facts, scenarios, and actions for leaders
Publication #5 with a focus on
Revamping Organizations for the New Reality

Version: 8 May 2020
COVID-19 is a global societal crisis

We at BCG believe that the COVID-19 outbreak is first and foremost a societal crisis, threatening lives and the wellbeing of our global community. Society now, more than ever, needs to collaborate to protect people's lives and health, manage mid-term implications, and search for lasting solutions.

Leaders need to drive an integrated response to navigate the crisis

It is the duty of health, political, societal, and business leaders to navigate through this crisis. A complex interplay of epidemic progression, medical response, government action, sector impact, and company action is playing out. This document intends to help leaders find answers and shape opinions to navigate the crisis in their own environments. It encourages thinking across the multiple time horizons over which we see the crisis manifesting itself.
LEADING IN THE NEW REALITY

9 action areas for business leaders

Establish crisis management

1. Develop Scenario-Based Planning Approach to manage uncertainty

Focus of this edition

2. Create a Rapid Response and Transformation (RR&T) team

Navigate through Flatten, Fight, and Future

3. Revamp Organization for the New Reality

4. Drive Topline Security and Customer Trust

5. Stabilize and restart Supply Chain, Manufacturing

6. Restructure Cost, manage Cash, & Liquidity

7. Emerge Stronger; drive advantage in adversity

8. Accelerate Digital and Technology transformation


Note: RR&T = Rapid Response and Transformation Team
Source: BCG
Executive Summary | COVID-19 BCG Perspectives

With several countries in restart mode, a critical priority for businesses is to think through emerging PEOPLE implications

• Many countries are moving into restart mode with the easing of lockdown measures from early May
• Consumers are starting to have a more optimistic outlook than two weeks ago, and are spending more time on the move
• Clear people priorities are emerging – including 'smart' (more remote, lower cost) work and a more flexible workforce, but also leadership and purpose
• As companies begin bringing (some of) their people back to work safely to meet business demand, a more flexible workforce will be required
• Leaders must assess current capabilities and future strategic needs to define a people plan that caters to short-term crisis and long-term strategy

Across countries, efforts to flatten the curve and ramp-up testing continue; the impact on economy, sectors, and business persists

• Globally, about 33% of COVID-19 patients have recovered and the case doubling rate has improved to 28 days
• While many countries are planning to relax lockdown measures based on the flattening disease spread curve, they continue to step up testing
• The testing landscape is changing rapidly and molecular testing continues to be the “gold standard;” efforts focused on improving speed
• Economic and employment impact from lockdown of 'non-essential' activities during 'Flatten' phase becoming more evident for many countries
• Economic forecasts deteriorating globally for 2020 while remaining stable for 2021; global rebound to pre-COVID levels not expected before end of 2021
• Total Shareholder Return continues to rebound with only a few sectors above pre-crisis level; impact still varies widely within industries

We believe during this crisis leaders need to think along two dimensions:

1. Taking an integrated perspective on health/medical progression, governmental responses, societal reactions, and economic implications to understand business/sector impacts

2. Thinking multi-timescale in a Flatten-Fight-Future logic

1. Impact only for duration of specific phase (Flatten and Fight). Only accounting for first order effects of microeconomic data and subject to change, e.g. as governments act

Source: BCG
COVID-19 will be a journey with three distinct phases requiring an integrated perspective

**Flatten**
- Typically the initial phase after a pandemic outbreak – goal is to urgently limit number of new cases, especially critical care.
- Social distancing (lockdown) and partial business closures, lead to economic recession with large employment impact.

**Fight**
- Finding paths to collectively fight the virus, restart the economy, and support society in balancing lives and livelihood.
- Increasing economic activity with recovering GDP, some business reopenings, and social distancing on sustainable level.

**Future**
- Disease controlled through vaccine/cure/herd immunity, and treatment within sustainable medical capacities possible.
- Reactivated economy with strong business rebound and job growth, social restrictions limited or completely suspended.

All of the above five factors result in specific economic and social outcomes in each phase.
Guide for leaders

Getting ready for Restart
How to revamp organization for the New Reality

Updated epidemic, economic, and business scenarios and impact

Epidemic progression
Economic impact
Business scenarios and impact

Appendix: Detailed action areas and further readings

Detailed action areas for business leaders
Further readings
COVID-19: Impact dashboard

As of 06 May 2020

**Epidemic Progression**

<table>
<thead>
<tr>
<th># of cases</th>
<th># of recoveries</th>
<th># of fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7M</td>
<td>1.2M</td>
<td>264K</td>
</tr>
</tbody>
</table>

- # of days of case doubling:
  - 22 Apr: 19
  - 29 Apr: 25
  - 6 May: 28

- # of reported recoveries as % of total cases:
  - 27%
  - 30%
  - 33%

- # of countries with 1k+ cases:
  - 81
  - 85
  - 89

- # of tests / case:
  - 19k
  - 20
  - 21

- # of tests / million:
  - 12k
  - 15k
  - 19k

**Economic Impact**

**GDP forecasts (Current outlook, likely to evolve further)**

<table>
<thead>
<tr>
<th>IMF forecast</th>
<th>As of Jan'20</th>
<th>As of May'20</th>
<th>As of Jan'20</th>
<th>As of May'20</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>2.0%</td>
<td>-5.9%</td>
<td>1.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>China</td>
<td>6.0%</td>
<td>1.2%</td>
<td>5.8%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Europe</td>
<td>1.3%</td>
<td>-7.5%</td>
<td>1.4%</td>
<td>4.7%</td>
</tr>
<tr>
<td>India</td>
<td>5.8%</td>
<td>1.9%</td>
<td>6.5%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Japan</td>
<td>0.7%</td>
<td>-5.2%</td>
<td>0.5%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

**Estimated current employment impact**

<table>
<thead>
<tr>
<th>Country</th>
<th>Total employment (2019 M)</th>
<th>Employees impacted (M)</th>
<th>% of employees impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>~159</td>
<td>~34</td>
<td>~21%</td>
</tr>
<tr>
<td>UK</td>
<td>~33</td>
<td>~5</td>
<td>~14%</td>
</tr>
<tr>
<td>Germany</td>
<td>~45</td>
<td>~10</td>
<td>~23%</td>
</tr>
<tr>
<td>France</td>
<td>~28</td>
<td>~10</td>
<td>~36%</td>
</tr>
<tr>
<td>Italy</td>
<td>~23</td>
<td>~6.5</td>
<td>~28%</td>
</tr>
<tr>
<td>Spain</td>
<td>~20</td>
<td>~4.3</td>
<td>~21%</td>
</tr>
</tbody>
</table>

**Business Impact**

**Stock market performance**

<table>
<thead>
<tr>
<th>Date</th>
<th>S&amp;P500</th>
<th>FTSE100</th>
<th>DAX</th>
<th>CHN SSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Mar vs 21 Feb</td>
<td>-31%</td>
<td>-30%</td>
<td>-34%</td>
<td>-10%</td>
</tr>
<tr>
<td>06 May vs 21 Feb</td>
<td>-15%</td>
<td>-20%</td>
<td>-21%</td>
<td>-6%</td>
</tr>
</tbody>
</table>

**Total Shareholder Returns**

<table>
<thead>
<tr>
<th>Date</th>
<th>Americas</th>
<th>Europe</th>
<th>Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>First column: 21 Feb to 20 Mar; Second column: 21 Feb to 6 May</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharma</td>
<td>-19%</td>
<td>-20%</td>
<td>-22%</td>
</tr>
<tr>
<td>Telecom</td>
<td>-17%</td>
<td>-20%</td>
<td>-14%</td>
</tr>
<tr>
<td>F&amp;B30</td>
<td>-26%</td>
<td>-24%</td>
<td>-12%</td>
</tr>
<tr>
<td>Software</td>
<td>-30%</td>
<td>-32%</td>
<td>-28%</td>
</tr>
<tr>
<td>Retailing</td>
<td>-42%</td>
<td>-36%</td>
<td>-24%</td>
</tr>
<tr>
<td>Capital goods</td>
<td>-38%</td>
<td>-35%</td>
<td>-29%</td>
</tr>
<tr>
<td>Financials</td>
<td>-36%</td>
<td>-35%</td>
<td>-19%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>-42%</td>
<td>-26%</td>
<td>-22%</td>
</tr>
<tr>
<td>Auto</td>
<td>-47%</td>
<td>-45%</td>
<td>-32%</td>
</tr>
<tr>
<td>Energy</td>
<td>-56%</td>
<td>-45%</td>
<td>-41%</td>
</tr>
</tbody>
</table>

**Economic Impact**

**IMF forecast**

1. No. of doubling days based on 7 day CAGR
2. Mean of values for top 15 countries by nominal GDP (except China)
3. On-going trials including pre-clinical, Phase 1 (first trial in humans), Phase 2, Phase 3, Phase 4 5. 12 month development ‘best case’, then likely to require time to scale across population
6. Remdesivir is approved now, could be more widely available by Jul ’20. For the next wave, estimated timeline is Oct ’20 – April’21 (6-24 months). If first round of drugs being tested succeeds – then 6-9 months; if not – substantially longer 7. Available data as of May 1; figures are changing rapidly and often being reported with a lag from the current date 8. Includes increase in unemployment and employees covered by government’s wage support programs 9. Performance is tracked for two periods, first from 21 February 2020 (before international acceleration of outbreak) to 20 March 2020 (trough of the market) and from 21 February 2020 through 07 May 2020 10. Food & Beverage

Source: WHO, World Bank, JHU CSSE, Our World in Data, IMF, Bloomberg, BoE, Employment data - Eurostat, Trading Economics; Gov’t Wage Support figures: The Guardian (UK), Reuters (Italy), News Break (Spain), RTL (France), Ranarz (Germany)
Many countries in restart mode with easing of lockdown measures

As of 06 May 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th># of days for case doubling¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td></td>
<td></td>
<td>164 ↑</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td>108 ↑</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td></td>
<td>103 ↑</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
<td></td>
<td>87  ↑</td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
<td></td>
<td></td>
<td>29  ↑</td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td></td>
<td></td>
<td>25  ↑</td>
</tr>
<tr>
<td>North America</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td></td>
<td></td>
<td></td>
<td>28  ↑</td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td></td>
<td>23  ↑</td>
</tr>
<tr>
<td>Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td></td>
<td></td>
<td></td>
<td>47  ↑</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td></td>
<td></td>
<td>11  ⇔</td>
</tr>
<tr>
<td>S Korea</td>
<td></td>
<td></td>
<td></td>
<td>NA²</td>
</tr>
<tr>
<td>Hong Kong</td>
<td></td>
<td></td>
<td></td>
<td>NA²</td>
</tr>
</tbody>
</table>

Current status of measures

- Four phased de-escalation of restrictions planned with Phase 0 starting 04 May
- Cautious exit in coordination with states with ongoing restrictions
- Plan to ease restrictions from 11 May with shops and businesses to reopen
- Factories, wholesale trade, parks opened. Restrictions on restaurants till 01 June
- “Low-scale lockdown” approach avoided total economic shutdown
- Gov’t to review lockdown by 07 May and announce plan for easing restrictions
- Federal gov’t proposed three-phase plan; implementation at governor’s discretion
- Several provinces started to ease restrictions on allowing non-essential businesses
- Declared emergency with suggested lockdown restrictions; extended till 31 May
- Eased in low-risk areas with shops opening; extended in high-risk areas for 2 weeks
- Staged reopening with mandatory monitoring, testing, and contact tracing
- Avoided lockdown with exception of schools; now reopening gyms, cinemas, bars

Notes: ¹ No. of doubling days based on 7 day CAGR; ² For China, S Korea, Hong Kong, number of average daily new cases is fewer than 10 resulting in ~0% growth rate; and very high doubling days; Easing of lockdown comes with certain restrictions in all the countries; Source: Oxford COVID-19 Government Response Tracker, World Economic Forum, Our World in Data, Press search, BCG Analysis

Restrictions without lockdown | Lockdown | Re-entry started | Planned re-entry ↑ Indicates improving trend
Consumers starting to display more optimistic outlook than two weeks ago

As of 27 April 2020

Respondents who agree that… (%)  
"The worst of the coronavirus is still ahead"

Source: BCG COVID-19 Consumer Sentiment Survey, March 6–9, 2020 (N = 3,454 UK; 3,465 US), March 13–16, 2020 (N = 2,521 France, 2,206 Italy, 2,797 UK, 2,417 US), March 27–30, 2020 (N = 2,934 Canada; 2,985 France; 2,150 Italy; 2,984 UK; 2,944 US), April 10–13, 2020 (N = 2,827 Canada; 3,116 France; 3,112 UK; 2,960 US), and April 24–27, 2020 (N = 2,933 Canada; 2,954 France; 3,024 Italy; 3,126 UK; 2,783 US), unweighted, representative within ±3% of census demographics.

Note: Question text: “How much do you agree with each of the following statements about the coronavirus?”
People starting to spend more time on the move

As of 02 May 2020

Non-residential movement compared with usual
Tracked as changes\(^1\) in visits to retail & recreation stores, grocery stores and pharmacies, parks, transit stations, and workplaces

Weekly city movement compared with usual
Tracked as movement of people including walking, cycling, public transport usage, cabs, etc. by an app.; 100% implies usual level of movement

---

1. Taken as weekly average compared with decline from baseline (median value to corresponding day of the week during Jan3-Feb 6 2020); Represented only for selected countries.

Note: Dates mentioned are the week commencing. Source: Google mobility report; Citimapper mobility index
With Restart, businesses start to think about revamping organizations for the new reality

As of 06 May 2020

Ministers meet unions and business to plan getting UK back to work

Talks aimed at bringing in practices that reassure employees it is safe to leave lockdown

Coronavirus: Firms ready to restart within three weeks, says business group

Coronavirus: IT sector looks at staggered opening

Prodded the lockdown, India’s large IT firms have ensured as many as 85% of their employees are working from home, even while continuing to support global clients.

What Will Tomorrow’s Workplace Bring? More Elbow Room, for Starters

German labor minister calls for right to work from home

Coronavirus has forced millions of Germans to work remotely. One minister wants this to continue, even after the threat from the virus has passed.

How Covid-19 is accelerating the shift from transport to teleport

We are fast moving to a world where more economic activity takes place in digital form.

COVID-19: How an office outbreak in South Korea shows that protecting workers is vital for relaxing lockdown

Singapore Signals More Working From Home Even After June 1 Deadline Lifts
People priorities to be accelerated by the COVID-19 crisis

From COVID-19...

1. Accelerate smart work
2. Enhance corporate health and hygiene
3. Manage workforce flexibility
4. Mitigate people and skills risk
5. Communicate openly with empathy
6. Stand together
7. Speed up digital readiness

...to the New Reality

1. Smart work (more remote, lower cost)
2. Comprehensive health and wellbeing
3. Flexible workforce
4. New talent and skill paradigm
5. Leadership with head, heart, and hands
6. Purpose-driven organization and culture
7. Resilient and Bionic organization

Source: BCG analysis
7 people priorities for the new reality

1. **Smart work (more remote, lower cost)**
   - Accommodate virtual collaboration and remote work at scale
   - Try a new approach that balances remote and on-site work
   - Set up smart workspaces
   - Realize the cost upsides

2. **Physical and mental health**
   - Cultivate physical health capabilities
   - Make mental health and mindfulness matter
   - Promote wellbeing and resilience

3. **Flexible workforce**
   - Make your workforce, cost, and skill-planning dynamic
   - Tailor working models to employees
   - Institute new performance, rewards, and compensation systems

4. **New paradigm for skills and talent**
   - Create an adaptive learning ecosystem
   - Upskill and reskill by building digital capabilities at scale
   - Refocus and enable talent programs and platforms

5. **Leadership with head, heart, and hands**
   - Lead with empathy, and direction
   - Enable and empower frontline leaders
   - Develop a continuous, two-way communication platform

6. **Purpose-driven organization and culture**
   - Foster a culture of resilience
   - Align purpose, vision, and values
   - Commit to sustainability and social impact at a higher level

7. **Resilient and Bionic Organization**
   - Simplify your operating model
   - Harness data and digital platforms
   - Use AI and algorithms to complement humans
   - Adopt agile at scale
Smart work (more remote, lower cost)

Which smart work practices will remain after the crisis? How can we optimize for safety, productivity, and effectiveness while realizing cost savings?

- Who should work remotely in my organization?
- What should the newly balanced model be?
- Which tools do we need for remote collaboration?
- How do we keep motivation and productivity high?
- Can we translate changes to OPEX savings?

Find the right balance between onsite and remote...

On-site work benefits
- Easier communication and social interaction
- Better group creativity and problem-solving
- More “chance” encounters yielding potential

Remote work benefits
- Easier social distancing
- Lower infrastructure costs
- Better environmental footprint
- Reduced commuting and travel time

... and pull the right levers to make it work ...

Levers for successful smart work

<table>
<thead>
<tr>
<th>Smart office spaces &amp; usage</th>
<th>Right technology &amp; infrastructure</th>
<th>New travel policy</th>
<th>Purpose-driven sustainable culture</th>
<th>New Leadership skills</th>
</tr>
</thead>
</table>

Example
Insurance company

- ~40% target for remote work
- ~20-40% reduction in desks
- ~10%+ reduction in leasing expenses
- ~5-10% reduction in travel expenses

1. Based on 0.6 desks/employee
Source: BCG
Physical and mental health

How do we ensure employee safety? How can we manage increased stress and make working models sustainable?

- What physical health and safety measures should be maintained for rebound preparation?
- What mindfulness and mental health measures can help employees improve their wellbeing and performance?
- What innovative tools can we leverage to optimize for customization and access?

Ensure physical health—non-negotiable for operations

1. Update emergency protocols
2. Create transparency for workforce
3. Increase hygiene standards
4. Guarantee social distancing
5. Track infection chains

Example | App manages operational safety

| Safe@Work |
|---|---|
| Targeted information | Compliance monitoring |
| Crowd density alerts | Self-reporting |
| Contingency staffing | Infection tracing |

Example | Service provider offers employees mental health training

<table>
<thead>
<tr>
<th>Mental health training</th>
<th>Stress management</th>
<th>Positive thinking</th>
<th>Collective intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habit review</td>
<td>Asking for help</td>
<td>Mindfulness</td>
<td></td>
</tr>
<tr>
<td>Psychological safety</td>
<td>Emotion regulation</td>
<td>...</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>+22% Employee focus¹</th>
<th>-30% Stress level²</th>
<th>-50% Burnout rate²</th>
</tr>
</thead>
</table>

How do we translate the changing business demands to dynamic workforce adjustments?

- Which areas are most critically affected by smart work?
- Do we expect capacity gaps and surpluses in any of the areas?
- What measures can we take to manage the gaps?

... then manage the surplus/gaps proactively

**Reduce employee capacity**
- Reduce overtime
- Extend vacations
- Furloughs, leaves
- Short-time work
- Terminate contractors
- Hiring/promotion stop
- ...

**Optimize personnel factor costs**
- Leverage governmental support
- Delay/reduce voluntary payments
- Reduce other expenses (e.g. travel)
- (Re)negotiate tariffs
- ...

**Repurpose workers for other activities**
- Insource: replace ext. with int. workers
- Second people to other organizations
- Pool talents across or within industry
- Support pro bono work
- ...

**Ramp up/shift capacity**
- Bring back alumni/part-timers
- Offer inducements
- Leverage talent platforms
- Expand automation of work
- ...

---

**Surpluses and shortfalls per function month by month via planning model**

<table>
<thead>
<tr>
<th>Function</th>
<th>FTE</th>
<th>Demand versus supply (# FTE, color %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance &amp; Controlling</td>
<td>407</td>
<td><img src="chart.png" alt="Surplus and Shortfall Table" /></td>
</tr>
<tr>
<td>Engineering</td>
<td>799</td>
<td></td>
</tr>
<tr>
<td>General Management</td>
<td>587</td>
<td></td>
</tr>
</tbody>
</table>

Understand changing demand and the impact on staff functions...

Illustrative
Example | Companies leverage flexible work models in three dimensions

Dimensions of flex-work models

**A Affiliation**
Contrasted ↔ Contingent
Leverage flex-talent options: use gig economy platforms, share workforce with partners in your ecosystem, etc.

**Example**
**Pharmaceutical company**
Uses on-demand talent
Rapid spin up/down of research teams in changing clinical trials results in much lower cost

**Time**
Full-time ↔ Part time
Individualize flex-time options, such as part time work adapted to team specifics, life stages, and nature of work

**Example**
**Facilities mgmt.** firm
Introduces flex-time
Initiative lets employees craft individual flex-time work options with their managers

**Location**
Onsite ↔ Remote
Introduce flex-location options, such as offering remote work adapted to needs, possibilities, and nature of work

**Example**
**Health care provider**
Pilots remote working
Call center staff leveraging special at-home technology saves space and attract better global talent
Determine who needs which skills in the future...

<table>
<thead>
<tr>
<th>Job function</th>
<th>Digital business</th>
<th>Digital HR</th>
<th>Adv. Analytics</th>
<th>...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead/Global Business Partner</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Talent Attraction (incl. student)</td>
<td></td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Learning Program Manager</td>
<td></td>
<td>E</td>
<td></td>
<td>B</td>
</tr>
</tbody>
</table>

*Illustrative*

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Digital business</th>
<th>Digital HR</th>
<th>Adv. Analytics</th>
<th>...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build employee journeys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Build business models &amp; ecosystem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robotic process automat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talent Attraction (incl. student)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Program Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majority of salesforce skilled for sales in 150 offline stores</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offline sales limited due to shutdown</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital skills lacking for acceleration of online sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virtual training to drive customer acquisition on third-party online tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conversion of offline staff to digital salesforce within one week</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of ~20k new customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example | Household products retailer builds offline workers’ digital skills**

Majority of salesforce skilled for sales in 150 **offline stores**

Offline sales limited due to **shutdown**

Digital skills lacking for acceleration of online sales

Virtual training to drive customer acquisition on third-party online tools

Conversion of offline staff to digital salesforce within one week

Acquisition of ~20k new customers

*Source: BCG*
Leadership with head, heart, and hands

What have we learned about our firm’s leadership capabilities in this crisis and how can we prepare it for the future?

- What do leaders need to do now?
- How can we build capabilities of frontline leaders?
- How can we drive behavior change?

Example | Mining company uses head, heart, hands to communicate to employees

<table>
<thead>
<tr>
<th>Head</th>
<th>Heart</th>
<th>Hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO announces plans for business continuity</td>
<td>Coworker mobilizes sponsorship for community support projects</td>
<td>COVID task force regularly updates work guidelines</td>
</tr>
<tr>
<td>Recruiting director lowers intake targets but continues campaign</td>
<td>Board members communicate via video messages from home</td>
<td>Line managers push changes in work schedules via employee app</td>
</tr>
<tr>
<td>Plant manager limits production but pursues maintenance</td>
<td>Team lead checks-in with team members via daily video chats</td>
<td>Directors host townhall meetings to directly address concerns</td>
</tr>
</tbody>
</table>

Source: BCG
Purpose-driven culture

What did the crisis teach us about our organization’s purpose and culture and how should we shape it for the future?

- How should we lean into our purpose and vision?
- Do we need to adapt our culture?

Link purpose, strategy, and culture to succeed in the new reality

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Strategy</th>
<th>Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why we exist guides what we should do</td>
<td>What we do guides how we act</td>
<td>How we act guides our success</td>
</tr>
<tr>
<td>Increase in productivity when employees are inspired</td>
<td>More likely to succeed when strategy, purpose, and culture are linked</td>
<td>Higher TSR Performance when company culture is aligned</td>
</tr>
</tbody>
</table>

Example | Supermarket leans into purpose in reaction to COVID-19 crisis

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Updated strategy and culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Feed the Nation”</td>
<td>launched new ways to deliver groceries to customers</td>
</tr>
<tr>
<td></td>
<td>created dedicated call center for customers who cannot shop online</td>
</tr>
<tr>
<td></td>
<td>implemented faster payments to secure cashflow of smaller suppliers</td>
</tr>
</tbody>
</table>

Source: BCG
Pull key levers to accelerate org design for the new reality…

... following five-step logic

1. Rapid assessment of current state and future needs to prioritize areas of focus
2. Finding the 'Big Rocks'—no-regrets moves for rapid cost take out
3. Defining meaningful changes to the operating model for the New Reality
4. Accelerated implementation across the full organization
5. Start of transition to Resilient and Bionic Organization with agile and digital structure, processes, and talent

Near-term:
- Prepare for strongest possible crisis impact
  - Cost efficiency & productivity

Mid-/long-term:
- Prepare for rebound and pursue structural enhancements
  - Agility & resilience

Structure & Roles
Work & Ways of Working
Leadership, Culture, & Capabilities
Leaders need to assess current capabilities and strategic importance as they chart their priorities.

A Quick assessment of current capabilities and strategic importance of New Reality topics

1 Smart work (more remote, lower cost)  Realize the cost upsides ...

2 Physical and mental health  Promote wellbeing and resilience ...

3 Flexible workforce  Make your planning dynamic ...

4 New paradigm for skills and talent  Create an adaptive learning ecosystem ...

5 Leadership with head, heart, hands  Lead with empathy and direction ...

6 Purpose-driven culture  Align purpose, vision, and values ...

7 Resilient and Bionic organization  Simplify your operating model ...

Source: BCG

B Identification and prioritization of key initiatives and next steps

<table>
<thead>
<tr>
<th>Current Capabilities</th>
<th>Strategic Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low 1 2 3 4</td>
<td>Low 1 2 3 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working models</th>
<th>Purpose, vision, &amp; values</th>
<th>Dynamic workforce planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical health capabilities</td>
<td>Adaptive learning ecosystem</td>
<td>Data and digital platforms</td>
</tr>
<tr>
<td>Balances remote and onsite work</td>
<td>Mental health &amp; mindfulness</td>
<td>Artificial intelligence and algorithms</td>
</tr>
<tr>
<td>Virtual collaboration</td>
<td>Reflective culture</td>
<td>Empathy, coaching, &amp; direction</td>
</tr>
<tr>
<td>Virtual collaboration</td>
<td>Enable- &amp; empowerment</td>
<td>Digital capabilities</td>
</tr>
</tbody>
</table>
| Data and digital platforms | ... | ...

Sustainability & social impact

Future differentiators  Mid-term initiatives  First changes
Guide for leaders

Getting ready for Restart
How to revamp Organization for the New Reality

Updated epidemic, economic, and business scenarios and impact

Epidemic progression
Economic impact
Business scenarios and impact

Appendix: Detailed action areas and further readings

Detailed action areas for business leaders
Further readings
~33% reported recoveries\(^1\) globally so far; case doubling rate improves to 28 days

As of 06 May 2020

Days of doubling cases:

- 0-3 days
- 3-6 days
- 6-14 days
- 14-30 days
- >30 days

184 Countries with cases\(^3\)

3.7M \([\Delta 2\%]^4\)
Confirmed cases globally

264k \([\Delta 2\%]^4\)
Fatalities globally

Note: Continued cases and fatalities are subject to different testing, propensity, reporting standards and hence imperfect measures

1. Refers to total reported recoveries as a percentage of total reported infections (cases), 2. No. of doubling days based on 7-day CAGR, 3. Basis Johns Hopkins CSSE, 4. Daily growth rate basis 7-day CAGR

Sources: Johns Hopkins CSSE, Our world in data, WHO situation reports, BCG analysis
Many countries currently flattening the curve

As of 06 May 2020

Daily growth rate of total cases (seven-day average)

- Cases doubling: 10 days
- Cases doubling: 14 days
- Cases doubling: 21 days

Cumulative number of confirmed cases (log scale)

Includes Middle East 2. Countries selected from the chart on the left 3. # of days after exceeding 100 confirmed cases
Source: Johns Hopkins CSSE, Our World in data, WHO situation reports
Countries planning to relax lockdown measures and substantially ramp-up testing

As of 06 May 2020

- For countries with complete or partial lockdowns (Singapore, UK, France, etc.), reopening is gated by lack of widespread testing
- For countries with relaxed lockdowns (S. Korea, Australia, etc.), continued higher testing critical
- For countries to move to the right and reopen, they need an integrated Virus Monitoring System that includes testing, tracking, and tracing

Source: Worldometer, BCG Analysis
Testing landscape is changing: Tests to detect viral genome and patient immune response are now available

As of 04 May 2020

<table>
<thead>
<tr>
<th>Test purpose</th>
<th>Available for last 3+ weeks</th>
<th>Becoming available now (over last 1-2 weeks)</th>
<th>In development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of viral genome</td>
<td>Lab-based</td>
<td>BIOCARTIS, Siemens Healthineers, altona</td>
<td>FLUIDigm, CoSPR, LexaGene</td>
</tr>
<tr>
<td></td>
<td>Near-patient/Point-of-Care</td>
<td>Luminex, QIAGEN, ThermoFisher Scientific, analytica</td>
<td>Rapid, on-site portable test</td>
</tr>
<tr>
<td>Immune response to virus</td>
<td>Lab-based</td>
<td>BIOCARTIS, Siemens Healthineers, altona</td>
<td>Nucien, MobiDx, MOBIDING, Biome, IDrop</td>
</tr>
<tr>
<td></td>
<td>Near-patient/Point-of-Care</td>
<td>Luminex, QIAGEN, ThermoFisher Scientific, analytica</td>
<td>LumiraDx, Handheld digital PCR</td>
</tr>
<tr>
<td>Antigen tests: Presence of viral particle</td>
<td></td>
<td></td>
<td>Many players announced development plans¹</td>
</tr>
<tr>
<td>Viral load: Amount of virus</td>
<td></td>
<td>Currently none</td>
<td></td>
</tr>
</tbody>
</table>

1. More than 120 serology test makers have notified FDA that they have serology tests available for use as of April 23, 2020

Source: CDC website, FDA website, company websites, BCG analysis

Not exhaustive; US example
Scenarios and impact | Five key questions

As of 06 May 2020

Economic activity
100%

Critical care patients

Five questions will shape the economic impact

What will the LENGTH of "Flatten" be?
What are the preconditions to transition?
When will we achieve them?

To what DEPTH does the economy drop in "Flatten"?

What will the LENGTH of "Fight" be?
What are the preconditions to transition?
When will we achieve them?

What will the DEPTH of "Fight" be?
What level of recovery does the economy achieve in "Fight"?

Where does the economy return to, relative to the pre-COVID era in "Future"?

Source: BCG
Methodology | To determine economic impact, must derive depth (from economic starting point) and factor-in length of crisis

ECONOMIC IMPACT

Economic starting point: Understanding a country’s sector composition

For each country and sector cluster, assumptions are made on activity-reduction based on reduced contact

Depth: Deriving the impaired economic activity

For each country, a range of microeconomic loss is derived

Length: Factoring-in the duration of crisis

For each country, expected length of stay-at-home order is factored in

Projected economic impact: Determining the result as full-year economic impact from direct impact of disease

Result is full-year economic impact (not comparable to GDP as excludes fiscal stimulus and other effects) – need to combine pre-crisis, Flatten, and Fight phase to conclude impact for 2020

Source: BCG
Economic starting point | Understanding of countries' sector composition critical to estimate negative impact of reduced contact

As of 05 May 2020

Revenue by sector (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>E.g., groceries, &amp; health care providers</th>
<th>E.g., legal, &amp; software</th>
<th>E.g., auto &amp; mining</th>
<th>E.g., tourism &amp; restaurants</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>54%</td>
<td>12%</td>
<td>22%</td>
<td>12%</td>
</tr>
<tr>
<td>Germany</td>
<td>65%</td>
<td>11%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>Italy</td>
<td>66%</td>
<td>8%</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>Spain</td>
<td>67%</td>
<td>7%</td>
<td>11%</td>
<td>15%</td>
</tr>
<tr>
<td>UK</td>
<td>68%</td>
<td>11%</td>
<td>7%</td>
<td>13%</td>
</tr>
<tr>
<td>US</td>
<td>53%</td>
<td>13%</td>
<td>23%</td>
<td>11%</td>
</tr>
<tr>
<td>Brazil</td>
<td>71%</td>
<td>9%</td>
<td>1%</td>
<td>18%</td>
</tr>
<tr>
<td>Mexico</td>
<td>62%</td>
<td>8%</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>India</td>
<td>71%</td>
<td>4%</td>
<td>19%</td>
<td>6%</td>
</tr>
<tr>
<td>Japan</td>
<td>53%</td>
<td>5%</td>
<td>29%</td>
<td>12%</td>
</tr>
</tbody>
</table>

For each country and sector cluster, estimates on activity reduction are made

Example of Germany:
60-80% activity reduction estimated for 'red' sectors (consumer services, retail, travel and tourism, food service and bars)

Note: European figures reflect gross output by sector, which is analogous to revenue by sector. US figures directly reflect revenue by sector. Source: Eurostat Database; St. Louis Fed Reserve; O*NET; American Community Survey; other country-specific sources available on request; BCG COVID response teams; BCG Analysis

Copyright © 2020 by Boston Consulting Group. All rights reserved. Updated 8 May 2020 Version 5.1
'Flatten' | Impaired economic activity (depth) and lockdown duration (length) yield full-year economic impact for 'Flatten' phase

As of 05 May 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>Lockdown duration (in weeks)</th>
<th>Full-year economic impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>8</td>
<td>-2% – -4% vs. pre-COVID run rate</td>
</tr>
<tr>
<td>Germany</td>
<td>4-6</td>
<td>-1% – -3%</td>
</tr>
<tr>
<td>Italy</td>
<td>8-12</td>
<td>-2% – -6%</td>
</tr>
<tr>
<td>Spain</td>
<td>8-12</td>
<td>-2% – -6%</td>
</tr>
<tr>
<td>UK</td>
<td>7-12</td>
<td>-2% – -6%</td>
</tr>
<tr>
<td>North Am.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>10-14</td>
<td>-2% – -7%</td>
</tr>
<tr>
<td>LatAm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>4-6</td>
<td>-1% – -3%</td>
</tr>
<tr>
<td>Mexico</td>
<td>8-12</td>
<td>-2% – -8%</td>
</tr>
<tr>
<td>Asia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>8</td>
<td>-2% – -4%</td>
</tr>
<tr>
<td>Japan</td>
<td>6-10</td>
<td>-2% – -6%</td>
</tr>
</tbody>
</table>

Max of estimated range (i.e. period hardest hit by the lockdown) Min of estimated range

Disclaimer: These analyses represent only potential scenarios based on discrete data from one point in time. They are not intended as a prediction or forecast and the situation is changing daily. Figures shown only reflect economic activity "directly displaced" by effect of virus. However, multi-order impacts and the impact of government spending and stimulus not considered.

Note: Lockdown length capped at 6 weeks.; We expect a lot of variations across geographies, even within countries.

1. European figures reflect gross output by sector, which is analogous to revenue by sector. US figures directly reflect revenue by sector. 2. Only accounts for COVID-19 impact, does not factor in underlying growth.

Source: Eurostat Database; St. Louis Fed Reserve; O*NET; American Community Survey; other country-specific sources available on request; BCG COVID response teams; BCG Analysis.

Copyright © 2020 by Boston Consulting Group. All rights reserved. Updated 8 May 2020 Version 5.1.
Flatten' | ~15 to 35% of employees in Europe and the US impacted by COVID-19 crisis

As of 06 May 2020
Numbers are approximate

<table>
<thead>
<tr>
<th>Country</th>
<th>2019 total employment (M)</th>
<th>Increase in unemployment (M)</th>
<th>Employees covered by support programs (M)</th>
<th>Employees impacted by COVID-19 crisis</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>28</td>
<td>0.1</td>
<td>10.0</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>Germany</td>
<td>45</td>
<td>0.1</td>
<td>10.1</td>
<td>10</td>
<td>23%</td>
</tr>
<tr>
<td>Italy</td>
<td>23</td>
<td>−1</td>
<td>5.0 - 7.7²</td>
<td>5 - 8</td>
<td>22-33%</td>
</tr>
<tr>
<td>Spain</td>
<td>20</td>
<td>3.5 - 5.0</td>
<td>3.5 - 5.0</td>
<td>18-25%</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>33</td>
<td>0.6</td>
<td>4.0</td>
<td>5</td>
<td>14%</td>
</tr>
<tr>
<td>North America</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>159</td>
<td>33.5³</td>
<td>34</td>
<td>21%</td>
<td></td>
</tr>
</tbody>
</table>

Note: These figures are changing rapidly and are often being reported with a lag from the current data.; Bolded figures are rounded to the nearest million;
1. Absolute unemployment went down driven by less people looking for work; 2. Only 5M have received funds.; 3. Government wage support provided through unemployment insurance; jobs protected by PPP not included.

Source: Employment figures: Eurostat (Europe), Trading Economics (US); Gov’t Wage Support figures & comments: The Guardian 4/27 (UK), Reuters.com 4/29 (Italy), The Financial Times 5/7 (US), Reuters 5/5 (Spain), RFI 4/22 (France), Barrons 4/30 (Germany)
"Fight" | ~5 to 25% of economic activity can be temporarily at risk – implying protracted economic challenges

As of 05 May 2020

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Impaired economic activity during 'Fight' phase (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>France</td>
<td>-10%</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td>-5%</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
<td>-15%</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
<td>-20%</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>-10%</td>
</tr>
<tr>
<td>North Am.</td>
<td>US</td>
<td>-20%</td>
</tr>
<tr>
<td>LatAm</td>
<td>Brazil</td>
<td>-15%</td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>-15%</td>
</tr>
<tr>
<td>Asia</td>
<td>India</td>
<td>-15%</td>
</tr>
<tr>
<td></td>
<td>Japan</td>
<td>-10%</td>
</tr>
</tbody>
</table>

Note: Gov’t employment does not include health care in EU countries to maintain comparison with US.; We expect a lot of variations across geographies, even within countries, hence the wide ranges.

Source: Eurostat Database; St. Louis Fed Reserve; O*NET; American Community Survey; other country-specific sources available on request; BCG COVID response teams; BCG Analysis

To determine full-year economic impact, need to factor in length of 'Fight' which is still unknown – see next page for estimated timeline

Disclaimer: These analyses represent only potential scenarios based on discrete data from one point in time. They are not intended as a prediction or forecast and the situation is changing daily. Figures shown only reflect economic activity "directly displaced" by effect of virus. However, multi-order impacts and the impact of government spending and stimulus not considered.
"Fight" | Accelerated movement toward vaccine or treatment at scale could limit Fight phase to 12-24 months

As of 06 May 2020

### Current status

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Treatment</th>
<th>Herd immunity</th>
</tr>
</thead>
</table>
| • Multiple vaccines (e.g. Moderna, CanSino, AstraZeneca) in Phase 1 trials  
• Simultaneously, investments being made in manufacturing capacity  
• Likely about 12 months to earliest FDA-approval  
• Likely to take 4-6 months post-approval to full implementation | • Anti-viral therapies potentially available at scale in Q4-2020—however, likely only used for more advanced cases  
• Antibodies from recovered patients currently being tested—use will be limited to small scale/at-risk groups | • Potentially could achieve herd immunity through exposure to disease and subsequent recovery  
• Estimates suggest greater than 60% population is required to acquire and recover to reach herd immunity²  

**Likely must be combined with vaccine**

### Estimated timeline

| April '21 – April '23  
(12-36 months) | Remdesivir is approved now, could be more widely available by July ‘20  
For the next wave, estimated timeline is  
**October ’20 – April ’22**  
(6-24 months¹) | Substantial  
Would likely involve “pulsing” economy on/off, but always maintaining caseloads below care capacity |

1. If first round of drugs being tested succeeds – then 6-9 months; if not – substantially longer; 2. This would require mass exposure, high fatality rate, and an assumption that re-infection does not occur. Achieving herd immunity through disease exposure would likely take significant time, and it is currently unclear if exposure prevents reinfection.

Source: BCG analysis; Morningstar
Economic forecasts deteriorating globally for 2020 while remaining stable for 2021

As of 05 May 2020

GDP growth forecast vs. baseline

<table>
<thead>
<tr>
<th>Region</th>
<th>2020 Forecast</th>
<th>2021 Forecast</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>-5.9%</td>
<td>1.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>China</td>
<td>-7.5%</td>
<td>1.4%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Europe</td>
<td>-5.2%</td>
<td>0.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>India</td>
<td>-5.2%</td>
<td>1.9%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Japan</td>
<td>-5.2%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

GDP level forecast

EOY 2021 vs. EOY 2019

<table>
<thead>
<tr>
<th>Region</th>
<th>2020 Forecast</th>
<th>2021 Forecast</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>-5.9%</td>
<td>1.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>China</td>
<td>-7.5%</td>
<td>1.4%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Europe</td>
<td>-5.2%</td>
<td>0.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>India</td>
<td>-5.2%</td>
<td>1.9%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Japan</td>
<td>-5.2%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

Note: As of reports dated 31 March 2020 to 05 May 2020, YoY forecasts 1. Announced by the German Federal Ministry for Economic Affairs and Energy on 29 Apr 2020 2. Range calculated with 25th & 75th percentile values of forecast range 3. Range from forecasts (where available) of International Monetary Fond, JP Morgan Chase; Morgan Stanley; Bank of America; Fitch Solutions; Credit Suisse; Danske Bank; ING Group; HSBC Source: German Federal Ministry for Economic Affairs and Energy; Bloomberg; IMF; BCG analysis
ECONOMIC IMPACT

TSR has rebounded over last month, but impact visible across all sectors

Two time periods from 21 February 2020 to 6 May 2020

### Decline reflects economic scenario and consumer sentiment

<table>
<thead>
<tr>
<th>TSR performance</th>
<th>Americas</th>
<th>Europe</th>
<th>Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/staples Retail</td>
<td>-10%</td>
<td>-7%</td>
<td>-15%</td>
</tr>
<tr>
<td>Pharma</td>
<td>-19%</td>
<td>1%</td>
<td>-20%</td>
</tr>
<tr>
<td>Household Products</td>
<td>-19%</td>
<td>-10%</td>
<td>-16%</td>
</tr>
<tr>
<td>Semiconductors</td>
<td>-30%</td>
<td>-8%</td>
<td>-43%</td>
</tr>
<tr>
<td>Software</td>
<td>-30%</td>
<td>-9%</td>
<td>-32%</td>
</tr>
<tr>
<td>Telecom</td>
<td>-17%</td>
<td>-11%</td>
<td>-20%</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
<td>-26%</td>
<td>-15%</td>
<td>-31%</td>
</tr>
<tr>
<td>Health Equipment</td>
<td>-33%</td>
<td>-14%</td>
<td>-25%</td>
</tr>
<tr>
<td>Tech Hardware</td>
<td>-29%</td>
<td>-11%</td>
<td>-31%</td>
</tr>
<tr>
<td>Materials</td>
<td>-34%</td>
<td>-17%</td>
<td>-29%</td>
</tr>
<tr>
<td>Prof. Services</td>
<td>-30%</td>
<td>-17%</td>
<td>-36%</td>
</tr>
<tr>
<td>Retailing</td>
<td>-42%</td>
<td>-25%</td>
<td>-38%</td>
</tr>
<tr>
<td>Transport</td>
<td>-37%</td>
<td>-26%</td>
<td>-30%</td>
</tr>
<tr>
<td>Utilities</td>
<td>-33%</td>
<td>-22%</td>
<td>-35%</td>
</tr>
<tr>
<td>Capital Goods</td>
<td>-38%</td>
<td>-22%</td>
<td>-35%</td>
</tr>
<tr>
<td>Financials</td>
<td>-36%</td>
<td>-22%</td>
<td>-35%</td>
</tr>
<tr>
<td>Media</td>
<td>-36%</td>
<td>-24%</td>
<td>-47%</td>
</tr>
<tr>
<td>Hospitality</td>
<td>-49%</td>
<td>-36%</td>
<td>-47%</td>
</tr>
<tr>
<td>Insurance</td>
<td>-42%</td>
<td>-35%</td>
<td>-40%</td>
</tr>
<tr>
<td>Banks</td>
<td>-41%</td>
<td>-36%</td>
<td>-44%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>-42%</td>
<td>-33%</td>
<td>-26%</td>
</tr>
<tr>
<td>Auto</td>
<td>-47%</td>
<td>-36%</td>
<td>-45%</td>
</tr>
<tr>
<td>Durable Goods</td>
<td>-49%</td>
<td>-33%</td>
<td>-32%</td>
</tr>
<tr>
<td>Energy</td>
<td>-56%</td>
<td>-37%</td>
<td>-45%</td>
</tr>
</tbody>
</table>

### Observations

- **Non-discretionary/essential service less hit but still had recovery**
- **Broad set of industries experiencing pressure, with some regions particularly affected for certain sectors (e.g. transport in Europe)**
- **Utilities, media, and health equipment generally better off in Asia**
- **Hardest hit sectors had the strongest recoveries except banks**

Note: As of 6 May 2020; Based on top S&P Global 1200 companies; Sectors are based on GICS definitions 1) Performance is tracked for two periods, first from 21 February 2020 (before international acceleration of outbreak) to 20 March 2020 (trough of the market) and from 20 March 2020 through 6 May 2020

Source: S&P Capital IQ; BCG ValueScience® Center; BCG
Credit risk continues to be a concern for majority of sectors

As of 21 February 2020 to 6 May 2020

<table>
<thead>
<tr>
<th></th>
<th>Median 5-year CDS(^1) implied probability of default(^2)</th>
<th>Companies in distress (%)(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Healthier sectors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food/staples Retail</td>
<td>4% 5%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Pharma</td>
<td>3% 3%</td>
<td>0% 5%</td>
</tr>
<tr>
<td>Household Products</td>
<td>4% 4%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Semiconductors</td>
<td>5% 7%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Software</td>
<td>4% 5%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Telecom</td>
<td>4% 7%</td>
<td>0% 15%</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
<td>3% 3%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Health Equipment</td>
<td>4% 5%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Tech Hardware</td>
<td>4% 4%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Materials</td>
<td>4% 6%</td>
<td>4% 17%</td>
</tr>
<tr>
<td>Prof. Services</td>
<td>5% 5%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Retailing</td>
<td>5% 9%</td>
<td>0% 41%</td>
</tr>
<tr>
<td>Transport</td>
<td>3% 3%</td>
<td>0% 39%</td>
</tr>
<tr>
<td>Utilities</td>
<td>3% 4%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Capital Goods</td>
<td>3% 5%</td>
<td>2% 11%</td>
</tr>
<tr>
<td><strong>Pressured sectors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financials</td>
<td>4% 6%</td>
<td>0% 5%</td>
</tr>
<tr>
<td>Media</td>
<td>5% 8%</td>
<td>0% 14%</td>
</tr>
<tr>
<td>Hospitality</td>
<td>5% 12%</td>
<td>7% 43%</td>
</tr>
<tr>
<td>Insurance</td>
<td>4% 6%</td>
<td>0% 14%</td>
</tr>
<tr>
<td>Banks</td>
<td>4% 7%</td>
<td>0% 4%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>5% 10%</td>
<td>0% 17%</td>
</tr>
<tr>
<td>Auto</td>
<td>5% 12%</td>
<td>0% 33%</td>
</tr>
<tr>
<td>Durable Goods</td>
<td>4% 6%</td>
<td>0% 0%</td>
</tr>
<tr>
<td>Energy</td>
<td>5% 12%</td>
<td>0% 35%</td>
</tr>
<tr>
<td><strong>Vulnerable sectors</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Observations**

- Less discretionary and cash-rich sectors are largely at lower risk of default in current climate
- Retailing, hospitality, and energy industries facing greatest risk of default based on current credit profile

Note: As of 6 May 2020; Based on top S&P Global 1200 companies; Sectors are based on GICS definitions

\(^1\) Credit Default Swap; \(^2\) Performance is tracked on 21 February 2020 (before international acceleration of outbreak), and 6 May 2020

\(^3\) Distressed comprises over 15% implied probability of default Source: S&P Capital IQ; BCG ValueScience® Center; BCG

Copyright © 2020 by Boston Consulting Group. All rights reserved. Updated 8 May 2020 Version 5.1.
Majority of companies negatively affected—yet some companies in each sector manage to emerge much stronger

As of 6 May 2020

Note: Sectors are based on GICS definitions; data as of 6 May 2020; Companies sampled from S&P Global 1200

Source: S&P Capital IQ; BCG ValueScience® Center
Guide for leaders
Getting ready for Restart
How to revamp Organization for the New Reality

Updated epidemic, economic, and business scenarios and impact
Epidemic progression
Economic impact
Business scenarios and impact

Appendix: Detailed action areas and further readings
Detailed action areas for business leaders
Further readings
Establish crisis management

1. Develop Scenario-Based Planning Approach to manage uncertainty

   • Deep-dive into possible outcomes of disease spread, demand shifts, supply/operations issues, regulatory requirements, and potential operations restart; adjust for sector-specific issues
   • Perform scenario stress tests around cash-flow
   • Establish preconditions for what it will take to get workforce back to offices, factories, etc.
   • Set up teams to work on different time horizons (Flatten, Fight, Future) to avoid reverting to crisis management across all

2. Create a Rapid Response and Transformation (RR&T) team

   • Establish nimble cross-functional Rapid Response & Transformation team (RR&T)
   • Refine processes to manage the crisis situation, remote working, disruption in supply
   • Ensure smooth transition of operations and workforce to the 'New Reality'
   • Shift to digital/remote customer interactions

Navigate through Flatten, Fight, and Future

3. Revamp Organization for the New Reality

   • Define policies to keep employees safe with high morale
   • Engage across levels to retain talent
   • Move to online/remote working; redefine rosters, and train for efficiency/effectiveness
   • Establish preconditions for coming back to the working environment; clearly communicate them
   • Build SWAT teams to address critical business areas, such as product launch, digital channel redesign, retail delivery models

   • Frequently run scenarios and update plan; focus on understanding the de-averaged impact by geography and line of business, depth of demand drop, duration of Fight phase
   • Develop recommendations for daily planning, resources, supply chain, workforce, and other stakeholder management as per modeled scenarios

   • To manage the massive complexity of "restarting," enhance Rapid Response & Transformation team structures
   • Develop approach for how to bring people back to work, how/when to engage customers
   • Establish governance and standardization to effectively coordinate other areas from the RR&T

   • Get ahead of the curve to manage policies to get teams back to work safely
   • Take a clear view of forward demand and the new normal: manage/restructure organization to fit capacity needs
   • Create dedicated focus to accelerate digital, process automation, new ways of working

Source: BCG
Navigate through Flatten, Fight, and Future

**Flatten**
- Reach out to customers for their situation and needs
- Drive actions to inspire confidence and ensure ability to deliver (multichannel, people-light approaches)
- Manage volatility in demand and refine sales motions (to virtual, etc.) and objectives
- Take measures to ensure operations continuity: workforce safety and management, stop-gap measures for supply chain, site readiness (access, maintenance, services, suppliers)
- Ensure open and direct communication with employees
- Explore solutions to retain key talent
- Build forecasts for COVID-19 impact on P&L, balance sheet, investor base
- Review capital sufficiency scenarios and possible effects on credit risk
- Manage credit and debt commitment for short term
- Create agile FY20-21 business plans and budgets to deal with uncertainty

**Fight**
- Assess changes in customers’ behaviors
- Adapt and transform channels (e-commerce), sales, marketing spend, pricing, and support
- Ramp up commercial efforts significantly to seize market shifts; leverage learnings to accelerate digital capabilities
- Ensure quick and safe restart of facilities; push centrally driven efficiency measures
- Set up capabilities (org, control tower) to manage unstable supply chain; explore alternate networks, dual/multiple suppliers for critical goods and services, delivery methods, etc.
- Acceleration of production as demand rebounds; account for product shifts
- Build central team to simulate financials as per evolving scenarios; drive agile ways of working
- Decisively take structural actions: TURN PMO, zero-based budgets, delaying/restructuring, re-base tech portfolio, etc.; deploy rapidly as speed is predictive of success in downturns

**Future**

Source: BCG
<table>
<thead>
<tr>
<th>Navigate through Flatten, Fight, and Future</th>
<th>Source: BCG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7</strong> Emerge stronger; drive advantage in adversity</td>
<td></td>
</tr>
<tr>
<td><strong>8</strong> Accelerate Digital and Technology transformation</td>
<td></td>
</tr>
<tr>
<td><strong>9</strong> Help Society during COVID-19</td>
<td></td>
</tr>
</tbody>
</table>

### Flatten
- Stress-test current value proposition and business offerings, and scan crisis impact on key customer/market trends
- Address and serve immediate workforce needs for remote working
- Leverage tools for conducting key processes online
- Adapt traditional processes to become digitally viable
- Ensure immediate support to employees, suppliers, communities, etc.
- Team with government/local communities/across industries to address crisis
- Leverage assets, supplier relationships, logistics networks, and employees to help adjacent communities
- Work across industry boundaries to identify cross-sectoral synergies to deploy solutions

### Fight
- Plan for new projects to shift the portfolio and leverage the ‘new normal’; plug capability gaps
- Identify white spaces in own industry and ecosystem
- Selectively invest in areas where opportunistic M&A can be conducted
- Develop and implement strategy to exploit greater talent availability
- Identify and implement key digital use cases and adapt to agile way of working
- Accelerate use cases to meet demand shifts
- Redesign key customer journeys with emphasis on digital interventions
- Determine how to contribute in the crisis to employees, customers, through medical response, supply of essential items for society, or by playing a positive economic/employment role
- Allocate innovation resources where possible to focus on solutions to COVID-19 crisis
- Leverage expertise developed to support government policies and responses, rebuild business for local customers, suppliers, etc.
## Additional perspectives on COVID-19

### Selected overarching and functional publications

<table>
<thead>
<tr>
<th>Business &amp; Society</th>
<th>People &amp; Organizations</th>
<th>Corporate Strategy</th>
<th>People</th>
<th>Finance</th>
</tr>
</thead>
</table>
The services and materials provided by Boston Consulting Group (BCG) are subject to BCG’s Standard Terms (a copy of which is available upon request) or such other agreement as may have been previously executed by BCG. BCG does not provide legal, accounting, or tax advice. The Client is responsible for obtaining independent advice concerning these matters. This advice may affect the guidance given by BCG. Further, BCG has made no undertaking to update these materials after the date hereof, notwithstanding that such information may become outdated or inaccurate.

The materials contained in this presentation are designed for the sole use by the board of directors or senior management of the Client and solely for the limited purposes described in the presentation. The materials shall not be copied or given to any person or entity other than the Client (“Third Party”) without the prior written consent of BCG. These materials serve only as the focus for discussion; they are incomplete without the accompanying oral commentary and may not be relied on as a stand-alone document. Further, Third Parties may not, and it is unreasonable for any Third Party to, rely on these materials for any purpose whatsoever. To the fullest extent permitted by law (and except to the extent otherwise agreed in a signed writing by BCG), BCG shall have no liability whatsoever to any Third Party, and any Third Party hereby waives any rights and claims it may have at any time against BCG with regard to the services, this presentation, or other materials, including the accuracy or completeness thereof. Receipt and review of this document shall be deemed agreement with and consideration for the foregoing.

BCG does not provide fairness opinions or valuations of market transactions, and these materials should not be relied on or construed as such. Further, the financial evaluations, projected market and financial information, and conclusions contained in these materials are based upon standard valuation methodologies, are not definitive forecasts, and are not guaranteed by BCG. BCG has used public and/or confidential data and assumptions provided to BCG by the Client. BCG has not independently verified the data and assumptions used in these analyses. Changes in the underlying data or operating assumptions will clearly impact the analyses and conclusions.

The situation surrounding COVID-19 is dynamic and rapidly evolving, on a daily basis. Although we have taken great care prior to producing this presentation, it represents BCG’s view at a particular point in time. This presentation is not intended to: (i) constitute medical or safety advice, nor be a substitute for the same; nor (ii) be seen as a formal endorsement or recommendation of a particular response. As such you are advised to make your own assessment as to the appropriate course of action to take, using this presentation as guidance. Please carefully consider local laws and guidance in your area, particularly the most recent advice issued by your local (and national) health authorities, before making any decision.