

COVID-19: Briefing materials

Global health and crisis response

Updated: June 1, 2020

Current as of June 1, 2020

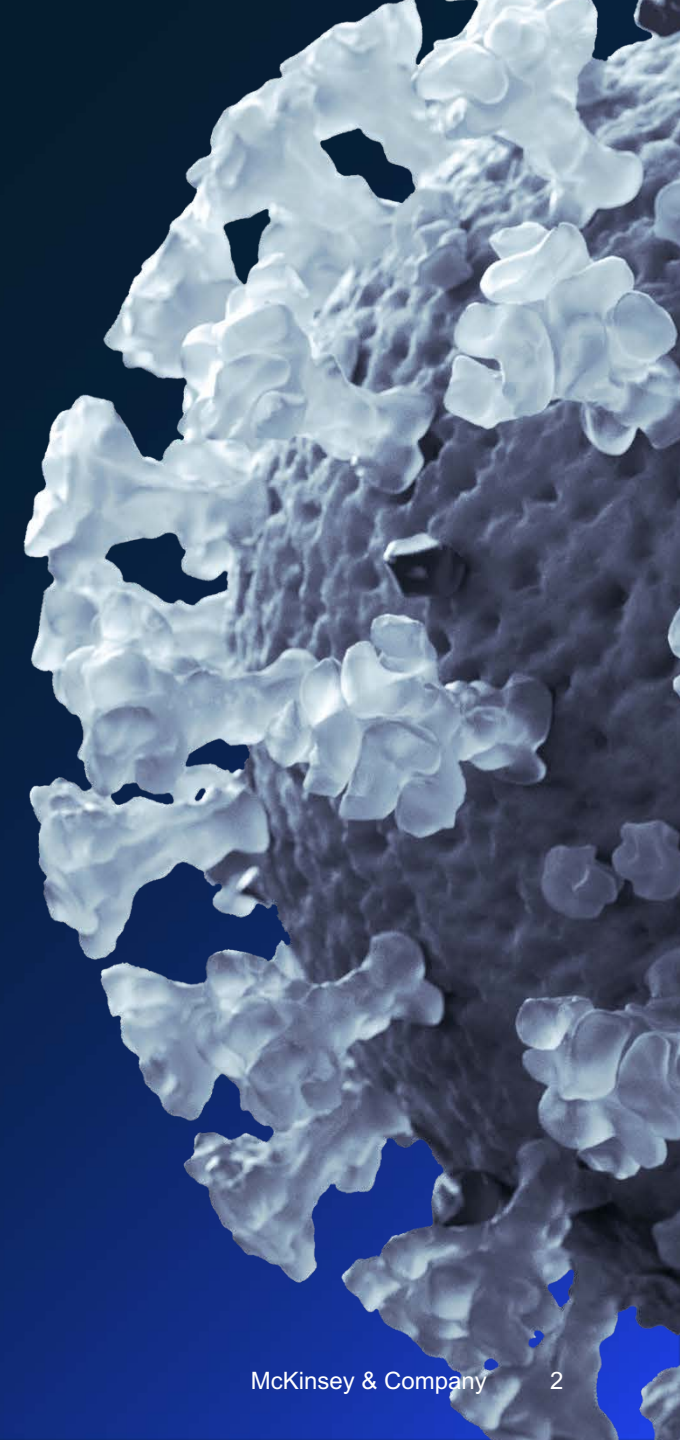
COVID-19 is, first and foremost, a global humanitarian challenge.

Thousands of health professionals are heroically battling the virus, putting their own lives at risk. Governments and industry are working together to understand and address the challenge, support victims and their families and communities, and search for treatments and a vaccine.

Companies around the world need to act promptly.

This document is meant to help senior leaders understand the COVID-19 situation and how it may unfold, and take steps to protect their employees, customers, supply chains, and financial results.

[Read more on McKinsey.com](#) →



Executive summary

The situation now

At the time of writing, COVID-19 cases have exceeded 6.2 million and are continuing to increase worldwide.

As spring turned to summer, many US regions started to reopen, as did others in Europe, Latin America, and Asia. Despite ongoing public-health concerns, the desire to spend and shop is palpable. Some Asian countries, such as China, have kept incremental cases low, and are restarting economies. Others, such as India, have experienced a steady rise in new cases since reopening.

In the past month, another group of countries such as Japan, South Korea and Germany have lifted and then reinstated public health measures due to a virus resurgence.

How the situation may evolve

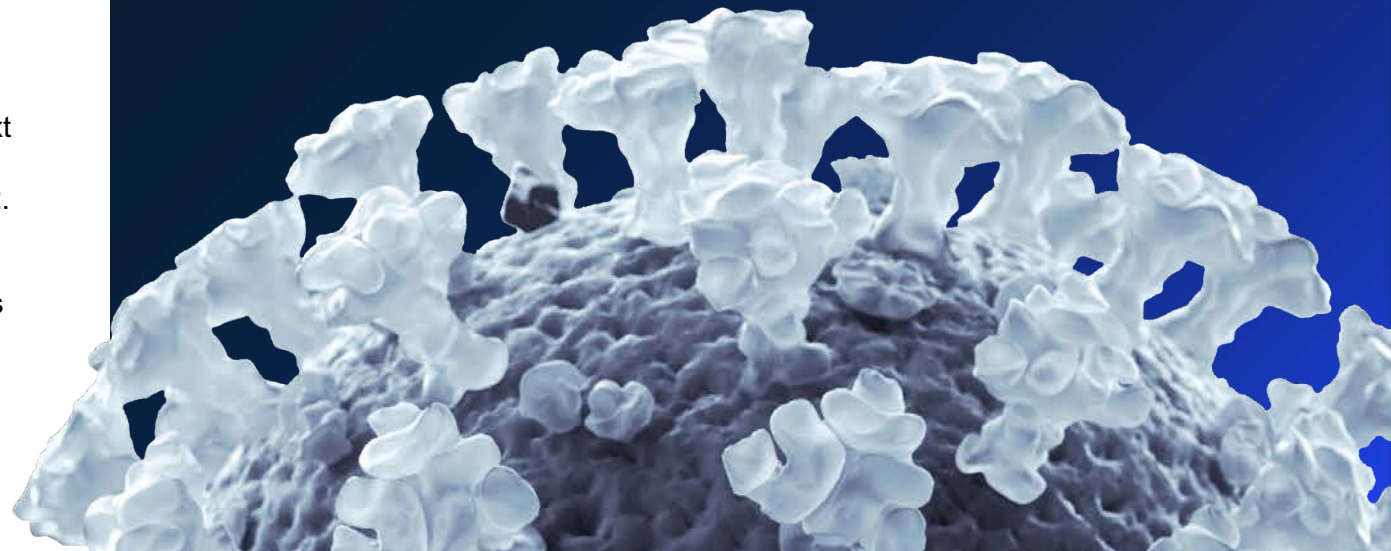
As different geographies reopen, uncertainties around case reduction might persist. Both the WHO and CDC indicate the possibility of a COVID-19 resurgence in the fall, coinciding with flu season.

For the private sector, there are 4 key trends that may continue to shift for the next 18-24 months that need to be considered: 1. customer sentiments and preferences have shifted online due to the pandemic, and may continue to shift; 2. workplace norms have temporarily become remote, with several tech giants entertaining a permanent shift to an altered workforce; 3. the deployment of massive government stimulus packages and the rise of trade tensions contributes to regulatory uncertainty that could persist for a few years 4. our knowledge of how to test, trace, and treat the virus across different public health realities is changing each day with no silver bullet.

Actions that institutions can take

Given the constantly shifting landscape and uncertainty ahead, thinking about return as a static plan could be ineffective. What's needed is [a return "muscle"](#): an enterprise-wide ability to absorb uncertainty and incorporate lessons into the operating model quickly.

Companies and governments looking to adapt should develop lasting capabilities that comprise this muscle: harnessing the speed and discipline exhibited during the crisis, building capabilities for the 'next normal' at scale within your organization, and monitoring / learning from the environment to bound-uncertainty faster than ever before.



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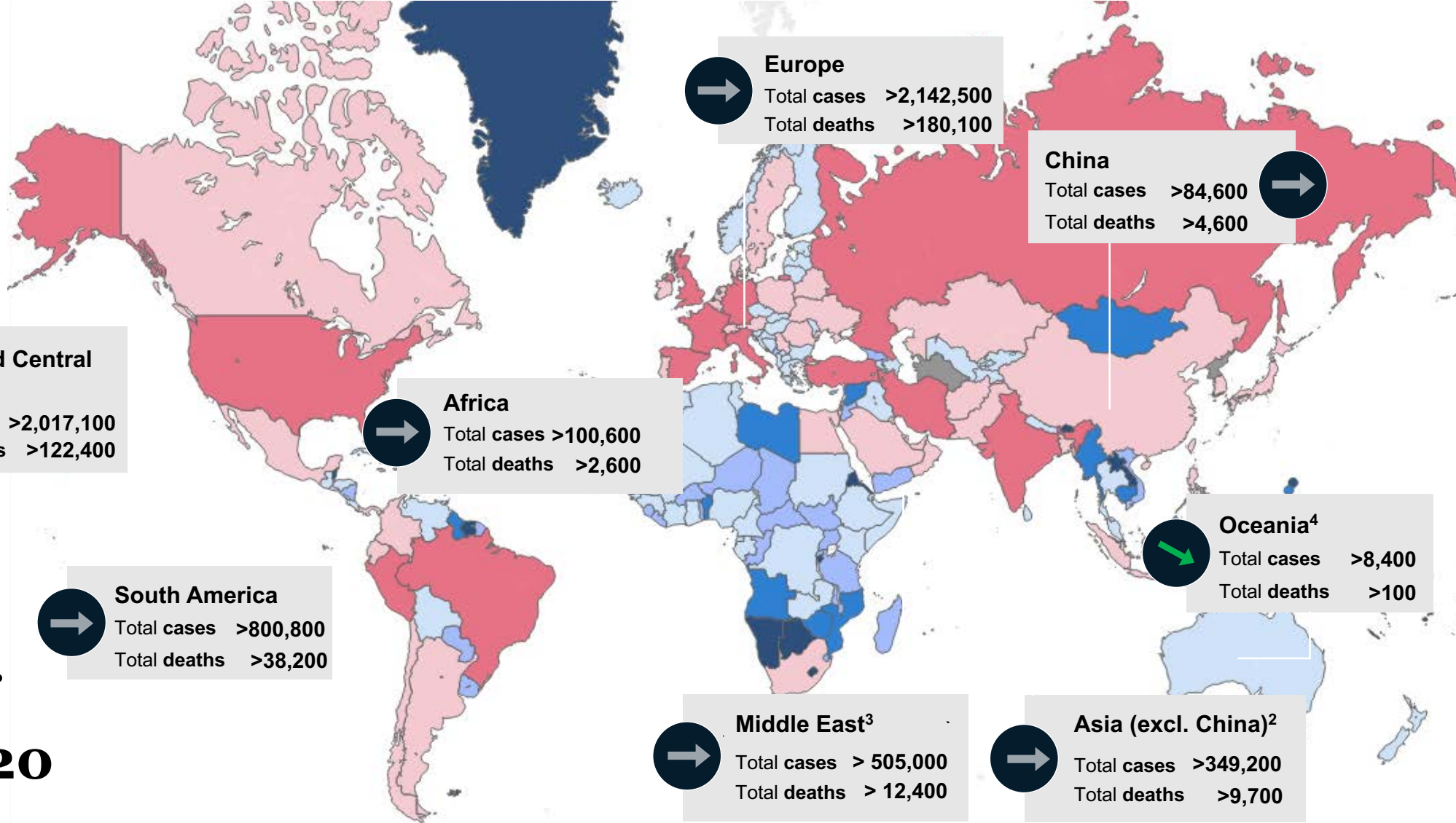
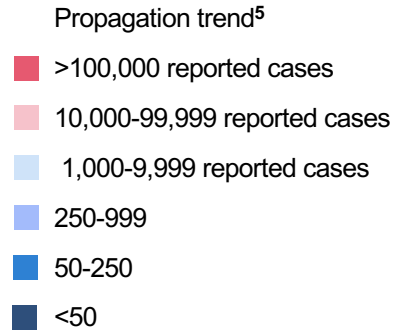
03

**Planning ahead
across multiple
horizons**

04

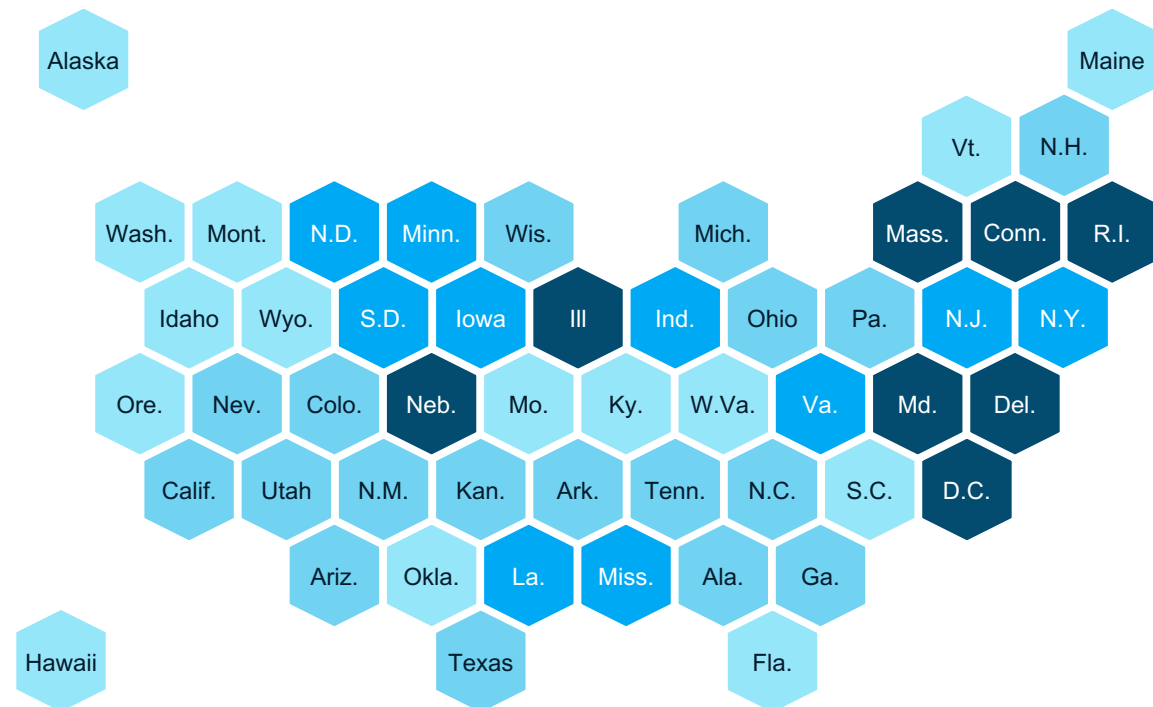
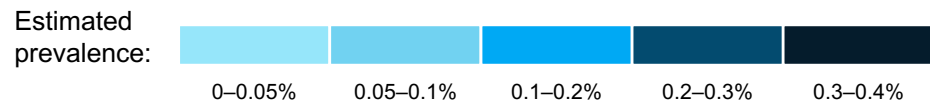
**Appendix:
Scenarios and
Return deep-dives**

COVID-19 status as of May 31, 2020



1. Johns Hopkins data used for U.S., all other North America countries reporting from WHO
 2. Includes Western Pacific and South-East Asia WHO regions; excludes China; note that South Korea incremental cases are declining, however other countries are increasing
 3. Eastern-Mediterranean WHO region
 4. Includes Australia, New Zealand, Fiji, French Polynesia, New Caledonia, Papua New Guinea
 5. Increasing: > 5% increase in incremental cases over last 7 days, compared to incremental cases over last 8-14 days; stabilizing: -5% ~ 5%; decreasing: < -5%

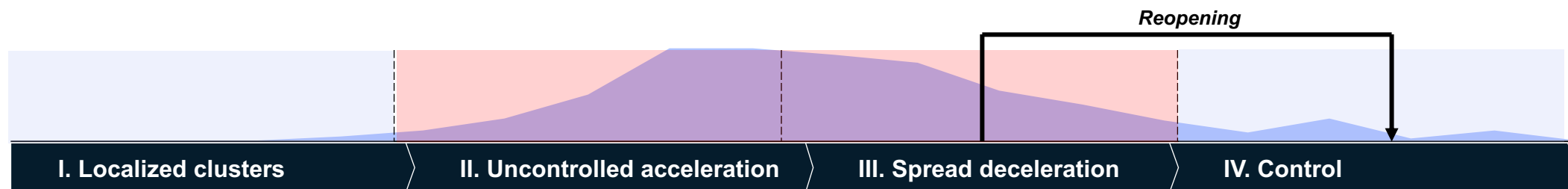
In the US, Northeastern states tend to have the highest prevalence and total case counts



State with highest # of confirmed cases	Confirmed cases	Estimated prevalence ¹	Prevalence trend ²
New York	363,836	0.14%	↓
New Jersey	155,764	0.18%	↓
Illinois	113,195	0.25%	↓
California	99,387	0.07%	→
Massachusetts	93,693	0.22%	↓
Pennsylvania	72,778	0.10%	↓
Texas	57,230	0.06%	→
Michigan	55,104	0.08%	→
Florida	52,255	0.05%	→
Maryland	47,687	0.23%	→
Georgia	43,983	0.09%	→
Connecticut	41,303	0.22%	↓

1. Defined as number of new cases over past 14 days / total population
 2. Defined as difference between latest estimated prevalence and estimated prevalence as of 1 week prior: < -0.01% marked as decreasing, between -0.01% and 0.01% marked as flat, > 0.01% marked as increasing

The disease progression appears to be following 4 phases across geographies



Description	Small number of new cases	Increasingly large number of incremental cases	Decreasingly large number of incremental cases	Number of incremental cases reduced to low levels
Example geographies¹	<p>Asia</p> <ul style="list-style-type: none"> Bhutan (33) Laos (19) Fiji (18) <p>Africa</p> <ul style="list-style-type: none"> Burundi (42) Namibia (21) <p>Oceania</p> <ul style="list-style-type: none"> New Caledonia (19) <p>North and Central America</p> <ul style="list-style-type: none"> Belize (18) Saint Lucia (18) 	<p>Asia</p> <ul style="list-style-type: none"> India (182,143) Pakistan (69,496) <p>Middle East</p> <ul style="list-style-type: none"> Saudi Arabia (83,384) Qatar (55,262) <p>North and Central America</p> <ul style="list-style-type: none"> Mexico (84,627) <p>South America</p> <ul style="list-style-type: none"> Brazil (465,166) Peru (148,285) Chile (94,858) 	<p>Europe</p> <ul style="list-style-type: none"> Spain (239,600) Italy (232,664) Germany (181,482) France (148,436) Austria (16,638) Czech Republic (9,230) Norway (8,411) <p>Middle East</p> <ul style="list-style-type: none"> Israel (17,012) <p>North and Central America</p> <ul style="list-style-type: none"> United States (1,716,078)² Canada (89,741) 	<p>Asia</p> <ul style="list-style-type: none"> Mainland China (84,570) South Korea (11,468) Thailand (3,081) Hong Kong (1,088) Taiwan (443) Vietnam (328) <p>Europe</p> <ul style="list-style-type: none"> Iceland (1,806) <p>Oceania</p> <ul style="list-style-type: none"> New Zealand (1,154)

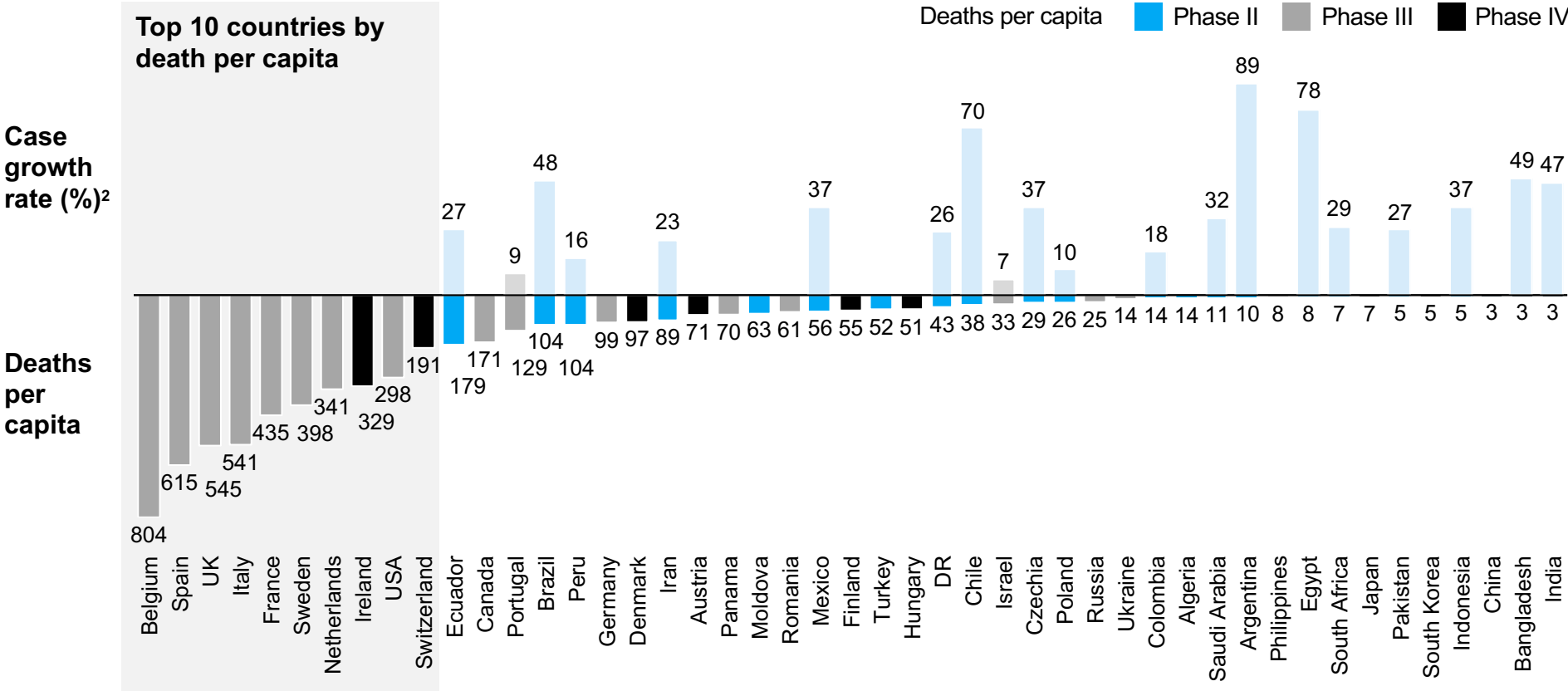
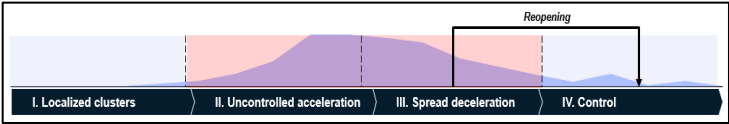
(#) Reported cases

1. Subject to change as data accumulates and more countries move through disease progression phases; dependent on volume of tests completed per capita

2. Overall, the U.S. is in Phase III, but the reality varies by state

The top 10 countries in reported COVID-19 deaths per capita are all in Europe and North America but all have stable or declining case growth

Countries with the highest reported COVID-19 deaths per capita¹, Average case growth as percent, total # of deaths per 1M people



Countries use different methodologies for attributing deaths to COVID-19, which accounts for some differences

This trend could be partially attributed to the higher proportion of aging populations in high-income countries.

Additionally, greater testing and tracing capacities of high-income countries could increase the likelihood of a death being attributed to COVID-19.

1. Excluding countries with fewer than 250 deaths; 2. Case growth is negative if not shown. It is calculated as the percent difference in the seven-day average of new cases from one week ago to today; countries with case growth of 10% or more are considered "uncontrolled acceleration"; growth rates of 0-10% are considered stable

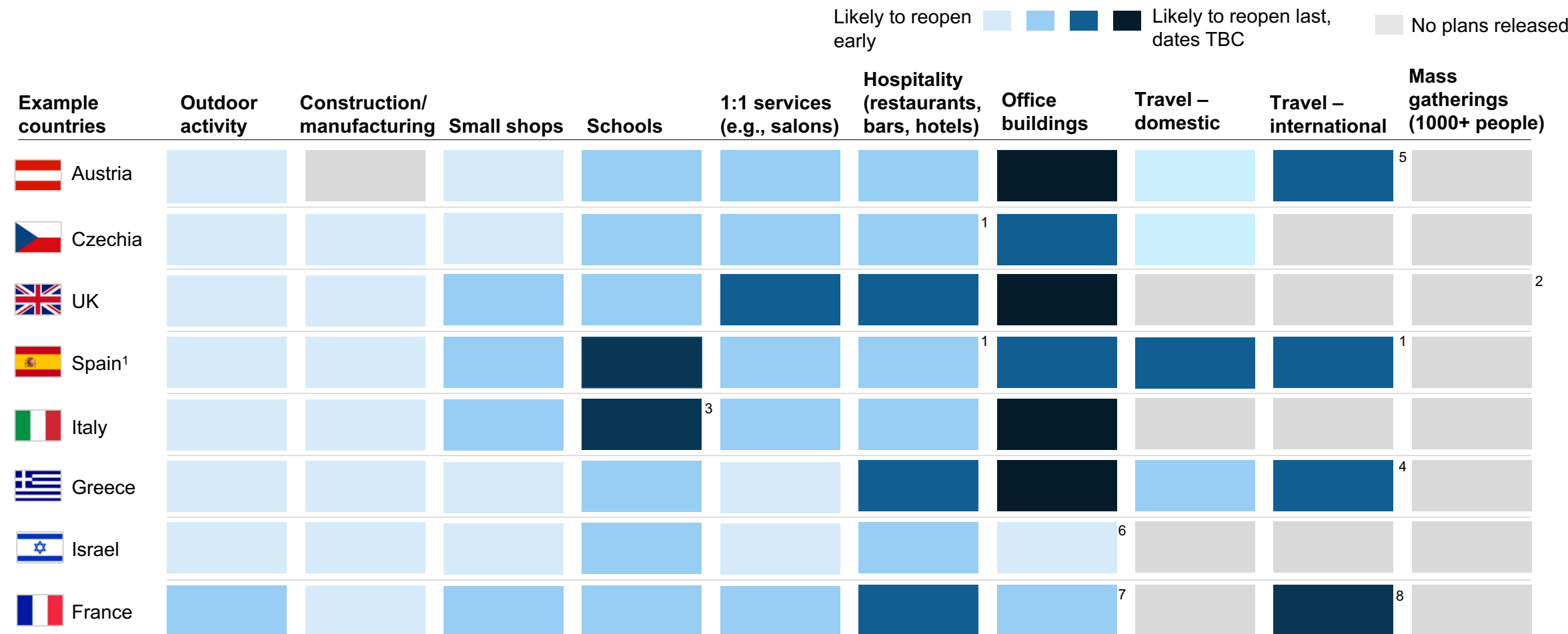
Source: World Health Organization, Johns Hopkins University, Our World in Data, World Bank

COVID-19 disease progression

Reopening in the short-term

Controlling the spread in the long-term

While reopening strategies vary, there are some clear trends across countries



1. Restaurants and bars with outdoor areas can open first, followed by indoor seating areas a few weeks later
 2. The UK has an indefinite ban on crowds for sporting events
 3. Italy is not planning on reopening schools until September
 4. Greece has announced a date for international travel, June 15, with most flights resuming July 1

5. Austria will slowly reopen its border with Germany, Switzerland, and Liechtenstein mid-May and fully reopen mid-June
 6. Finance and tech sectors allowed to return to work first; no plans released for other sectors
 7. Employees still encouraged to work remotely if possible; businesses that cannot telework are encouraged to stagger shifts
 8. Discussions of introducing travel bubble with Germany, Switzerland, and Austria in mid-June; TBC

Different geographies have chosen to reopen with varying numbers of cases and Rt values

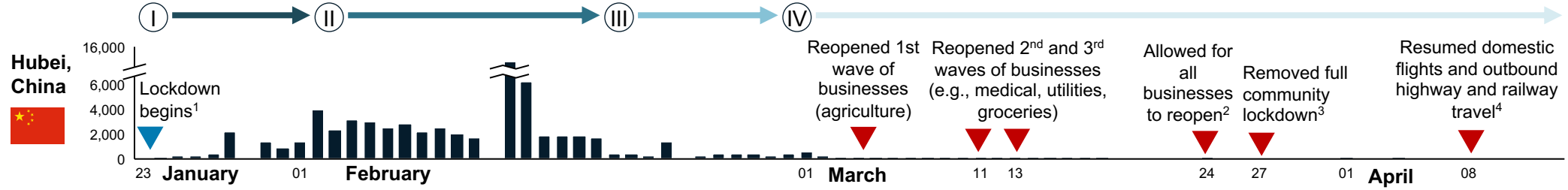
Reopening strategy

Open when cases are near zero

Daily incremental cases for example countries

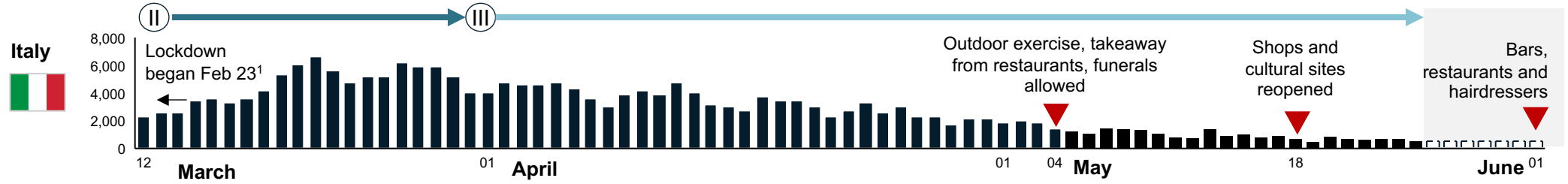
▼ Start of lockdown / strict social distancing restrictions ▼ Easing of restrictions (implemented or planned)

Other example countries



S. Korea

Open when Rt < 1 for an extended period of time

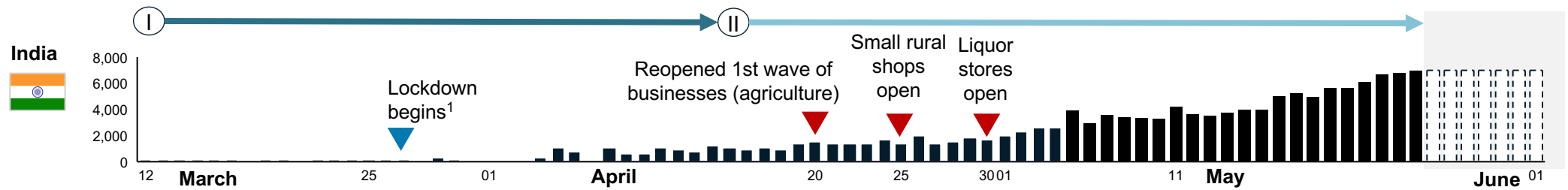


Spain



Germany

Open when Rt > 1 driven by economic factors



Nigeria

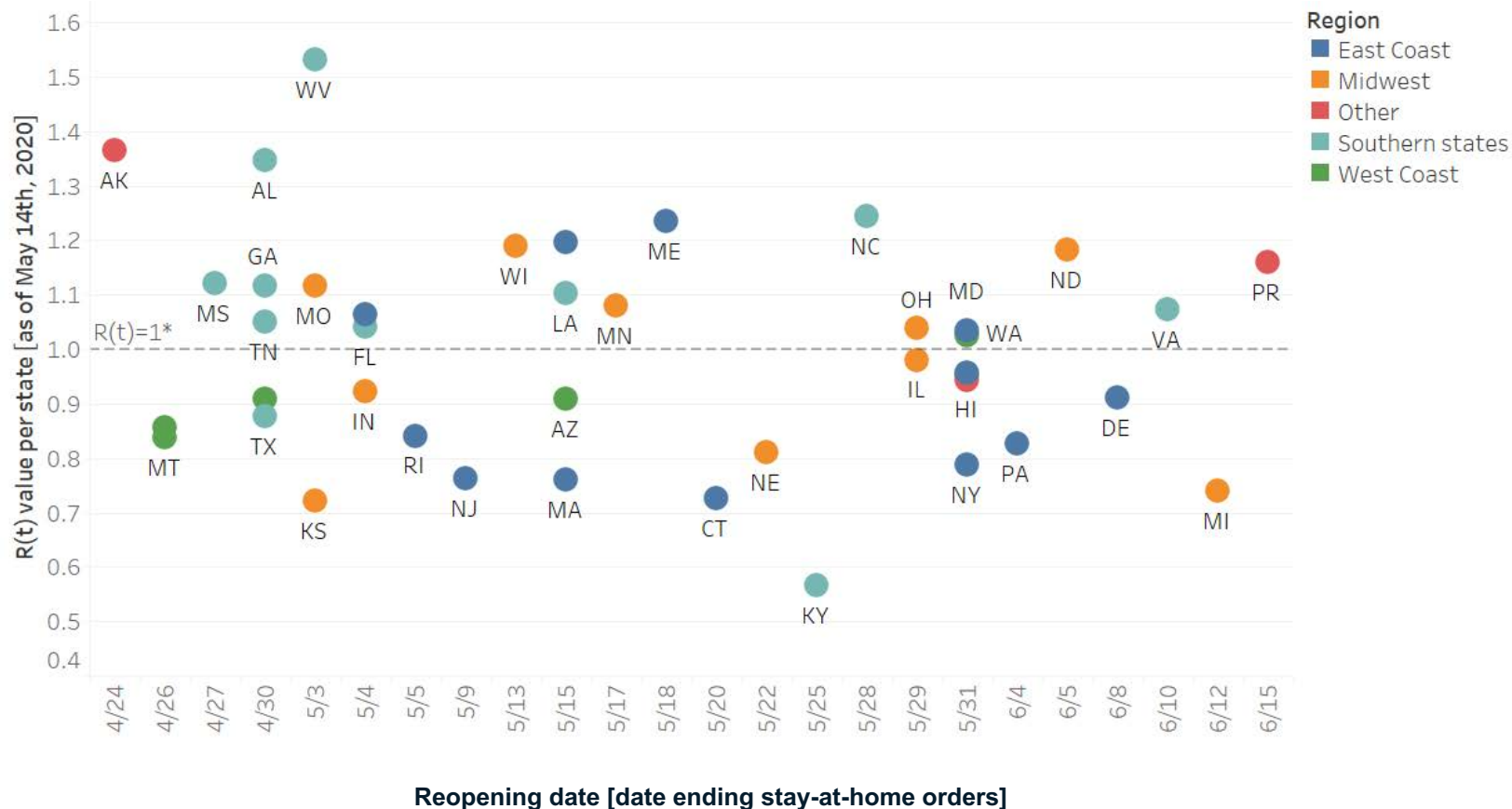


Pakistan

1. Lockdown date is determined as the date at which both stay-at-home orders and workplace closures were enforced; 2. Upon individual assessment, as of April 7; 3. However, people encouraged to stay home as much as possible and schools remain closed; 4. Domestic flights resumed excluding Beijing and outbound highway and railway travel resumed after presenting a phone app that indicates whether they are contagion risks; 5. Public events canceled; restrictions on gatherings limited to no more than 1000 6. Stay-at-home orders, workplace closures, and restrictions on domestic travel were strengthened

For US states, there is minimal correlation between R_t and reopening timing

$R(t)$ values for U.S. states and their respective reopening dates¹



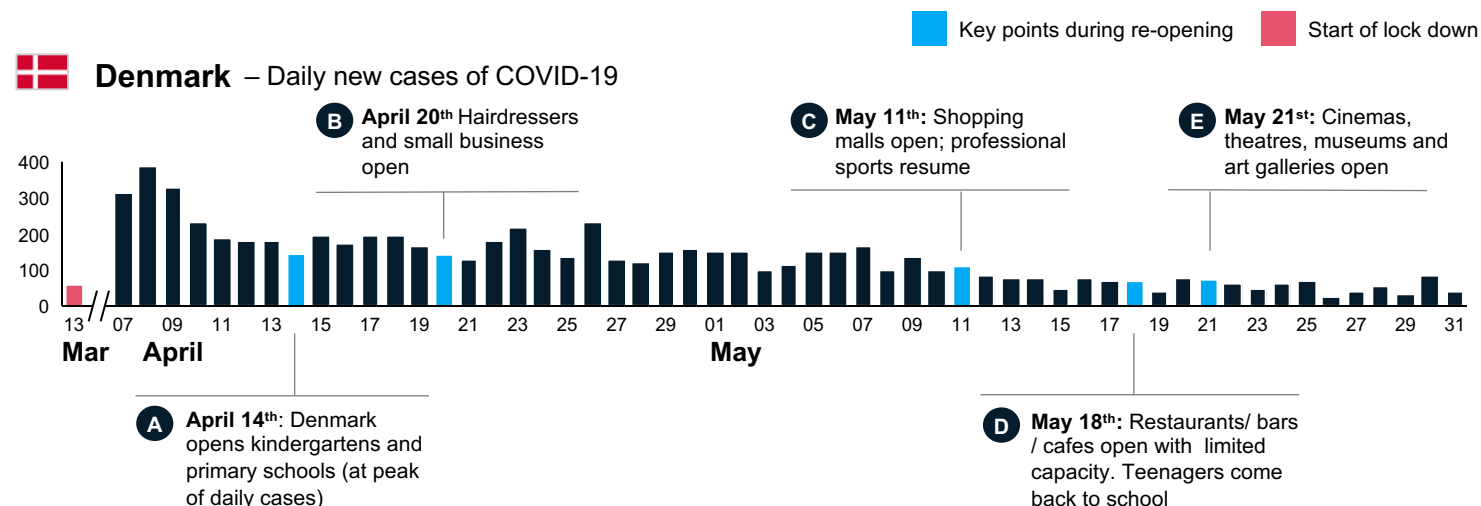
Implications

There is no clear correlation between $R(t)$ values and time before reopening within the U.S

States seem to apply their own guidelines and perspectives to reopen

1. Currently announced dates by state; subject to change based on public health guidance and disease progression; "reopening" defined as end of stay-at-home order
 * $R(t) = 1$ is widely used as a crucial threshold for the rate of COVID-19 transmission; $r(t) = 1$ implies no exponential growth of cases and is often used as a proxy for reopening
 Note: States which never had stay at home orders, or have not yet announced the end of their stay at home orders, are not included in analysis

Denmark and Austria show initial success in re-openings; however, more time is needed to draw long-term conclusions



Both Denmark and Austria see a consistent decrease in numbers of new cases per day, even after beginning to loosen restrictions

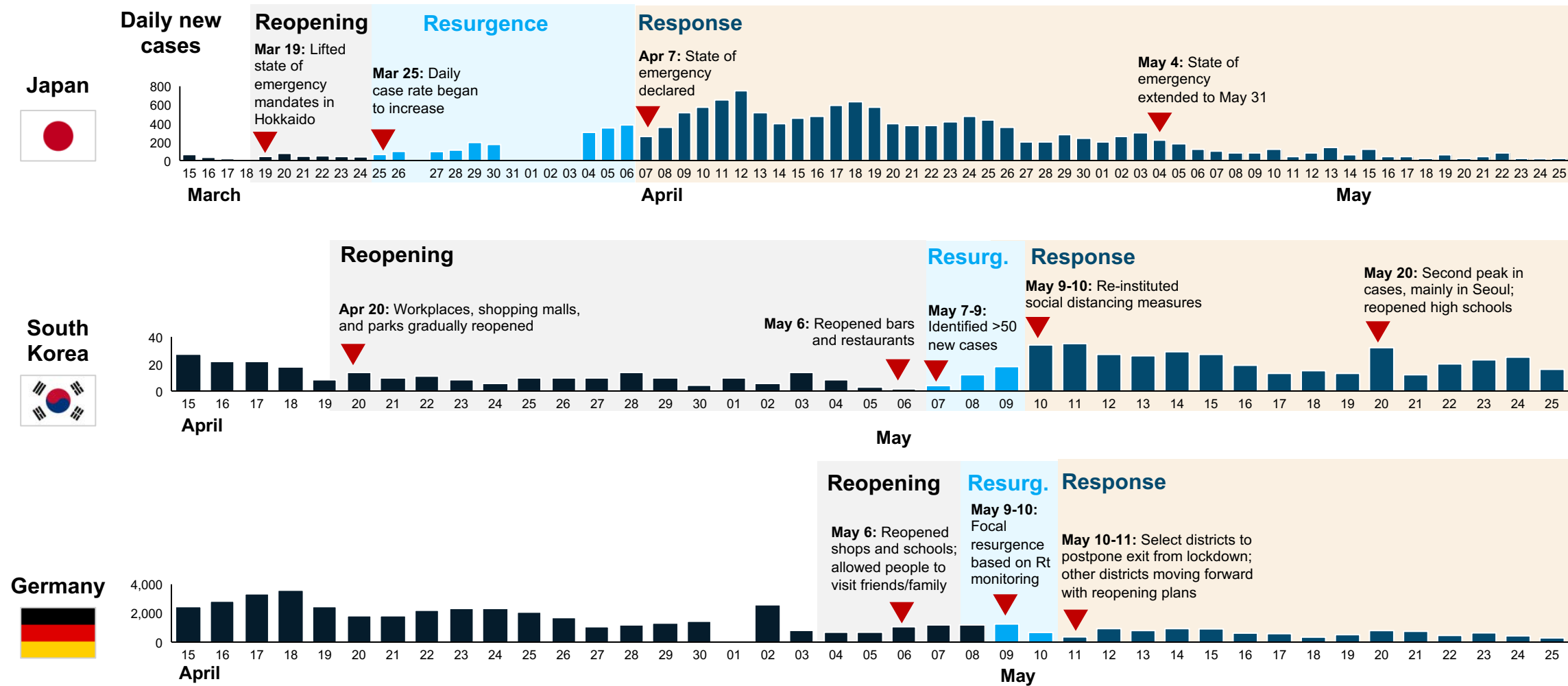
Austria and Denmark have followed a similar path for reopening:

- Ensuring a gradual opening process, with public places at highest risk of violating social distancing (e.g., restaurants, cafes) to open last
- Leaving a 1-2 week period after every opening to monitor its impact and pivot if necessary (i.e., return to harsher restrictions if there is a steep increase)
- Encouraging citizens to use digital tools to track the virus (allowing population to self-monitor)

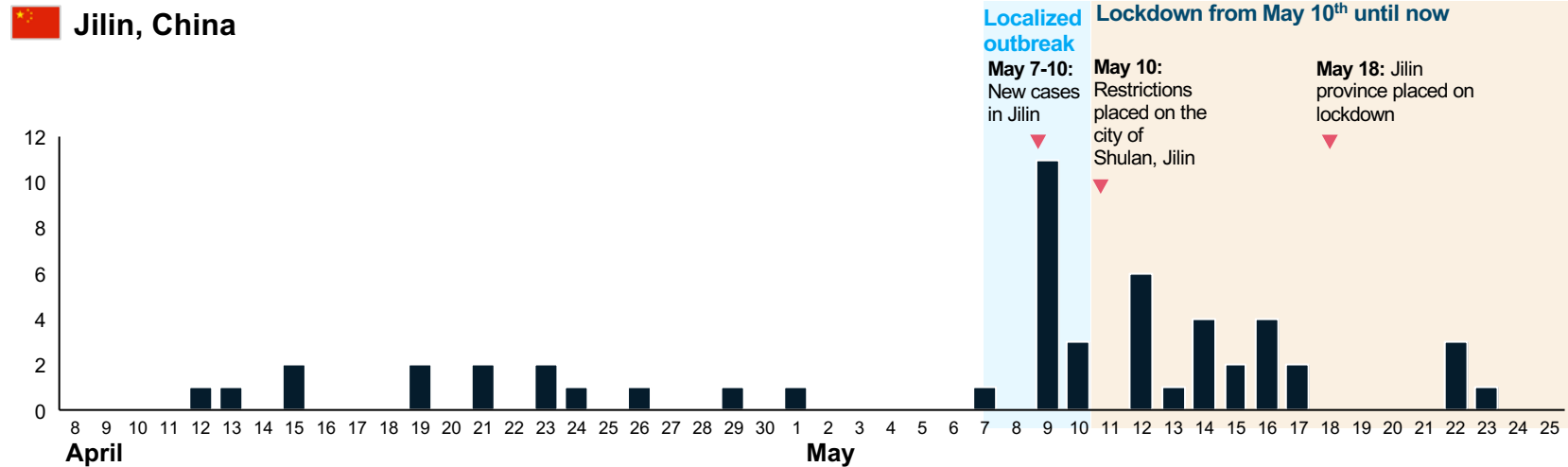
Some other factors that might have led to Austria's and Denmark's success are:

- Both countries have relatively small economies, with a relatively smaller movement across borders (relative to e.g., Germany, France)
- Both countries implemented social distancing measures at earlier stages than their neighbors
- Both countries have an advanced and universally-accessible healthcare system

Initial reopening has not always been smooth – in some geographies, resurgence has required reinstitution of public health measures

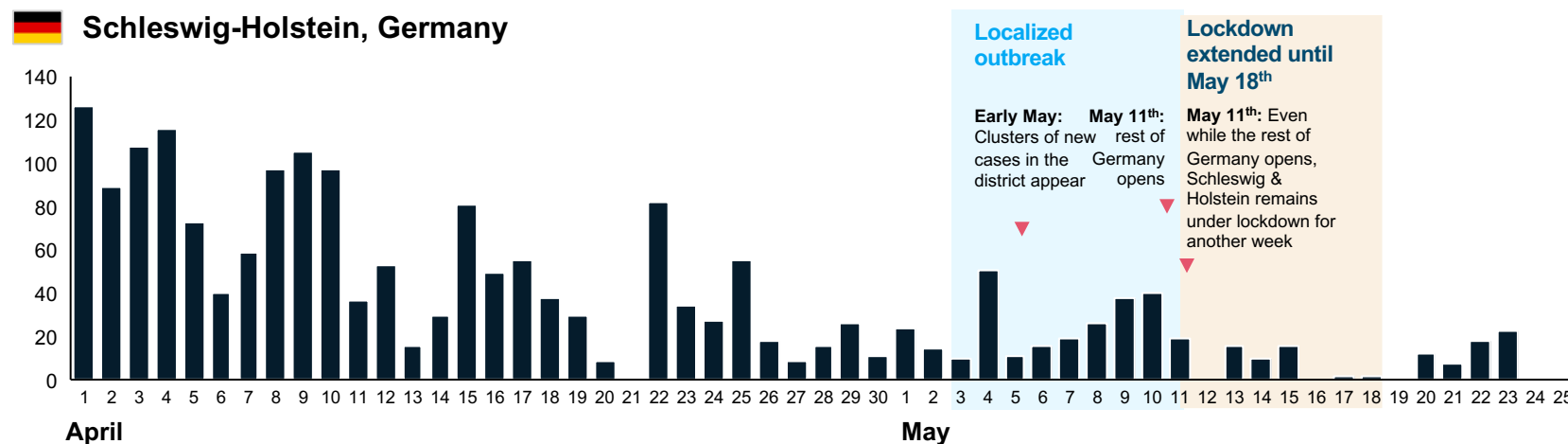


Localized responses may reduce the need for nation-wide measures



In China, several provinces like Jilin (e.g., Heilongjiang, Hubei) appear to have successfully responded to outbreaks with localized measures

Throughout the pandemic, specific regions/cities in China had to be placed under a lockdown to contain the virus within the whole country



In Germany, 3 non-adjacent districts with emerging local outbreaks, including Schleswig-Holstein, had extended their lockdown by a week in comparison to the rest of Germany

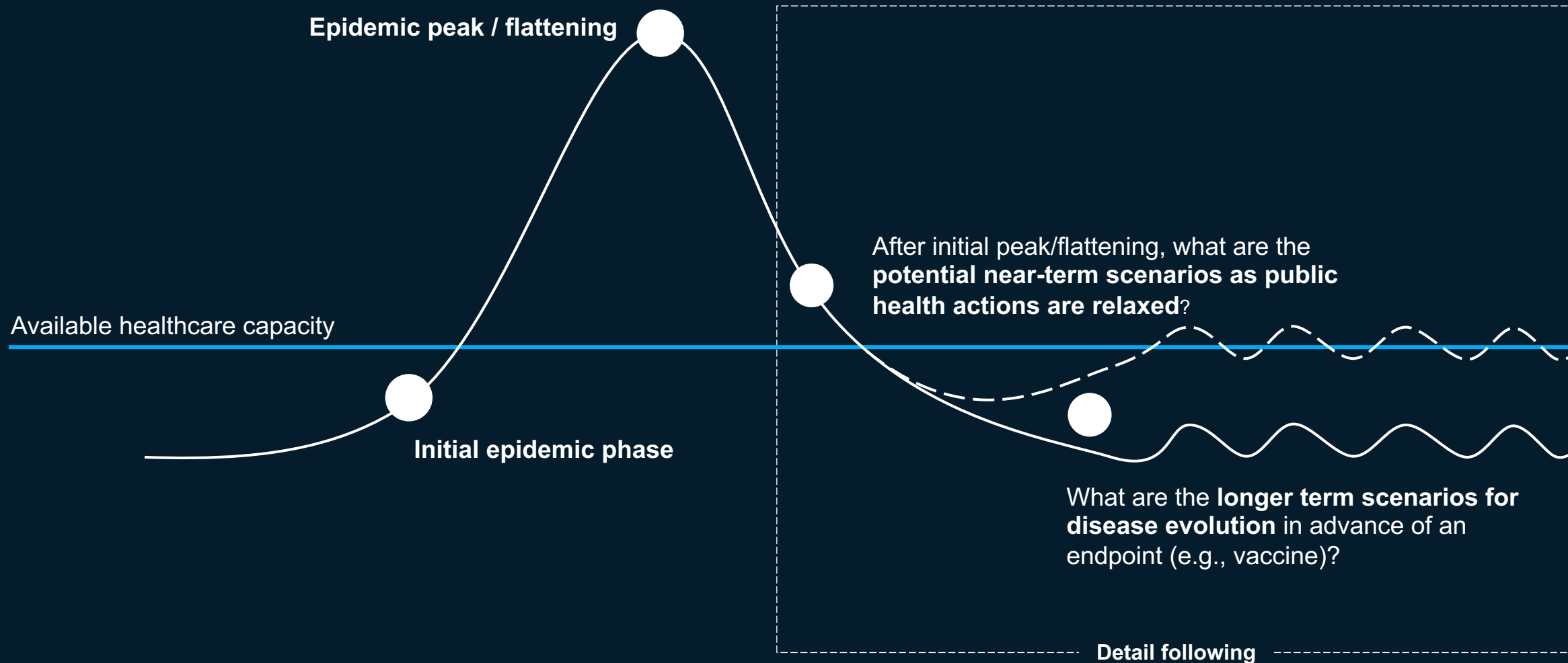
COVID-19 disease progression

Reopening in the short-term

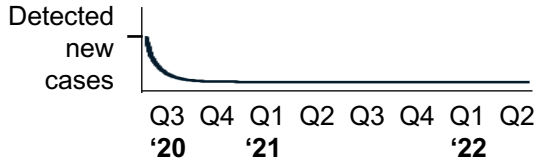



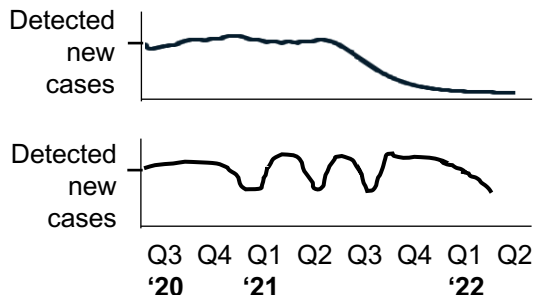



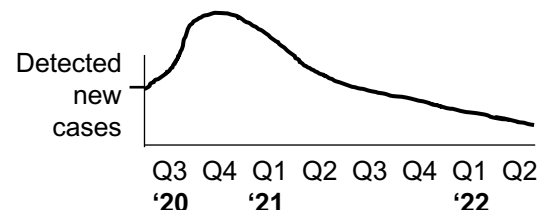
Controlling the spread in the long-term

Significant uncertainty remains around medium- and long-term epidemiology trajectory of the virus spread

Illustrative



Global leaders are exploring various potential paths for the spread of COVID-19 over the next 1-2 years

Paths forward	Description	Assumptions	Geographies that seem to follow these paths
<p>Near-zero virus</p>  <p>Detected new cases</p> <p>Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 '20 '21 '22</p>	<p>Lifting lockdown while implementing a collection of effective measures that eliminate transmission quickly and keep the number of cases near zero</p>	<ul style="list-style-type: none"> Governments consistently implement and enforce control measures that are able to eliminate transmission across their entire geography Governments seek to eliminate transmission quickly as opposed to achieving herd immunity 	<p> South Korea</p> <p> Iceland</p> <p> New Zealand</p>
<p>Balancing act: gradual or cycles</p>  <p>Detected new cases</p> <p>Detected new cases</p> <p>Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 '20 '21 '22</p>	<p>Lifting lockdown gradually while implementing measures that keep the number of cases at a moderate level (well within the capacity of healthcare systems) but do not completely eliminate transmission</p> <p>Leads to persistent or oscillating transmission until herd effects are seen</p>	<ul style="list-style-type: none"> Measures that eliminate transmission are too costly to be implemented over time, so governments relax the measures to support social and economic activity The magnitude of oscillations depend upon the speed of response to upsurge in cases 	<p> Germany</p> <p> USA</p> <p> UK</p>
<p>Limited response</p>  <p>Detected new cases</p> <p>Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 '20 '21 '22</p>	<p>Lifting lockdown without effectively implementing measures that control or eliminate transmission, leading to a large resurgence and healthcare system overload</p>	<ul style="list-style-type: none"> The measures employed by governments are not able to control transmission For instance, measures that control or eliminate transmission are too costly or unfeasible to be implemented over time and/or are not socially or politically acceptable, so governments relax the measures 	<p>May be applicable to some low and middle income countries where lockdowns are not a feasible tool and other measures cannot be implemented effectively</p>

Geographies may transition from the balancing act paths to the near-zero virus path as they are developing their capabilities to implement effective transmission elimination measures (e.g., expanding testing capabilities, building PPE stocks).

Key uncertainties that will likely drive medium-term scenarios

Focus of the document – 5 potential uncertainties



1. True number of cases to date

The true number of cases is only partly unknown due to asymptomatic or otherwise undetected cases. High quality seroprevalence studies are forthcoming, which will help answer this question



2. Pathways to herd immunity

Uncertainty remains regarding whether antibody presence equates to immunity, and how long this immunity to COVID-19 lasts



3. Seasonality of transmission

While some studies show a modest decrease in transmissibility of COVID-19 during warmer, more humid months¹, seasonality does not currently appear to significantly contribute to stopping the spread



4. Effectiveness and implementation of public health interventions over the medium-term

The medium-term effect of public health measures, as well as the ability to implement and maintain these measures in specific geographies, are not yet fully understood



5. Adherence to public health measures

We are still learning how people's adherence to public health interventions changes over time, which can affect the effectiveness of these interventions

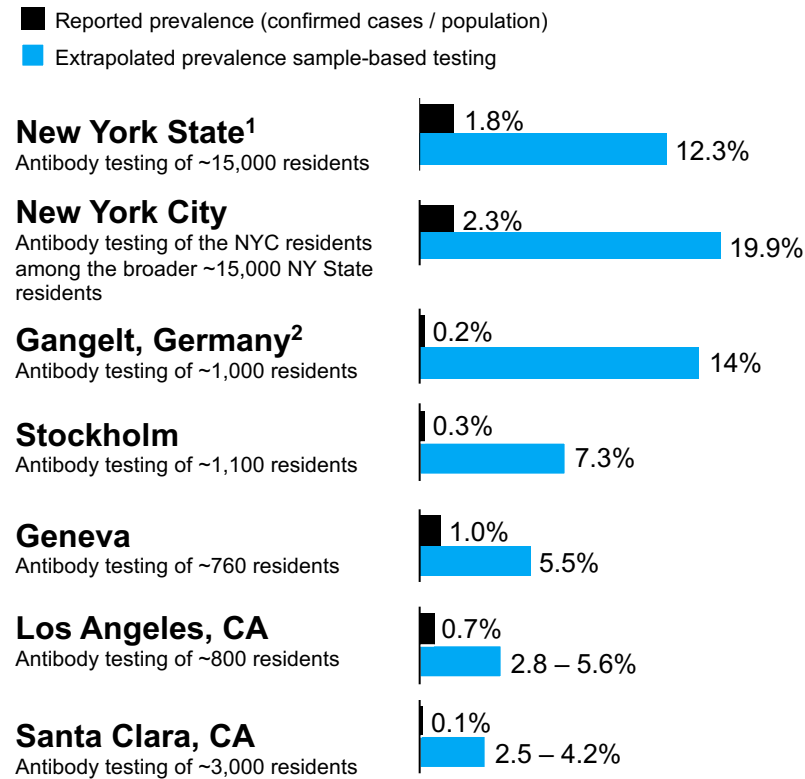
Other uncertainties

- Severity of illness
- Fatality rate and drivers of mortality
- Long term or secondary complications
- Mutagenicity
- Transmissibility in sub-population, especially children
- Infection intervals such as latent and infectious periods
- Asymptomatic / pre-symptomatic impact on overall spread
- Medium of transmission (e.g., air, surfaces)
- Exposure risk factors (e.g., age, occupation)
- Mobility and movement patterns during outbreaks and mitigation periods
- Population density characteristics

1. National Academies of Sciences, Engineering, and Medicine, "Rapid Expert Consultation on SARS-CoV-2 Survival in Relation to Temperature and Humidity and Potential for Seasonality for the COVID-19 Pandemic", April 7

1. Official case and death counts are only capturing a portion of the true totals

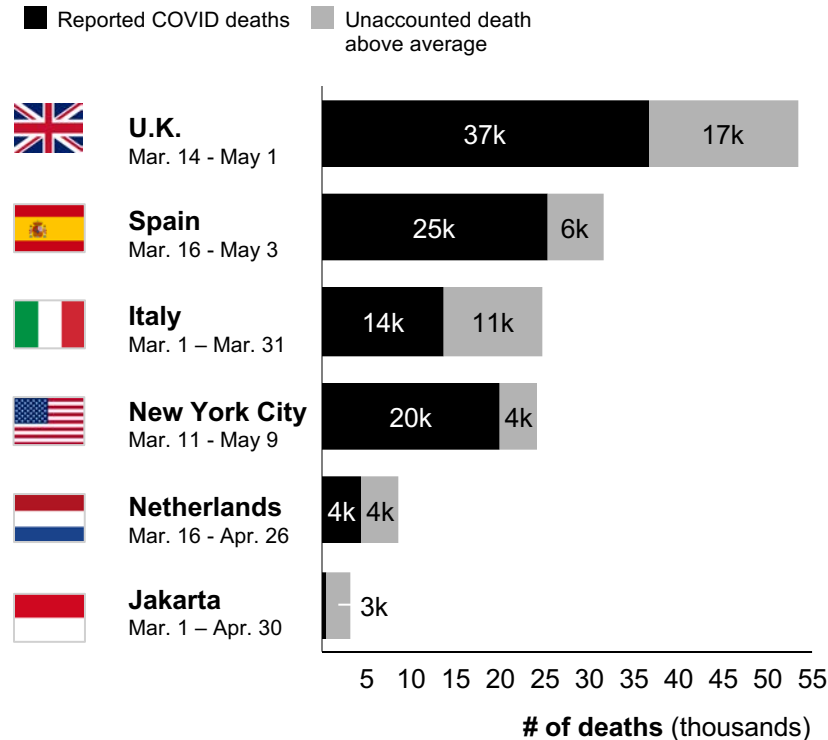
Sample-based testing suggests that official confirmed cases are only a small fraction of the total



1. Results not corrected for test accuracy
2. North Rhine-Westphalia's reported prevalence data used

Excess mortality exceeds reported COVID-19 deaths and likely includes both missed COVID-19 cases and incremental non-COVID mortality

Confirmed COVID-19 deaths and unaccounted excess deaths, Compared to 2015-19 average death counts, varying dates



While some testing surveys have methodological and accuracy challenges, far more people appear to have been infected with COVID-19 than official case counts imply

This means that the infection fatality ratio may be lower than previously thought

However, most geographies still appear to be far from the herd immunity threshold

2. Immunity to COVID-19 is key to return to the next normal, yet its prevalence and duration remain only partly understood

While some early studies suggest potential longer term immunity similar to SARS-COV-1...

...specific incidents of patients retesting positive could suggest shorter term immunity

Implications

Accelerated transition is possible based on **accurate serological testing** providing criteria for economic re-openings

Transition to “next normal” is **contingent upon vaccine development**

Vaccines may not work or require frequent booster-shots

Supporting Data

SARS-CoV2 evidence

A Chinese study reports **immune response to S-protein in 100% patients** (n=16) > 14 days post-symptom onset

South Korea CDC confirmed **neutralizing antibody in 100% of initial cohort** of patients (n=25)

Helper T cells, which aid in targeted antibody responses against SARS-COV-2, **were found in 15/18 and 10/10 patient blood samples** in a German study and a Californian study, respectively

– These helper T cells were also found in 34% of blood samples from uninfected patients suggesting **cross-immunity between other human coronaviruses and SARS-COV-2**

A Chinese study reports 30% of patients (n=175) with mild symptoms developed low or **no detectable antibody response**

48% of 25 recovered patients with neutralizing antibody **also tested positive for viral RNA** in South Korea

At least ~200 South Korean **recovered patients tested positive again** for COVID-19

– However, experts at the Seoul National University Hospital suggest that tests were false positives for active disease, **picking up non-infectious, dead virus fragments**

Indirect evidence

Immunity to SARS-COV-1, which shares 79% genetic identity, **persists for 1-3 years** in recovered patients

Immunity to seasonal coronaviruses (e.g., common colds) **starts declining a few weeks after** infection

Implications

The nature of immunity remains one of the biggest unknowns about COVID-19

Serologic testing will be an impactful lever if immunity is of significant duration

Durable immunity following exposure or immunization is a pre-requisite for herd immunity

3. While summer conditions may have some influence on COVID-19 transmission, other factors have a bigger impact

Transmission and temperature	Temperature threshold	Past influenzas pandemic seasonality	Case study: countries with year-round warm climate	“The biggest driver of disease transmission is our behavior – temperature and humidity really didn’t mean much for disease transmission, but our implementation of physical distancing did,”
<p data-bbox="277 439 415 491">3.8%</p> <p data-bbox="147 529 545 672">the decrease in transmission rate (R factor), for every 1°C increase above 25°C</p>	<p data-bbox="698 439 825 491">56°C</p> <p data-bbox="575 529 945 634">the temperature at which the spread COVID-19 can be eliminated</p>	<p data-bbox="1174 439 1294 491">50%</p> <p data-bbox="1054 529 1416 672">of influenza pandemics started in warm months – 30% in the spring, 20% in the summer</p>	<p data-bbox="1640 439 1768 491">2.88</p> <p data-bbox="1518 529 1888 634">average R(t) factor for selected countries with warm weather year-round¹</p>	
<p data-bbox="168 786 529 929">Some studies show a decrease in COVID-19 transmission due to heat above a certain threshold</p>	<p data-bbox="575 786 945 891">A very high temperature is able to hamper the spread of COVID 19</p>	<p data-bbox="1039 786 1429 968">There is no clear correlation between influenza outbreaks and temperature (although there is for seasonal flu)</p>	<p data-bbox="1526 786 1888 929">Despite warm weather, many regions still have a high R factor (high rate of transmission)</p>	<p data-bbox="2010 772 2397 996">— Brian Labus, <i>PhD, MPH, assistant professor at the School of Public Health at the University of Nevada in Las Vegas</i></p>
<p data-bbox="160 982 537 1086">In practice, this does not appear to remove the need for other measures</p>	<p data-bbox="588 943 932 1086">But that temperature is never consistently present on Earth’s surface</p>	<p data-bbox="1039 982 1429 1086">Seasonality does not play a role in influenza pandemics</p>	<p data-bbox="1526 982 1888 1086">Warm weather is not by itself enough to stop COVID-19</p>	

Variations in climate between regions do not appear to significantly contribute to stopping the spread of COVID-19, in comparison to other factors (e.g., implementing physical distancing measures)

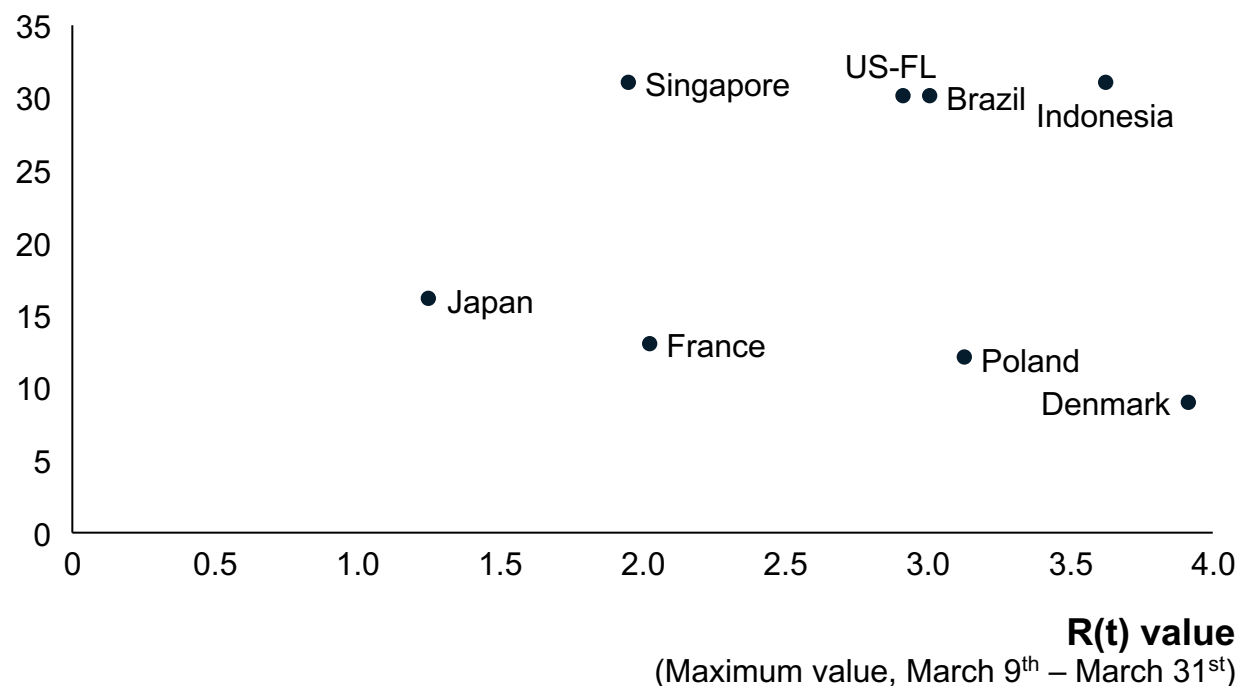
1. Selected countries only for March 9th – March 31st – max r(t): Singapore 1.95, Indonesia 3.62, Brazil 3.0, Florida (US) 2.9

3. Analysis of selected countries does not show clear correlation between warm weather and COVID-19 transmission

Relationship between COVID-19 rate of transmission and weather in selected countries (March 9th-31st)

Average temperature

(Degrees Celsius, March 9th – March 31st 2020)



R(t) average

2.87

Countries with warm climate¹

2.58

Countries with temperate climate²

Implications

There is no clear correlation between temperatures and COVID-19 rate of transmission (shown by R(t) value):

- Indonesia, Brazil and Florida had some of the highest R(t) values, despite warm weather
- Japan had the lowest R(t) values, despite cold weather

While warm temperatures might be a secondary factor for COVID-19 rate of transmission, other factors (e.g., physical distancing measures, population density) have a much bigger impact

1. Singapore, Indonesia, Brazil, US-Florida

2. Poland, France, Japan, Denmark

4. The medium-term effect of more moderate public health measures is not yet fully understood

✓ Effective to reduce transmission
 ✓ Effective to reduce transmission when coupled with other measures

A

Physical distancing

✓ Lockdowns have proven effective to reduce rate of transmission R_t (e.g., 1.6 reduction for Austria, 2.0 for New Zealand)¹

B

Travel restrictions

✓ A vast majority of countries have imposed international and domestic travel restrictions in addition to other measures to limit imported cases and reduce spread

C

Testing, tracking, and targeted quarantine

✓ Examples of countries that have successfully employed heavy testing, tracking / tracing, and targeted quarantining include Taiwan and South Korea

D

PPE & cleaning

✓ PPE and cleaning measures (e.g., widespread use of masks) have been used in addition to other measures in most countries

Stricter implementation

Partial / more moderate implementation²













Some countries have implemented more moderate measures (e.g., distancing guidelines, closure of schools, banning public events) to curb the spread of COVID-19 (e.g., reduction in R_t of 0.9 for Iceland, 1.0 for Germany)³

These measures were part of broader bundles of measures taken at the same time, which makes it **difficult to accurately predict how individual measures** or incremental steps toward restarting the economy **may affect transmission**

Efficacy of these measures will also depends on government's ability to implement them in specific their specific geographies

1. Impact of full shut-down includes the impact of all the restrictive physical distancing measures put in place prior to shut-down
 2. Moderate mitigation measures are often followed by more stringent measures if they fail to lower R_t below 1
 3. Both Germany and Iceland have been aggressively ramping up testing, contact tracing and quarantine prior to school closure

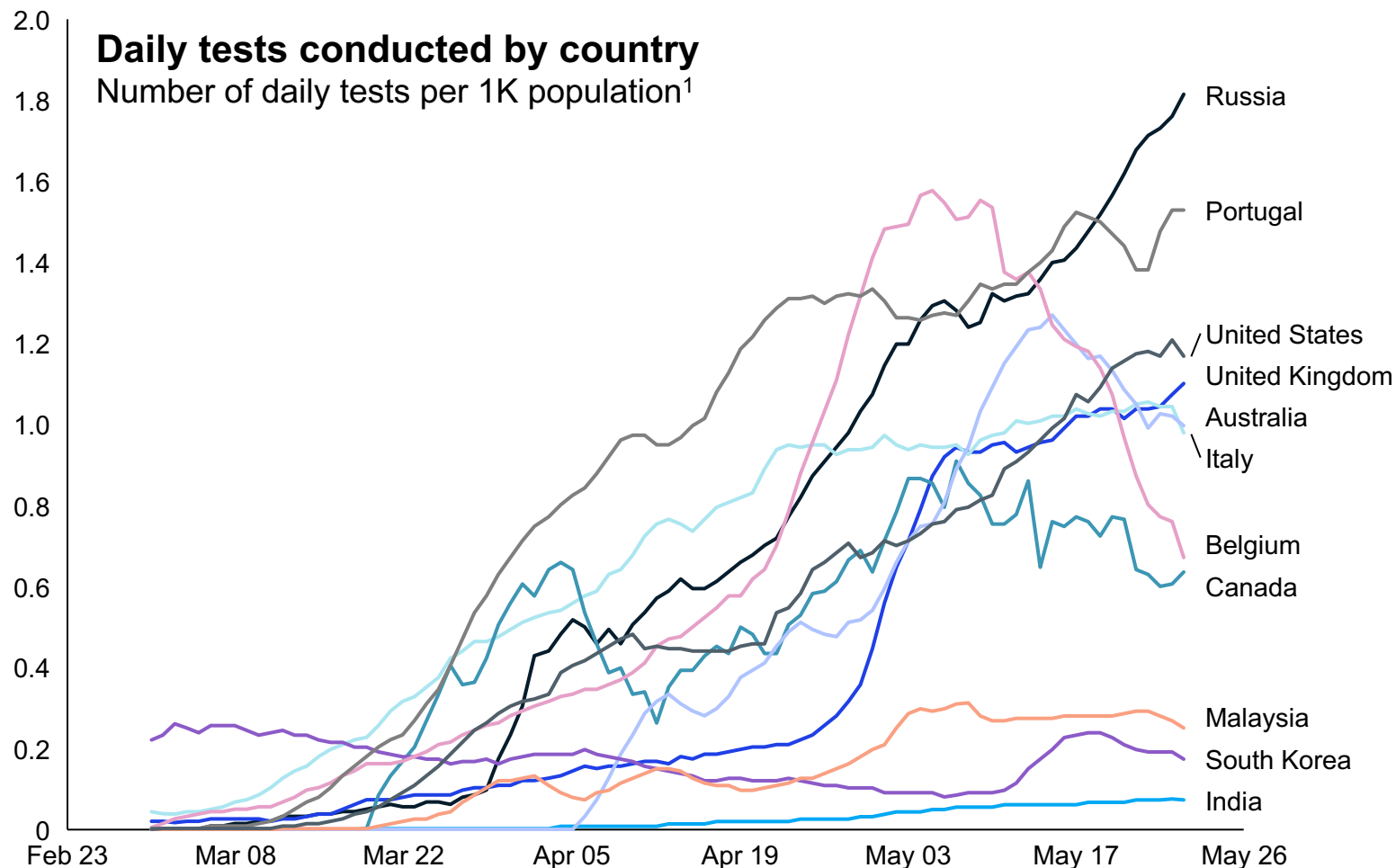
4. Available tests have varying levels of speed, accuracy and sensitivity

	 Point of care / beside  Laboratory					
	FDA approved ⁵					Other
	Antigen	Rapid PCR	RT-PCR	CRISPR	Serology	Clinical diagnosis
Description of methodology	Detection of antigen from SARS-CoV-2 in nasal swab specimens	Specialized solution breaks down RNA and replicates genetic material for detection	RT-PCR transcribes RNA with enzymes to match against markers	Special molecules detect the presence of SARS-CoV-2 genetic signature	Detection antibodies in serum sample	Mix of symptom, CT scan and blood test to assess for COVID-19
Site of testing	 			 	 	 
Additional considerations	Provides results in about 15 minutes, however cannot tell the difference between the two different SARS-CoV under consideration	Quick turnaround including 5-45 minutes at the bedside and require swab utilization	Require swab / aspirate collection methodology and longer turnaround of 48+ hours typically	Overall process can be turned around in ~1 hr including incubation periods for isothermal amplification and detection	Low effectiveness within 7 days with 11% detection rate, and significantly increased over time ³	In addition to symptoms, require positive viral CT scan and evidence of lymphopenia
Accuracy and sensitivity of testing	Test demonstrated 80% clinical sensitivity compared to an EUA molecular device and clinical specificity of 100%	96-99% based on targeted publications ² but likely closer to RT-PCR rates of 70% given collection errors	Up to 100% for RT-PCR methodology with "air swab" collection issues resulting in evidence of 70% accuracy in some studies ¹	Up to 100% specificity and sensitivity ⁶ however likely closer to RT-PCR rates of 70% given collection errors	As low as 11% detection rate within the first 7 days ³ with up to 93-97% based on appropriate time of testing ³	63% of patients with COVID-19 also saw lymphopenia and 55% with dyspnea ⁴

Systems and states will need to quickly develop guidelines on which tests should be administered with which patients and in which care setting

1 FDA EUA release; Tao Ai, et al. RSNA (2020); 2 FDA studies; based on influenza A & B: Mitamura K, et al. J Infect Chemother (2020); 3 Pao Y, et al. medRxiv (2020); 4 Huang C, et al. Lancet (2020); 5 <https://www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations>; 6 <https://www.fiercebiotech.com/medtech/sherlock-s-quick-crispr-based-coronavirus-test-gets-emergency-nod>

4. Most countries are gradually increasing their testing capabilities

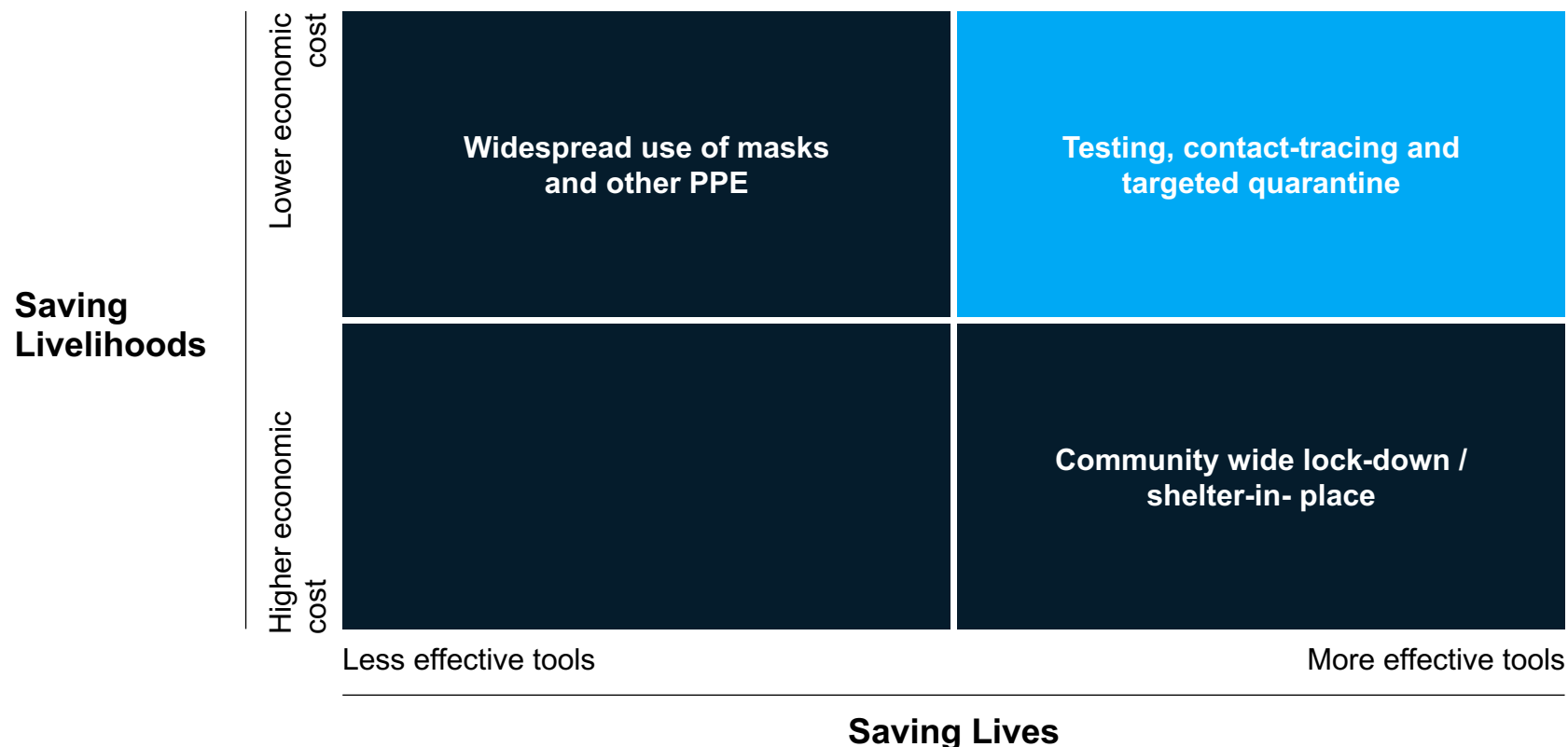


- **Some countries have drastically increased the number of daily tests performed** (e.g., ~350k tests in the U.S. currently compared to <1k in beginning of March)
- **Scientists are debating testing capabilities required to safely reopen** (e.g., scientists are suggesting 500k to 20M tests a day needed in the U.S.)
- **Testing random samples of populations can help overcome uncertainty** around current prevalence (e.g., bias introduced by self-referrals) to better understand future hospital needs and when and how to relax restrictions on economic activity

1. 7-day averages; where no daily data available, number of tests for previous day has been used

4. Contact tracing seems to be one of the few tools with high effectiveness and low economic cost

Testing combined with contact tracing has lower economic cost, but equal or higher effectiveness



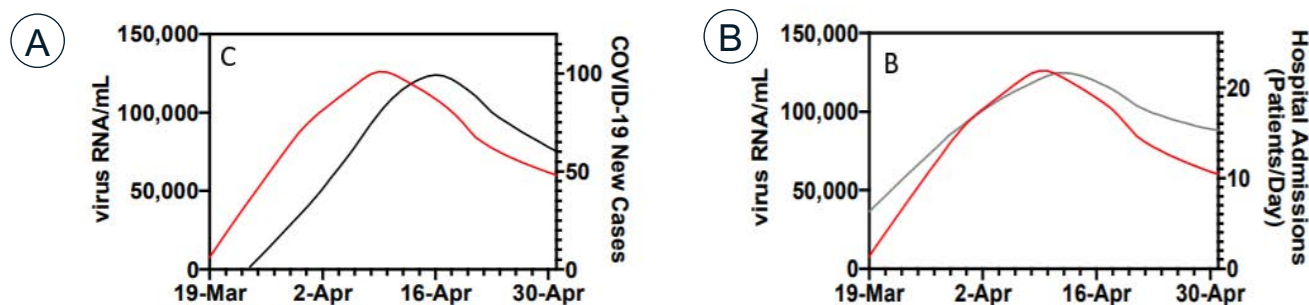
- Contact tracing allows for a precision approach – requiring only those at higher risk to isolate from society (vs. population-wide approaches)
- Several scientific studies suggest that contact tracing is still likely to be helpful even when a large fraction of cases are asymptomatic because those most likely to transmit the disease are isolated
- Evidence suggests that tracing is likely to have maximum impact when used in combination with widespread testing and can be combined with other measures

4. Recent studies suggest that wastewater surveillance could serve as an early warning tool

Wastewater and sewage surveillance could potentially be better predictors of COVID-19 transmission compared to standard testing, which is biased towards symptomatic transmission

- 1 COVID-19 viral particles have been found to be shed in stool in asymptomatic and pre-symptomatic patients^{1,2} and in raw wastewater³
- 2 A recent study in CT found that viral RNA levels in sewage sludge were strongly correlated with new cases 7 days later and hospital admissions 3 days later ($R^2=0.99$)⁴

COVID-19 viral RNA concentrations with (A) daily new COVID-19 cases and (B) hospital admissions⁴



R2 is a measure of correlation between two variables ranging from 0 to 1. The closer R2 is to 1, the more strongly correlated two variables are to each other

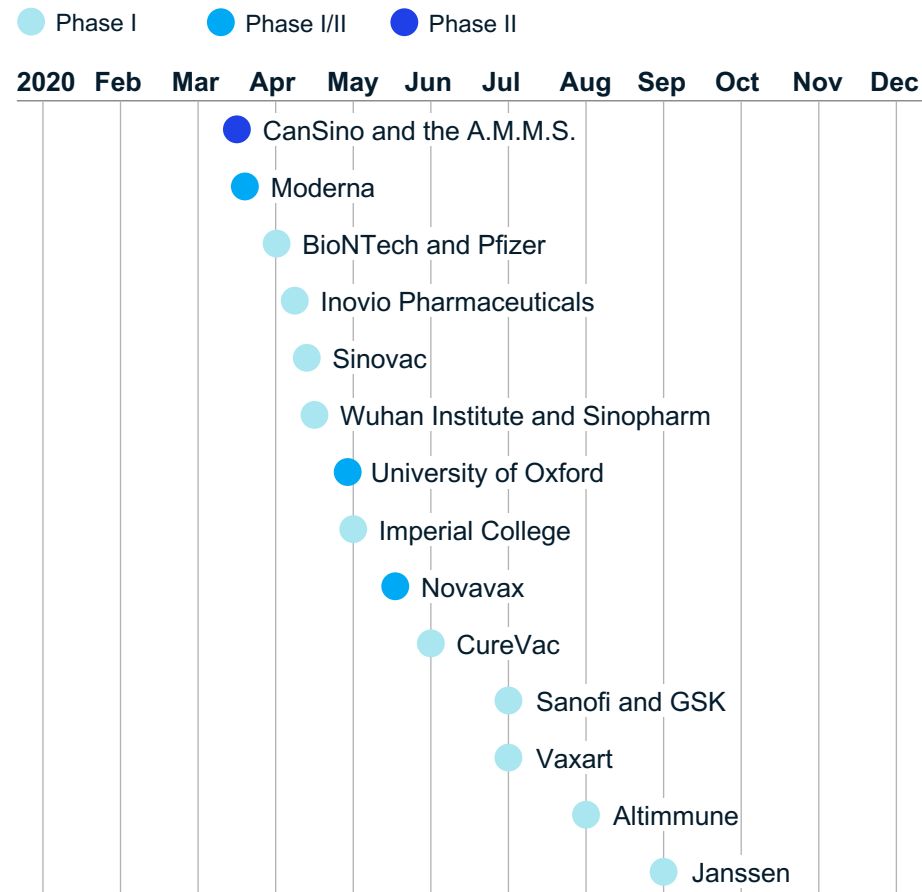
Source: 1. [JAMA](#); 2. [Nature](#); 3. [Science of the Total Environment](#); 4. [MedxRiv](#);

In middle- to low-income countries where testing capacity is limited, wastewater surveillance may be able to ascertain the true level of community transmission and influence decisions on public health measures

4. Meanwhile, the development of a COVID-19 vaccine still faces significant uncertainties

Only one COVID-19 vaccine, out of 100+, is truly in phase II of clinical trials

Select vaccines by start date and phase of clinical trial



Uncertainties



Success rate: less than 10% of drug trials are ultimately approved – COVID-19 vaccines may be even more prone to failure due to sped up research process



Time to market: The shortest timeline for phase II and phase III¹ vaccine trials was 21 months (Ebola)² – it is unclear to what extent the timeline can be shortened for COVID-19



Distribution: A vaccine factory usually takes ~5 years to build and costs 3x standard pharma factories due to high customization – factories for COVID-19 need to be built now, despite not knowing whether the factory will eventually be used



Public uptake: 25% of Americans have no or little interest in taking a COVID-19 vaccine, which might influence whether the vaccine reaches the public sufficiently to establish herd immunity

Implications

Although developing a vaccine for COVID-19 is a global priority and some progress has been achieved, **its success is based on multiple factors – many of which are highly variable**

Maintenance of other health measures, in the near term, may be important to mitigate transmission of COVID-19 before a vaccine is developed

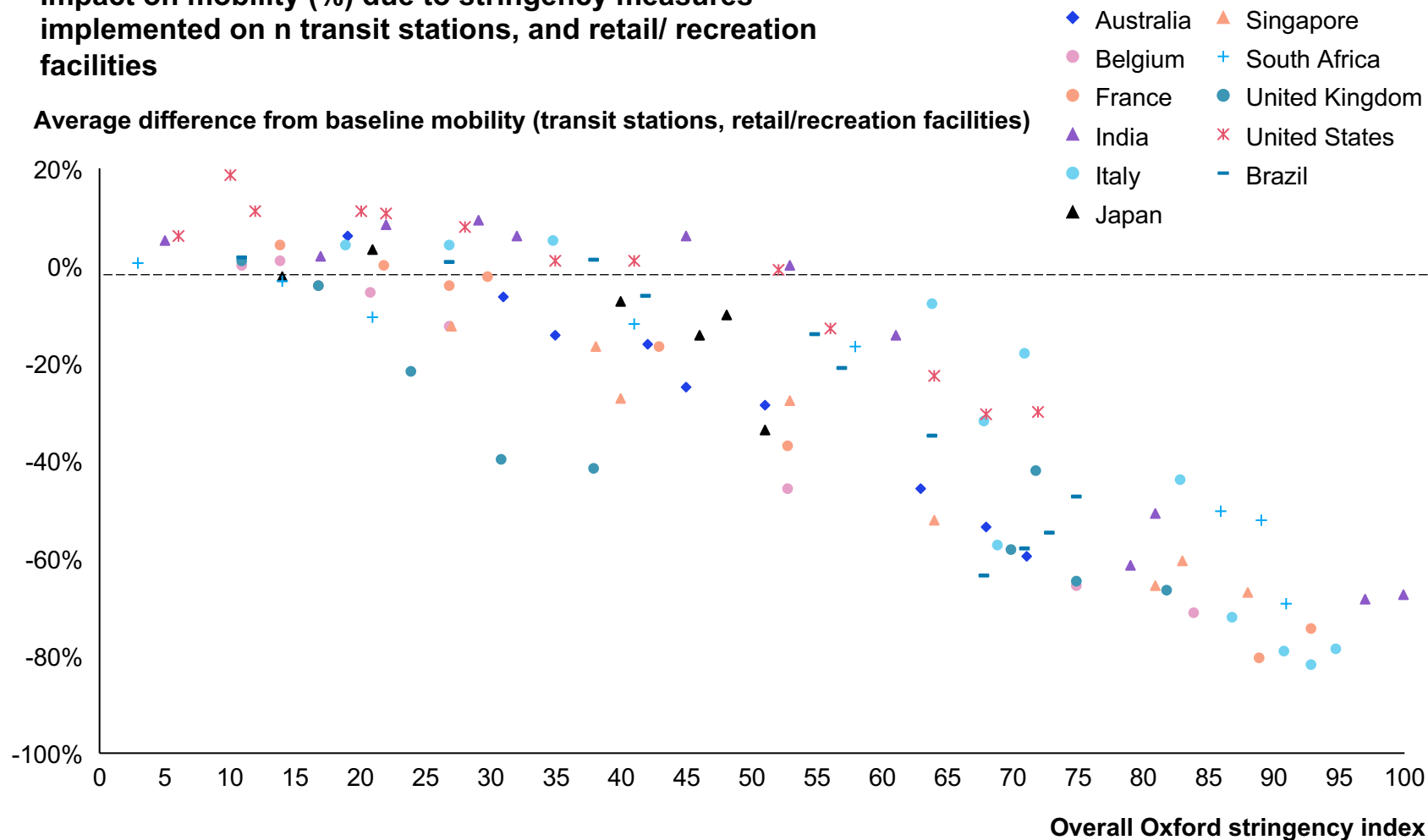
Source: Reuters, Time, Clinicaltrials.gov, NYTimes

1. Excluding the timeline for H1N1 2009 due to facilitated conditions and already-established infrastructure (H1N1 is a strain of a basic flu vaccine)
2. The rVSV-ZEBOV vaccine; phase II and III trials started in March 2015 and ended in December 2016

5. To achieve significant declines in mobility, it appears most countries had to implement stringent measures

Impact on mobility (%) due to stringency measures implemented on n transit stations, and retail/ recreation facilities

Average difference from baseline mobility (transit stations, retail/recreation facilities)



There is a clear relationship between the increase of stringency and a decrease in mobility:

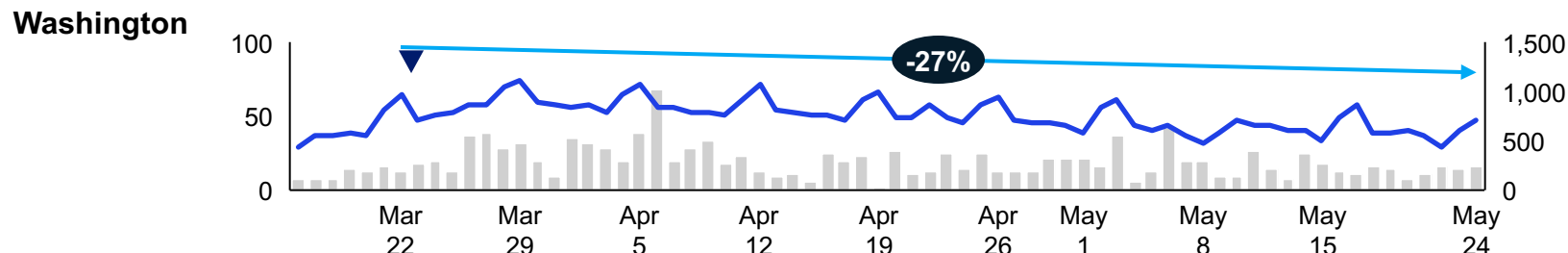
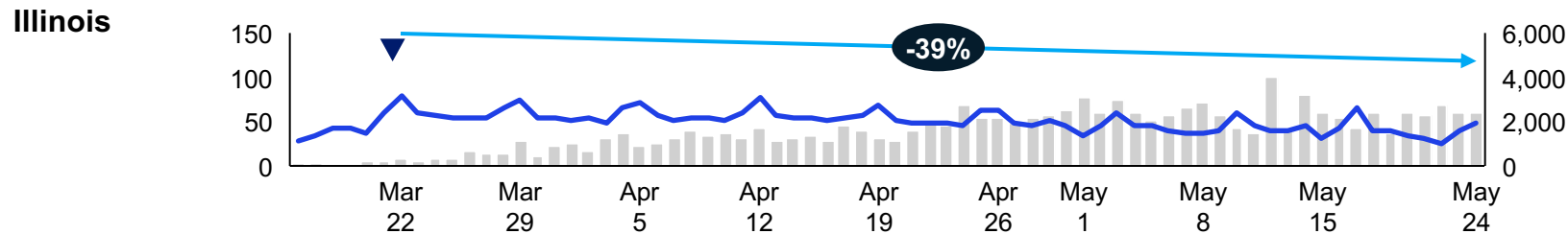
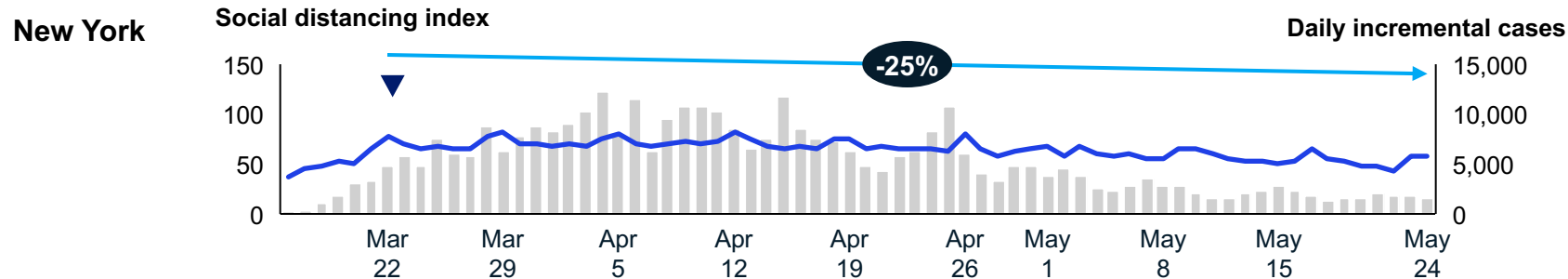
- An exception is the US, where after a ~65 stringency index, the mobility reduction seems to plateau (potentially due to varying levels of worry about COVID-19)
- An opposite exception would be the UK, where despite lack of strict measures initially, the public has decreased its mobility (probably due to the awareness of COVID-19 in Europe)

This indicates that, in addition to stringency imposed by the governments, various sociological factors are at play in reducing mobility

5. Adherence to physical distancing measures appears to decrease over time

Social distancing index over time in states where lockdown orders are still in place¹

▼ Lockdown enforced — Social distancing index ■ Daily incremental cases → Change in social distancing index



Starting in mid-March, when most stay-at-home orders were announced across the U.S., people began physical distancing, going out less and making fewer trips

By mid April, people in several states seemed to develop “quarantine fatigue” and began to increasingly go out, despite the extension of lockdown orders



“It just seems that people are getting a little tired collectively of staying at home after we passed that one-month mark,”

- Lei Zhang, director of the Maryland Transportation Institute at the University of Maryland, College Park

1. Combination of: the percentage of people in a state or county who are staying home, the number of trips per person per day, the distance of those trips and the number of trips taken beyond county or state borders. Measured using cellphone data.

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What is happening in China: emerging “post-COVID-19 trends”

China “reopening”

Chinese consumers are gradually regaining their confidence

50%

Consumers optimistic that the economy may recover soon after the end of the outbreak

Sectors recovering at different rates, with large industrial firms recovering at a faster pace than SMEs and services

99%

Work resumption rate for large enterprises outside Hubei as of March 28

92%

Work resumption rate for all government-owned firms as of early March

77%

Work resumption rate for small and medium enterprises outside Hubei as of March 29

40%

Restaurants reopened, but only 20% of workers returned as of mid-March

Changes since COVID

1 Digitization

- Stickiness of digital: >55% consumers more likely to buy groceries online, leading RE firm used “virtual showrooms” with in-house salesforce
- Even traditionally physical-dominant sectors were forced to go digital: e.g. direct-to-streaming film distribution bypassing cinemas

2 Decoupling of the connected world

- Localization: Japan has earmarked US\$2.2B to help manufacturers shift production out of China; similar calls in US and Australia
- Accelerated retreats: Samsung announced moving manufacturing out of China

3 Widening performance gap

- Resourceful players who use digital are growing: ByteDance (TikTok) hiring 10,000 new employees in anticyclical fashion
- People unable to embrace remote working trend face a downturn: ~2.3mn people claimed unemployment insurance in Jan and Feb

4 Consumers growing up

Selectiveness in spending: overall spending lowered (consumer confidence index decreased ~7% in March YoY, but consumers over-index on healthy products (e.g. ~75% consumers with strong preference to exercise and healthy eating post crisis; e.g. ZhongAn PHI premium grew 60%+)

5 Stakeholder capitalism

Private sector becoming significant force to accelerate country agenda: e.g., “Health Code” by Alibaba; Taikang owned hospital leading virus fight

The Four Forces that are shaping the Next Normal



Metamorphosis of demand

Increased online sales is not a new phenomenon, but the speed with which new generations of consumers have gone online (20-60% more consumers are now digital¹) has led to a metamorphosis of demand that is unlikely to reverse quickly. It is also generating entirely new patterns of behavior. Switching for instance has accelerated. In a world of lower overall consumption, access to the digital consumer dollar is shaping the new resilient



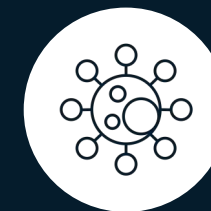
An altered workforce

Remote work is the new norm. Some are thrilled about productivity and flexibility, and the time reclaimed from commutes. Others cannot wait to get back to the office. Up to one-third of jobs in US— 86% of them low income - may be vulnerable². Strangely, with so many sidelined, some industries are experiencing shortages. Many people cannot return to their jobs because of health-related issues, and newly needed skill sets are in short supply



Regulatory uncertainty

Before COVID-19, the world was facing growing statist sentiments as well as declining support in the free-market's ability to distribute wealth. As governments around the world sign up huge COVID-19 stimulus packages (~3x compared to 2008 financial crisis among G20 countries³), new regulations favoring local economies are increasingly likely. This uncertainty can lead to new complexities in government relationships, supply chain, pricing economics and consumer behaviors.



Understanding of the virus

Around the globe, communities are reopening amidst different public health realities (e.g., stage of crisis, level of virus containment, levels of testing and tracing). On top of that, our understanding of the virus continues to shift, with new studies on testing, transmission and treatment arising each day (e.g., ~171 vaccine candidates in development⁴). This changing landscape with idiosyncratic considerations by region results in a constantly changing set of safety interventions to protect customers, employees, and citizens at large.

1. McKinsey & Company COVID-19 US Consumer Pulse Survey

2. "Lives and livelihoods: Assessing the near-term impact of COVID-19 on US workers", Mckinsey.com, 2020.

3. 2019 GDP taken into account for values related to COVID-19 crisis; 2008 financial crisis data based on data published by IMF in March 2009; G20 here excludes Turkey and EU (no data available)

4. As of May 21, 2020; source: Milken Institute, BioCentury, WHO, Nature, CT.gov, ChiCTR, clinicaltrials.gov, press search

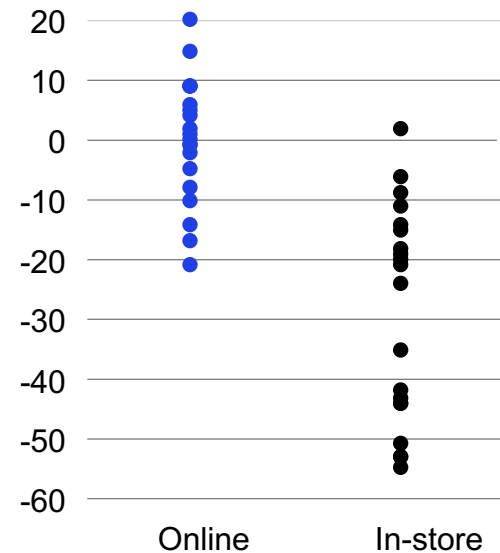


Metamorphosis of demand – B2B and B2C

Lockdowns have accelerated digital adoption, which is driving entirely new patterns of consumption

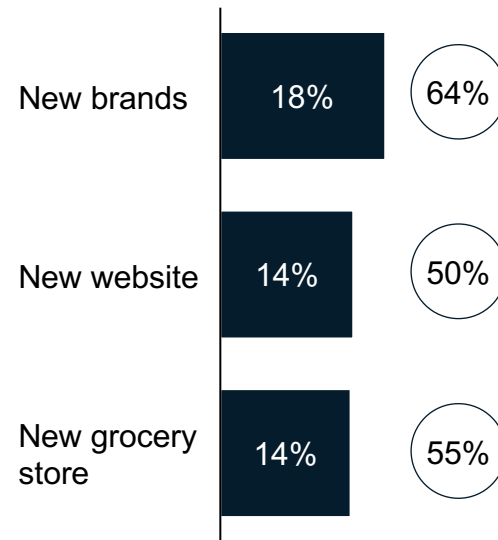
The new consumer shops online far more...

Net intent¹
By category, channel



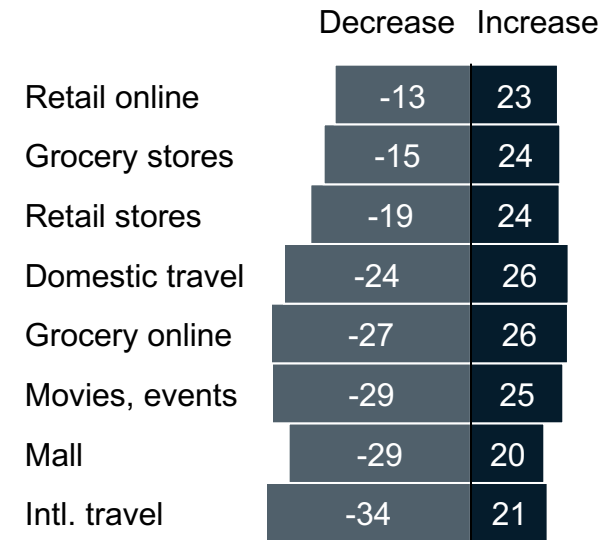
...is more willing to switch across brands...

% consumers who switched
and intent to continue



...and is refocusing towards domestic & local activities

Post-COVID consumer expectations
Intent to increase or decrease time spent



This change is not just restricted to B2C; B2B customers are also similarly changing their patterns

(e.g., X% of physicians now prefer remote sales from pharmaceutical reps)

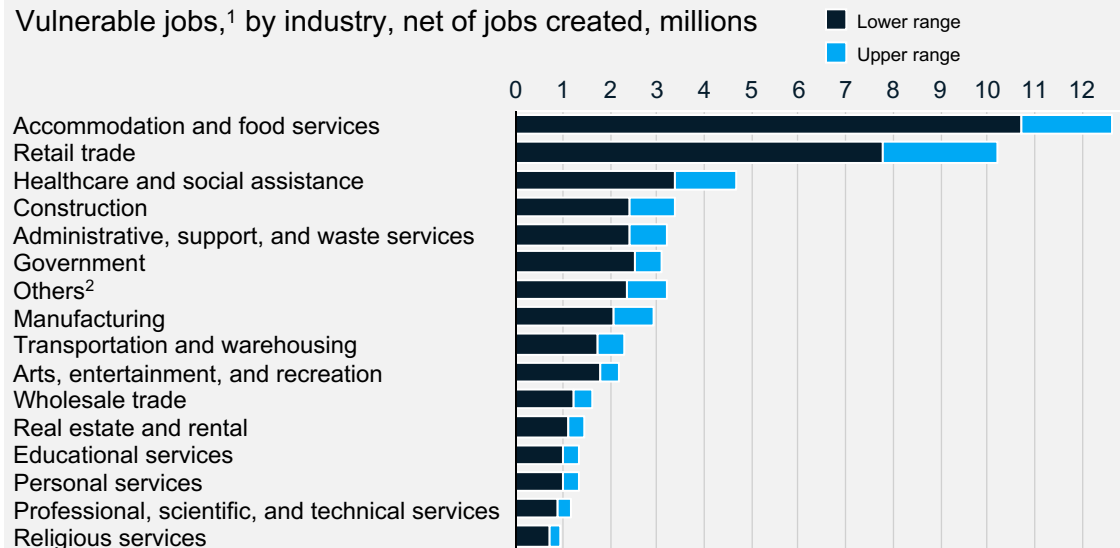
1. Categories: Accessories, Appliances, Jewelry, Footwear, Alcohol, Apparel, OTC medicines, Fitness, Tobacco, Snacks, Electronics, Skincare, Personal care, Print, Delivery, Groceries, Supplies, Vitamins, Child products, Home Entertainment

Workforce demands are shifting, with new hybrid-remote work models emerging



Traditional jobs are likely at risk – with one-third of current jobs estimated as being vulnerable¹ due to physical distancing

~44-57M jobs are vulnerable¹ in the short term, of which 86% are low-income



Simultaneously, there are under-matched demand pulls as: **a)** few sectors are facing **surgingly demand** (e.g., 2-3 million new jobs in groceries, pharmacies and delivery services) and **b)** **new skills** are required (e.g., physical retail moving to online sales)

These forces may require the adaptation of workforces to new industry realities and relevant reskilling

1. Vulnerable jobs are subject to furloughs, layoffs, or being rendered unproductive (for e.g., workers on payroll but not working) during periods of high physical distancing; 2 – Others include utilities, repair and maintenance, finance and insurance, information, mining, quarrying and oil & gas, agriculture, forestry and fishing

Source: LaborCube, McKinsey Global Institute Analysis - "Lives and Livelihoods: Assessing the near-term impact of COVID-19 on US workers; COVID-19 Smart working survey, 4,034 respondents, Italy

At the same time, new ways of working are taking precedence e.g., near-shoring supply chains, remote working

83% of employees are willing to work remotely after the emergency (vs. 37% pre-COVID-19)

>50% of respondents recommend improvement of tech tools and a review of company welfare policies to enable Virtual Working "at scale"

33% of respondents with a client-facing role report and increase in client satisfaction vs. only 14% reporting a decrease

6% Increase in efficiency through Virtual Working, reported by respondents



Several companies, incl. Facebook and Twitter have announced intention to expand the option for majority of its workforce to be remote

Government stimulus packages on top of growing statist sentiments and free-market backlash may lead to regulatory shifts



Regulatory uncertainty may require corporate adaptability to manage this complexity

Declining confidence in free market mechanisms & rising statism¹



Moves ignoring free markets and favoring onshoring are likely to accelerate in the post-pandemic world -

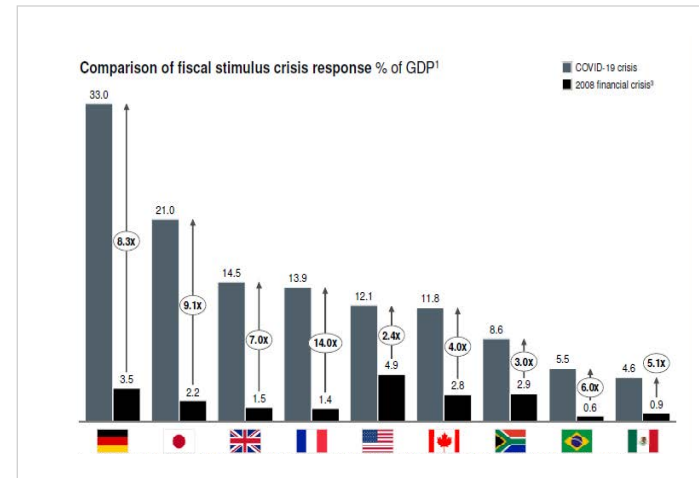
- Japan sanctioned incentives worth \$2.2B (Apr 2020) to push local firms to **move back manufacturing** of high value-added products from China
- With output constant, US imports of manufacturing goods from **14 Asian LCCs decreased by 7%** from 2018 to 2019² (first decrease in 5 years)



Governments worldwide are providing stimulus packages³ to alleviate COVID-19 impacts

3X

greater response from G-20⁴ governments compare to 2008 financial crisis (11.4% vs 3.5%)



Resulting potential complexity for organizations

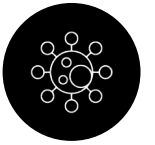
- New relationship with government – with depth of change unclear
- No global playbook given highly varied approaches and competencies by country
- Likely new regulations affecting manufacturing locations and supplier economics
- Disruption to global supply chains (for e.g., move to near-shore, heavily controlled vs global, decentralized partners)
- 2nd order implications on pricing, competition and consumer behavior

¹ Source: Bloomberg, Forbes;

² Source: Kearney 'US Reshoring Index 2019' report, LCC – low cost countries;

³ 2019 GDP taken into account for values related to COVID-19 crisis; 2008 financial crisis data based on data published by IMF in March 2009, includes discretionary measures announced for 2008-2010; 4 - Excludes Turkey and EU (no data available);

The evolving understanding of the virus and the shifting impacts of the crisis may require a changing set of responses

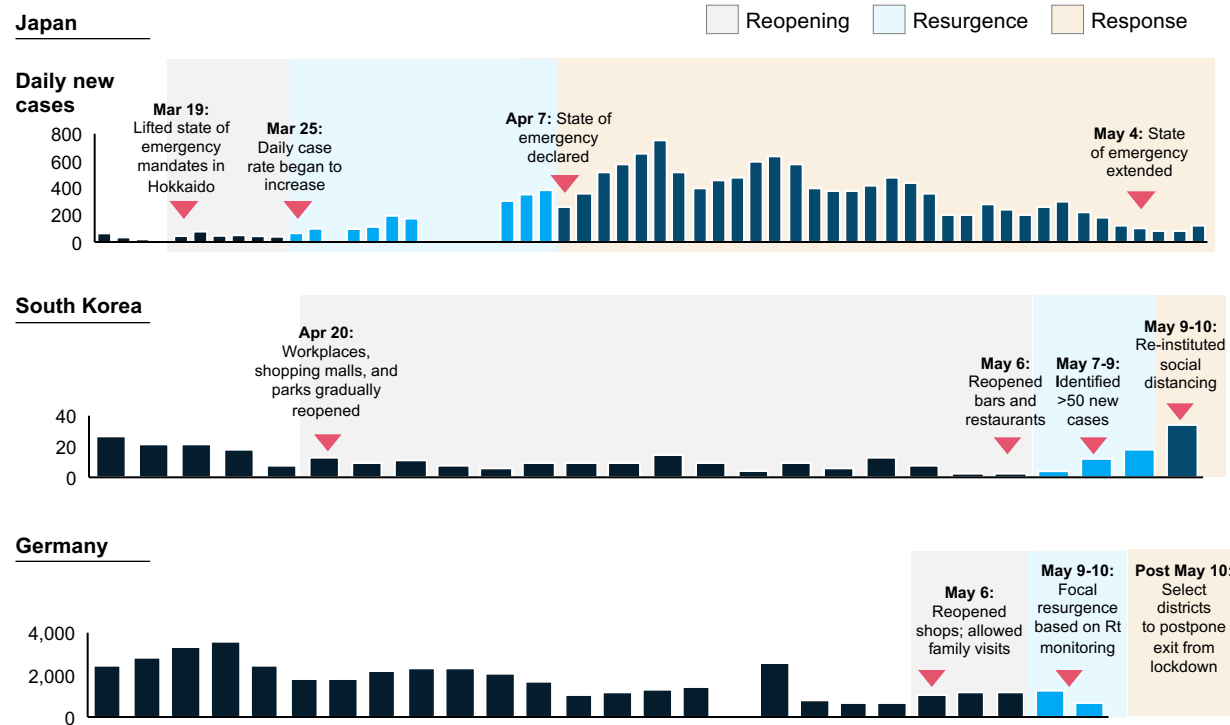


Shifting perspectives and uncertainty on 3 key topics requires adaptability on implementing safety measures

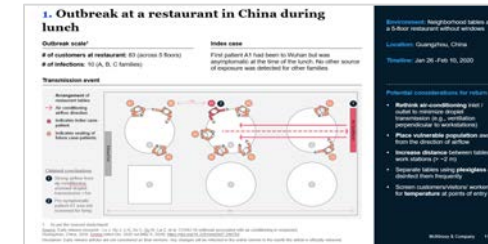
1 Shifting public health reality across different geographies globally

Public health situation such as **hospital capacity**, **reopening guidelines/timing**, **testing and tracing** vary widely across regions

For instance, many countries had to re-institute lockdown measures after resurgence events post re-opening



2 New information on virus testing efficacy and transmission patterns



New transmission incidents indicate emerging ways of virus transmission (for e.g., droplet transmission due to air-conditioning)

3 Emerging solutions on how the virus will be treated



Nearly 171 vaccine candidates (13 in clinical trials, 28 entering trials in 2020, others unknown) and over 210 therapeutics¹ candidates are currently in consideration

1. As of May 20, 2020 - Source: Milken Institute, BioCentury, WHO, Nature, CT.gov, ChiCTR, clinicaltrials.gov, press search

Source: <https://www.statesman.com/news/20200420/fact-check-did-countries-that-reopened-see-spike-in-coronavirus>; Statnews; NPR; Al Jazeera; Time; Associated Press; The Guardian; <https://www.wired.com/story/the-asian-countries-that-beat-covid-19-have-to-do-it-again/>; Reuters; BBC; Financial Times

Return is a muscle, not a plan

The four forces may continue to shift for the next 2 years, implying that thinking about return as a static plan could be ineffective.

Adapting to the changing landscape likely requires a muscle comprised of 3 separate capabilities:

1

Strengthen the speed and execution discipline used for the last 60 days

2

Increase pace & quality of skill-building and of scaling new working models

3

Develop ability to handle uncertainty through real-time microdata monitoring and iteratively-testing operating plans



Return is a muscle, not a plan

How can we rewire the organization for speed and embed in our long-term DNA?



Strengthen the “fast-twitch” muscle you have been using for the past 60 days

Faster decision making “out of necessity” involving only critical decision makers

Basing decisions on minimum and essential information

Leaders’ time freed up from non-priority activities

Ubiquitous license to act at all levels

Stepping up individual performance



Increase pace & quality of skill building at scale

Process-based capabilities: can we execute well?

Relationship-based capabilities: do we know our counter parties well?

Knowledge-based capabilities: do we have unique insights?



Learn from the environment and bound-uncertainty faster than ever before

Develop an enterprise-wide ability to absorb uncertainty and incorporate learnings into the operating model quickly

Modify plans and base decisions on updated projections —supported by continually refreshed microdata about what’s happening

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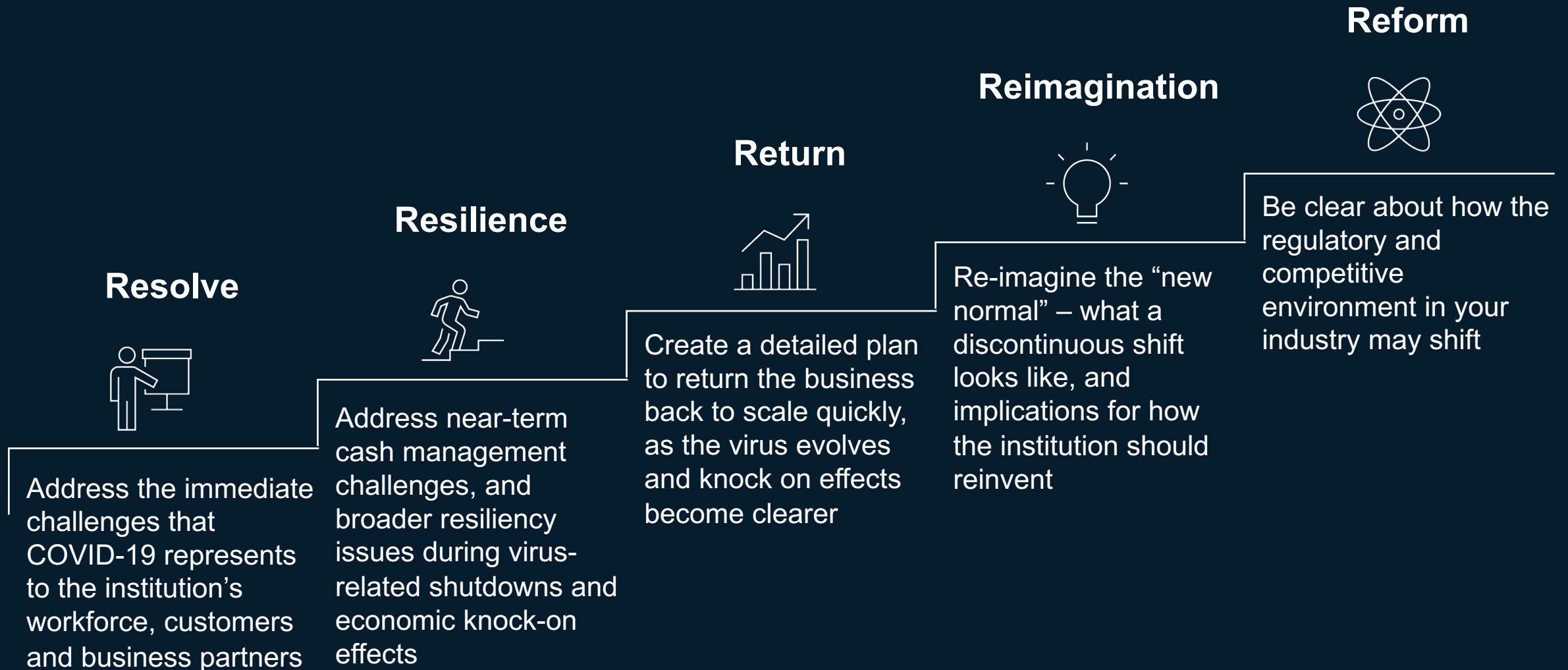
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Leaders need to think and act across 5 horizons

From Resolve to Resilience and Reimagination to Reform



Leading insights across the 5 horizons of crisis response

Read the latest thinking from across our practices



Resolve

[Tuning in, turning outward: Cultivating compassionate leadership in a crisis](#)

– By tuning inward to cultivate awareness, vulnerability, empathy, and compassion, and then turning outward to comfort and address the concerns of stakeholders, leaders can exhibit individual care, build resilience, and position their organizations to positively reimagine a post-crisis future.

[The CFO's role in helping companies navigate the coronavirus crisis](#)

– Critical steps CFOs and finance organizations can take across three horizons: immediate safety and survival, near-term stabilization of the business in anticipation of the next normal, and longer-term preparations for the company to make bold moves during recovery.

[Responding to coronavirus: The minimum viable nerve center](#)

– Approach and key considerations when developing the COVID-19 response structure and minimum viable nerve center



Resilience

[Safeguarding our lives and our livelihoods: The imperative of our time](#)

– A discussion on how to deal with and bound the uncertainties surrounding COVID-19 and how the future could unfold

[A global view of how consumer behavior is changing amid COVID-19](#)

– Insights into consumer behavior from our global survey series that track consumer sentiment across 41 countries through the crisis



Return

[Return: A new muscle, not just a plan](#)

Return is not a phase; it's a way of operating. A nerve center can help build the capabilities that businesses need in the "next normal."

[Reopening safely: Sample practices from essential businesses](#)

– The safety protocols of hospitals, grocery stores, and other establishments that stayed open during the COVID-19 pandemic can offer ideas for businesses preparing to welcome employees and customers back.

[The Restart: Eight actions CEOs can take to ensure a safe and successful relaunch of economic activity](#)

– Actions for Return based on research and conversations with leaders of large French, European, and Asian companies from all sectors, who provided a broad view of their issues and concerns about the end of lockdown



Reimagine & reform

[The future is not what it used to be: Thoughts on the shape of the next normal](#)

– Seven elements for business leaders to consider as they plan for the next normal.

[From surviving to thriving: Reimagining the post-COVID-19 return](#)

– Four strategic areas to focus on when reimagining the business model: recovering revenue, rebuilding operations, rethinking the organization, and accelerating the adoption of digital solutions

[Lives and livelihoods: Assessing the near-term impact of COVID-19 on US workers](#)

– Up to one-third of US jobs may be vulnerable and more than 80% are held by low income workers

[Getting ahead of the next stage of the coronavirus crisis](#)

– How to launch a "plan ahead team" that works across multiple time horizons, using five frames

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Macro-economic scenarios



Return as a muscle

Metamorphosis of demand



An altered workforce



Regulatory uncertainty



Understanding of the virus



The Imperative of our Time

“Timeboxing” the Virus and the Economic Shock

Imperatives

1

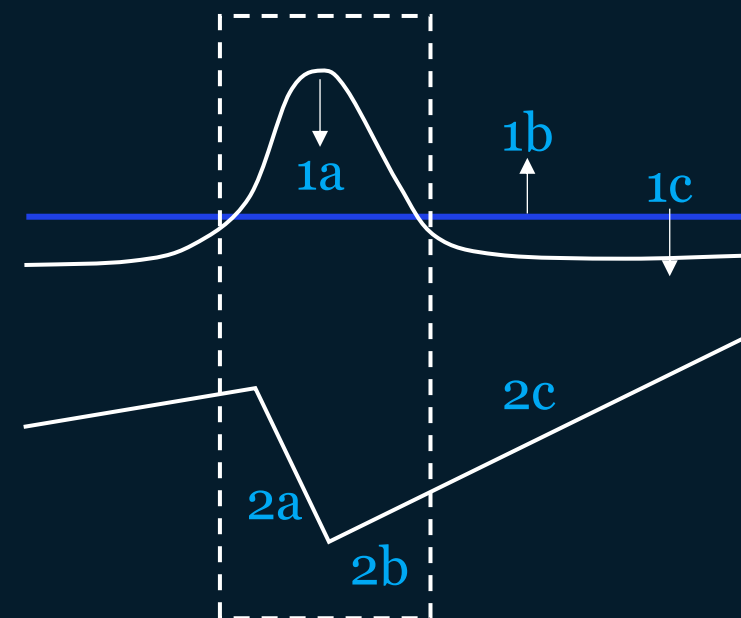
Safeguard our lives

- 1a. **Suppress the virus** as fast as possible
- 1b. **Expand testing, quarantining and treatment** capacity
- 1c. Find “**cures**”; treatment, drugs, vaccines

2

Safeguard our livelihoods

- 2a. **Support people and businesses** affected by lockdowns
- 2b. **Prepare to get back to work safely** when the virus abates
- 2c. **Prepare to scale the recovery** away from a -8 to -13% trough



Scenarios for the Economic Impact of the COVID-19 Crisis

GDP Impact of COVID-19 Spread, Public Health Response, and Economic Policies

Virus Spread & Public Health Response

Effectiveness of the public health response in controlling the spread and human impact of COVID-19

Rapid and effective control of virus spread

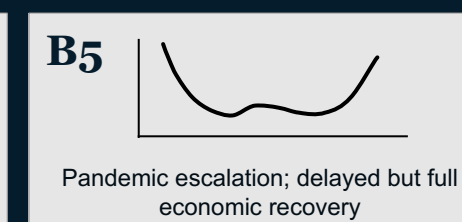
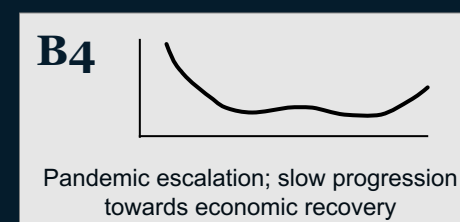
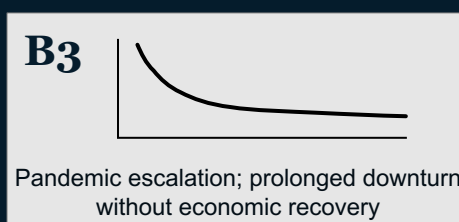
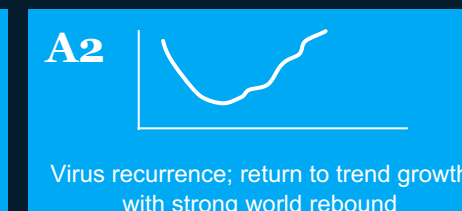
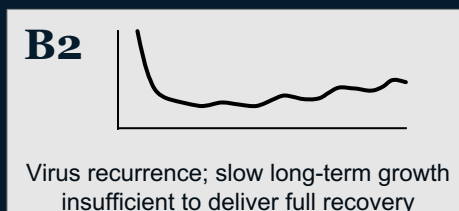
Strong public health response succeeds in controlling spread in each country within 2-3 months

Effective response, but (regional) virus recurrence

Initial response succeeds but is insufficient to prevent localized recurrences; local social distancing restrictions are periodically reintroduced

Broad failure of public health interventions

Public health response fails to control the spread of the virus for an extended period of time (e.g., until vaccines are available)



Ineffective interventions

Self-reinforcing recession dynamics kick-in; widespread bankruptcies and credit defaults; potential banking crisis

Partially effective interventions

Policy responses partially offset economic damage; banking crisis is avoided; recovery levels muted

Highly effective interventions

Strong policy responses prevent structural damage; recovery to pre-crisis fundamentals and momentum

Knock-on Effects & Economic Policy Response

Speed and strength of recovery depends on whether policy moves can mitigate self-reinforcing recessionary dynamics (e.g., corporate defaults, credit crunch)

Shape of the COVID-19 impact: the view from global executives

“Thinking globally, please rank the following scenarios in order of how likely you think they are to occur over the course of the next year”; % of total respondents¹

Virus spread and public health response

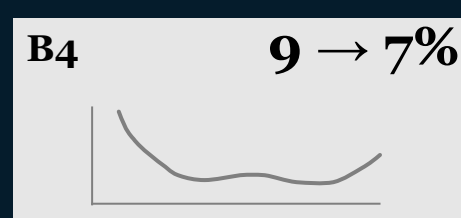
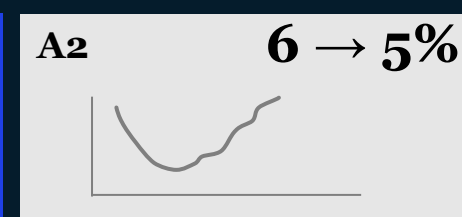
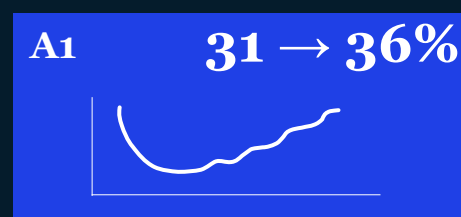
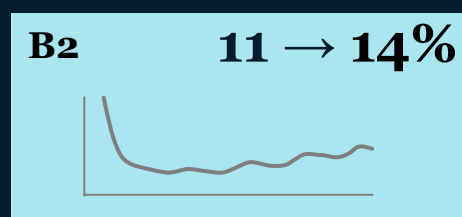
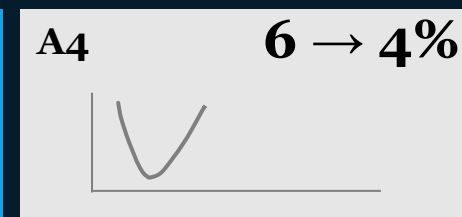
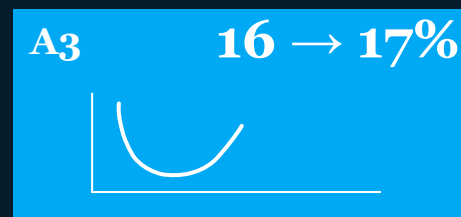
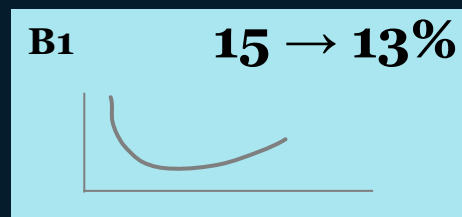
Rapid and effective control of virus spread

Effective response, but (regional) virus resurgence

Broad failure of public health interventions

Most likely scenario, World

April → May surveys



Ineffective interventions

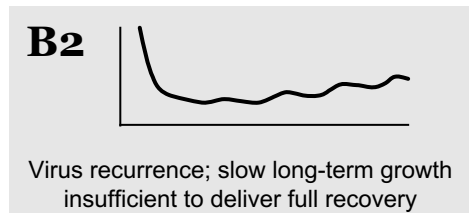
Partially effective interventions

Highly effective interventions

Knock-on effects and economic policy response

1. Monthly surveys: April 2–April 10, 2020, N=2,079; May 4–May 8, 2020, N=2,452

Scenarios B2, A1, A2, and A3 have varying profiles of effectiveness of public health and economic interventions



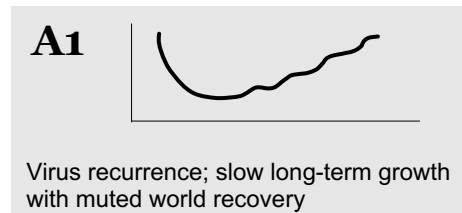
Ineffective economic interventions, effective public health response

Slow long-term growth insufficient to deliver full recovery of world output to 2019Q4 levels until 2026

Economic policy is ineffective spurring self-reinforcing recession dynamics and meager growth results that cause long-term structural damage to the economy

Long-term capacity of the economy to deliver output is reduced as

- Widespread business closures lead to a reduction in the physical capital stock
- Employment levels and participation rates drop as individuals drop out of the labor force
- Productivity growth to near-zero as investment in innovation and human and physical capital stagnates



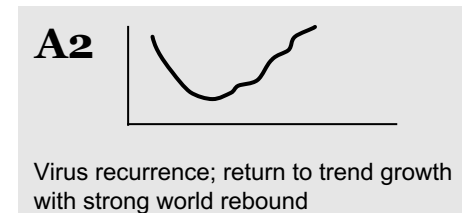
Partially effective economic interventions, effective public health response

Slow long-term growth with muted world recovery returning output to 2019Q4 levels in late 2022

Economic policy responses are effective in stopping the rapid decline of the economy in 2020, but are insufficient to raise confidence and restart growth

Insufficient government stimulus in the face of recurrent regional lockdowns result in

- Significant business closures and lack of confidence lead businesses to pull back on investment and fragmentation of supply chains
- Widespread job losses and continued weakness in consumer spending as household focus on necessities
- Steep drop in tourism, and other service related industries persist



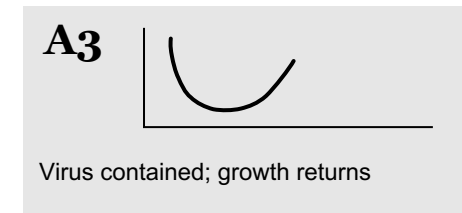
Highly effective economic interventions, effective public health response

Return to trend growth with strong world rebound returning output to 2019Q4 levels in late 2021

Economic policy responses deliver robust relief packages that not-only back-stop activity in 2020 but also deliver sufficient stimulus to raise confidence and drive growth in 2021

Fiscal and monetary authorities take measures to boost effectiveness and speed of policy impact

- Fewer bankruptcies and layoffs support stronger business investment and release pent-up demand driving more spending
- Increase in business and consumer confidence is boosted by more effective public health responses that successfully contain the regional virus occurrences and fewer periodic restrictions



Partially effective economic interventions, rapid and effective control of virus spread

Return to trend growth with world rebound returning output to 2019Q4 levels in late 2020

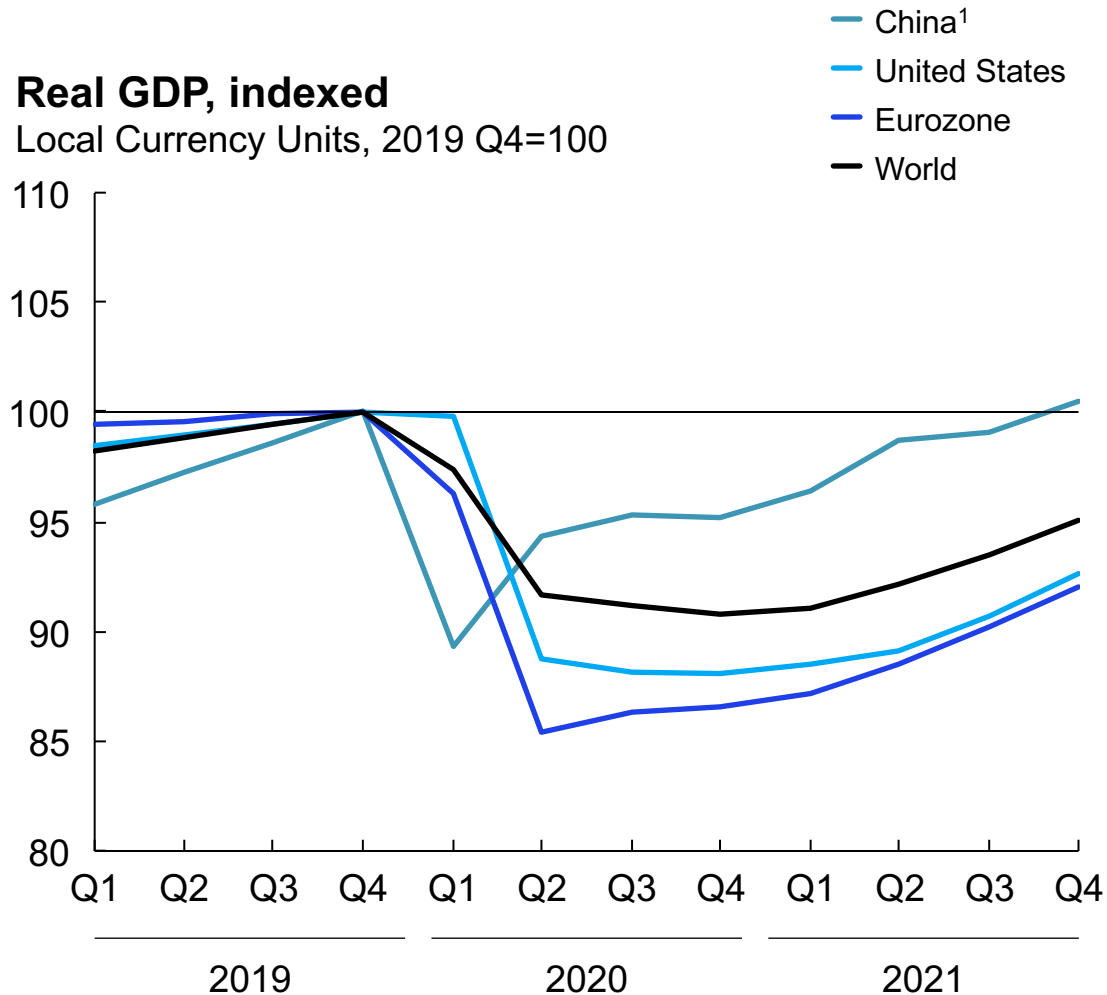
Economic policy responses are effective in stopping the rapid decline of the economy in 2020 and return the economy to pre-crisis levels after the virus is quickly contained in Q2

Fiscal and monetary authorities mitigate economic damage with only some delays in transmission

- Fewer bankruptcies and layoffs support stronger business investment and release pent-up demand driving more spending
- Business and consumer confidence is quickly restored by effective public health responses

Scenario A1: virus recurrence, with muted recovery

Large economies



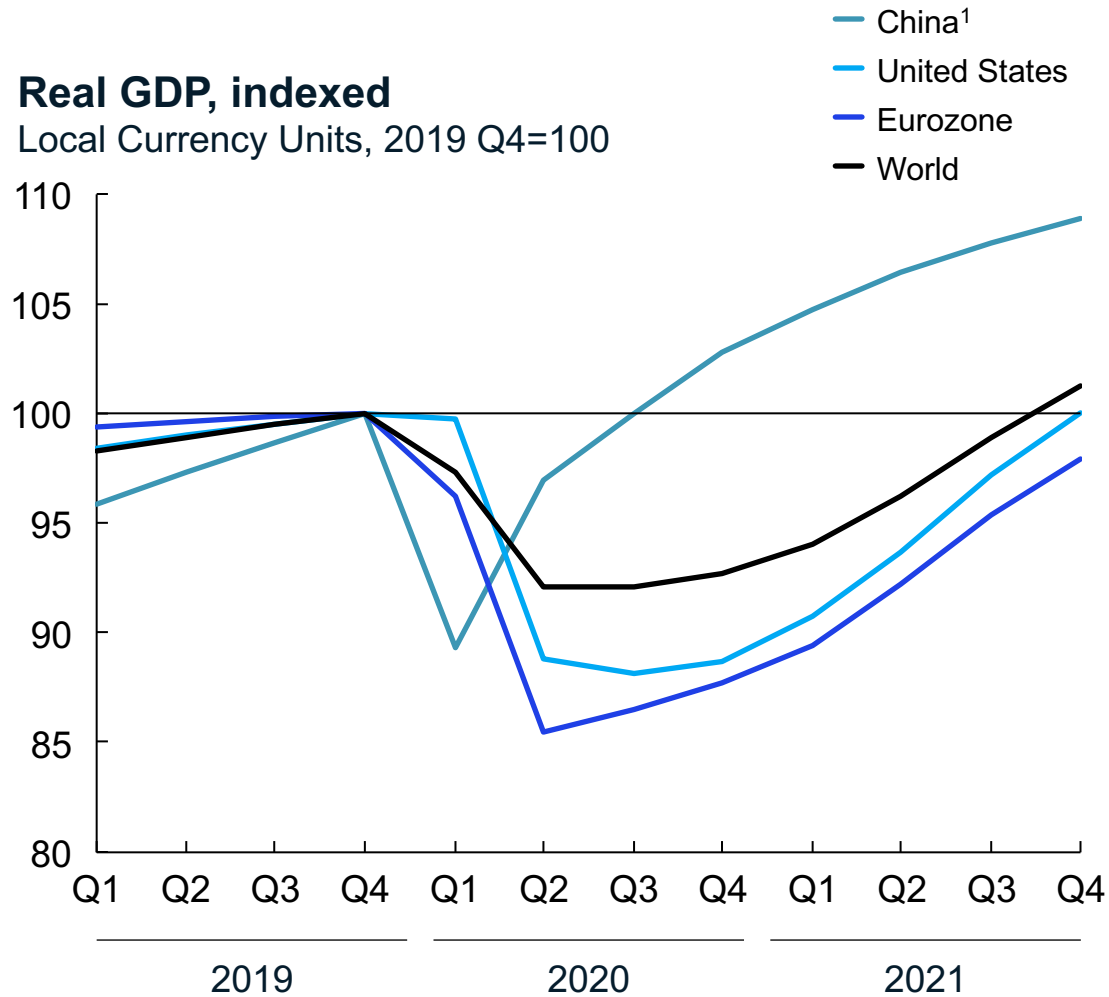
1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics

	Real GDP Drop 2019Q4-2020Q2 % Change	2020 GDP Growth % Change	Return to Pre- Crisis Level Quarter (+/- 1Q)
China	-5.7%	-4.4%	2021 Q4
United States	-11.2%	-8.1%	2023 Q1
Eurozone	-14.6%	-11.1%	2023 Q3
World	-8.4%	-6.5%	2022 Q3

Scenario A2: virus recurrence, with strong world rebound

Large economies



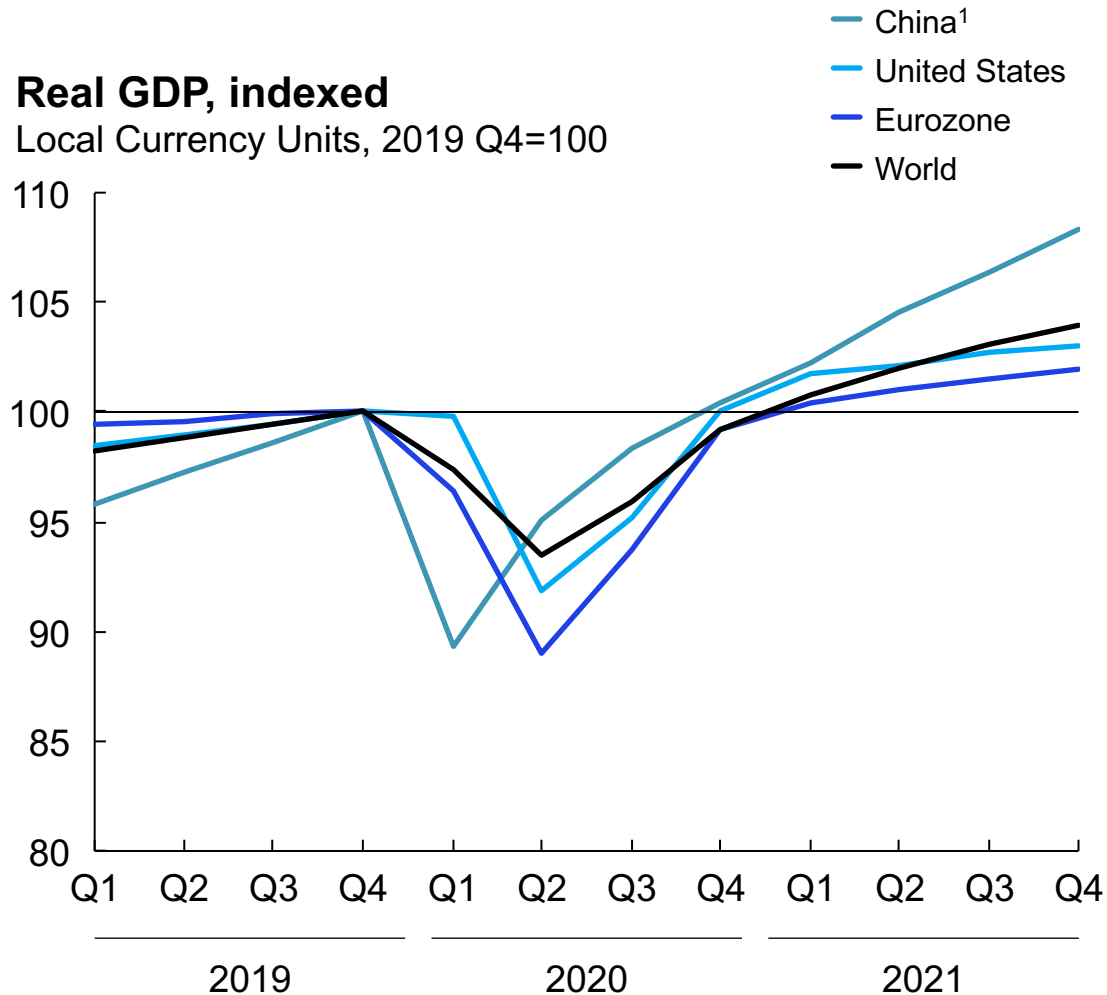
	Real GDP Drop 2019Q4-2020Q2 % Change	2020 GDP Growth % Change	Return to Pre- Crisis Level Quarter (+/- 1Q)
China	-3.0%	-0.4%	2020 Q4
United States	-11.2%	-7.9%	2021 Q4
Eurozone	-14.5%	-10.8%	2022 Q1
World	-7.9%	-5.6%	2021 Q4

1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics

Scenario A3: virus contained, growth returns

Large economies



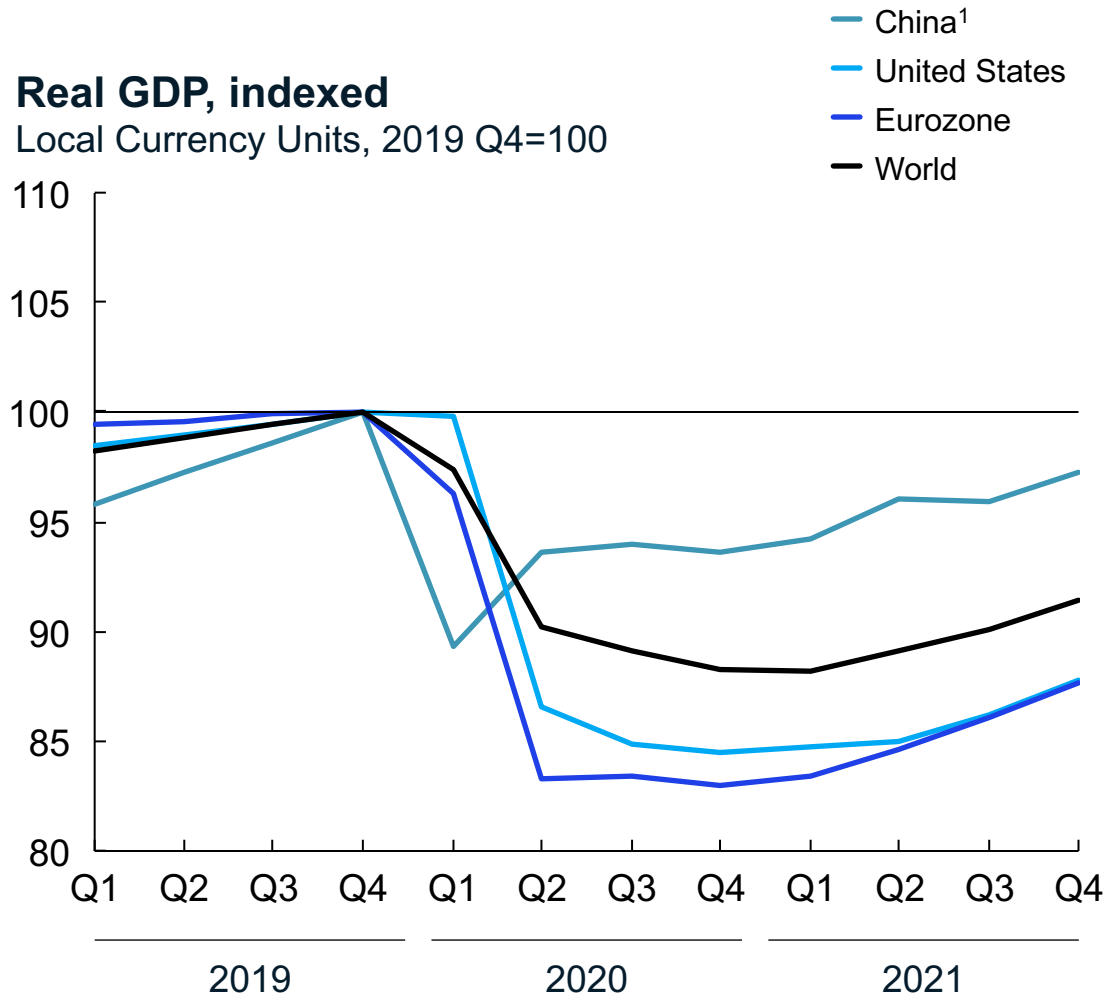
	Real GDP Drop 2019Q4-2020Q2 % Change	2020 GDP Growth % Change	Return to Pre- Crisis Level Quarter (+/- 1Q)
China	-4.9%	-2.0%	2020 Q4
United States	-8.1%	-2.5%	2020 Q4
Eurozone	-11.0%	-5.2%	2021 Q1
World	-6.5%	-2.7%	2021 Q1

1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics

Scenario B2: virus recurrence, with slow long-term growth

Large economies



1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics

	Real GDP Drop 2019Q4-2020Q2 % Change	2020 GDP Growth % Change	Return to Pre- Crisis Level Quarter (+/- 1Q)
China	-6.4%	-5.4%	2022 Q2
United States	-13.5%	-10.4%	2025+
Eurozone	-16.7%	-13.3%	2025+
World	-9.8%	-8.0%	2023 Q3

The Four Forces that are shaping the Next Normal



Macro-economic scenarios



Return as a muscle

Metamorphosis of demand



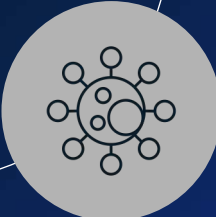
An altered workforce



Regulatory uncertainty



Understanding of the virus



Return is a muscle, not a plan

How can we rewire the organization for speed and embed in our long-term DNA?



Strengthen the “fast-twitch” muscle you have been using for the past 60 days

Faster decision making “out of necessity” involving only critical decision makers

Basing decisions on minimum and essential information

Leaders’ time freed up from non-priority activities

Ubiquitous license to act at all levels

Stepping up individual performance



Increase pace & quality of skill building at scale

Process-based capabilities: can we execute well?

Relationship-based capabilities: do we know our counter parties well?

Knowledge-based capabilities: do we have unique insights?



Learn from the environment and bound-uncertainty faster than ever before

Develop an enterprise-wide ability to absorb uncertainty and incorporate learnings into the operating model quickly

Modify plans and base decisions on updated projections —supported by continually refreshed microdata about what’s happening



What organizations need now

Pyramidal orgs were never built to handle the situation they face today



What typical pyramidal organizations are good at

Topic expertise and pattern recognition
("do a few things, but do them well")

Fact-based decision-making. Leaders that can drive action based on well-tested sets of facts promoted

Commitment to a path forward based on consensus from a large swathe of leaders

Self-selecting organization based on a specific world-view



VS. What orgs need now

Generalized problem solving across a wide array of topics

Hypothesis-based decision-making
("By the time the facts are available, it is too late to respond")

Speed of action at a higher premium over consensus about the action

Multiple world views that provide constructive, purposeful conflict

**Nerve Centers
can help
traditional
organizations
manage the
Return**



From war rooms to Nerve Centers

War rooms...

Act on the basis of historical data and facts

Focus on solving problems that have cropped up before (sometimes even in the same company)

Rely on the use of a clear, rigid process facilitated by experts to address the problem

Have a clearly defined goal that is well understood (e.g., improve profitability by X%)

Achieve measurable impact that is usually publicized broadly

Achieve measurable impact

Nerve Centers...

Act on the basis of senior judgement, and an informed hypothesis about the future

Focus on solving problems that have no precedent within the company, sector or broadly

Need rigid processes and experts, but also creative, first-principles problem solving to address the issue

Have goals that are tough to define clearly (e.g., “help the company emerge from the crisis”)

Achieve impact that can be hard to measure, and is usually confined to close observers

Achieve impact that can be hard to measure, but is widely acknowledged by those participating



John Boyd's OODA loop

Nerve Center design is based on military command principles

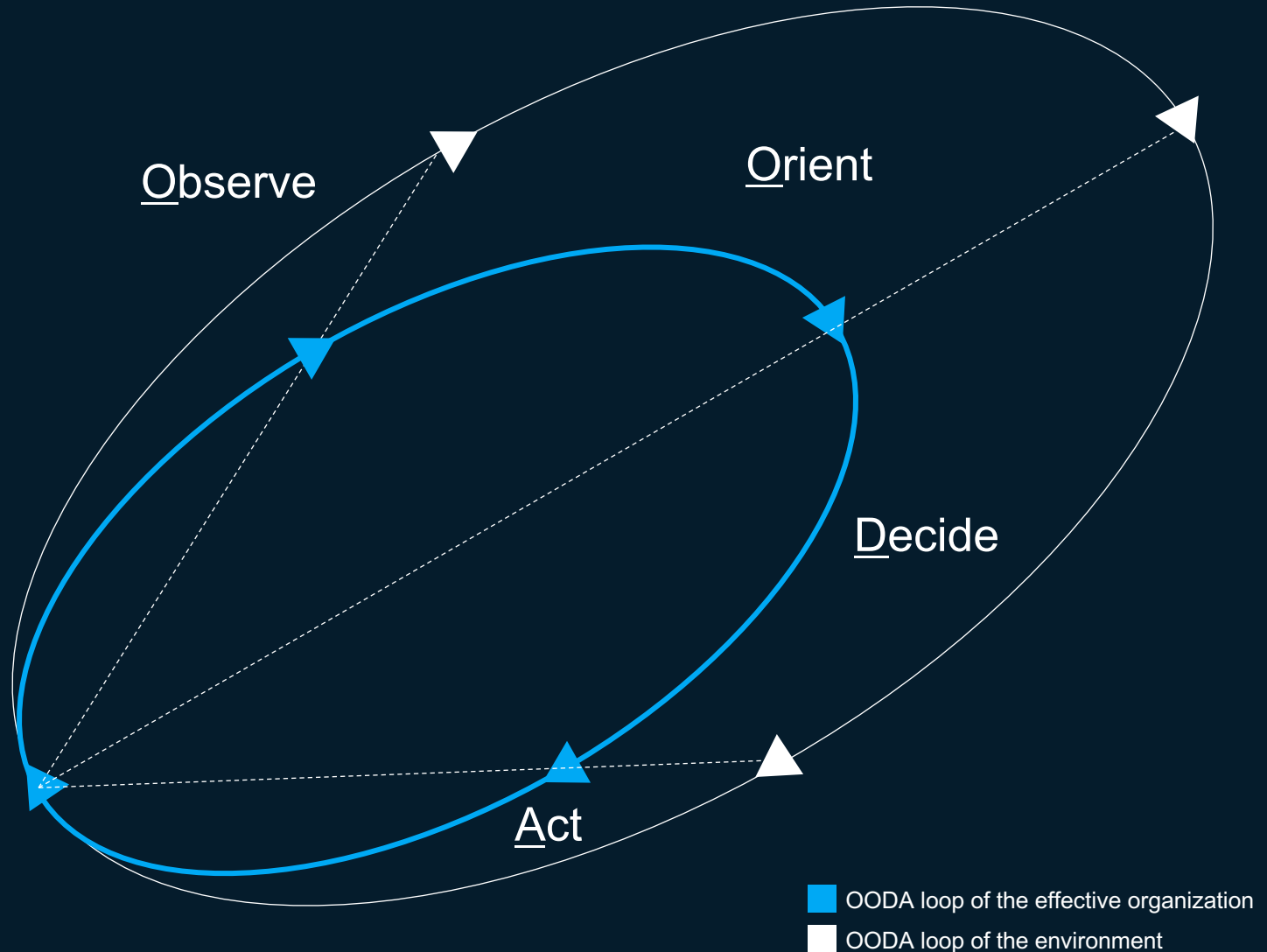
Core concept: Create an organization that can Observe, Orient, Decide and Act faster than the environment

John Boyd was a Colonel in the U.S. Air Force, whose ideas on the art of war revolutionized U.S. military thinking, especially after the Vietnam War

Boyd's key concept: The OODA loop.

The key to victory is to be able to make appropriate decisions faster than the rate at which the environment evolves

Source: Osinga, Frans PB. *Science, strategy and war: The strategic theory of John Boyd*. Routledge, 2007.



Increasing the pace and quality of skill building at scale (1/2)



Define the reskilling strategy – identify critical employee groups, no-regrets critical skills and tailored learning journeys

Rapidly identify the skills your recovery business model depends on

For example, when moving from in-store sales to predominately home deliveries, the tech team and logistics coordinators will play a critical role in the new strategy

Build critical employee skills including a no-regrets skill set

Build a tool kit that will be useful no matter how an employee's specific role may evolve. Focus investments on four kinds of skills: digital, higher cognitive, social and emotional, and adaptability and resilience

Launch tailored learning journeys to close critical skill gaps

For example, when its regular face-to-face sales model faced disruption, an international bank began a tailored upskilling for its sales reps to develop the skills for virtual selling

Focus investments on four kinds of critical, no-regret skills



Digital

Expand the ability to operate in a fully digital environment



Higher cognitive

Develop cognitive skills to ensure that critical players can respond to the need for redesign and innovation



Social/emotional

Strengthen social and emotional skills to ensure effective collaboration



Adaptability/resilience

Build adaptability and resilience skills to thrive during an evolving business situation

Increasing the pace and quality of skill building at scale (2/2)



Enable business to reskill by learning from rapid iterations, adopting the principles of smaller companies and protecting learning budgets

Start now, test rapidly, and iterate

Build institutional learning by capturing what works now and what doesn't. Apply these lessons to future disruptions

Act like a small company to have a big impact

Emulate smaller companies that are more agile, find it easier to change and are often more willing to take risks. They have a clear view of their deficiencies to help prioritize reskilling

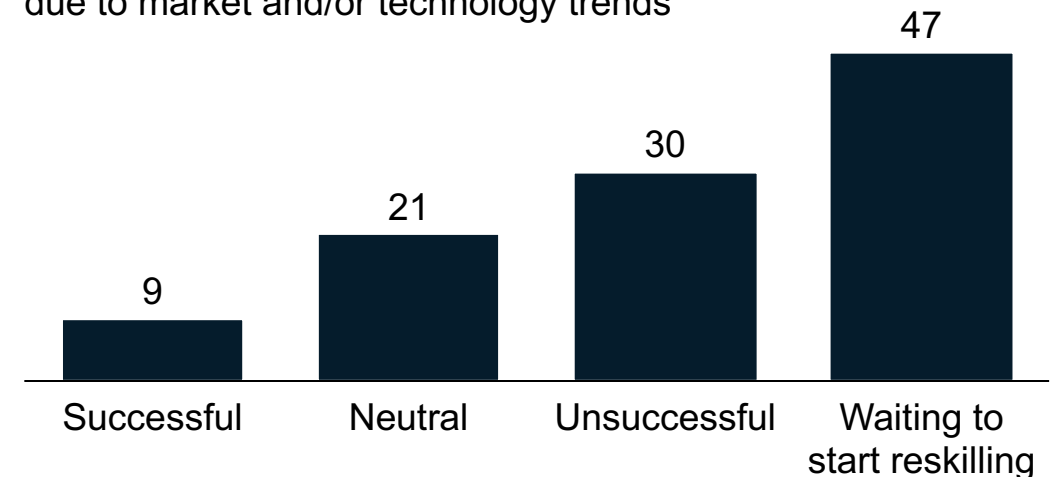
Protect learning budgets

Invest in skill building to adapt to the next normal. Cutting learning budgets only delays the investment in learning to a later day. E.g., a drop in training expenditures in 2009 and 2010 was followed by a surge in 2011¹



Organizations that had already tried reskilling felt more prepared to take on future skill gaps than those that hadn't.

Assessment of previous reskilling, % of companies that said there were unprepared to address the potential role of disruptions due to market and/or technology trends



1. According to the Training Industry Report, US data during and after the Great Recession



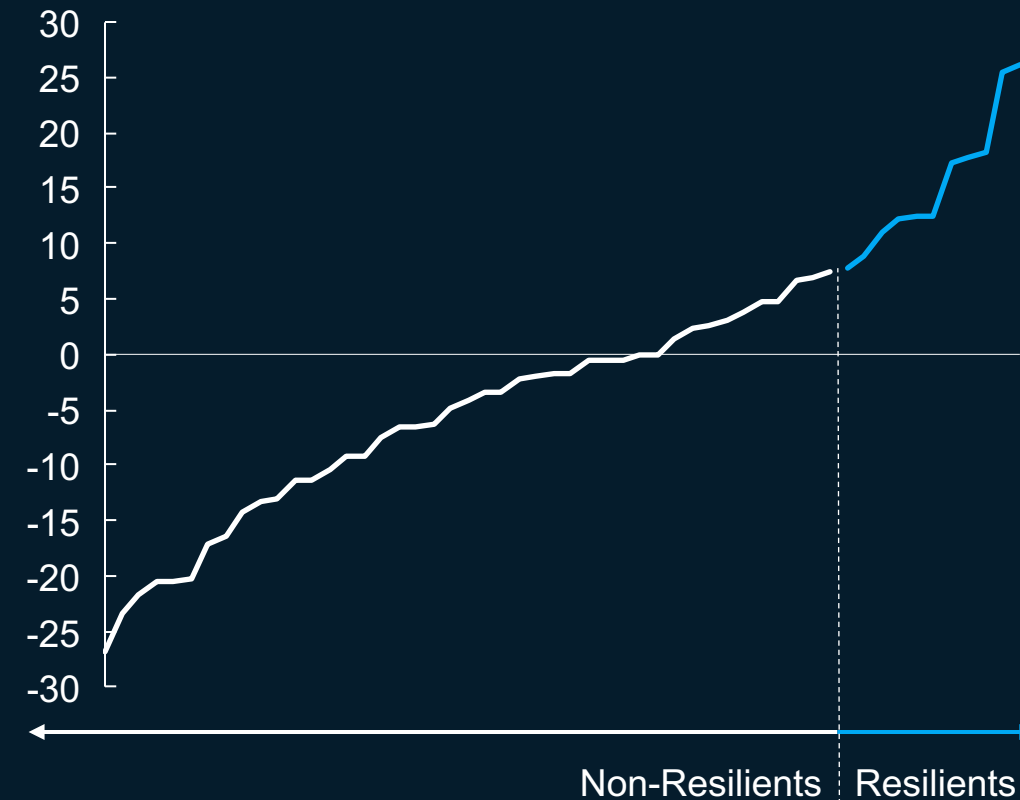
Sector-specific power curves show dramatic differences in performance during the recession

Resilience:
Speed + discipline is key

“The Resilients”

Teams seeking to boost resilience during COVID-19 need to learn lessons from the companies that survived and thrived in the last recession

Mean TRS for automotive sector, 2007–11



The top 20% of companies that emerged from the recession are called the Resilients

These Resilients didn't have any particular starting advantage (e.g., existing portfolio). Instead, they managed to achieve a small lead, which they then extended over the next 10 years.

Two words that define their success: Speed + discipline.

Speed + discipline—how the Resilients stood apart

Speed

EBITDA and revenues outperformance

Resilients companies sustained¹ organic revenue growth early and throughout the recession and on revenue in recovery

Early and hard moves

Resilients moved faster, harder on productivity; preserved growth capacity

Discipline

M&A activities outperformance

Resilients divested more during the downturn and acquired more in the recovery

De-leveraging outperformance

Resilients cleaned-up their balance sheets ahead of the downturn

¹ Resilients only lost 1% of organic revenue vs. 2007 level during 2009

Source: “Bubbles pop, downturns stop”, McKinsey.com, 2019

How Resilients performed relative to Non-Resilients:

30%

Increase in revenue

3X

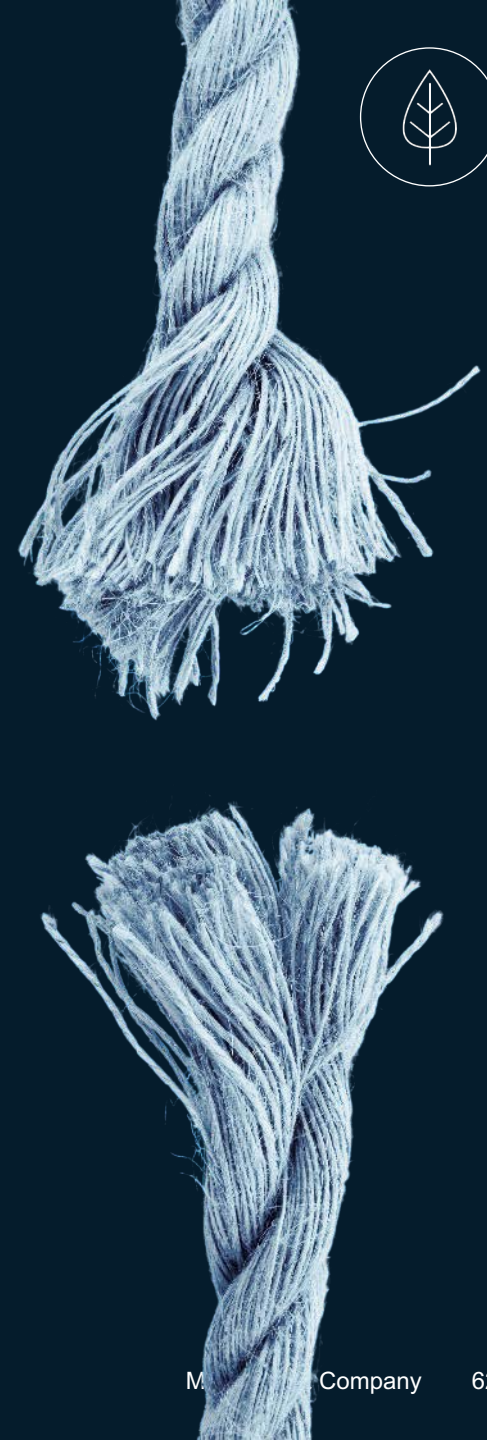
Reduction in operating costs; they also moved 12–24 months earlier

1.5X

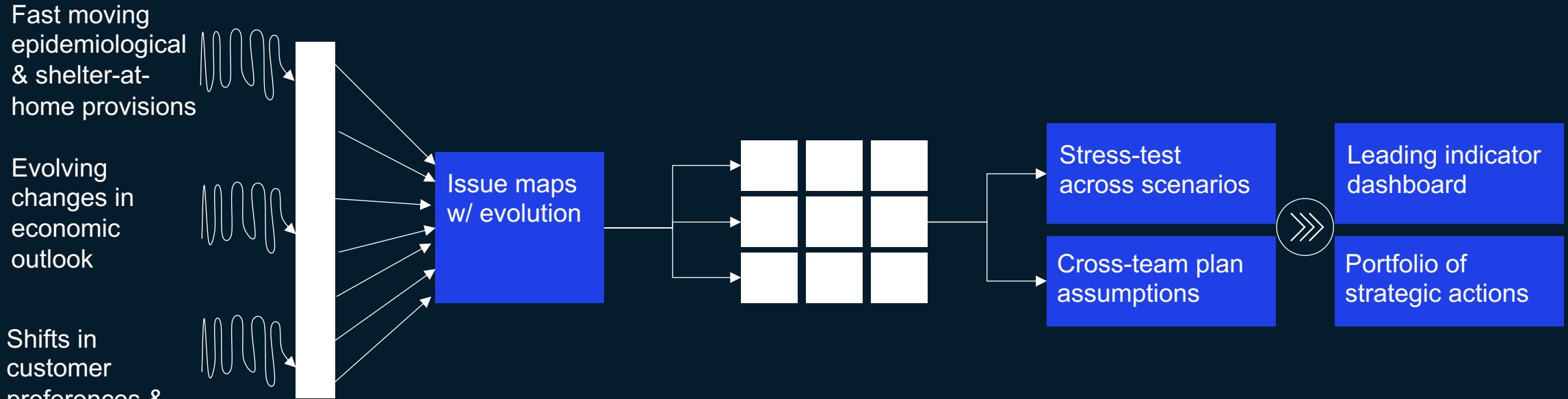
Divestiture in the downturn

~5% pts.

Deleveraged before trough



Develop ability to absorb uncertainty & incorporate learnings fast



1 Capture the full scope of the uncertainty through issue maps that emphasize future evolution, not just facts about the past

2 Bound the uncertainty through tangible scenarios that include 2nd order effects

3 Stress-test the portfolio across multiple scenarios & ensure delivery teams have appropriate planning assumptions

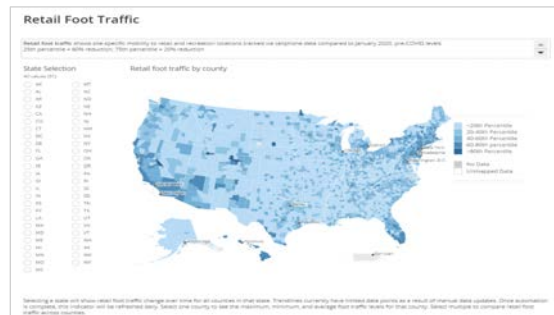
4 Build basis for rapid yet thoughtful actions by building a leading indicator dashboard & portfolio of strategic actions

Continuously monitor microdata and iteratively take actions to inform future-state hypothesis, and consequently, current strategy



A leading indicator dashboard and rapidly, iteratively taking actions allows companies to navigate uncertainty

Real-time, curated micro-data



Current strategy driven by ongoing hypothesis about future evolution



Rapid actions & learnings from successes & failures

		United States	Canada	Mexico	Italy	Spain	Germany	France	United Kingdom	China	
Public health indicators	Shelter-in-place	Shelter-in-place orders lifted									
	Health system capacity	Hospital beds per 10,000 adults									
	Disease progression	Growth rate of new cases, %									
		Share of population currently sick, %									
		COVID deaths per capita (31-day)									
Testing and tracing	Share of population recovered (presumed immune), %										
	Positive test rate, %										
	Rapid testing availability (Oxford assessment)										
Economic indicators	Contact tracing infrastructure (Oxford assessment)										
	Economic stimulus	Share of government stimulus distributed, %									
	Traffic indicators	Traffic relative to pre-COVID level (p=0-9), %									
	Corporate confidence	Unemployment rate, %									
Purchasing Managers Index											
Consumer confidence	Consumer Confidence Index										
	Restaurant spend relative to pre-COVID level (p=0-9), %										
	Retail foot traffic relative to pre-COVID level (Jan 2020), %										

Sample journey

Monitor local public health conditions, consumer behavior, government interventions to understand the evolving local circumstances in regions of interest / relevance

Tailor marketing approach, workforce and salesforce timeline to return onsite, and project spikes in consumer demand (e.g., if consumers returning to workplace, they will return to retail stores)

Update consumer messaging, change policies / strategies to target consumers effectively - and track success of actions to improve future hypothesis

How to get started: Focus on few key capabilities

Gather the information and initial assessments needed to guide companies through the return journey



Strengthen the “fast-twitch” muscle

Set up a nerve center

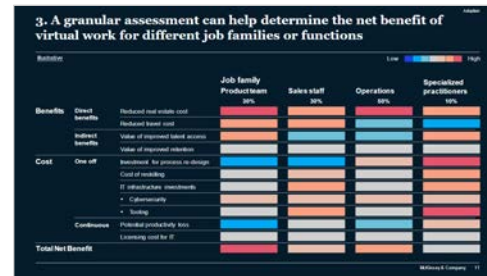


Establish a sustainable nerve center with both strategical planning oriented and tactical implementation oriented teams



Increase pace & quality of skill building

Asses remote work readiness

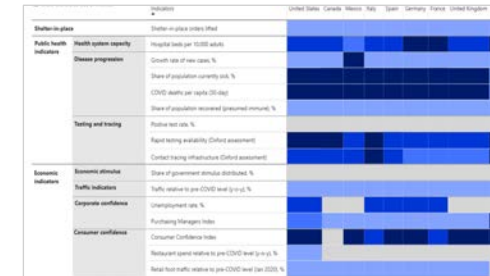


Evaluate the net benefit of remote work to your organization and the readiness of your workforce to go remote



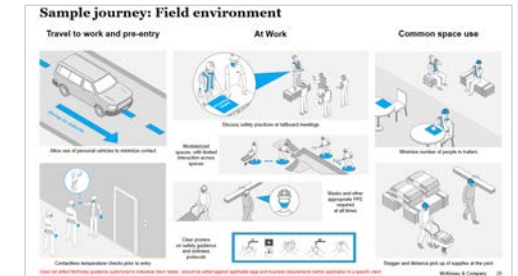
Learn from the environment and bound-uncertainty

Monitor leading indicators



Monitor industry and regional recovery signals to assess the timing of return

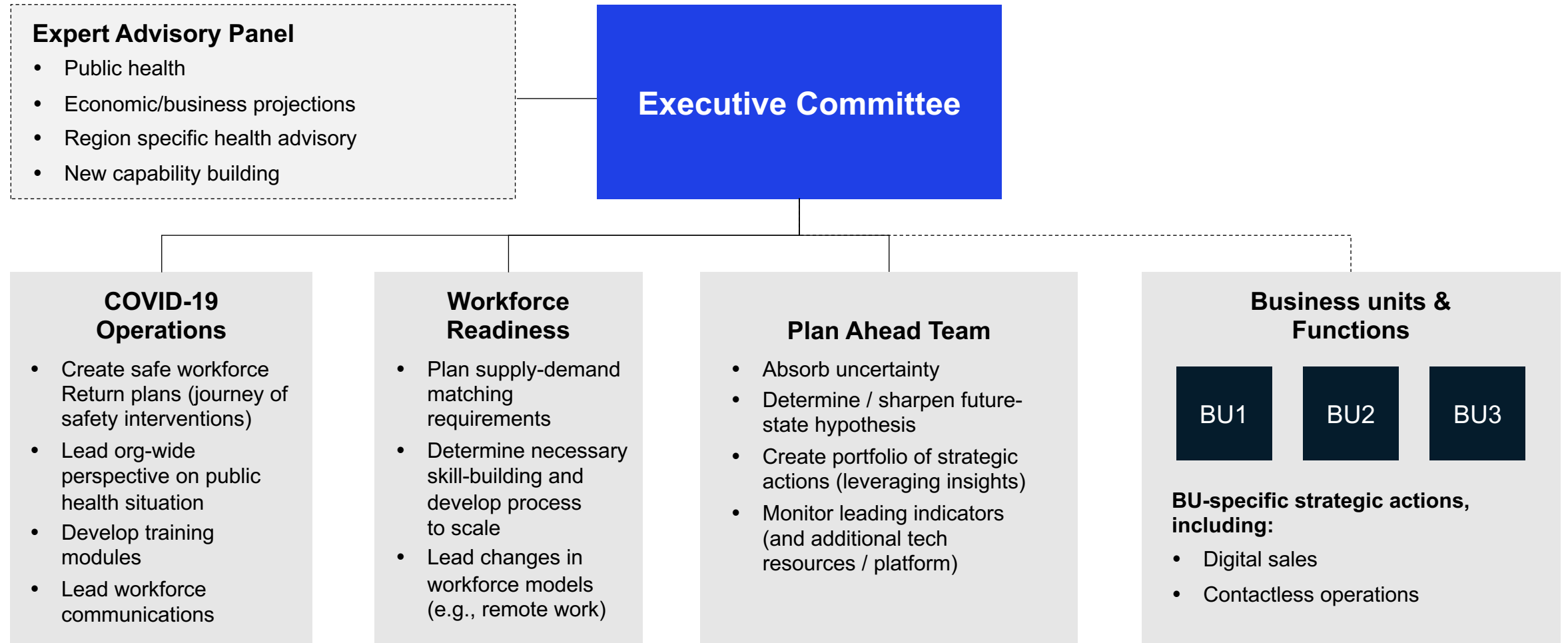
Build a return plan



Leverage monitoring dashboards, industry best practices and outside-in risk assessments to build an initial return plan

Separating responsibilities through a new Nerve Center structure helps develop and sustain the 3 return muscle capabilities

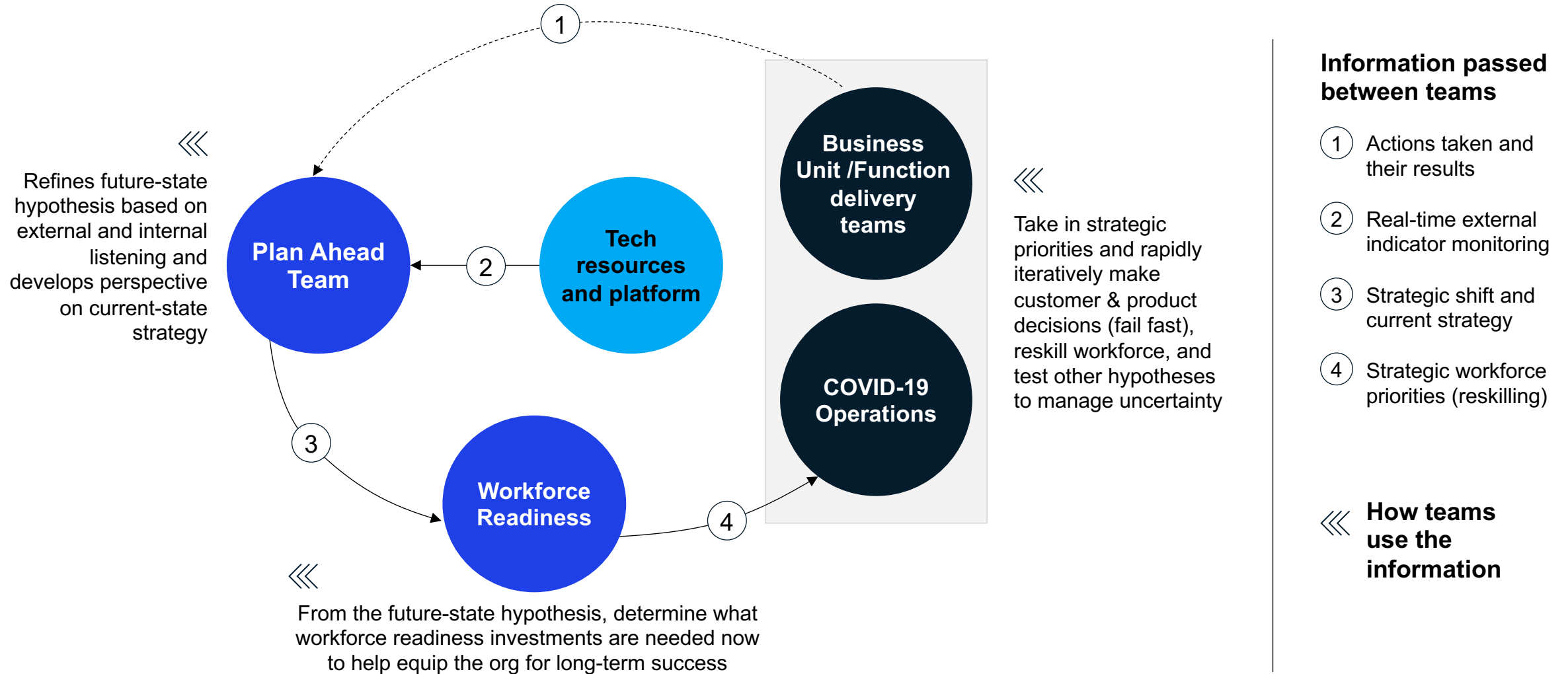
Dedicated muscle teams within BUs interact with broader Plan Ahead, WF Readiness, and COVID-19 teams



BU Dedicated delivery teams within BUs (fast-twitch)

This org structure enables a continuous-feedback operating model between fast-twitch and slow-twitch teams

Iterative feedback between the Plan Ahead and execution teams helps absorb the uncertainty of the crisis



The 8-to-12-month journey to developing the Return muscle follows a three-phase journey



The Four Forces that are shaping the Next Normal



Macro-economic scenarios



Return as a muscle

Metamorphosis of demand



An altered workforce



Regulatory uncertainty



Understanding of the virus

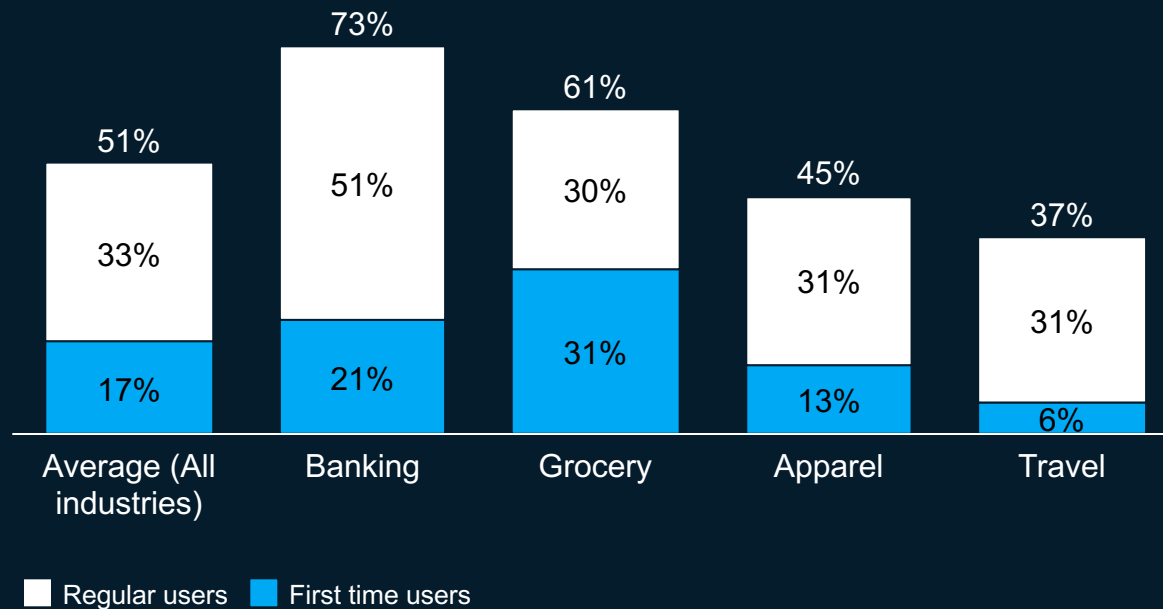


Adoption of digital sales channels is ‘on the rise’

Consumers are accelerating adoption of digital channels¹

Most first-time customers (~86%) are satisfied/ very satisfied with digital adoption and majority (~75%) plan to continue using digital post-COVID

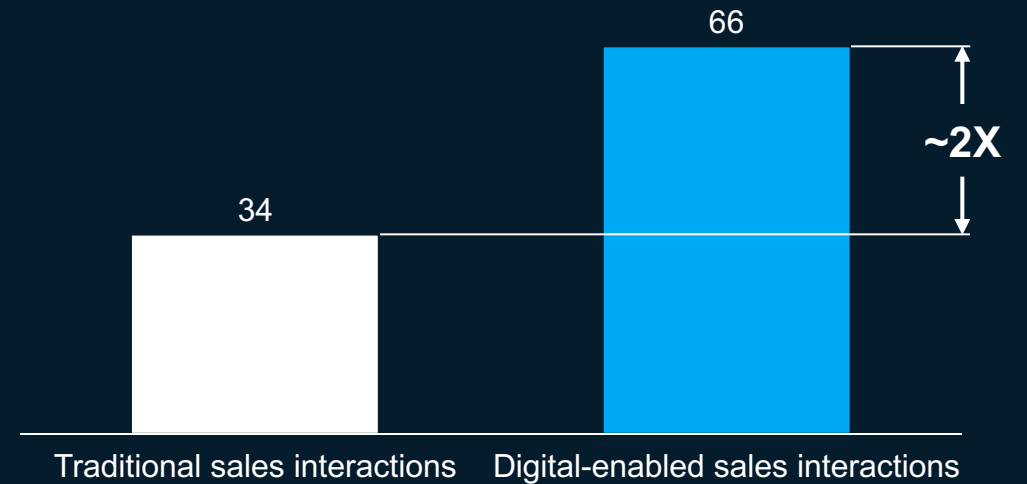
% of respondents



...and so are B2B decision makers²

B2B decision makers believe digital sales interactions will be ~2X more important than traditional interactions in the next few weeks (vs equally important pre-COVID)

% of respondents



Source:

1 - Q: Which of the following industries have you used/visited digitally (mobile app/ website) over the past 6 months? Which of this services have you started to use digitally during COVID-19?

McKinsey & Company COVID-19 Digital sentiment insights: survey results for the U.S. market; April 25-28, 2020

2 - McKinsey B2B Decision Maker Pulse Survey, April 2020 (N=3,619 for Global. Respondents from France, Spain, Italy, UK, Germany, South Korea, Japan, China, India, US, and Brazil)

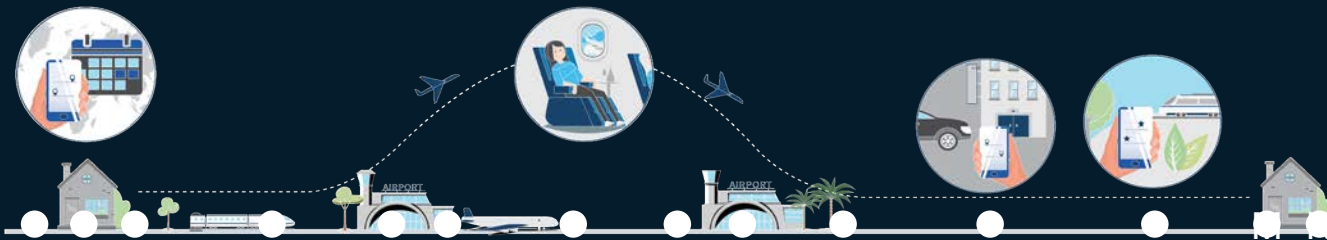
Rapidly iterating on redesigning the end-to-end customer journey will be critical

Travel example: designing a 'contactless' experience

Understand the **risks across key journeys** to fuel the **design of relevant solutions** that can best address and mitigate those risks. Rapid development of solutions by a cross-functional team enables the team to create a "table-top" future experience to **rapidly test and validate** with users and stakeholders.

Ideas solving for risks identified in the E2E traveler journey

(Illustrative)



Touch free E2E journey



Fully digital hotels



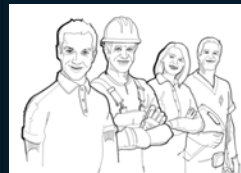
Medical services linked to hotel



Safe-o-meter to plan options



Visible security tray sanitization



Safer train/bus interior zoning



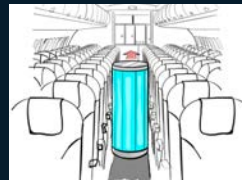
Safer luggage storage on trains



Seclusion pods in airport



UV cleaning robot for transport



Air vents in transport headrest



Health check-up prior to trip



Vision development, ideation, prototyping

Increase the level of fidelity to prototype a winning subset of ideas

Testing with customers and stakeholders & refinement

Validate and refine concepts with relevant user groups

Prioritization

Balance investments over time to accelerate re-start and recovery

The Four Forces that are shaping the Next Normal



Macro-economic scenarios



Return as a muscle

Metamorphosis of demand



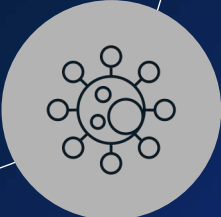
An altered workforce








Regulatory uncertainty



Understanding of the virus



Remote working can generate substantial value for organizations...

Lever	Definition
 Increasing resilience	Equipping organizations to react more flexibly and efficiently to events that are beyond their influence by decoupling location and business outcomes
 Improving talent access	Increasing the size of the addressable talent pool as (especially high potential) individuals are less willing to move for work
 Increasing operational efficiency	Improving employee efficiency Improving efficiency through required redesign of work (e.g., automation, new tools, improved process times, reduced paper flow and # reports)
 Improving cost position	Reducing demand for expensive real estate space and business travel
 Driving employee satisfaction	Offering employees flexibility to reduce attrition and unscheduled absences

1. <https://www.mckinsey.com/business-functions/operations/our-insights/building-resilient-operations>
2. <https://globalworkplaceanalytics.com/>
3. <https://www.gsb.stanford.edu/insights/why-working-home-future-looking-technology>

Example Impact

150% Is the typical TRS outperformance resilient organizations (companies with the **ability to adapt faster during and after a crisis**) achieve post-crisis compared to less resilient peers¹

70% of employees report that the ability telecommute plays a role in the choice for their next job²






13% performance improvement of remote workers was shown in a Stanford study on the Chinese travel agency Ctrip³

15-20% efficiency improvements can be realized by GCCs through remote work (incl. full program cost)⁴

63% average reduction of unscheduled absences for organizations that implemented a telework program⁵

4. McKinsey survey across 46 GCCs and 248,000 employees)
5. American Management Association

.. Although it is unlikely to be a panacea – certain tasks will still benefit from in-person connection

		Description
Negotiations		Negotiations rely on deep mutual trust and require interpretation of non-verbal communication to react sensitively to the counterpart to achieve the best mutually beneficial outcome
Relationship building		Relationship building (e.g., boards, potential customers, interviews, team kick-offs) done in person enable a faster and more trust based connection , as physical human interaction (e.g., shaking hands) plays a major subconscious role in that
Onboarding and job training		Training new hires with no previous experience in respective role presents a significant challenge in a remote setting as regular feedback and interaction with a trainer/supervisor is beneficial to optimize learning and train new behaviors
Critical decision meetings		Decision meetings in boards are often based on a deep mutual knowledge of board members, where implicit signals have elevated importance (e.g., reading body language of people in the room): thus it is harder to make consensual decisions remotely
Critical conversations		Critical conversations require a sensitive reaction on emotional and unconscious expressions of one's counterpart (e.g., body language, facial expressions), which is hindered in a remote setting Furthermore a remote conversation might be perceived as less appreciative

Examples

An experiment done by researchers at the University of Chicago and Harvard found that negotiators who shook hands were more open and honest, and reached better outcomes¹

8 out of 10 executives surveyed preferred face to face meetings, with three main reasons:²

- Build stronger, more meaningful business relationships (85%)
- Ability to read body language and facial expressions (77%)
- More social interaction, ability to bond with co-workers/clients

Gitlab the world's largest only remote company does not hire junior roles and so far only has a pilot for interns³

According to research the degree of liking conveyed by facial expressions will dominate and determine the impact of the total message⁴ which might deteriorate in video calls⁵

1.Schroeder, Juliana and Risen, Jane and Gino, Francesca and Norton, Michael I., Handshaking Promotes Cooperative Dealmaking (May 29, 2014).

2.Forbes Insights: The case for Face-to-face

3.www.gitlab.com

4.Silent messages Paperback – 1971 by Albert Mehrabia

5.<https://www.nytimes.com/2020/04/29/sunday-review/zoom-video-conference.html> - Why zoom is terrible

The shift to hybrid-virtual model requires considering the needs of employee segments, teams and organization as a whole

What are the virtual work archetypes at an employee segment level?

Virtual work archetypes	Description
Fully virtual	+90% of work is in the virtual workplace
Hybrid - Regularized	On-site work occurs at regular intervals largely at individual discretion
Hybrid – On-demand	Split on-site versus virtual fluctuates depending on work demands
Onsite Primary	Majority of work occurs on-site while some activities are done virtually
Onsite Critical	100% of work activities must be completed on site

What do businesses solve for at a team level?

The need for teams to sustain and improve productivity

The need for teams to frequently re-organize as opportunities arise and dissipate

Ability to tap into greater skill pools to assemble winning teams

What do businesses solve for at organization level?

Ability to attract and retain top talent






Ability to flexibly dial talent supply up and down by greater reliance on virtual contractors

Improved location strategy and cost optimization

Ability to close the gaps in critical skill pools



There are a number of core principles that can enable a successful virtual transition

	Develop hybrid-virtual leaders	<p>Ensure leaders are equipped to lead in a world where inspirational leadership is more effective to build trust that hierarchical leadership</p> <p>Define new leadership “observable behaviors” to ensure leaders are spending their time on appropriate activities (e.g., creating informal interactions with employees)</p>
	Be deliberate about your culture	<p>Create a culture where remote working employees do not feel like second class employees (e.g., fear for disadvantages in career development due to remote work)</p> <p>Leaders should role model by working remotely for a significant share of their time</p> <p>Acknowledge the benefits of F2F communication and create periodic in person interactions (1 - 2 times/ yr min)</p>
	Ensure productivity of onsite and virtual employees	<p>Ensure virtual employees can stay on the pulse by establishing clear guidelines and working norms for documentation and creating transparency for all meetings and decisions, that also apply for co-located employees (e.g., be on own laptop in VC even in meeting that is partly in person)</p> <p>Overcompensate with managerial attention for virtual employees to remove in-person bias</p> <p>Increase efforts in performance management, clearly define outcomes, regularly document KPIs, and evaluate employees purely on transparent outcomes / metrics in order to remove in-person bias</p>
	Actively manage engagement and org effectiveness	<p>Actively engage with employees on organizational health</p> <p>Continuously monitor organizational health and take action if required</p> <p>Be intentional about everything, especially interpersonal connections (or they may not occur)</p> <p>Conduct social networking analysis to understand social cohesion and intervene as appropriate</p>
	Foster a sense of purpose for employees	<p>Emphasize and communicate purpose for each and every employee through clear communication strategy and channels</p>

The Four Forces that are shaping the Next Normal



Macro-economic scenarios



Return as a muscle

Metamorphosis of demand



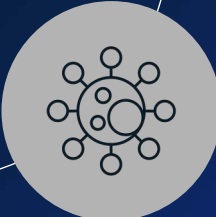
An altered workforce



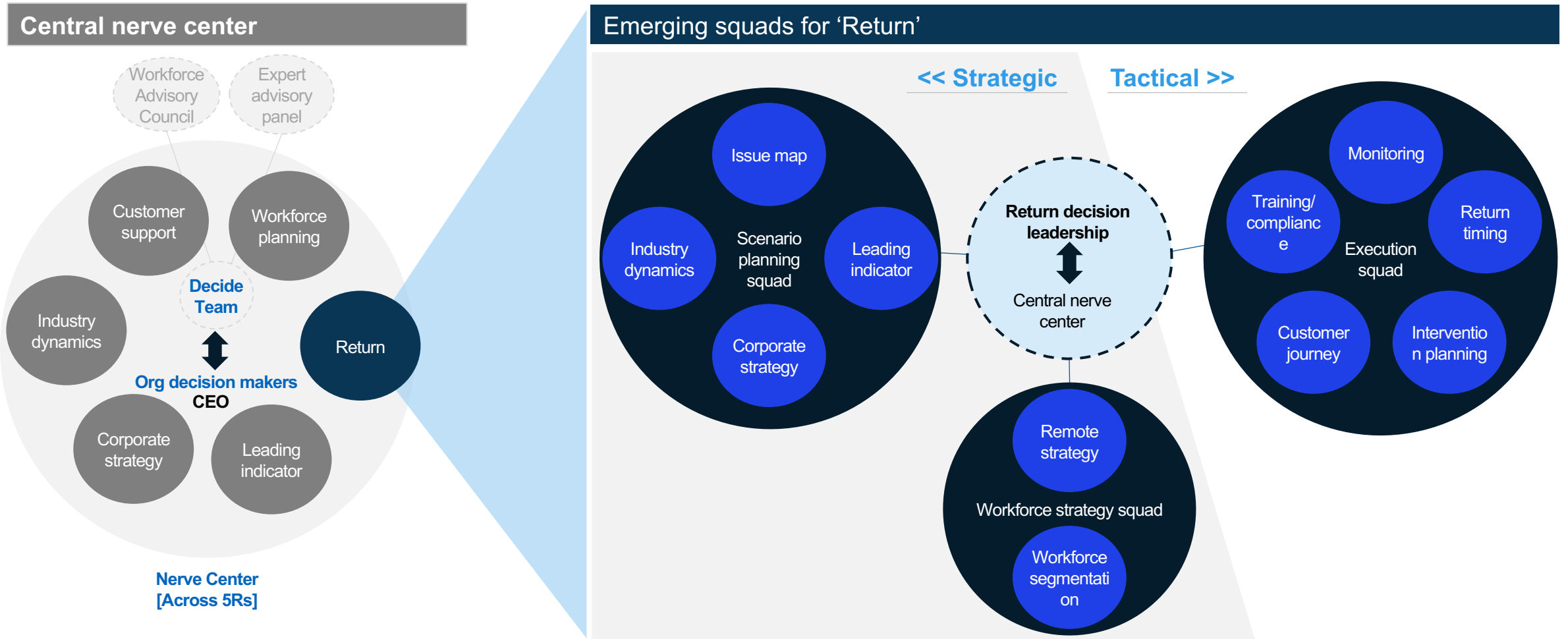
Regulatory uncertainty



Understanding of the virus



Nerve center teams should be modular and reorient their focus around “Return to work” priorities



Return focused nerve center squads build on existing priorities of the core nerve center to focus on strategic return priorities

1. Focus on short term strategic priorities, long-term workforce strategy to be prioritized (in collaboration with core nerve center) as return ramps up

Success of a return plan can benefit from adequate data and scenario-based response readiness (1/2)

Outputs of a Return Plan



Immediate business strategy¹

- ❑ Immediate post-return business strategy map (e.g., stop a business model, focus on a product/ customer segment, re-orient mfg. focus)
- ❑ Business priority list for execution (e.g., restart mfg., prioritize resilient business partners)
- ❑ Digital-first scenarios/ roadmap for short-term pivots



Return strategy & phase-wise roadmap

- ❑ Leading-indicator monitoring dashboard
- ❑ End-to-end return strategy, timeline and checklist² including phases of return and organizational focus by phase
- ❑ List of clear triggers for return phases and communication plans
- ❑ Weekly cadence to monitor return phases/ issues and re-focus



Workforce segmentation

- ❑ Current workforce segmentation based on remote vs in-person and risk levels of infection
- ❑ Operating model by workforce segments for each return phase
- ❑ Plan for larger remote enablement



Workforce training and engagement

- ❑ Implementation plan including workforce trainings on norms, interventions, two-way communication modes, health response manuals



Health & safety interventions

- ❑ End-to-end Intervention plans with detailed illustrative posters, videos, manuals, safety protocols to enable safety measures for workforce return
- ❑ Goals and milestones to monitor each intervention

What does good look like?

- Short term 'business priorities' are in alignment with capital position, ecosystem readiness (suppliers), and **focused on customer retention**
- Strategic **highlights focus on 'continuous iteration** – strong willingness for reversal as required
- Includes focus on **resiliency in business partners**
- Return strategy is **grounded in macro-economic scenarios**
- **Leading indicators are customized** to adequately reflect local conditions specific to your industry sector, geographical presence
- Return phases in **accordance with regional guidelines and regulations**
- **Participation in industry associations** and collaborative groups
- Priority considerations around **digital and remote-first return**
- **Mindful return** without 'follow-the-crowd' mentality
- Workforce transitions through cycle of return, reimagine and reform supported by **cost-benefit analyses**
- Pre-emptive, consistent and transparent communication on upcoming phases and **'what to expect' for all employees**
- Consideration of **end-to-end employee journey** in different environments (e.g., office, manufacturing, retail)
- Interventions **stress-tested** against growing repository of known failures
- Interventions address physical safety as well as **mental health**

1. Core nerve center builds out long term business strategy scenarios; near-term strategy in 'Return' feeds into the long term strategy
2. Detailed return checklist in page 9

Success of a return plan can benefit from adequate data and scenario-based response readiness (2/2)

Outputs of a Return Plan



Intervention monitoring

- ❑ Monitoring dashboards for intervention performance through measures such as safety levels, infections (if any), barrier gaps, workforce sentiments, productivity
- ❑ Cadence with the Return planning and ops teams



Return policy

- ❑ Guiding policies on workforce priorities (e.g., for vulnerable populations/ high risk regions)
- ❑ Policies to oversee specific scenarios (e.g., on-site infection at point of entry)



Return operating model

- ❑ Operating model of return squads including roles, governance, decision flows and cadence of delivery
- ❑ Cadence of checkpoints with core nerve center



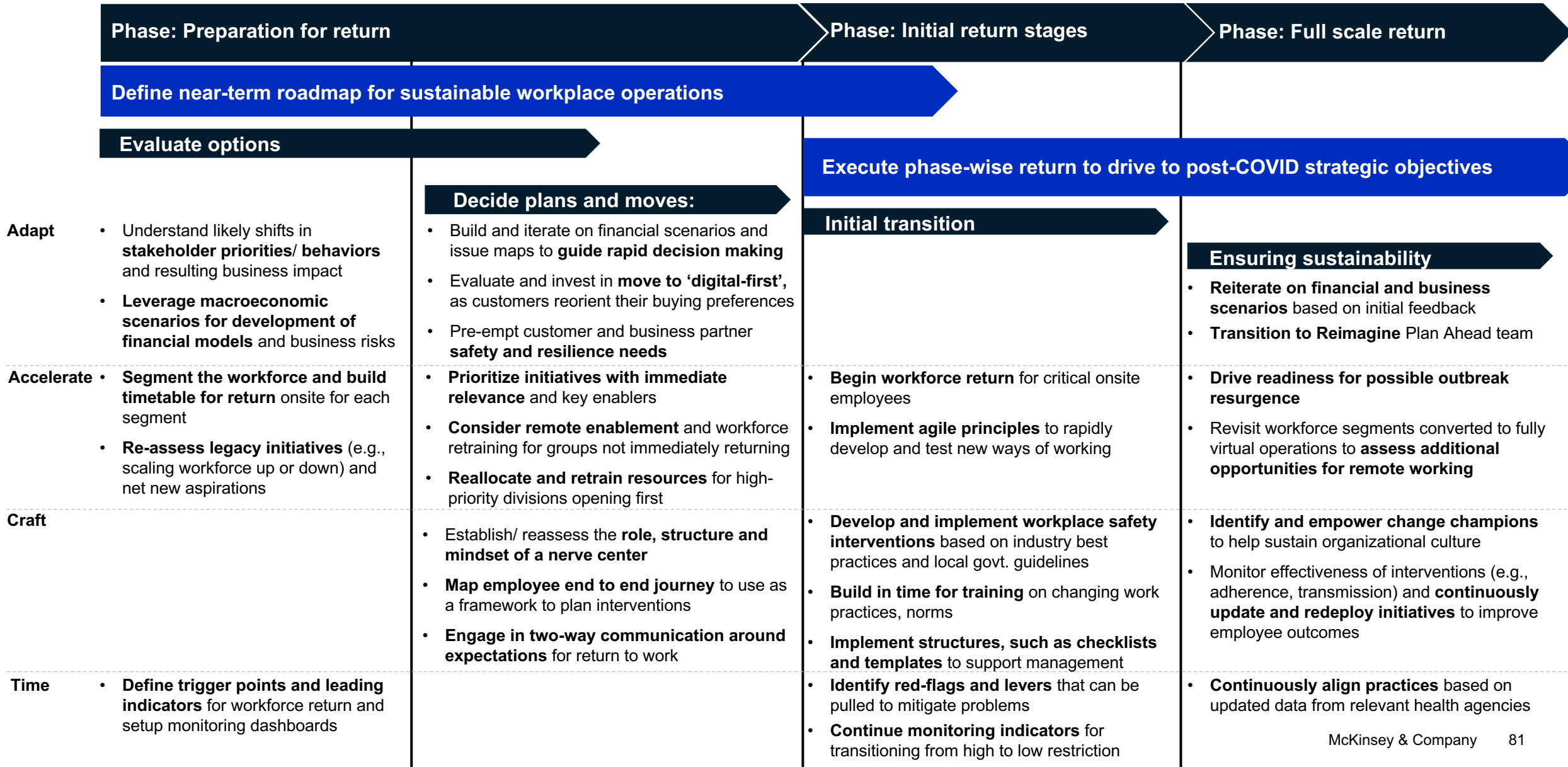
Risk management

- ❑ Risk readiness scenarios with a focus on legal, compliance and HR risks
- ❑ Manuals for risk reviews of interventions and workforce processes

What does good look like?

- **Adequate two-way communication modes** for feedback loop with employees/ customers/ suppliers
- Ability to be **agile in responding to barrier leaks** in interventions
- Policies in line with emerging **local and national guidelines**
- **Policies prioritize workforce safety** while protecting against potential liabilities
- Operating model ensures **agile ways of working** with flexibility to pivot quickly
- Roles and responsibilities **clearly articulate dependencies** and focus on decisioning speed
- **Holistic approach** to risk management considering brand, legal, compliance risks
- Liability protection readiness for **preventative and mitigative scenarios**

Potential phased approach for organization's return to work



The Four Forces that are shaping the Next Normal



Macro-economic scenarios



Return as a muscle

Metamorphosis of demand



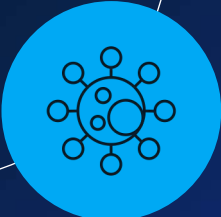
An altered workforce



Regulatory uncertainty



Understanding of the virus



Sample transmission case: Outbreak at a restaurant in China during lunch

Outbreak scale¹

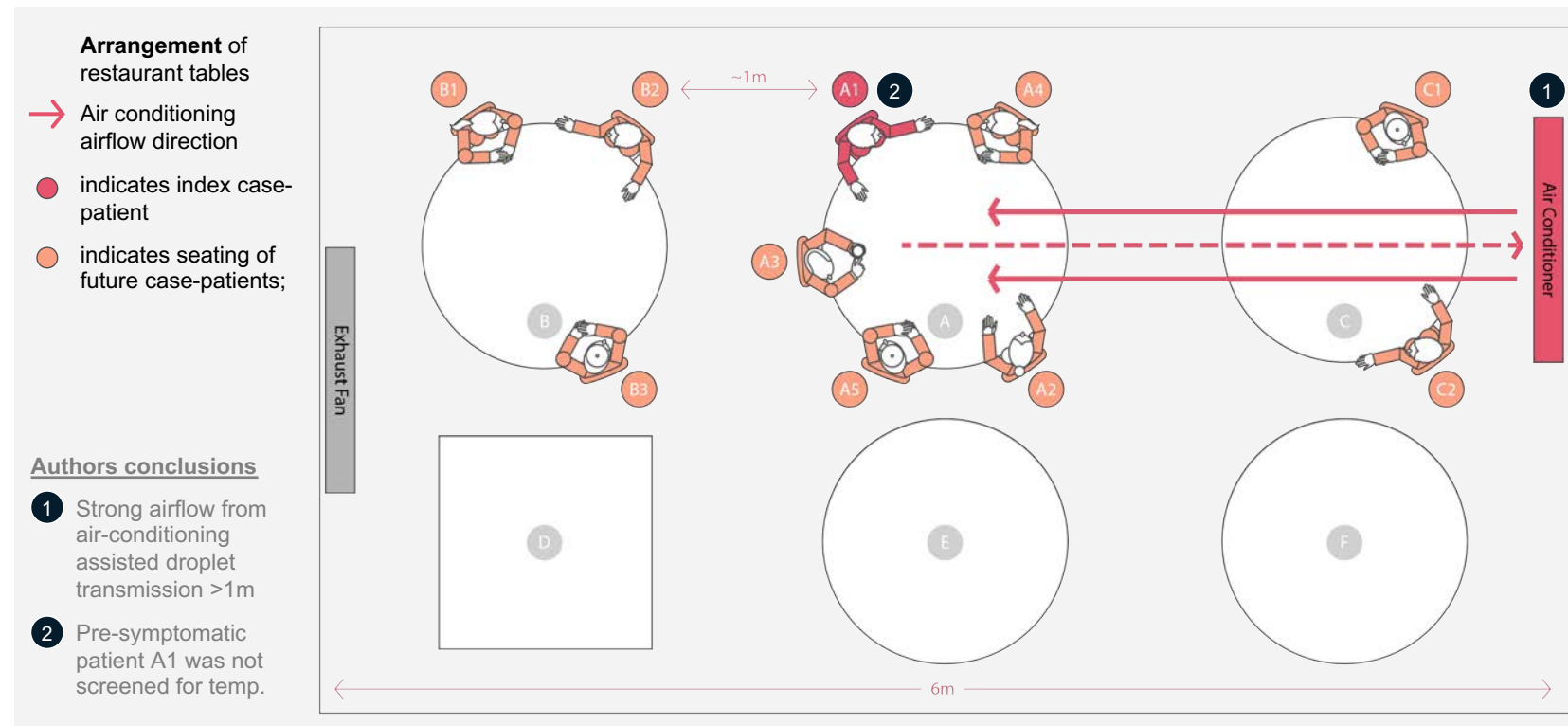
of customers at restaurant: 83 (across 5 floors)

of infections: 10 (A, B, C families)

Index case

First patient A1 had been to Wuhan but was asymptomatic at the time of the lunch. No other source of exposure was detected for other families

Transmission event



Environment: Neighborhood tables at a 5-floor restaurant without windows

Location: Guangzhou, China

Timeline: Jan 26 -Feb 10, 2020

Potential considerations for return

- **Rethink air-conditioning inlet / outlet** to minimize droplet transmission (e.g., ventilation perpendicular to workstations)
- **Increase distance** between tables/ work stations (> ~2 m)
- Separate tables using **plexiglass** and disinfect them frequently
- Screen customers/visitors/ workers for **temperature** at points of entry

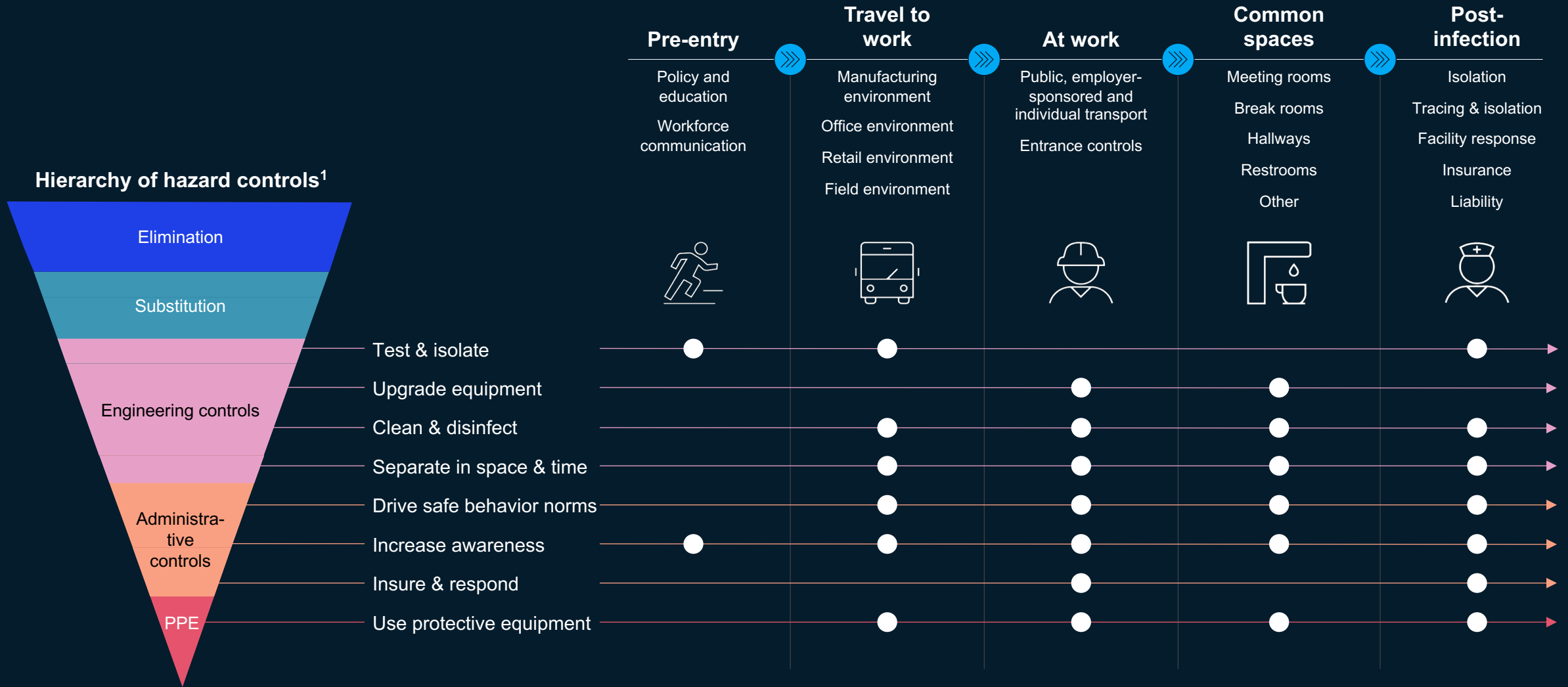
1. As per the sourced study/report

Source: Early release research - Lu J, Gu J, Li K, Xu C, Su W, Lai Z, et al. COVID-19 outbreak associated with air conditioning in restaurant, Guangzhou, China, 2020. Emerg Infect Dis. 2020 Jul [May 6, 2020]. <https://doi.org/10.3201/eid2607.200764>

Disclaimer: Early release articles are not considered as final versions. Any changes will be reflected in the online version in the month the article is officially released.

Example: A customer journey view across the CDC pyramid

An end to end customer journey, with interventions tied to the CDC pyramid, allows for upgrades over time

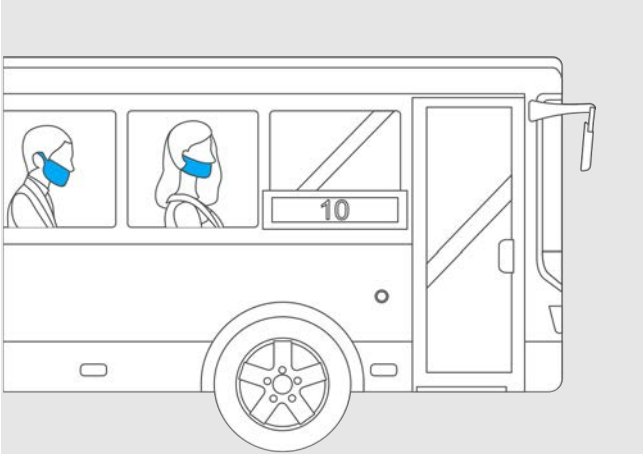


Least effective Most effective

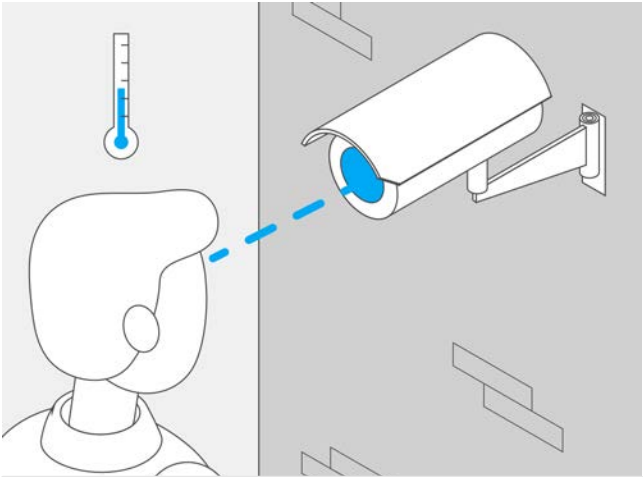
1. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy/index.html> | <https://www.osha.gov/shpguidelines/hazard-prevention.html>

Companies are increasingly mapping new interventions across the workforce journey – Sample Manufacturing journey

Travel to work and pre-entry

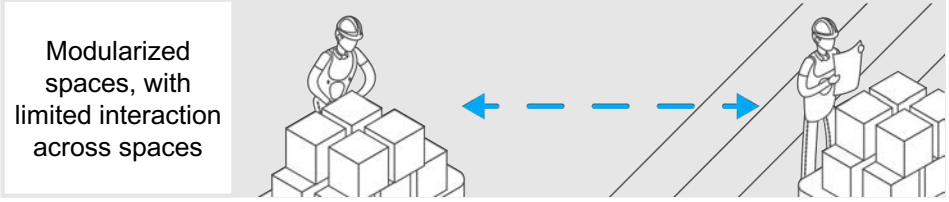


Use of masks required during employee commutes



Temperature checks

At Work



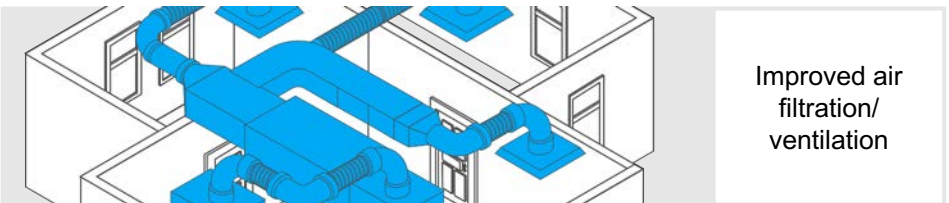
Modularized spaces, with limited interaction across spaces



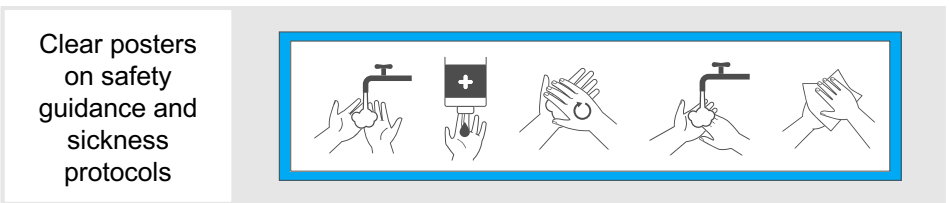
Masks and other appropriate PPE required at all times



High-frequency cleaning of high-touch surfaces and spaces

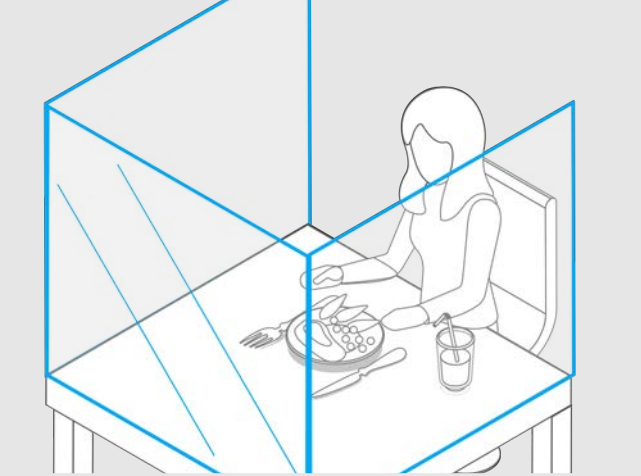


Improved air filtration/ventilation

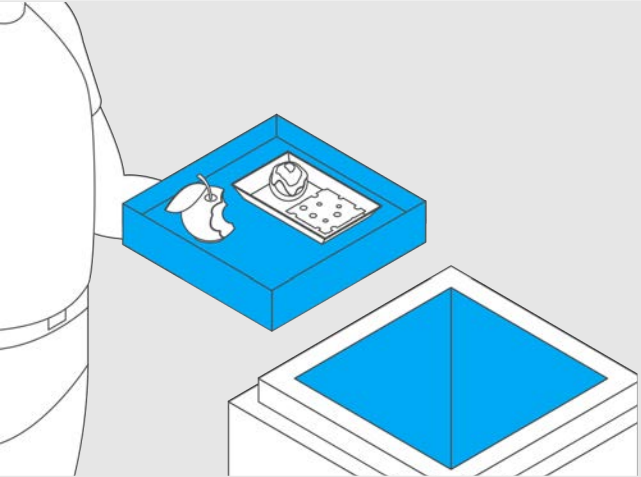


Clear posters on safety guidance and sickness protocols

Common space use



Separated lunch seating with dividers on dining tables



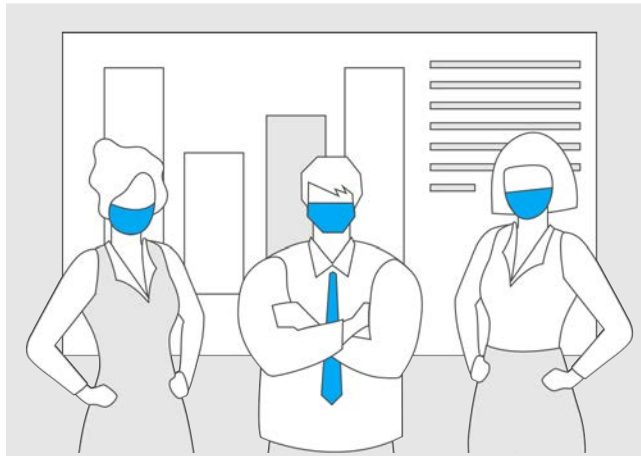
Use of non-reusable dishes at cafeterias

Does not reflect McKinsey guidance customized to individual client needs - should be vetted against applicable legal and business requirements before application to a specific client

Source: Industry expert interviews, government/public health websites (including, but not limited to, sources available at CDC.gov, WHO.int), and press research (including, but not limited to, sources available at NYT, WSJ, and specific Fortune 1000 or equivalently large international company websites)

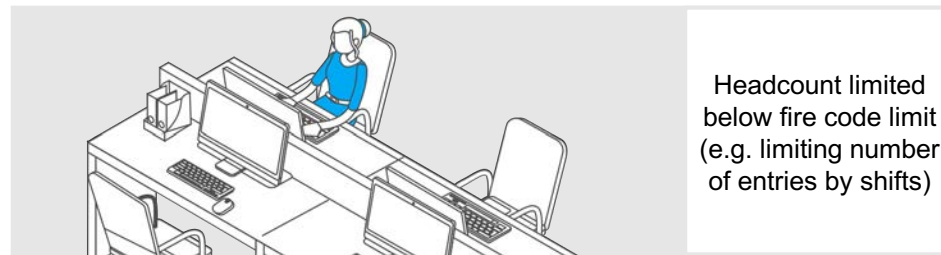
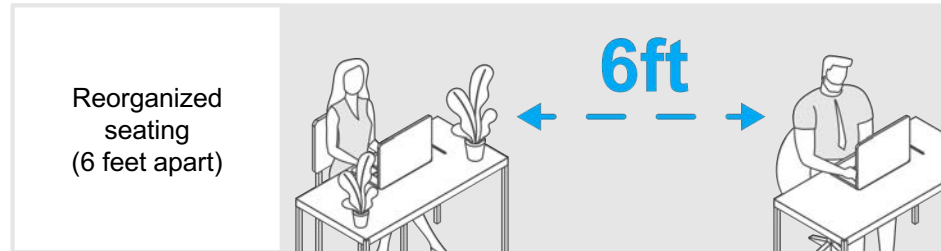
Sample journey: Office environment

Travel to work and pre-entry

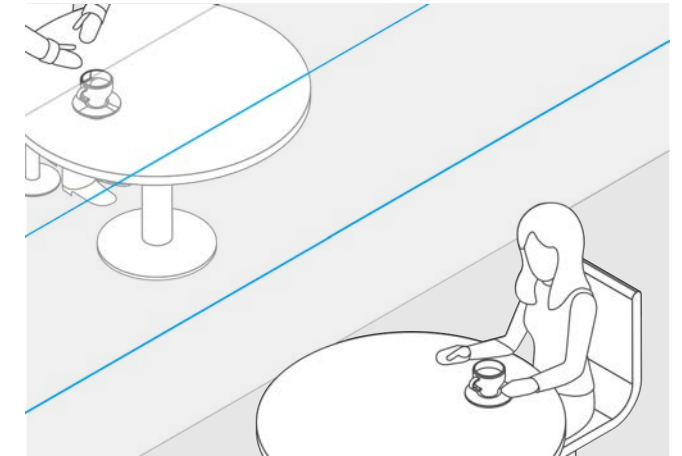


Masks required and provided for employees

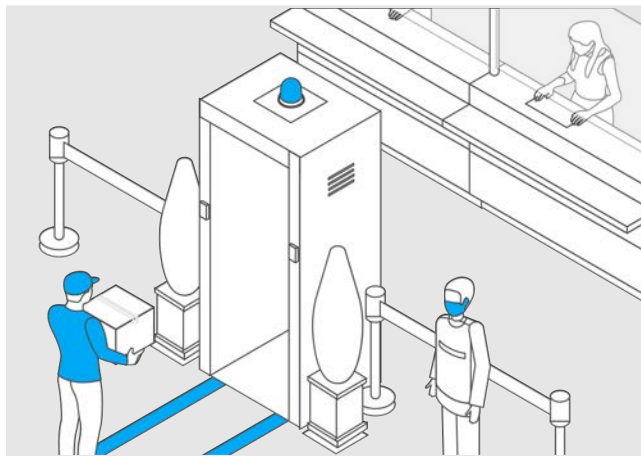
At Work



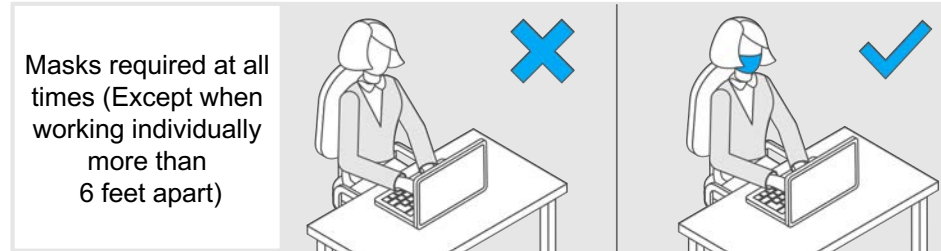
Common space use



Separated lunch seating



Limited entrance for non-employees



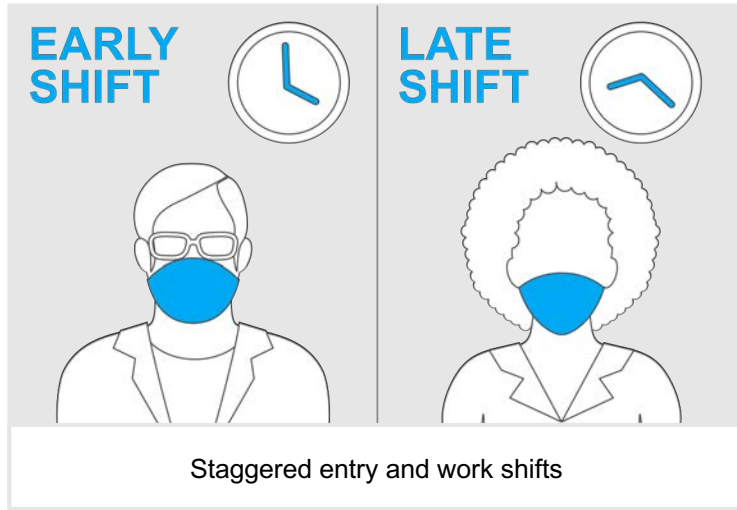
Increased frequency cleaning with visibly monitored cleaning schedules

Does not reflect McKinsey guidance customized to individual client needs - should be vetted against applicable legal and business requirements before application to a specific client

Source: Industry expert interviews, government/public health websites (including, but not limited to, sources available at CDC.gov, WHO.int), and press research (including, but not limited to, sources available at NYT, WSJ, and specific Fortune 1000 or equivalently large international company websites)

Sample journey: Retail environment

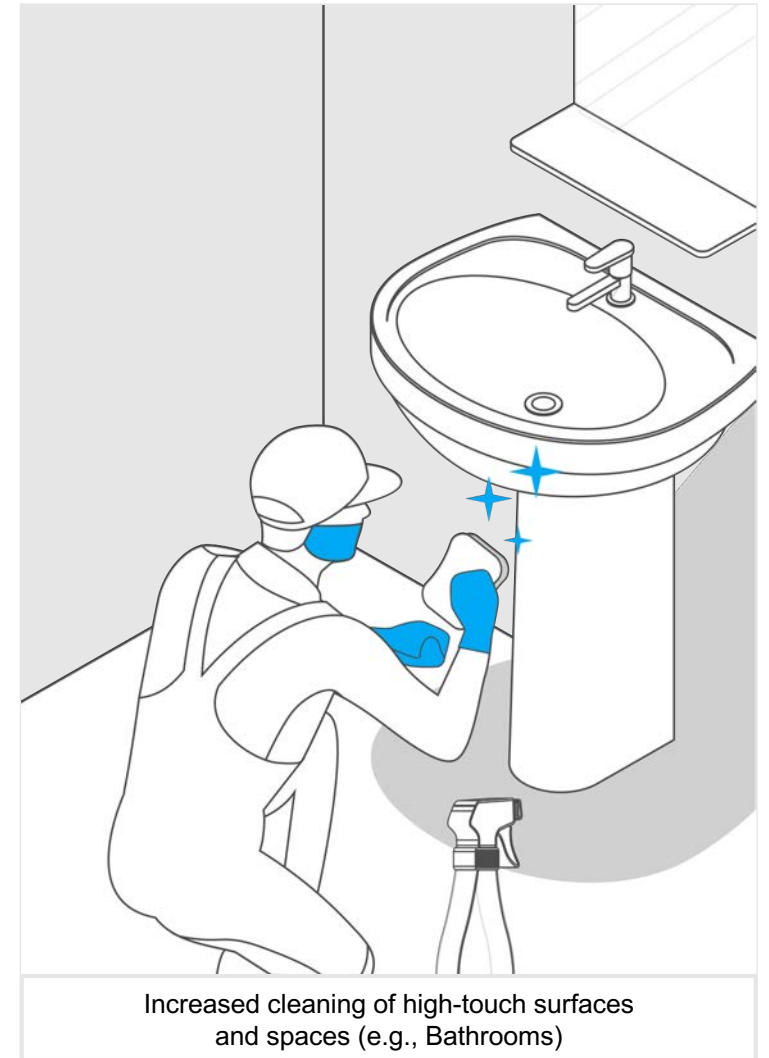
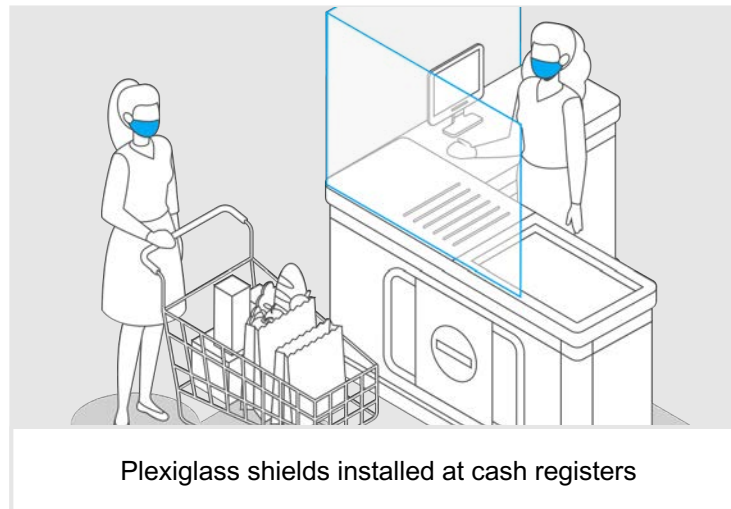
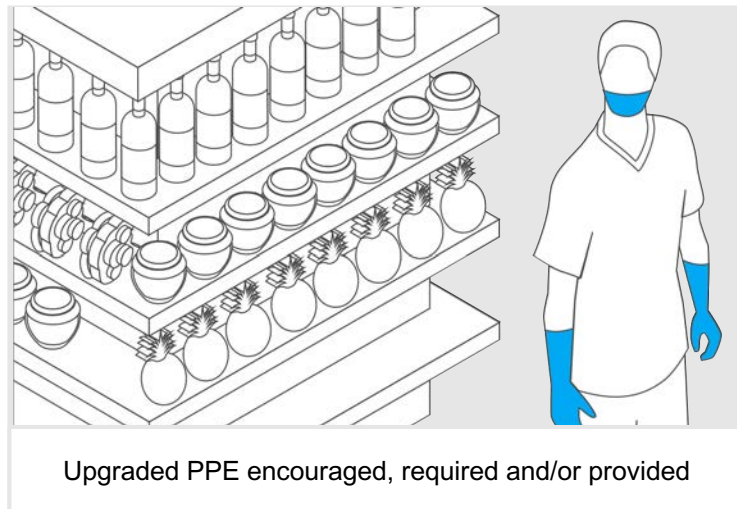
Travel to work and pre-entry



At Work



Common space use

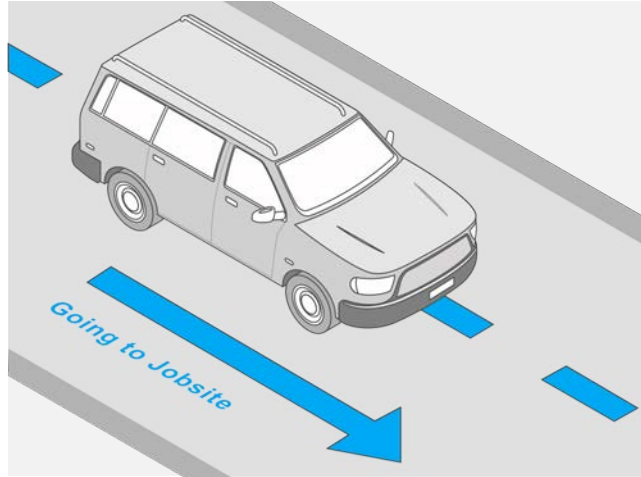


Does not reflect McKinsey guidance customized to individual client needs - should be vetted against applicable legal and business requirements before application to a specific client

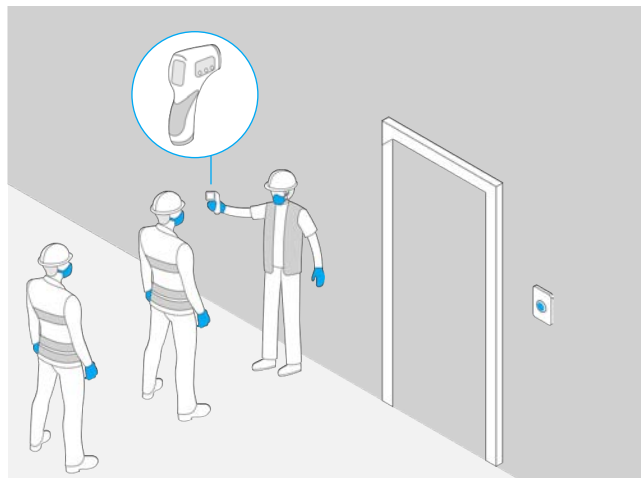
Source: Industry expert interviews, government/public health websites (including, but not limited to, sources available at CDC.gov, WHO.int), and press research (including, but not limited to, sources available at NYT, WSJ, and specific Fortune 1000 or equivalently large international company websites)

Sample journey: Field environment

Travel to work and pre-entry

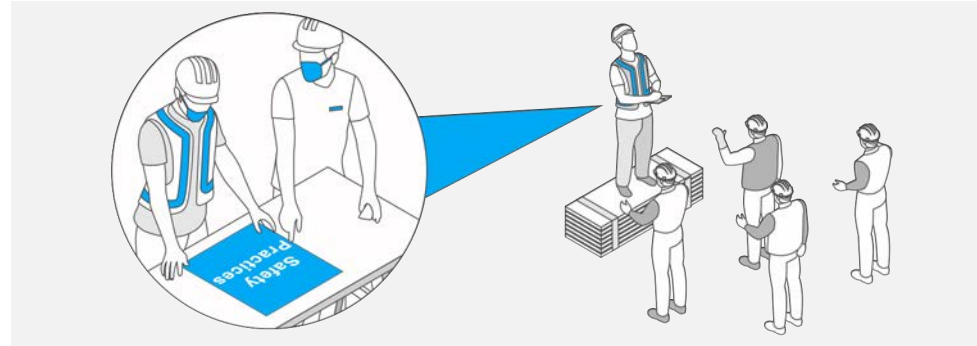


Allow use of personal vehicles to minimize contact



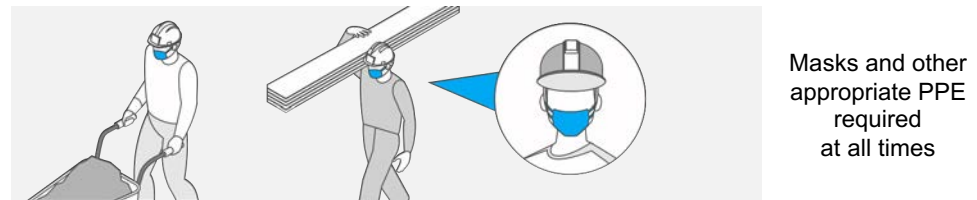
Contactless temperature checks prior to entry

At Work



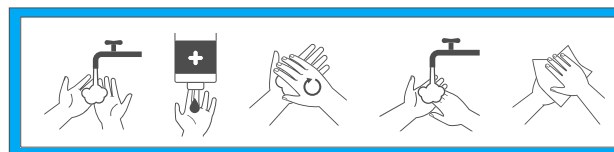
Discuss safety practices at tailboard meetings

Modularized spaces, with limited interaction across spaces

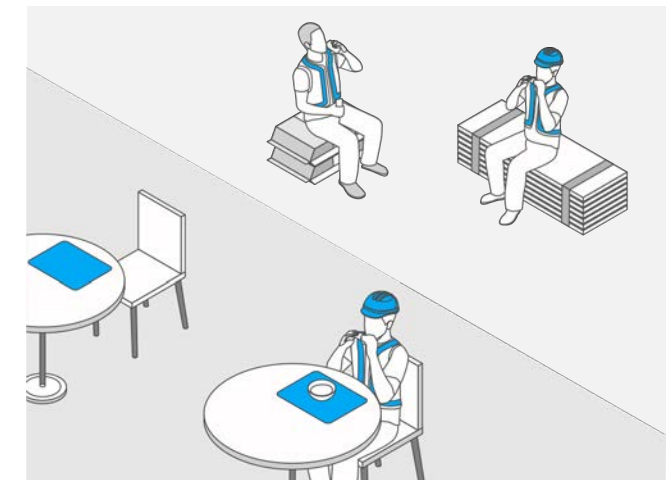


Masks and other appropriate PPE required at all times

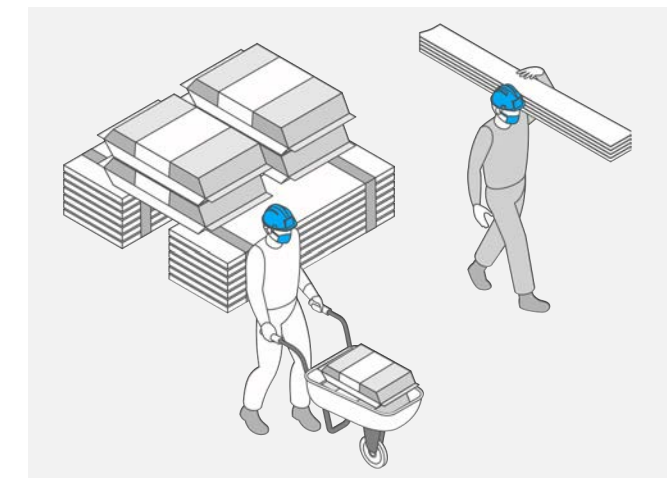
Clear posters on safety guidance and sickness protocols



Common space use



Minimize number of people in trailers



Stagger and distance pick up of supplies at the yard

Does not reflect McKinsey guidance customized to individual client needs - should be vetted against applicable legal and business requirements before application to a specific client

Source: Industry expert interviews, government/public health websites (including, but not limited to, sources available at CDC.gov, WHO.int), and press research (including, but not limited to, sources available at NYT, WSJ, and specific Fortune 1000 or equivalently large international company websites)

Improve air filtration / ventilation to remove aerial antigens

Pre-entry

Travel to work

At Work

Common areas

Post-infection

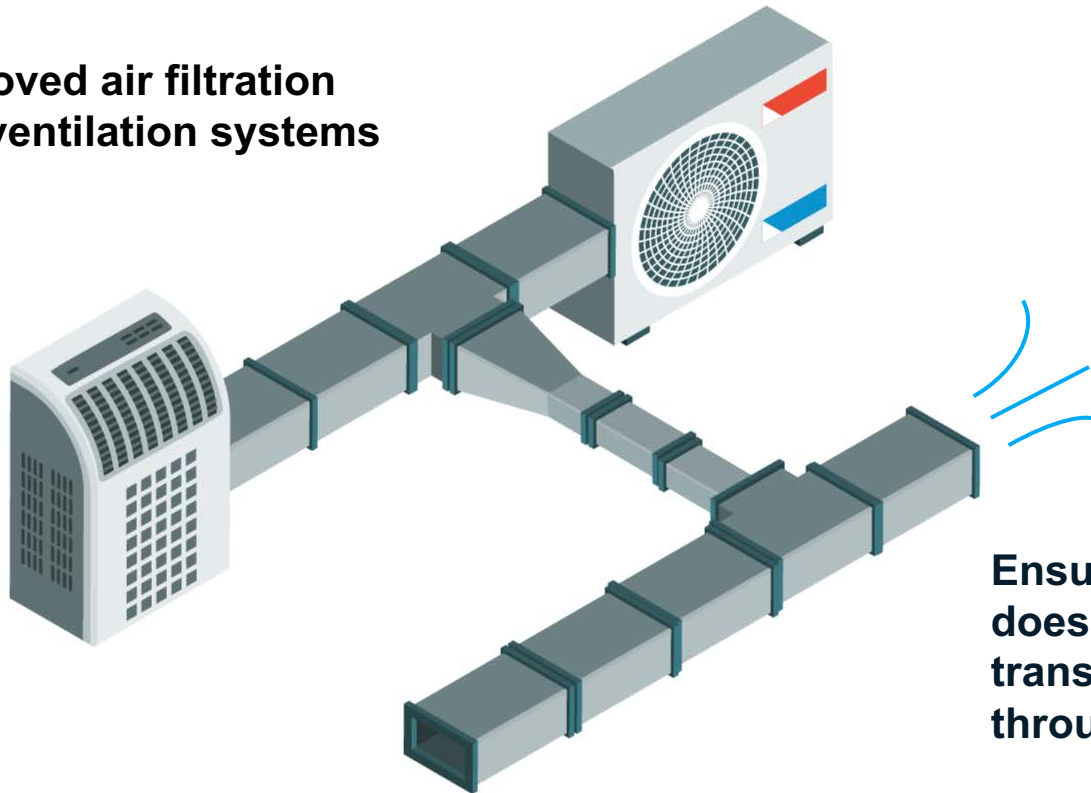
Upgrade equipment

Office

Manufacturing

Retail

Improved air filtration and ventilation systems



Ensure airflow does not aid transmission through droplets

HEPA (high-efficiency particulate air)-rated filter

Does not reflect McKinsey guidance customized to individual client needs - should be vetted against applicable legal and business requirements before application to a specific client

Source: Industry expert interviews, government/public health websites (including, but not limited to, sources available at CDC.gov, WHO.int), and press research (including, but not limited to, sources available at NYT, WSJ, and specific Fortune 1000 or equivalently large international company websites)

Description of potential intervention

Install high-efficiency air filters and increase ventilation rates in the work environment

Avoid using central air conditioning and heating systems where possible

Where this has been done

Multinational automotive manufacturer in S. Korea heightened ventilation requirements beyond government guidelines

American multinational automotive manufacturer

Global commercial real estate company

Identify high risk areas based on a walkthrough assessment

Pre-entry

Travel to work

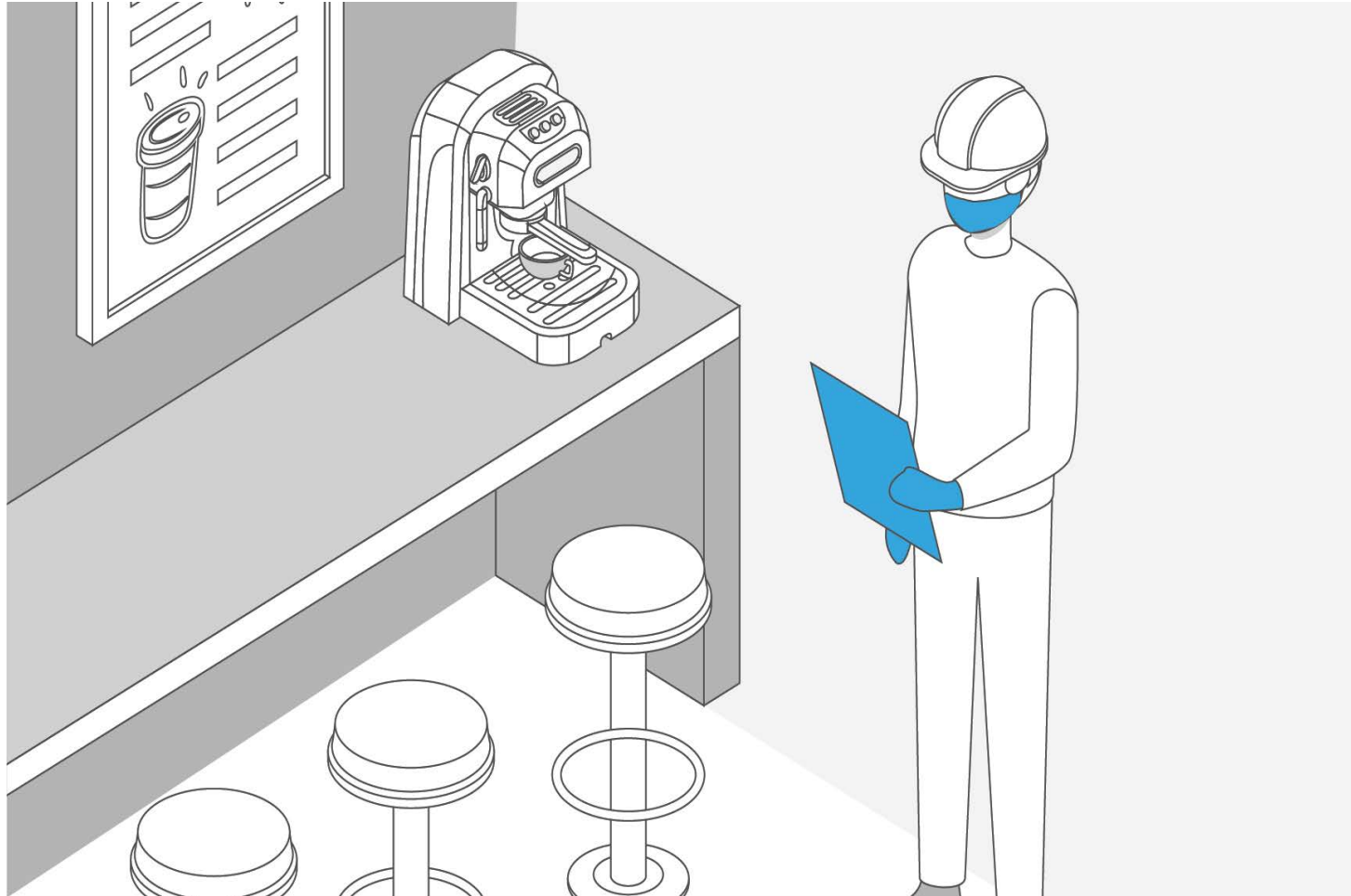
At Work

Common areas

Post-infection

Drive safe behavior norms

Office | Manufacturing | Retail | Field



Third party walk-through

Description of potential intervention

Have an employee, employee team or third-party perform a walkthrough assessment to identify high-risk, high-touch areas

Use this assessment to inform new safety measures

Where this has been done

American multinational aerospace and defense manufacturer

Global commercial real estate company

American multinational technology conglomerate

Does not reflect McKinsey guidance customized to individual client needs - should be vetted against applicable legal and business requirements before application to a specific client

Source: Industry expert interviews, government/public health websites (including, but not limited to, sources available at CDC.gov, WHO.int), and press research (including, but not limited to, sources available at NYT, WSJ, and specific Fortune 1000 or equivalently large international company websites)

COVID-19 impacts on behavioral health may change the role of employers



Financial crises can incite behavioral health crises. Following the 2007-2008 global financial crisis:

Rates of **depression, anxiety, and alcohol and drug use** increased

Worldwide, suicides attributable to unemployment increased 13%, leading to **over 46,000 lives lost** ^{1, 2, 3}



COVID-19 presents behavioral health challenges. In a recent survey of American adults

59% of respondents reported feeling depressed or anxious, or both

1 out of 4 reported binge drinking and **1 out of 5** misused prescription drugs ⁴



Employers can have a critical role to play in promoting resilience and mitigating the impact for their employees

In the Return phase, employers likely need to **attend to the behavioral health needs of the workforce**, including those returning to physical plants (e.g., fear of contagion) as well as those working remotely indefinitely (e.g., social isolation)

Employers can foster health and resilience, through their benefits and supports, communications, and culture

1. Classen TJ and Dunn RA. Health Economics, 2012.
3. Nordt C et al. Lancet Psychiatry, 2015.

2. Milner A, Page A, and LaMontagne AD. Psychological Medicine, 2014.
4. McKinsey COVID-19 Consumer Surveys, 3/17/2020, 3/29/2020, and 4/13/2020

Framework of employer behavioral health actions to consider

Strategic themes



Prioritize behavioral health

Appoint a **behavioral health (BH) ambassador/leader**, to coordinate efforts and demonstrate commitment

Commit funding to behavioral health initiatives, including enhanced supports and targeted programming to address COVID-19 needs



Communicate resources

Develop a **clear overview of behavioral health resources** (e.g., EAP, telehealth,) and disseminate widely (e.g., internal websites, HR, team leaders)

Convey senior **leadership commitment to BH**, acknowledgement of distress, and support for addressing behavioral health needs, including substance use



Make treatment accessible

Examine **BH policies and benefits** to ensure that they have capacity to meet current demand; consider adding enhanced supports

Ensure easy to **access BH treatment resources**, (e.g., telehealth, scheduling flexibility, on-site care) accounting for employee needs and physical distancing guidelines



Cultivate inclusive culture

Educate the organization in behavioral health literacy, ways to reduce stigma, and how to support colleagues

Institute **formal and informal programming** to provide social support and promote wellbeing (e.g., leadership check-ins, counseling webinars, social connectivity)



Measure and hold accountable






Use **analytics** to understand BH needs (e.g., pulse surveys, people analytics, program utilization, culture surveys) and tailor supports and communications for key segments (e.g., on-site vs. remote roles; teams working directly on COVID-19 response)

Hold the organization **accountable and take action based upon metrics**

Tactical initiatives

Identifying and sourcing critical protective supplies is likely a key enabler to facilitating safe return to work

Detailed fact packs and supplier lists are available across a number of critical supply categories

Critical supply category	Examples	Usage observed in case studies
1 Respiratory protection (e.g., PAPR, N95, surgical mask)		 Widespread
2 Eye/Face protection (e.g., face shield, goggles)		 Limited to select applications or cases
3 Body protection (e.g., isolation gowns, lab coats, coveralls)		 Limited to select applications or cases
4 Hand protection (e.g., gloves)		 Multiple applications observed
5 Sanitizers and disinfectants (e.g., alcohol-based hand rub)		 Widespread
6 Diagnostic tests		 Limited to select applications or cases
7 HVAC / Air purification		 Limited to select applications or cases
8 Thermal measurement		 Multiple applications observed

McKinsey
& Company

