

A decorative graphic on the left side of the slide features a dark grey background with a grid of teal and green squares of varying sizes, some of which are slightly offset, creating a sense of depth. Below this, there are several teal and green circles of different sizes, some with white outlines, and a few thin white lines connecting them, resembling a network or data visualization.

COVID-19 BCG Perspectives

Facts, scenarios, and actions for leaders
Publication #3 with a focus on *Emerging Stronger from the Crisis*

Version: 24 April 2020

COVID-19 BCG Perspectives

Objectives of this document

COVID-19 is a global societal crisis

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

Leaders need to drive an integrated response to navigate the crisis

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

Executive Summary | COVID-19 BCG Perspectives

Many countries are starting to establish **preconditions for a controlled restart, as COVID-19 continues to be a global challenge to societies**

- Governments' actions and societal adherence continue to deliver results in flattening the curve; allowing us to consider relaxation of lockdowns
- However, health care capacity (e.g. masks) and testing (e.g. currently unreliable serology) remain major issues
- Business preparation (e.g. health protocols; workplace safety) and public response (e.g. revised social norms) are key to ensure a sustainable transition

Impact on economy, sectors, and business remains severe in 2020; rebound to pre-crisis levels not expected by end of 2021

- Length of 'Fight' phase dependent on many unknowns; accelerated movement toward vaccine or treatment at scale could limit 'Fight' phase to 12-24 months; data from therapeutics will emerge in a few months—drugs likely to reduce severity of infection
- Estimating the economic, sector, and business impact requires scenario-thinking to navigate the crisis
- Current consumer sentiment suggests some willingness to resume activities post lockdown but not to pre-crisis levels (even with treatment)
- Economic forecasts point to severe downturn in 2020—global rebound to pre-COVID levels not expected before 2021
- Total shareholder returns (TSR) have rebounded over the last 20 days, most sectors still hit; there are clear winners even in hard hit sectors

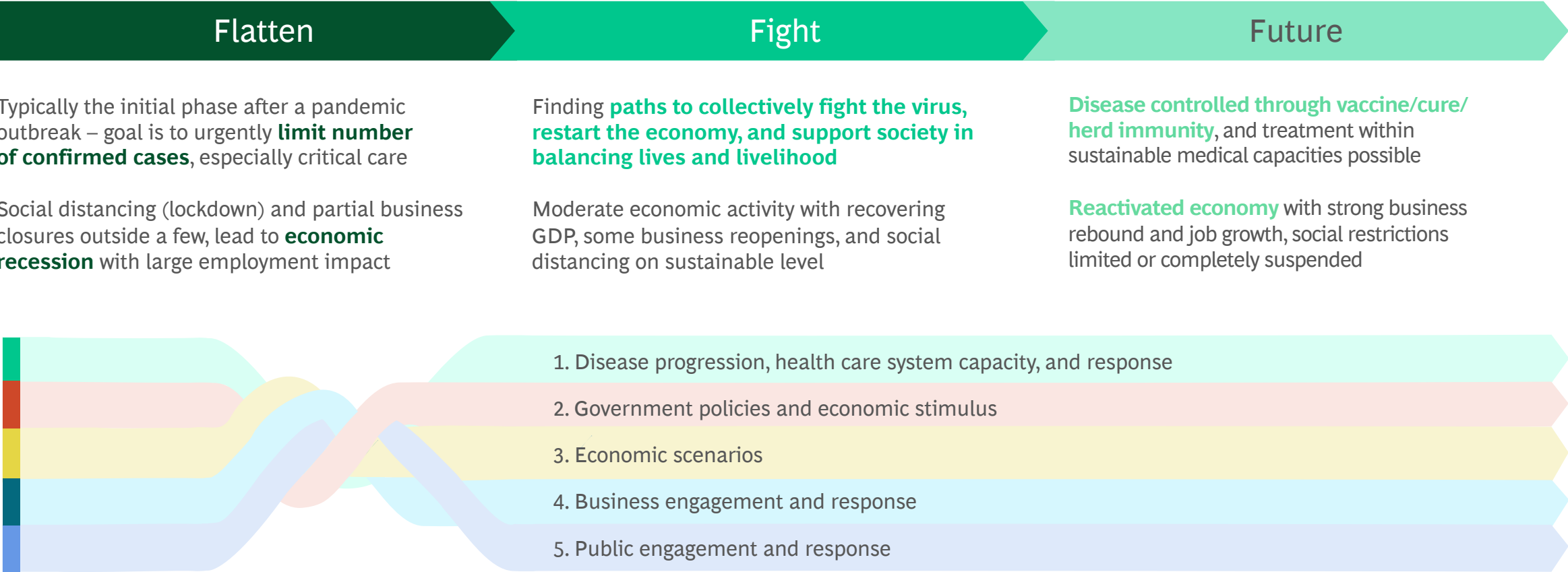
To **emerge stronger from the crisis requires fast, decisive action; business leaders need to concurrently think across multiple time horizons**

- To navigate through the crisis, leaders can leverage real-time, high-frequency, leading indicators to understand patterns and societal shifts
- Experience from prior crises suggests that winners innovate to accelerate out of crisis and seek bold moves, e.g. M&A
- We recommend nine action areas to business leaders that allow companies to emerge stronger
- 'Winning the Fight' improves odds to also 'Win the Future'

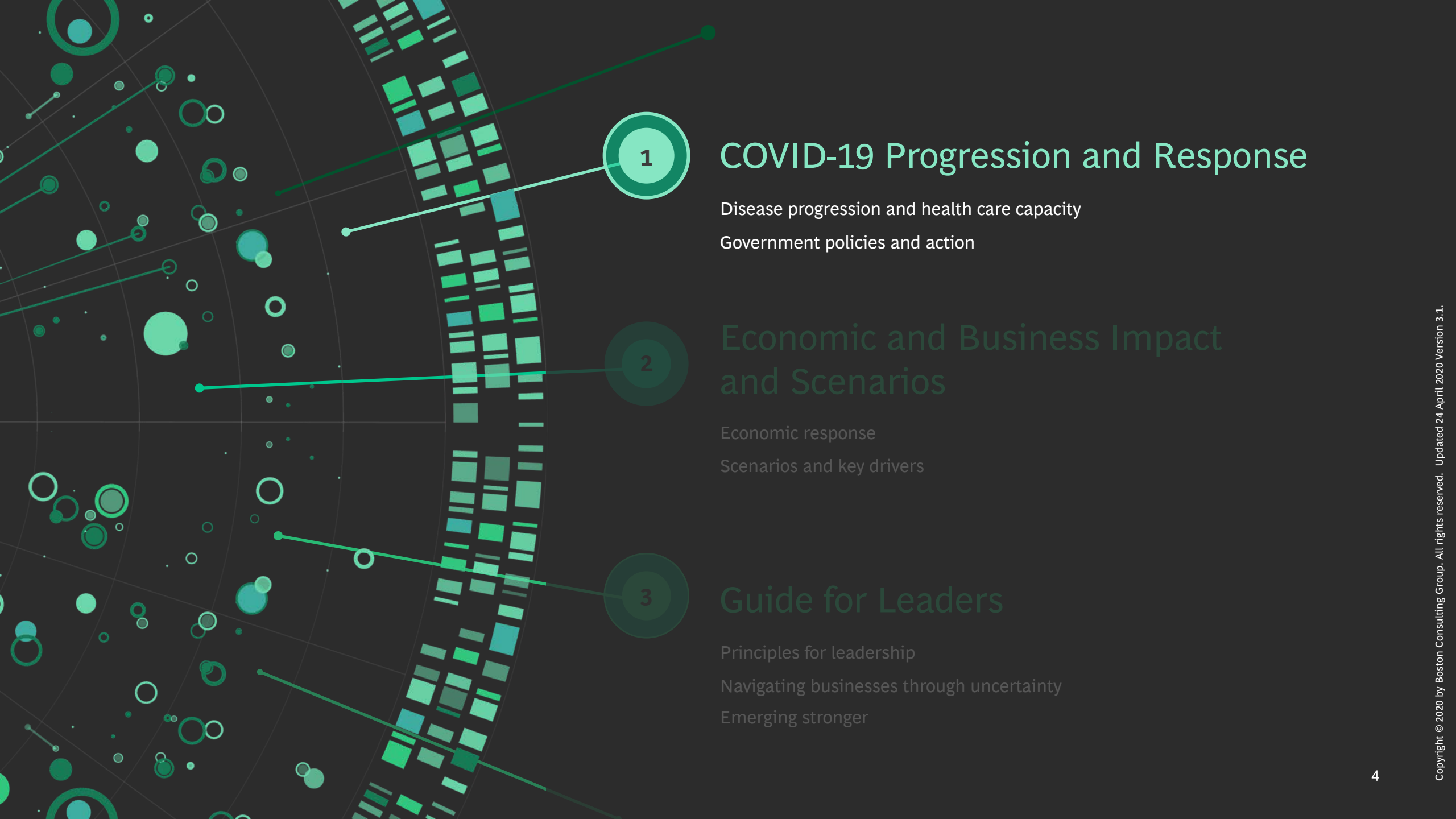
We believe during this crisis, leaders need to think along two dimensions:

- 1** Taking an integrated perspective on health/medical progression, governmental responses, societal reactions, and economic implications to understand business/sector impacts and
- 2** Thinking multi-timescale (the now, near, and long-term future—in a flatten-fight-future logic).

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



All of the above five factors result in specific economic and social outcomes in each phase



1

COVID-19 Progression and Response

Disease progression and health care capacity

Government policies and action

2

Economic and Business Impact and Scenarios

Economic response

Scenarios and key drivers

3

Guide for Leaders

Principles for leadership

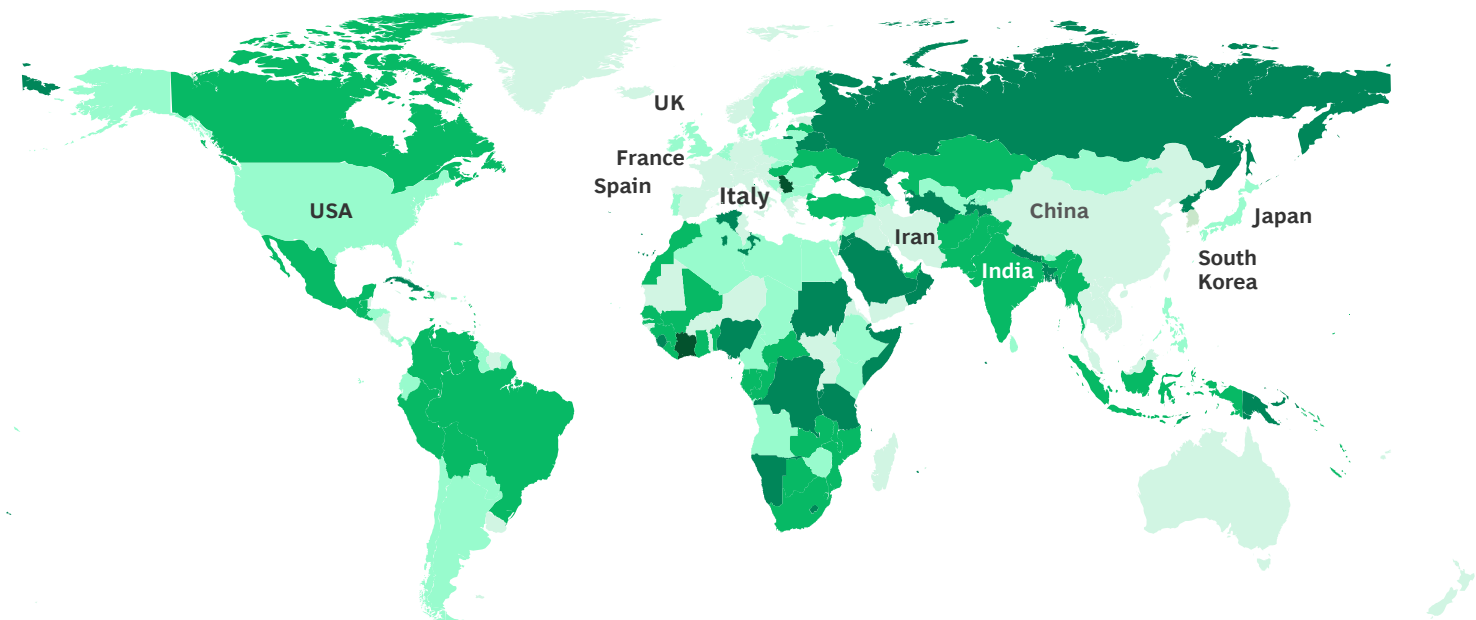
Navigating businesses through uncertainty

Emerging stronger

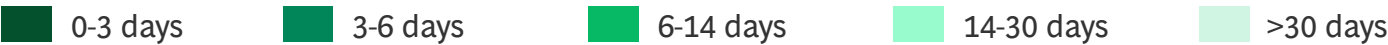
COVID-19 pandemic spread: Cases doubling every ~20 days¹ globally

DISEASE PROGRESSION &
HEALTH CARE CAPACITY

As of 23 April 2020



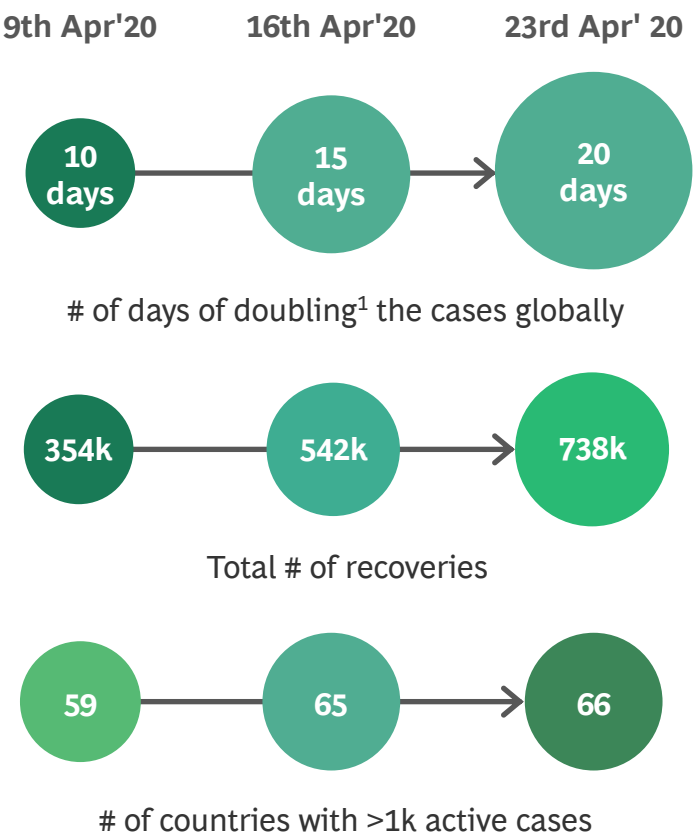
Days of doubling cases:



183
Countries with cases²

2.7M ^{[Δ4%]³}
Confirmed cases globally

191k ^{[Δ5%]³}
Fatality globally



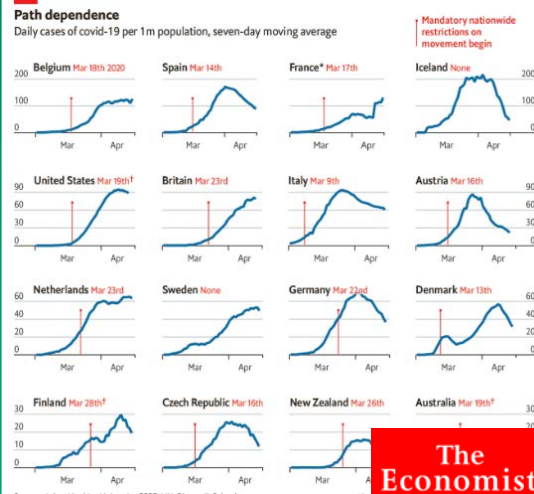
Note: Continued cases and fatalities are subject to different testing, propensity, reporting standards and hence imperfect measures
1. No. of doubling days based on 7 day CAGR 2. Basis Johns Hopkins CSSE ; 3. Daily growth rate basis 7 day CAGR
Sources: Johns Hopkins CSSE, Our world in data, WHO situation reports, BCG analysis

The week that was...

From 18 to 23 April 2020

Coronavirus infections have peaked in much of the rich world

But the fight to control the pandemic is likely to be a long and slow one



The Standard

FOCUS
Rare lull in HK virus patients 20 Apr 2020 3:12 pm

For the first time since March 5, there are no coronavirus patients reported in Hong Kong as of 4:00pm today and health officials canceled their regular briefing to the media. The number of people infected since...

The Moscow Times
INDEPENDENT NEWS FROM RUSSIA

LATEST CASES

Russia's Coronavirus Cases Rise By Over 4,000

Russia now has 47,121 cases.

April 20, 2020

The Guardian

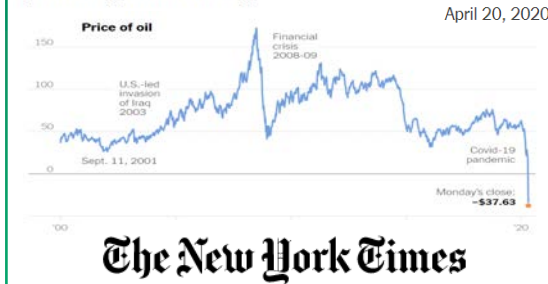
Germany and Norway ease lockdowns but Spain and France hold off

Sun 19 Apr 2020 20:25 BST

Countries diverge on exit strategy as Europe's coronavirus death toll nears 100,000

Too Much Oil: How a Barrel Came to Be Worth Less Than Nothing

One oil price went negative on Monday, signaling that there is no place to store all the crude the world is producing but not using.



South Korea holds elections under strict safety measures amid coronavirus pandemic

WORLD ECONOMIC FORUM

Strict measures have been put in place to ensure voter safety. 15 Apr 2020

Image: REUTERS/Kim Hong-Ji

WHY WIDESPREAD CORONAVIRUS TESTING ISN'T COMING ANYTIME SOON

By Robert P. Beid

Photograph by Ted S. Warren / AP

THE NEW YORKER

A critical shortage of swabs and other testing components is, in many cases, making it impossible for labs across the country to expand their capacity.

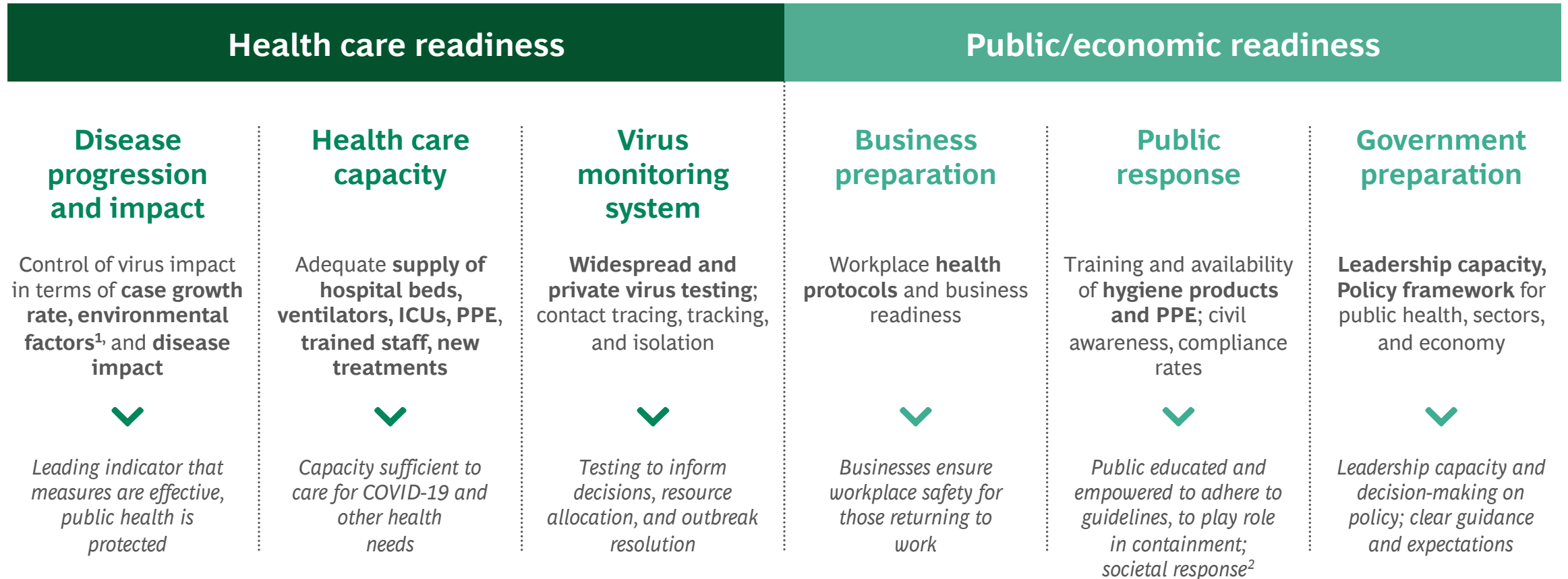
Coronavirus: EU and Australian tracing apps 'ready in weeks'

© 17 April 2020

Coronavirus pandemic

BBC

Leaders need to get the preconditions for Restart right



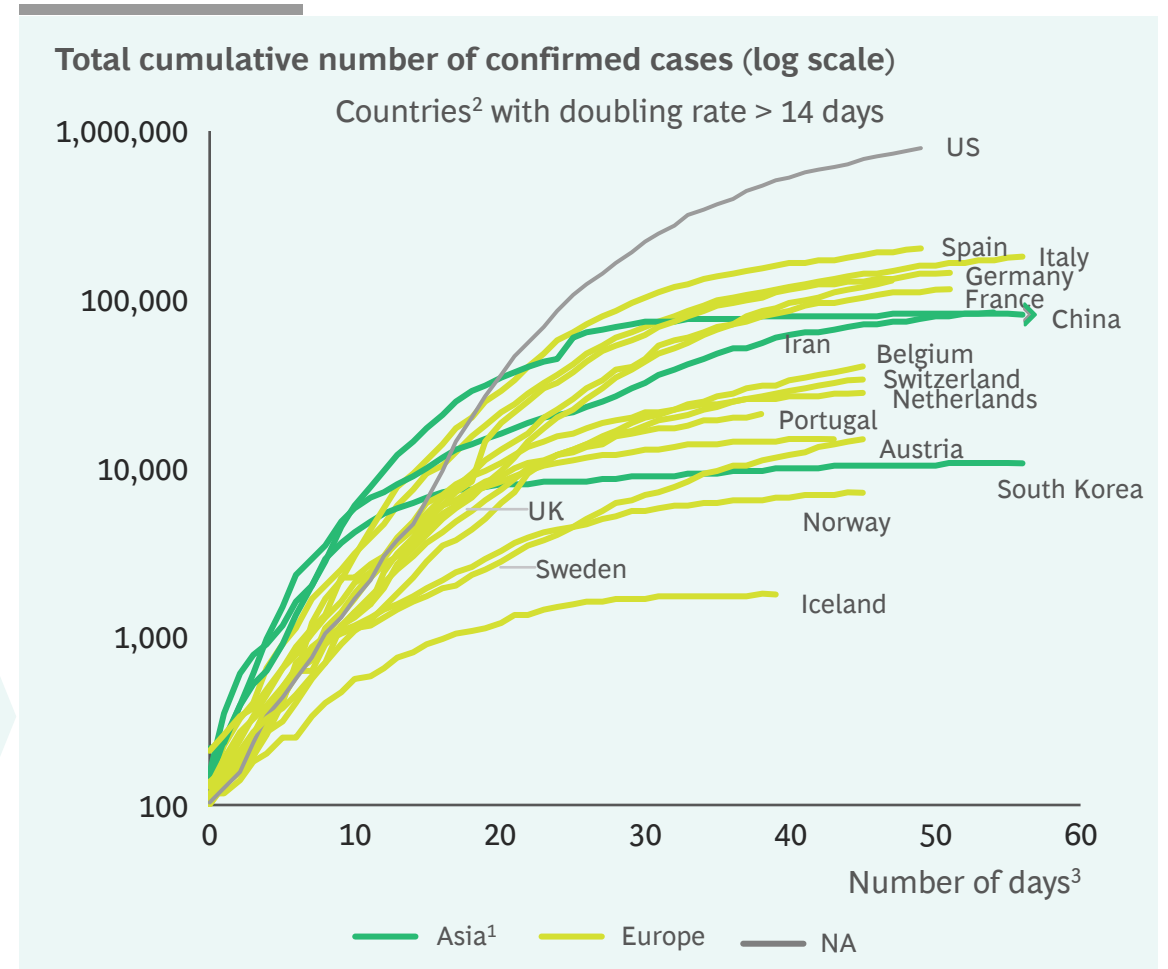
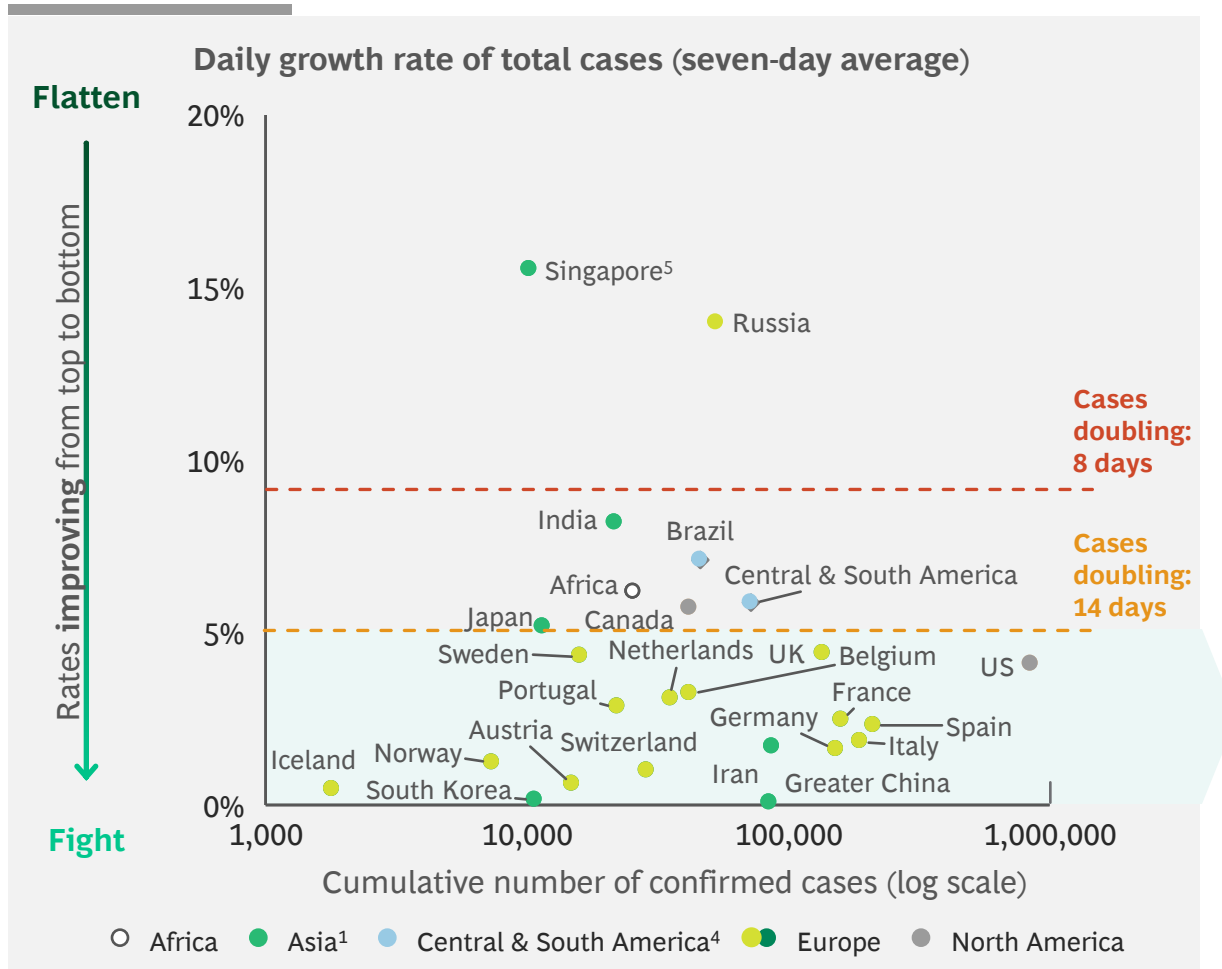
1. Environmental factors: population density, demographics (age, health conditions), weather, etc.; mixing from other localities

2. Societal behavior: physical distancing, gatherings, intergenerational living, mass transit usage, shopping behavior, etc.

Source: BCG analysis

Disease progression | Many countries currently flattening the curve

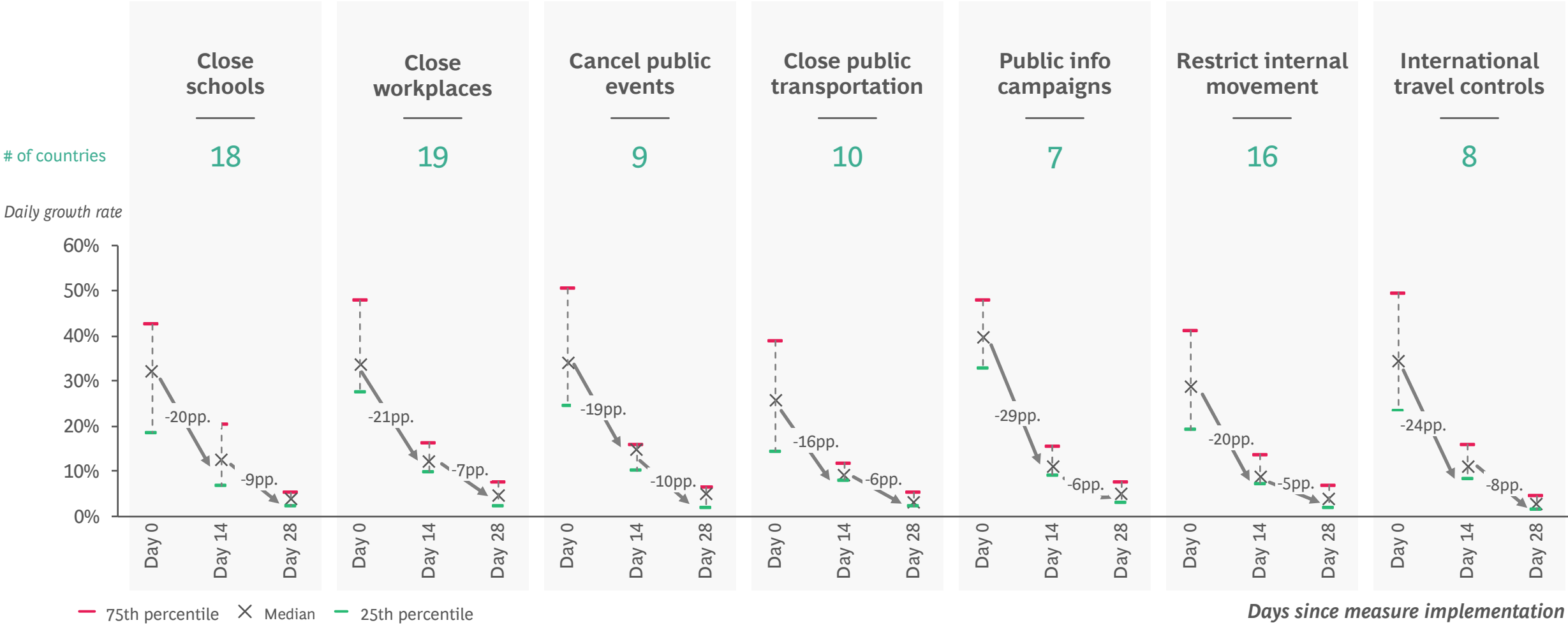
As of 22 April 2020



1. Includes Middle East 2. Countries selected from the chart on the left 3. # of days after exceeding 100 confirmed cases 4. Excludes Brazil 5. Singapore observed a steady decline in growth rate of cumulative cases from 22 Mar to 6 Apr post which the rate has mostly increased as of 22 Apr 2020. Source: Johns Hopkins CSSE, Our World in data, WHO situation reports

Disease progression | Governments actions are delivering results

Up to 15 Apr 2020



Note: "Day 0" reflects day measure was taken in each country and can vary across measures; daily growth rate of reported infections based on compound growth in 3-day window prior to date; Chinese province of Hubei considered as separate country for purpose of presentation; correlations between effects of measures not taken into account; threshold of 100 cases at date of measure introduction used per measure, not across measures
Countries (ISO 3166-1 alpha-2): AT, BE, BR, CH, CL, CN (Hubei), CZ, DE, ES, FI, GR, ID, IL, IN, IQ, IR, IS, IT, JP, KR, MY, NO, PK, PT, QA, SE, SI, TH, US, ZA
Source: Oxford COVID-19 Government Response Tracker, Johns Hopkins University CSSE data, BCG analysis

Health care capacity | To support broader usage of masks, different countries planning ramp-up of production

Illustrative: Modeled* for a country with 100M population

As of 23 April 2020

PPE: Masks

Range of potential recommendations

	Public facilities & patients	Vulnerable groups & patients		Essential workers & patients	Optional daily use for general public		Mandatory daily use for general public	
Groups affected & usage description	Anyone using public facilities (e.g. shops, transport)	Recommended use for vulnerable people leaving home		Any worker going into a workspace with others	Recommended but optional use for anybody leaving home		Required use for anybody leaving home	
Examples of where guidance is adopted	Austria	China	USA	USA ⁶	China	USA	Czech Rep.	Morocco
	Mongolia	Japan	S Korea	India ⁶	Japan	S Korea	Slovakia	Turkey
No. people affected per month (M)	39 ¹	35 ²		20 ³	100		100	
Total masks/month (M) ^{4,5}	18	34		154	85		180	

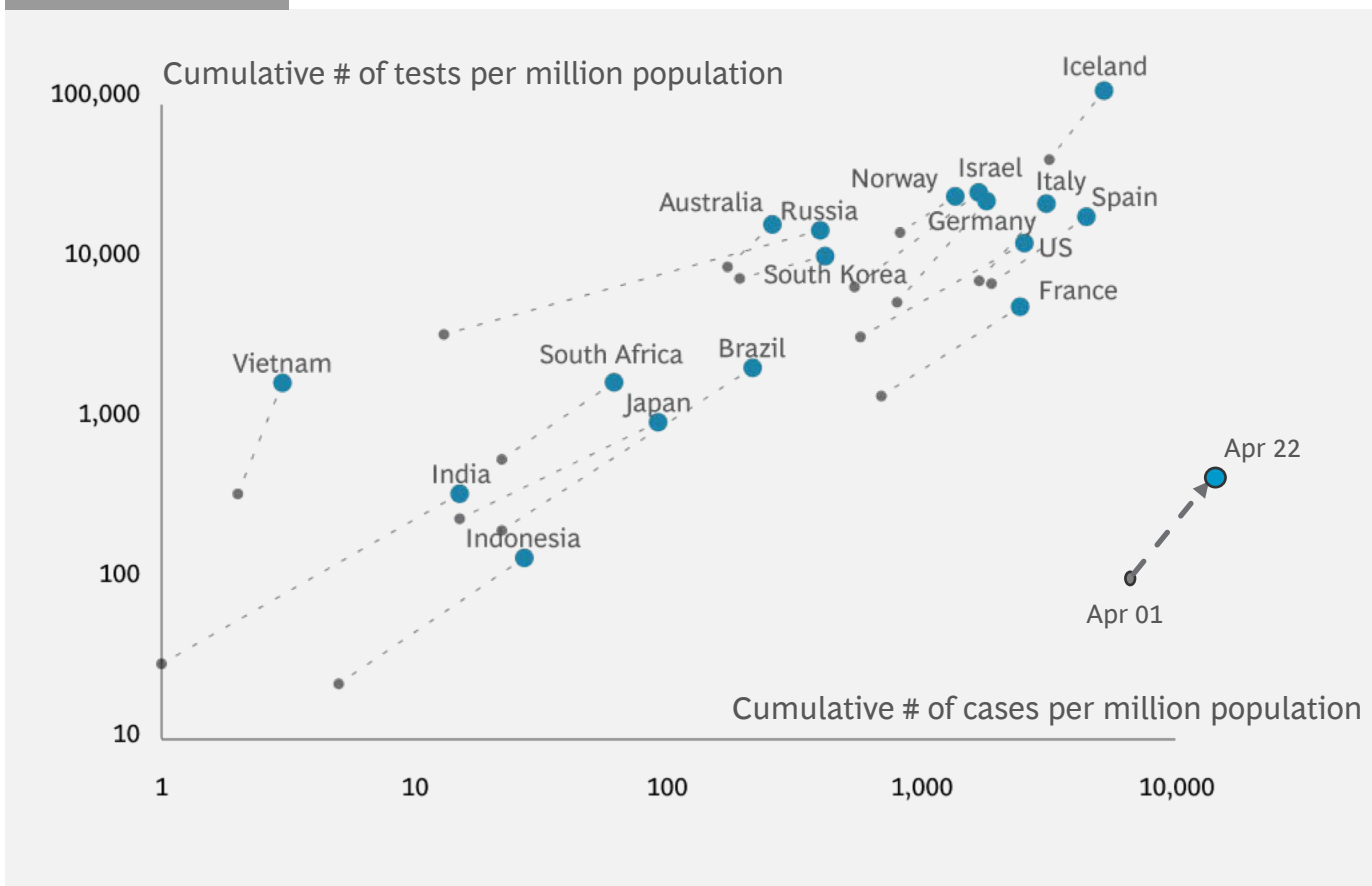
NB: Analysis above is for 'population masks' and not those that are FDA or FDA EUA approved for health care workers interacting with COVID-19 patients

*Model has been built with US as a representative country and can be used as a near base case for developed countries
1. Brookings (2020); 2. Assumes one member of household goes shopping/to pharmacy 5x monthly –Census.gov (2020); 3. KFF (2020); 4. No of masks needed per person daily assumed to 1 for Public facilities & patients, Vulnerable groups & patients, Optional daily use for general public, Mandatory daily use for general public; and 4 for Essential workers & patients; 5. Assumes that 50-60% of people go out daily, 50% of general population will wear masks & 70% of vulnerable population will wear masks; 10% buy surgical masks instead of using homemade face coverings; 6. For selected states

Virus monitoring | Testing continues to be a pressing issue

As of 22 April 2020

Countries¹ are continuing to ramp-up testing

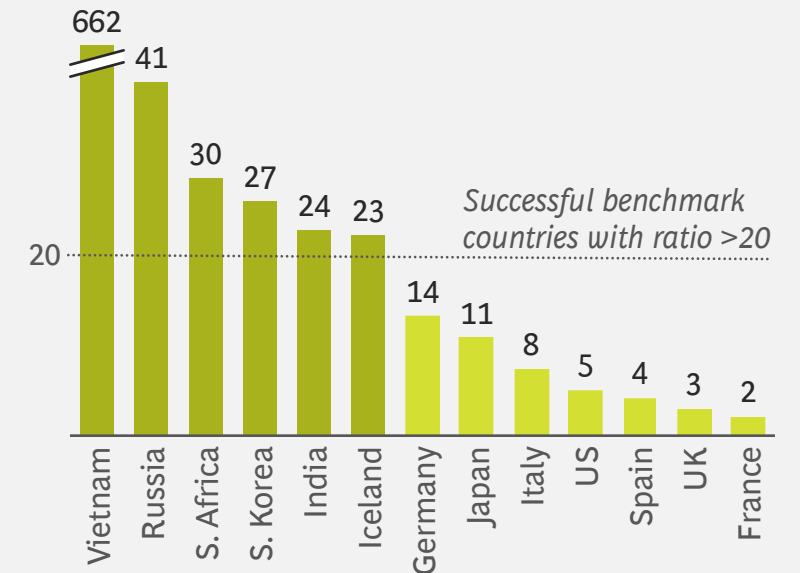


Testing-to-cases ratios differ widely

Total # of cases (000's)

0.3	53	3.5	11	20	1.7	146	11	184	825	204	129	117
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of tests administered per reported case (based on cumulative average)



Virus monitoring | Currently available serological tests too unreliable to provide strong solution

As of 17 April 2020

Two test types available for Covid-19 that differ in what they detect and how well they detect

1

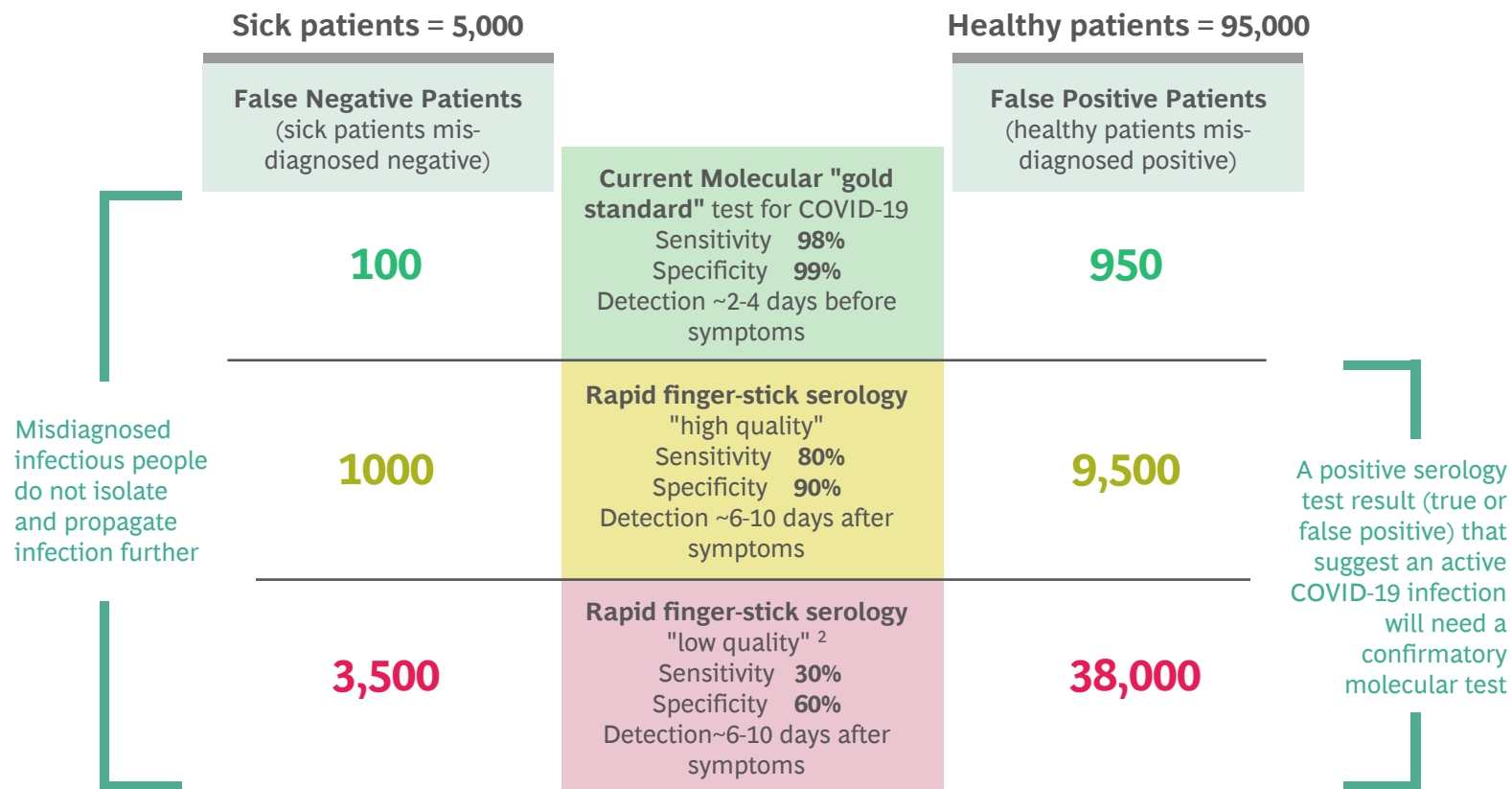
"Gold standard" molecular tests provide the most accurate detection of the virus genetic material (RNA), typically from respiratory swabs, and can detect the virus before symptoms appear

2

Serological tests detect the human immune response to the virus ~1 week from when symptoms appear; many "rapid" serology tests launched vary significantly in accuracy relative to molecular tests

Illustration: Implications of Accuracy for Covid-19 Testing

Base data: 100,000 tests performed¹; 5% disease prevalence

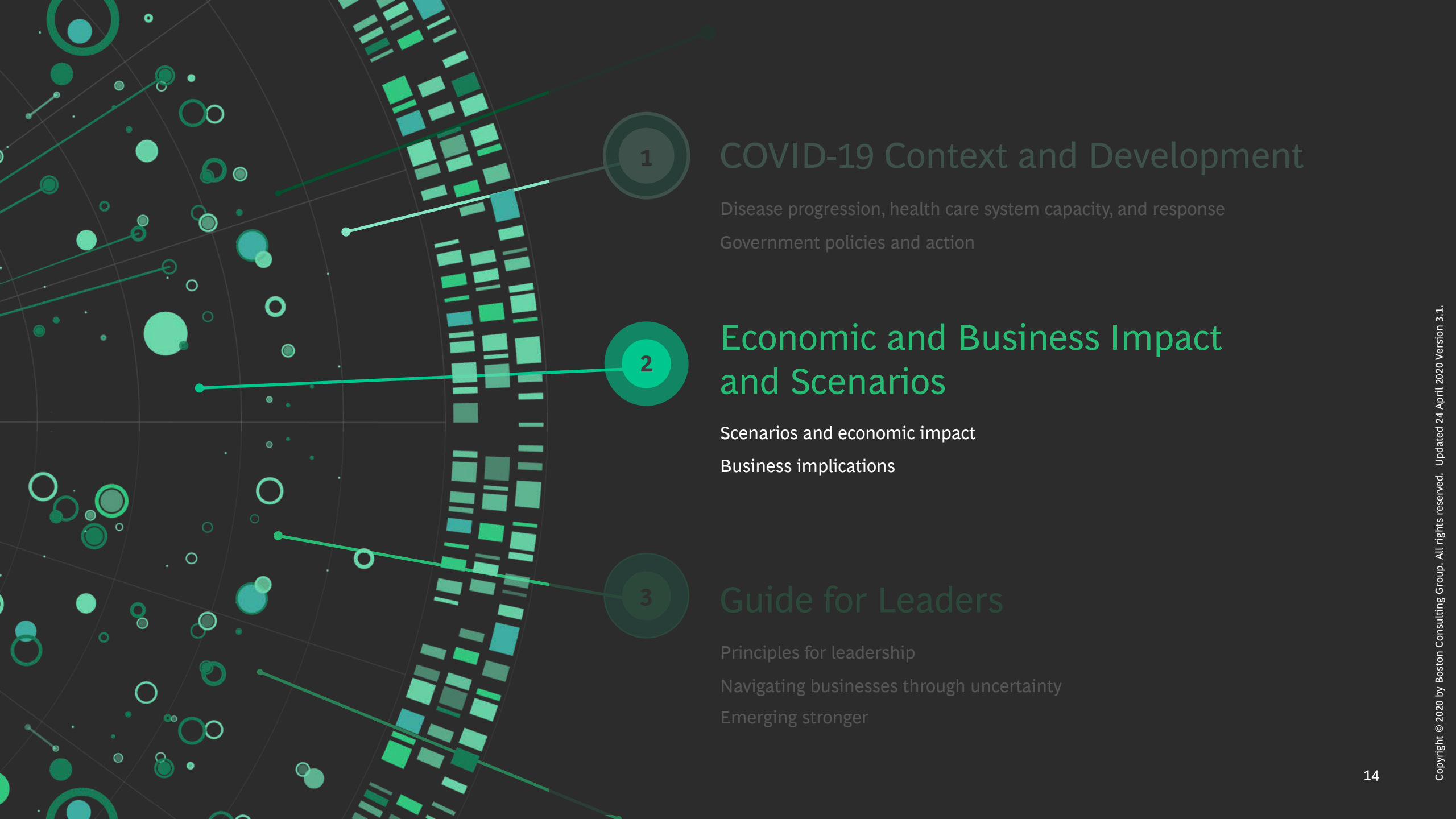


1. Roughly equivalent to US nationwide daily throughput as of March 31, 2020 2. The Guardian ("Coronavirus test kits withdrawn in Spain over poor accuracy rate", March 27, 2020); Source: Expert interviews, BCG analysis. Note (i): Serology tests detect active COVID-19 infection starting ~6-10 days after symptoms appear (IgM earlier, IgG later), or previous exposure to the virus (IgG only); Note (ii): The situation surrounding COVID-19 is dynamic and rapidly evolving on a daily basis. Although we have taken great care prior to producing this presentation, it represents BCG's general view at a particular point in time. This presentation is not intended to: (i) constitute medical, legal or safety advice, nor be a substitute for the same; nor (ii) be seen as a formal endorsement or recommendation of a particular response. As such you are advised to make your own continued assessments as to the appropriate course of action to take, using this presentation as general guidance only. Please carefully consider local laws and guidance in your area, particularly the most recent advice issued by your local (and national) health authorities, before making any decision.

Business preparation | Business readiness across health protocols and workplace safety key to ensure smoother transition during Restart

DISEASE PROGRESSION &
HEALTH CARE CAPACITY





1

COVID-19 Context and Development

Disease progression, health care system capacity, and response

Government policies and action

2

Economic and Business Impact and Scenarios

Scenarios and economic impact

Business implications

3

Guide for Leaders

Principles for leadership

Navigating businesses through uncertainty

Emerging stronger

Economic and Business Impact and Scenarios

'Flatten'

Negative economic impact during 'Flatten' depends on LENGTH of suppression and DEPTH of economic drop

Understanding of countries' sector composition critical to estimate direct negative economic impact of reduced contact

'Fight'

Accelerated movement toward vaccine or treatment at scale could limit 'Fight' phase to 12-24 months

Development in China gives a first idea on what LEVEL of recovery the economy can achieve

Current consumer sentiment suggests some willingness to resume activities post lockdown, but not to pre-crisis level even with treatment

Impact

Economic forecasts point to severe downturn in 2020—global rebound to pre-COVID levels not expected before 2021

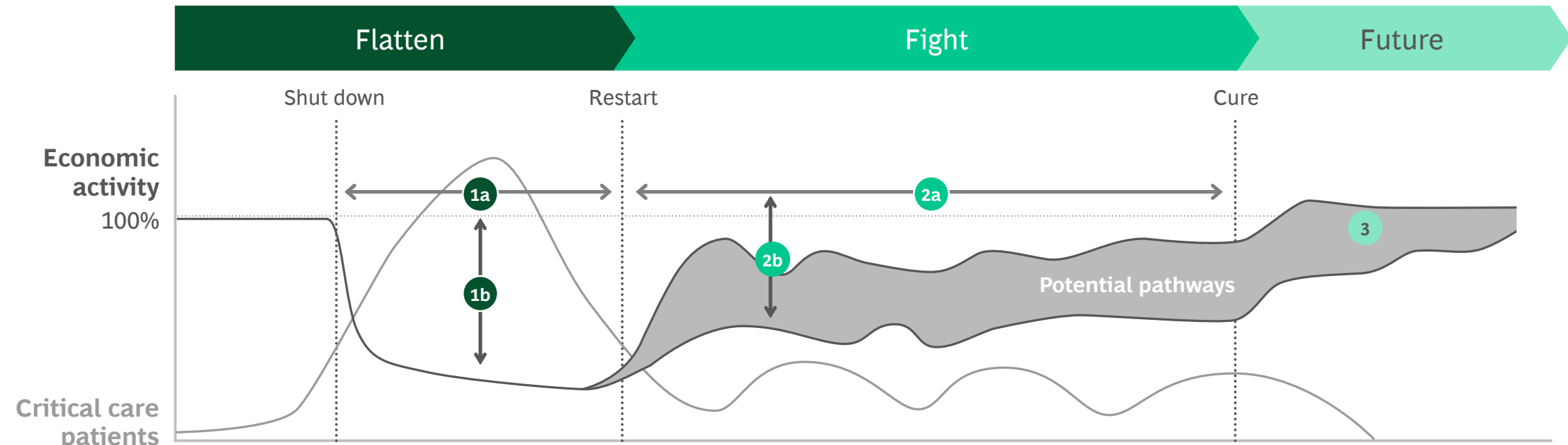
Total shareholder return (TSR) has rebounded over last 20 days but impact visible across many sectors; no sector above pre-crisis level across regions

While all sectors are affected by the downturn there is a large spread with some winners within each sector

Scenarios and potential outcomes driven by five key questions

As of 24 April 2020

Illustrative



Five questions
will shape the
economic
outcomes

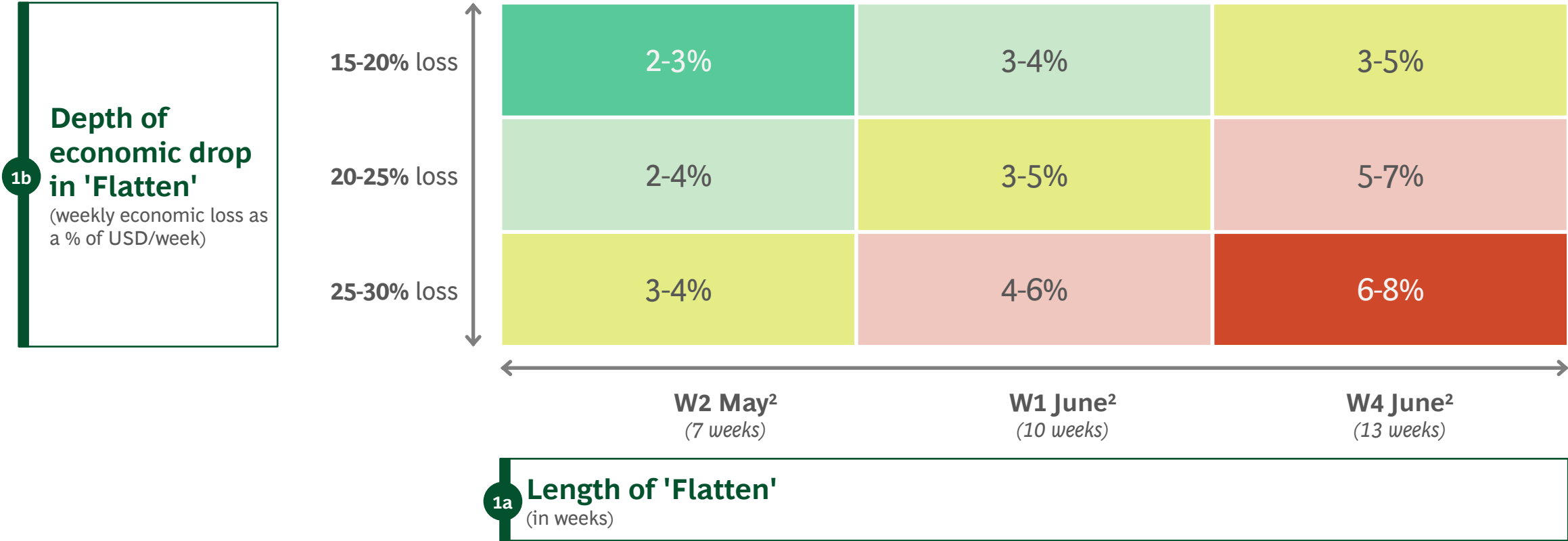
- 1a What will be the **LENGTH** of "Flatten"?
What are the preconditions to transition?
When will we achieve them?
- 1b To what **DEPTH** does the economy
drop in "Flatten"?

- 2a What will be the **LENGTH** of "Fight"?
What are the preconditions to transition?
When will we achieve them?
- 2b What **LEVEL** of recovery does the
economy achieve in "Fight"?

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

'Flatten': Economic impact depends on LENGTH of suppression and DEPTH of economic drop

As of 24 April 2020
US (Preliminary figures)



1. % in matrix indicate the annualized economic loss (as a % of USD/year) that occurs for a combination of the weekly economic loss (as a % of USD/week) and the length of the suppression period (in weeks). Lower end of ranges rounded down and upper end of ranges rounded up to reflect uncertainty. 2. Lockdown duration scenarios based on empirically observed 4-8 weeks from peak infection. Does not reflect impact from peak infection rate, local healthcare capacity, local testing/monitoring capability or local government policies.

'Flatten': Understanding of countries' sector composition critical to estimate direct negative economic impact of reduced contact

As of 24 April 2020

US (Preliminary figures)

US employment by sector (%)

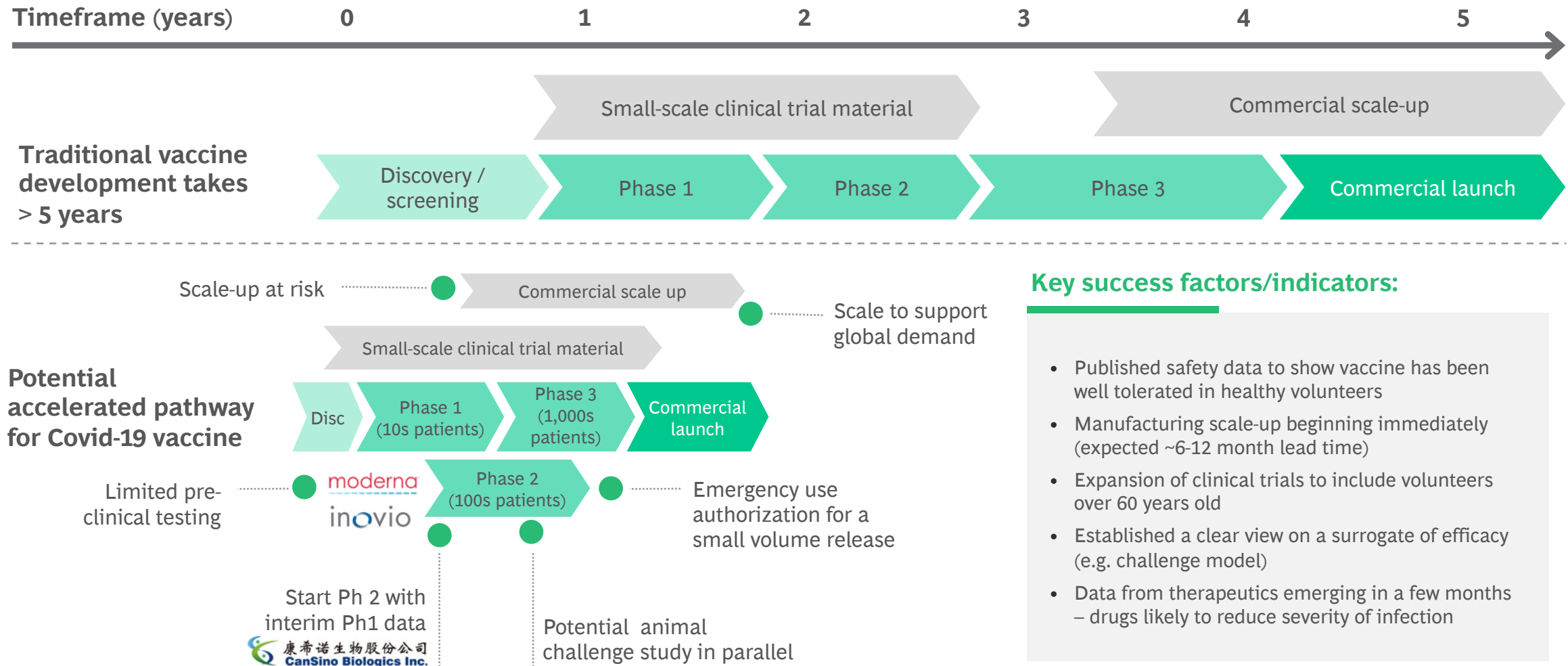


US revenue by sector (%)



'Fight': Accelerated movement toward vaccine or treatment at scale could limit 'Fight' phase to 12-24 months

As of 24 April 2020

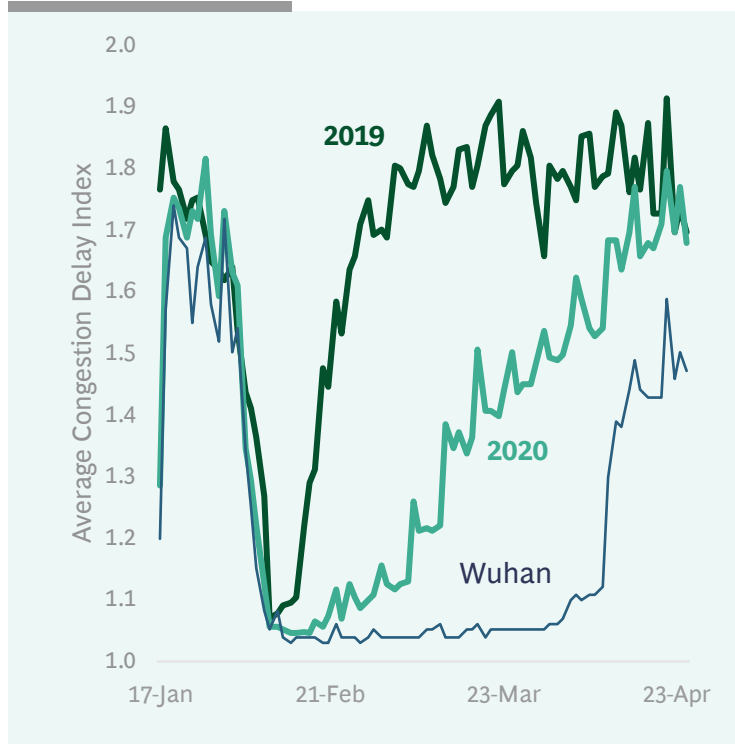


'Fight': China gives a first idea on what LEVEL of recovery the economy can achieve

As of 24 April 2020

China

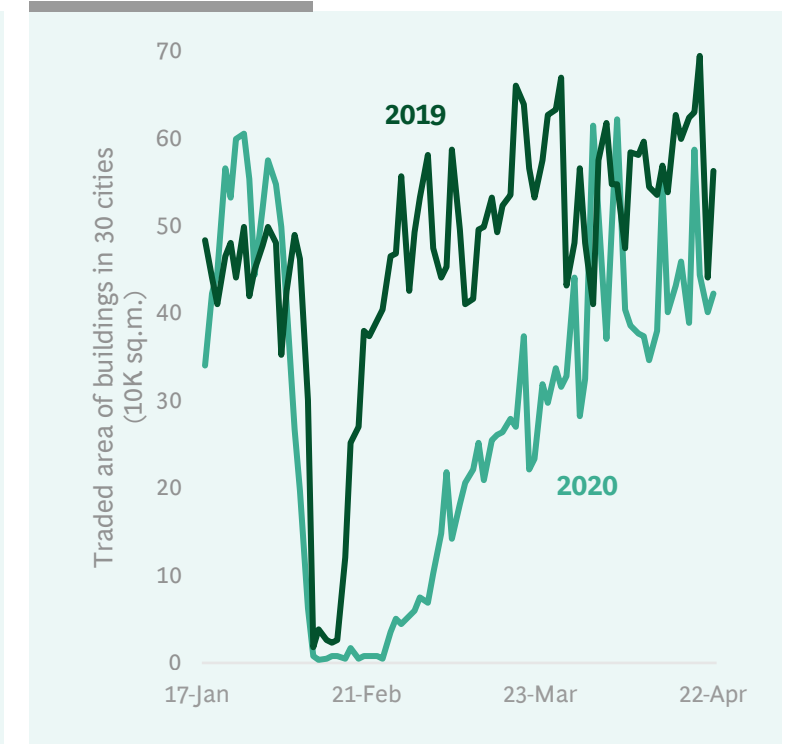
People and goods are starting to move again



Coal consumption moving higher



Property transactions are restarting



Note: As of 24 April 2020; China data re-based for weekdays excl. weekends. Congestion delay index average include Beijing, Shanghai, Guangzhou, Shenzhen, and Wuhan; Daily coal consumption of major power plants = sum of daily average coal consumption of Jerdin Electric, Guangdong Yudean Group, Datang International Power Generation, and Huaneng Power International, Inc.; Source: www.cqcoal.com, and BCG Center for Macroeconomics

'Fight': Consumer sentiment suggests some willingness to resume activities post lockdown, but not to pre-crisis level even with treatment

As of 13 April 2020

US

Willing to resume some
level of the activity (%)

Activities

Flights²

Hotel²

Local

Restaurant

Shopping

Observations

Available vaccine and/or
drugs to treat

82

85

84

84

91



Even with treatment, activity level **not going back to pre-crisis level for 9-18%**

No new cases in my country

82

80

76

83

91

Number of new cases
in my country slows

61

56

56

65

74

Government removes restrictions

46

46

47

55

62



Even if governments remove restrictions, **38-54% not willing to resume** activity

I'm already comfortable doing this
or will be as soon as they reopen

16

18

18

27

33



16-33% already comfortable with resuming activities 'no matter what'

*I would never do this, even after we
return to 'normal' times (%)*

5

4

9

7

4

Source: BCG COVID-19 Consumer Sentiment Survey, April 10-13, 2020 (N=2,960 US), unweighted; representative within $\pm 3\%$ of US census demographics.

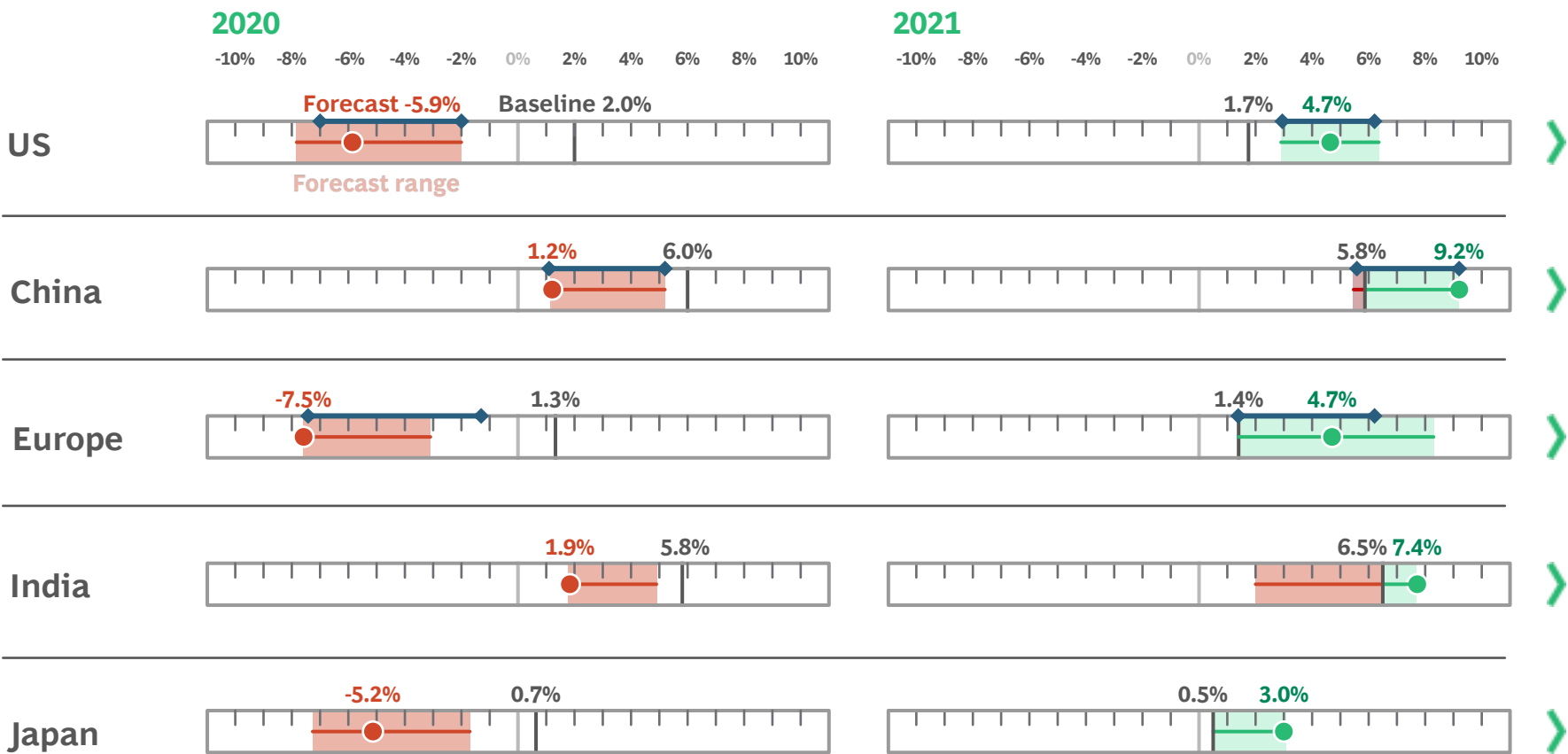
Note: Question text: "When will you feel comfortable [on activity]? Please select up to 3." Respondents who are already comfortable with an activity are assumed to be comfortable with all other measures as well; respondents who selected "government removes restrictions" are assumed to be comfortable with "number of new cases in my country slows."

1. Data includes only respondents who have been on a cruise in 2016-2020.; 2. Data includes only respondents who have done these activities on 2019-2020.

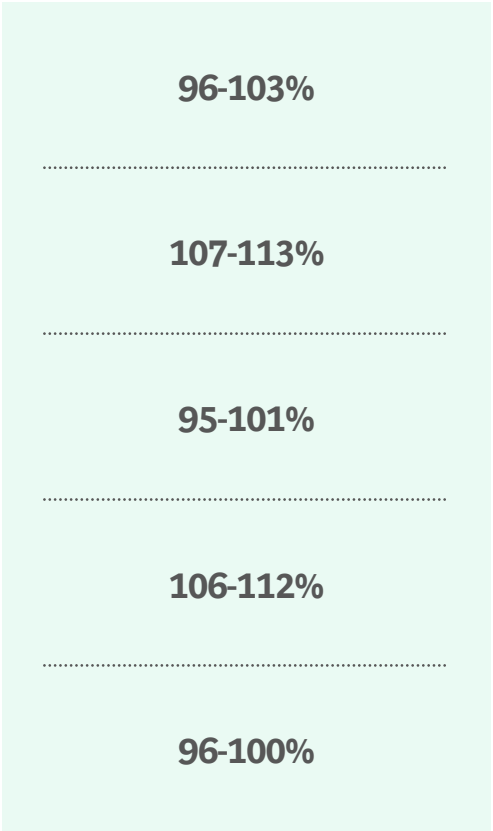
Economic forecasts point to severe downturn in 2020— global rebound to pre-COVID levels not expected before 2021

As of 22 April 2020

GDP growth forecast vs. baseline



GDP level forecast¹ EOY 2021 vs. EOY 2019



Note: As of reports dated 31 March 2020 to 22 April 2020, YoY forecasts; Last week's forecast based on forecast of IMF and same banks 1. Range calculated with 25th & 75th percentile values of forecast range; 2. Range from forecasts (where available) of International Monetary Fund, JP Morgan Chase; Morgan Stanley; Bank of America; Fitch Solutions; Credit Suisse; Danske Bank; ING Group; HSBC; Source: Bloomberg, IMF, BCG analysis

TSR improved over last 20 days, but impact visible across all sectors; no sector above pre-crisis level across regions

As of 22 April 2020

Order of sectors reflects economic scenario and consumer sentiment

TSR performance ¹		Americas		Europe		Asia		Observations
		21 Feb '20 – 20 Mar '20	21 Feb '20 – 22 Apr '20	21 Feb '20 – 20 Mar '20	21 Feb '20 – 22 Apr '20	21 Feb '20 – 20 Mar '20	21 Feb '20 – 22 Apr '20	
Healthier sectors	Food/staples Retail	-10%	-3%	-15%	-12%	-8%	-10%	Non-discretionary/essential service less hit but still had recovery
	Pharma	-19%	1%	-20%	-5%	-22%	-1%	
	Household Products	-19%	-6%	-16%	-8%	-5%	5%	
	Telecom	-17%	-11%	-20%	-19%	-14%	-6%	
	Semiconductors	-30%	-10%	-43%	-24%	-27%	-17%	
Pressured sectors	Food & Beverage	-26%	-14%	-24%	-17%	-12%	-3%	Broad set of industries experiencing pressure, with some regions particularly affected for certain sectors
	Utilities	-33%	-17%	-30%	-28%	-6%	7%	
	Health Equipment	-33%	-14%	-31%	-15%	-11%	-4%	
	Software	-30%	-14%	-32%	-22%	-28%	-16%	
	Tech Hardware	-29%	-17%	-25%	-11%	-23%	-18%	
	Prof. Services	-30%	-21%	-29%	-21%	-31%	-23%	
	Materials	-34%	-20%	-31%	-19%	-30%	-23%	
	Retailing	-42%	-28%	-36%	-29%	-24%	-8%	
	Capital Goods	-38%	-24%	-35%	-27%	-29%	-23%	
	Financials	-36%	-22%	-35%	-25%	-19%	-12%	
Vulnerable sectors	Transport	-37%	-25%	-38%	-33%	-13%	-14%	Hardest hit sectors had some recoveries but still performing way below 21 Feb 2020 levels
	Media	-36%	-24%	-47%	-42%	-14%	0%	
	Insurance	-42%	-34%	-40%	-32%	-27%	-19%	
	Hospitality	-44%	-30%	-47%	-37%	-23%	-17%	
	Banks	-41%	-37%	-44%	-47%	-26%	-23%	
	Real Estate	-42%	-33%	-26%	-22%	-22%	-11%	
	Auto	-47%	-38%	-45%	-35%	-32%	-25%	
	Durable Goods	-49%	-38%	-32%	-23%	-21%	-14%	
	Energy	-57%	-43%	-45%	-30%	-41%	-31%	

Note: Based on top S&P Global 1200 companies; Industries are based on GICS definitions. 1. Performance is tracked for two periods, first from 21 February 2020 (before international acceleration of outbreak) to 20 March 2020 (trough of the market) and from 21 February 2020 through 22 April 2020

Source: S&P Capital IQ; BCG ValueScience® Center; BCG

Credit risk continues to be a concern for majority of sectors

BUSINESS
IMPLICATIONS

As of 22 April 2020

		Median 5-year CDS ¹ implied probability of default ²		Companies in distress (%) ³		Observations
		21 Feb 2020	22 Apr 2020	21 Feb 2020	22 Apr 2020	
Healthier sectors	Food/staples Retail	4%	5%	0%	0%	Less discretionary and cash-rich sectors are largely at lower risk of default in current climate
	Pharma	3%	3%	0%	11%	
	Household Products	4%	4%	0%	0%	
	Telecom	4%	7%	0%	15%	
	Semiconductors	5%	7%	0%	0%	
Pressured sectors	Food & Beverage	3%	4%	0%	0%	Retailing with spike in companies in distress (~50% of retailing sector with > 15% implied probability of default)
	Utilities	3%	4%	0%	0%	
	Health Equipment	4%	5%	0%	0%	
	Software	4%	4%	0%	0%	
	Tech Hardware	4%	4%	0%	0%	
	Prof. Services	5%	5%	0%	0%	
	Materials	4%	6%	4%	19%	
	Retailing	5%	7%	0%	47%	
	Capital Goods	3%	5%	2%	10%	
Vulnerable sectors	Financials	4%	6%	0%	0%	Auto, hospitality, and energy industries facing greatest risk of default based on current credit profile
	Transport	3%	3%	0%	32%	
	Media	5%	8%	0%	14%	
	Insurance	4%	7%	0%	0%	
	Hospitality	5%	12%	7%	43%	
	Banks	4%	7%	0%	8%	
	Real Estate	5%	9%	0%	20%	
	Auto	5%	13%	0%	33%	
	Durable Goods	4%	6%	0%	5%	
	Energy	5%	13%	0%	41%	

Note: As of 22 April 2020; Based on top S&P Global 1200 companies; Sectors are based on GICS definitions

1. Credit Default Swap 2. Performance is tracked on 21 February 2020 (before international acceleration of outbreak), and 22 April 2020 3. Distressed comprises over 15% implied probability of default Source: S&P Capital IQ; BCG ValueScience® Center; BCG

Business leaders can navigate through 'Flatten' and 'Fight' leveraging a dynamic cockpit for their specific industry

Dynamic Cockpit

External data sources

Macro indicators

Public health situation

- Virus spread scenarios > EPI MODEL
- Medical demand/ supply assessment > PLAN

Macroeconomic developments

- GDP estimated development > ECONOMIC SCENARIOS
- Government policies
- Labor impact > UNEMPLOYMENT SCENARIOS

Governmental measures

- Government response timelines > OUTBREAK SCENARIOS
- Lockdown status and estimated end date

Category demand evolution

Category economic scenarios

- COVID eco. impacts on categories > CONSUMER SPEND
- Scenario-based future sales > SALES SCENARIOS
- Short-term demand by product/location > DEMAND SENTINEL

Customer behavior shifts

- Online user behaviors > DEMAND SENTINEL
- Sentiment surveys > CONSUMER SPEND

Internal data sources

Demand data

- Segments / categories, channels, company vs. competition

Stock data

- Sell-in / sell out scenarios
- Sell-in / sell out actuals (customer, week and location / channel level)

Orders

- Stock levels, purchase materials and location

Product and customer master data

- Product and customer attributes and hierarchies

Production data

- Production planning for coming weeks

Commercial data

- Promo calendar

Example for the Fashion and Luxury industry

BUSINESS IMPLICATIONS

As of 12 April 2020

US

Fashion & Luxury

		Pre-crisis to bottom		Pre-crisis to current		7 days momentum	
		Fashion	Luxury	Fashion	Luxury	Fashion	Luxury
Demand	Payment patterns	-45%	-63%	-45%	-63%	-42%	~-2%
	Web traffic	-4%	-14%	-4%	-4%	-4%	+6%
	Online search trends	-42%	-23%	-22%	-5%	+3%	+11%
	Open retail space	-100%	-100%	-100%	-100%	-	-
	Unemployment rate	+146%	+146%	+146%	+146%	+5%	+5%
	Average	-67%	-69%	-63%	-63%	-9%	+4%
Supply	Job listings	-80%	-80%	-48%	-48%	+156%	+156%
	Discount penetration	~-7%	~+198%	~-7%	~+198%	-14%	+4%
	Average discount rate	~+3%	~-9%	~+3%	~-9%	+2%	+1%
	Cotton Futures	-17%	-17%	-13%	-13%	-1%	-1%
	Average	-23%	-71%	-14%	-62%	+42%	+38%

Source: BCG

Note: Bottom is defined as the lowest point during the (partial) lockdown period, for Fashion & Luxury in the US this would be 15 March 2020; pre-crisis refers to 21 April 2019

Example for the Machinery industry (including automation)

BUSINESS
IMPLICATIONS

As of 12 April 2020

US

US

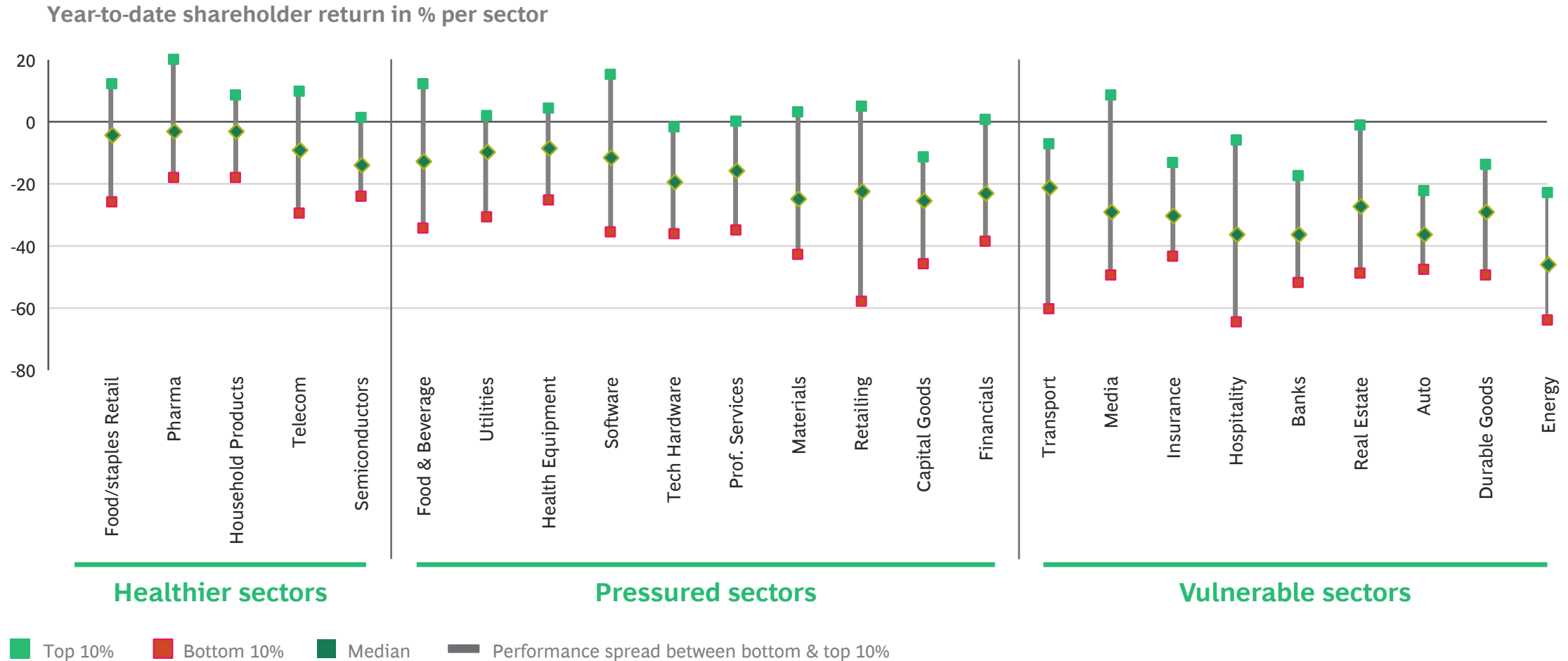
		Pre-crisis to bottom	Pre-crisis to current	7 days momentum	
Machinery (including automation)	Demand	Energy consumption	~-21%	~-21%	~-1%
		Carbon certificate price	-	-	-
		Automotive	~-33%	~-21%	~+16%
		Construction	~-11%	~-9%	~-1%
		Oil & Gas	~-5%	~+9%	~-1%
		Food & Beverage	~-11%	~+1%	~+4%
		Chemicals	~-9%	~+2%	~+7%
		Insolvency filing	+6	-	0
		Automotive prod. volume loss	~-15%	~-15%	~-5%
		Chemical commodities' price develop	~-9%	~-9%	~-4%
		Average	~-13%	~-6%	~-2%
	Supply	Job listings	~-76%	~-76%	~+1%
		Traffic load	~-50%	~-38%	~0%
		Cargo volume	~+45%	-	~-42%
		Average	~-27%	~-57%	~-20%
Price levels		~-10%	~-9%	~+2%	

Source: BCG

Note: Bottom is defined as the lowest point during the (partial) lockdown period, for MIA in the US this would be 5 April 2020; pre-crisis refers to 1 January 2020

While all sectors are affected by the downturn, some companies emerge as winners within each sector

As of 22 April 2020



Note: Data as of 22 April 2020; Sectors are based on GICS definitions; Companies sampled from S&P Global 1200
Source: S&P Capital IQ; BCG ValueScience® Center



1

COVID-19 Context and Development

Disease progression, health care system capacity, and response

Government policies and action

2

Economic and Business Impact and Scenarios

Economic response

Scenarios and key drivers

3

Guide for leaders

Principles for leadership

Navigating businesses through uncertainty

Emerging stronger

Guiding principles for leadership in crisis

“THESE are the times that try men's souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of their country; but he that stands by it now, deserves the love and thanks of man and woman. Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph.”

Thomas Paine, The Crisis

Be visible, purposeful, and authentic

Communicate in ways that engage and increase the relevance of your teams and clarify the reasons underlying your communications

Use multiple clock-speeds

Think on multiple timescales by considering the now, the next, and the later. Ensure that leadership teams look ahead and prepare for the future

Cut through bureaucracy

Assemble a multi-functional task force that is empowered to make decisions and suspend normal decision protocols

Leverage the principle of “commander’s intent”

Share only key objectives and rationale of required actions to allow the organization to be flexible and adaptive, and allow a focus on execution

Engage externally

Communicate with customers and stakeholders to gather frequent, fresh, firsthand information to adapt and respond effectively

Keep imagination alive

Look out for new needs and opportunities to serve clients now and beyond the crisis. We will not be reverting to a 2019 reality

1 What will the "new future" look like?

- What are potential long-term impacts to consumer behavior?
- How will business economics be structurally different?
- What will the competitor landscape look like in the future?
- What (digital) trends will have accelerated due to COVID-19?
- Which new trends will appear?
- Can our supply chain still rely on international trade?
- How will the future of work develop?
- Which changes in employee routines will remain?

2 How should we prepare and win?

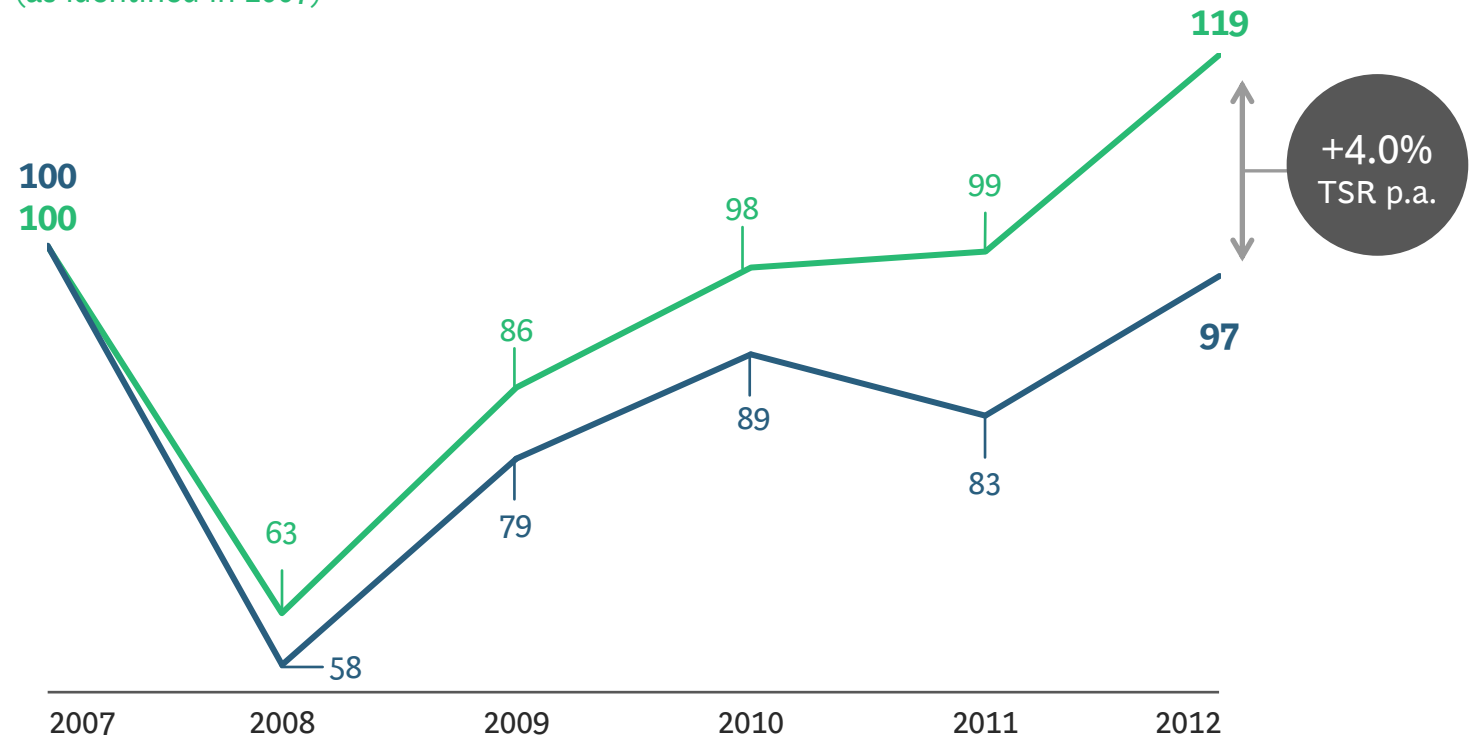
- How do we emerge stronger after the crisis?
- How do we build capabilities for the future?
- What "no regret" or "low regret" moves can we make? When should we make various moves?
- How can we accelerate innovation, adoption of future digital, and technology trends?
- How do we collaborate effectively with society and government?

Winners innovate to accelerate out of a crisis

Example based on companies that leveraged the 2008 crisis to innovate

BCG 50 Most Innovative Companies
(as identified in 2007)

Morgan Stanley Capital International (MSCI) World



Note: Chart compares TSR performance of publically listed MIC (Most Innovative Companies) 50 companies in 2007 (pre-financial crisis) and follows their TSR performance through the crisis until 31.12.2012;
Source: Accelerating out of the great recession book, BCG Innovation Journey Analytics Database; CapitalIQ

In the new normal, existing trends will accelerate and winners will define new ones

Medtech example

1 What will the "new future" look like?

Not exhaustive

COVID-19 likely accelerating existing/anticipated trends

Telemedicine

Increasing patient adoption of virtual interactions with physicians for a wider range of maladies/treatments

Point of care

Disruption in industry will see rise of new care models; may spark move away from hospitals for some less invasive/complicated surgeries (e.g. hip replacements)

Provider consolidation

Potential liquidity crisis could put smaller players out of business and advantage larger networks of provider services going forward

Digital engagement

New investments in digital marketing and novel sales tactics could yield long-term structural changes to how manufacturers engage with physicians (and physicians with patients)

COVID-19 may introduce new long-term trends/impacts

Protectionism

More restrictive flow of goods, innovation, and people could result in balkanized markets and the need to focus on different set of markets for future growth

Economic downturn

Global recession will lower overall demand for elective health care services; rise in unemployed and uninsured will dampen demand

Note: These analyses represent only potential scenarios based on discrete data from one point in time. They are not intended as a prediction or forecast, and the situation is changing daily (as of April 6, 2020); Source: BCG

In the new normal, existing trends will accelerate and winners will define new ones

Retail (non essential) example

1 What will the "new future" look like?

Not exhaustive

Market

Many sub-sectors will consolidate into a triumvirate of or two traditional players, at-scale marketplaces, and niche players (including pureplays, direct to consumer)

Marketplaces and essential retailers will disruptively steal share in non-essential categories (*less so where barriers to entry are high or supply chains are different e.g. DIY*)

Channels

Large share of physical retail may permanently close as lower spending, and decline in relevance of malls, brings less foot traffic (*less so where stores provide experience*)

Omnichannel growth will challenge retailer economics, and require business model and customer experience innovation, as consumers push toward e-commerce as the norm

Customer communication will largely move to digital marketing as retailers lose ability to use stores to drive traffic (*less so for categories with structural need for stores e.g. DIY*)

Operating model

Cost base will be restructured for most companies, potentially through bankruptcy or insolvency proceedings (e.g. Chapter 11, Company Voluntary Agreements)

Supply chains will become diversified with pressure to shift inventory to vendors as retailers seek to reduce inventory costs, cash-outs, and the risk of product not selling

Note: These analyses represent only potential scenarios based on discrete data from one point in time. They are not intended as a prediction or forecast, and the situation is changing daily (as of April 6, 2020); Source: BCG

To emerge stronger, leverage disruption by making bold, strategic moves

Reevaluate **portfolio strategy and restructure**



Adjust portfolio priorities to capture demand across key categories, over "Fight" and "Future" phases

Innovate across the value chain



Accelerate innovation—reimagine the system to scale value-creating ideas across the value chain and customer journeys
(e.g. Transform go-to-market approach)

Evaluate **org. structure**; ways of working



Transform organization to enable strategic change—leverage 'future of work' models

Accelerate **E2E digitization**



Double down on shift to digital during COVID—embrace opportunities across all processes

Consider **inorganic opportunities**



Pursue attractive M&A options or other opportunistic moves during downturn—consider macro and company landscape

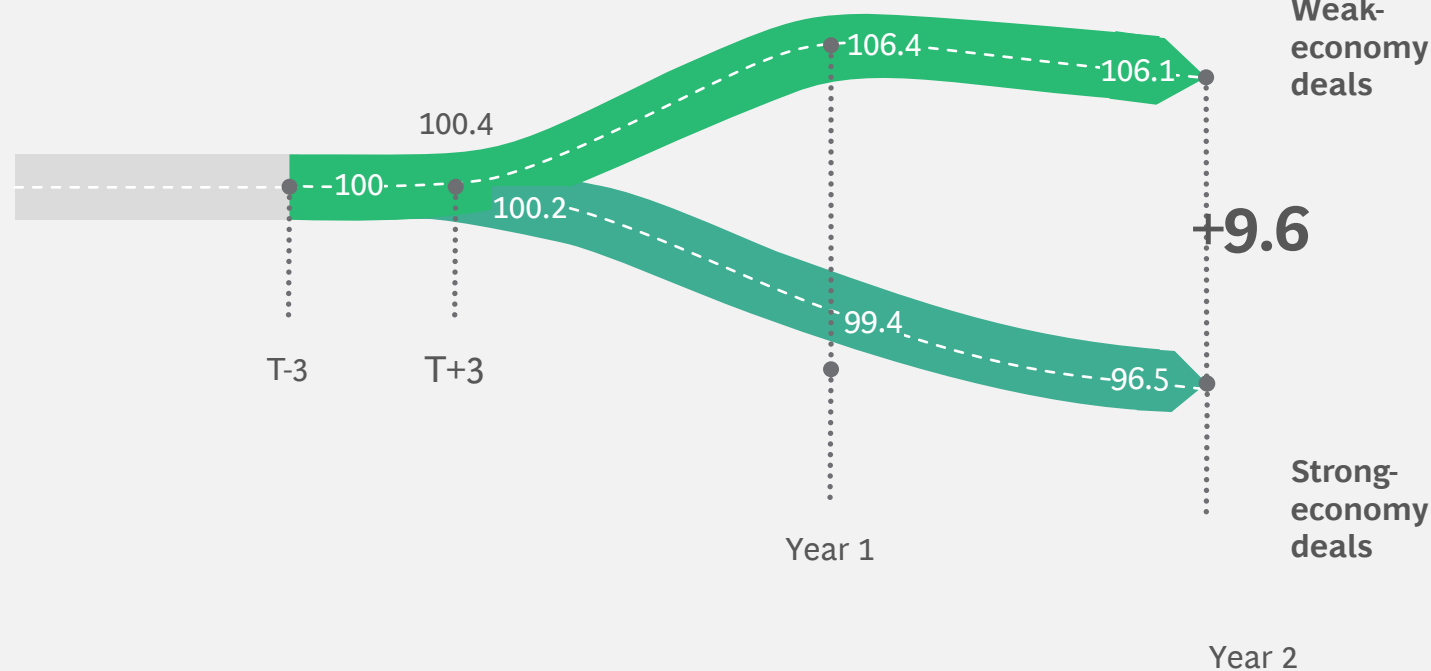
Weak-economy M&A deals outperform strong-economy deals

EMERGING STRONGER

2 How should we prepare and win?

Observations

Cumulative relative total shareholder return index



Weak-economy deals outperform strong-economy deals by more than 9 percentage points

The benefits are even higher for non-core acquisitions (outside the buyer's industry)

Both experienced M&A dealmakers and occasional acquirers create value from downturn deals

Note: Strong-economy (weak-economy) years are those in which the respective global real GDP growth rate is in the top (bottom) third of all growth rates in the observation period. The total of 9,987 M&A transactions comprises pending, partly completed, completed, unconditional and withdrawn majority deals announced between 1980 and 2018 with a deal value greater than \$250 million. Only deals with a public buyer were considered. The share price three days before the announcement date (T-3) equals 100. Share performance from T-3 to three days after the announcement (T+3) equals the announcement effect.
Source: Revinitiv; Datastream; BCG analysis

IT Services example

Six pools that could potentially provide good acquisition targets

↑ Tailwind
↓ Headwind

2 How should we prepare and win?

1 Managed services and Cloud – Health care

- ↑ Increase in requirement for digitization of records and cloud storage for analytics
- ↑ Government may mandate need for more providers to be connected to cloud to be able to access inflow and capacity real-time

2 BPO – Banking, Securities, and Retail

- ↑ Increased adoption of remote banking and digital processing by banks; increased e-commerce transactions to positively impact BPO services requirement
- ↓ Transaction-based services like brokering, collections, are negatively impacted; physical retail stores may see lasting footfall decrease as e-commerce adoption increases

3 All IT services – Insurance

- ↑ Increase in number of claims, fresh policies and renewals, higher volumes will require more outsourcing for processing
- However, In the shorter term insurance companies will have stretched financials due to high claim ratio

4 Cybersecurity – Banking and Securities

- ↑ Increased focus on cybersecurity of assets as WFH/remote working proliferates
- ↑ Increase in online banking and digitization of processes

5 Unified Communications and Collaboration across industries

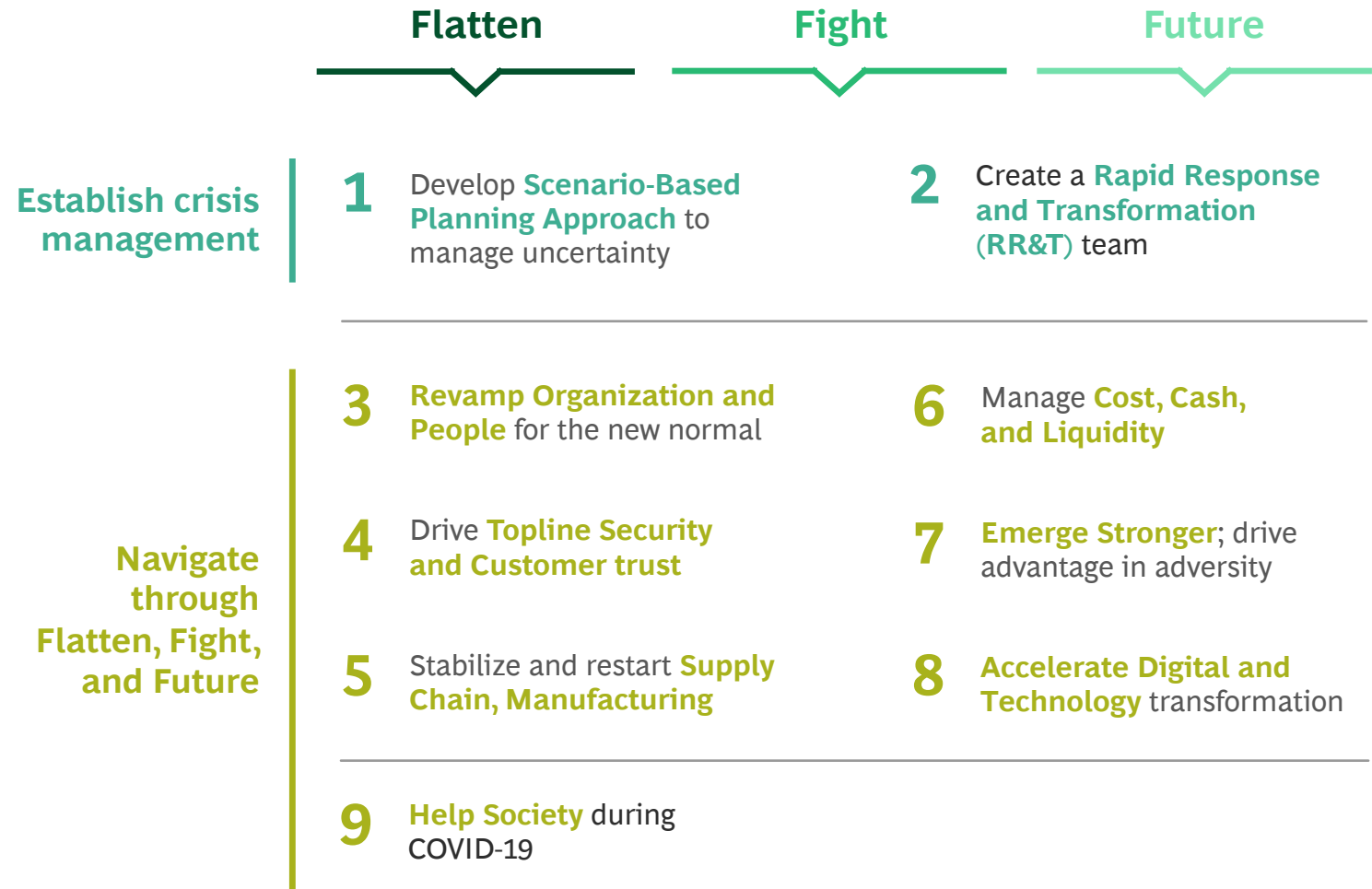
- ↑ Increased requirement for remote and secured connectivity due to remote operations
- ↑ More spend on collaborations software including task management, communication, etc.

6 Engineering services – Health care

- ↑ Increased spending on testing and health care (ventilators) equipment
- ↑ More spent on health care infrastructure across the board by governments world over

9

action areas for business leaders



Note: RR&T = Rapid Response and Transformation Team
Source: BCG

Detailed measures across priority action areas (1/3)

Establish crisis management

1

Develop **Scenario-Based Planning Approach** to manage uncertainty

2

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

Navigate through Flatten, Fight, and Future

3

Revamp **Organization and People** for the new normal

Flatten

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

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

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

Fight

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

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

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

Future

Navigate through Flatten, Fight, and Future

4

Drive **Topline Security & Customer Trust**

5

Stabilize and restart **Supply Chain, Manufacturing**

6

Manage **Cost, Cash, and Liquidity**

Detailed measures across priority action areas (2/3)

Flatten

- Reach out to customers for their situation and needs,
- Drive actions to inspire confidence and ensure ability to deliver (e.g., multichannel, people-light approaches)
- Manage volatility in demand, and refine sales motions (e.g. to virtual) and objectives

- Take measures to ensure operations continuity: workforce safety and management, stop-gap measures for supply chain, site readiness (access, maintenance, services, suppliers)
- Ensure open and direct communication with employees
- Explore solutions to retain key talent

- Build forecasts for COVID-19 impact on P&L, balance sheet, investor base
- Review capital sufficiency scenarios and possible effects on credit risk
- Manage credit and debt commitment for short term
- Create agile FY20-21 business plans and budgets to deal with uncertainty

Fight

- Assess changes in customers' behaviors
- Adapt and transform channels (e-commerce), sales, marketing spend, pricing, and support
- Ramp up commercial efforts significantly to seize market shifts; leverage learnings to accelerate digital capabilities

- Ensure quick and safe restart of facilities; drive centrally driven efficiency measures
- Set up capabilities (org, control tower) to manage unstable supply chain; explore alternate networks, dual/multiple suppliers for critical goods and services, delivery methods, etc.
- Accelerate production as demand rebounds; account for product shifts

- Build central team to simulate financials as per evolving scenarios; drive agile working ways
- Decisively take structural actions: TURN PMO, zero-based budgets, delayering/restructuring, re-base tech portfolio, etc.; deploy rapidly as speed is predictive of success in downturns

Future

Navigate through Flatten, Fight, and Future

7

Emerge stronger; drive advantage in adversity

8

Accelerate Digital & Technology transformation

9

Help Society during COVID-19

Detailed measures across priority action areas (3/3)

Flatten

- Stress-test current value proposition and business offerings, and scan crisis impact on key customer/market trends

- Address and serve immediate workforce needs for remote working
- Leverage tools for conducting key processes online
- Adapt traditional processes to become digitally viable

- Ensure immediate support to employees, suppliers, communities, etc.
- Team with government/local communities/across industries to address crisis
- Leverage assets, supplier relationships, logistics networks, and employees to help adjacent communities
- Work across industry boundaries to identify cross-sectoral synergies to deploy solutions

Fight

- Plan for new projects to shift the portfolio and leverage the 'new normal'; plug capability gaps
- Identify white spaces in own industry and ecosystem
- Selectively invest in areas where opportunistic M&A can be conducted
- Develop and implement strategy to exploit greater talent availability

- Identify and implement key digital use cases and adapt to agile way of working
- Accelerate use cases to meet demand shifts
- Redesign key customer journeys with emphasis on digital interventions

- Determine how to contribute in the crisis to employees, customers, through medical response, supply of essential items for society, or by playing a positive economic/employment role
- Allocate innovation resources where possible to focus on solutions to COVID-19 crisis
- Leverage expertise developed to support government policies and responses, rebuild business for local customers, suppliers, etc.

Future

Additional perspectives on COVID-19

Selected overarching publications



Transformation

[COVID19: Win the Fight, Win the Future](#)



Strategy

[Advantage Beyond the Crisis](#)



Globalization

[COVID-19 and the Emerging-Market Consumer](#)



Crisis Response Checklist

[Checklist](#)



Leadership & Talent

[Leading Out of Adversity](#)



People & Organizations

[Take Care of Tech Talent When it Matters](#)

Selected sector publications



Public Sector

[Beyond the Curve: How to Restart in the Wake of COVID-19](#)



Automotive

[Auto Companies Will Outlast COVID-19 & Come Out Stronger](#)



Financial Institutions

[Global Risk 2020: It's Time for Banks to Self-Disrupt](#)



Energy

[How Uncertainty Is Hitting M&A in Oil and Gas](#)



Health Care

[Biopharma Applies New Service & Support Models amid COVID-19](#)



Consumer

[COVID-19 Consumer Sentiment Snapshot #5: Hitting the Straightaway](#)



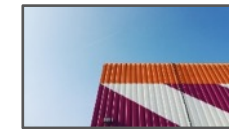
Travel & Tourism

[The Great Reset for Revenue Management in Travel](#)



Telecommunications

[Time for action: In times of COVID-19 Telcos need to move rapidly to be part of the solution](#)



Transportation & Logistics

[Transportation & logistics companies must adapt to keep supplies moving](#)

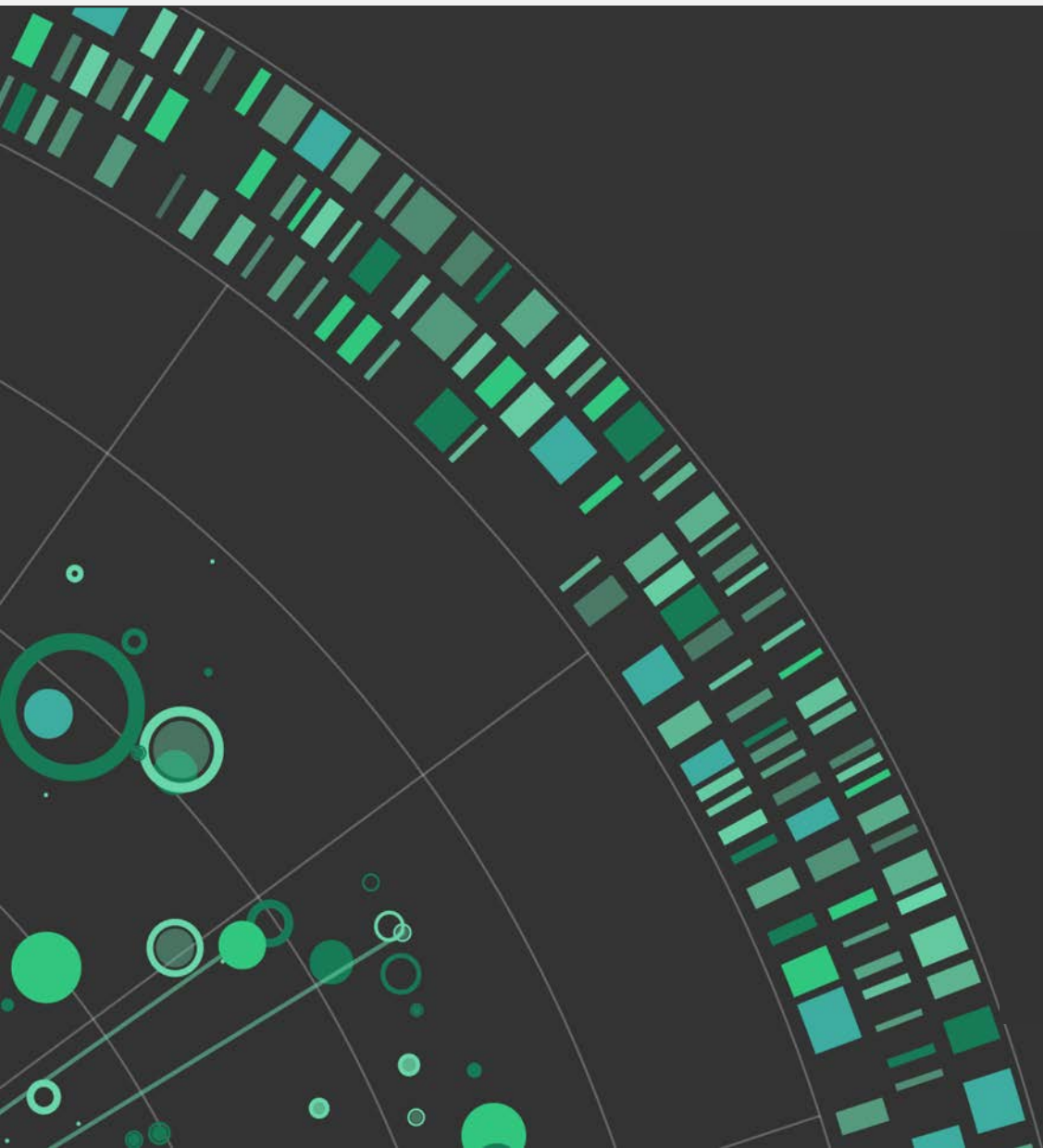
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Contact

BCGRapidResponseNetwork@bcg.com