



## COVID-19

How Will COVID-19  
Affect Machinery and  
Industrial Automation?

# 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 well-being of our global community. Now, more than ever, society needs to collaborate to protect people's lives and health, manage midterm implications, and search for lasting solutions.

## Leaders should promote 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 is intended to help leaders navigate the crisis by finding answers and shaping opinions in their own environments. It encourages thinking across the multiple time horizons over which we see the crisis manifesting itself.

# Three COVID-19 Lenses on Machinery and Industrial Automation Feed into Demand Scenarios

## 1 COVID-19 infection development

- Progress of pandemic has triggered an economic impact worldwide
- Both infection rates and country responses affect demand scenarios



## 2 GDP impact

- Projections show severe hit for GDPs in 2020–2021
- Machinery and industrial-automation sectors correlating with GDP will also be affected<sup>1</sup>
- Scenarios for 2021 and beyond are based on medical cures, testing, and compliance with measures



## 3 Impact by sector

- Machinery and industrial-automation sectors are not all affected equally by the crisis
- Industry criticality and contact intensity are highly material
- Need to deaverage the impact by sector, looking at a range of outcomes



## 4 Resulting demand scenarios

- Demand for machinery and industrial automation is derived from the impact on sectors
- Demand model with impact and recovery ranges per sector and country
- Recovery time is highly dependent on the scenario

**This crisis is unique:** Sectors are affected to different degrees, recovery is highly dependent on infection development, and there is a parallel shock to both supply and demand.

**Source:** BCG analysis.

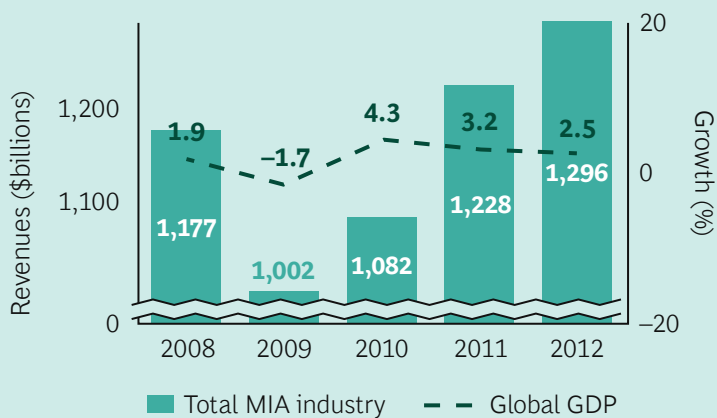
**Note:** Status as of May 29th, 2020.

<sup>1</sup>For sectors with a lower GDP correlation, we used other proxies to generate market projections, such as construction and automotive demand scenarios.

# Looking Back: How the Industry Responded to the 2008 Crisis

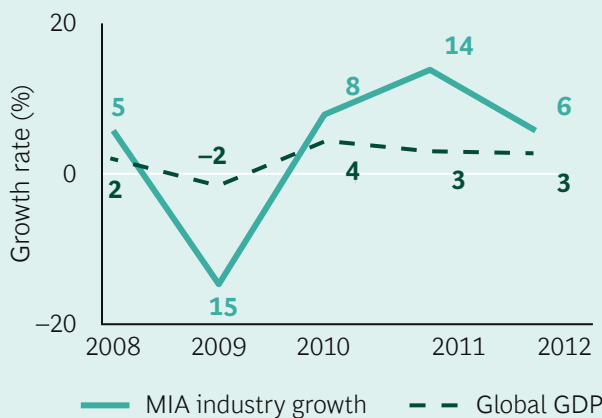
Industry shows high GDP correlation ...

Industry shows high GDP correlation, with R<sup>2</sup> of 0.76

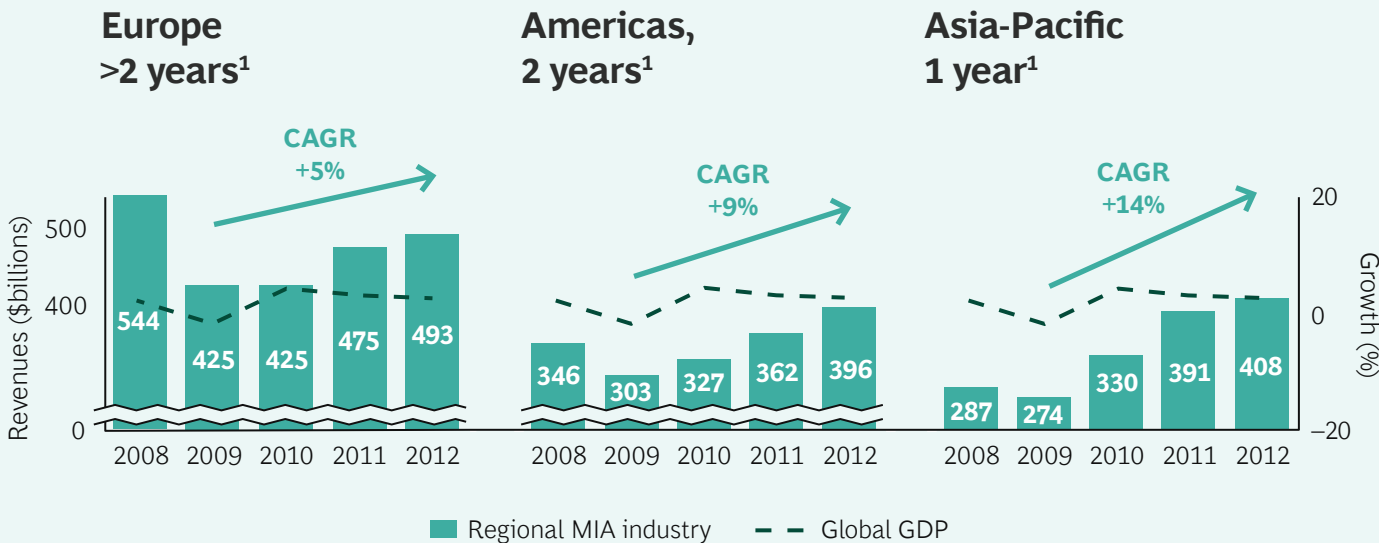


... amplifying loss by a factor of 8 ...

Factor of 8



... with regional differences in recovery time



Global industry growth is **highly correlated** with GDP

**76% of variance** in industry sales is **explained** by GDP development

Industry sales on average **amplified GDP by a factor of 8** in the financial crisis:

Each 1pp GDP drop translated to an 8pp drop in industry sales

**Recovery patterns** and **time lags** in the 2008–2009 crisis differed by region

- **Europe:** U-shape, slower recovery
- **Americas:** U-shape, slower recovery
- **Asia-Pacific:** V-shape, faster recovery

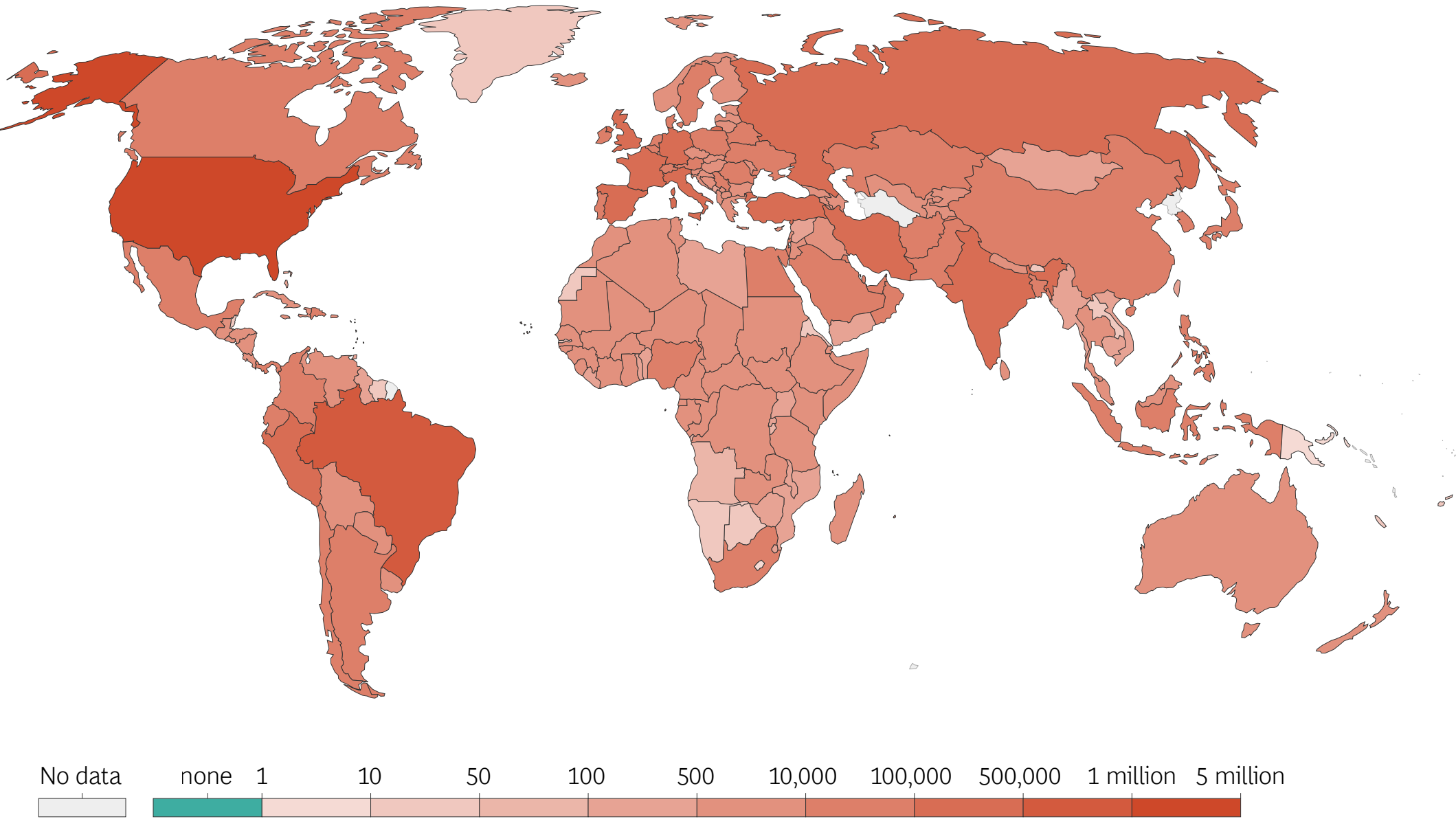
Source: BCG analysis.

Note: MIA = machinery and industrial automation; pp = percentage point.

<sup>1</sup>Time to recovery is measured in the number of years needed to return to the 2008 level.

# Lens #1: COVID-19 Infection Development Differs by Economy ...

TOTAL CONFIRMED COVID-19 CASES AS OF JUNE 4, 2020

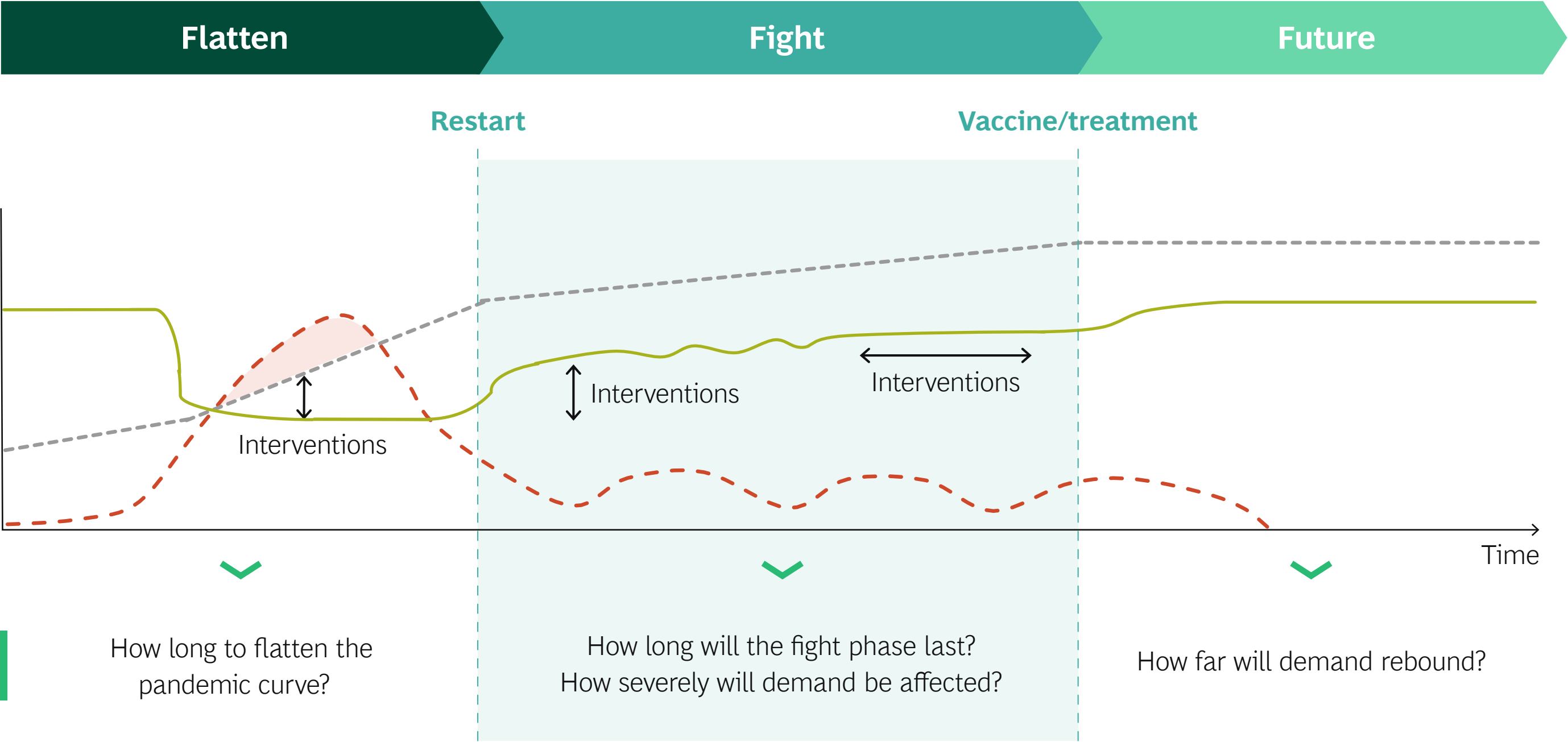


## Three factors affecting epidemic status

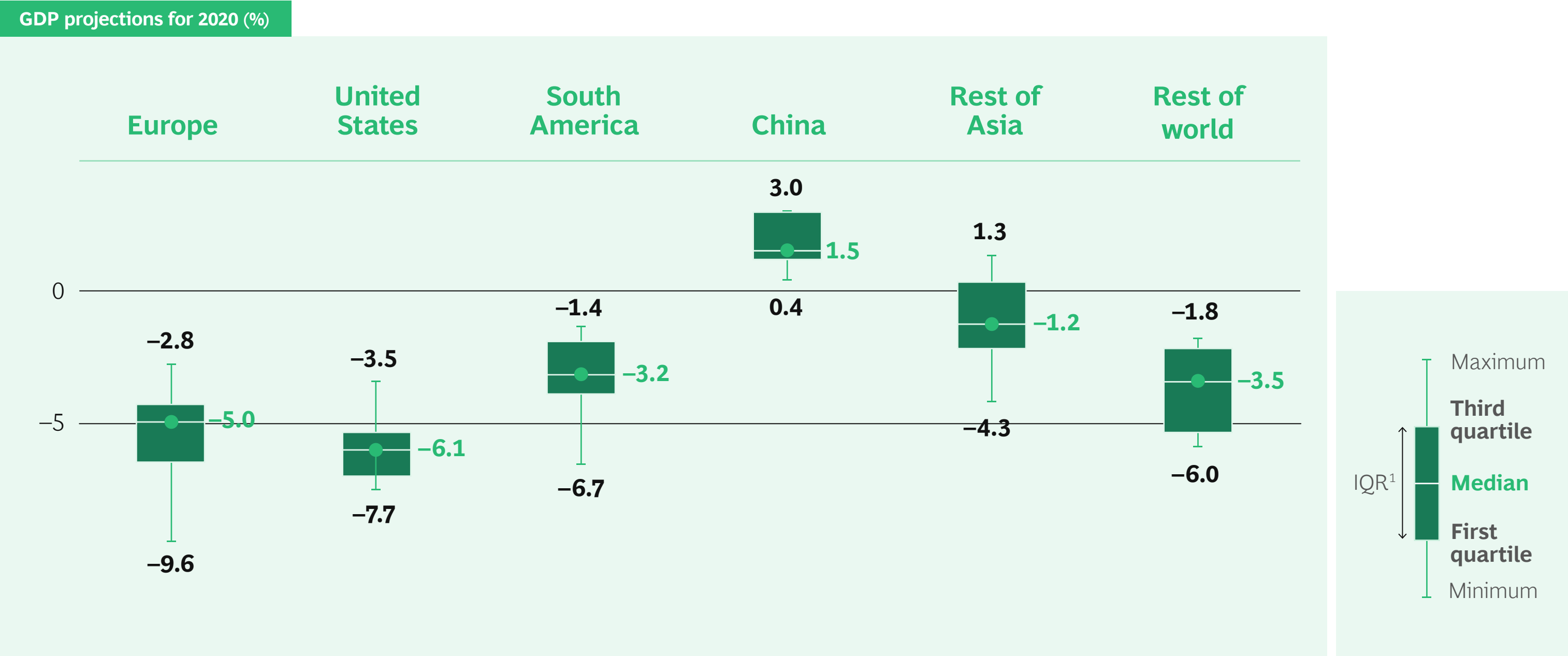
- 1 **Medical response**, which varies with health system preparedness and global effort to develop cures and vaccines
- 2 **Government response** across regions, including testing and tracing strategies
- 3 **Public compliance** with government interventions through adoption of social distancing and hygiene paradigms

**Source:** <https://ourworldindata.org/grapher/total-cases-covid-19?tab=map>.  
**Note:** Reported as of May 13, 2020. Continued cases and fatalities are subject to different testing, propensity, and reporting standards and are hence imperfect measures.

# ... But Follows a Similar Pattern in the Long Run

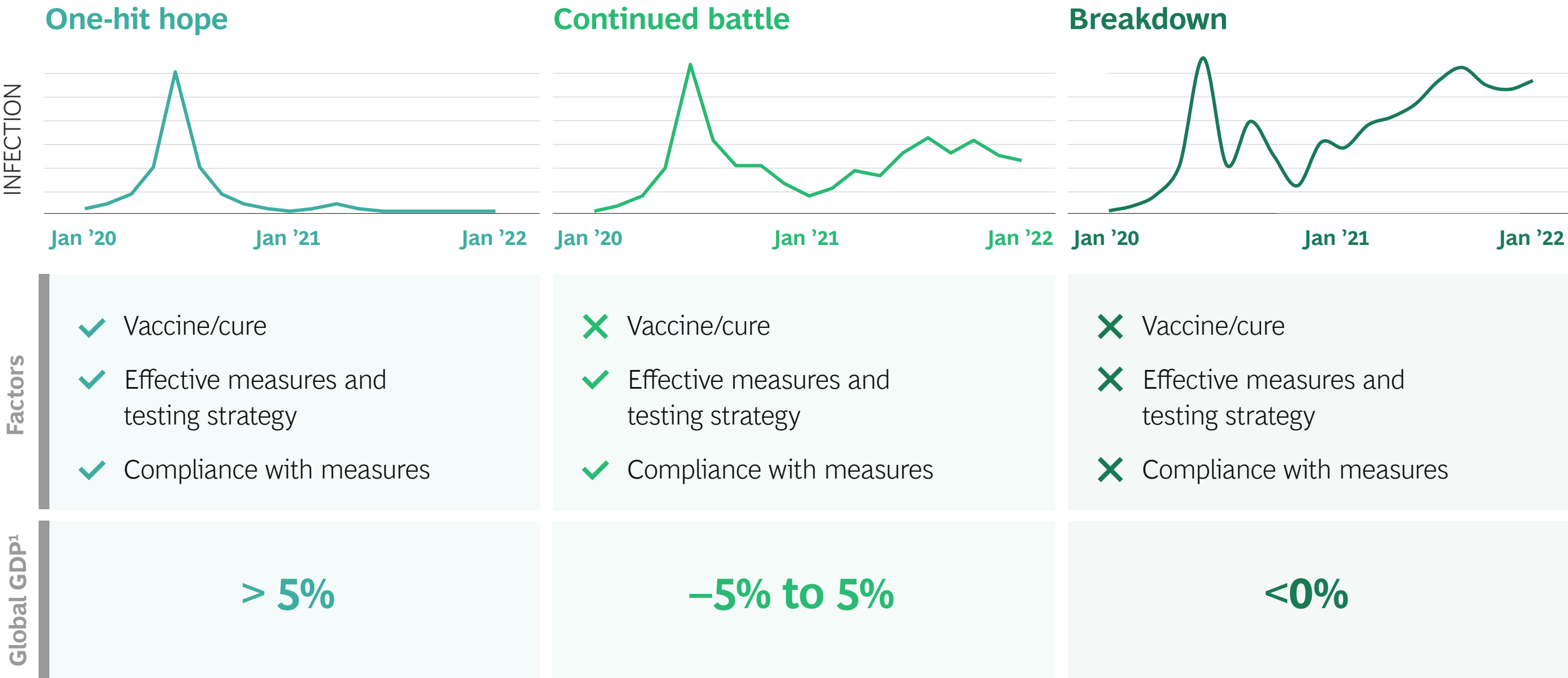


# Lens #2: Forecast for 2020 GDP Impact Varies, with High Uncertainty...



**Sources:** GDP forecasts for 2020 as of May 6th by IMF; Oxford Economics; World Bank; and UniCredit. GDP forecasts for 2020 as of April 23rd by Bloomberg; Bank of America; UBS; Morgan Stanley; Goldman Sachs; JPM; and HSBC.  
**Note:** Projections based on machinery and industrial-automation project analysis; global BCG view on GDP pending. Status as of May 29th, 2020.  
<sup>1</sup>IQR = Interquartile range.

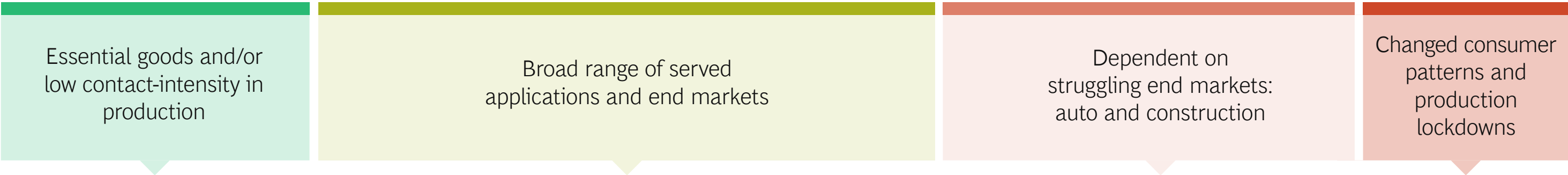
# ...So from 2021 On, We Need to Think in Scenarios



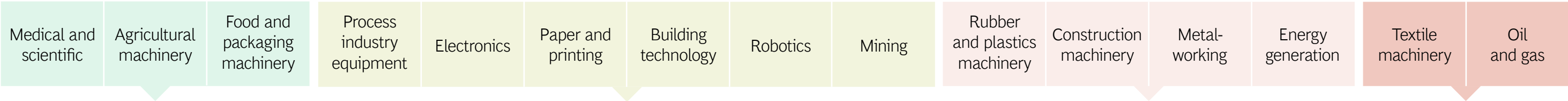
Sources: World Bank; St. Louis Federal Reserve; BCG analysis.  
Note: Projections based on machinery and industrial-automation project analysis; global BCG view on GDP pending. Status as of May 29th, 2020.  
<sup>1</sup>Rough estimate of global GDP growth for GDP 2021.



# Lens #3: Economic Impact by Sector



END MARKETS WITH LOW HIT BY CRISIS → END MARKETS WITH HIGH HIT BY CRISIS



Industries barely hit by crisis

Industries hit less severely than MIA average

Industries hit in line with MIA average

Industries hit harder than MIA average

GDP MULTIPLE

0–2  
(versus last crisis MIA average of 8)

4–6  
(versus last crisis MIA average of 8)

6–8  
(versus last crisis MIA average of 8)

10–13  
(versus last crisis MIA average of 8)

MAX QUARTERLY SALES DIP 2020 (%)<sup>1</sup>

0–15

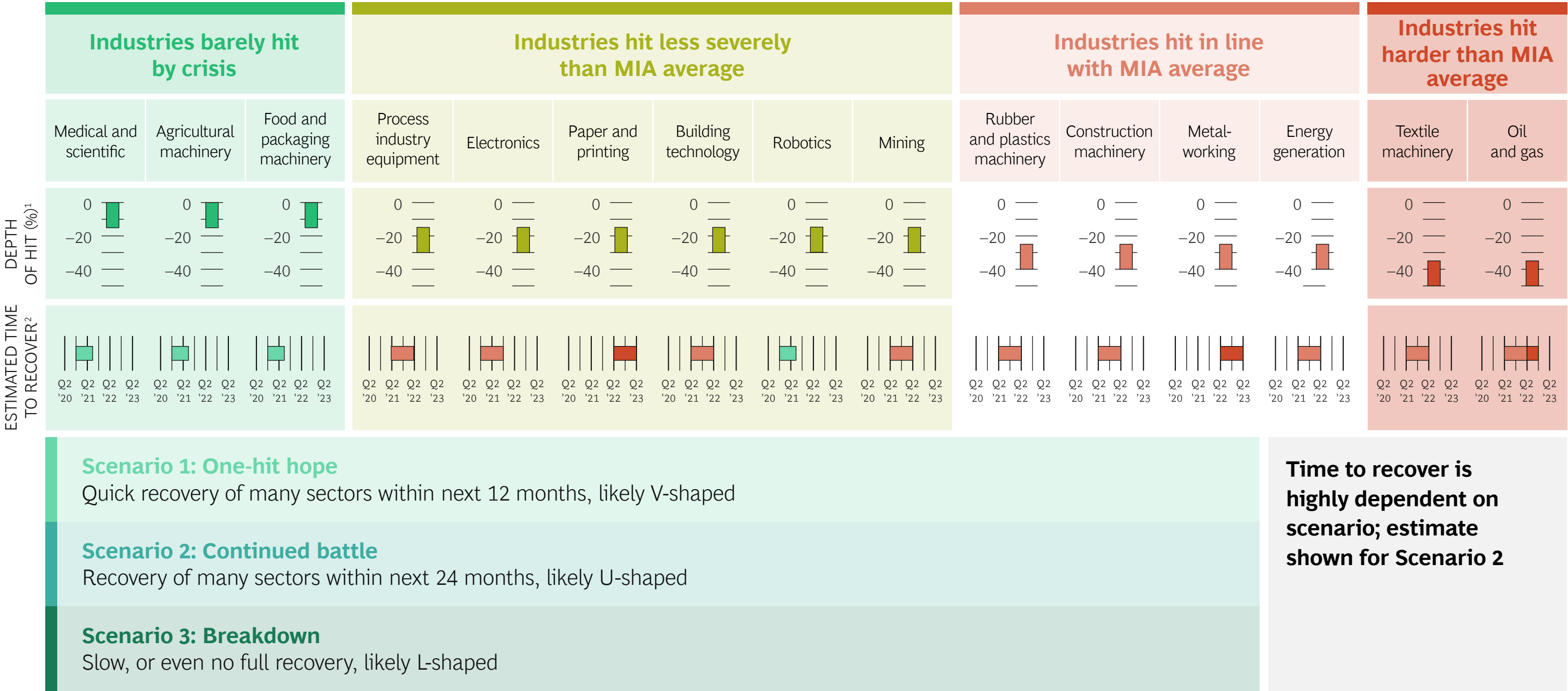
15–30

25–40

35–50

Sources: IHS Global Machinery Production Market; Economist Intelligence Unit; BCG analysis.  
Note: MIA = machinery and industrial automation. Status as of May 29th, 2020.  
<sup>1</sup>Maximum sales dip in any given quarter compared with 2019 actuals (%).

# Resulting Demand Scenarios per Sector



**Sources:** IHS Global Machinery Production Market; Economist Intelligence Unit; BCG analysis.

**Note:** MIA = Machinery and industrial automation. Status as of May 29th, 2020.

<sup>1</sup>Maximum dip in sales per quarter in % compared with 2019 actuals.

<sup>2</sup>Estimated time to recover is defined as the time until a given sector will return to at least 95% of pre-COVID-19 sales volume; full recovery in a shrinking market is unlikely.

# How to Accelerate Out of the Crisis: Key Takeaways



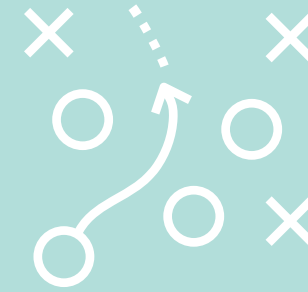
## Reflect

Challenge your current scenario planning with more reliable and refined sector outlooks



## Resize

Use the ongoing time lag of the hit on machinery sectors to stabilize the cost base through cost-reduction initiatives



## Rethink

Focus on commercial excellence to secure the top line by innovating and scaling digital go-to-market offering



## Reimagine

Use increased focus on automation as a business opportunity, helping customers to reduce their fixed-cost base