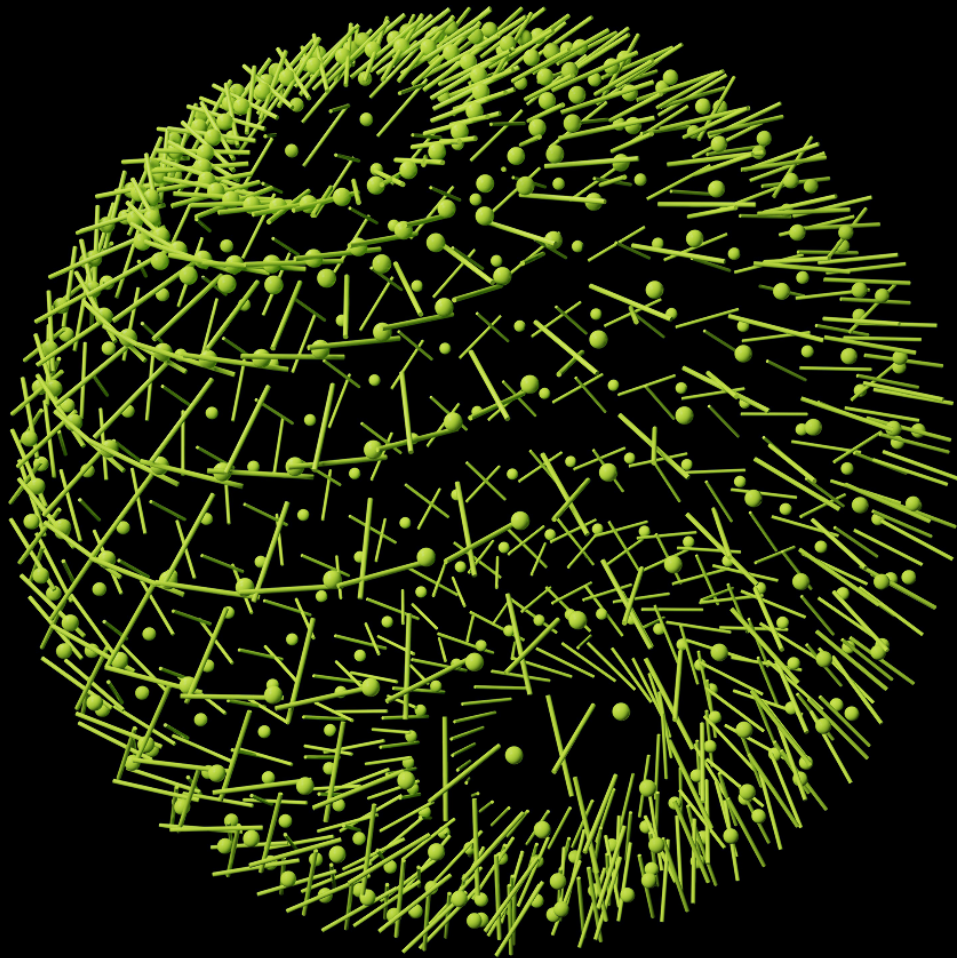


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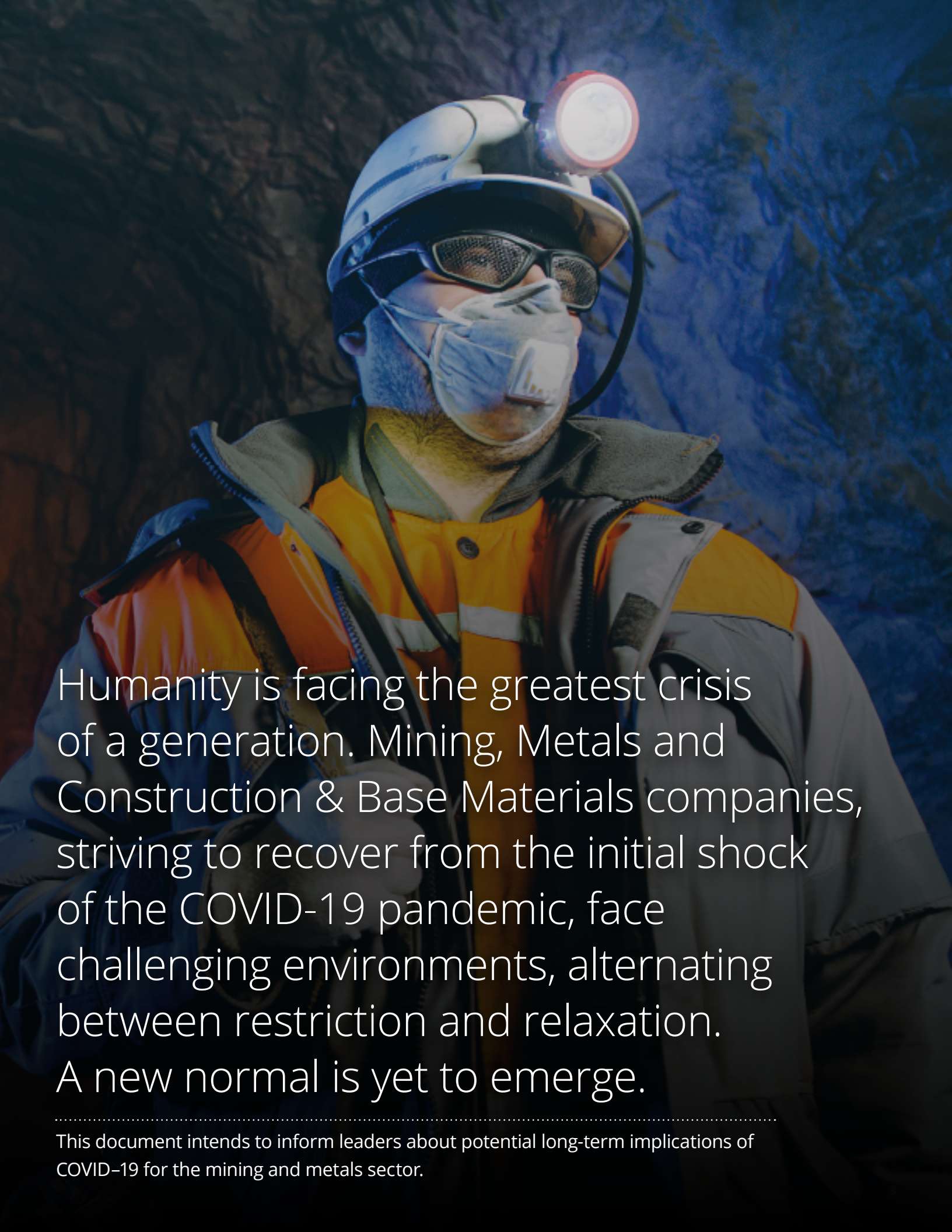
Thriving post COVID-19

Scenarios for resilient leaders in Mining & Metals and Construction & Base Materials

July 2020



MAKING AN
IMPACT THAT
MATTERS
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Humanity is facing the greatest crisis of a generation. Mining, Metals and Construction & Base Materials companies, striving to recover from the initial shock of the COVID-19 pandemic, face challenging environments, alternating between restriction and relaxation. A new normal is yet to emerge.

This document intends to inform leaders about potential long-term implications of COVID-19 for the mining and metals sector.

We are in uncharted waters, yet leaders must take decisive action to ensure their organizations are resilient.

Deloitte's Resilient Leadership framework defines three time frames of the crisis



This document shares a view of how the world of Mining, Metals and Construction & Base Materials (C&BM) may develop over the next three to five years and is intended to help leaders explore some of the potential long-term implications of COVID-19.

Our view is based on scenarios – stories about the future created to spark insight and spot opportunity – developed with some of the world's best-known scenario thinkers.

Use these scenarios to inspire bold thinking about the future, as Peter Drucker famously observed:
famously observed:

“The greatest danger in times of turbulence is not turbulence itself, but to act with yesterday's logic.”¹

¹ Managing in Turbulent Times, by Peter F. Drucker (1980)

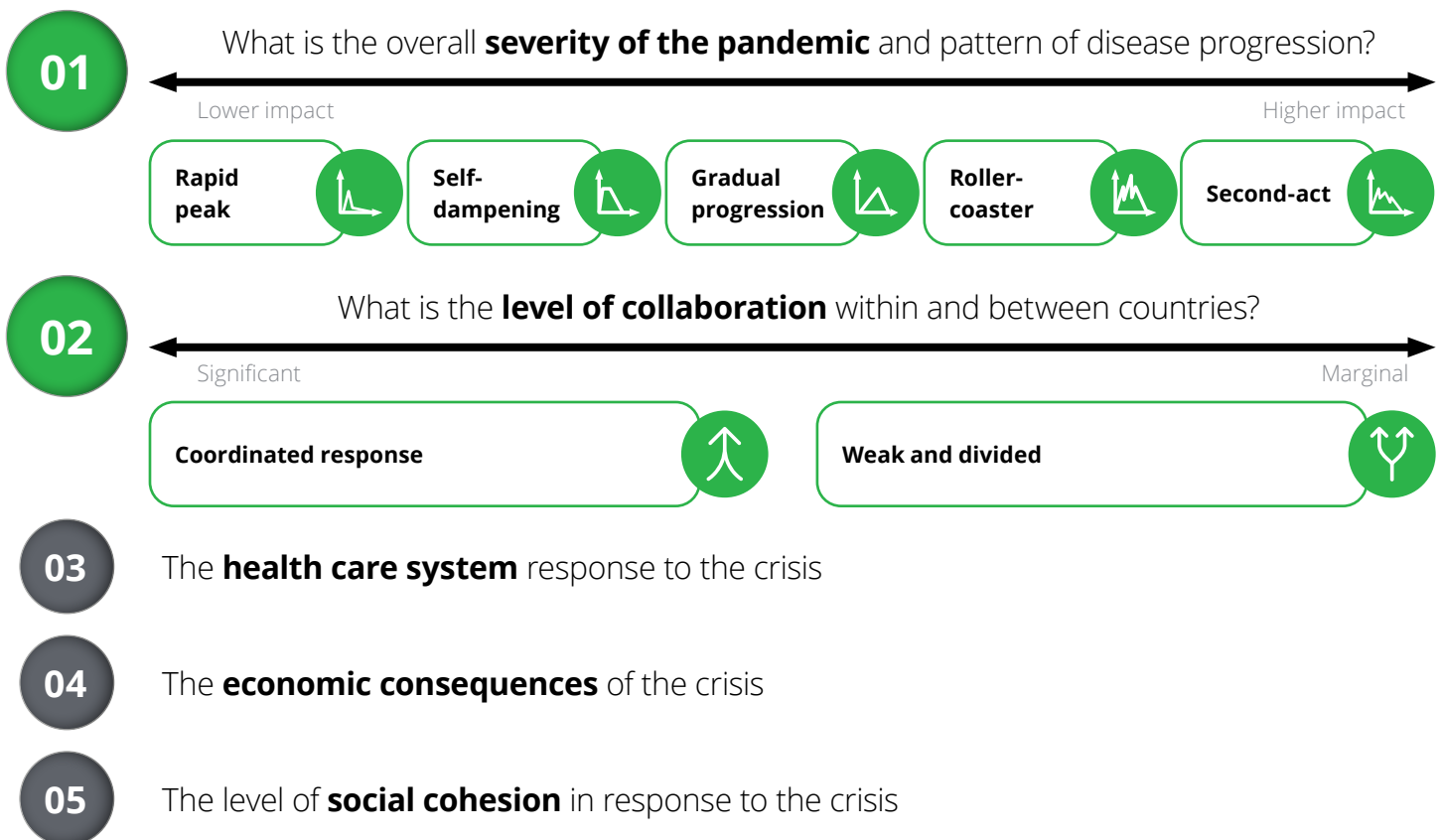
Objectives of this document

Share scenarios about how the industry might evolve in three to five years to help leaders:

- 01 Explore how uncertainties during the pandemic could shape the mining and metals industry in the long-term
- 02 Have productive conversations on the lasting implications and impacts of the crisis
- 03 Identify decisions and actions that will improve resilience of companies in a rapidly changing landscape
- 04 Move beyond “recovering” from the crisis, and towards “thriving” in the long-term

Five fundamental uncertainties are likely to have a significant impact post-COVID-19

Fundamental uncertainties explored



Additional uncertainties explored

Society

- Level of societal trust
- Psychological impacts after quarantine
- Normalization of working from home

Technology

- Workforce, skills and processes
- Automation and remote control innovation
- Data, analytics and decision making
- Digital innovation implementation

Economy

- Speed of economic recovery
- Shift to new business models
- Distribution of economic growth
- Changing demand for commodities


Environment

- Changes in business case for de-carbonization
- Focus on fighting climate change
- License to operate

Politics

- Localization of supply chain
- Shift in share of responsibilities with governments
- Governmental stimulus measures
- Nationalization agenda


Four distinct scenarios emerge based on current trends and critical uncertainties



The passing storm

The pandemic is managed due to effective responses from governments to contain the virus, but is not without lasting repercussions, which **disproportionately affect SMB¹ and lower- and middle-income individuals, and communities.**

- Relatively constrained disease dynamic
- Effective health system and policy response



Lone wolves

Prolonged pandemic period, spurring governments to **adopt isolationist policies**, shorten supply chains, and increase surveillance.


- Severe, rolling pandemics
- Insufficient global coordination and weak policy response



Good company

Governments around the world struggle to handle the crisis alone, with **large companies stepping up as a key part of the solution** and an acceleration of trends toward “stakeholder capitalism.”

- More prolonged pandemic
- Collaboration to control the pandemic led by large companies



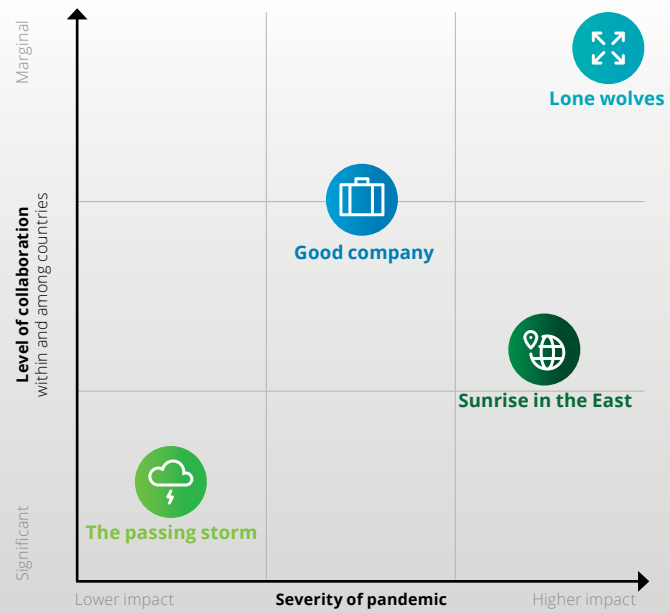
Sunrise in the East

China and other East Asian nations are more effective in managing the virus and take the reins as **primary powers on the world stage.**

- Severe pandemic
- Collaborative health response led by East Asian countries

1. SMBs – Small and Medium Businesses

Note: Scenarios are based off Deloitte’s publication COVID-19 Economic cases: Scenarios for business leaders



In the long run and across all scenarios, some key trends will be top-of-mind for mining, metals and C&BM leaders post COVID-19



Economy:
Supply chains localization

The COVID-19 impact across geographies is likely to reshape global supply chains



Politics:
Government power

Governments may be less able to **provide public services** around operations as a result of increased indebtedness



Society:
Future of work

Shifts in the workplace will **accelerate an already ongoing remote and virtual working environment**



Technology:
Automation & digital





Digitization and automation could accelerate in a post-COVID-19 environment



Environment:
De-carbonization

The crisis will highlight the trade-off between **short term economic recovery versus long term environmental impact**

These scenarios illustrate potential ways in which the global landscape could unfold over the next three to five years

	The economy (with a potential impact on supply chains)	Governments (with a potential impact on the power shift between governments and companies)	Social cohesion (with a potential impact on the Future of Work)	Technology advances (with a potential impact on Automation & Digital)	A focus on climate change (with a potential impact on the de-carbonization journey)
 <p>The passing storm</p>	... enters an extended recession , with increased income inequality	... gain trust , and international organizations such as WHO grow in relevance	... rises , with a heightened appreciation for interpersonal and familial relationships	... stay on course , as previous holdouts move online	... is renewed , as global collaboration provides hope for progress
 <p>Good company</p>	... is disrupted , with a growing concentration of power among large companies	... partner with large corporations, who step up as part of the solution	... is maintained , as society shifts to become more "purpose-driven"	... take center stage , with large companies driving solutions in areas such as health tech and biotech	... is mixed , with some sustainability-minded companies investing in renewable energy
 <p>Sunrise in the East</p>	... shrinks , due to the prolonged nature of the virus	... look to the East for guidance, as Asian countries effectively manage the virus	... shifts to an increased emphasis on the "good of the whole"	... are accelerated , as more data-sharing allows for advances in AI and other advanced tech capabilities	... is deemphasized , as economic recovery is prioritized
 <p>Lone wolves</p>	... is left in turmoil , as global supply chains are disrupted	... adopt isolationism , as they attempt to contain the virus within	... falls , as xenophobia and suspicion of others become the norm	... are divergent among different markets, with a focus on advances in surveillance and control measures	... declines , as countries shift toward energy independence



Collaboration

Significant

Marginal

Significant

Marginal

Severity

Lower impact

Lower impact

Higher impact

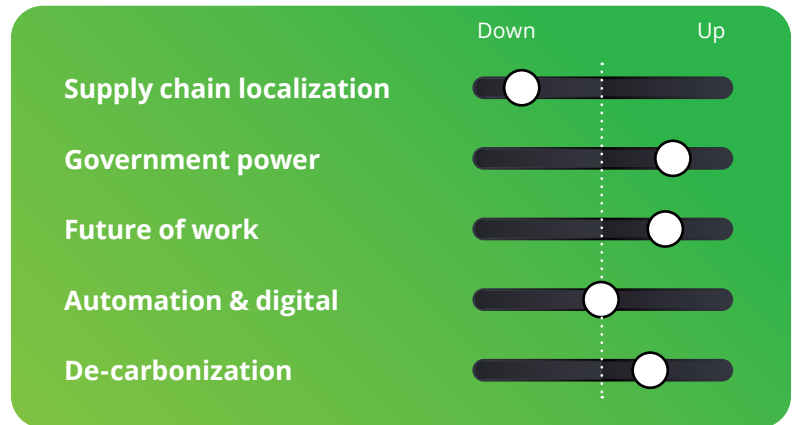
Higher impact

Scenario 1

The passing storm

Sector implications

In response to the crisis, companies **keep automating and digitizing their operations and assets** to mitigate risks. The governmental stimulus measures, including an **accelerated infrastructure agenda**, helps drive the demand and the prices for commodities. Less affected by the economic impacts, **large companies are better positioned** to move forward by investing in new exploration and operations, technology innovations, and smaller player acquisitions. Efforts to **decarbonize the supply chain** also allows companies to respond to the increasing ESG pressure and gain and maintain social licenses.



Mining



- Demand contraction and resultant price volatility force companies to bring greater focus on **cost reduction or cost take-out measures**.
- **Digitization of operations continues at the same pace** as firms see the benefits of automation and digital technologies.
- The economic case for companies to **continue investing in de-carbonization** is reinforced.
- **Remote work environment is adopted as a new way of working** particularly for the back office and headquarter staff.

Metals



- Most changes to the customer base of mining companies are caused by **customers' demands for provenance and greener products**, which increases the pressure to reduce carbon footprint.
- With a greater precedent for cash preservation, companies **focus on portfolio restructuring** rather than capital expenditure or M&A with smaller players who can manage to rebound.
- **New efforts for customer support** materialize in the form of enhanced credit, revamped communications strategies and monetizing value-added services.

Construction & Base Materials



- Governments emerging with less debt than anticipated are eager to **provide economic stimulus** and accelerate agendas for large **infrastructure projects**.
- Deploying **track and trace mechanisms** will be an early priority for companies to meet government guidelines.
- Operating models will become more focused on flexi-factory setups to more easily ramp-up and ramp-down production with demand.



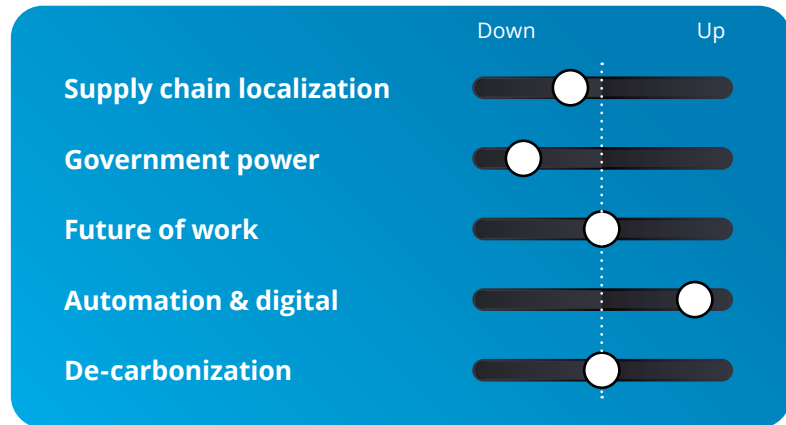
Collaboration	Significant	Marginal	Significant	Marginal
Severity	Lower impact	Lower impact	Higher impact	Higher impact

Scenario 2

Good company

Sector implications

In this scenario, **companies are forced to step up to the plate**. Companies will volunteer their resources to support and supplement containment, treatment, and recovery efforts. Also, **companies are increasingly expected or forced to make direct financial investments into their local communities**, to maintain their social license to operate and avoid scrutiny from communities, governments, and the media. At the same time, mining and metals companies will be forced to adapt to the new world, with **increased investment in areas such as wearables, virtual reality, AI, and 3D printing**, to combat significant supply chain shifts and workforce social distancing requirements.



Mining



- Mining companies in rural and remote regions work to revitalize their communities during a time of economic downturn, **taking on functions previously provided by the public sector**.
- **The importance of climate change and meeting environmental goals** is maintained by sustainability-minded companies.
- Development of **remote operating centers** and **digitally enhanced shared service centers** support the wider business needs.
- **Individuals become more open to new technologies** from wearables to AI.

Metals



- Investments by **large companies and public-private partnerships** are looked to in order to drive the revival of demand and economic growth.
- Metal companies place a greater emphasis on **building separate local health ecosystems**.
- Beyond the optimization of existing supply chains, companies will focus on the **restructuring of critical procurement systems**, including localization of resources.
- **IT becomes a critical infrastructure** to reinforce cybersecurity and reduce the vulnerability of key business processes (e.g., CRM, remote procurement).

Construction & Base Materials



- **Extensive government debt taken on for the pandemic response limits stimulus measures**, particularly around infrastructure investment and related work.
- Large companies invest in developing **end-to-end solutions for customers** to gain differentiation and profitability.
- Customers looking to capitalize on the low commodity prices of construction & base materials provide **initial support to their key suppliers** (e.g., raw material, refractories, spares).



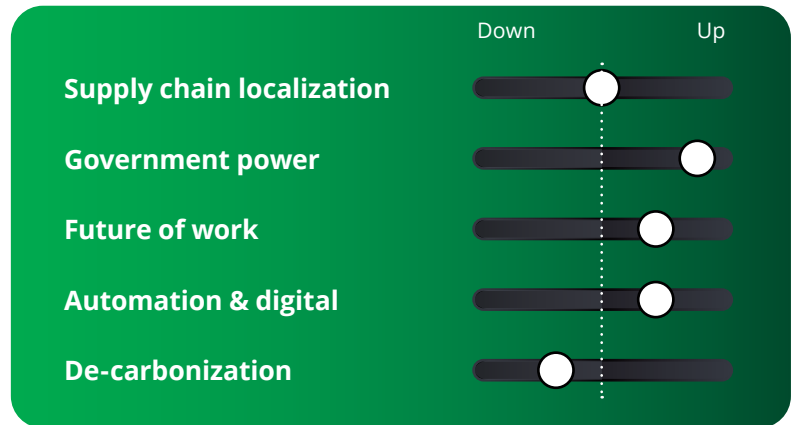
Collaboration	Significant	Marginal	Significant	Marginal
Severity	Lower impact	Lower impact	Higher impact	Higher impact

Scenario 3

Sunrise in the East

Sector implications

The severe and long-lasting impacts of the crisis cause companies to prioritize and accelerate the **implementation of digital technologies**. Companies, particularly in remote areas and developing countries, **develop programs in and around their operations to provide public services** that highly indebted governments cannot provide. **East Asian countries take a central role** in acquisitions and consolidating some sectors. Some **governments turn to nationalization** to help their finances. Companies **shift away from de-carbonization efforts and towards business models lighter in assets**.



Mining



- The unprecedented devaluation of companies triggers **intense acquisition activity of small mining and technology companies** by those with strong balance sheets.
- Chinese players are key drivers of **consolidation in the sector** and extend their influence on developed markets to become a central provider in the global supply chain.
- Mining companies shift their business models to become **leaner in terms of assets owned** and employ alternatives such as leasing.

Metals



- As the global economy shrinks, **commodity prices for aluminium remain low** due to decreased global demand. Infrastructure spend in East Asia raises the demand for steel.
- Limited only by the ability to ship globally, these same companies from **East Asia will capture export opportunities in developing and emerging markets**.
- Large East Asian metal companies deploy investments to **establish bases in new geographies** through greenfield and brownfield routes.

Construction & Base Materials



- China rising in prominence causes a **sharp increase in the demand for construction mining commodities across Eastern Asia**.
- Rise of Asian dominance establishes **new norms for trade negotiations** to facilitate exports.
- Local demand in China will gain momentum which will trigger **shortage of key raw materials**.
- **Protectionist agendas dominate foreign policy**, seeking to centralize manufacturing business in home countries and adopt tough anti-dumping measures against Chinese imports.



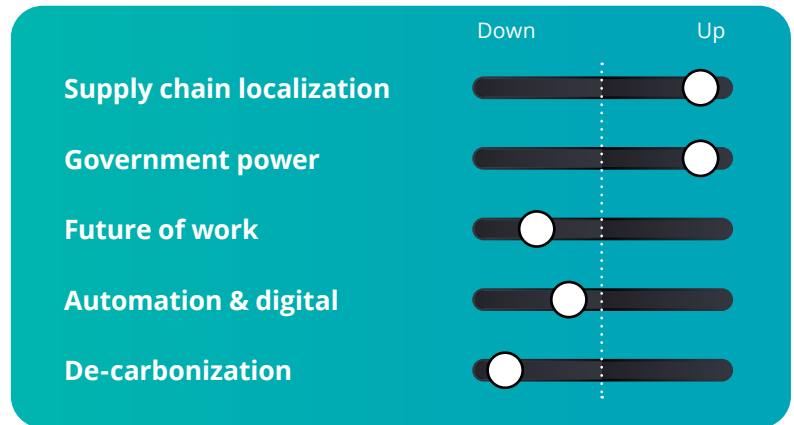
Collaboration	Significant	Marginal	Significant	Marginal
Severity	Lower impact	Lower impact	Higher impact	Higher impact

Scenario 4

Lone wolves

Sector implications

In response to the impacts of the crisis, **companies see drastic disruption to their production and their supply chains**. With strict social distancing and tracking measures, **companies are forced to keep production halted or see large declines in productivity**. As countries adopt isolationist policies and global supply chains are cut, **companies will need to find local suppliers and customers**. The strength of local supply chains will determine who survives. In regions with strong local demand, companies thrive, while in regions **where metals are heavily exported, companies potentially struggle**.



Mining



- Supply chains become increasingly localized, **physical distancing becomes a fact of life**, and suspicions of foreign companies heightens.
- Companies **secure their supply chains by stockpiling key materials** and participating in less international trade.
- Mining companies **rapidly accelerate investment in technologies that allow for remote operations and people and equipment tracking**.
- **Climate change and environmental efforts take a step-back**.

Metals










- Without a local supply of raw materials, companies **struggle to keep their plants utilized**.
- Local markets for each commodity and **prices are largely dictated by the availability of local supply**, given reduced ability to ship globally and reduced production; **localization of products** and quality management measures occurs.
- A **survivalist mentality** steers management away from deploying traditional CAPEX.
- **Different operating models** evolve including shift scheduling, outsourcing, and job work processing.

Construction & Base Materials

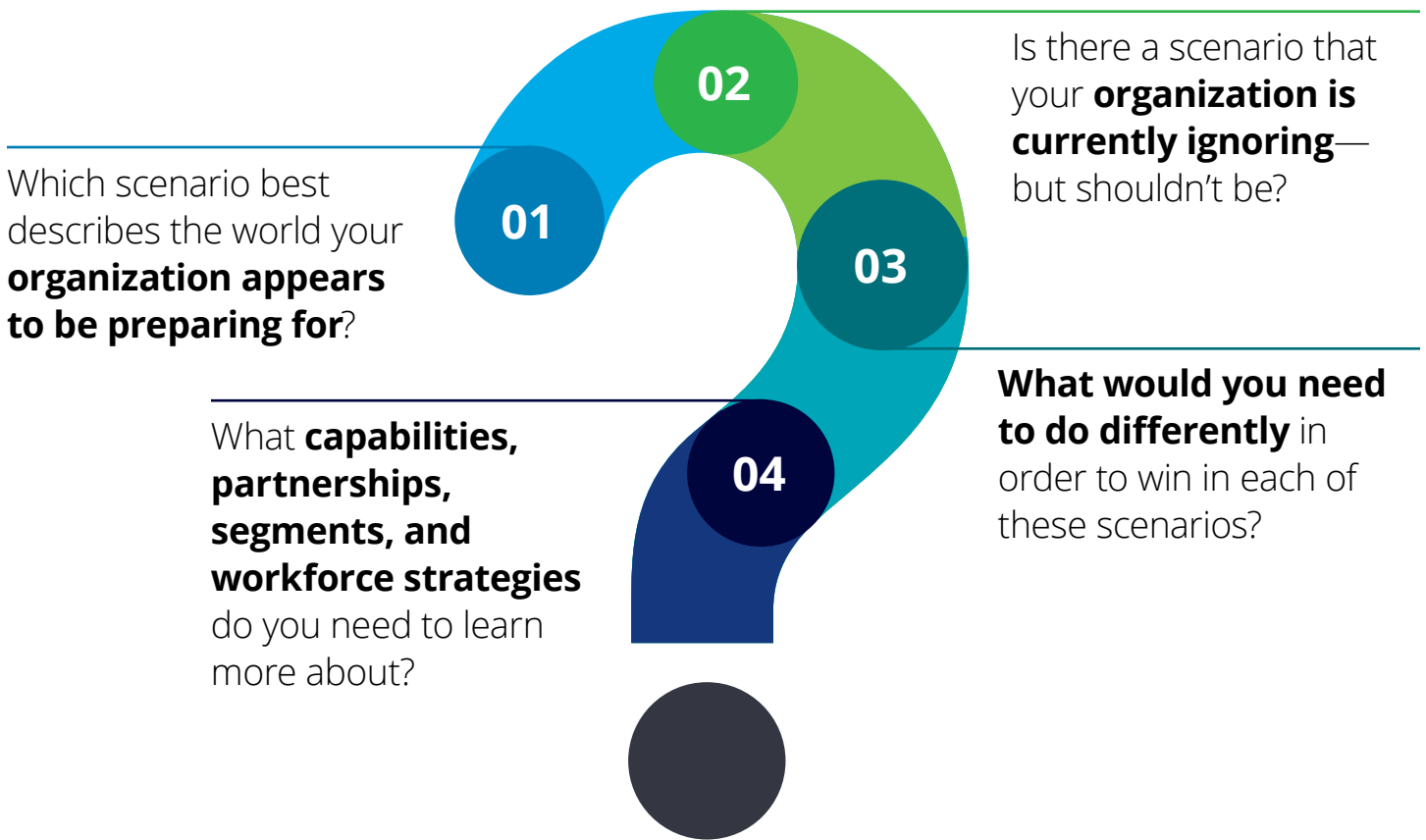


- **Large infrastructure projects are halted**, with little to no stimulus support from governments.
- Due to longstanding disruption, **manufacturing supply chains are decoupled from global markets** to reduce logistical upsets and match the smaller scale of local demand.
- Companies look to **deploy innovative manufacturing models** (e.g., mass intermediary product manufacturing units and grinding near customer demand centers).
- **Developing countries**, irrespective of global reach, see **growth continue through nationalization of resource bases and domestic consumption**.

While we cannot know which scenario will occur, there are signals that might indicate our progression towards them

	 The passing storm	 Good company	 Sunrise in the East	 Lone wolves
 Signals & signposts	<ul style="list-style-type: none"> The virus sees a single peak with no indications of further waves Governments decide to re-open large swathes of society and the economy, with little-to-no impact on infection rate Highly effective mechanisms to combat the virus are created and deployed (e.g., vaccine) Governments collaborate and share best practices, resulting in a world-wide decline in infections 	<ul style="list-style-type: none"> Companies are increasingly looked at as partners in solving this crisis, solutions start arriving from the private-sector Government measures hit limitations that have to be broken by private sector innovation Governments run out of resources to effectively combat the virus and look elsewhere (e.g. human capital, money, etc.) 	<ul style="list-style-type: none"> East Asian countries see their peaks end soon, while Western countries struggle to contain their outbreaks or see second waves China & other East Asian nations have restrictions lifted, and their economies return to normal at a quicker pace than Western nations Western governments strike partnerships with East Asian nations to share best practices around reducing infections 	<ul style="list-style-type: none"> Vaccine or other combative developments see setbacks A second or more waves are seen Countries deploy invasive monitoring programs to track individuals in the name of safety Countries begin investment programs in building local industries for important resources Countries deemphasize working together and enter into trade wars
This is a world in which...				
 Leaders:	<ul style="list-style-type: none"> Larger companies will have better access to resources and investment to combat COVID-19 in the short-term and will rebound quicker 	<ul style="list-style-type: none"> Companies with good community and government relations will build upon their license to operate foundations 	<ul style="list-style-type: none"> Companies based in East Asian countries will rebound quickly; companies with demand based in Asia will see stronger results than others 	<ul style="list-style-type: none"> Companies with their own integrated processing operations will be better positioned to weather the storm
 Laggards:	<ul style="list-style-type: none"> Smaller companies will take longer to return to normal, given their lack of resources to change operations in the short-term 	<ul style="list-style-type: none"> Companies that are building upon a poor reputation will not be seen as strategic partners and will be left behind by those with a healthy license to operate 	<ul style="list-style-type: none"> All other jurisdictions will be at a productivity disadvantage given local restrictions and social distancing measures, and will see softer demand 	<ul style="list-style-type: none"> Companies with largely global supply chains for processing will have to navigate a complicated international landscape to continue operating

As you reflect on these scenarios, consider:



These scenarios suggest a range of possible outcomes as the COVID-19 crisis evolves. Only time will tell which of these, or other scenarios, will emerge. Resilient leaders are preparing now for what the future may hold.

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Thank-you to the team who crafted the original publication of COVID-19 Economic cases: Scenarios for business leaders which provided the base scenarios for this document.

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Find the publication here:

<https://www2.deloitte.com/global/en/pages/about-deloitte/articles/covid-19/covid-19-scenarios-and-impacts-for-business-and-society-world-remade.html>

<https://www2.deloitte.com/global/en/pages/about-deloitte/articles/covid-19/covid-19-planning-scenarios-for-business-leaders-resilient-world-remade.html>

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