BEING RESILIENT

HOW THE RESOURCES INDUSTRY CAN NAVIGATE THE NEW NORMAL

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Nations debate whether the COVID-19 pandemic is a 'black swan' event or an avoidable crisis, but there is no doubt that industries and economies have to prepare for the new normal.The pandemic poses several fundamental questions to businesses:

Will production and sourcing move closer to end users

Will mining and chemicals manufacturing be classified as essential services

Will workplace policies be revisited to prioritize the health and safety of employees

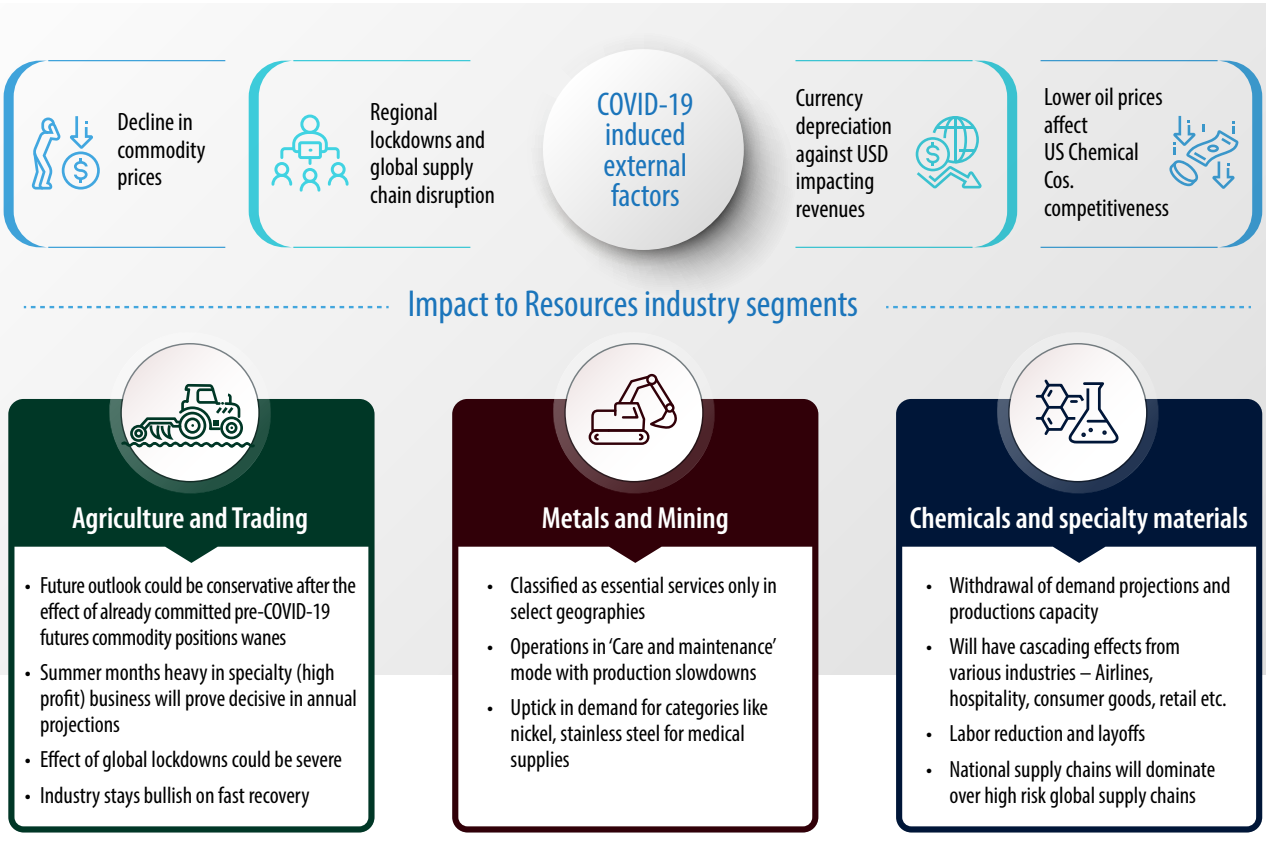
Will task forces be mandatory to closely monitor the global, national, and regional situation

Global enterprises need to respond to the new normal, address challenges, and accept that a connected globe is susceptible to widespread disruption, with after-effects cascading across industries and economies.

Even as governments evaluate measures to restore normalcy, business leaders should formulate strategies to emerge stronger by adapting to the current socio-economic environment and mitigating the long-term business impact.

A high-level assessment of the current landscape serves as a starting point to develop a road map for recovery. The natural resources and materials industries such as mining, agribusiness, and chemicals are affected due to sector-specific factors such as demand and operations, and external factors that are beyond the control of these industries. The illustration below summarizes the impact of major business challenges.

Impact on Business



Enterprises need to devise a strategic plan to mitigate risks, ensure business continuity, and address fluctuating demand, while responding to the dynamics of the new normal – resilience and agility of the workforce and the enterprise. Since the output of mining, chemicals, and agribusiness enterprises has both direct as well as indirect impact across industries, operating at full capacity is an imperative for the global economy.

A predominantly digital workforce and robust IT infrastructure provide enterprises with the foundation to bounce back to recovery and operate at full capacity. As enterprises cope with disruption, some near-term imperatives will be crucial to operate in the new normal.

Resume safe and secure operations

The disruption demands renewed focus on employee health and safety, which necessitates a reduction in on-site employee numbers and gradual ramp-ups. While, the nature of mining and chemicals manufacturing does not allow remote working as the default operating mode, digital technologies such as Artificial Intelligence (AI), Augmented / Virtual Reality (AR / VR) can be used for digital twinning, remote decision making, and reducing the need for on-site activities.

Although a majority of enterprises have implemented Environment, Health and Safety (EHS) solutions for operational health, EHS policies should incorporate regular employee screening, social distancing, and proximity tracking. IoT-based non-intrusive health and safety solutions can monitor vital signs such as body temperature, pressure, and pulse. Similarly, a network of sensors should monitor oxygen levels and the Air Quality Index (AQI) of physical spaces such as a mine, an open pit, trading floor, or control rooms. IoT devices can track the location of employees, while sensors embedded in equipment and workstations ensure safety by triggering remedial action such as automated activation of ventilation fans or evacuation of a zone.

As efforts to restore operations are put in place, disruption to operations owing to breaches in cyber security needs to be addressed concurrently.

Reduce cost of operations

Industries in this sector need to evaluate cost structures in the light of fluctuating demand and supply chain risks. The smart use of digital technology boosts efficiency, productivity, and safety while rationalizing costs.

Automation, AI, and machine learning-driven process optimization tools enable a near zero-touch approach to certain processes in the manufacturing value chain. Automation can allow static and moving assets to be controlled from remote locations – boosting energy efficiency, minimizing maintenance, and reducing the lifetime cost of assets.

Autonomous equipment enables 24/7 operations with skeletal staff, resulting in consistent production output while undertaking exploration in extreme conditions at greenfield sites. The Syama underground gold mines in Mali or Rio Tinto's autonomous mining vehicles and autonomous trains in Western Australia are prime examples.

Cloud technology and managed cyber security solutions eliminate fixed costs while facilitating real-time management of field force, back office, production, and logistics processes.

Respond to unpredictable demand

Both the demand as well as supply side of mining, chemicals and agriculture businesses have been affected. The pandemic has caused an unprecedented surge in demand for personal protective equipment, healthcare supplies, fine chemicals, and Active Pharmaceutical Ingredients (APIs). Similarly, the sustained demand for agricultural produce cannot be fulfilled due to supply-side constraints. In addition, the stringent restrictions on movement of people as well as goods prevent commodities trading.

Enterprises can leverage predictive analytics and AI models as decision support tools amid unpredictable circumstances. Analytical tools use big data to optimize global supply chain operations and predict price volatility. Accurate insights enable data-driven strategies to prioritize haulage operations and trade deals when business resumes. Moreover, a digital ecosystem integrates employees, suppliers, customers, and other stakeholders with core processes and logistics systems. It enables accurate resource allocation to match demand with supply and mitigate supply chain risks.

Learning in the era of remote working

The mandatory lockdown and social distancing period provides an opportunity for upgrading skills of a remote and distributed workforce. Digital learning solutions help employees not only manage stress, and become health conscious, but also undertake upskilling of an aging workforce in industries such as mining. e-Learning can introduce design thinking and data-driven problem-solving skills to personnel in the mine / plant, commodity trading or operations. Upskilling through e-learning should focus on enhanced productivity, collaboration, and exploring new business and technology models to adapt to the new normal.

For more information, contact askus@infosys.com

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