



Supply Chain Trends: Revisiting, Reshoring, & Reinvention

September 16, 2020

3:00 - 4:00 p.m. ET



Agenda



- 1 Introduction
- 2 Caught Off-guard by COVID-19
- 3 Supply Chain Risk Management
- 4 Supply Chain Reshoring
- 5 Risk Informed Operations Restoration
- 6 Q&A

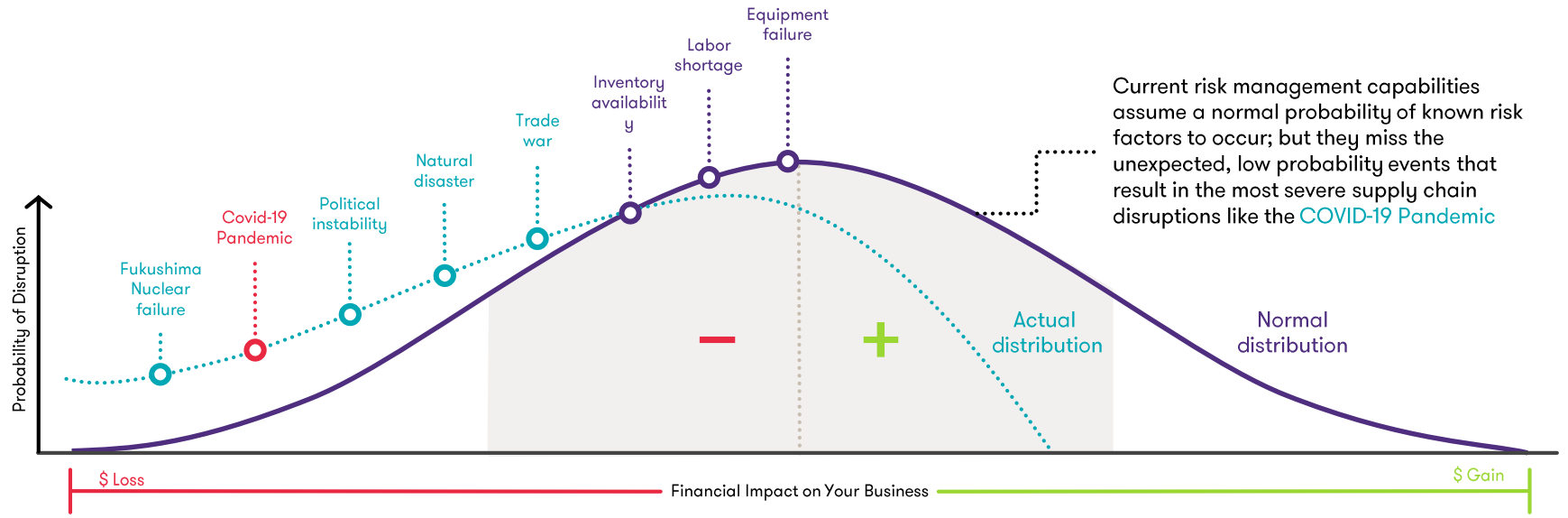


Caught Off-guard by COVID-19



A lack of business continuity plans or proper interpretation of risk are where most companies were exposed

Understanding the actual probability of a disruption and correctly modeling it relative to all other possible events is a critical success factor for effective risk management:



Grant Thornton's Pandemic Risk Impact Framework

We focus on four key impact zones and eight risk factors

These impact zones relate to one another when assessing and measuring a pandemic's negative risk impacts. We quickly assess each zone, including the risk factors, to help you prioritize mitigating responses and enhance overall resiliency – **ultimately creating better results.**



LIQUIDITY & CASH FLOW MANAGEMENT

How much working capital is at risk today? What steps are you proactively taking to avoid insolvency issues?



SUPPLY & DEMAND

With supply chain execution at risk, how are you calibrating it with rapidly changing customer demand?



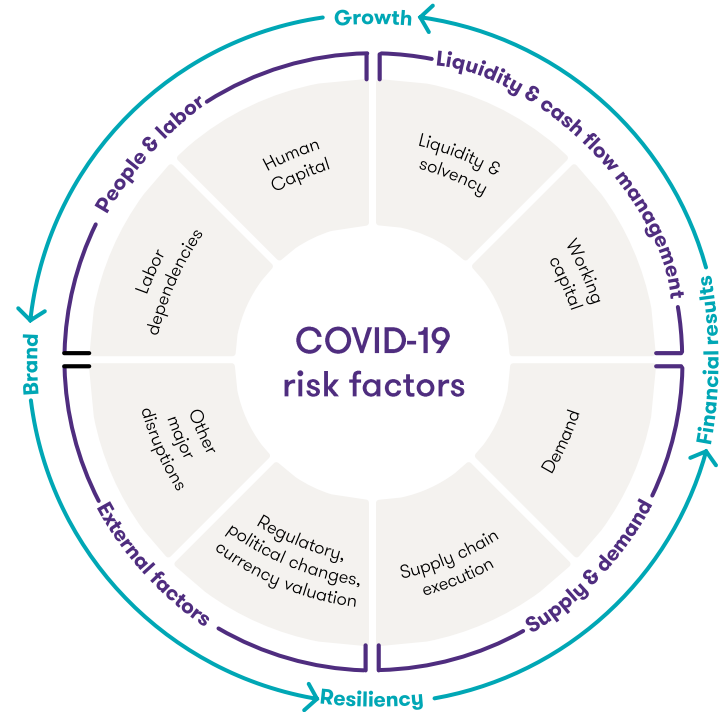
EXTERNAL FACTORS

How do you quantify and interpret the risk of hard to predict external factors on your supply operating model?



PEOPLE & LABOR

How would devastating losses in planned labor or a steep increase in human capital impact your business?



Proper evaluation of pandemic risk enables resiliency planning and competitive advantage

Business impacts of poor pandemic risk management and resiliency planning



The following list of business impacts can be categorized as losses in revenue or increases in expenses, both of which erode shareholder value and create unnecessary financial stress:

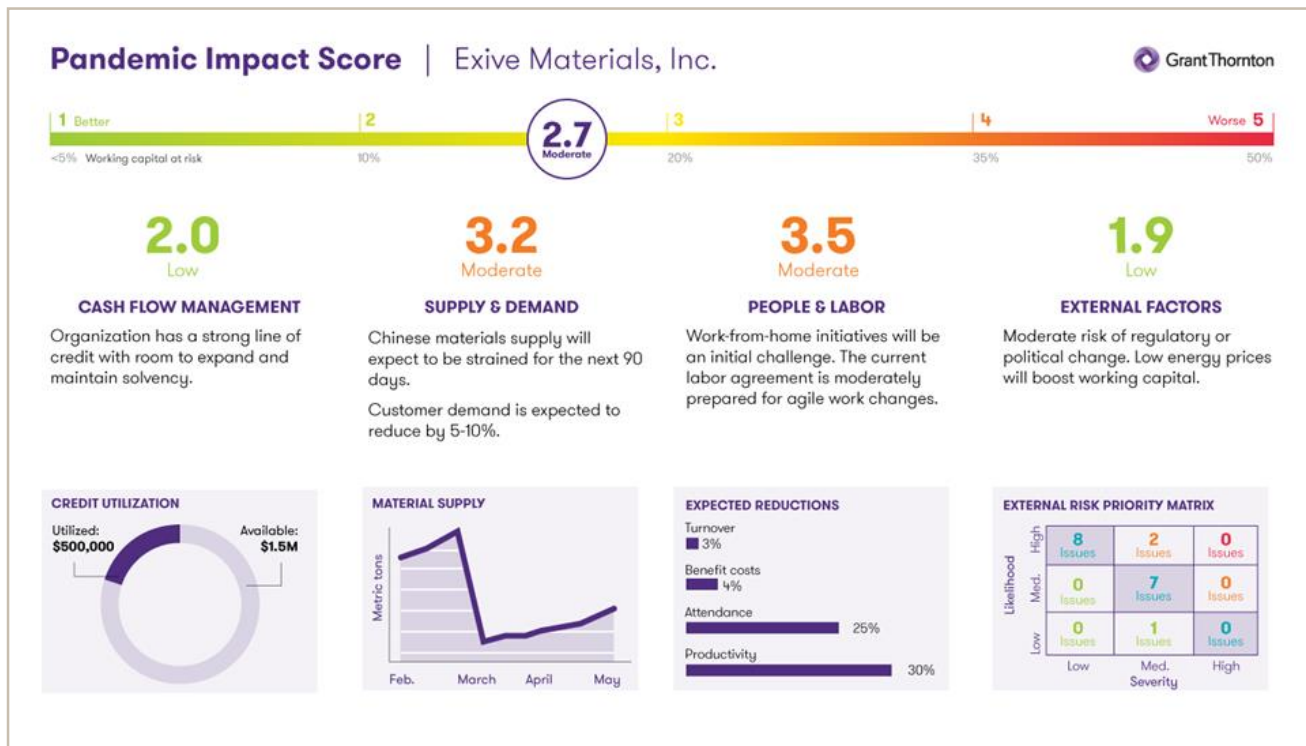
LOSS OF REVENUE

- Logistics disruption
- Product unavailability
- Reduced product quality
- Decrease in production capabilities
- Reduced workforce (single/multiple locations)
- Eliminated/delay in new products or business ventures
- Changes in demand or buying behavior
- Client defections
- Supplier solvency (1st, 2nd, 3rd and 4th parties)
- Reputational impacts
- Loss of market share

INCREASED EXPENSE

- Availability/cost of credit
- Contractual breach fines and penalties
- Employee action (i.e., wrongful death, workers comp)
- Litigation/defense costs
- Increased insurance claims
- Inadequate insurance recoveries
- Regulatory fines
- Overtime/paid leave labor costs/benefit plan costs
- Professional services fees
- Raw material & expediting costs
- Direct and indirect taxes

Resiliency scorecard: example



Liquidity & cash flow management



LIQUIDITY & CASH FLOW MANAGEMENT

How much working capital is at risk today? What steps are you proactively taking to avoid insolvency issues?

- 1 Cash is king – Understand your working capital needs
- 2 Cost optimization – Be relentless on cost control
- 3 Evaluate and collaborate with customers and suppliers
- 4 Communicate early and often with your lenders
- 5 Consider liquidity about tax opportunities from IRS change, credit and incentives available and recent legislation

Supply & demand



SUPPLY & DEMAND

With supply chain execution at risk, how are you calibrating it with rapidly changing customer demand?

1

Prioritize the most important and profitable customer demand

2

Reduce supply chain and operating model complexity

3

Recalibrate labor, assets, capacity, and working capital investments

4

Shore up those supplier and third party relationships

5

Evaluate supplier solvency and manage any other risk factors

Polling question #1

How was your business impacted by COVID-19?

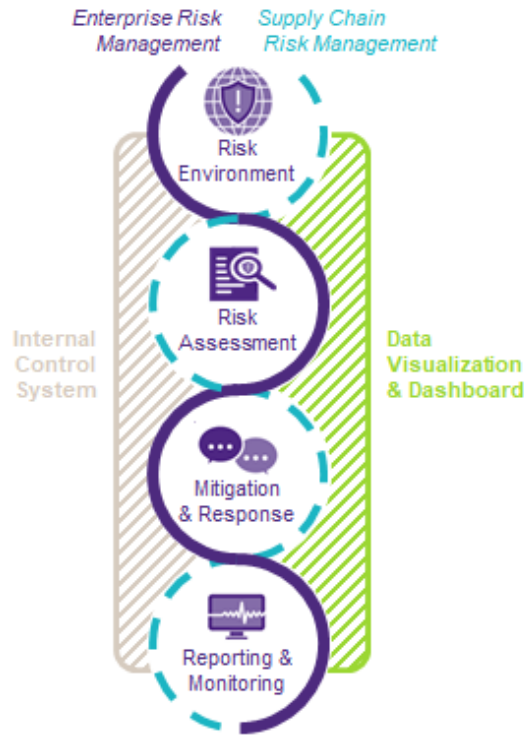
- Business shutdown
- Supplier driver disruptions
- Internal liquidity issues
- Unanticipated changes in demand



Supply Chain Risk Management



Integrated supply chain risk model



Supply chain risk management and ERM work in conjunction with the internal control system form the supply chain ecosystem.

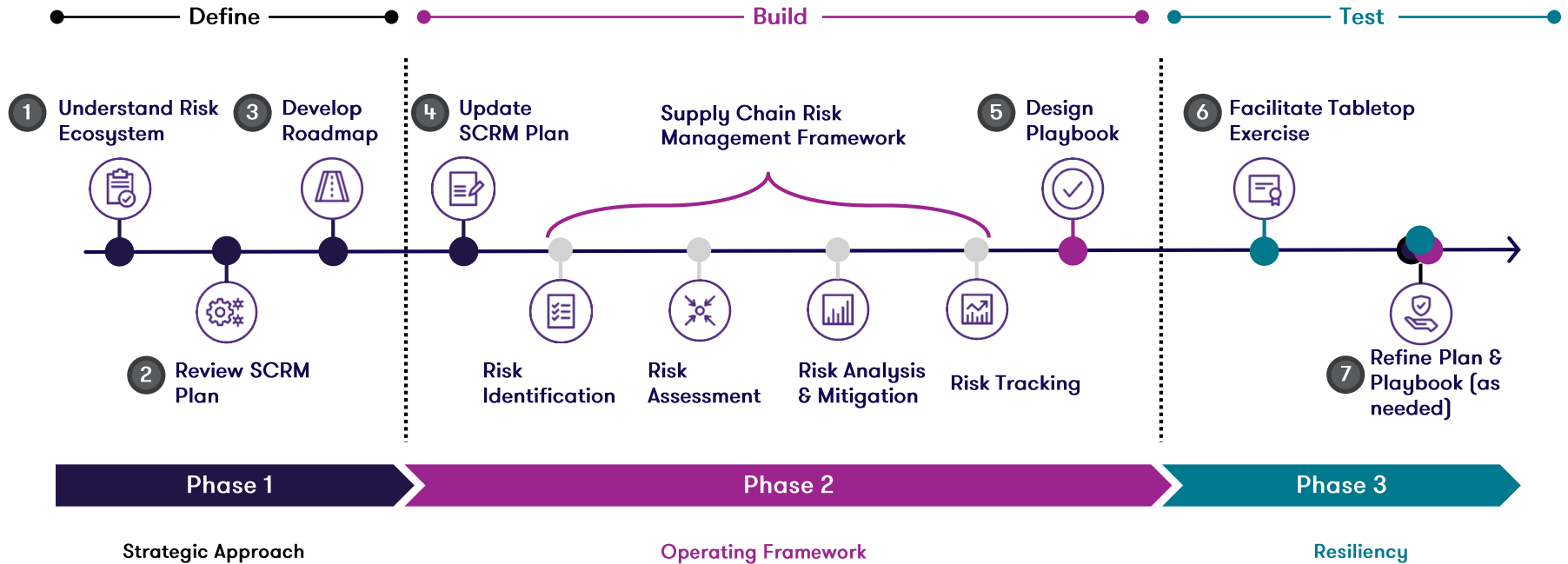
Risk Environment must be understood and managed to prevent undue influence of macro trends, which cannot be directly controlled. This is especially important for highly regulated, governmental contracts.

Risk Assessment shapes the basis of organizational decision making by informing leadership and management when established risk tolerance thresholds are exceeded.

Risk Mitigation & Response enables leadership to apply resources optimally based on the risk assessment results and prioritization, including available resources.

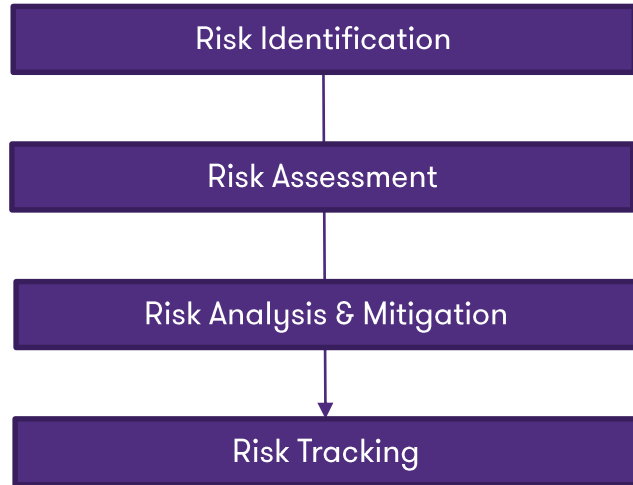
Reporting & Monitoring allows the organization to continually improve its supply chain risk management using transparent communication of vulnerabilities across the supply chain and proactive notifications about changes in risk profiles.

Three phased approach to supply chain risk management



Enterprise supply chain risk management plan forms the baseline for identifying material risks

Enterprise Supply Chain Risk Management Plan Components



Identify Material Supply Chain Risks

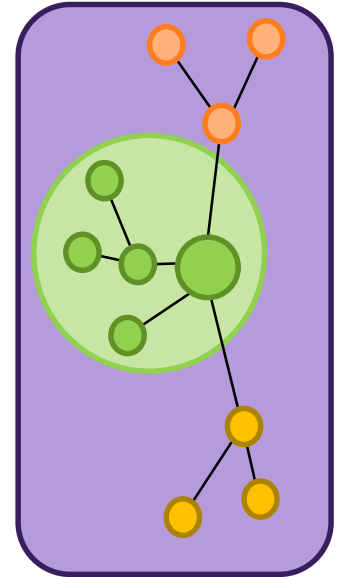
Supply Risk (Upper Nodes) – Risks originating from suppliers to the organization. They can be managed and mitigated but not directly controlled e.g., NDAA.

Network / Control Risk (Links) – Risks existing in the relationship between different areas of the supply chain.

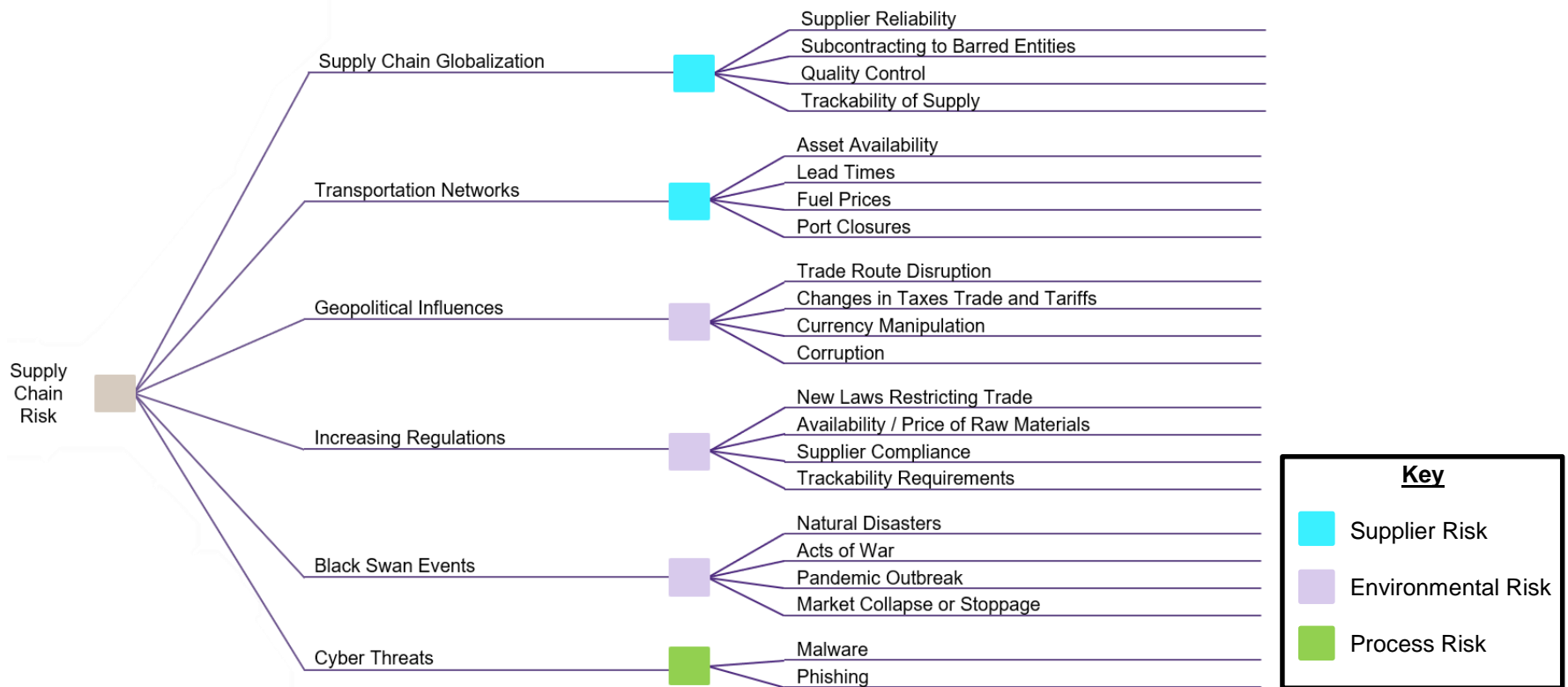
Process Risk (Central Nodes) – Risks within the organization (procurement, legal / compliance, quality, logistics, etc.). The company attempts to control under its governance structure.

Environmental Risk (Background) – Risks external to the entire supply chain (Economic, Political, etc.) that cannot be controlled but must be planned for.

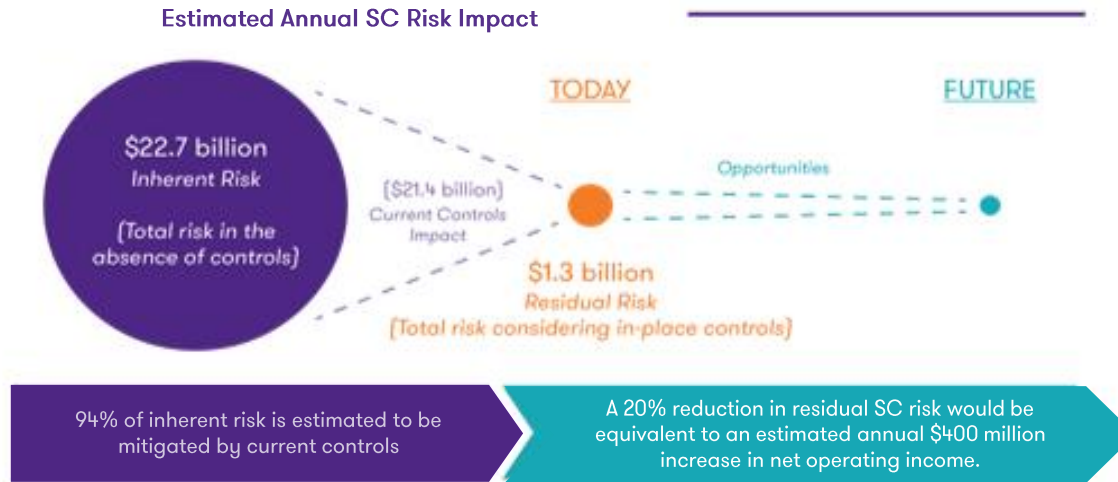
Demand Risk (Lower Nodes) – Risks originating from consumers of the organization’s products. They can be managed and mitigated but not directly controlled.



Decomposing and classifying risk varies by organization



Risk analysis and mitigation: example



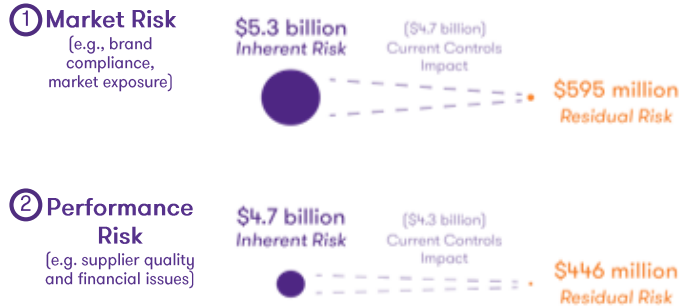
Concentration of Estimated Annual SC Risk Impact with Current Controls (i.e., Residual Risk)

Risk analysis and mitigation: example

76%

of total residual estimated annual losses resulting from SC risk are related to Cause 1 and Cause 2

What are the TOP causes of SC Risk?

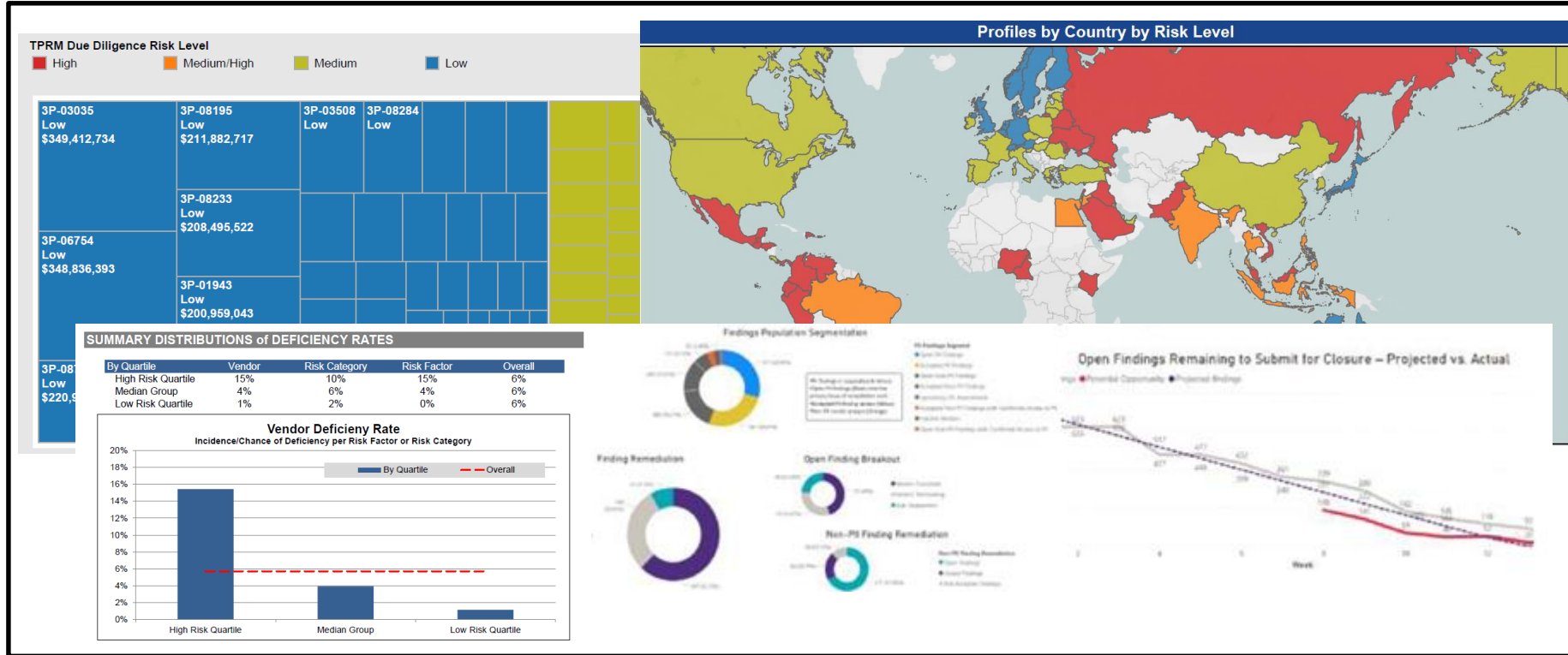


What are the TOP drivers of SC Risk exposure?

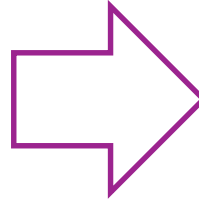
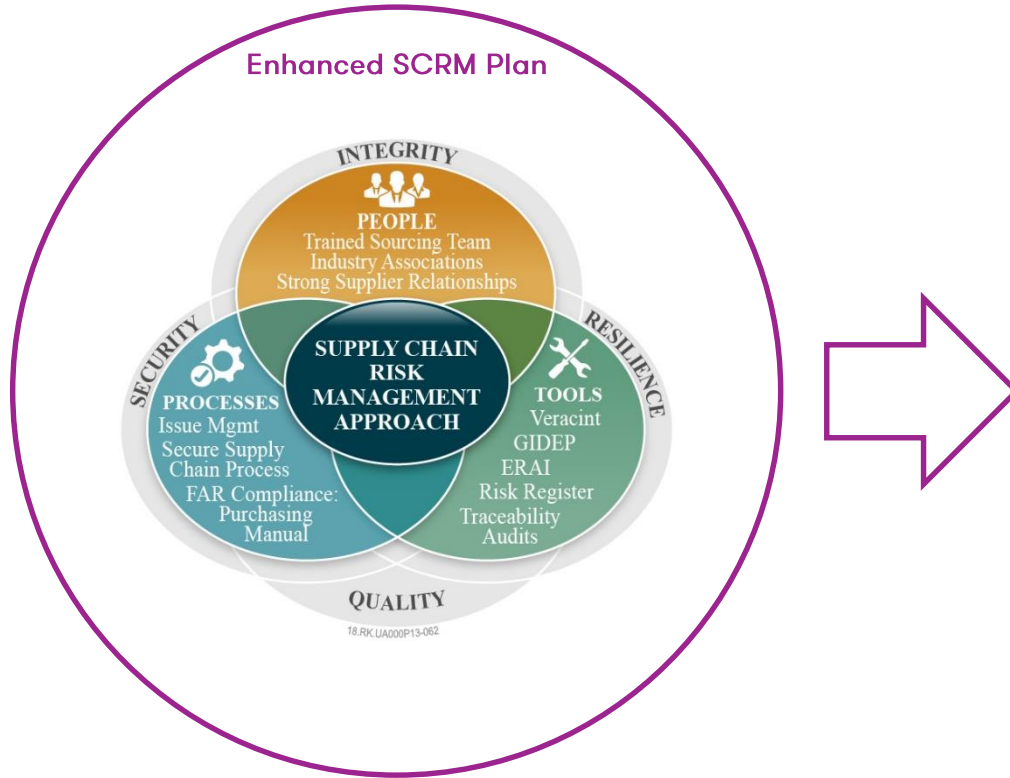


- Globalization of supply chain
- Transportation networks
- Geopolitical influences
- Increasing regulations
- Black swan events
- Cyber threats

Risk tracking and reporting: example



Design a supply chain disruption playbook



Supply Chain Disruption Playbook

Design disruption scenarios

Build playbook process elements

- Identification
- Assessment
- Mitigation
- Tracking

Test results

- Conduct self-assessment tabletop exercises (see slides 14 & 15)
- Recognize lessons learned and Plan / Playbook updates

Monitor compliance performance

- Develop Key Risk Indicators (KRIs)

Polling question #2

How would you characterize your supply chain risk management plan?

- Full business continuity plan that utilized data for predictive capabilities
- Well defined, monthly cadence with a playbook
- Loosely defined and primarily reactive
- Non existent



Supply Chain Reshoring



Point of view: industry, NAM renewal guidelines, and other pending legislation driving reshoring discussions

Multiple industry groups are recalibrating their supply chains, the National Association of Manufacturers submitted renewal guidelines in support of supply chain reshoring, and there is pending legislation

Companies in 12 global industry sectors with 22 trillion in market cap are evaluating supply chains for movement

• Software	\$ 4.4 Tn
• Capital goods	\$ 3.5 Tn
• Tech hardware & equipment	\$ 2.8 Tn
• Materials	\$ 2.3 Tn
• Healthcare equipment & services	\$ 2.1 Tn
• Semiconductors	\$ 1.9 Tn
• Food, beverage, & tobacco	\$ 1.1 Tn
• Consumer durables	\$ 1.0 Tn
• Automobiles & components	\$ 0.9 Tn
• Retailing	\$ 0.9 Tn
• Food & staples retailing	\$ 0.5 Tn
• Household & personal products	\$ 0.5 Tn

US Bureau of Economic Analysis data reveals every dollar in sales for manufactured products supports \$1.33 in output from other sectors

National Association of Manufacturers recommended renewal guidelines

- Use tax code to encourage investment in US
- Direct GSA to open government's portfolio of surplus and underutilized real property and equipment for purchase below market rates
- Produce annual report on competitiveness of US tax regime for expedited congressional consideration of actions to ensure US is the most attractive place to grow a business
- Expedite federal permitting necessary to acquire and build onshore operations
- Expand federal investments in advanced manufacturing technologies to ensure long-term competitiveness of the sector

Six indirect jobs are created for every new job created in manufacturing

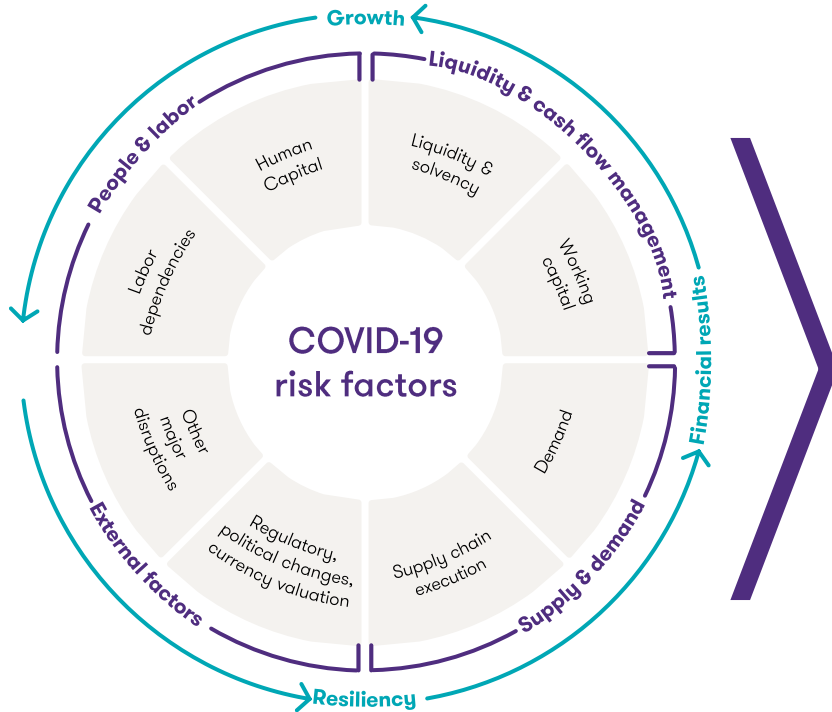
CARES Act impact on manufacturers & other examples of pending legislation on reshoring supply chains

The 2017 TCJA cut corporate tax rates from 35% to 21%. Combine this with trade instability and many companies are already considering reshoring their supply chains.

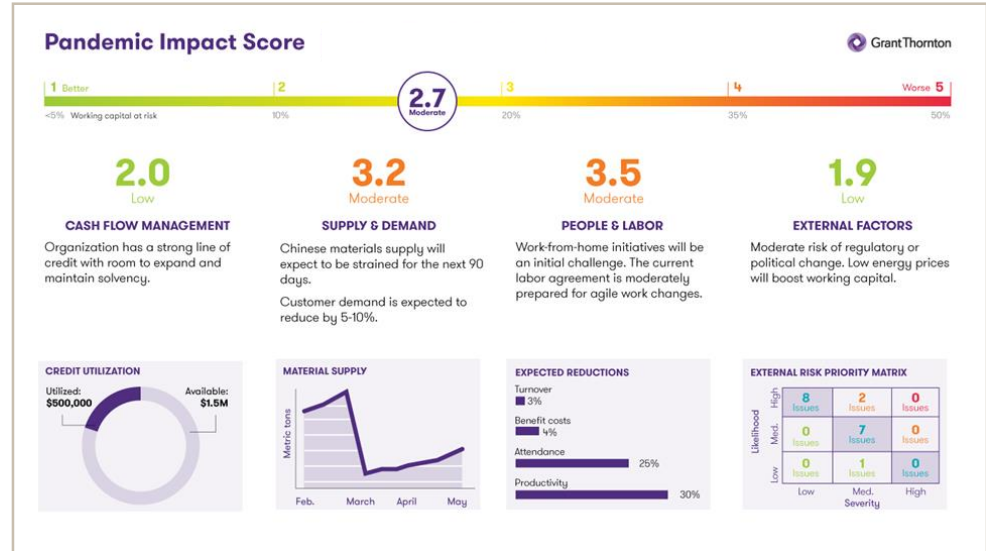
We predict Life Sciences will be the next industry sector to move towards reshoring.

- The CARES Act includes tax credits to retain employees and loan funding provisions
- Other examples of pending legislation impacting life sciences companies:
 - Protecting Our Pharmaceutical Supply Chain from China Act
 - Medical Supply Chain Security Act
 - Strengthening America's Supply Chain and National Security Act

Risk based quantitative analysis as a precursor to tax effective supply chain planning

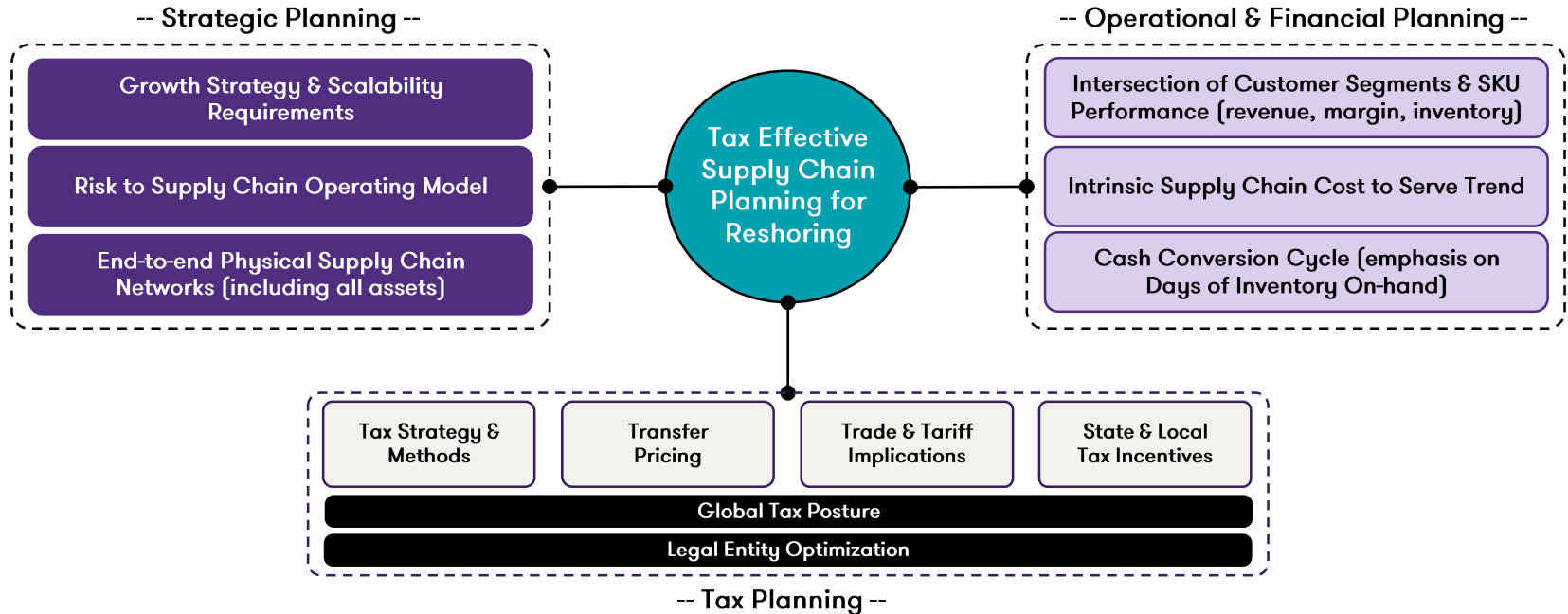


Quantitative risk analysis identifies the greatest areas of financial risk. Resolution often requires supply chain design decisions and changes to the physical operating model. If so, tax analysis and planning is essential.



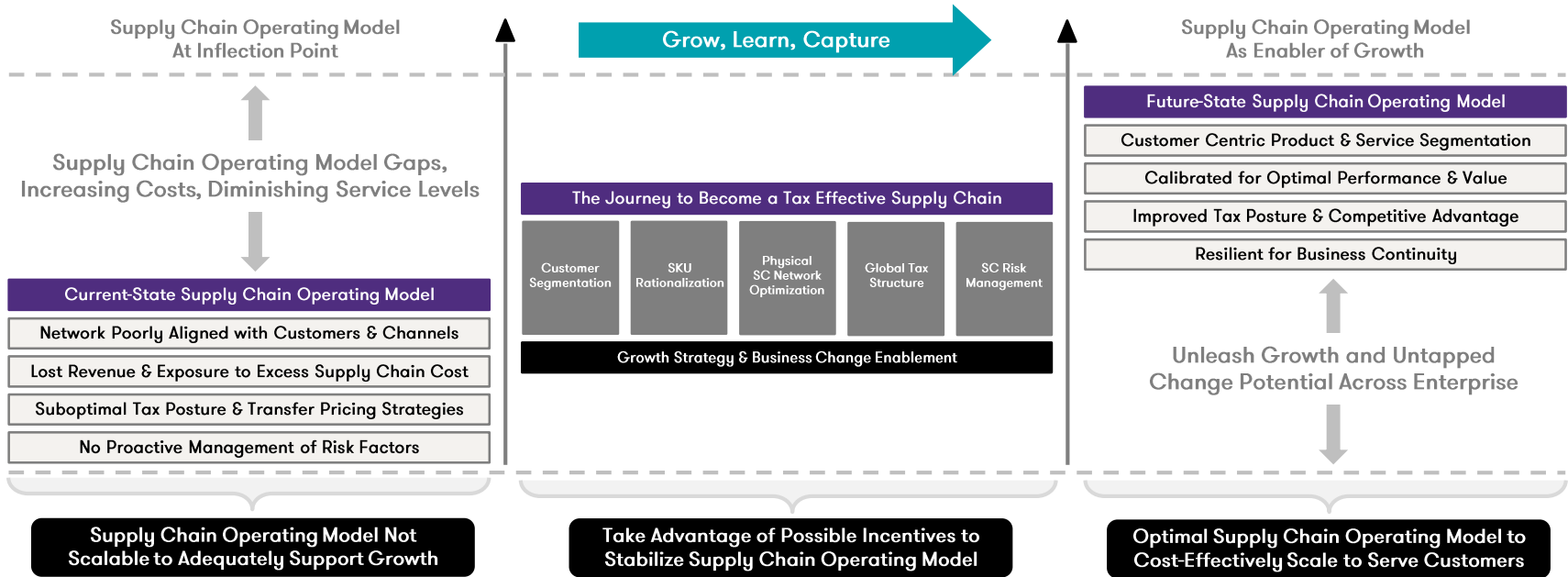
Tax effective supply chain planning framework in support of supply chain reshoring

Reshoring decisions can be best accomplished through simultaneous strategic, operational, financial, and tax planning.



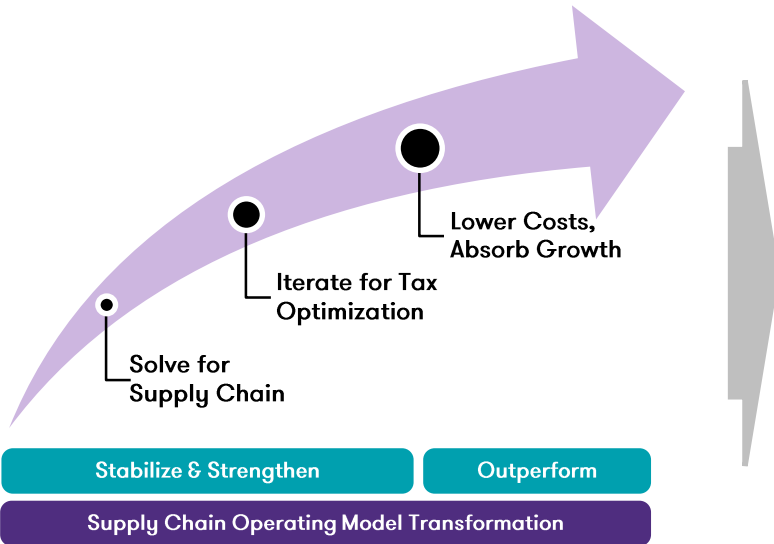
The case for tax effective supply chain planning

Increasing supply chain cost to serve is a major issues in all industries. That, combined, with the risk of supply chain disruption is why companies with the top performing supply chains routinely invest in tax effective supply chain planning to optimize their physical supply chain network and overarching tax posture



Summary path ahead & expected outcomes from supply chain reshoring

-- Path To Tax Effective Supply Chain Planning in Support of Reshoring --



-- Quantifiable Benefits to be Expected from Supply Chain Reshoring --

Order Fill Rates & Revenue	↑	<ul style="list-style-type: none"> • Unrealized revenue met through improved fill rates and product placement • Gross margins grow with optimal customer segmentation logic and service levels • Working capital increase through improved cash cycle conversion (inventory driven) • Cost to serve decreases through an optimal physical network and lower transit costs • Effective tax rate decreases through tax strategies, transfer pricing, and incentives • Supply chain disruption risk decreases through quantification & continuity planning
Gross Margins	↑	
Working Capital	↑	
Supply Chain Cost to Serve	↓	
Effective Tax Rate	↓	
Supply Chain Disruption Risk	↓	

Policy recommendations to support reshoring

Companies will have a choice and can reshore their supply chains into the United States. But, they will also consider other areas of the world that are low risk and competitive from a financial and tax perspective. If new legislation has the right policies, companies will be more likely to choose the United States.

The following policy recommendations will increase the probability that companies bring their supply chains back home:

- Further reduce the maximum federal tax on business and states should follow
- Long term investment tax credits for the cost of equipment and increase the deductions for these investments
- Simplify and expand the R&D tax credit and fund more R&D activities in key industry sectors
- Large tax incentives for the investment in automation that will be required given historical labor shortages
- Additional funding for the Manufacturing Extension Partnership operated at the state level to boost small businesses
- Increase the deduction of for interest on business loans paid by smaller private companies that do not benefit from being publicly traded
- Longer term reduction in payroll taxes

Current list of pending reshoring legislation

We are tracking the bills and how they progress.

Title	Sponsor	Cosponsors	Latest Action Date
Preventing Essential Medical Device Shortages Act of 2020	Sen. Loeffler Kelly (GA) R	1	3/12/2020
Preventing Drug Shortages Act	Rep. Peters Scott H. (CA-52) D	8	3/4/2020
Medical Supply Chain Security Act	Rep. Gallagher Mike (WI-8) R	5	3/2/2020
Medical Supply Chain Security Act	Sen. Hawley Josh (MO) R	1	2/27/2020
Strengthening America's Supply Chain and National Security	Rep. Waltz Michael (FL-6) R	15	3/25/2020
HOME Act	Sen. Peters Gary C. (MI) D	1	5/20/2020
PART Act	Sen. Peters Gary C. (MI) D	1	5/20/2020
CHIPS for America Act	Sen. Cornyn John (TX) R	11	6/10/2020

Polling question #3

Is your company considering reshoring the supply chain?

- Already underway
- Within the next 12 months
- Analyzing options now
- Not applicable for my business



Risk Informed Operations Restoration



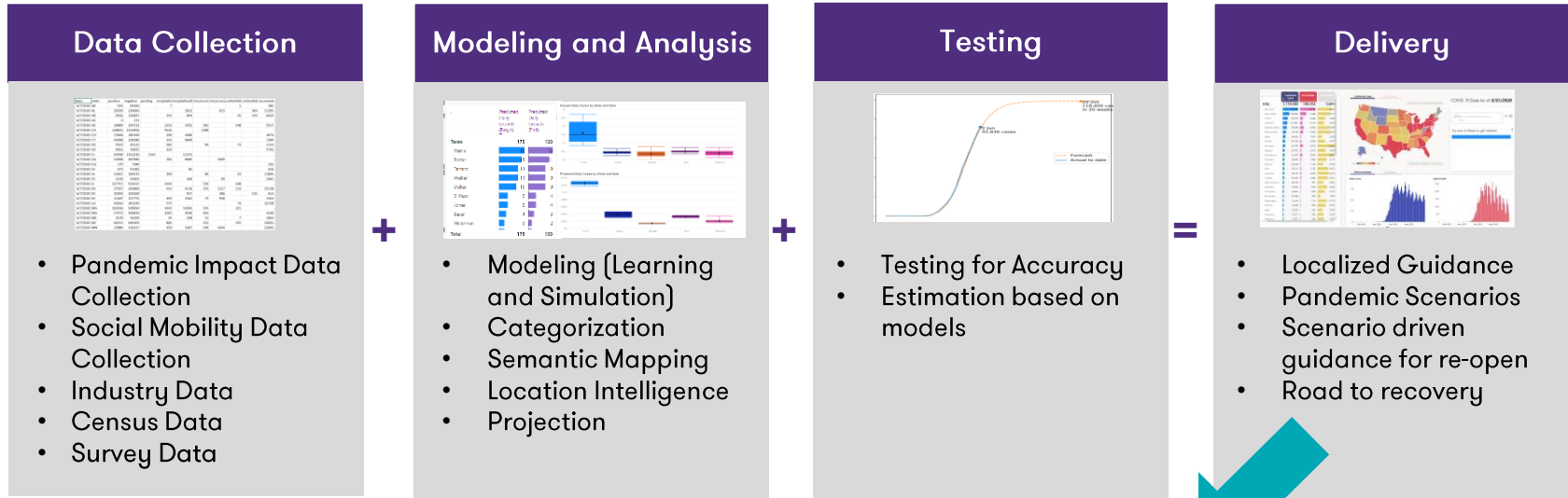
Primary objectives of organizations seeking to reopen

Every company we speak with is anxious to reopen, but few are able to quantify the risk or the financial benefit of reopening. And, most have similar objectives that are all well intended.

- Reopen key offices and other facilities quickly to resume core operations
- Continue serving customers with minimal prolonged business disruption
- Avoid exposing employees to unnecessary and unmitigated risks
- Understand where the most likely points of failure exist so they can be addressed
- Identify the key precautions and changes to “ways of working” that must occur
- Build a plan and checklist to drive the reopening process
- Measure the risk vs reward of reopening to determine when it should happen
- Quantify the expected financial impacts of the decisions that are made
- Strive to mitigate the possibility of future business disruption and harm to employees

Quantitative modeling for thorough analysis

We use a best practice approach to ensure that our model can be used to develop reports and scenarios that will give you and your organization actionable insights.



The document will introduce Grant Thornton's Pandemic Model, how it has been created, and how it can be used by your organization for your COVID go-forward plan.

Using our Pandemic Model

The Pandemic model uses several data sources to give us unlimited modeling results. Our data incorporates economic, social, and risk information to create a valuable output. Recent events and state / federal legislation requirements are also incorporated. Then, the model is tailored based on critical data inputs unique to your organization.

The Pandemic Model can be used to:

- ✓ Identify scenarios for actionable insights
- ✓ Determine a new path forward as businesses reopen
- ✓ Dictate a new normal for a post COVID-19 business environment
- ✓ Identify policies and procedures for reopen
- ✓ Determine timing for reopen (based on risk and benefit)
- ✓ Identify timing and likelihood of a Second COVID-19 Wave
- ✓ Identify levels of risk related to the Pandemic

The impacts of the COVID-19 Pandemic are **always changing**. Our Pandemic Model is updated **daily** using the most reliable and relevant data sources.

Data Source	Data Description
Johns Hopkins (GitHub)	Pandemic Impact – Infected and Deaths
COVID19 Tracking Project (GitHub)	Pandemic Impact – Testing and Hospitalizations
DesCartes Labs (GitHub)	Social Mobility – Cell Phone
Exante (Twitter)	Social Mobility – Traffic

Pandemic modeling scenarios inform reopening decisions

We have developed a complex Pandemic Model that incorporates key economic and COVID-19 cases inputs to predict scenarios that will allow your organization to implement the best reopen policies and procedures.

Key Inputs:

GDP

Unemployment

Supply and Demand

COVID Mitigation Events

Inflation



Prediction Scenarios

Scenario 1: Peaks and Valleys

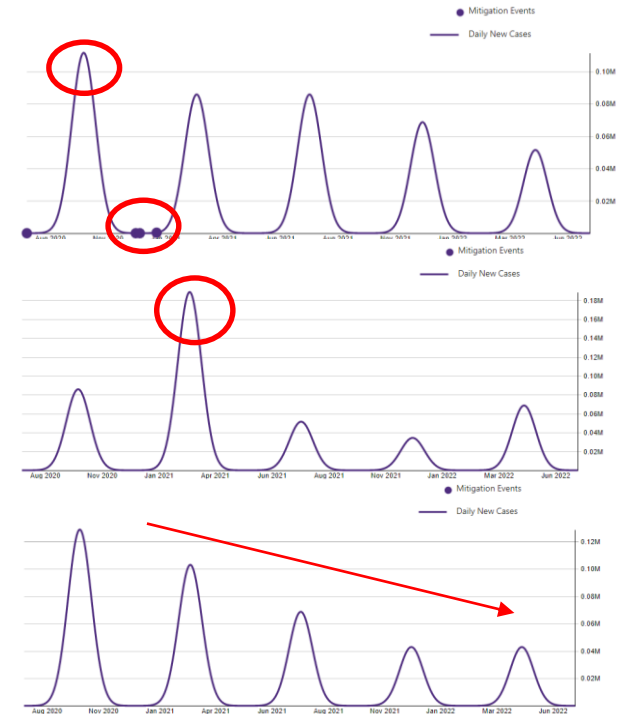
The spread of COVID-19 in Spring 2020 will be followed by smaller, repetitive waves that will occur into Summer 2020. These smaller waves are predicted to continue over a 1-2 year period, fading sometime in 2021. These peaks may vary by region and are directly affected by the mitigation measures that are in place.

Scenario 2: Fall Peak

The spread of COVID-19 in Spring 2020 will be followed by a large wave in Fall and Winter 2020. This larger peak will then be followed by smaller waves in 2021. This pattern is similar to what was previously experienced in the 1918-19 Spanish Influenza pandemic [CDC 2018].

Scenario 3: Slow Burn

The spread of COVID-19 in Spring 2020 is followed by a consistent and ongoing transmission and case occurrence. There is no clear wave pattern in the "Slow Burn" scenario. The "slow burn" seen here, may vary by region and is directly affected by the mitigation measures that are in place.



Country, state, and county specific modeling

This visual displays the key figures associated with the most recent confirmed cases and fatalities for the entire country.

Pandemic Summary

This dashboard provides details on the key health data (daily new and aggregate cases, fatalities as well as hospitalization).

Navigate to the state in the table or map view to see the data by state and click on the below buttons to go to the details dashboard for your selected state.

Data as of

7/30/2020

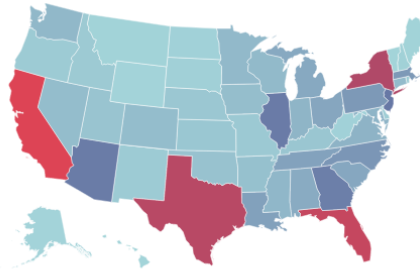
View actuals by county

View forecast by county

Confirmed Cases

Fatalities

	Confirmed Cases	Total Deaths	Fatality Rate
USA	4,322,149	145,892	3.38%
California		9,026	1.83%
Florida		6,430	1.42%
Texas		6,261	1.46%
New York		32,678	7.89%
New Jersey		15,809	8.77%
Illinois		7,306	4.22%
Arizona		3,626	2.12%
Georgia		3,589	2.17%
North Carolina		1,922	1.59%
Massachusetts		8,573	7.37%
Pennsylvania		7,194	6.21%
Louisiana		3,256	3.25%
Tennessee		1,017	1.05%
Ohio		3,442	3.84%
South Carolina		1,667	1.90%
Michigan		6,309	7.51%
Alabama		1,497	1.85%
Virginia		1,738	2.69%
Maryland		2,660	4.17%
Indiana		2,635	4.30%
Mississippi		1,611	2.80%
Washington		1,564	2.81%
Minnesota		1,476	2.63%

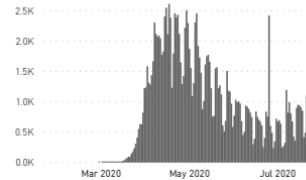
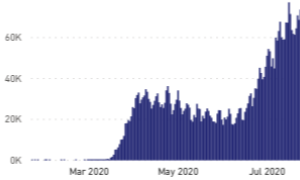


Daily

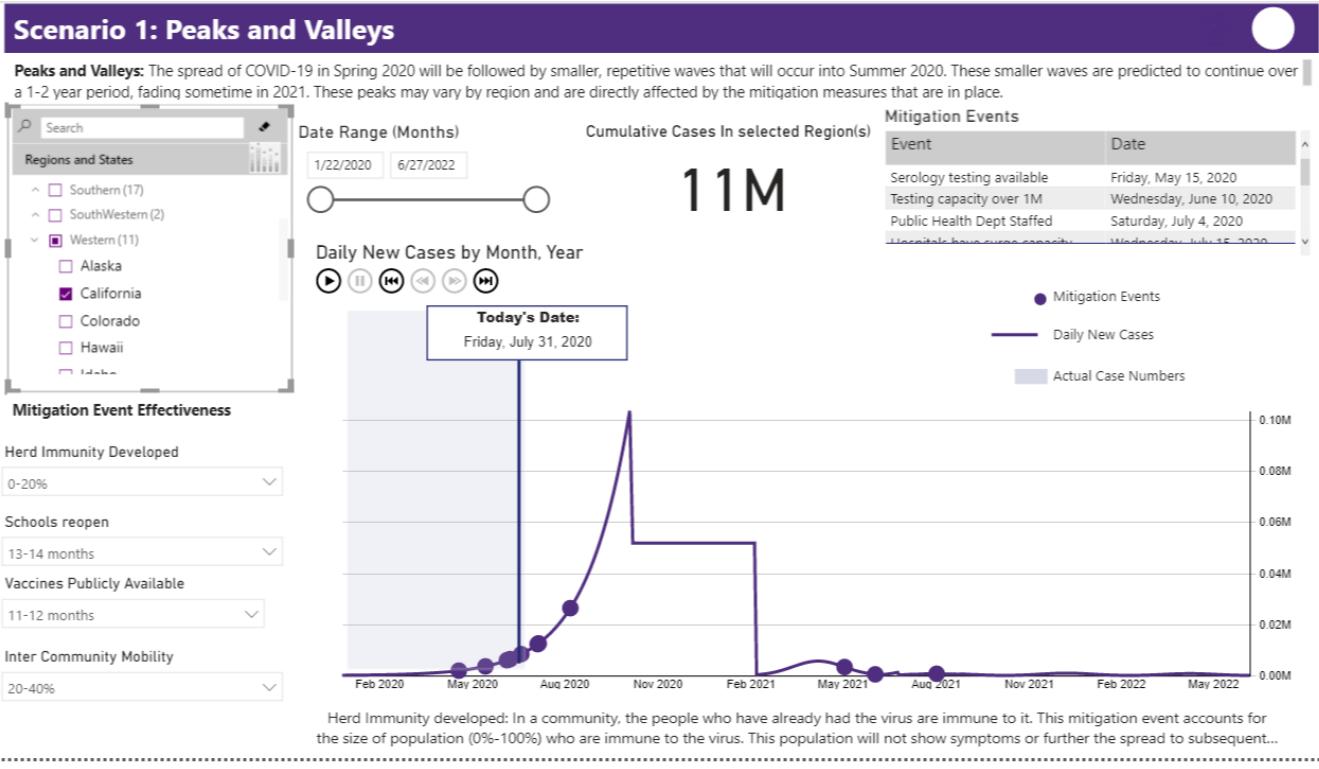
Aggregate

Confirmed cases

Fatalities



Scenario 1 - Peaks & Valleys: example

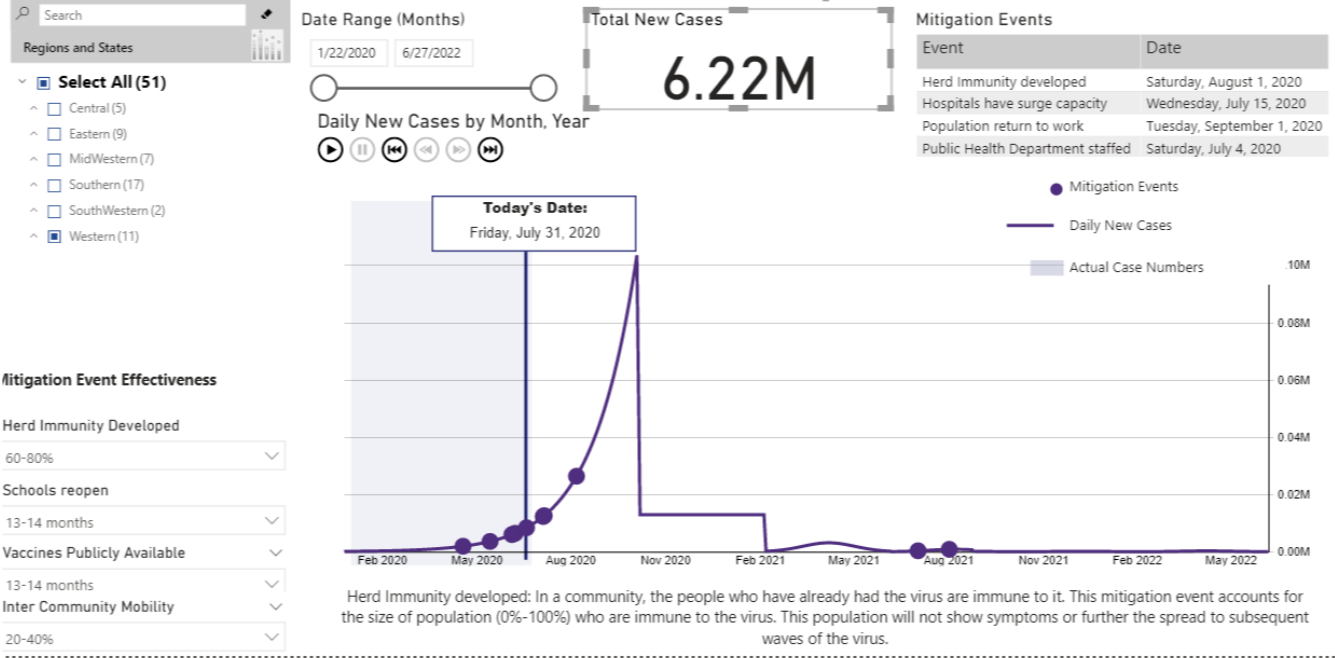


Scenario 2 - Fall Peak: example

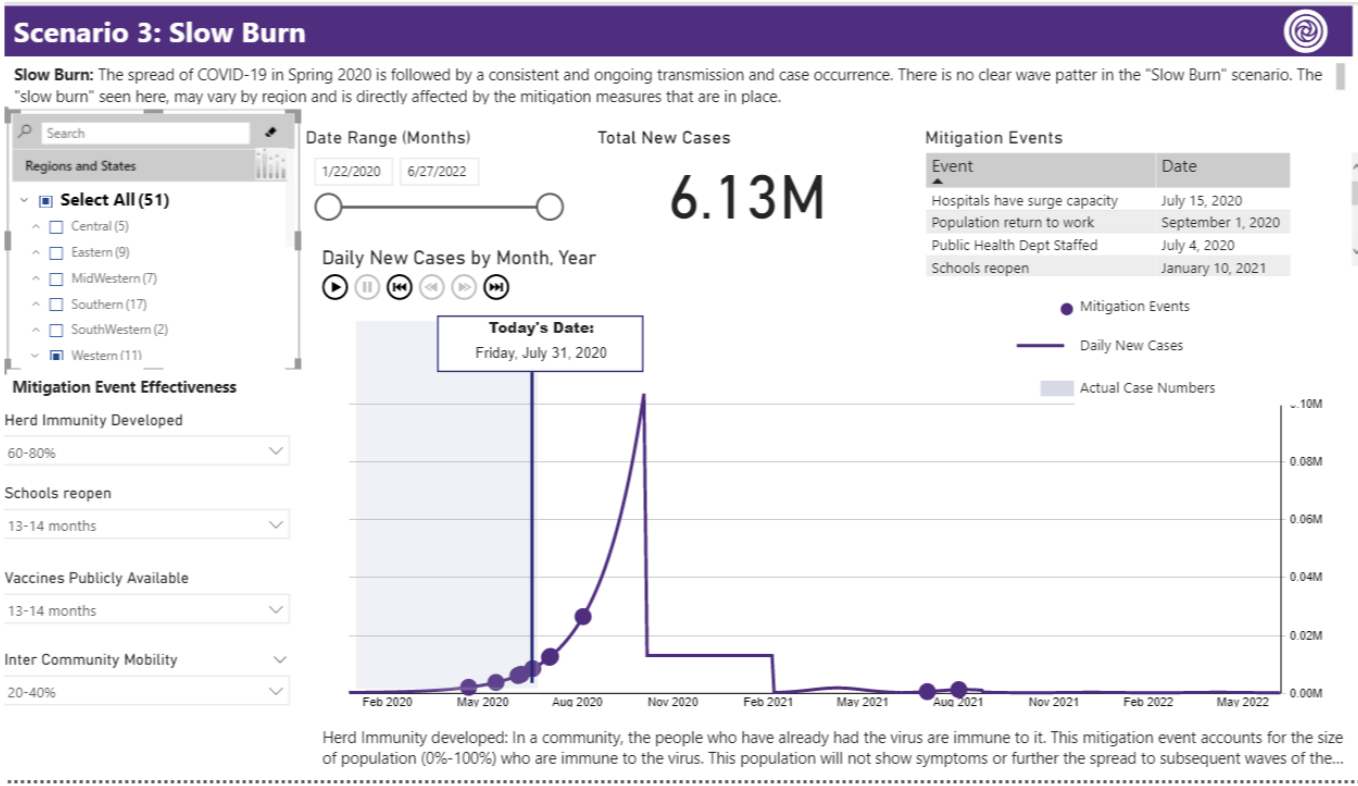
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Fall Peak: The spread of COVID-19 in Spring 2020 will be followed by a large wave in Fall and Winter 2020. This larger peak will then be followed by smaller waves in 2021. This pattern is similar to what was previously experienced in the 1918-19 Spanish Influenza pandemic (CDC 2018).



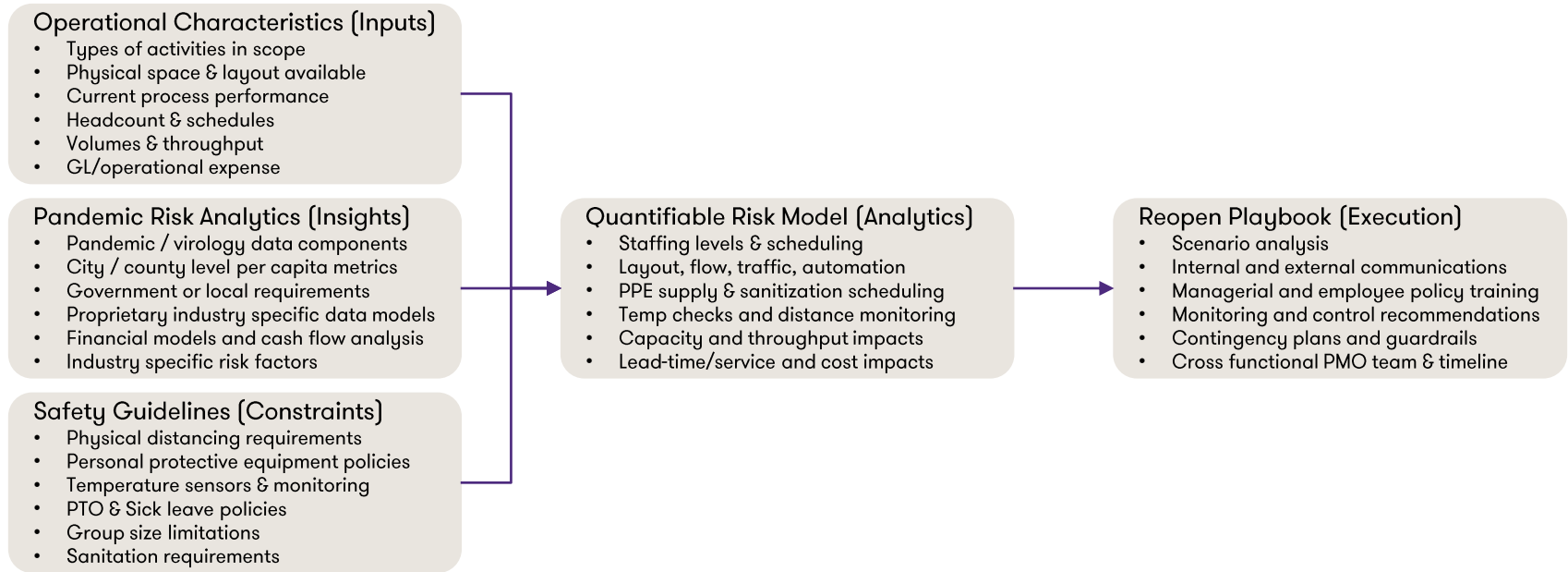
Scenario 3 – Slow Burn: example



High level framework for modeling inputs and analytics

The Operations Restoration Framework helps accelerate re-opening while ensuring safety protocols and compliance to applicable regulations and policies to protect employees, the business, and customers.

The diagram is a high level example of how we create your organization's unique risk model to inform the reopen playbook.



Thank you for attending



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