

# After the Dust Settles...

Fundamental Changes for the Supply Chain in a Post-Covid-19  
World

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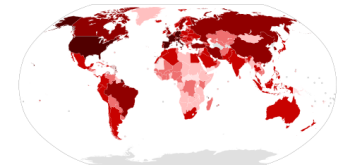
ASCM Orange County Chapter

# What Covid-19 Was...

- Not a Black Swan Event
  - Black Swans – “Unknown Unknowns”
  - Pandemics Have Been Known for Millenia
  - Bill Gates Predicted a Worldwide Pandemic in a 2014 TED Talk
  - The World was Simply Unprepared
- An Accelerant for Change
  - What were Once Viewed as Trends Matured Overnight
    - Technology Enabled Workforce (AI, Digital Transformation)
    - Work From Home (WFH) is here to Stay
    - Reduced Business Travel – Rise of Teleconferencing
    - Serious Damage to B&M Retailing – Rise of E- commerce



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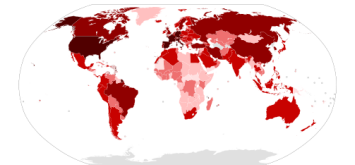


# Covid-19 Proved...

- Supply Chain Priorities were Misaligned
  - Focus on Cost Reduction should have been a Focus on Risk Reduction
  - Focus on Efficiency should have been a Focus on Effectiveness
  - Focus on Inventory Visibility should have been a Focus on Supply Chain Visibility
- Supply Chains proved to be Fragile when what was needed to be was Resiliency
- Relationships with Suppliers and Customers are Important
  - Companies that had Strong Relationships with Suppliers and Customers Fared Better
  - Paid Suppliers Faster or Received Better Payment Terms from Customers
- Supply Chain Models Were not as Sophisticated as We Thought



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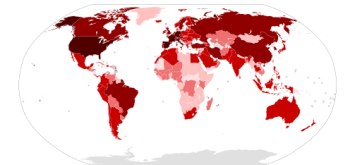


# Characteristics of Post-Covid Supply Chains

- Supply Chains Must Become Resilient and Agile to Adapt to Challenges, Changes, Opportunities and Threats
- Eight Recommendations (Arranged from Broad to Specific)
  - Create a Vision and Culture of True End-to-End Visibility
  - Leverage Technology Compatible with the Vision and Culture
  - Implement a Continuous Improvement (CI) Program
  - Emphasize Planning over Forecasting
  - Segment Supplier and Customer Bases
  - Develop a Supply Chain Risk Analysis Plan
  - Transition from Purchasing to Procurement
  - Implement Sales & Operations Planning (S&OP)



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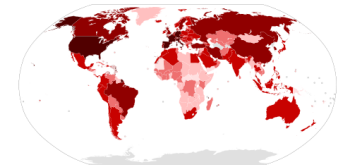


# Create a Vision and Culture of True End-to-End Visibility

- What is a Vision?
  - A statement of aspiration – What we want our company to be
  - Desired state
  - Short, clear, and to the point
  - The Vision should be Shared with Everyone
- What is Culture?
  - It is the sum of an organization's beliefs and behaviors tempered by the customs, morals and goals of the group
  - It is how people act when the boss isn't around
  - Cultures are developed through tradition and organizational change



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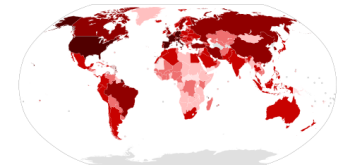


# Create a Vision and Culture of True End-to-End Visibility

- What is End-to-End Visibility?
  - The ability to track material from the time it is ordered to when it is consumed, used, sold and delivered to the customer or other end user
  - At any point in the supply chain
  - By item, serial number, lot number, date code, etc.
  - Best Realized Through Digital Transformation
- Leverage Auto ID
  - Barcode & 2-D
  - RF Tags
- Transparency in Operations and Processes
  - Integrated databases
  - Shared KPI's



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# Create a Vision and Culture of True End-to-End Visibility

- Requirements

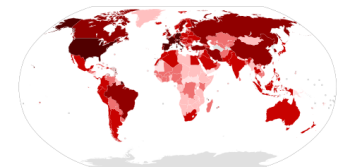
- Inclusive / Participative – not “Command & Control”
- Embraces change and a free exchange of ideas
- Free and open communication in all directions, up, down and across
- Process, not function driven – No silos!
- Allows experimentation, learning and failure

- Requires Extensive Organizational Change Management (OCM) Expertise

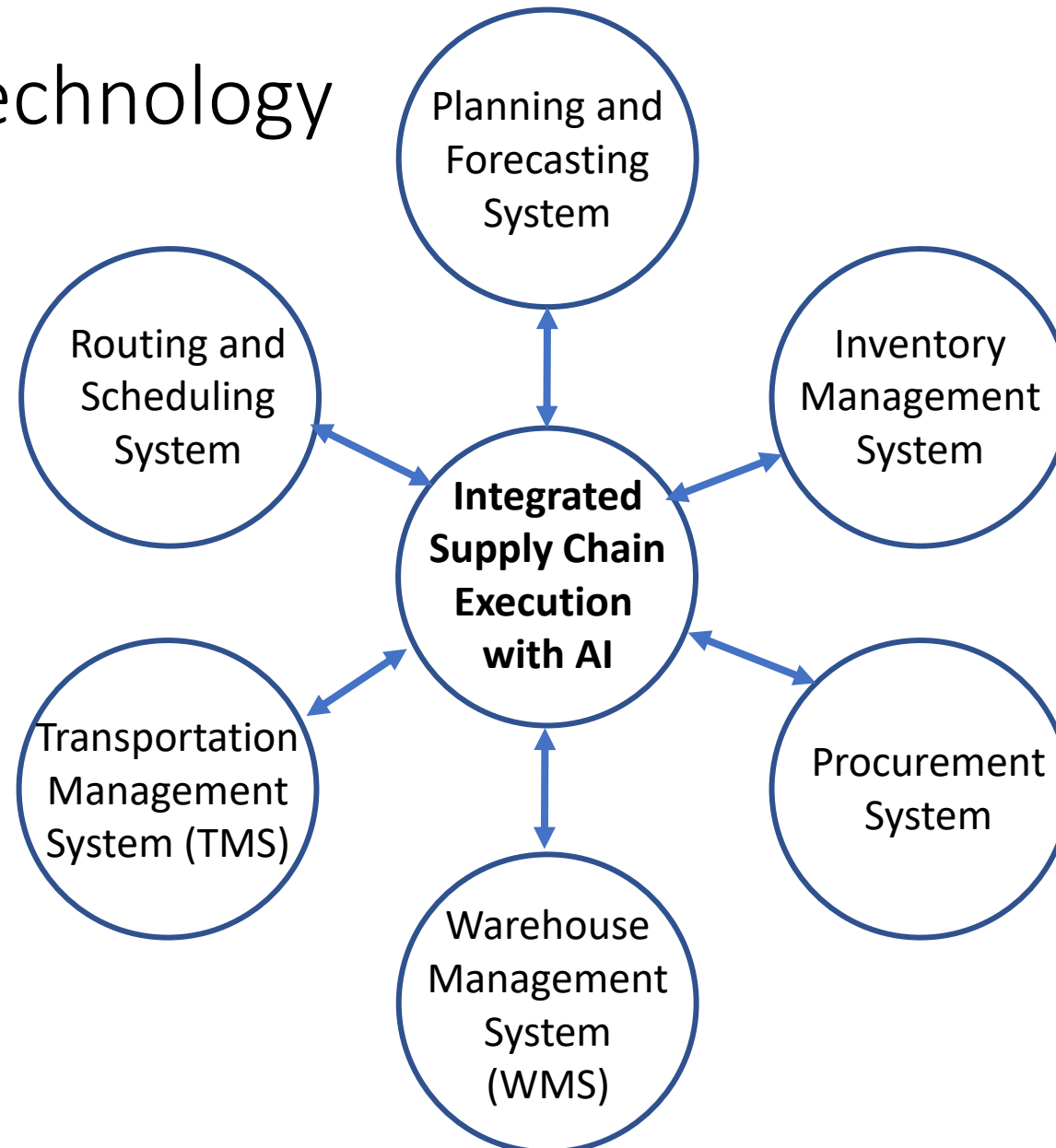
- Communicate early and often through extensive discussions with unions / hourly employees / management
- Develop trust at all levels – change must be viewed as an opportunity not a threat



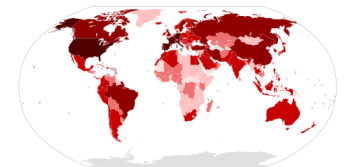
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# Leverage Technology



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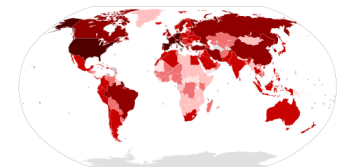


# Leverage Technology

- Technology must be Consistent with the Vision, Strategy and Culture
- Combine Commercial Off-the-Shelf (COTS) Software Systems into an Integrated Supply Chain Management System
  - Minimize customization
  - Integrated into SaaS and Cloud services
- Incorporate Artificial Intelligence in Decision Making Processes
- Transparency Driven by Dashboards and KPI's Accessible to All
- Technology Should be Viewed as an Investment rather than an Expense
  - Subject to development of a business case and subject to ROI / payback analysis
  - Periodically review to ensure it is meeting the organization's needs



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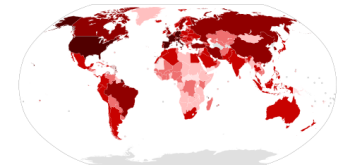


# Leverage Technology

- Planning and Forecasting System
  - Emphasize planning over forecasting
    - Planning – process of selecting strategies to achieve a goal based on assumptions for the future including forecasts and objective and subjective information
    - Forecasting – using past and present data to create a model for the future based on assumptions, postulates and a certain degree of guessing
- Inventory Management System
  - Tracks inventory levels (RM, WIP, FG, MRO)
  - Tracks inventory accuracy through cycle counts



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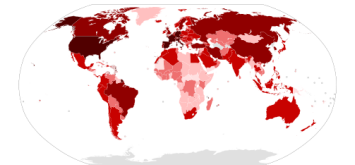


# Leverage Technology

- Procurement System
  - Automates the purchasing process – allowing for “Higher Level” Procurement Decisions
  - Allows supplier segmentation
  - Cuts purchase orders and blanket orders
  - Allows logical bid analysis
- Warehouse Management System (WMS)
  - Controls all warehouse operations (ASNs, receiving, putaway, picking, shipping)
  - Directs picking and putaway (interleaving)
  - Labor system (bolt-on) manages staffing and budgeting



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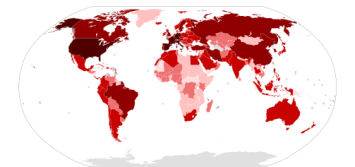


# Leverage Technology

- Transportation Management System (TMS)
  - Manages inbound transportation
  - Manages outbound transportation (parcel, LTL, TL)
  - Audits freight bills (inbound and outbound)
- Routing and Scheduling System
  - Optimizes route planning
  - Tracks assets via GPS
  - Plans delivery schedules
  - Reports early / late deliveries



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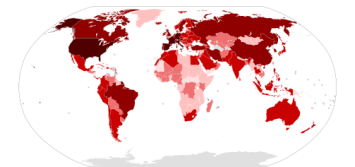


# Implement a Continuous Improvement (CI) Program

- Improvement of Products, Services and Processes with Incremental and Breakthrough Improvements
  - Focus on fundamentals for reducing cost and cycle time and improving processes
  - Provide company-wide training (all levels of the organization)
  - Utilize tools of Lean Management and Six Sigma
- Publicize Results
- Share Tangible Savings Wherever Possible and / or Appropriate



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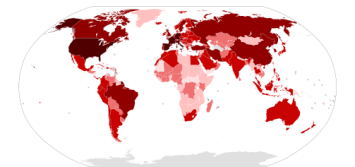


# Emphasize Planning over Forecasting

- Planning – process of selecting strategies to achieve a goal based on assumptions for the future based on objective and forecast information
  - Explains a course of action and explains the strategic thinking behind it
  - Identifies responsible parties, timing and expected results
- Forecasting – using past and present data to create a model for the future based on assumptions, and postulates
  - “Educated guess”
  - Two kinds of forecasts, lucky and lousy



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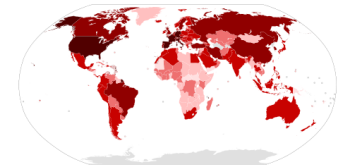


# Segment Supplier and Customer Bases

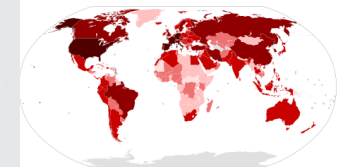
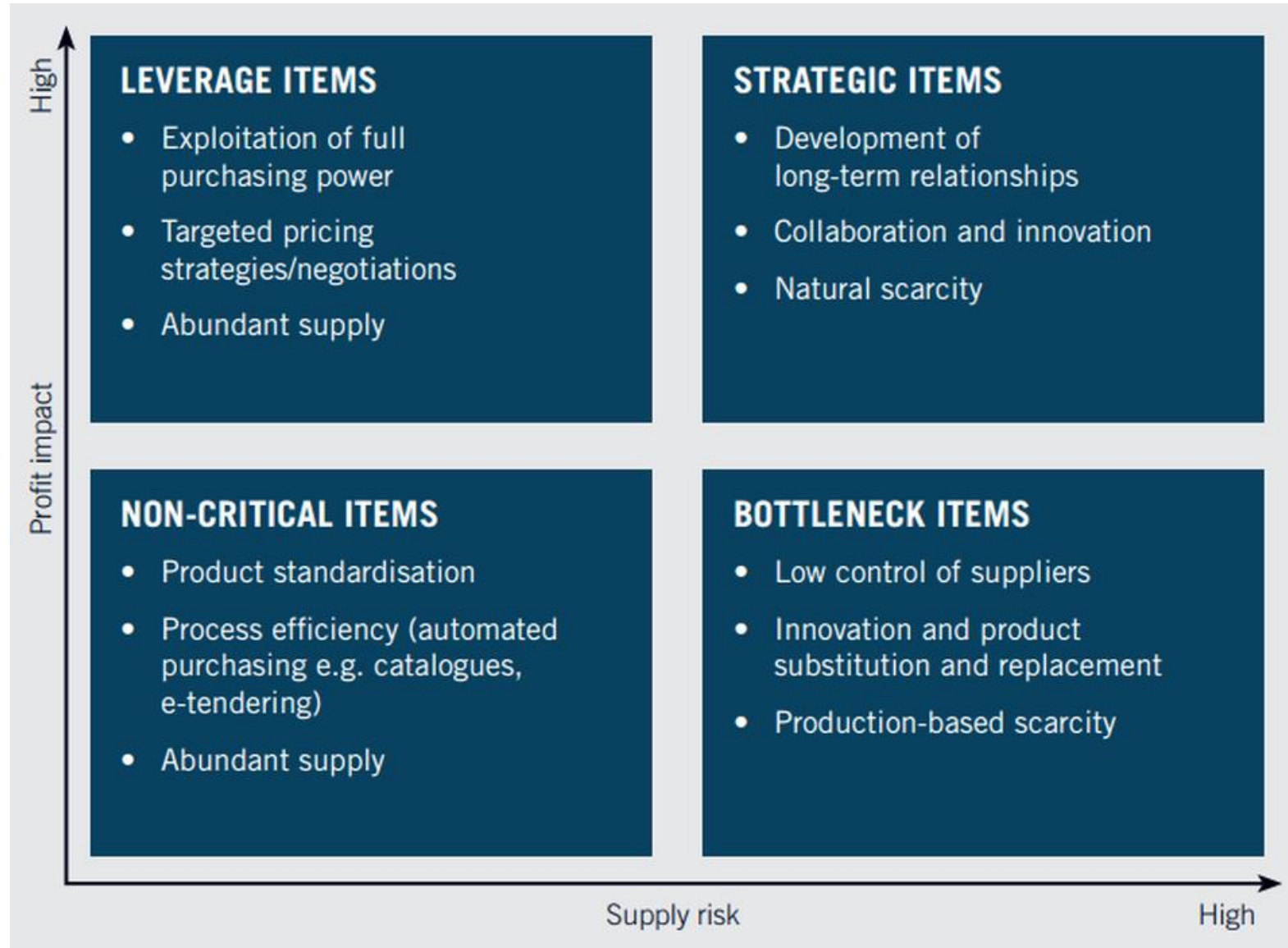
- One Size Does Not Fit All
- Supplier Segmentation - Procurement
  - Kraljic Matrix
  - ABC Classification
  - Supplier Performance
- Customer Segmentation - Sales
  - ABC Segmentation
  - Profitability
  - Demographic
  - Geography



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# Kraljic Matrix



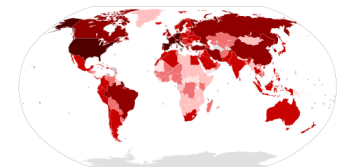


# Customer Segmentation Example

Main Bases of Segmentation			
Geographic	Demographic	Behavioural	Psychographic
e.g. "Customers 10 miles or more outside of a major metropolitan area."	e.g. "College students ages 18-24."	e.g. "Customers wanting a competitive edge on graduate admissions applications."	e.g. "Students who are interested in sustainability and environmental issues."
Location Region City/Town/State	Age Gender Occupation Socio-economic Group	Benefits sought Loyalty status Ready to buy Early adopters	Lifestyle Attitude Education Level Class Personality



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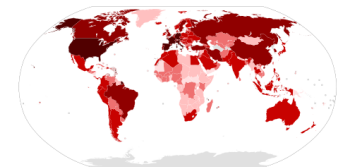


# Develop a Supply Chain Risk Analysis Plan

- Develop an Integrated Team Structure
- Develop a Comprehensive List of Risks
- Calculate the Risk of Probability and its Cost Impact
- Develop a Mitigation Strategy for Each Risk
  - Acceptance – there is nothing you can do about it
  - Transference – make it the responsibility of another party
  - Avoidance – eliminate the risk
  - Reduction - lessen the impact
- Monitor Risks and Update



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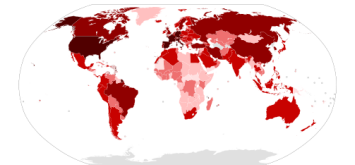


# Transition from Purchasing to Procurement

- Automate Procurement Process
- Minimize Transactional Purchasing (low volume / specialty)
- Segment Suppliers Based on Supply Chain Vision and Strategy
  - Kraljic Matrix
  - Geography
  - Supplier Performance
- Develop Relationships with Critical Suppliers
- Develop Partnerships with Suppliers
  - Improve Existing Products
  - Develop New Products



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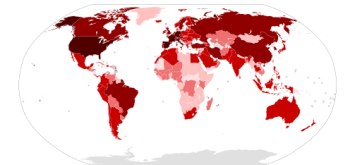


# Implement Sales & Operations Planning (S&OP)

- S&OP – a Process by which a Single Plan is Developed for use by Sales, Marketing, Production, Distribution, Finance and Company Executives
- Monthly Planning Cycle
- The Goal is to Balance Demand and Supply – “One Version of the Truth”
- 5-Step Process that Includes Data Gathering, Demand Planning, Supply Planning, a Pre-S&OP Meeting, and an Executive S&OP Meeting



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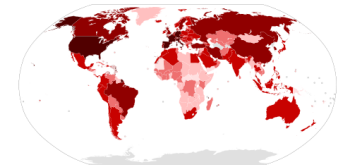


# After the Dust Settles...

- The Most Successful Companies will make a Paradigm Shift from “Profit First” to “People First” and Playing the Long Game
  - This is the result of Transitioning to a Vision and Culture of True End-to-End Visibility
    - Take Care of Employees, Customers, and the Environment and the Profits will Follow
  - Circular Supply Chains will Gain in Importance and Prevalence
    - To Fix the Environment We Must Fix the Economy
  - Increasing the Level of Engagement Reduces Turnover, and Improves Attendance and Productivity



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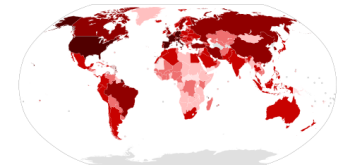


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- The Face of Companies is Changing, Resulting in Major Changes in their Supply Chains
- Supply Chains will Focus on Effectiveness vs. Efficiency
- The New Supply Chain Paradigm will be Resiliency + Agility = Adaptability
  - Adapt – able to adjust to new conditions or environments or modified for a new purpose
  - Resilient – ability to withstand or recover from difficult conditions
  - Agile – ability to change directions
- The New Supply Chain Paradigm will address any Challenge, Change, Opportunity, or Threat



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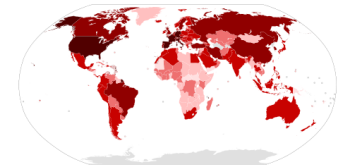


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- Other Supply Chain Changes include:
  - Governments will provide incentives, subsidies, and/or mandates to insure supplies of certain items
  - Organizations will Shorten Supply Lines (nearshoring and reshoring)
  - Companies will revise investment models to include expansion capacity
- However, There will Always be a Gap between the Virtual and Physical Worlds
  - Investment Cycles take Years
    - Three Year Timeline to Implement AI Software
  - We must narrow this Gap!



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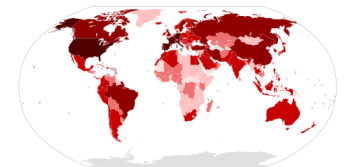


# Further Reading

- *Thinking Fast and Slow* by Daniel Kahneman
- *The Future after Covid* by Jason Schenker
- *The Infinite Game* by Simon Sinek
- *After the Dust Settles* by Gary A. Smith *Supply Chain Management Review, November 2020*



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Questions

Thank You!