TOP TOOLSETS TO CREATE A Resilient supply chain

Using data to make more informed and strategic decisions will produce

significant results

DESCRIPTIVE

Problem/ Challenge	Type of Data Analysis and Measurement Needed
 Limited process visibility or 	Key performance indicators
standardization	Descriptive statistics
Unknown pain points within processes	 Process capability analysis
Unknown inefficiencies within supply	Process maps
chain	Value stream maps
	Supply chain maps
	Total cost of ownership
	 Supplier risk rating and categorization

DIAGNOSTIC/PREDICTIVE

Problem/ Challenge	Type of Data Analysis and Measurement Needed
 Siloed systems for measuring sales, operations, inventory, capacity planning, cashflow etc. No checks and balances in place for reviewing processes, compliance, or existing systems Unknown risks within the supply chain No control mechanisms 	 Process reviews Collaborative sales and operations planning (S&OP) Inventory, resources, capacity, cash Corrective/preventive action program Audits Compliance, system, process Supplier owned inventory Failure mode and effects analysis (FMEA) Risk assessment questionnaires Risk mitigation and contingency plans Establish control plans (at control points) Significant factors analysis

PRESCRIPTIVE

Problem/ Challenge	Type of Data Analysis and Measurement Needed
 Fragmented/siloed systems 	 Integrated system architecture (Industry 4.0)
Supply chain not operating at an	• Optimization: Minimize risk, Maximize Cash, etc.
optimal level	 Supplier portfolio
Limited inventory visibility or	 Supply chain reliability
automation	 Mitigation programs
Too much inventory to control	 Inventory
manually	 Resource allocation
	 Transportation and logistics

Source: Sherwin, M., & Carmona, J. (2020, July 23). Risk Management and Resilience Engineering Strategies for Supply Chains [PDF]. Institute of Industrial & Systems Engineers. Webinar