

Operations and Supply Chain Management:

Overview and Strategic Imperative



- Operations manage plan, source, make, deliver, return; supply chains connect the network



- 2026 structural shift: disruption is the operating baseline, not a cyclical event



- 'Total Value' now displaces pure resilience as the primary supply chain objective



- Strategy aligns through order winners and order qualifiers; cost-service trade-offs frame decisions



- Evidence: 94% innovating in risk and resilience, 73% transforming operating models, 77% report talent gaps

The 2026 Operating Context: Disruption, Trade, and Energy Realities



- Disruption is now continuous, not cyclical: multiple material events weekly



- Confidence in preparedness is falling even as readiness is claimed



- External pressure stack: tariffs, geopolitics, cyber, supplier fragility, inflation



- 58% forecast more regionalized supply chains by 2030



- Energy reliability (40%) now outranks labor cost (36%) as a location driver



- 89% faced energy disruptions in the past year; 83% expect an energy crisis



- 73% still absorb financially material disruption losses each year



TARIFFS



GEOPOLITICS



CYBER



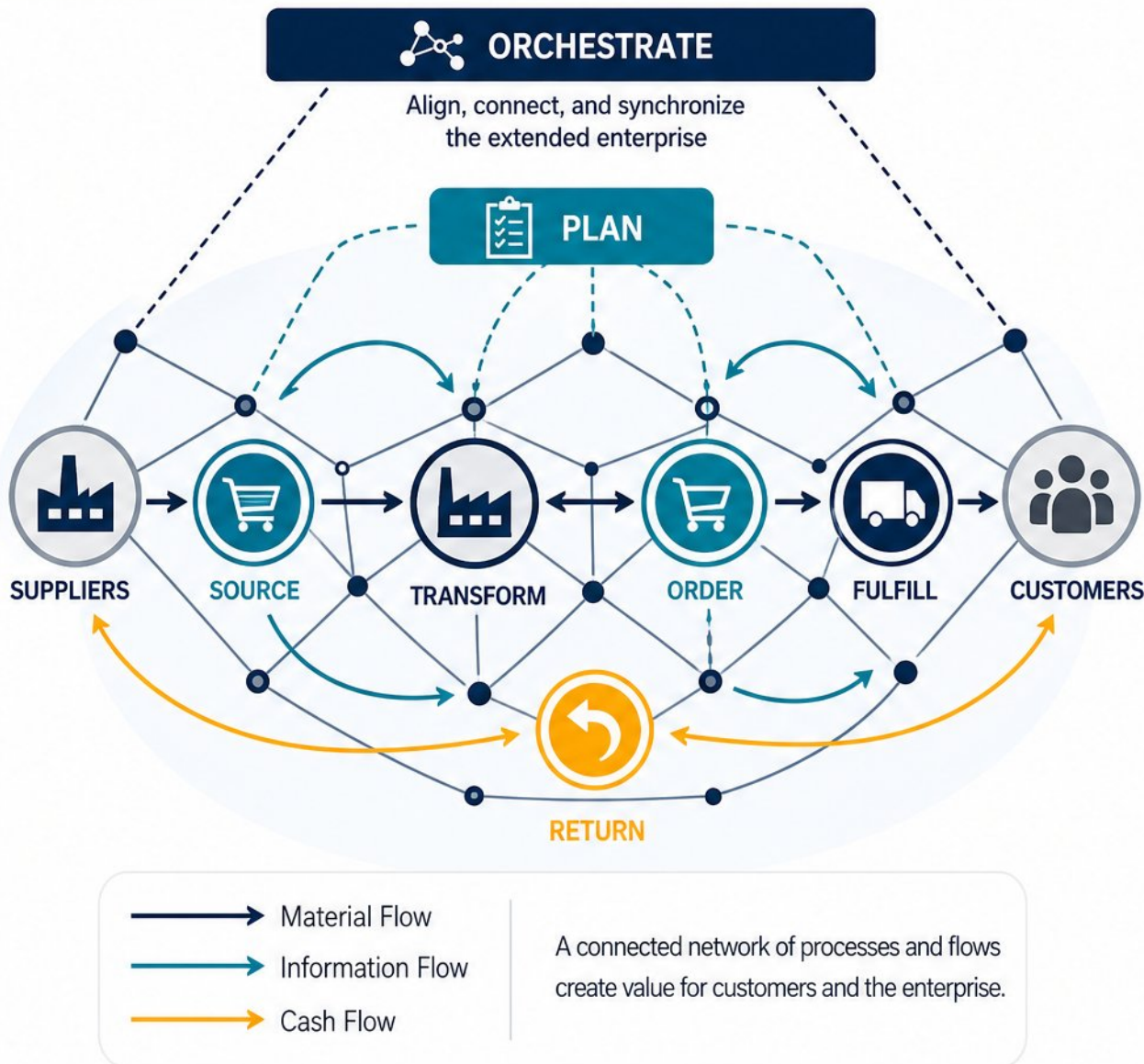
SUPPLIER
FRAGILITY



INFLATION



Core Concepts: Process View, Flows, and the Value Chain



- **Map the network, not a linear chain:** SCOR DS processes — Orchestrate, Plan, Source, Transform, Order, Fulfill, Return



- **Core flow measures:** lead time, cycle time, throughput, capacity, utilization — and how they interact daily



- **Little's Law:** inventory = throughput x flow time; explains queues, congestion, and WIP buildup

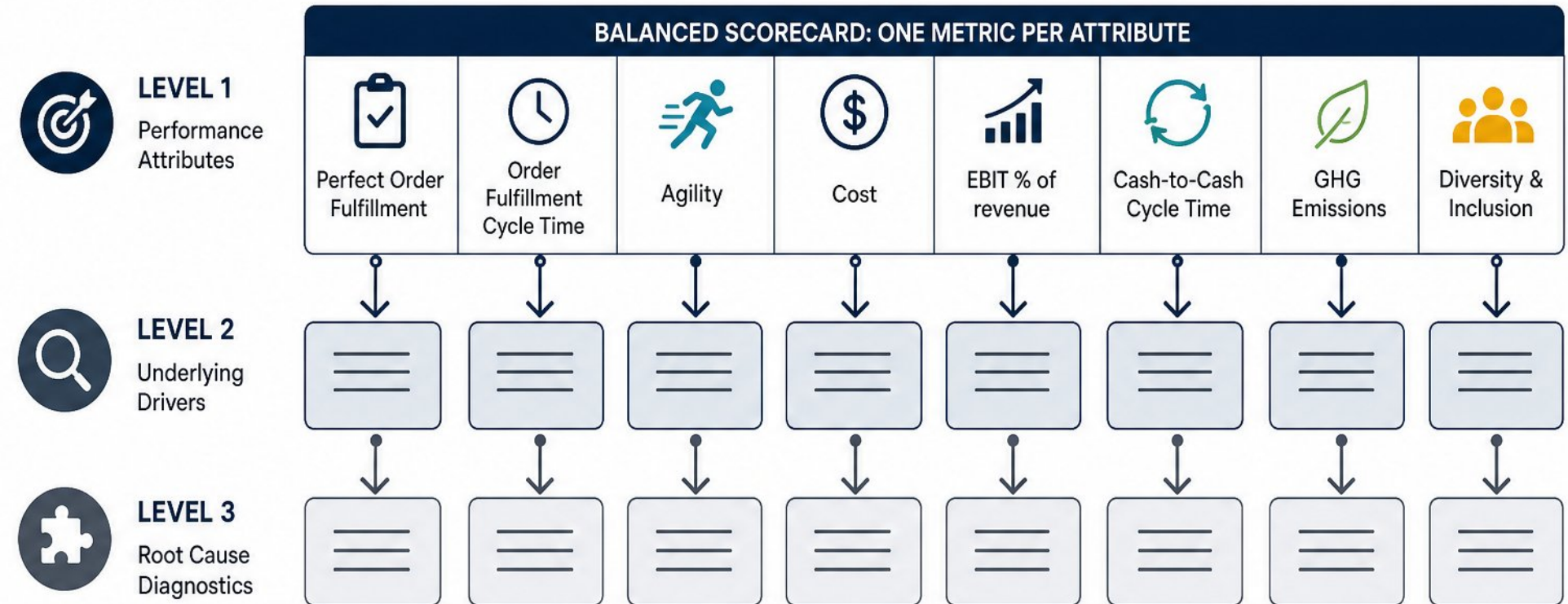


- **Three performance categories:** customer (resilience), internal (economic), outward (sustainability)



- **Competitive priorities from process choices:** cost, quality, speed, flexibility, dependability, sustainability

Performance Metrics and the SCOR Framework



- SCOR: eight performance attributes across resilience, economic, sustainability



- Level 1 KPIs: Perfect Order Fulfillment, Order Fulfillment Cycle Time, Agility



- Cost, EBIT % of revenue, Cash-to-Cash Cycle Time, GHG Emissions, Diversity & Inclusion



- Level 2 and 3 metrics diagnose root causes of Level 1 gaps



- Balanced scorecard: at least one metric per attribute, avoids single-dimension bias

Demand Planning, Forecasting, and Integrated Business Planning



- Independent vs. dependent demand: different logic, different forecasting methods



- Techniques: moving average, exponential smoothing, regression, demand sensing



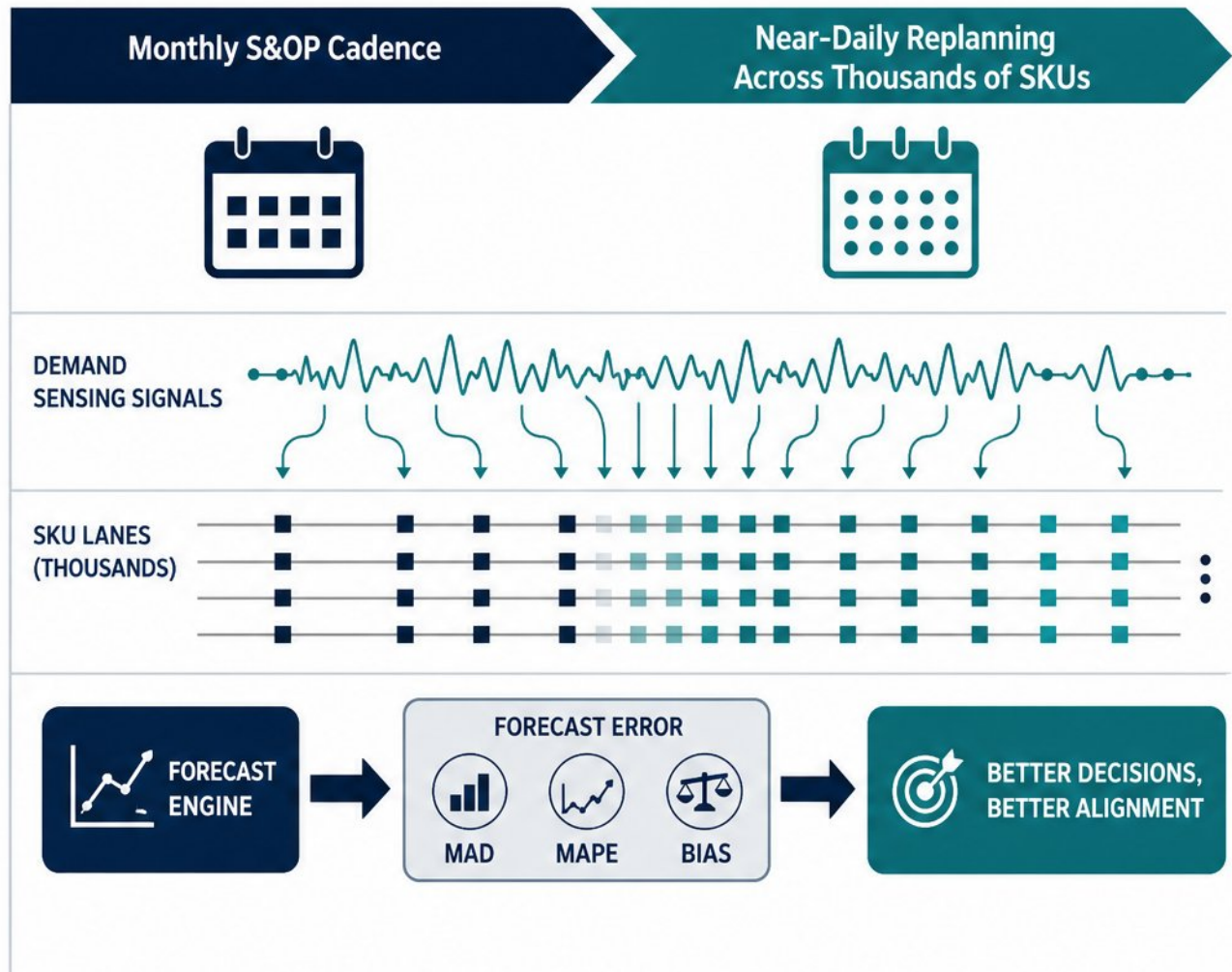
- Forecast error: MAD, MAPE, and bias reveal process quality



- S&OP and IBP align demand, supply, finance, and commercial commitments



- Leading firms push monthly S&OP toward near-daily replanning across thousands of SKUs



**MATURITY /
SEQUENCING ROADMAP**



FOUNDATION
Understand demand
and data quality

INTEGRATION
Align functions and
establish S&OP

COLLABORATION
Extend to IBP and
cross-enterprise
alignment

CONTINUOUS
Replan frequently
and adapt in
real time

Inventory Management and Working Capital Discipline



- Classify inventory by purpose: cycle stock, safety stock, in-transit, seasonal buffers



- Calculate EOQ, reorder point, and safety stock against service level targets



- Segment with ABC and XYZ analysis to focus attention where value and variability concentrate



- Inventory drives cash-to-cash cycle through DSO, DIO, and DPO



- Push vs. pull, VMI, consignment: buffers alone do not explain superior performance

FORMULAS



$$EOQ = \sqrt{(2DS / H)}$$

$$\text{Reorder Point} = (\text{Average Daily Demand} \times \text{Lead Time}) + \text{Safety Stock}$$

$$\text{Cash-to-Cash Cycle} = \text{DSO} + \text{DIO} - \text{DPO}$$

INVENTORY BY PURPOSE



CASH-TO-CASH CYCLE



REPLENISHMENT STRATEGIES



THE TRADE-OFF AXIS



COST



SERVICE



RESILIENCE

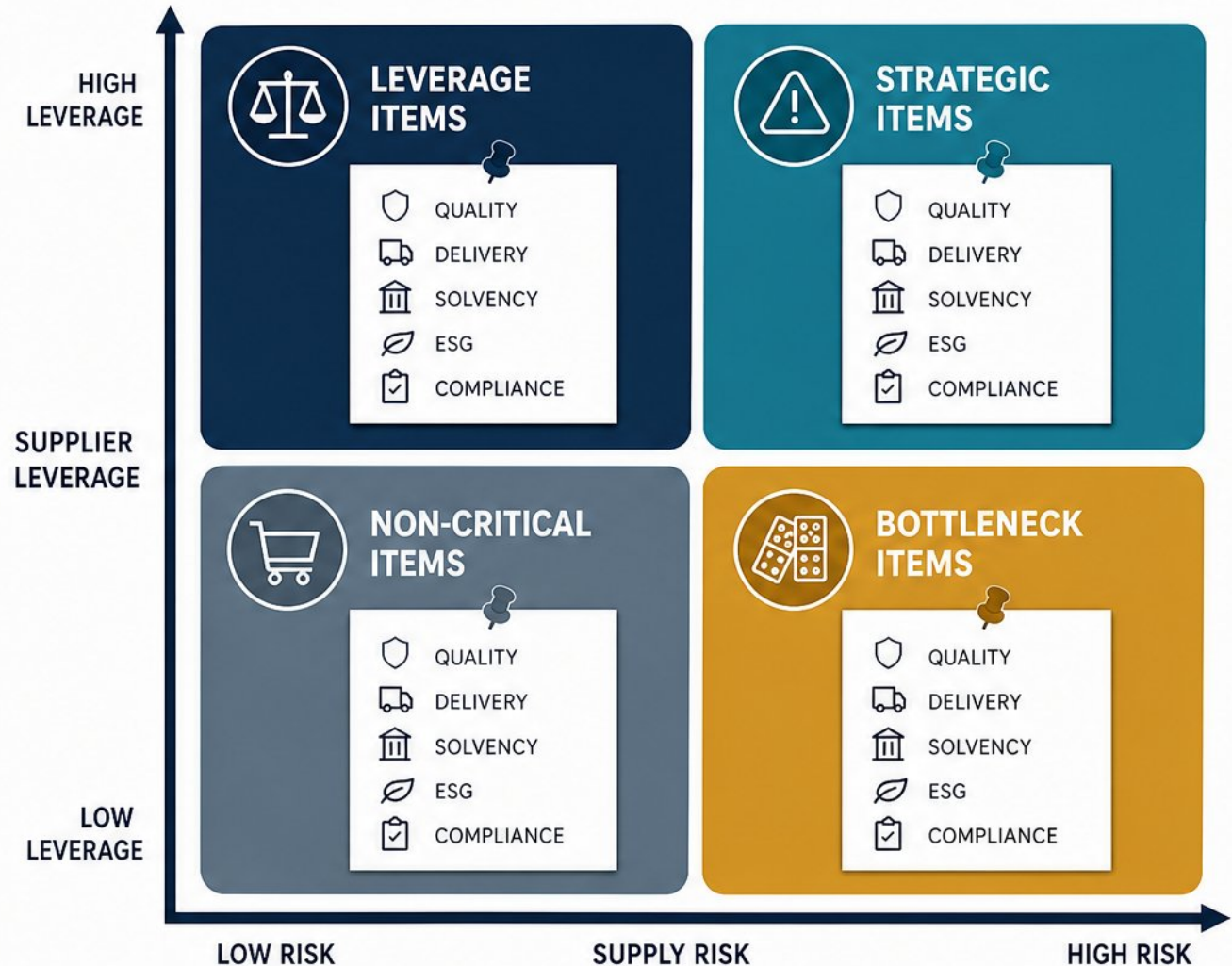
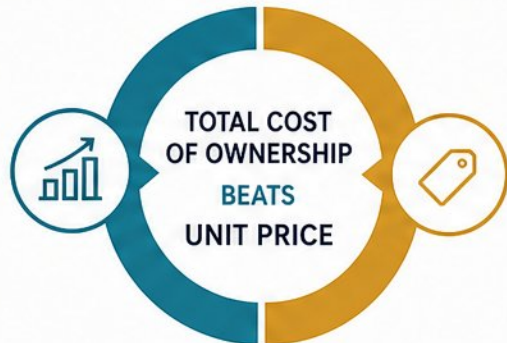


SUSTAINABILITY

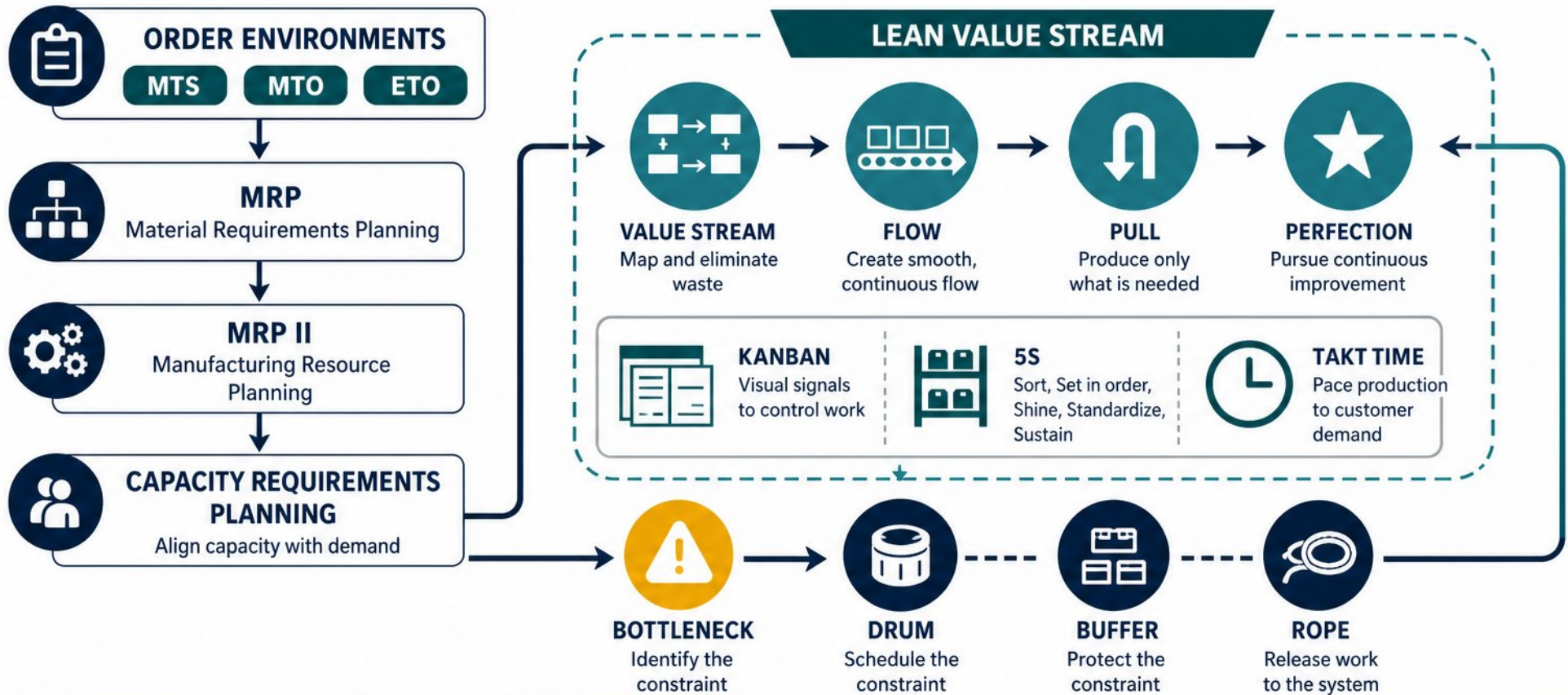
Procurement, Sourcing, and Supplier Relationship Management



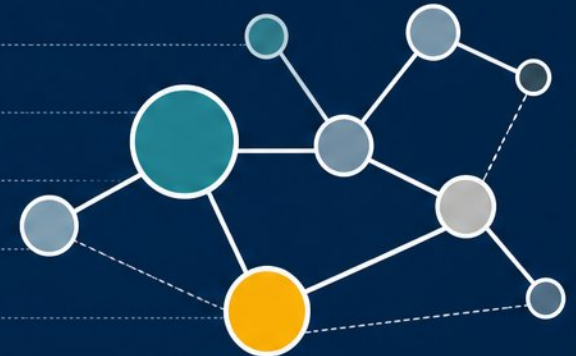
- Source-to-pay process; centralized or Global Business Services models
- Total cost of ownership and should-cost analysis beat unit price
- Kraljic matrix segments suppliers by leverage, risk, and spend
- Supplier scorecards: quality, delivery, solvency, ESG, compliance thresholds
- Treat supplier development, collaboration, and ethical sourcing as core duties



Production Planning, Scheduling, and Lean Operations



- ✓ MTS, MTO, and ETO environments each demand different planning logic
- ✓ MRP, MRP II, and capacity requirements planning in the hierarchy
- ✓ Lean principles: value stream, flow, pull, perfection via VSM, kanban, 5S
- ✓ Takt time, line balancing, and setup reduction boost throughput and responsiveness
- ✓ Manage bottlenecks with theory of constraints and drum-buffer-rope scheduling
- ✓ Advanced planning systems add value at the constraint, not everywhere



Logistics, Distribution Networks, and Last-Mile Economics



- Select transport mode on cost, speed, reliability, and shipment profile



- Optimize warehouse slotting and picking; weigh automation against throughput needs



- Design regional DCs, cross-docks, and self-sufficient nodes close to demand



- Track cost per order, cost per mile, OTIF, and exception resolution time



- Multi-carrier rate shopping now standard; last mile runs 41-53% of shipping cost



- Returns hit 20-35% for apparel; reliability beats speed promises



Cost per Order



Cost per Mile



OTIF



Exception
Resolution Time

Risk, Resilience, and Continuity as an Operating Capability



- Map risk across operational, financial, geopolitical, cyber, multi-tier supplier exposure



- Cybersecurity ranks as the top perceived supply chain risk in 2026



- Institutionalize risk reviews, business continuity planning, and crisis simulations



- Build resilience via visibility, flexibility, diversification—not inventory buffers alone

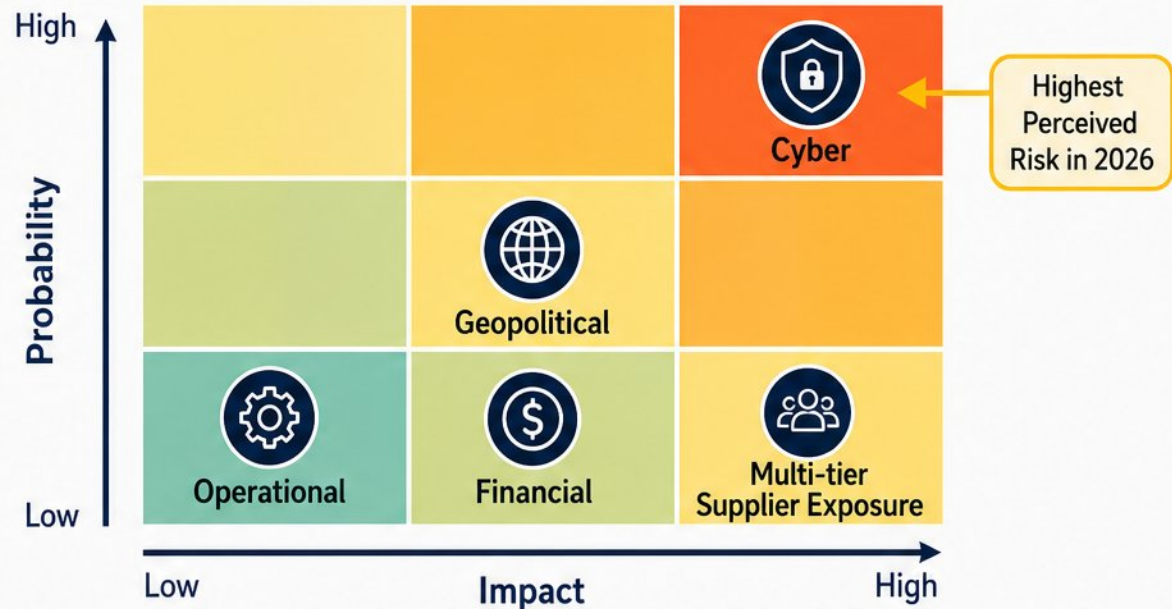


- Measure recovery time, sourcing agility, detection-to-response latency

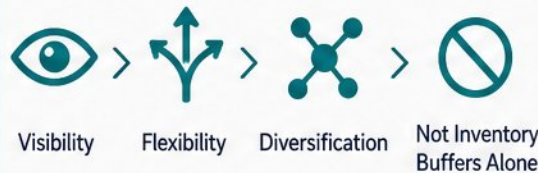


- Close the gap: replace "visibility as a claim" with auditable N-tier proof

PROBABILITY-IMPACT RISK MAP



RESILIENCE LEVERS



RECOVERY TIME FOCUS



LAYERED PERFORMANCE HIERARCHY



L1
Enterprise
View



L2
Business Unit
View



L3
Supply Chain
Network



L4
N-Tier
Visibility



L5
Root-Cause
Depth

Digital Transformation: AI, Control Towers, and Digital Twins



- **AI shifts from pilots to platforms:** source-to-pay, planning, risk; under 25% scale



- **Control towers:** 37% adoption, yet most display status instead of orchestrating exceptions



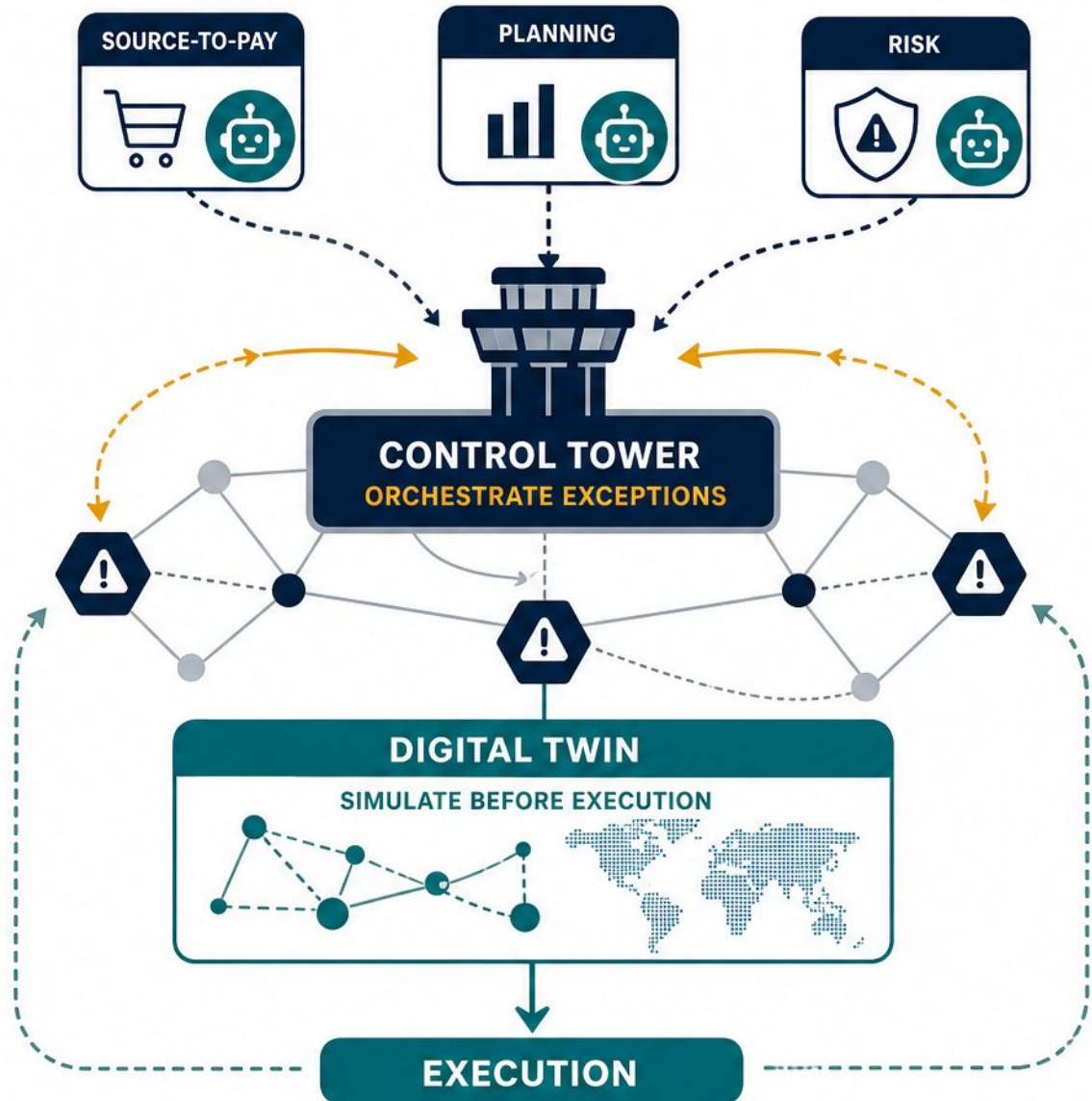
- **Digital twins** simulate before execution: 20-30% better forecasts, up to 80% fewer delays



- **Data first:** align ERP-TMS keys, backfill 12 months, connect inventory position



- **Human-agentic model:** guardrails, approval thresholds, agent registry, explainable oversight



Sustainability, Circularity, and Regulatory Compliance



- **Scope 3 emissions:** 70-90% of supply chain carbon footprint



- **Circular economy:** reuse, repair, remanufacture, recycle via reverse logistics



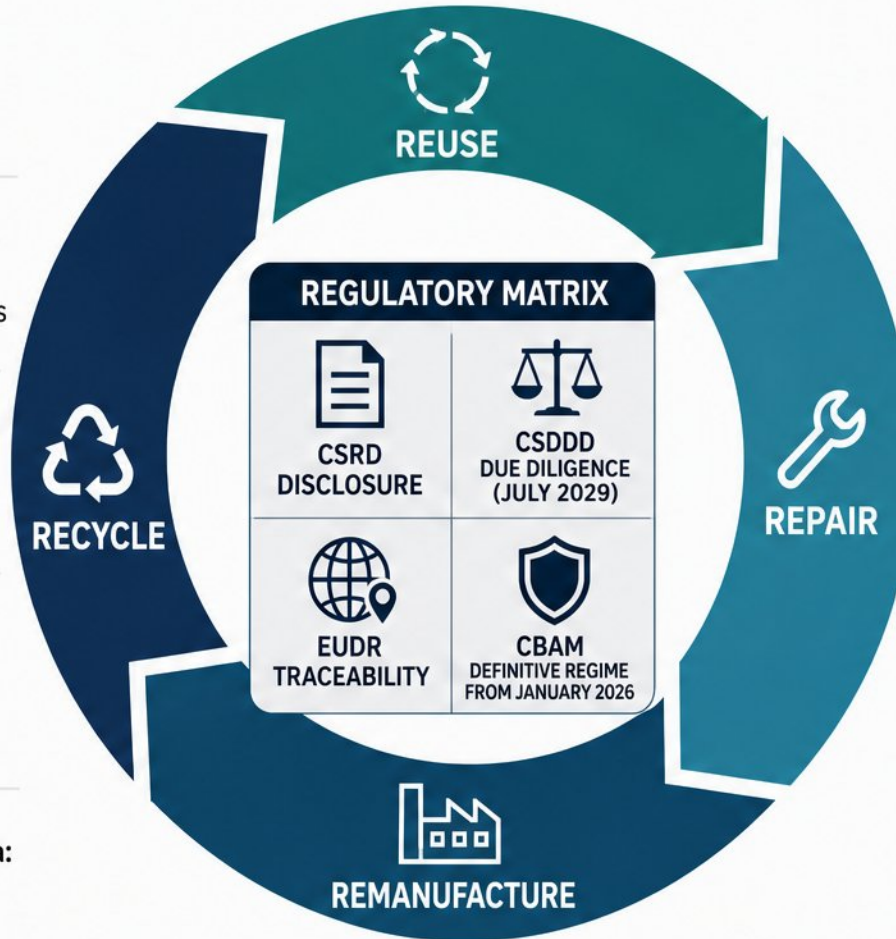
- **EU matrix:** CSRD disclosure, CSDDD due diligence (July 2029), EUDR traceability



- **CBAM definitive regime from January 2026:** authorisation, verified data, certificates, 50-tonne de minimis



- **Tiered supplier ESG data:** develop SMEs, don't exclude them



TIERED SUPPLIER ESG DATA



Tier 1
Strategic suppliers

Comprehensive ESG data



Tier 2
Important suppliers

Core ESG data



Tier 3+
Emerging suppliers

Basic ESG data



Develop and uplift suppliers—
don't exclude them.

TRADE-OFF AXIS



COST



SERVICE



RESILIENCE



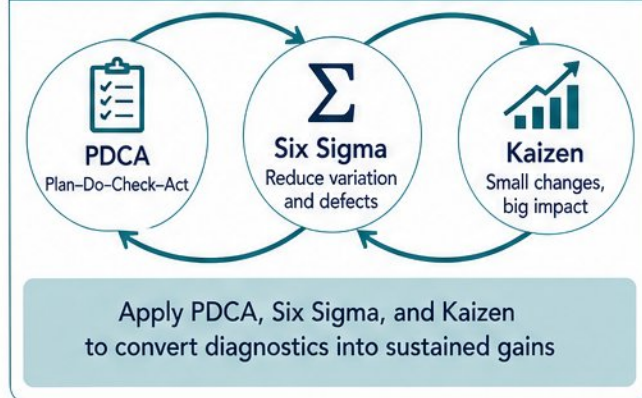
SUSTAINABILITY

Leadership, Governance, and Continuous Improvement Roadmap

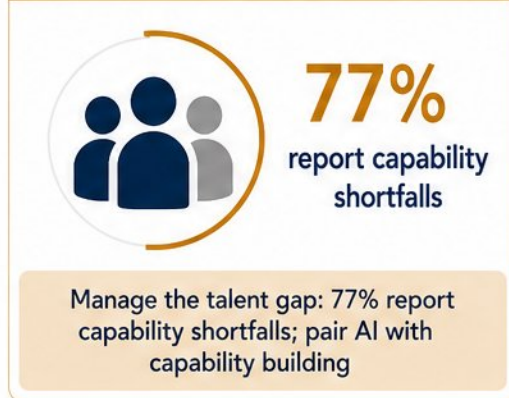
Cross-Functional Operating Cadence



Continuous Improvement Engine



Talent and Capability



Maturity / Sequencing Roadmap



- Define decision rights and cadences linking IBP, S&OP, S&OE, and daily execution



- Apply PDCA, Six Sigma, and Kaizen to convert diagnostics into sustained gains



- Manage the talent gap: 77% report capability shortfalls; pair AI with capability building



- Sequence pragmatically: fix margin leakage first, governance before technology, then scale



- Measure replanning latency, decision quality, and value realization, not milestones

Action Planning: From Assessment to Measurable Improvement



- 1 Run a maturity assessment across process, data, technology, risk, and people



- 2 Pick one bounded start: a lane, category, or decision flow



- 3 Define minimum viable data before scaling anything



- 4 Baseline SCOR Level 1 metrics; add Level 2 diagnostics



- 5 Build a 12-24 month roadmap with owners and quarterly reviews



- 6 Tackle the largest margin leakage first, then establish governance



- 7 Measure replanning latency and value realization, not milestones

1. MATURITY ASSESSMENT ACROSS FIVE DIMENSIONS



Process



Data



Technology



Risk



People

2. BOUNDED START: PRIORITY LANE



Select a lane, category, or decision flow



Define minimum viable data



Assign owner and cross-functional team

3. MEASURE AND DIAGNOSE



SCOR Level 1
Baseline Metrics



Add SCOR Level 2
Diagnostics

4. 12-24 MONTH IMPROVEMENT ROADMAP



Roadmap
Initiation



Owners and
Accountability



Quarterly
Reviews



Governance
and Oversight



Measure Replanning
Latency and Value
Realization

PersonWise.

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