CTSC CERTIFIED IN TRANSFORMATION FOR SUPPLY CHAIN

MODULE 2: PREPARING FOR SUPPLY CHAIN TRANSFORMATION

APICS

ASCM

Module 2 Overview

Preparing for Supply Chain Transformation

- **Section A:** Select Supply Chain Transformation Drivers
- **Section B:** Assess Supply Chain Current State
- **Section C:** Conceptualize the Future-State Supply Chain Operating Model
- **Section D:** Identify Initiatives to Address Gaps
- **Section E**: Initiate Transformation Work Streams and Projects
- **Section F:** Develop and Iterate Preliminary Transformation Business Cases
- **Section G:** Perform Post-Approval Tasks

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FOR SUPPLY CHAIN

SECTION A: SELECT SUPPLY CHAIN TRANSFORMATION DRIVERS

APICS

ascm

Section A Learning Objectives

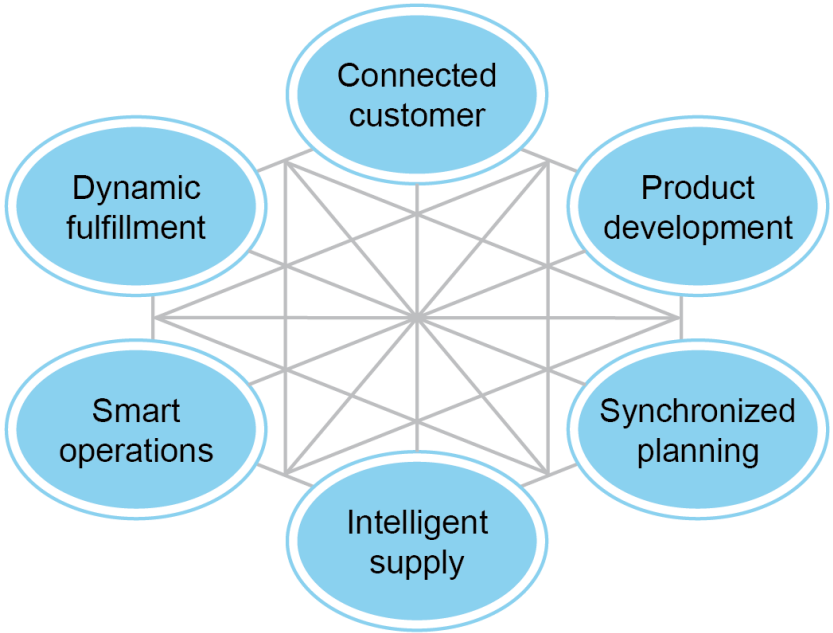
- Create a portfolio or program charter to authorize and guide the transformation.
- Use tools such as STEEPLE or PESTLE to assess external transformation drivers.
- Assess current and needed technology.
- Conduct supply chain maturity assessments.
- Assess readiness for transformation.

Create Portfolio Charter for Design Team and Core Steering Team

Charter content details:

- Scope and objectives
- Background and business need
- Aligned assumptions and expectations
- Formal contract of personnel involvement
- Selected metrics, schedule, deliverables, etc.

SCOR DS and DCM for Supply Networks



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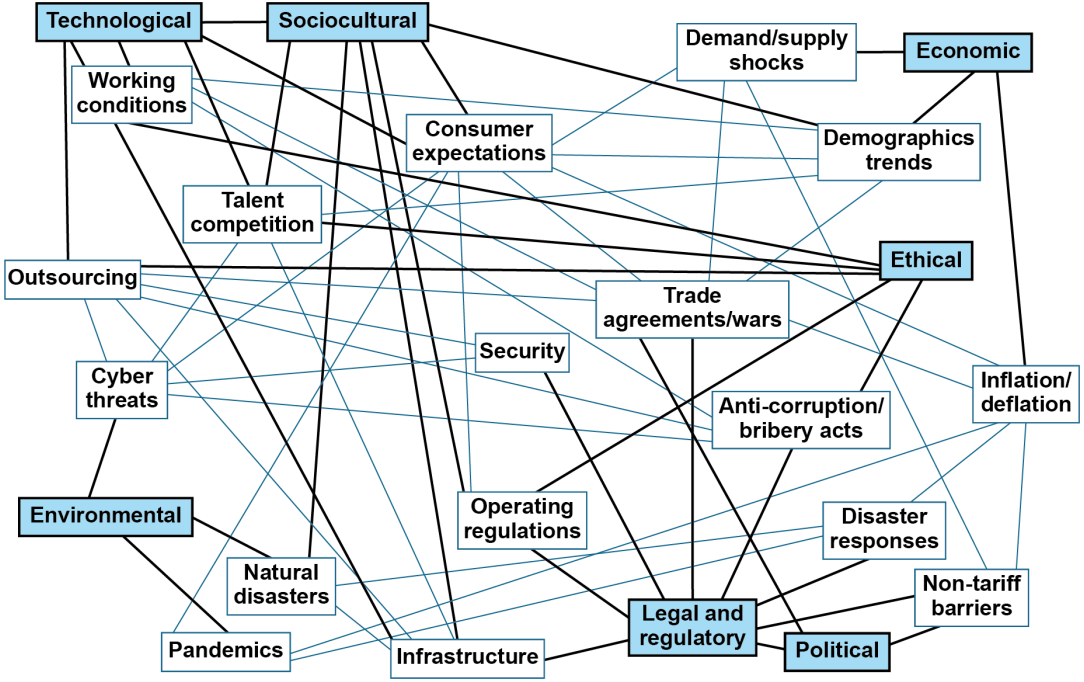
Environmental Scanning



Macroeconomics and the Macro Environment

Traditional macroeconomic drivers include currency fluctuations and supply and/or demand shocks.

Currency fluctuations may occur as inflation or deflation or through changes in currency exchange rates.

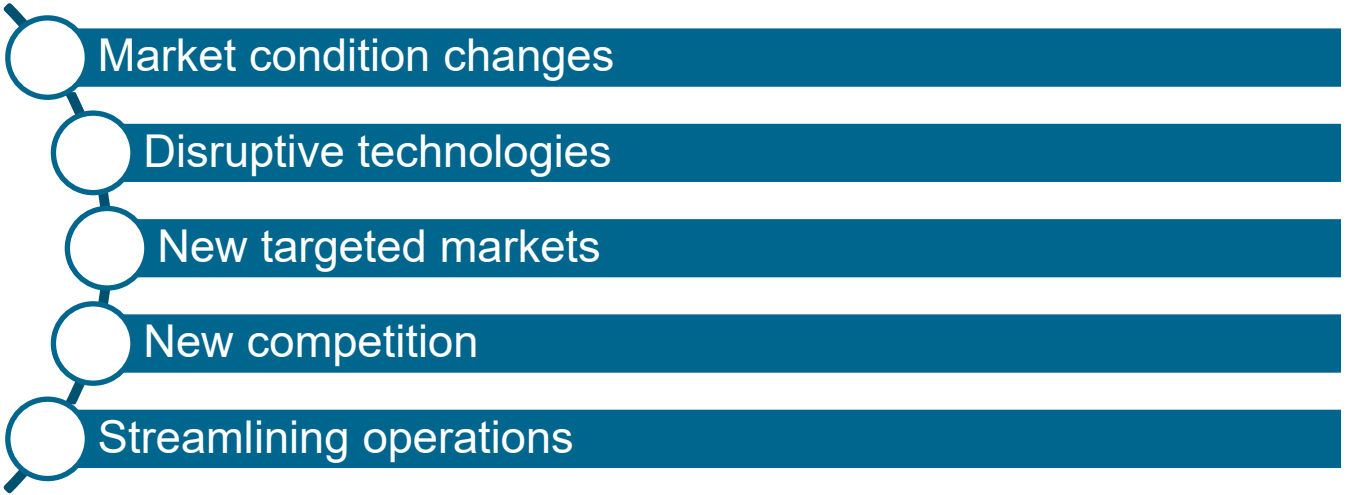
Demand and supply shocks may be driven by multiple reasons.

Industry Characteristics

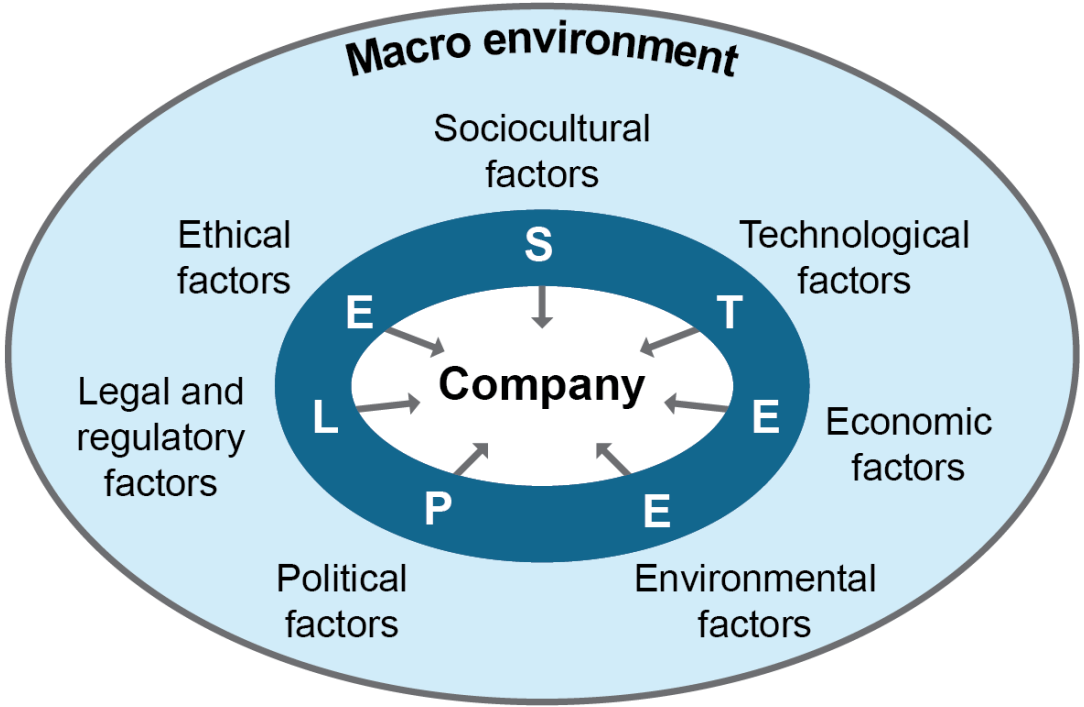
- Product characteristics
- Manufacturing and production processes
- Lean versus resilient supply chains
- Customer bases

Market Characteristics

- Supply chains must be set up and run to support the organization's strategy.
- Market characteristics may change due to many reasons:



STEEPLE and PESTLE/PESTEL



STEEPLE and PESTLE/PESTEL, continued

Factor	Details and Examples
Sociocultural	• Changing population demographics • Economic inequality • Consumer sustainability activism • Pandemics
Technological	• Emerging and speculative technology • Labor availability (remote work) • Cyber threats
Economic	• Macroeconomic conditions • Consumer confidence
Environmental	• Growing consumer interest in sustainable practices • Natural events and trends along with reactions to those events and trends • Environmental disasters

STEEPLE and PESTLE/PESTEL, continued

Factor	Details and Examples
Political	• Economy's political, governmental, or institutional environment • Public policies • Risk of sudden change (elections, civil unrest)
Legal/ regulatory	• Enacted laws and regulations • International drivers • National laws and regulations
Ethical	• Business ethics • Good governance • Social responsibility • Moral standards • Ethical sourcing • Accountability and sustainability

Industry 4.0 and Supply Chain Transformation

Industry 4.0:

- A concept of organizational and technological changes along with value chain integrations and new business models development that are driven by customer needs and mass customization requirements and enabled by innovation technologies, connectivity, and information technology integration. (*ASCM Supply Chain Dictionary,* 17th edition)

Topic 3: Strategic Imperatives

Supply Chain Transformation Technology Selection/ Utilization Process

Example Process Steps

- Define vision and goals.
- Evaluate current abilities.
- Select a host platform.
- Develop automated planning processes.
- Select data capture/analysis processes.
- Train employees.

Inherent Challenges

- High investment requirements
- Under-equipped workforce
- Over-focus on processes and solutions
- Failure to use real-time data
- Poor system integration

Sustainability and Social Responsibility Imperative

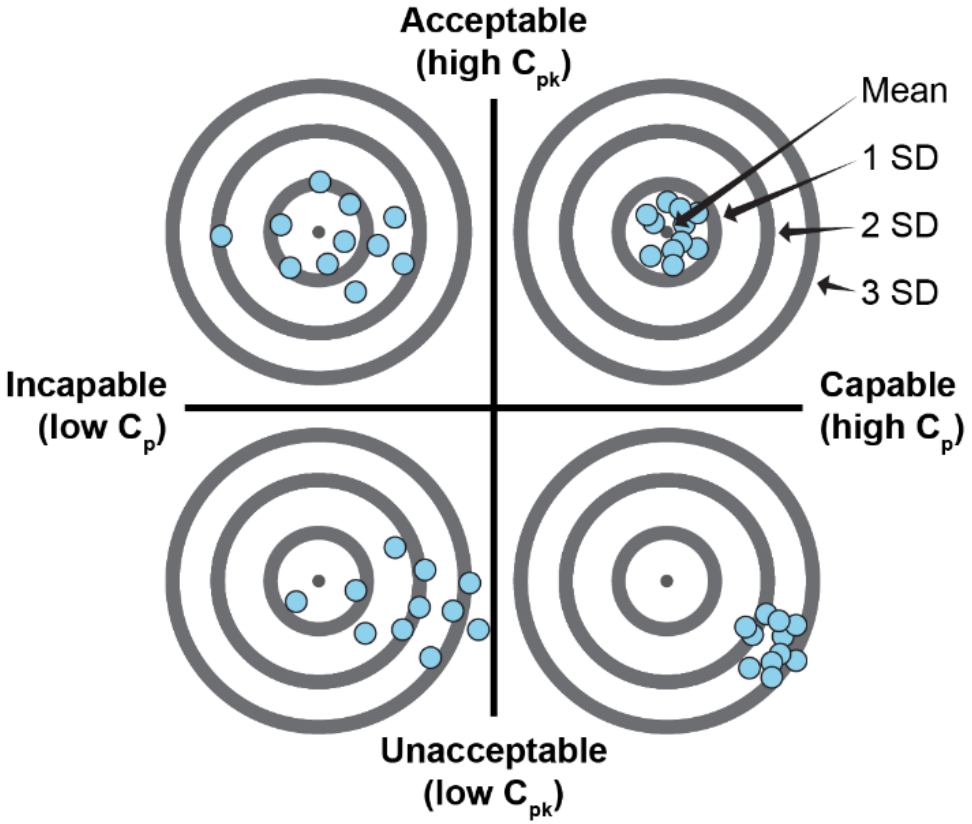
- Supply chain produces majority of pollution and greenhouse gas emissions.
- Climate change:
  - Particular concern for the growth and production of food
  - Results in supply chain disruptions around the world
  - Important to balance efforts with cost efficiency

Voice of the Customer Insights

Novel product uses	Quality needs and expectations	Interest in new products and services
New business models	Speed, dependability, and cost objectives	Customer satisfaction
Branding improvements	Customer loyalty issues	Competitor product information

Voice of the Process

- Processes both capable and acceptable (stable).
- Closely related to process capability is process acceptability.



Measuring Process Capability and Acceptability

$$C_p = \frac{USL - LSL}{6 \times SD}$$

$$C_{pk} = \text{Lesser of } \frac{(USL - Mean)}{3 \times SD} \text{ or } \frac{(Mean - LSL)}{3 \times SD}$$

Voice of the Business and Voice of the Employee

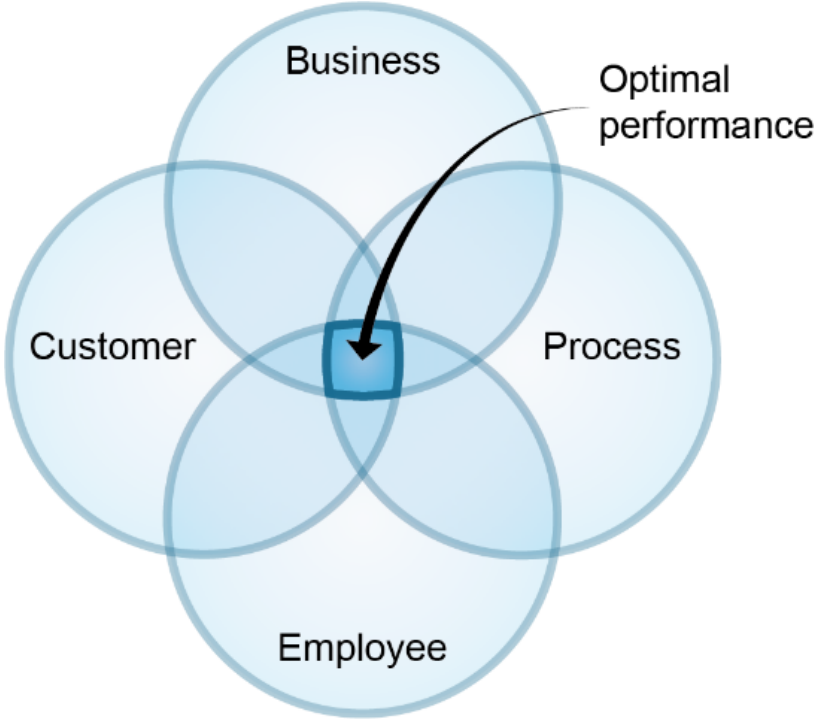
Voice of the Business

- Captures stakeholder needs and requirements
- May include
  - Shareholders/owners
  - Leadership
  - Boards of directors

Voice of the Employee

- Captures requirements of individual employees
- May include opinions on
  - Culture
  - Policies
  - Systems
  - Infrastructure
  - Working conditions
  - Transformation strategy

Balancing Preferences from the Voices



Requirements for Success in Digital Transformation

- Defined vision
- Clear goals
- Defined success metrics (should include both traditionally important metrics and metrics dealing with supply chain complexity)

Data Management and Data Analytics Technologies

- As digitalization of the supply chain is implemented, massive amounts of data will be generated.
- Gaps between current and desired technology capabilities may be related to multiple dimensions.

Data Technology

Big Data	IOT	SCADA	Sensors and Telematics
▪ Volume ▪ Variety ▪ Velocity ▪ Value ▪ Veracity	▪ Manufacturing processes ▪ Goods/materials movement ▪ Environmental conditions ▪ Equipment status ▪ Unexpected deviations ▪ Product utilization	▪ Monitoring and control focus ▪ Legacy SCADA systems are increasingly able to integrate with other systems.	▪ Provide process visibility and automation ▪ Include photosensors, RFID, lasers, lidar

Data Technology, continued

DSS

- Assists in selecting and evaluating courses of action
- Draws from other systems (ERP, APS, etc.)

AI

Useful areas:

- Forecasting and sourcing improvement
- Operations optimization
- Automation
- Decision support
- Targeted marketing/pricing

Cloud Computing

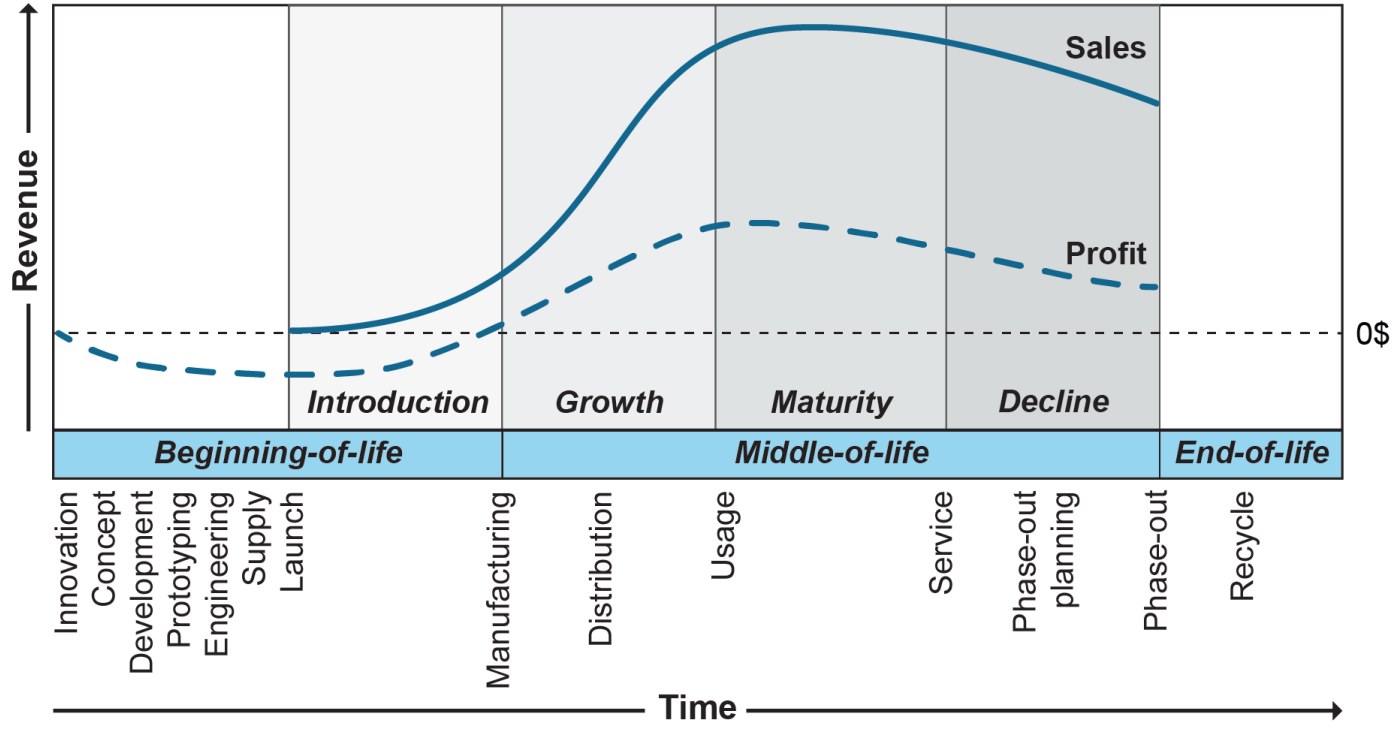
- Data storage accessible over internet
- Benefits include increased collaboration, hardware costs shifted, scalable, flexible

Blockchain

- Reliable, secure method of tracking goods movements
- Benefits include reliable evidence, automated capture and distribution of data, preventing counterfeits

Smart Operations

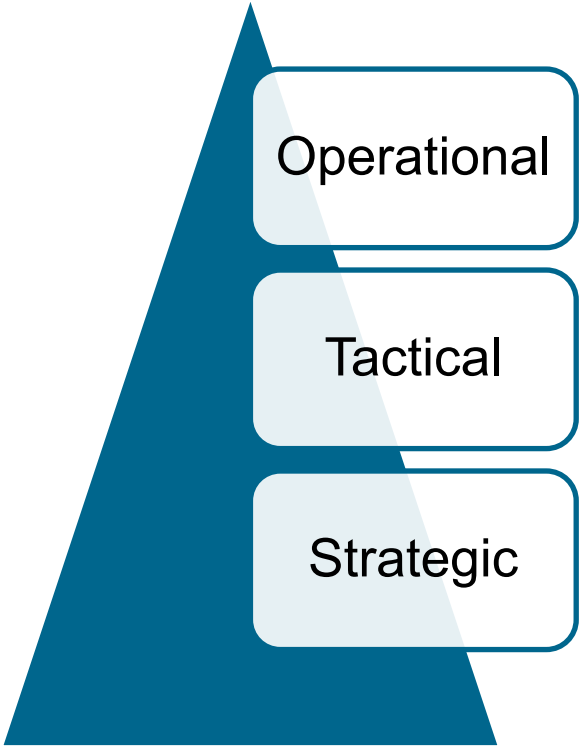
Product Life Cycle Management

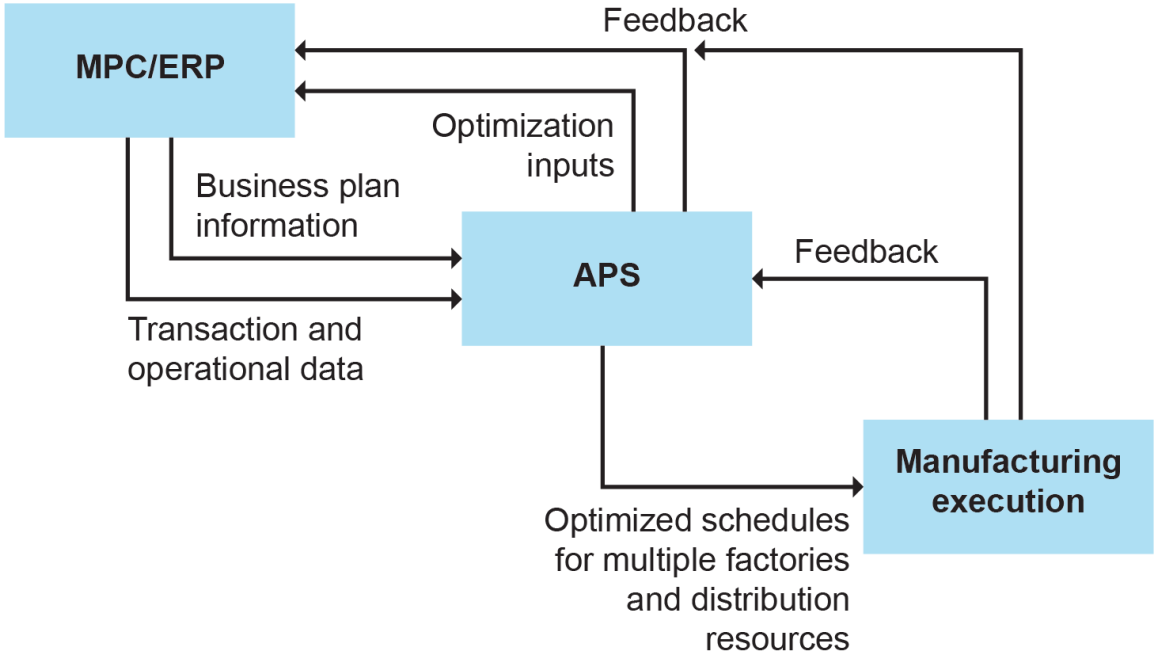


Enterprise Resource Planning

- Transactionally focused
- Modular options
- Central database for master data
- Designed for interoperability with other systems

Advanced Planning and Scheduling





Warehouse Management Systems

Database Inclusions

- Product profiles
- Slot locations
- Labor standards for planning
- Shipper information
- Customer information

WMS Functions

- Manage orders and inventory.
- Organize warehouse work.
- Monitor and analyze performance.

CMMS and RDSM

CMMS

- Software programs that monitor assets
- Can reduce unexpected breakdowns
- Can optimize life span of equipment

RDSM

Provides

- Plant-level coordination at supply network level
- Real-time visibility into supply disruptions and unmet demand

Digital Supply Chain Control Towers

- Allow customers to act on the information they provide
- Dependent on
  - IOT
  - RFID
  - Sensors
  - Telematics
  - ERP
  - Warehouse management
  - Transportation management

Supply Chain Event Management

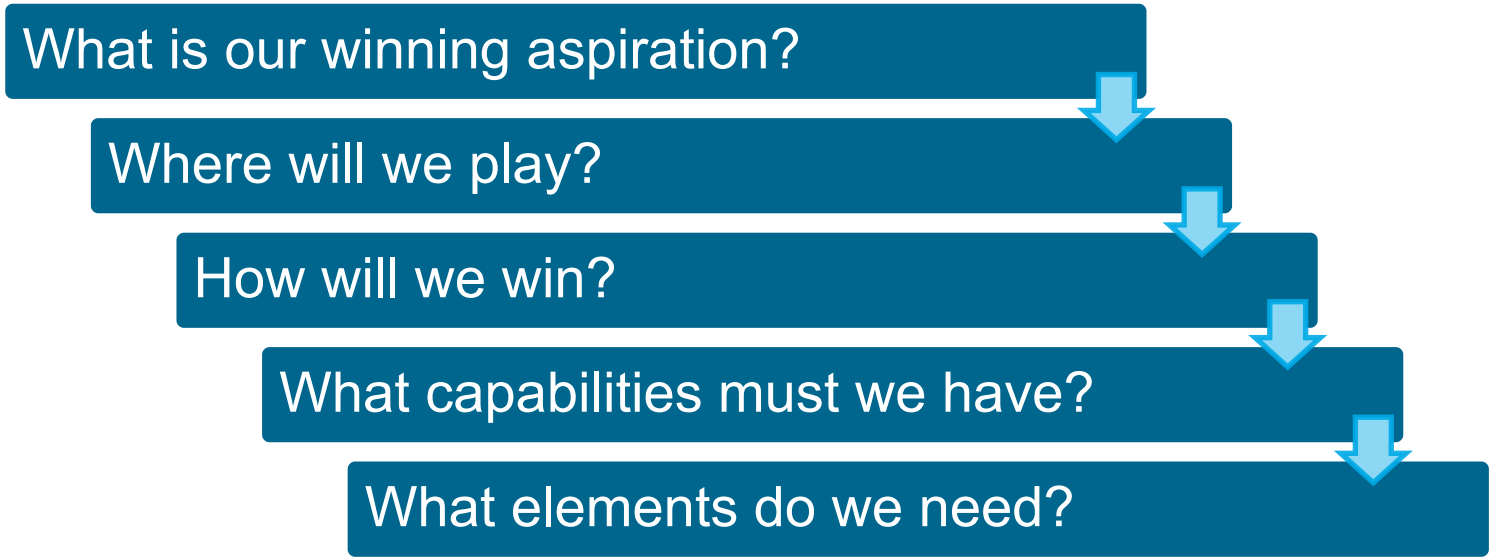
- Simulates, controls, and responds to unplanned events and exceptions to planned events
- Reduces or eliminates customer service errors
- Active visibility, enabling the following activities for events
  - Monitoring
  - Measurement
  - Notification
  - Simulation
  - Control

Maturity Assessment Tools

- Identify multiple levels of performance that an organization may be located in
- Multiple models:
  - PwC model accompanying SCORmark
  - Deloitte-TM Forum model
  - Area-specific models (GHSC, Demand-Driven Institute's Adaptive Enterprise Model Development Path)
  - Gartner model

Topic 6: Maturity Assessments

Digital Capabilities Model (DCM) for Supply Networks



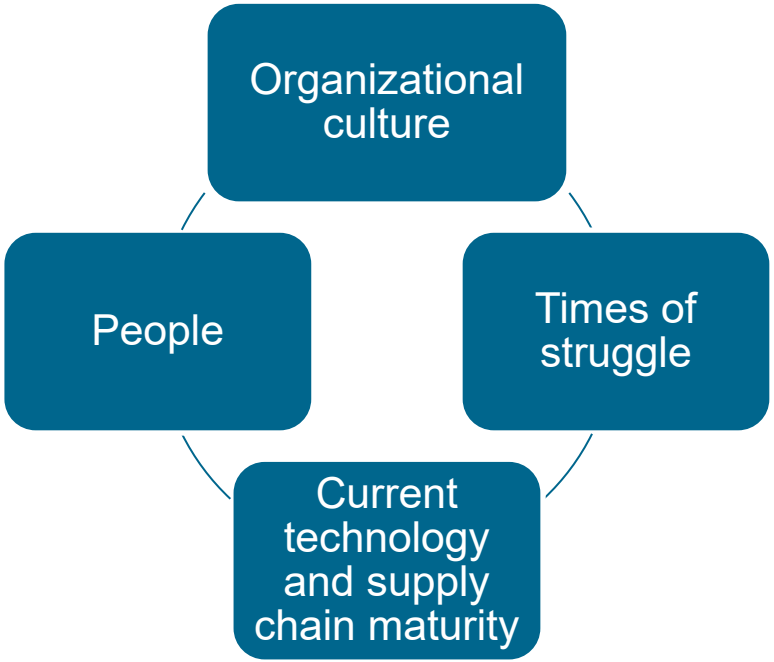
Capability Maturity Model Integration

Capabilities	Maturity Levels
▪ Capability Level 0: Incomplete ▪ Capability Level 1: Performed ▪ Capability Level 2: Managed ▪ Capability Level 3: Defined	▪ Maturity Level 1: Initial ▪ Maturity Level 2: Managed ▪ Maturity Level 3: Defined ▪ Maturity Level 4: Quantitatively managed ▪ Maturity Level 5: Optimizing

Common Misalignment Causes

- Unspoken disagreement
- Vague goals
- Failure to achieve ROI
- Lack of organizational support
- Fragmented strategies
- Poorly executed S&OP
- Lack of plan for technology investment
- Mismatched structure/culture and ERP
- Ineffective organizational structure
- Poor interoperability
- M&A side effects
- Poor processes
- Improper supply chain scope change
- Poor plan for scalability
- Failure to identify improvement areas
- Change management failure

Assess Readiness for Transformation



Common Forms of Bias

- Anchoring
- Availability
- Confirmation
- Framing
- Groupthink
- Overconfidence
- Selective perception
- Sunk cost

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SECTION B: ASSESS SUPPLY CHAIN CURRENT STATE

APICS

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Section B Learning Objectives

- Define a balanced set of integrated metrics.
- Convert generic metrics to organization-specific versions.
- Plan and conduct data gathering.
- Prioritize supply chain design through segmentation.
- Perform geographic and process mapping.
- Benchmark process and performance metrics.
- Create detailed as-is maps, models, and diagrams.
- Understand how to use the staple-yourself-to-an-order walkthrough/interview process.
- Analyze defects and identify performance gaps.

Define a Balanced Set of Integrated Metrics

Several methods can be used to select a balanced set of integrated metrics:

- Use metrics from established framework, like SCOR DS.
- Fill out benchmarking survey, e.g., SCORmark, and select from results.
- Use set of metrics from internal or consulting source.
- Supplement one of these sources with custom metrics.

Convert Generic Metrics to Organization-Specific Versions

Examine/Discuss

- Metric's standard definition
- Calculation
- Data collection process

Define

- Exact point at which each process or calculation starts
- Exact point at which each process or calculation ends

Organize

- All metrics descriptions should be recorded in one file.
- Data collected and calculated should also be gathered in one location.

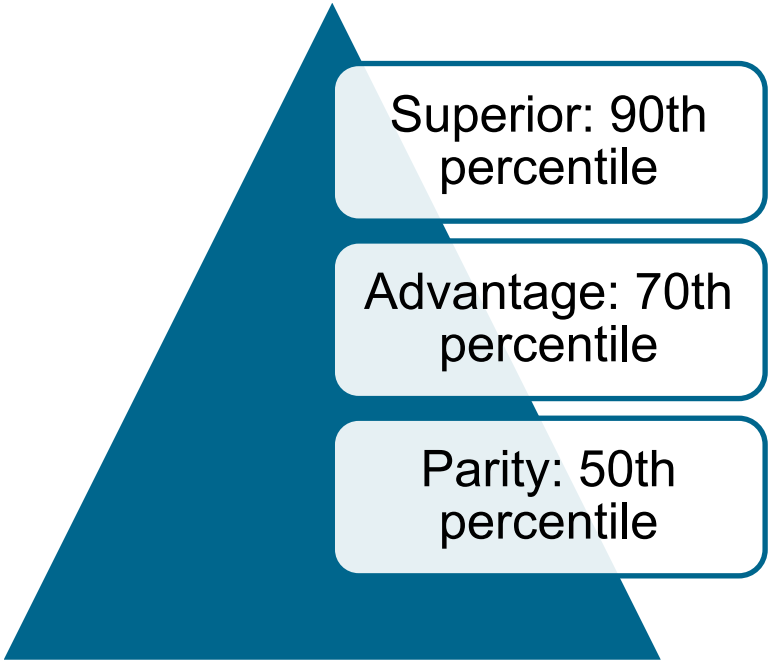
Prioritize Supply Chain Design Using Supply Chain Segmentation

Supply Chain Segmentation		Customers							
		West Coast				East Coast			
Products		S-Mart	Auto Bros	Costking	Carfix	Vehlicle Proof	Night Drive	The Mall	Automotive Ecommerce
Automotive Oil	Private	X	X	X					X
	Branded	X		X	X	X	X	X	X
Cleaning Products	Private	X	X	X					X
	Branded	X			X		X		
Lubricants	Private		X	X		X		X	
	Branded	X		X	X			X	X

Prioritize Supply Chain Design Using Supply Chain Segmentation, continued

Supply Chain Segmentation		Customers							
		West Coast				East Coast			
Products		S-Mart	Auto Bros	Costking	Carfix	Vehlicle Proof	Night Drive	The Mall	Automative Ecommerce
Automotive Oil	Private	4,535,345	5,676,576	12,313,543	-	-	-	-	64,758
	Branded	543,545	-	65,464	2,345,765	464,767	876,868	4,564	343,454
Cleaning Products	Private	43,543	675,757	3,424,234	-	-	-	-	544,657
	Branded	86,787	-	-	3,454,354	-	543,534	-	-
Lubricants	Private	-	9,756,345	67,657	-	56,455	-	34,344	-
	Branded	1,325,568	-	8,678,557	12,347	-	-	34,456	45,356
Total		6,534,788	16,108,678	24,549,455	5,812,466	521,222	1,420,402	73,364	998,225
Annual Revenue					**53,005,387**				**3,013,213**

Set Superior, Advantage, or Parity Targets for Major Attributes



Building a Competitive Strategy Matrix for Multiple Channels and Markets

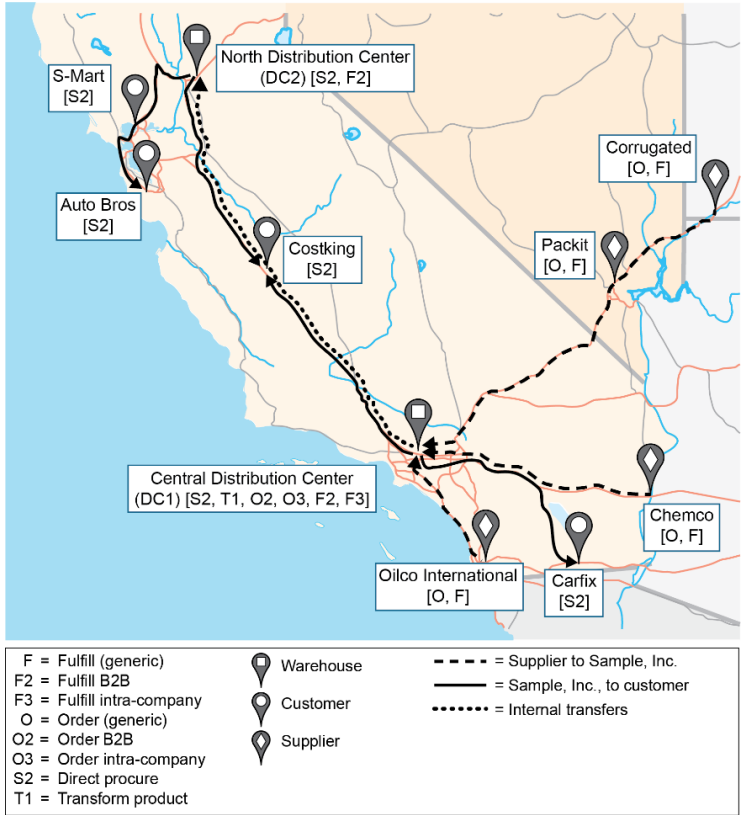
Attribute	West Coast Distributor	East Coast Distributor	West Coast Bulk Chemicals	West Coast Bulk Oils/Lubricants
Reliability	Advantage	Parity	Advantage	Advantage
Responsiveness	Parity	Advantage	Parity	Parity
Agility	Parity	Parity	Parity	Parity
Cost	Advantage	Advantage	**Superior**	**Superior**
Profit	Parity	Parity	Parity	Parity
Assets	**Superior**	**Superior**	Advantage	Advantage
Environmental	Parity	Parity	Advantage	Advantage
Social	Advantage	Advantage	Parity	Parity

Perform Geographic and Process Mapping of Selected Chain

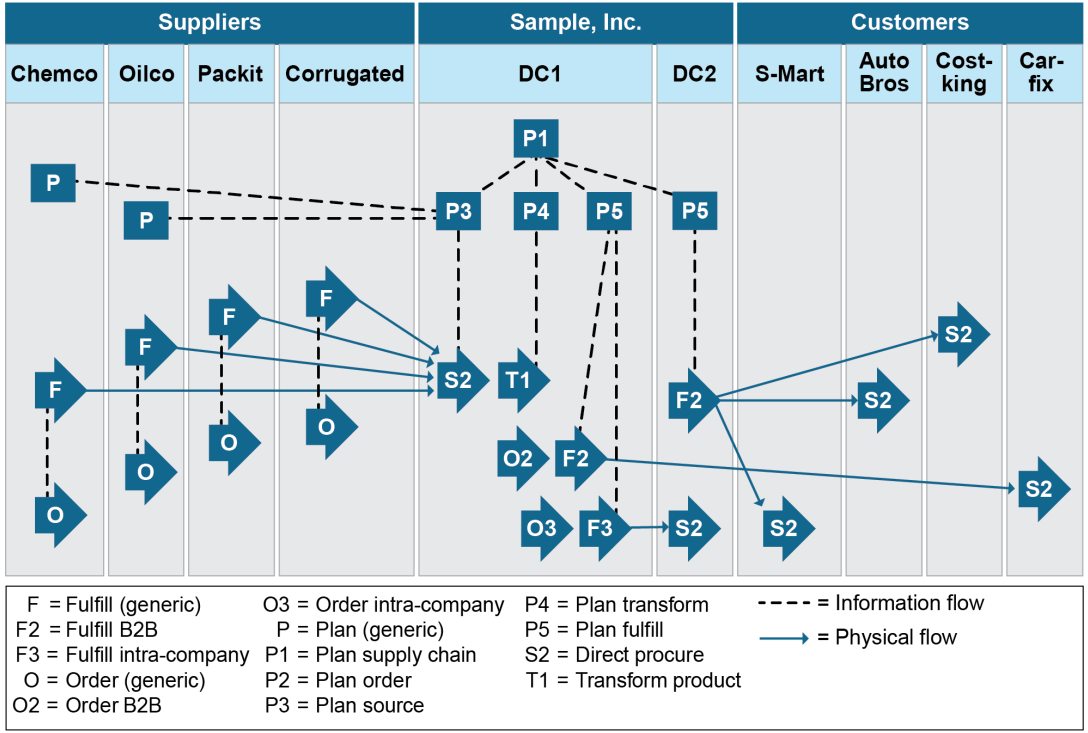
Issues that may be identified

- Too many nodes or too few
- Nodes not in optimal location
- Too many or too few processes
- Incorrect processes or incorrect process placement
- Too many or too few links or suboptimal links

As-Is Geographic Mapping



As-Is Process Mapping (Thread Diagram)



Benchmarking Principles

General Principles

- Benchmarking relies on use of standardized metrics.
- Can be linked to clear lines of responsibility.
- Avoids overly subjective metrics.

Industry Comparison Benchmarking

- Industry comparison benchmarking can be done without submitting any data to a third party.
- Organizations can get access to industry comparison benchmarking data from many sources.

Third-Party Scorecard Survey Benchmarking (e.g., SCORmark)

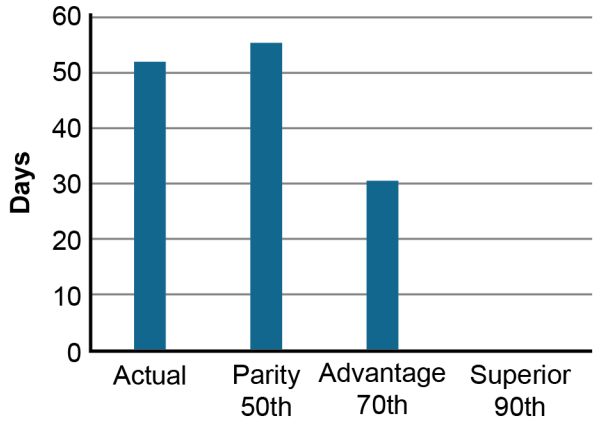
Attribute	Metrics	Target Performance	Your Organization	Parity (50%)	Advantage (70%)	Superior (90%)	Gap to Target
Reliability	Perfect customer order fulfillment	Advantage	70%	X 77%	85%	93%	-15%
Responsiveness	Customer order fulfillment cycle time	Parity	6	9.1	7 X	4	3.1
Agility	Supply chain agility, strategic (days)	Parity	35	X 30	25	20	-5
Cost	Total supply chain management cost (% of revenue)	Advantage	8%	8.70% X	5%	2.40%	-3%
Profitability	EBIT (as a % of revenue)	Parity	16%	14%	X 17%	20%	2%
Assets	Cash-to-cash cycle time (days)	Superior	52	55.4 X	30.5	0	-52
Environmental	Waste generated (metric tons)	Parity	14.3	X 13.4	11.2	9.2	-0.9
Social	Training (hours per year)	Advantage	80	X 82.1	91.5	100.1	-11.5

X Your organization

Source: Adapted from SCOR-Professional Training. Used with permission. Values are for example only.

Third-Party Scorecard Survey Benchmarking (e.g., SCORmark), continued

Cash-to-Cash Cycle Time
Your Score: 52 days
You chose the superior target for this metric. While you have scored above parity by -3.4 days, your target gap is -52 days.



Metric	Actual	Parity 50th	Advantage 70th	Superior 90th	Gap
Cash-to-Cash Cycle Time (Days)	52	55.4	30.5	**0**	-52
Days Payables Outstanding	55	66	60	**54**	-1
Days Sales Outstanding	27	**30**	33	39	3
Inventory Days of Supply	80	90	60	**15**	-65
• Finished Goods	67	50	30	**10**	-57
• Work In Process	1	**1**	0.5	0	0
• Raw Material	12	20	15	**5**	-7

= Targeted competitive level

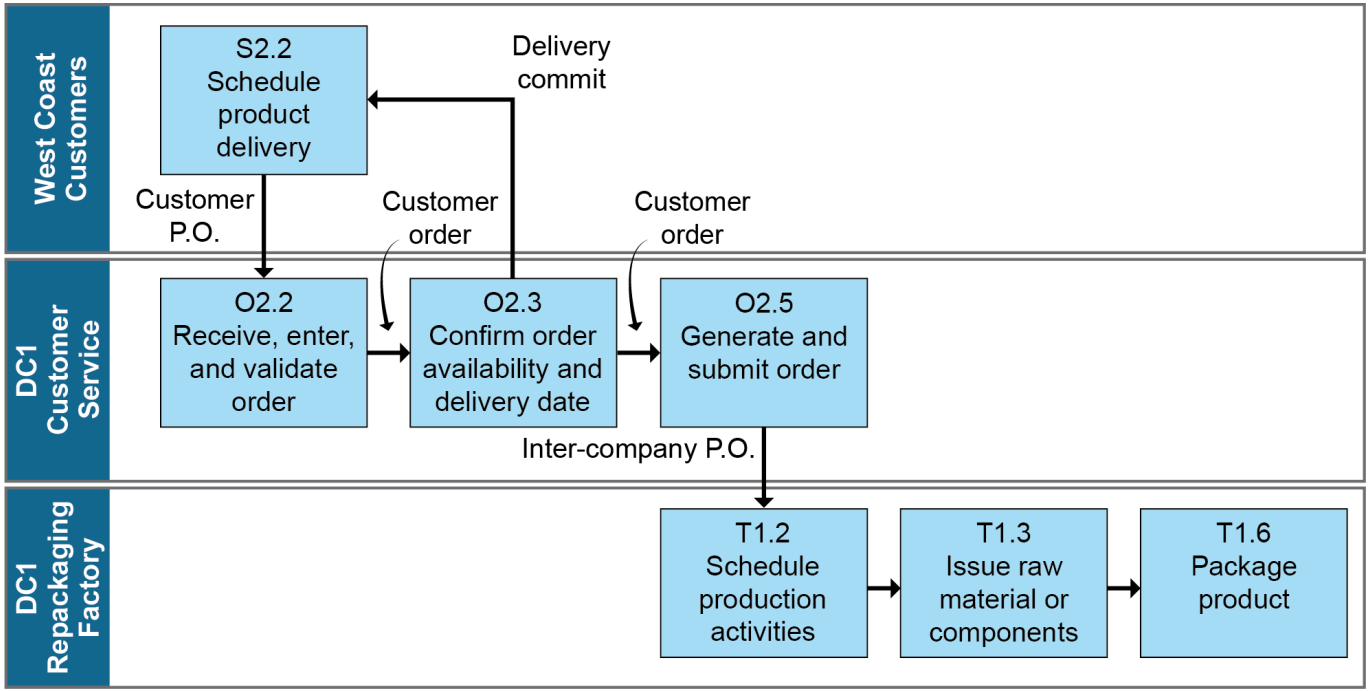
Refining As-Is Geographic and Process Maps to Better Study Gaps

- Benchmarking results will reveal areas that require collection of additional as-is information.
- Refinements may include
  - Geographic and process maps
  - Detailed process models
  - RACI diagrams.

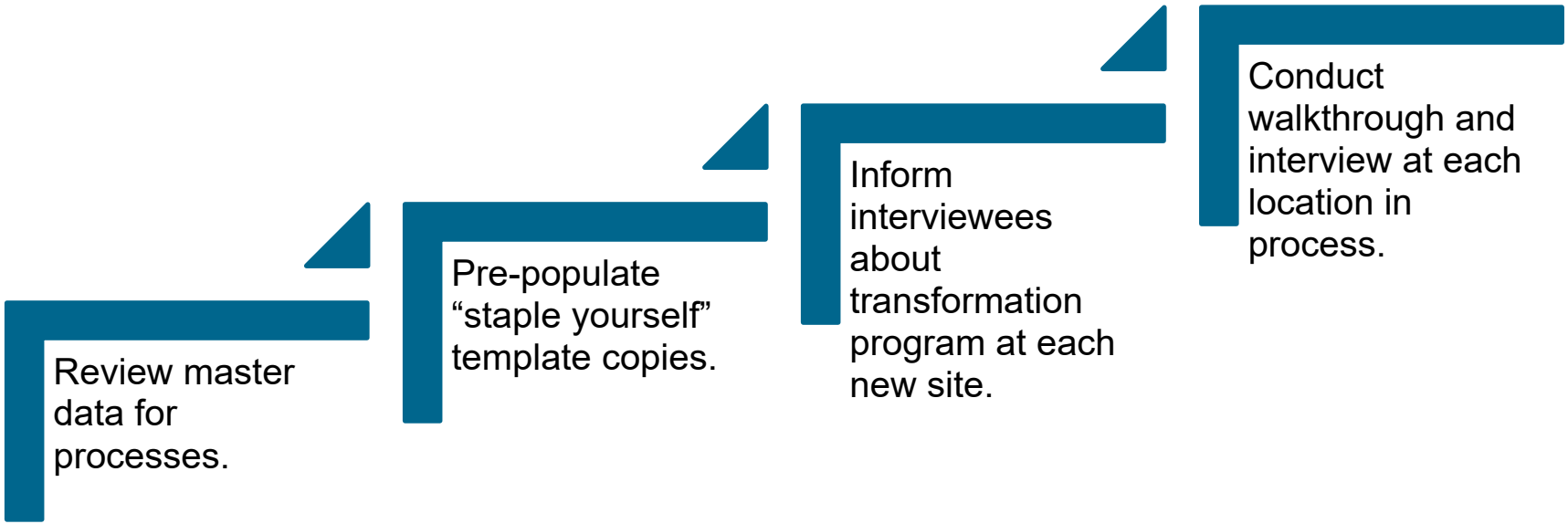
Gather Data Using Interviews to Make Detailed Process Models

- Cover cross-section of organization.
- Include supply chain partners.
- Be both horizontal and vertical.
- Avoid questionnaires.
- Encourage open, honest discussion.

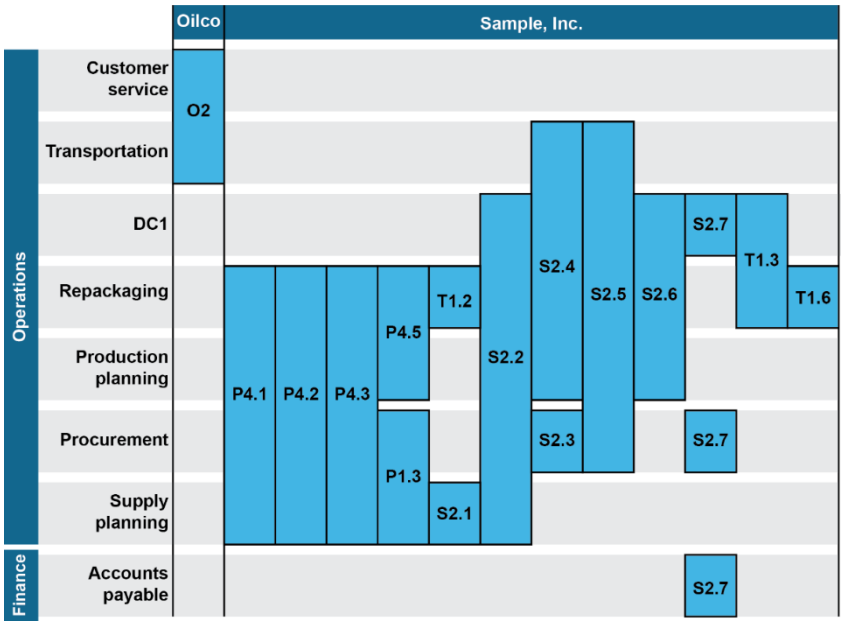
Detailed As-Is Process Models (Workflow Diagrams)

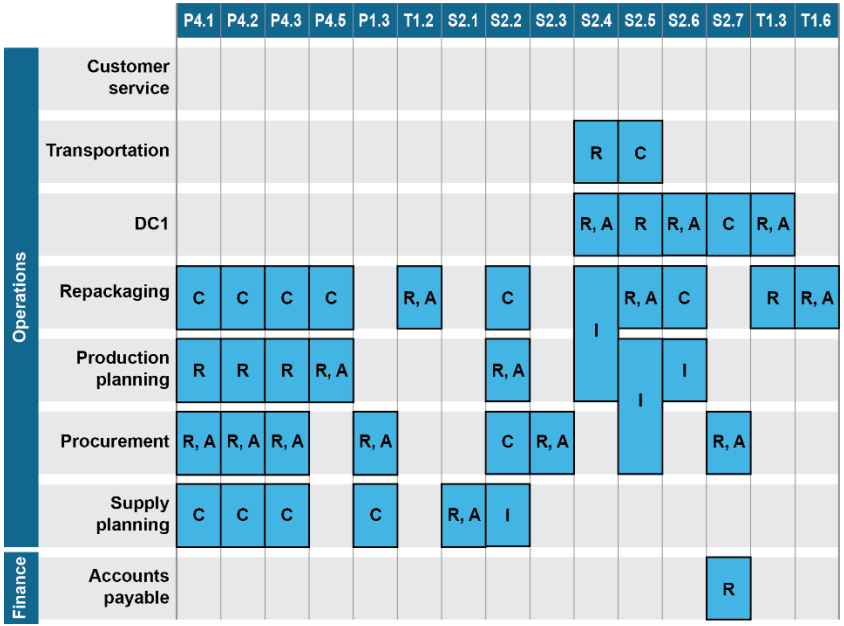


Create Detailed As-Is Process Models and RACI Diagrams (i.e., SCOR DS Level 4)

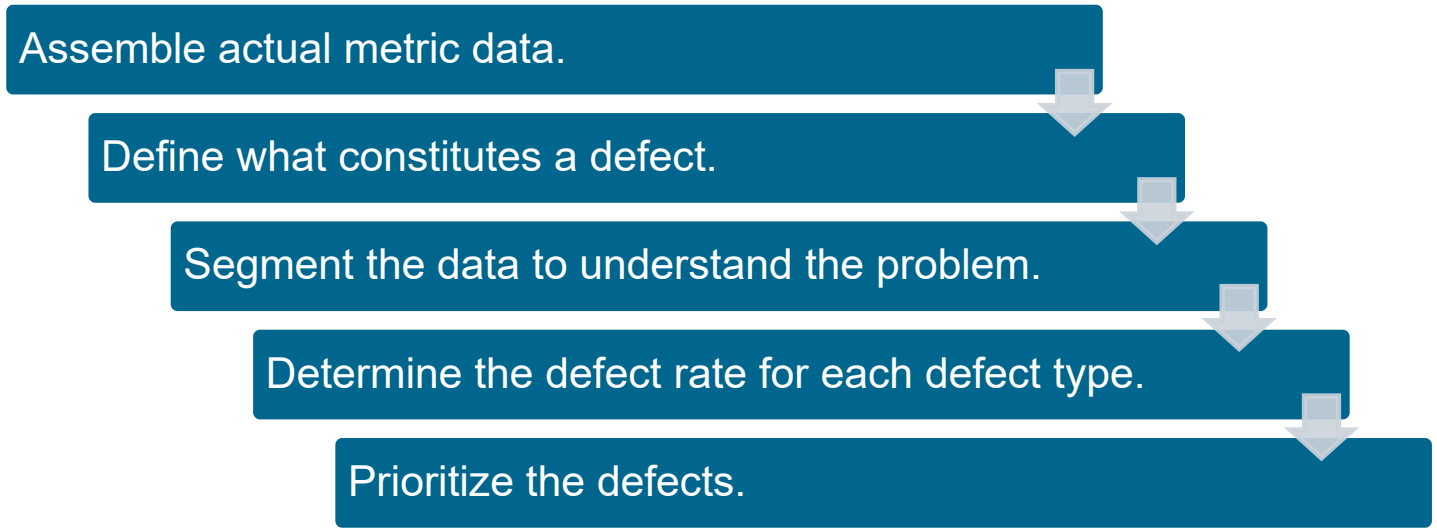


RACI Diagrams for Process Flows





Gap Assessments, Defects, Supply Chain Standards/ Frameworks



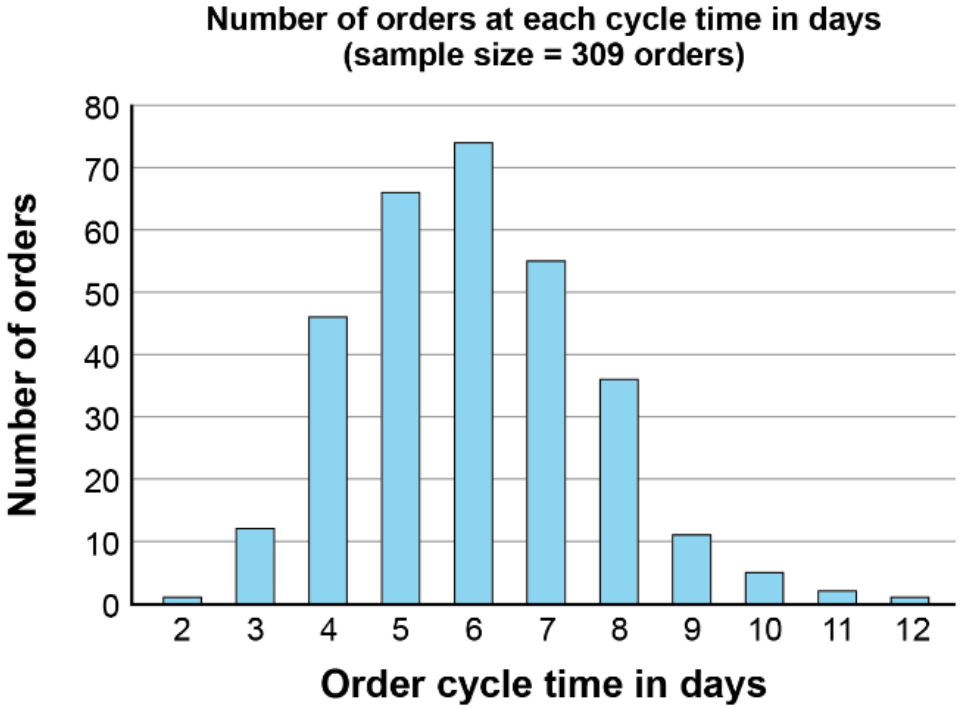
Analysis for Attribute Areas

Reliability	Responsiveness	Agility	Cost
Profit	Assets	Environmental	Social

Analysis for Perfect Customer Order Fulfillment

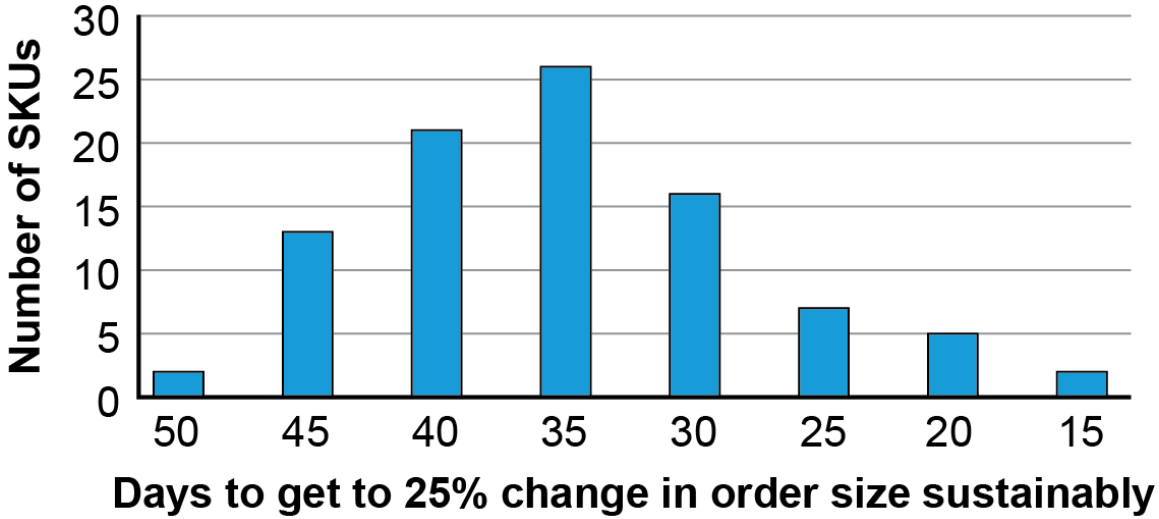
30.0%	20.0%	3.0%	3.0%	4.0%
Perfect Customer Order Fulfillment (RL.1.1) Failure Rate	**Incomplete Shipments Rate (RL.2.1)**	**Missed Original Customer Commit Date Rate (RL.2.2)**	**Documentation Error Rate (RL.2.3)**	**Condition Error Rate (RL.2.4)**
Wrong quantity assembled and shipped	0.25%			
Insufficient ordering due to actual demand > forecast	15.0%			
Late raw material pickup	0.25%			
Products mislabeled	0.25%			0.5%

Analysis for Customer Order Fulfillment Cycle Time



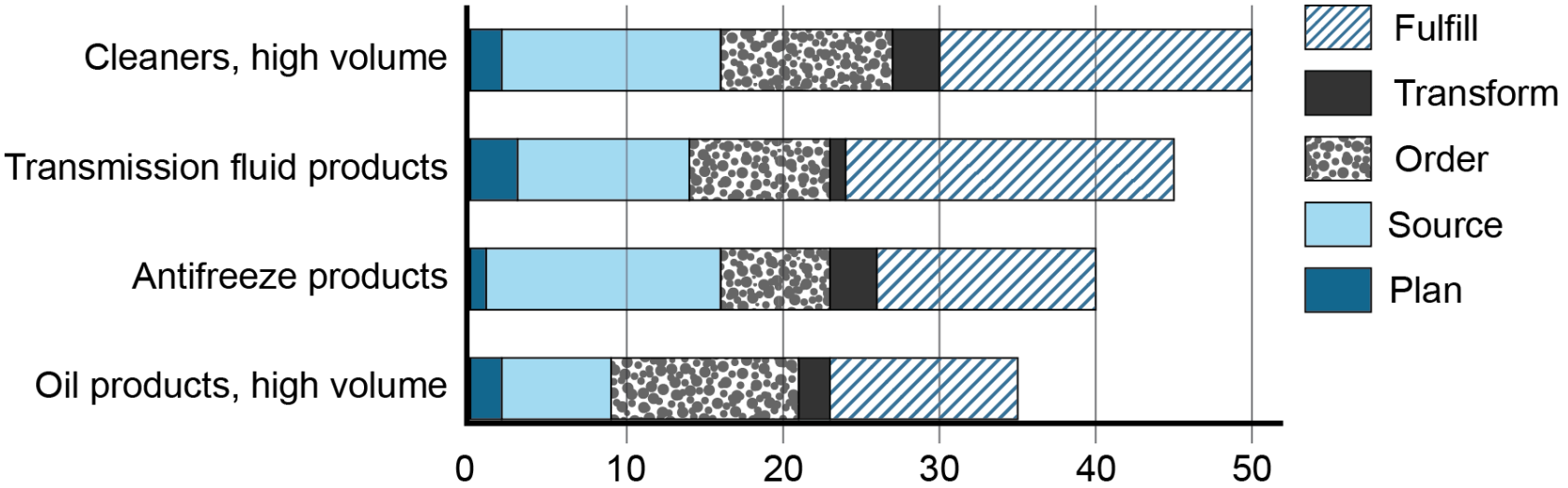
Analysis for Supply Chain Agility

Supply chain agility can be measured in SCOR DS as a strategic or an operational metric.



Analysis for Supply Chain Agility, continued

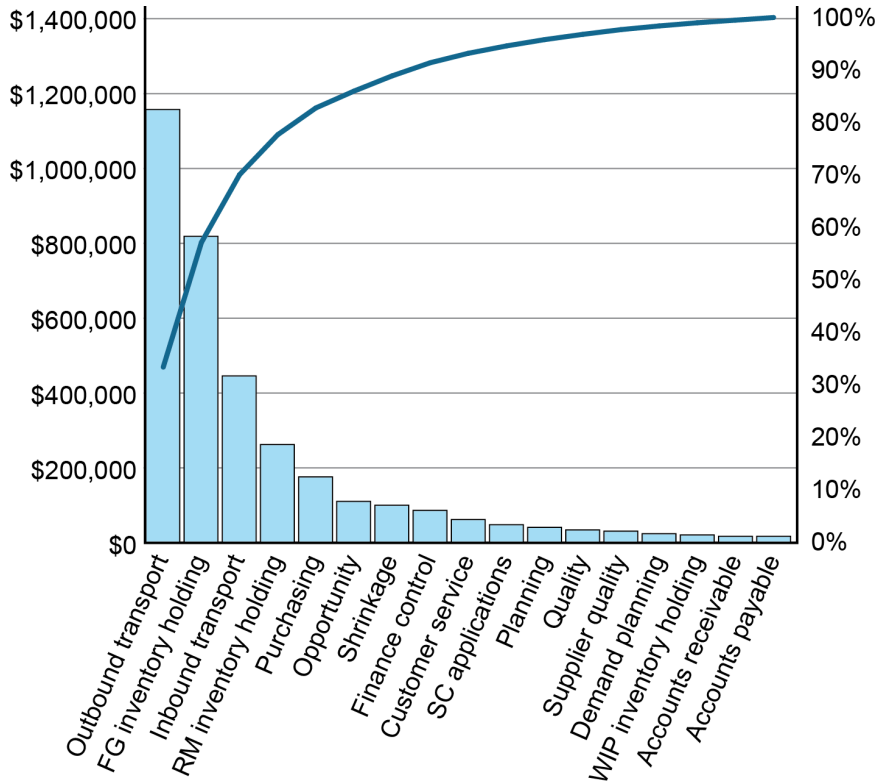
Each failure can then be given additional scrutiny.



Analysis for Total Supply Chain Management Cost

Create a Pareto chart to

- Analyze total supply chain management cost
- Rank all costs from highest to lowest.



Analysis for Cash-to-Cash Cycle Time

Cash-to-Cash Cycle Time = Inventory Days of Supply + Days Sales Outstanding – Days Payables Outstanding

Cash-to-Cash Cycle Time
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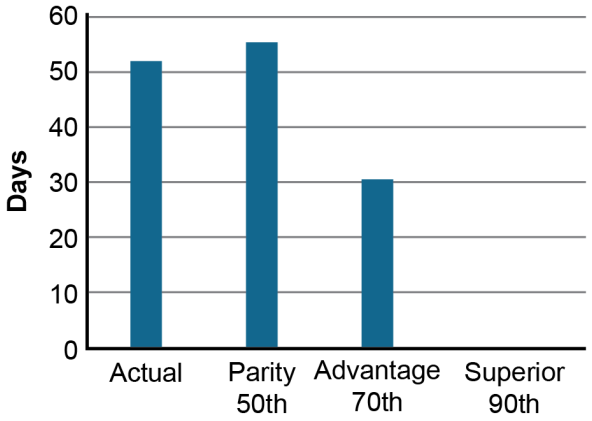
You chose the superior target for this metric. While you have scored above parity by -3.4 days, your target gap is -52 days.



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• Work In Process	1	**1**	0.5	0	0
• Raw Material	12	20	15	**5**	-7

= Targeted competitive level

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SECTION C: CONCEPTUALIZE THE FUTURE-STATE SUPPLY CHAIN OPERATING MODEL

APICS

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Section C Learning Objectives

- Prioritize defects by defect rate and problem weight.
- Convert approved scenarios into projects or work streams.
- Conduct an alternatives analysis.
- Develop supply chain models and simulations.
- Define and test to-be documentation and to-be geographic and process maps.
- Create a supply chain capability model.

Prioritize Defects by Defect Rate and Problem Weight

Final two steps of metric defect analysis:

- Prioritizing defects
- Estimating amount of work to get to root cause

Requires understanding consequence of problem

- Also known as problem weight

Assemble Documentation on Defect Rates and Disconnects or Blockers (Abridged)

ID	SCOR DS Level 2 and Level 3 Defects	Defect Rate
1.0.0	***Perfect customer order fulfillment failure rate (RL.1.1)***	***30.0%***
1.1.0	**Incomplete shipments rate (RL.2.1)**	**15.0%**
1.1.1	No available-to-promise (ATP) inventory at ordering	5.0%
1.1.2	Inventory reallocated to priority customer	5.0%
1.1.3	Late raw material pickup	2.5%
1.1.4	Insufficient ordering due to actual demand > forecast	1.0%
1.1.5	Wrong products picked and shipped	0.5%
1.1.6	Wrong quantity picked and shipped	0.5%

Plan for a Brainstorming Session to Define Problems and Problem Impact

- Determine the right persons to participate.
- Invite participants early.
- Provide participants with an overview.
- Select an appropriate venue.
- Select a leader.

Conduct a Brainstorming Event to Define Problems and Problem Impact

Brainstorming Types	Examples of Activities
▪ Individual ▪ Group	▪ Initial full-group brainstorming session ▪ Small team sessions on specific areas ▪ Small team sessions defining problems ▪ Final full-group meeting discussing results

Convert Approved Scenarios into Projects or Work Streams

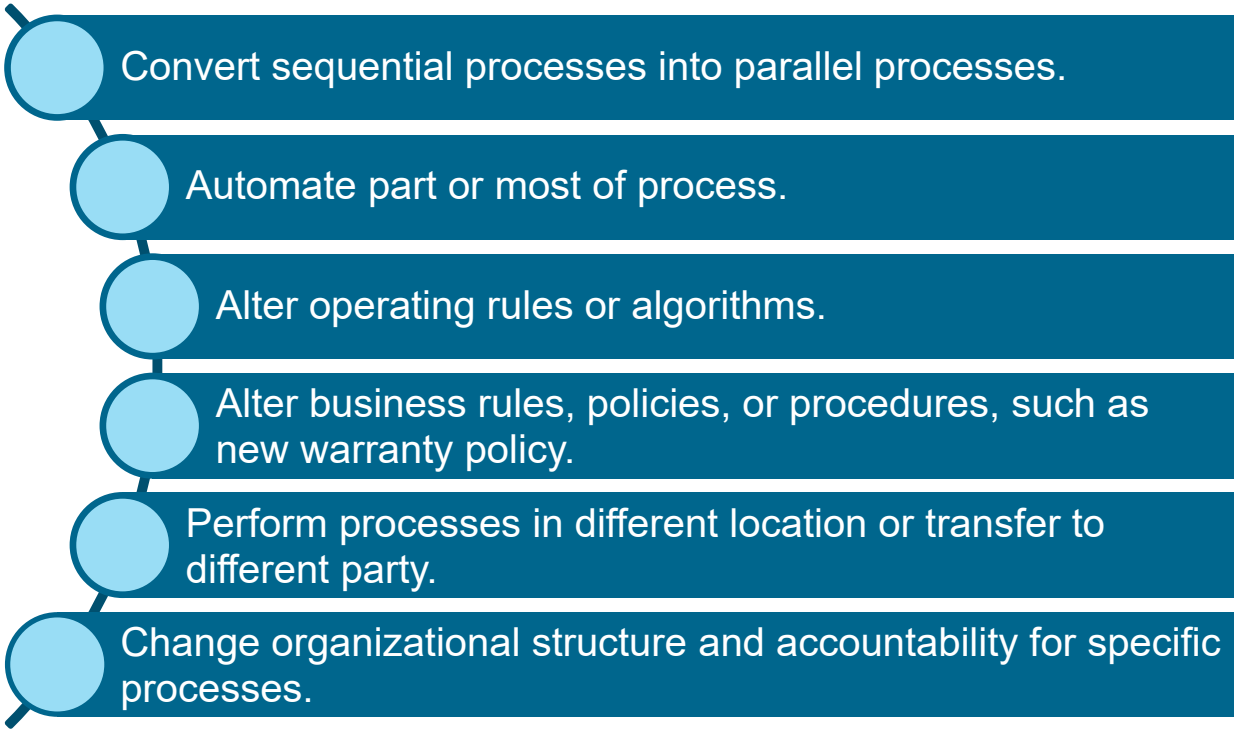
- Results of data collection, benchmarking, and brainstorming should be collected in project portfolio planning spreadsheet.
- Another brainstorming session can identify potential projects or work streams by grouping scenarios.

Determine Analysis Criteria and Process

- Analysis criteria include how the organization defines a winning alternative.
- Multiple tools can be used, alone or in combination, to develop alternatives.

Types of Alternatives

The design team develops a set of alternative ways to solve the organization's problem statements.



Sample, Inc., Alternatives List

- Sample, Inc., design team's analysis:
  - A push supply chain driven by forecasting
  - Adding inventory buffers
- SCOR DS has standardized codes for practices.

Simulate/Model Supply Chain Value in Its To-Be State

- Prior to settling on a particular solution:
  - Test and validate potential projects for financial value, strategic fit, and feasibility.
  - Develop a set of test scenarios.
  - Validate test scenarios based on analysis criteria.
- Scenarios that fail may be included on a wish list for future projects.

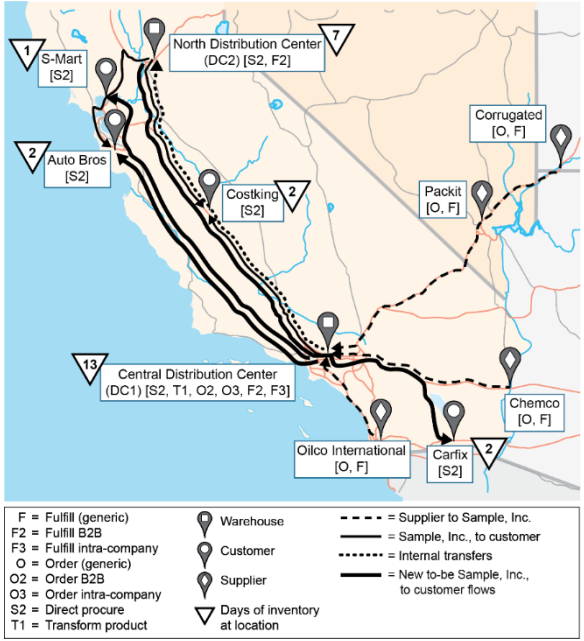
Perform Scenario Testing

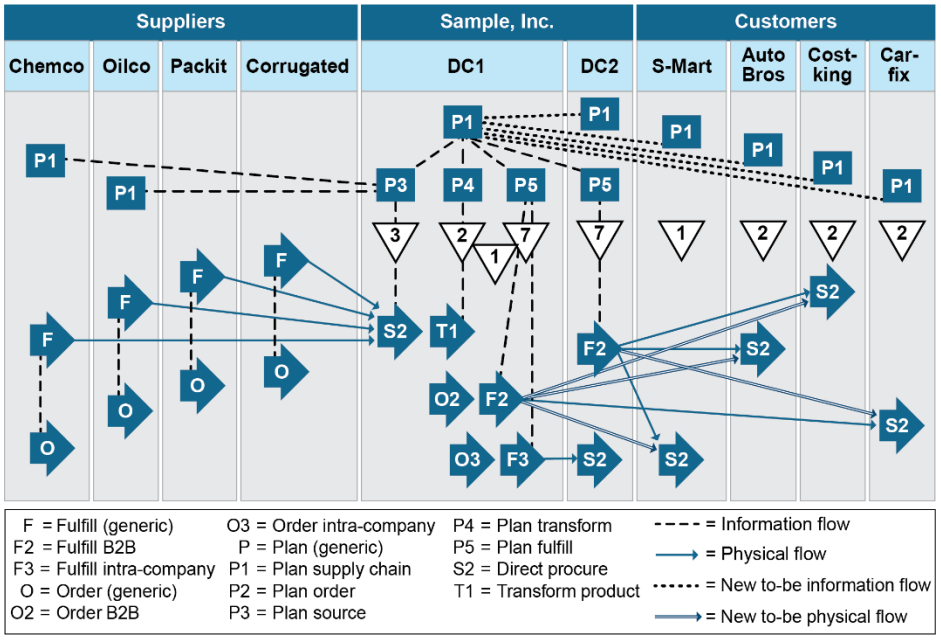
Practice	Test(s) Conducted	Result	Rationale
BP.021 Sales and Operations Planning (S&OP)	High-level walkthrough of the scenario led by a team member with S&OP expertise	Fail	Add to wish list. We have few product families and products and low mix/volume variance, so S&OP would have limited ROI. S&OP is internally focused, but current inventory issues are related to customer forecasts and consignment stocks.
BP.034 Extend Inventory Planning Using Collaboration	High-level walkthrough of the scenario led by a team member with S&OP expertise	Fail	Add to wish list. This extends S&OP to customers and would address inventory but requires S&OP maturity.
BP.156 Collaborative Planning, Forecasting, and Replenishment	Walkthrough of scenario led by a consultant	Pass	CPFR addresses delayed or missing promotion and demand change data and plan buy-in.

Define and Test To-Be Documentation

Metric	Actual	Mandate	Change	To-Be Goal
Cash-to-cash cycle time	**52 days**	**0 days**	**–53 days**	**–1 day**
Days sales outstanding	27 days		0 days	27 days
Days payables outstanding	55 days		0 days	55 days
Inventory days of supply	80 days		–53 days	27 days
• Days, RM	*12 days*		*–7 days*	*–7 days*
• Days, WIP	*1 day*		*0 days*	*1 day*
• Days, FG	*67 days*		*–50 + 4 = –46 days*	*21 days*

Create To-Be Geographic Maps, Process Maps, and RACI Diagrams





Create a Supply Chain Capability Model

- Sample, Inc., added related people skills from SCOR DS to their supply chain capability model.
- Capabilities need to be clearly aligned with organizational and supply chain strategy.

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SECTION D: IDENTIFY INITIATIVES TO ADDRESS GAPS

APICS

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Section D Learning Objectives

- Develop a portfolio strategy and an initial portfolio of transformation initiatives.
- Use strategic assessment to determine scope, impact, and effort of initiatives.
- Use a process to sequence and prioritize initiatives.
- Categorize projects in a prioritization matrix.

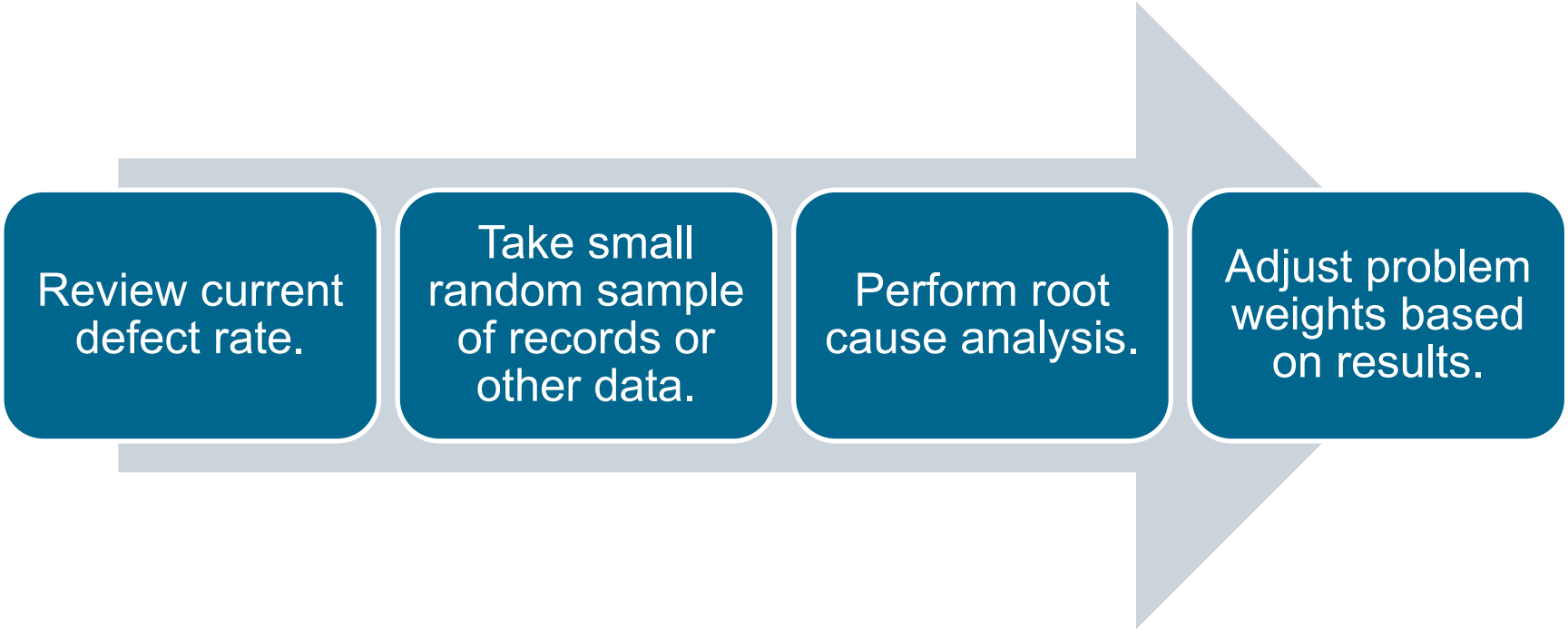
Collect and Validate Data

Potential Sources	Validation Checks
▪ Channel partner strategies, control towers, analytics ▪ Internal customer data ▪ Supplier contracts and SLAs ▪ Inventory data ▪ Transportation tracking data ▪ Social media analytics, weather data, etc.	▪ Valid sample sizes at necessary level ▪ Standardized master data ▪ Outliers ▪ Missing data ▪ Duplicate data merged ▪ Up-to-date data ▪ Clear ownership of each data type

Strategic Assessment

- Do the supply chain priorities align with business unit or organizational strategy?
- Do the supply chain priorities align with the operationalized customer segments identified?
- Does the process architecture envisioned by the to-be state address the end-to-end scope of this supply chain segment from the customers' customer to the suppliers' supplier?
- Will processes be integrated, documented, and supported by valid and timely data?
- Will processes be adaptable to new organizational learning or strategy shifts?

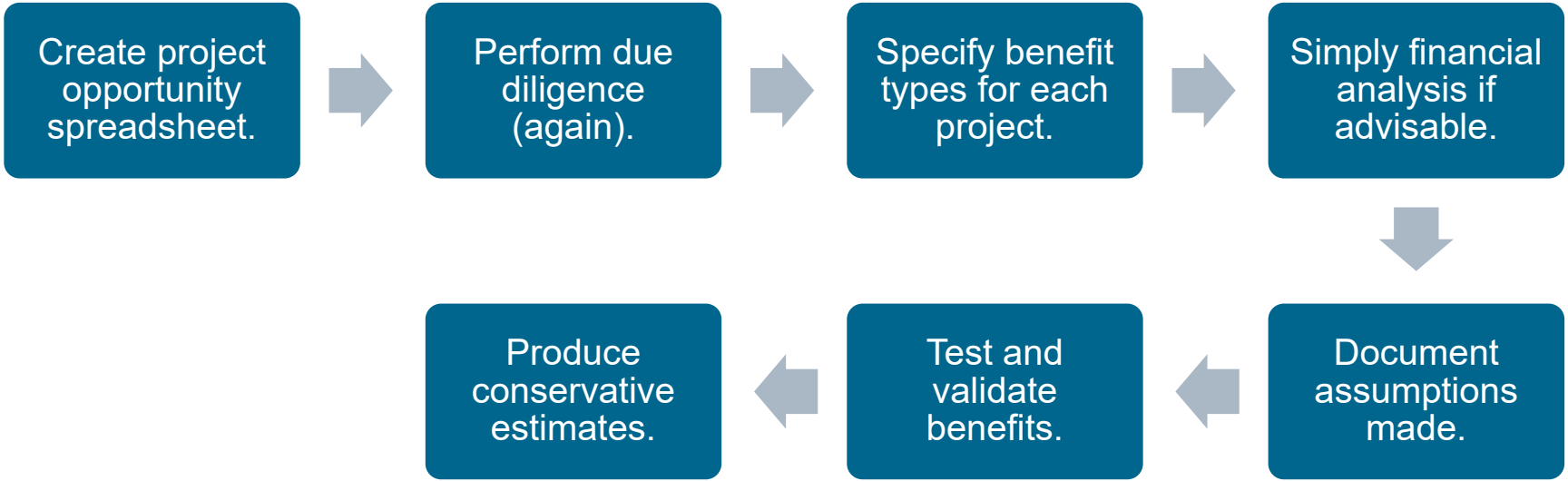
Validate Problem Weights and Produce First Draft of Portfolio



Turning Problems into Opportunities

- Defect identification and discussion can be contentious.
- Be sure to document all assumptions that are made.
- Actual profit potential for each potential project must be estimated.
- Costs may also require estimation.

Refine Quantitative/Qualitative Success Targets and Benefits Per Project



Steering Team Review and Go/No-Go Phase Gate

- The evangelist and selected design team members will present the overall project portfolio to the steering team and executive sponsor.
- Working with external parties on a transformation:
  - Have clear and consistent messaging among all points of contact with these parties.
  - Agree on goals internally before presenting externally.
  - Reflect final decisions in internal team goals.

Apply Project Sequencing

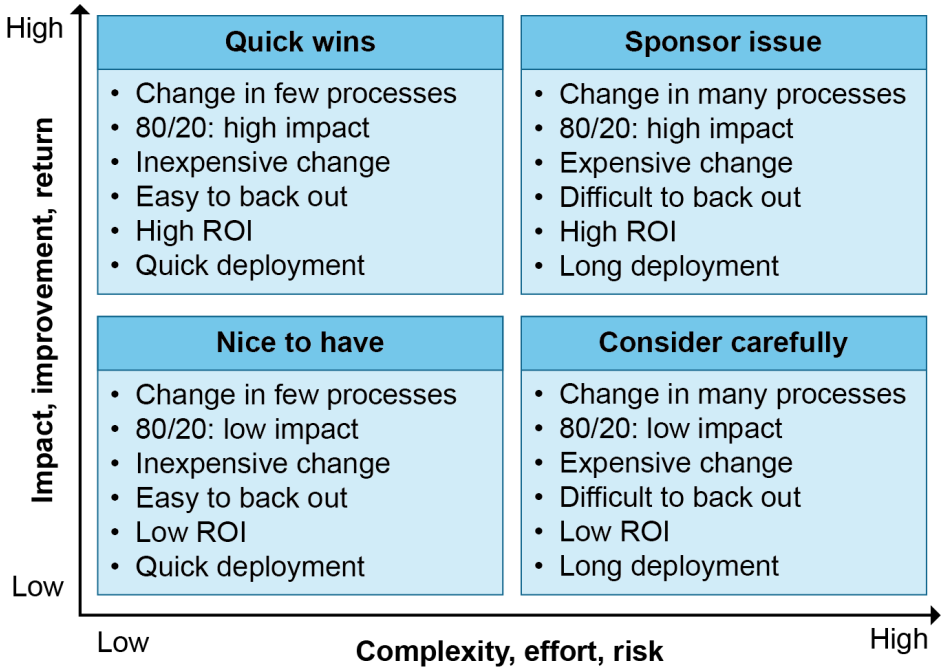
Mandatory dependencies

- Inherent in nature of activities or regulatory or contractual requirement

Discretionary dependencies

- Based on best practices; may be as a result of risk mitigation

Plan Quick Wins, Tactical Initiatives, and Strategic Initiatives



Apply Additional Priority Criteria

		Weight	Score (–3 to 3 for all but aversion factors; there use –3 to 0)	Total
Internal benefits	Revenue growth	10%	2	0.20
	Cost avoidance	10%	2	0.20
	Cost reduction	5%	1	0.05
	Cash-to-cash cycle time improvement	20%	3	0.60
Customer benefits	Reliability	10%	2	0.20
	Responsiveness	5%	0	0.00
	Agility	10%	1	0.10

Build Alliances and Trust

- Building alliances and trust with influential stakeholders and decision makers is vital.
- The best and most reliable benefits assessments and analysis can go to waste if decision makers do not act on the information.

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SECTION E: INITIATE TRANSFORMATION WORK STREAMS AND PROJECTS

APICS

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Section E Learning Objectives

- Create project charter.
- Lead program kickoff meeting.
- Create resource management plan.
- Negotiate for necessary resources.
- Implement stakeholder management plan, communication management plan, and change management plan.

Collect Business Requirements

- Corporate mission, vision, strategy, and goals
- Customer preferences
- Requirements from external partners
- Employee preferences
- Regulatory requirements
- Sustainability

Project Schedule and Milestones

Project Schedule Development

- Development of the schedule starts with the project or portfolio scope and work breakdown.
- From that point, major milestones can be identified.

Non-Milestone Activities

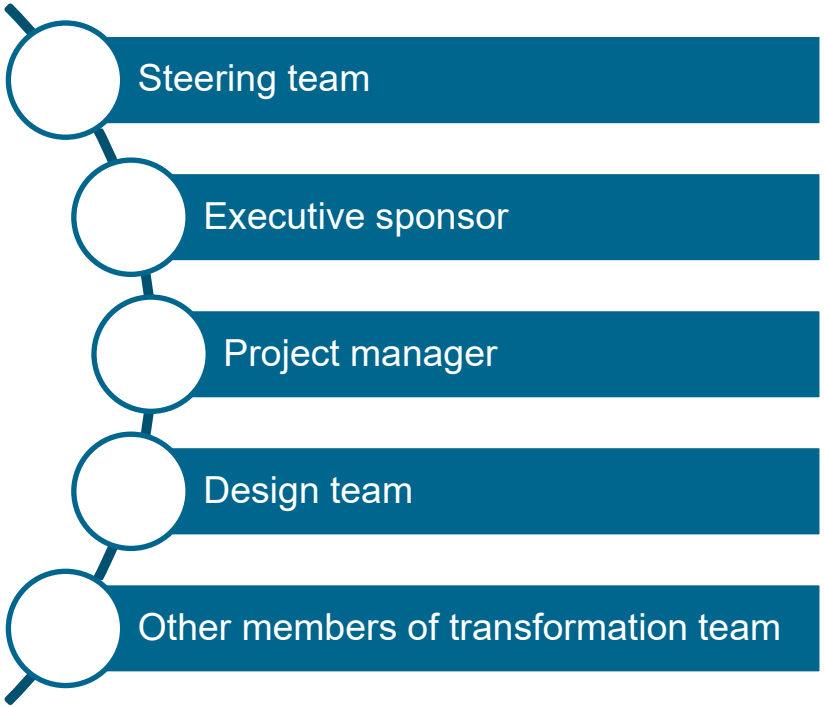
- Regular meetings
- Working sessions
- Planned project alignment evaluations
- Planned communication
- Outreach efforts to stakeholders
- Other tasks (risk evaluation/ mitigation)
- Schedule management plan

Project Charter Elements

Purpose	Objectives	Business requirements	Assumptions and constraints
Project scope	Risk register	Milestones schedule	Budget
Stakeholder summary	Approval summary	Project manager	Project sponsors

Hold a Transformation Program Kickoff

- A kickoff meeting must take place.
- Include all the major participants involved in the project.



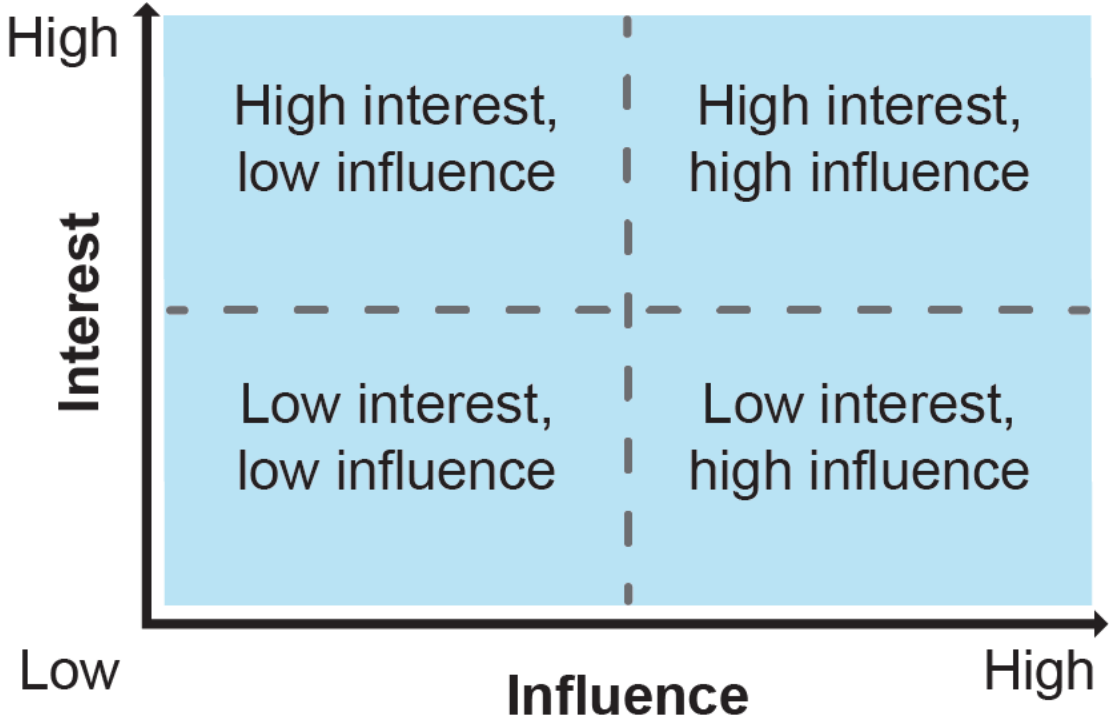
Resource Management Plan Components

Higher level	Lower level
• Increased uncertainty • Balance needs of program • Capacity constraints depending on progress • Interdependencies	• Decreased uncertainty • Consider only requests from component itself

Negotiate for Desired Resources

- Once the resource plan has been created, the identified resources must be acquired.
- Hiring external contractors may be a viable alternative.
- Conserving financial resources may help provide flexibility.

Mapping Stakeholders and Their Needs

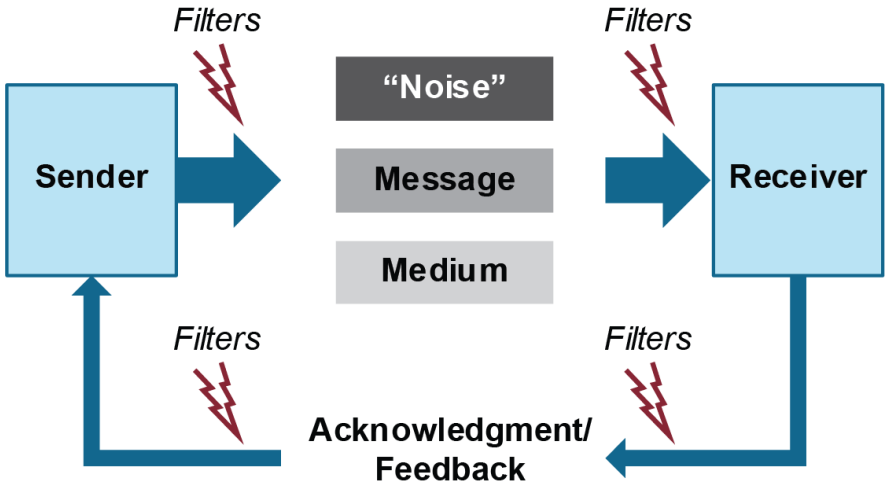


Managing Relationships

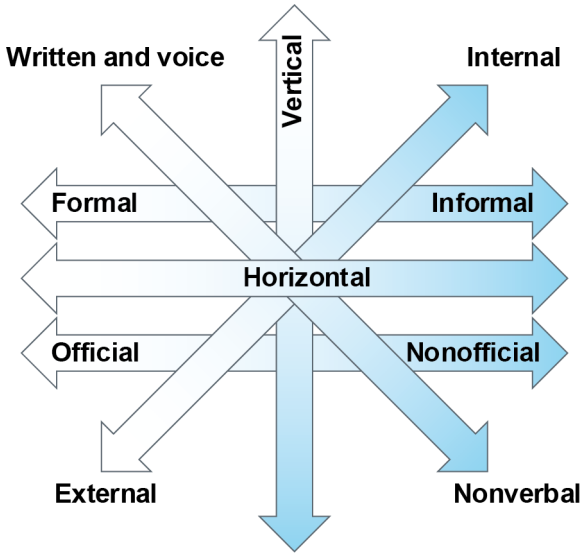
- Team-building exercises
- Mutual goal setting
- Ongoing involvement of leadership and management
- Communicating through opposition
- One-on-one or small group meetings to work through opposition

Communication Process and Dimensions

Basic Communication Process



Communication Dimensions



Source: Holmes Corporation. Used with permission.

Communication Plans

- Account for outgoing and incoming communication
- Tailored to needs
- Specified media and protocols
- Responsible individuals and roles

Document: Communications Management Approach **Author:** Project Manager
Project: Project 1, CPFR, West Coast Pilot, Phase 1—Costking Customer

1. Introduction:

The CPFR project is a collaboration between Sample, Inc., and its key West Coast customers, so it requires strong external communications. Costking is the collaboration customer for phase 1 of the pilot.

2. Communication Procedure:

- The project manager is responsible for all internal communications with the project team and will report weekly to the steering committee's project subcommittee using a summary report.
- The director of sales is responsible for all formal external communications but may delegate technical communications to relevant SME team members.

3. Tools and Techniques:

- The project manager will use the project portal for all internal communications and project documents.
- The director of sales will use site visits, virtual meetings, and a newsletter to communicate with participating customers.

4. Records:

The following reports will be issued for internal communications: summary report, milestone report, project results report, issue report, lessons learned report, change management report, newsletter (electronic).

5. Timing of Communication Activities:

The project manager will meet with the project subcommittee on a biweekly basis and have a formal presentation for go/no-go at each milestone.

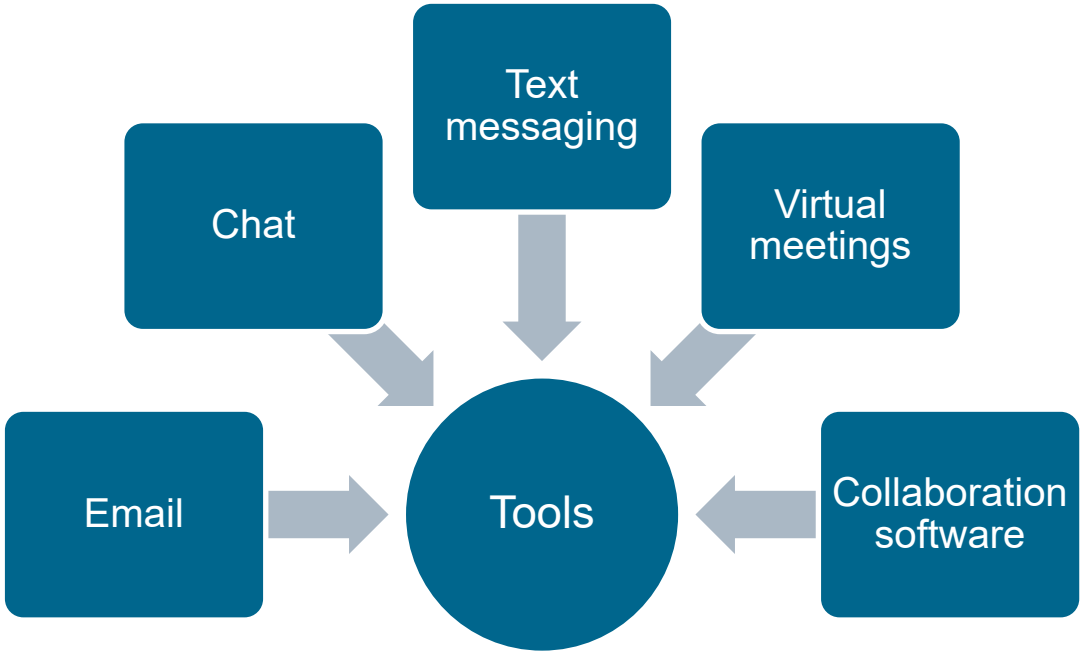
Data Visibility and Transparency of Project Outcomes

Different stakeholders will require different information at different cadences and for different purposes.

Broad data visibility is inappropriate.

It is important to be consistent and intentional with communications.

Building Communication Channels



Assess Change Management Requirements

First-order change

- Change to process or procedures
- Adjustment to systems
- Reversable
- Nontransformable

Second-order change

- Change in strategic direction
- Requires individuals to learn new skills
- Irreversible
- Transformable

Third-order change

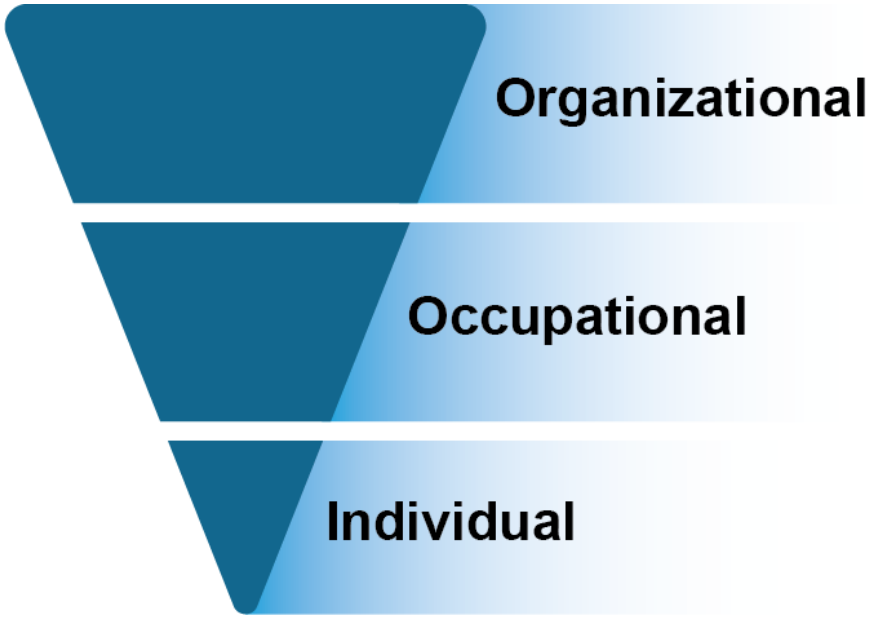
- Change in values, culture, founding principles
- Very difficult; individuals may leave
- Iterative
- Irreversible
- Transformable

Gaining Buy-In

- Political barriers
- Impermeable functional barriers
- Flawed communication process
- No plan to sustain strategy

Design Training

- Most effective to train when systems and processes go live.
- A training needs assessment is necessary.



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SECTION F: DEVELOP AND ITERATE PRELIMINARY TRANSFORMATION BUSINESS CASES

APICS

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Section F Learning Objectives

- Identify targeted value drivers.
- Quantify anticipated value of improvements.
- Calculate ROI.
- Determine necessary resources.
- Identify KPIs.
- Create business case messaging.
- Present business case to leadership.

Use a Business Case Development Process

Benefits	Questions to Answer
▪ Foster strategic thinking. ▪ Improve decision-making efficiency and quality. ▪ Enable comparison of alternatives. ▪ Establish criteria.	▪ Is the project achieving the anticipated benefits? ▪ Are the assumptions observed to be accurate in reality? ▪ Is the business case justification still valid?

Set Targeted Value Drivers

- The business case describes an opportunity to somehow create quantifiable benefits for an organization.
- Benefits may be realized at different points of a project.

Creating more flexible systems to adapt to future conditions

Increasing visibility and understanding among supply chain partners

Improving working conditions (and thus morale) of employees

Economic Levers and Measures

Major Economic Levers	Important Measures
▪ Revenue ▪ Costs ▪ Net fixed assets (fixed capital) ▪ Working capital ▪ Capital expenditure (capex)	▪ Net working capital ▪ Current ratio ▪ Time value of money ▪ Discounted cash flow ▪ Break-even point ▪ Contribution margin

Related Analyses

Cost-Volume-Profit Analysis

- "Study of how profits change with various levels of output and selling price" (*Dictionary*)

Break-Even Analysis

- "Study of the number of units or amount of time required to recoup an investment" (*Dictionary*)

Estimate ROI

ROI is calculated using the following formula:

$$\text{Return on Investment} = \frac{\text{Gain from Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}$$

Residual income is calculated in the following manner.

Residual Income =
Operating Income – (Minimum Required Rate of Return x Operating Assets)

Estimate ROI, continued

The payback period is “the period of time required for the stream of cash flows resulting from a project to equal the project’s initial investment.” (*Dictionary*)

Payback period can be calculated using the following equation:

$$\text{Payback Period} = \frac{\text{Cost of Investment}}{\text{Annual Cash Savings}}$$

Determining Necessary Resources

Focus Areas

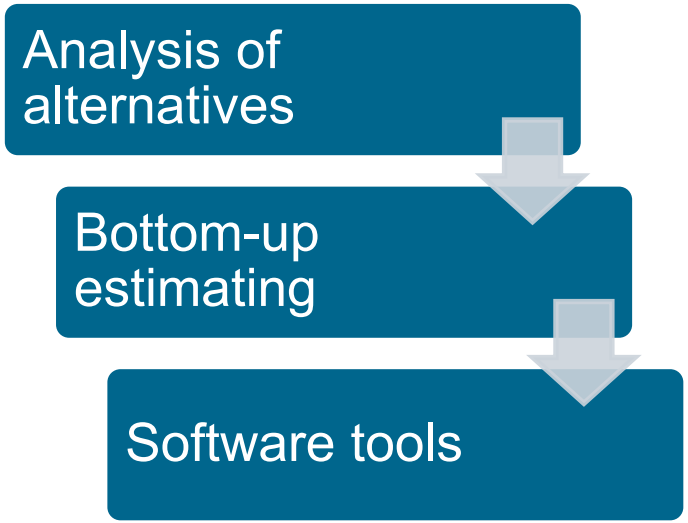
- Current/core supply chain functions
- New strategies
- Entirely new functions or operations

Funding Models

- Self-funding
- Funding from outside the managing unit
- External funding and management
- Collaborative funding

Tools

- When estimating resource needs and schedule requirements, a variety of tools may be used.

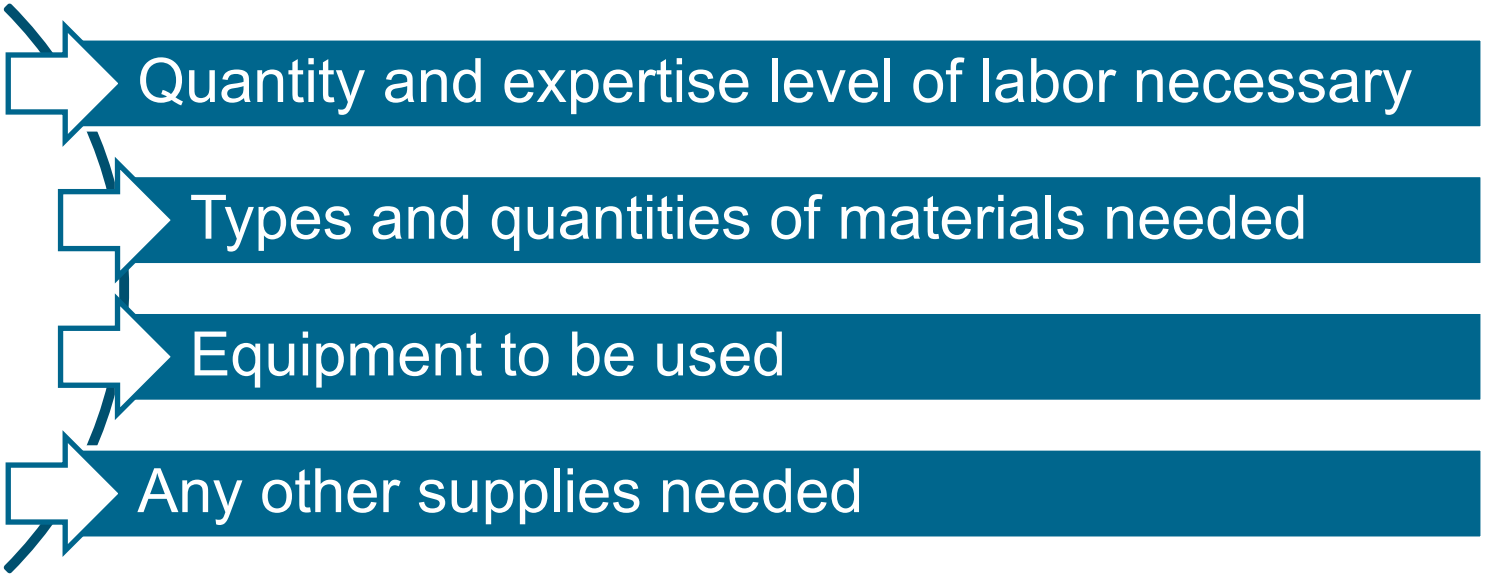


Determine How Project Spend Will Be Managed

The financial management plan records the following information:

- Schedules and milestones
- Initial budget
- Reporting mechanisms
- Financial metrics used to monitor program
- Associated operational and infrastructure costs
- Component payment schedules

Estimate Cost and Schedule



Define Metrics and Measurement Processes

- Overall progress against schedule
- Project performance against budget
- Individual process/project progress against schedules
- Number of change requests
- Number of approved/rejected requests
- Project benefits realization
- Team member performance

Communicate the Need and Future State of Success

- Partnering with marketing stakeholders may be beneficial.
- Depending on the presentation, questions may vary.

Examples of questions:

- What do they value?
- Are they risk-averse or aggressive?
- What is the climate of the organization and marketplace, and how does this affect the positioning of the business case?
- Are there supportive stakeholders who have a strong relationship with the decision makers and can help present the case or otherwise help influence them?
- Do decision makers have areas of interest within the organization that they consistently focus on?
- Does someone in the decision-making group stand to lose something or have other reasons to oppose the project?

Present the Business Case, Follow Up, and Take Next Steps

Once you have prepared your presentation:

- Schedule a meeting for the presentation.
- Maintain professionalism.
- Formally present the business case.
- Allow time for questions and discussion.
- Follow up no matter whether the project was approved/denied.

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SECTION G: POST-APPROVAL TASKS

APICS

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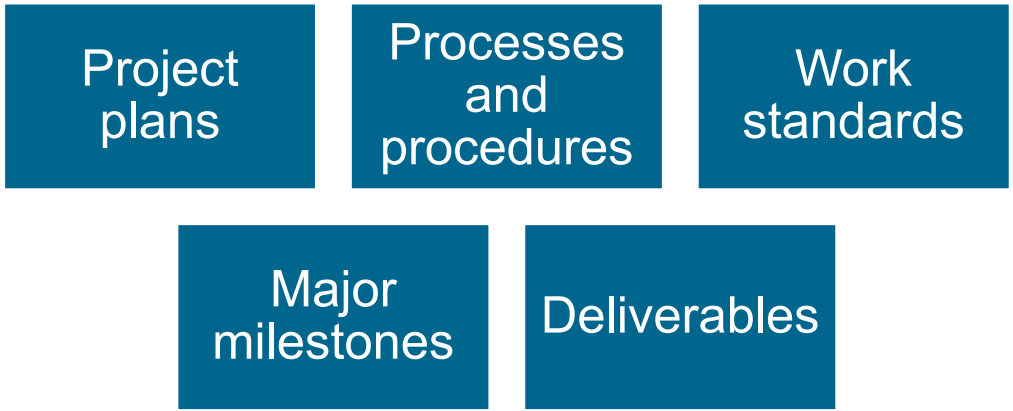
Section G Learning Objectives

- Assemble and complete the project portfolio.
- Use various tools to expand on the brainstorming processes.
- Work around identified resource constraints.
- Refine the business case based on new information.
- Create a portfolio management plan.

Project Portfolio Scope

- Project portfolio scope statement
- Analysis of selected metrics and identification of any gaps
- Work breakdown structure, which includes other project documentation



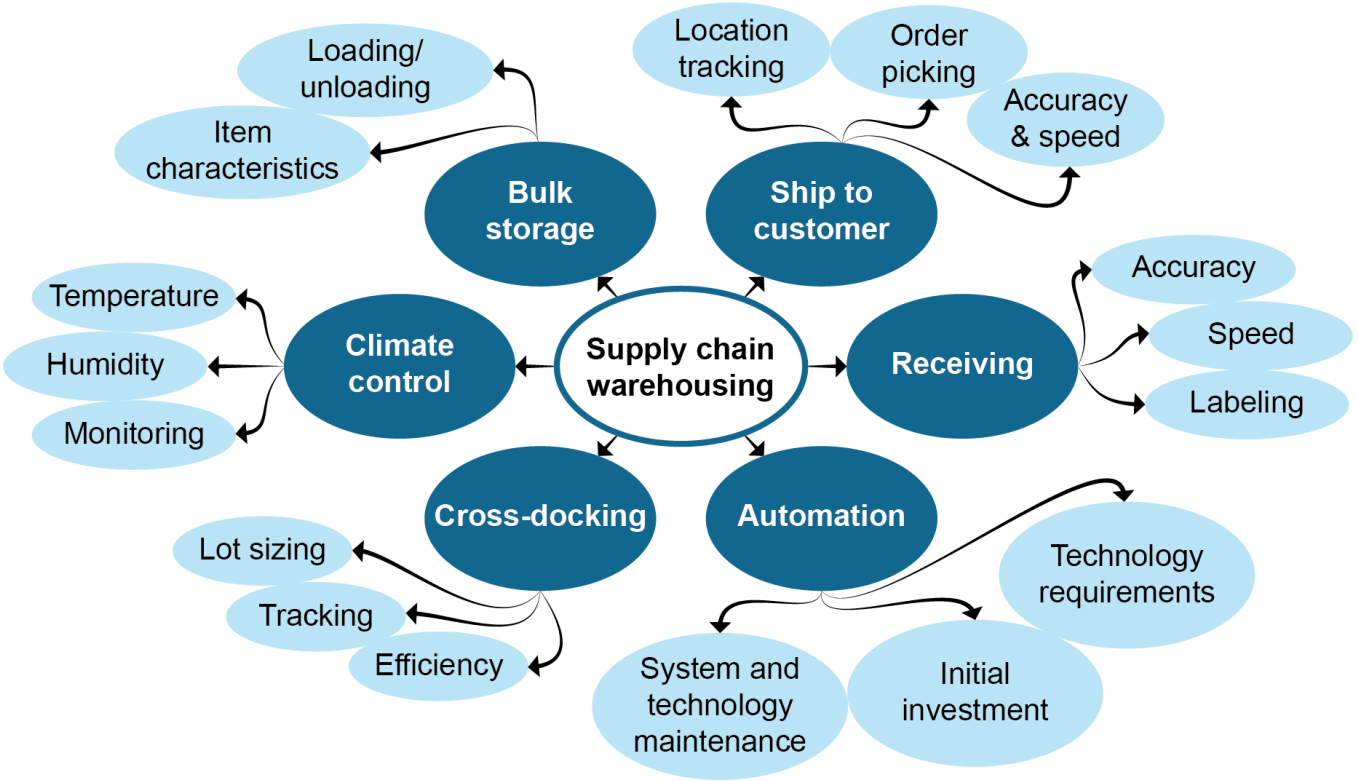
Tools to Expand on Brainstorming/Planning Processes

- Brainstorming should again be conducted.
- Target toward the project goals and tasks that have been approved.
- Several tools can help expand upon brainstorming and planning processes:
  - Nominal group technique
  - Mind mapping
  - Rich pictures
  - Affinity diagrams
  - Cause-and-effect diagrams
  - 5W2H framework

Nominal Group Technique

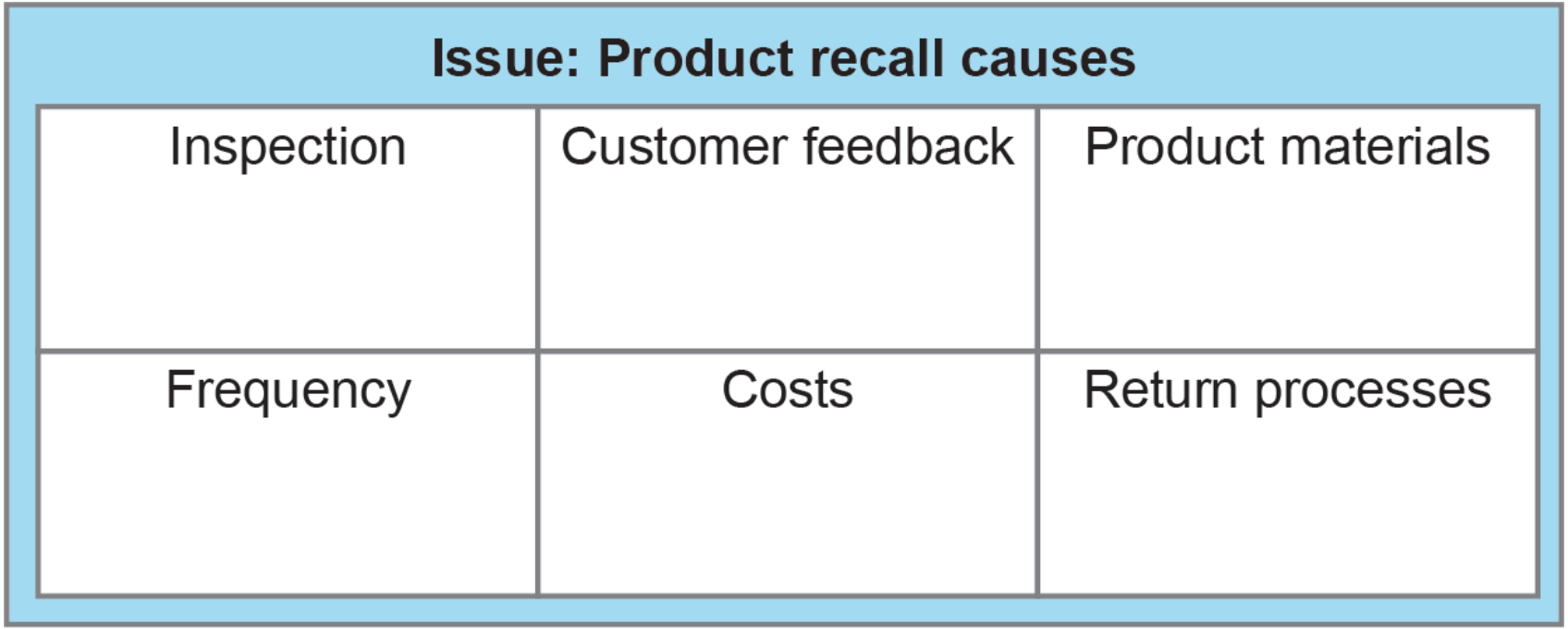
- "A technique, similar to brainstorming, used by teams to generate ideas about a particular subject." (*Dictionary*)
- Related to brainstorming.

Mind Mapping

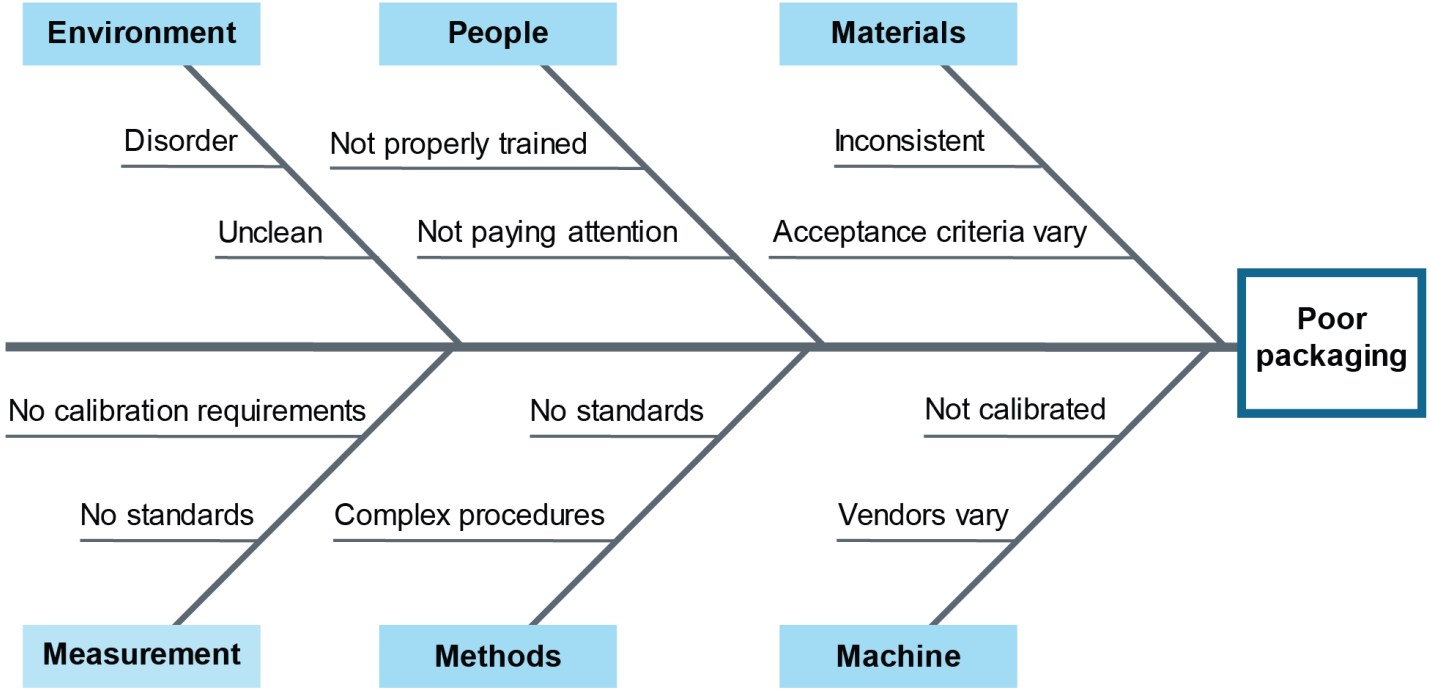


Rich Pictures

Affinity Diagram



Cause-and-Effect Diagrams



5W2H Framework

Validate Financial and Customer Service Commitments

Validate Commitments

- Following approval, revalidate
  - Previously identified costs
  - Initial commitments.
- Justify requests for additional resources.

Working Around Constraints

- There will be planned tasks that exceed the available resources.
  - Finance availability may be an issue.
  - It is important to negotiate to garner additional resources.

Evaluate and Select People and Solutions

The selection of the project team is crucial.

- Use a detailed organizational chart
- Capture team members' skills, duties, and other key details.

Employee	Current position	Job profile	Seniority level	Skills gap between current level and next level

Auditing

- Set up auditing and assessment tools during the project initiation phases.
- Define
  - Audit scope
  - Audit criteria
  - Specific assigned roles and responsibilities.
- Use an audit team that is separate from the project team when possible.

Select Consulting Partners and SC Business Outsourcing Partners

Pros	Cons
• Addresses labor availability constraints. • Potential addition of missing best-practice expertise. • Expertise leads to increased efficiency. • Energy injection into project. • Outside perspectives may generate additional insight. • May have ability to sway decision makers.	• More expensive. • May be difficult to find qualified consultants. • Consultants require training and time to learn details of the business. • Presence of external consultants may drive perceptions that harm implementation. • Increased risk of scope creep.

Refining the Business Case

- Business case should be updated as project begins initial work.
- Increasing detail and circumstances will change around project.
- Financial value of supply chain improvements should also be reassessed.

Portfolio Management Plans and Definition

Governance	Oversight	Change management
Balance and dependency management	Prioritization	Other areas

Ensure Proper Funding, Support, and Oversight Over Project Management and Risk Management

- Processes must be set to ensure that the project is appropriately monitored.
- Tracking may use color-coded systems or other easy-to-monitor status indicators.

What work was done last week?

What work has been completed against the plan?

What work is planned for the coming week?

What issues are impeding progress?

Set Key Steps, Milestones, and Time Line

Task Name	Duration	Start	Finish	Predecessors
Start	0 days	7/24	7/24	
Task A	5 days	7/24	7/28	1
Task B	4 days	7/24	7/27	1
Task C	5 days	7/31	8/4	2
Task D	1 day	7/28	7/28	3
Task E	4 days	7/28	8/2	3
Task F	6 days	8/7	8/14	4,5
Finish	0 days	8/15	8/15	6,7