

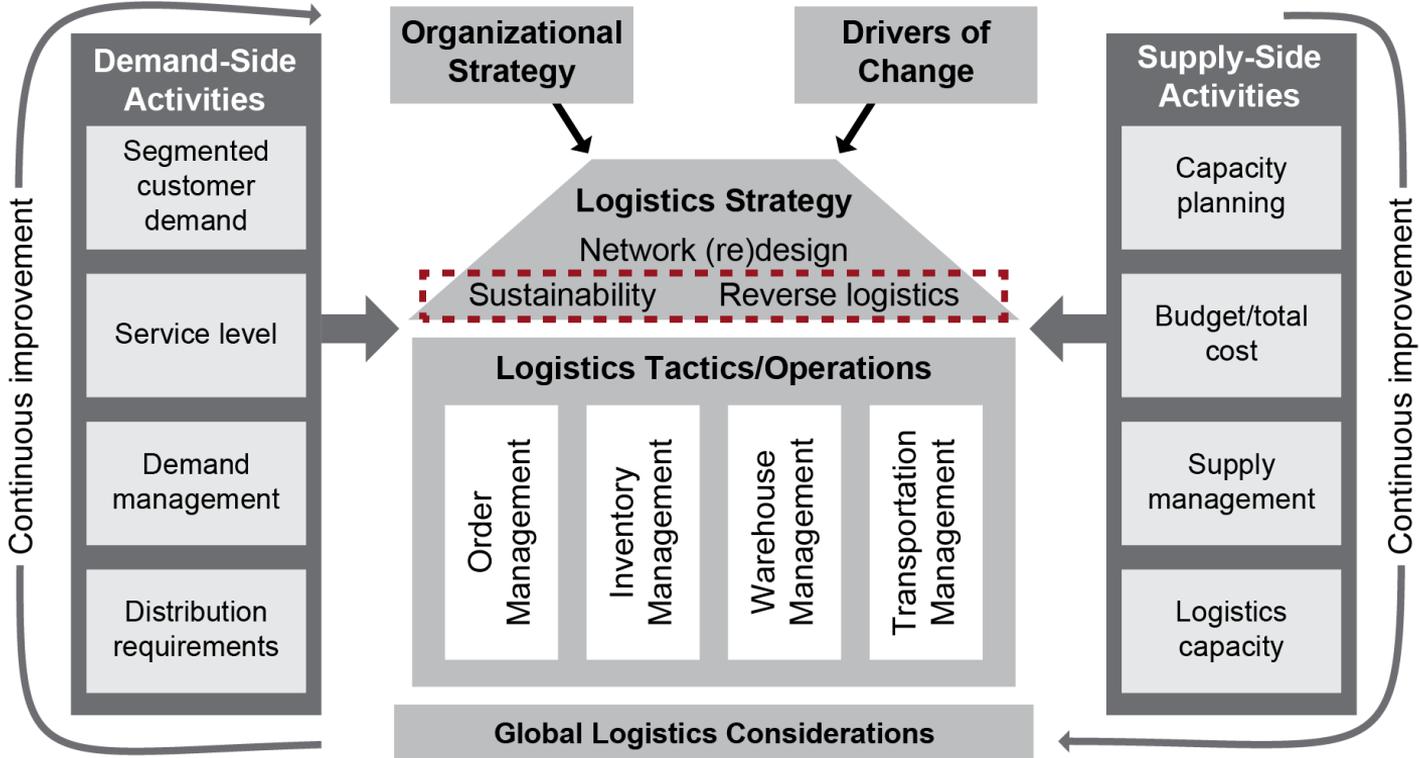
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CERTIFIED IN LOGISTICS,
TRANSPORTATION AND DISTRIBUTION

MODULE 3: SUSTAINABILITY AND REVERSE LOGISTICS

Module 3: Sustainability and Reverse Logistics

Module 3 Overview



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CERTIFIED IN LOGISTICS,
TRANSPORTATION AND DISTRIBUTION

MODULE 3, SECTION A: SUSTAINABILITY

Topic 1: Logistics Social Responsibility Considerations

Social Responsibility



“Commitment by top management to behave ethically and to contribute to community development. This may also entail improving the workforce’s quality of life.” *(ASCM Supply Chain Dictionary)*

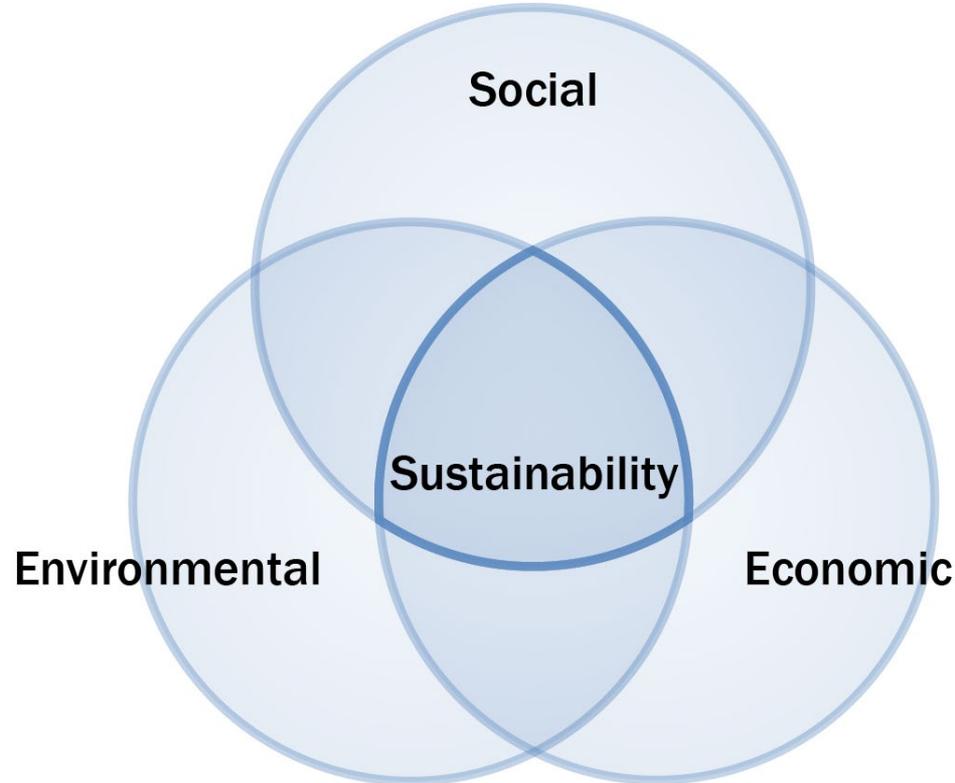
Topic 1: Logistics Social Responsibility Considerations

Social Responsibility Dimensions



Topic 1: Logistics Social Responsibility Considerations

Triple Bottom Line



Topic 1: Logistics Social Responsibility Considerations

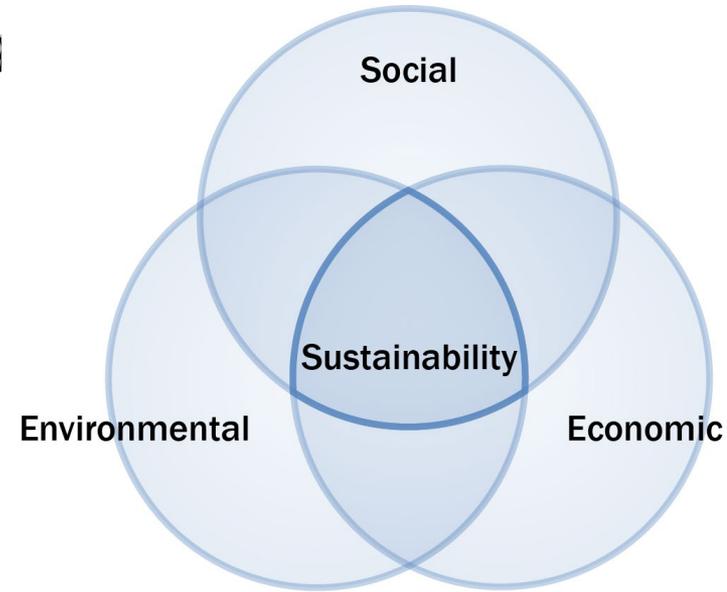
Triple Bottom Line

Economic perspective

- Value created by organization after deducting cost of all inputs

Initiatives:

- Implement technologies to support sustainability and economic goals.
- Develop an eco-friendly reputation.
- Write environmental management strategies.
- Promote green products.



Topic 1: Logistics Social Responsibility Considerations

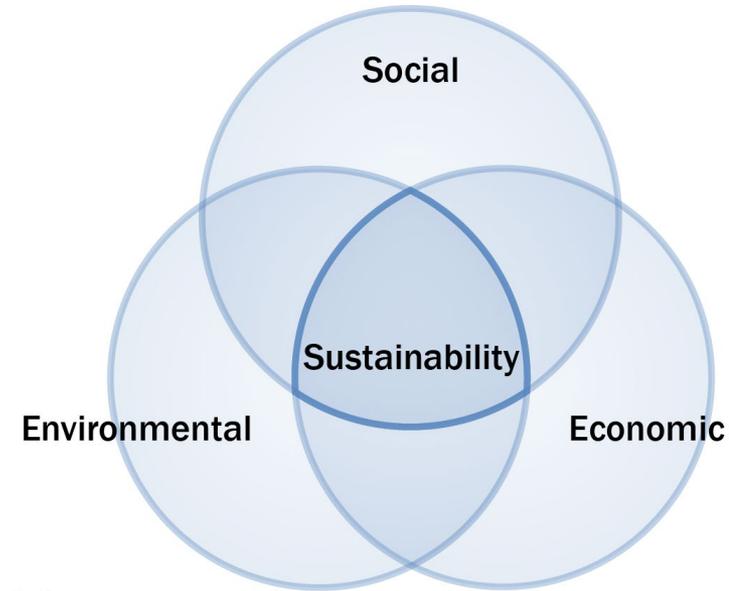
Triple Bottom Line

Environmental perspective

- Organization's ability to avoid harming environment and preserve scarce resources for future generations

Initiatives:

- Environmentally friendly manufacturing processes
- ISO 14000
- Regulatory considerations (example: RoHs)
- Energy-efficient transportation and warehouses



Topic 1: Logistics Social Responsibility Considerations

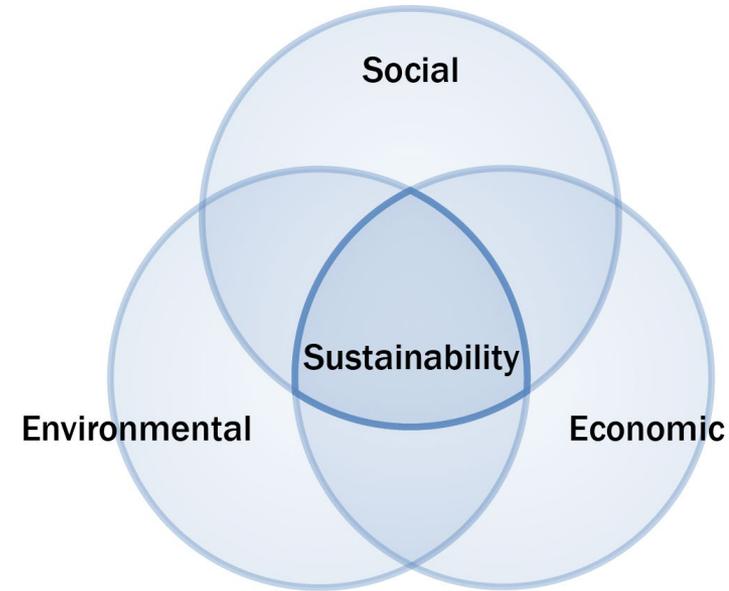
Triple Bottom Line

Social perspective

- How organization impacts employees, suppliers, and community at large

Initiatives:

- Promote human rights and fair labor practices.
- Develop socially responsible supply chain.
- Be positive role model.
- Treat stakeholders and environment with care and respect.



Topic 1: Logistics Social Responsibility Considerations

United Nations Global Compact

Areas	Principles
Human rights	<p>Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and</p> <p>Principle 2: make sure that they are not complicit in human rights abuse.</p>
Labour	<p>Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;</p> <p>Principle 4: the elimination of all forms of forced and compulsory labor;</p> <p>Principle 5: the effective abolition of child labour; and</p> <p>Principle 6: the elimination of discrimination in respect of employment and occupation.</p>

Source: © United Nations Global Compact, www.unglobalcompact.org.

Topic 1: Logistics Social Responsibility Considerations

United Nations Global Compact

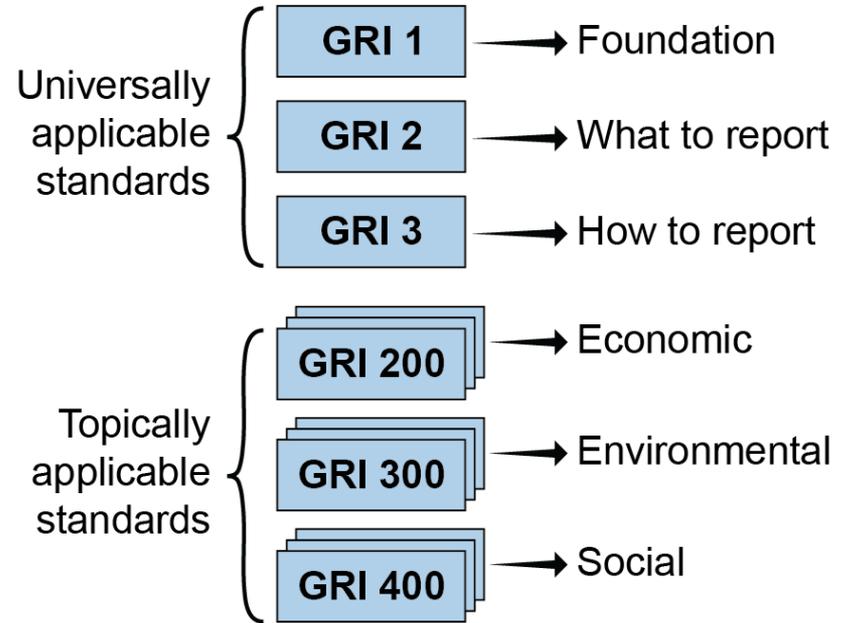
Areas	Principles
Environment	<p>Principle 7: Businesses should support a precautionary approach to environmental challenges;</p> <p>Principle 8: undertake initiatives to promote greater environmental responsibility; and</p> <p>Principle 9: encourage the development and diffusion of environmentally friendly technologies.</p>
Anti-corruption	<p>Principle 10: Businesses should work against corruption in all of its forms, including extortion and bribery.</p>

Source: © United Nations Global Compact, www.unglobalcompact.org.

Global Reporting Initiative (GRI)

GRI Standards

- Voluntary sustainability reporting
- Manage risks and optimize supplier performance



International Organization for Standardization

ISO Description

- Global federation (163 countries)
- Nongovernmental organization (NGO)
- Trusted partner in supply chain community
- Market-driven
- Voluntary

ISO Benefits

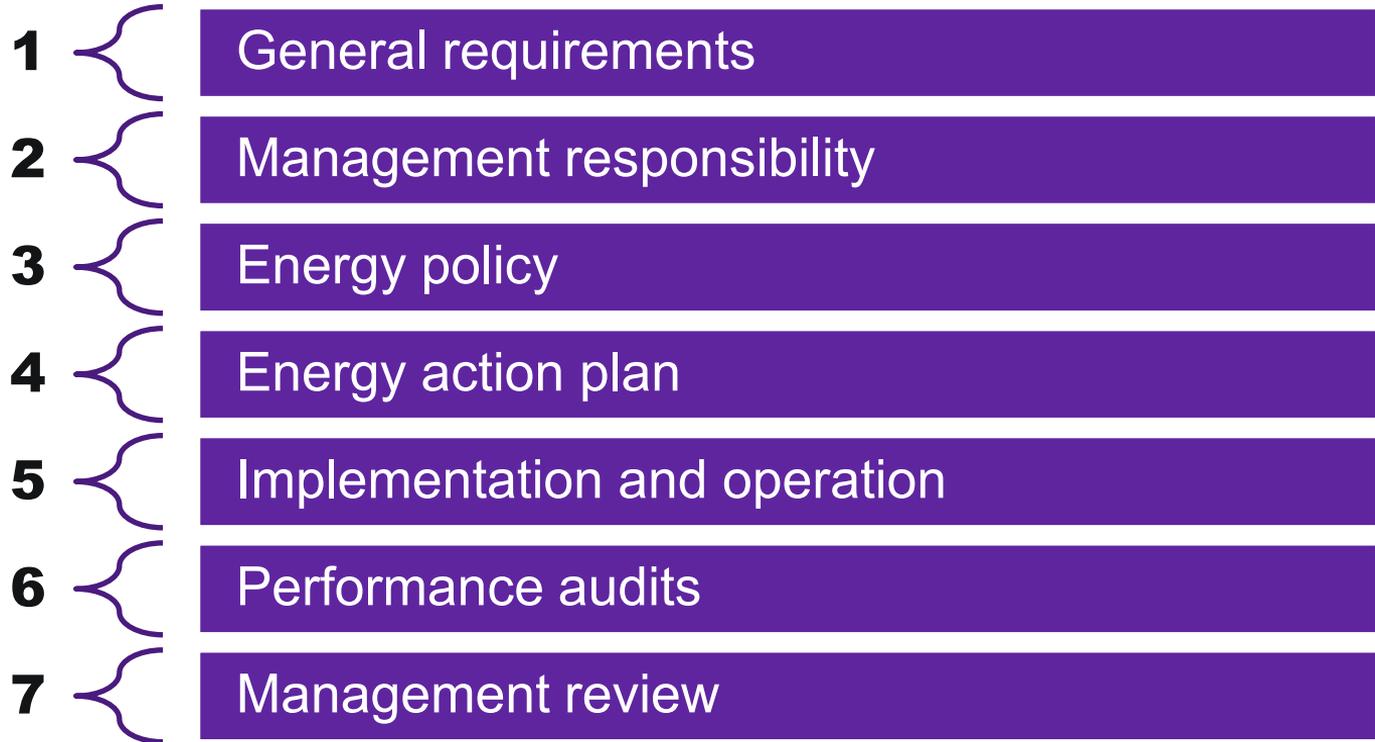
- Improved efficiency, productivity, bottom line
- Fair trade
- Reduced environmental impacts
- Legislation
- Best practices

ISO 14000 Series Standards

- ISO 14001
 - Strategic, holistic approach to environmental policy, plans, and actions
 - Generic environmental management system requirements
- ISO 14004
 - Guidelines for environmental management systems
 - Implementation guide
 - Assurance and proof

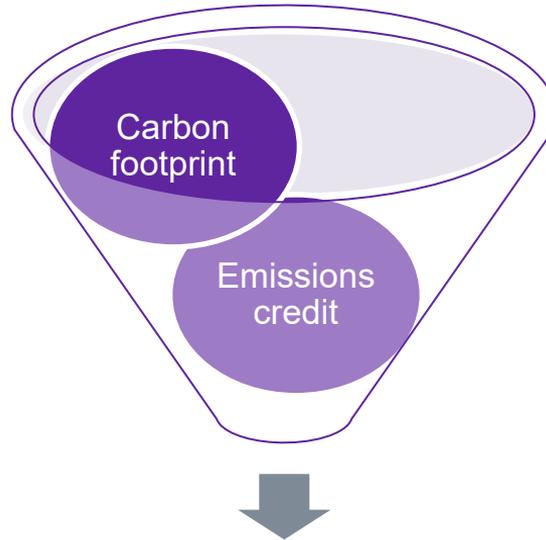
Topic 1: Logistics Social Responsibility Considerations

ISO 50001



Topic 2: Sustainability in the Supply Chain

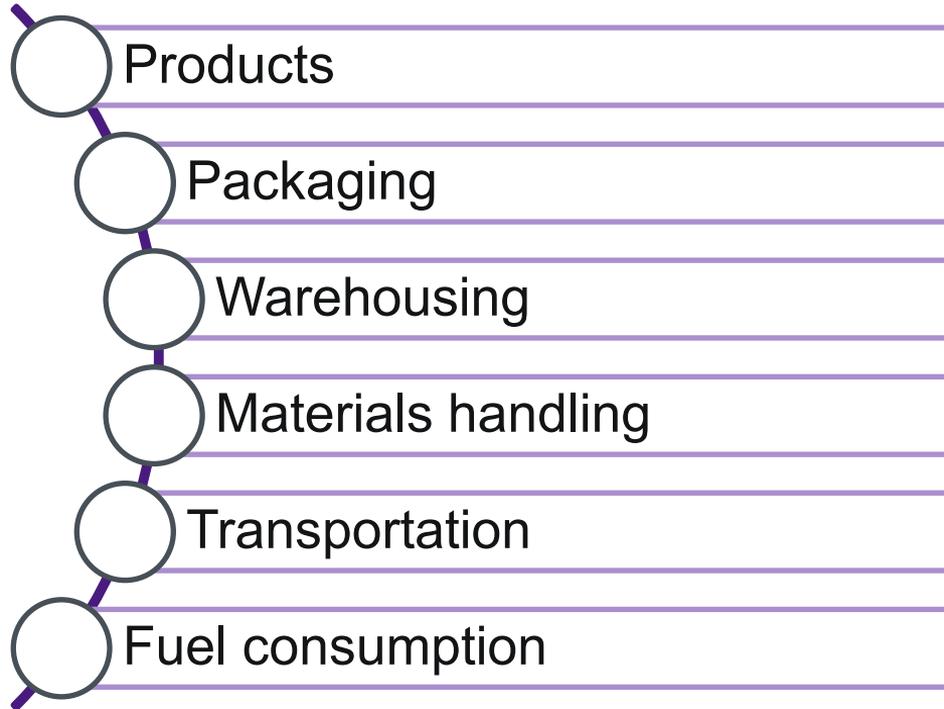
Greenhouse Gas Emissions



Goal: lower logistics emissions

Topic 2: Sustainability in the Supply Chain

Green Initiatives



Topic 2: Sustainability in the Supply Chain

Sustainability in the Supply Chain



Vendor
selection



Pricing
incentives



Handling
dangerous
materials

Topic 2: Sustainability in the Supply Chain

Handling Dangerous Materials

Materials that are “capable of posing an unreasonable risk when transported in commerce to health, to safety, and to property.” (U.S. Department of Transportation)



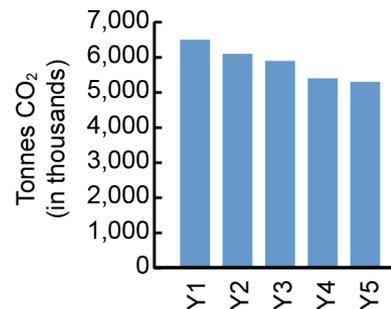
Topic 2: Sustainability in the Supply Chain

Monitoring and Measurement

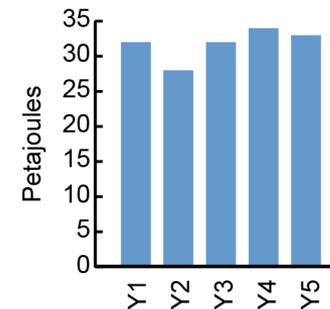
Sustainability scorecard

- Compare year-over-year results.
- Track opportunities for improvement.
- Demonstrate continuous progress.

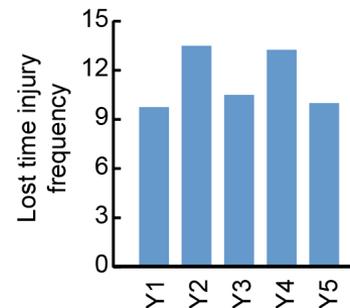
Greenhouse gas emissions



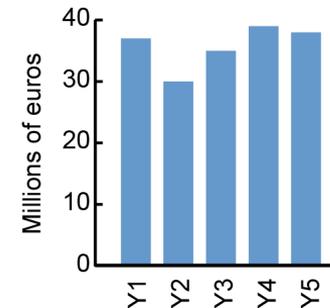
Energy use



Safety performance



Direct community contributions



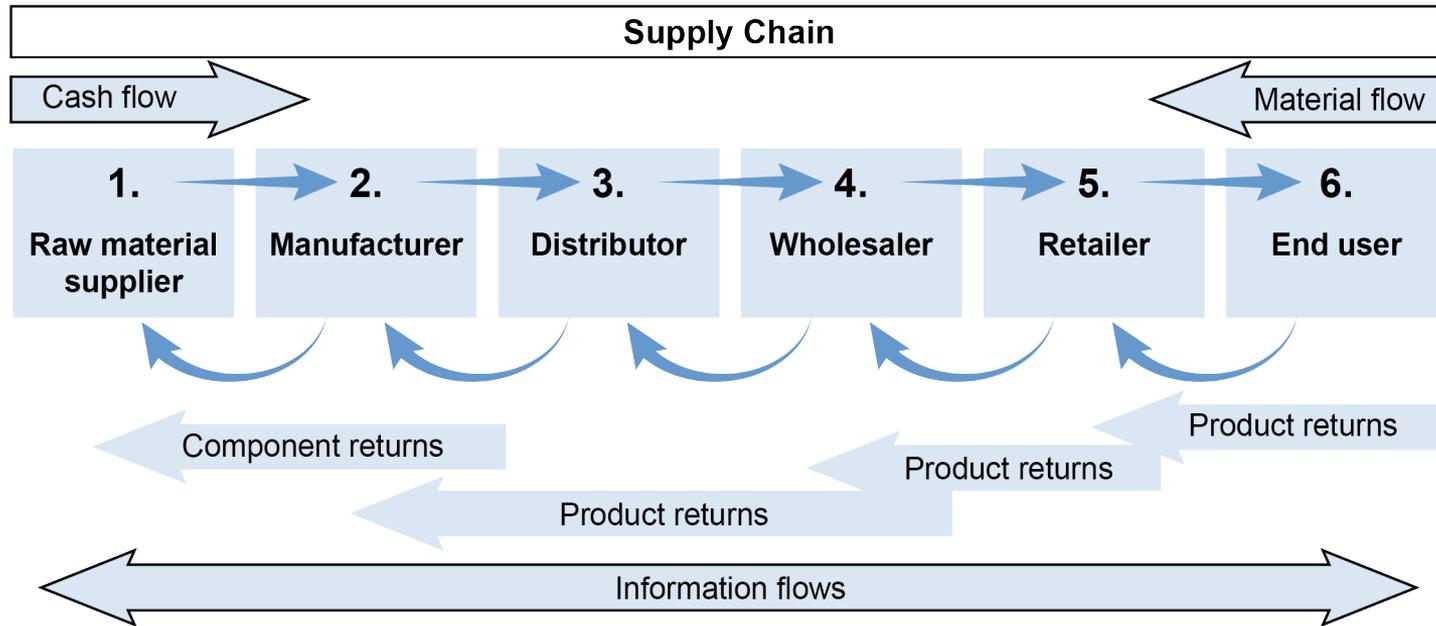
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MODULE 3, SECTION B: REVERSE LOGISTICS

Topic 1: Reverse Logistics and Handling Returns

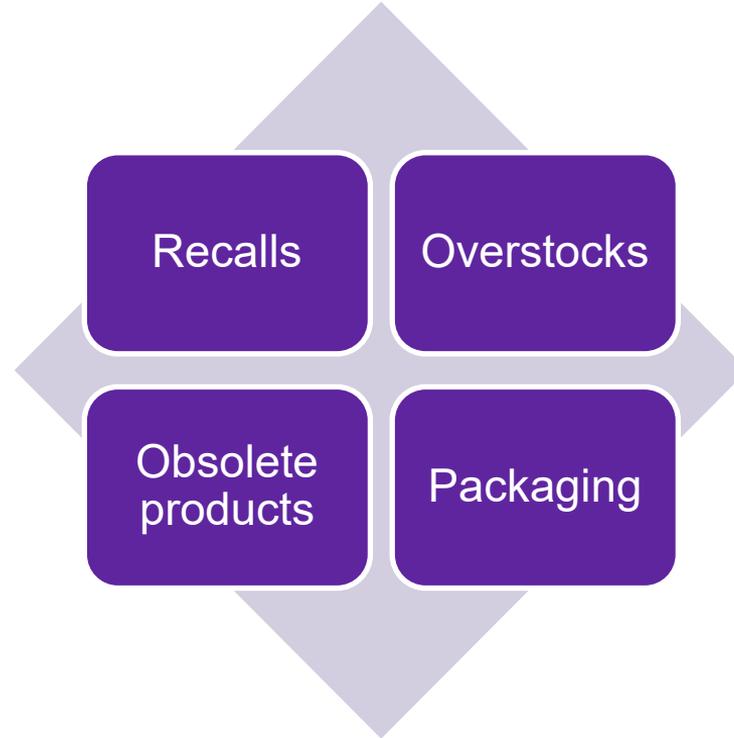
Reverse Logistics Process Flow



Source: APICS CSCP Learning System, 2024 Edition.

Topic 1: Reverse Logistics and Handling Returns

Reasons for Returns



Topic 1: Reverse Logistics and Handling Returns

Return Policies

Processes

- Set policies.
- Communicate policies to all customers.

Approaches

- Zero returns policy
- Return rate allowance
- Discount offers
- Defective returns only
- Return allowed with receipt
- B2B: Lot-size returns
- After gatekeeper approval
- Shipping and repair costs

Topic 1: Reverse Logistics and Handling Returns

Best Practices

- Retailers deduct returns costs from manufacturer outstanding payables.
- Manufacturers do not accept or credit retailer noncompliant returns.
- For defective or recalled products, manufacturer typically pays freight.
- High tech strict conditions for returns; may not pay handling/consolidation fees.
- Liquidators may provide carriers or pay third-party shipper costs.
- Send reusable packaging and return label or website with instructions/label.

Topic 1: Reverse Logistics and Handling Returns

Key Considerations for Reverse Logistics Management

Internal or outsourced?

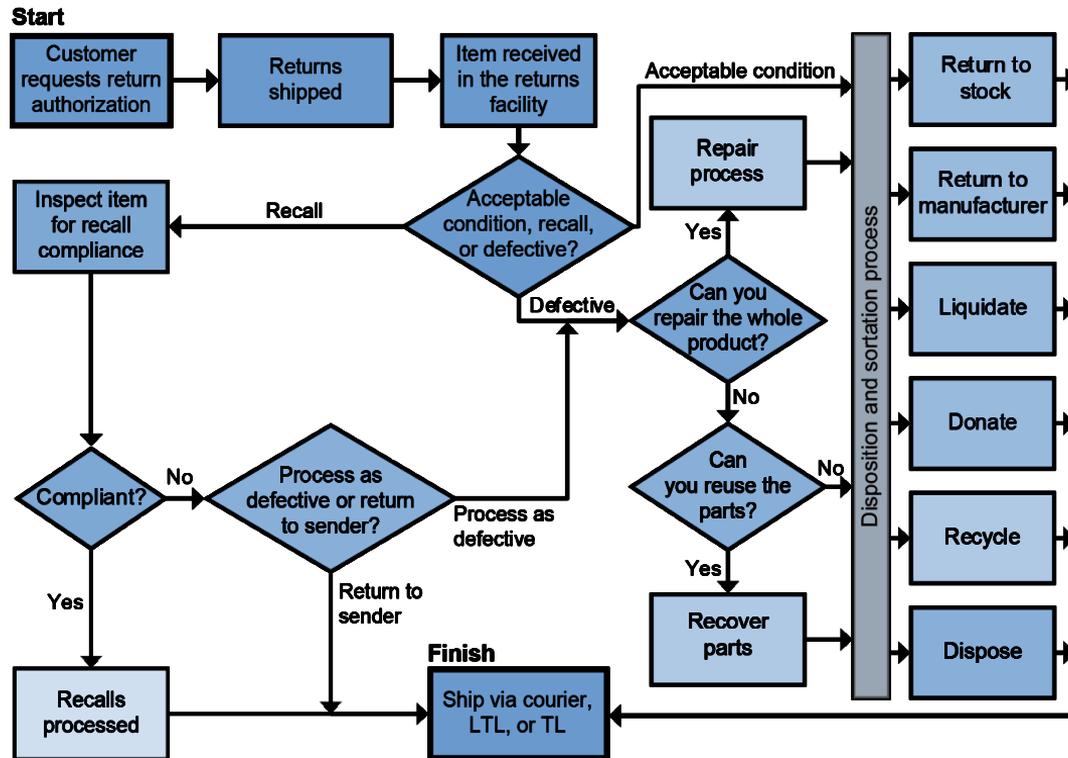
- Space
- Resources
- Trained personnel

Why develop core competencies?

- Competitive advantage
- Monetize efforts
- Demand for recyclable, reusable products

Topic 2: Reverse Logistics Activities

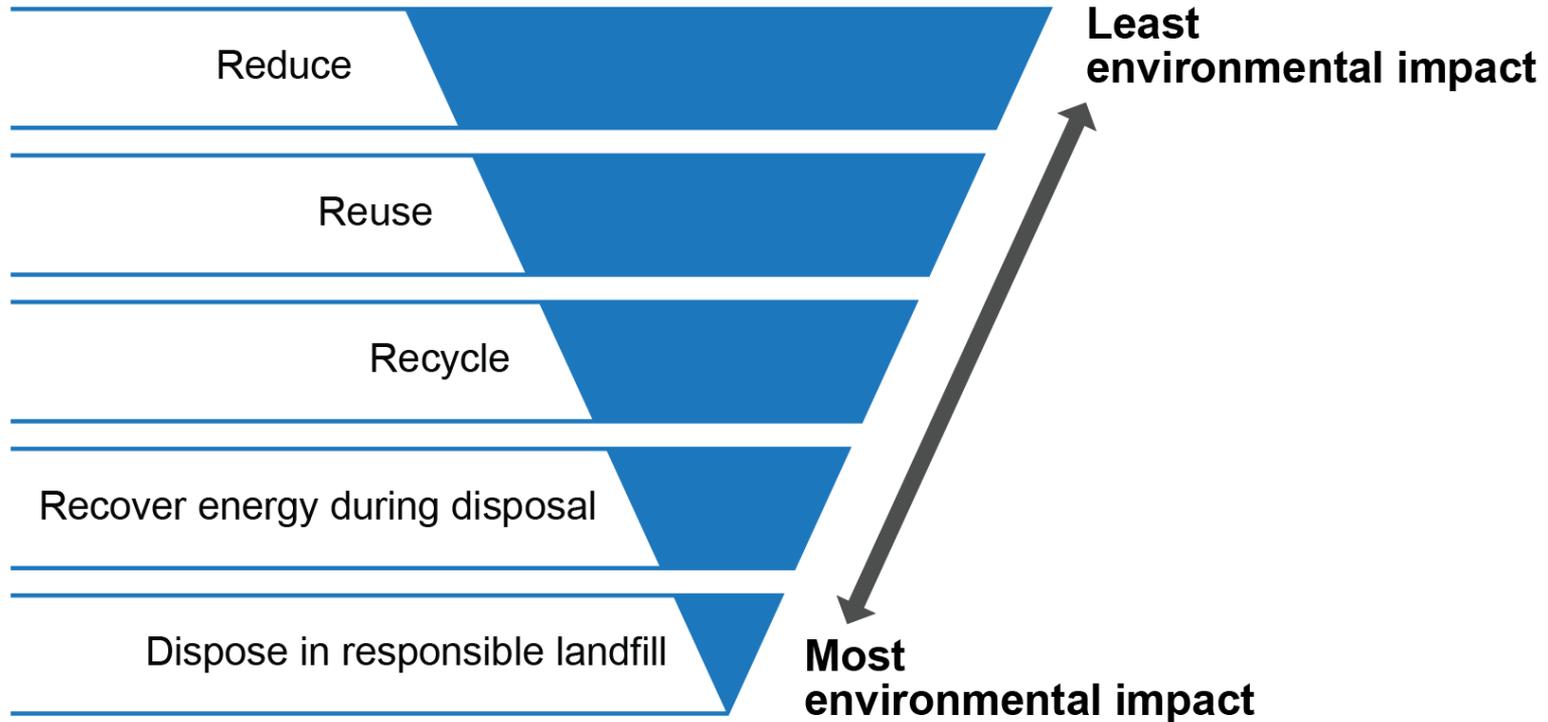
Disposition of Returns



Source: © "Reverse Logistics Process Flow," Greve and Davis. Used with permission.

Topic 2: Reverse Logistics Activities

Reverse Logistics Hierarchy



Closed-Loop Systems

- Designed for both forward and reverse flows.
- Objective is to reuse or recycle every component.

Advantages:

- Capture significant portion of original value.
- Products don't end up in landfills.
- Easier to balance supply and demand.

Managing Reverse Logistics

Key management elements

- Weigh pros and cons of internal returns center.
- Secure management buy-in.
- Select effective information systems.
- Document guidelines and procedures.
- Implement screening process.

Key technologies

Internet

ERP

EDI

IOT

RFID

RMS

Reverse
payments

Blockchain

Reverse Logistics Costs: Calculation Methods

Activity-based costing

Forward flow analysis and costs plus handling charges

Formulaic version

Benefits and Challenges



Benefits

- Customer satisfaction
- Brand protection
- Tracking and cost recovery
- Creation of new jobs
- Decreased use of landfills
- Recovery of materials
- Extended warranties and service contracts

Challenges

- Forecasting volumes
- Storage
- Costs
- Traceability