

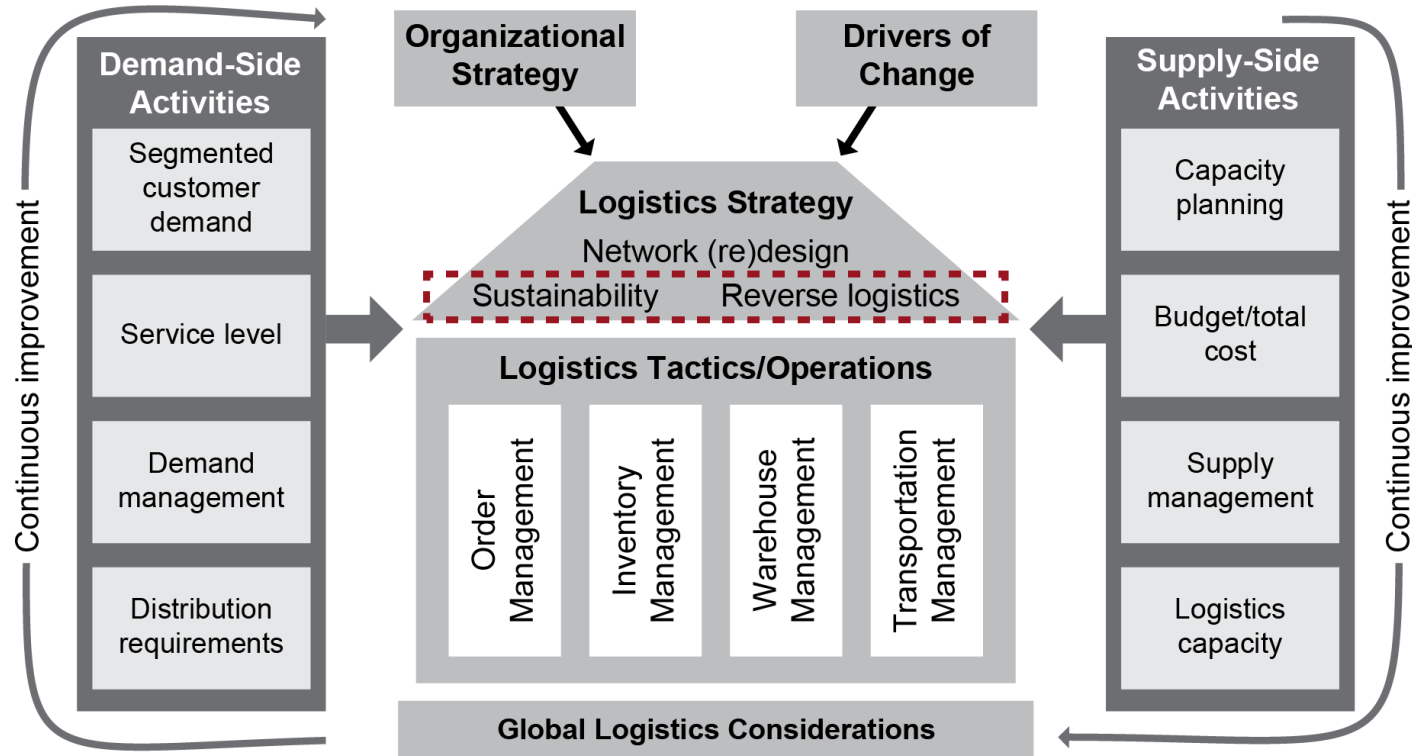
# CLTD

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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## 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)*

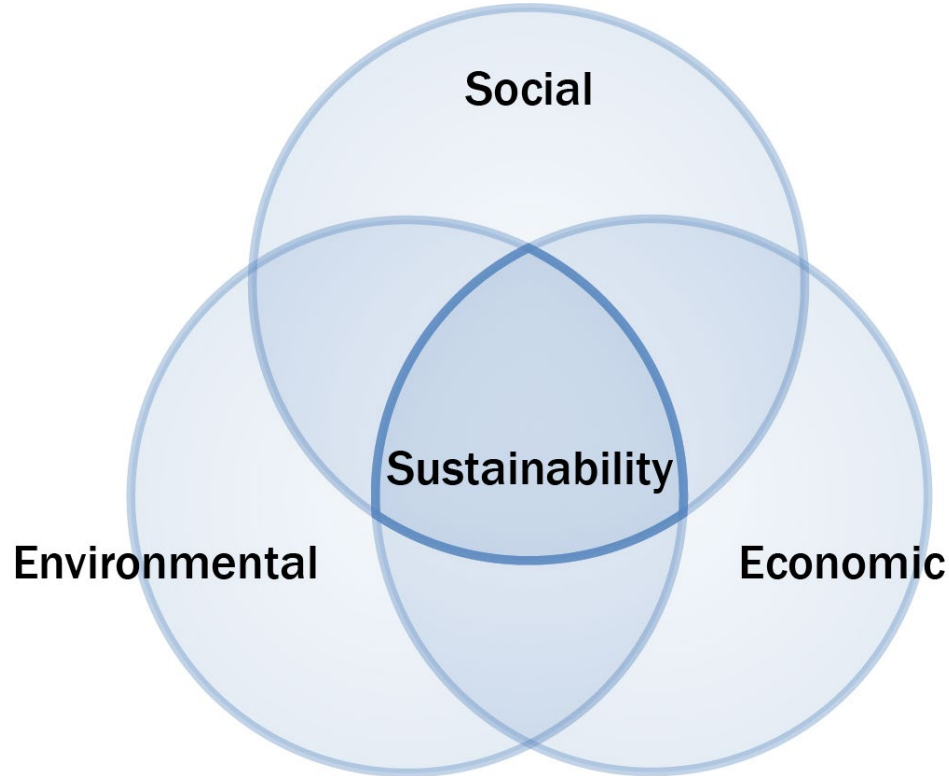
# Topic 1: Logistics Social Responsibility Considerations

## Social Responsibility Dimensions



# Topic 1: Logistics Social Responsibility Considerations

## Triple Bottom Line



# Topic 1: Logistics Social Responsibility Considerations

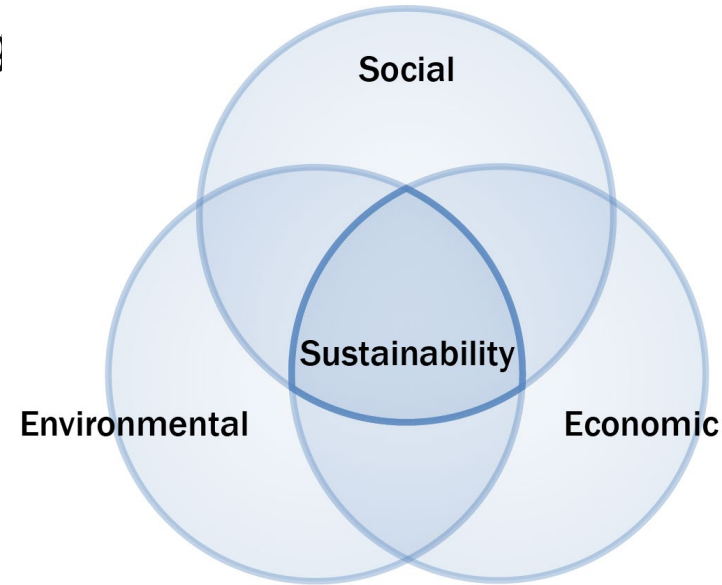
## Triple Bottom Line

### 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

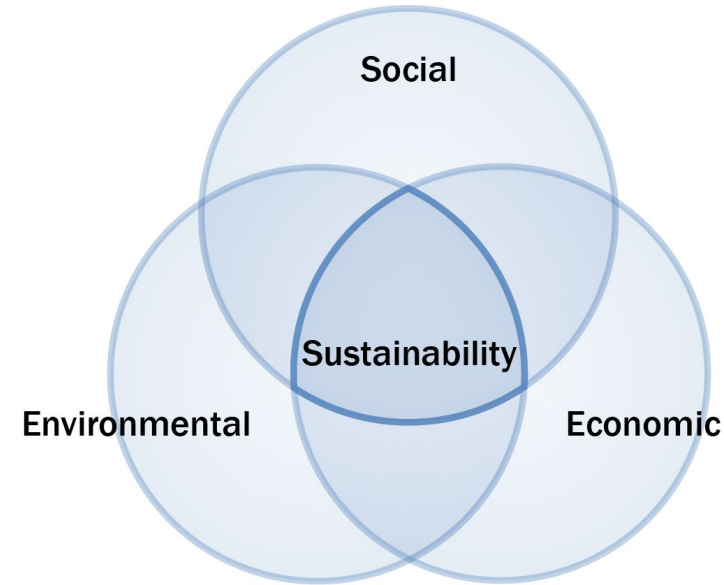
## Triple Bottom Line

### 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

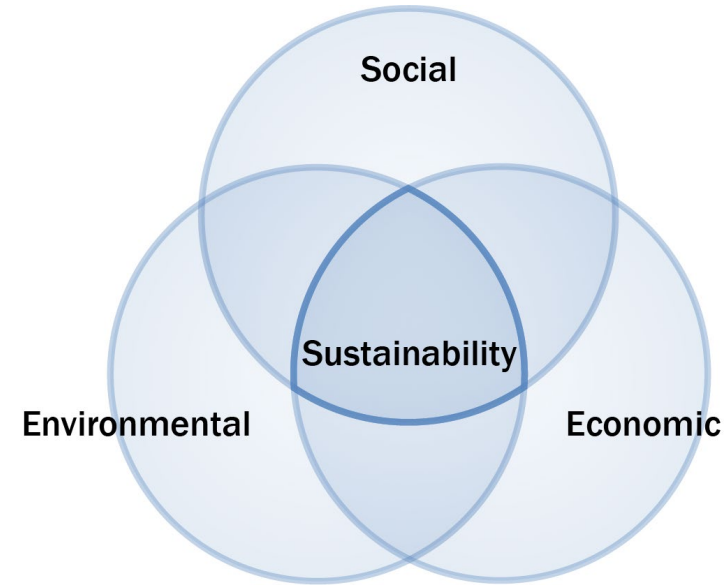
## Triple Bottom Line

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

Source: © United Nations Global Compact, [www.unglobalcompact.org](http://www.unglobalcompact.org).

# Topic 1: Logistics Social Responsibility Considerations

## United Nations Global Compact

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

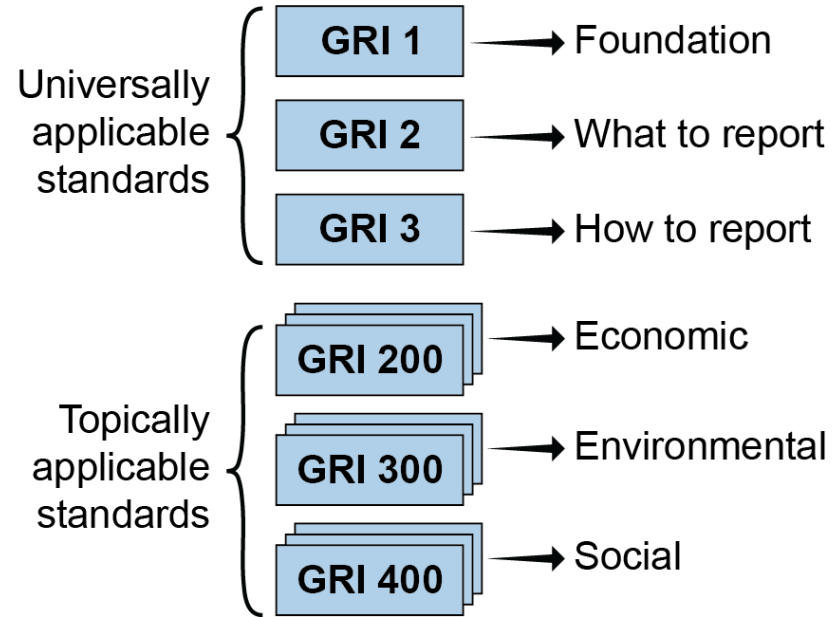
Source: © United Nations Global Compact, [www.unglobalcompact.org](http://www.unglobalcompact.org).

# Topic 1: Logistics Social Responsibility Considerations

## Global Reporting Initiative (GRI)

### GRI Standards

- Voluntary sustainability reporting
- Manage risks and optimize supplier performance



# Topic 1: Logistics Social Responsibility Considerations

## 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

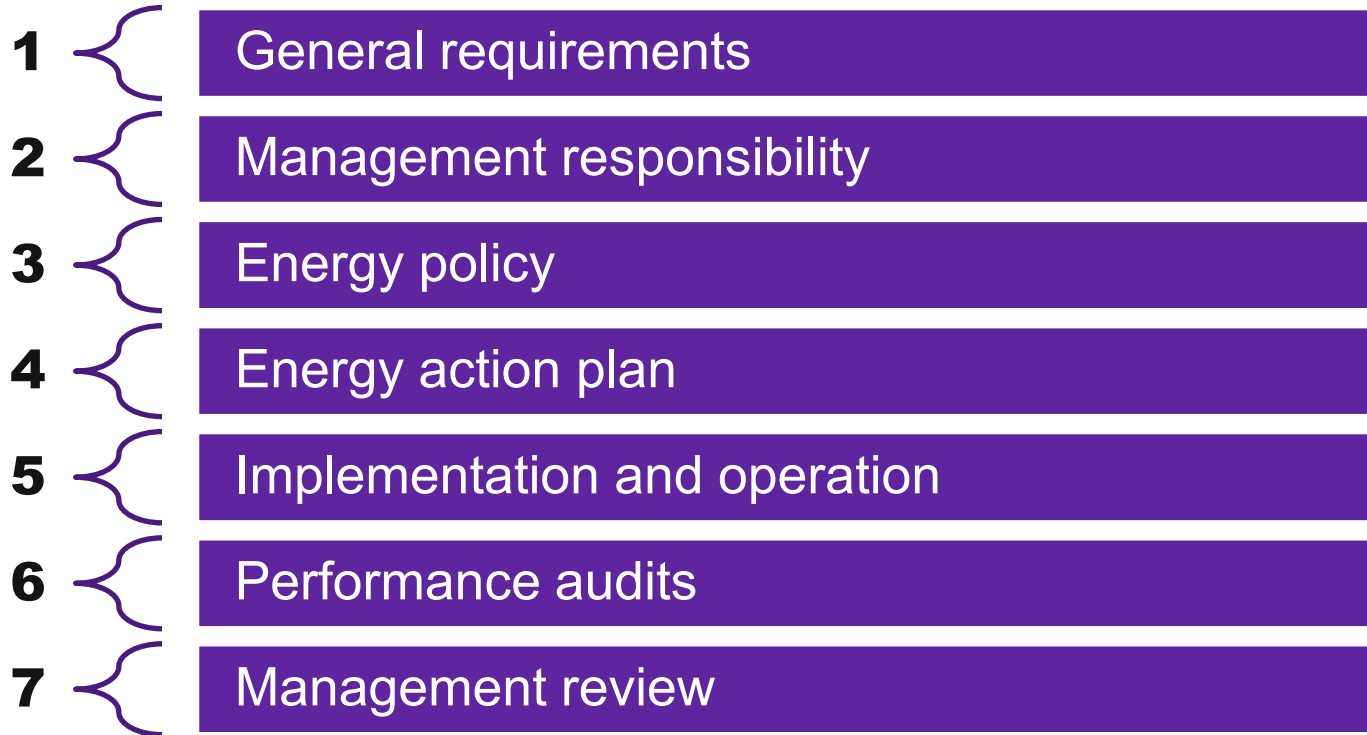
# Topic 1: Logistics Social Responsibility Considerations

## 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

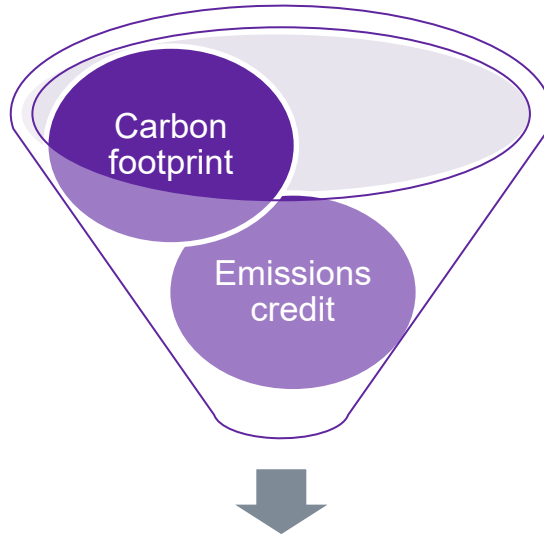
# Topic 1: Logistics Social Responsibility Considerations

## ISO 50001



# Topic 2: Sustainability in the Supply Chain

## Greenhouse Gas Emissions

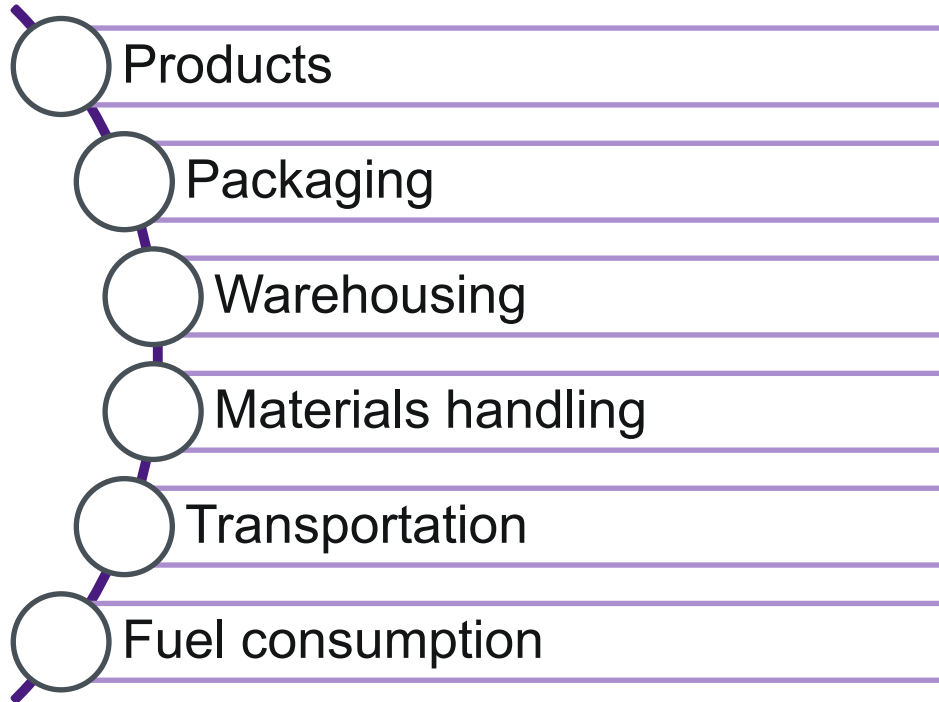


Goal: lower logistics emissions



# 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)



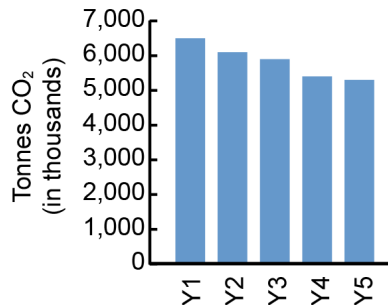
# Topic 2: Sustainability in the Supply Chain

## Monitoring and Measurement

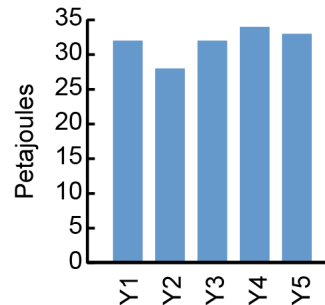
### Sustainability scorecard

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

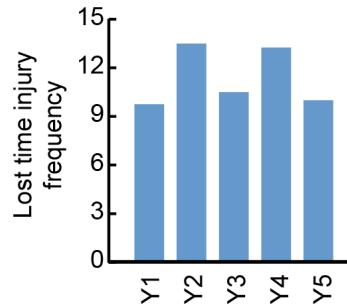
Greenhouse gas emissions



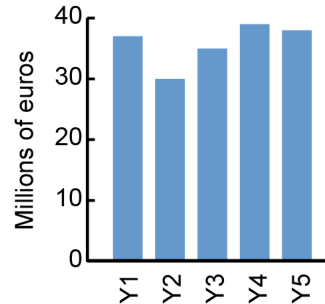
Energy use



Safety performance



Direct community contributions



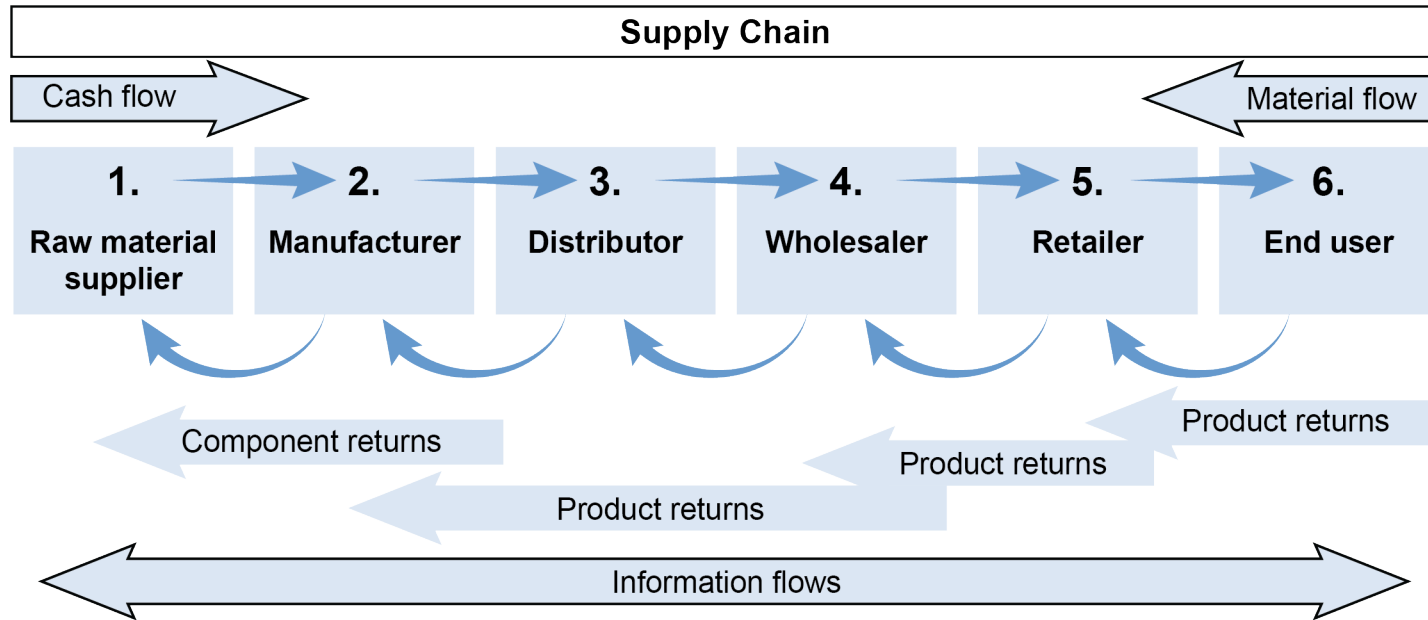
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## MODULE 3, SECTION B: REVERSE LOGISTICS

# Topic 1: Reverse Logistics and Handling Returns

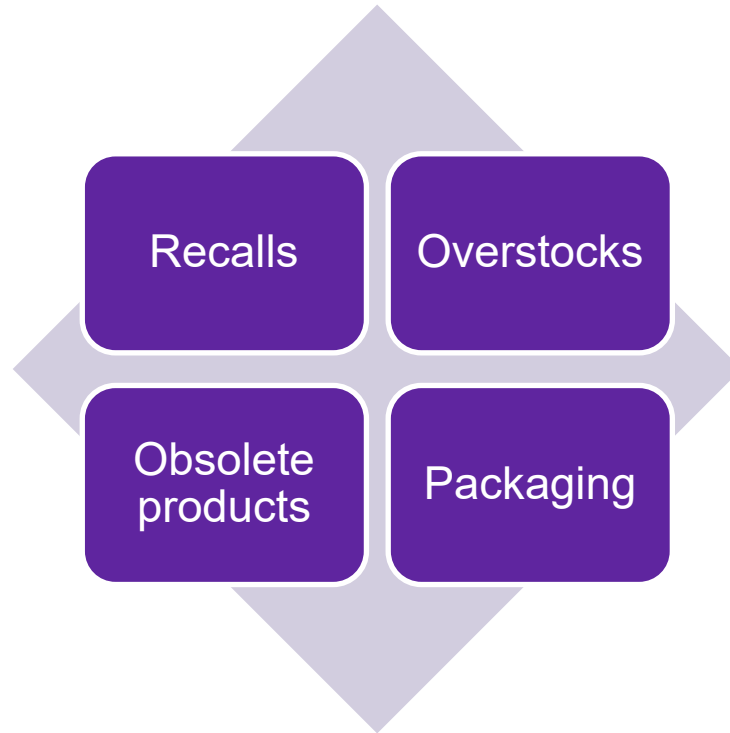
## Reverse Logistics Process Flow



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?

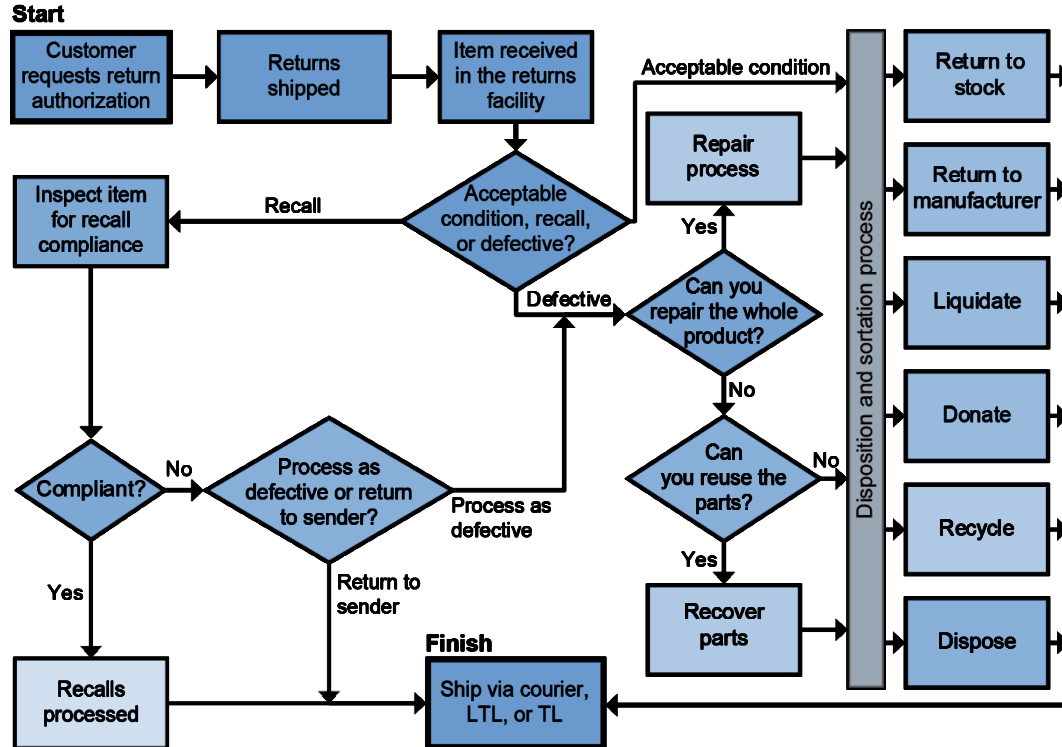
- Space
- Resources
- Trained personnel

### Why develop core competencies?

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

# Topic 2: Reverse Logistics Activities

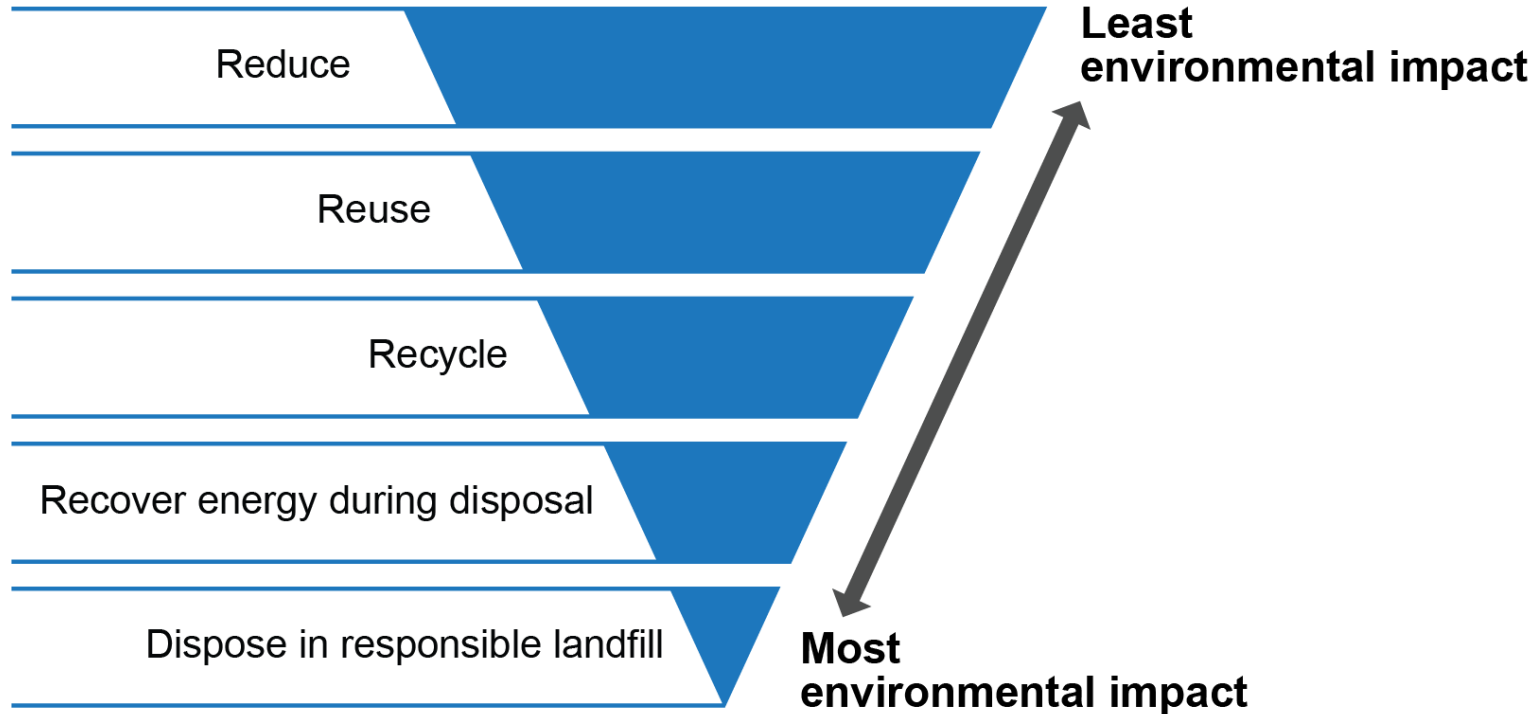
## Disposition of Returns



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