ChecklistGuro

Waste Minimization Opportunity Assessment Checklist

Process Understanding & Mapping

Focuses on documenting and understanding the manufacturing processes to identify potential waste generation points. This includes process flow diagrams, material inputs, and outputs.

Describe the primary manufacturing process flow.

Write something...

Attach a process flow diagram (PFD) or similar visual representation.

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What is the average production cycle time (in minutes)?

Enter a number...

Identify key process inputs (raw materials, components, energy, etc.)

Write something...

Which process steps are considered critical for product quality?

- [ ] Mixing
- [ ] Forming
- [ ] Assembly
- [ ] Finishing
- [ ] Packaging
- [ ] Other - Specify

Describe any bottlenecks or constraints in the process.

Write something...

What is the typical batch size (units per batch)?

Enter a number...

What type of process control system is in place (if any)?

- [ ] Manual Control
- [ ] PLC Control
- [ ] Statistical Process Control (SPC)
- [ ] No Control System

Material Inputs & Consumption

Evaluates the types and quantities of raw materials, components, and consumables used in manufacturing. Includes tracking, storage, and potential for reduction.

Total Raw Material Input (per production cycle)

Enter a number...

List of primary raw materials used and their approximate quantities.

Write something...

Material Procurement Strategy (e.g., Just-in-Time, Bulk Ordering)

- [ ] Just-in-Time
- [ ] Bulk Ordering
- [ ] Supplier Managed Inventory
- [ ] Other

Percentage of raw materials sourced locally (%)

Enter a number...

Describe any instances of material damage or spoilage upon receipt.

Write something...

Storage Conditions for key raw materials (e.g., Temperature, Humidity)

- [ ] Controlled Temperature
- [ ] Controlled Humidity
- [ ] Standard Conditions
- [ ] Not Controlled

Percentage of material waste due to overstocking (%)

Enter a number...

Which of the following material handling practices are used?

- [ ] Forklifts
- [ ] Conveyor Belts
- [ ] Manual Lifting
- [ ] Automated Guided Vehicles (AGVs)

Production Waste Streams

Identifies and characterizes all waste streams generated during production. This includes scrap, rework, off-spec products, and process byproducts.

Identify Primary Waste Streams Generated (e.g., metal scrap, plastic trim, chemical residue)

- [ ] Metal Scrap
- [ ] Plastic Scrap/Trim
- [ ] Wood Waste
- [ ] Chemical Residue
- [ ] Paper/Cardboard Waste
- [ ] Off-Spec Products
- [ ] Packaging Waste
- [ ] Other (Specify in Long Text)

Describe the source/process generating each identified waste stream.

Write something...

Estimated Quantity (Weight or Volume) of Each Waste Stream Generated Per Production Cycle/Week/Month (Specify Unit)

Enter a number...

Current Disposal Method for Each Waste Stream (e.g., landfill, incineration, recycling)

Write something...

Cost of Disposal for Each Waste Stream (Including transportation, handling, and fees)

Enter a number...

Is this waste stream hazardous?

- [ ] Yes
- [ ] No
- [ ] Unknown - Requires Testing

Details regarding any testing performed to determine waste classification (if applicable)

Write something...

Are there potential byproducts or recoverable materials within these waste streams?

- [ ] Yes, potential for byproduct recovery
- [ ] Yes, potential for material reclamation
- [ ] No known potential
- [ ] Unsure, requires further investigation

Equipment & Maintenance

Assesses equipment efficiency and maintenance practices related to waste generation. Includes factors like leaks, spills, and equipment downtime.

Estimated Leakage Rate (gallons/day) - Coolant Systems

Enter a number...

Frequency of Equipment Inspections (days)

Enter a number...

Describe Current Preventative Maintenance Program for key equipment (e.g., CNC machines, molding presses)

Write something...

Condition of Compressed Air System (Leaks, Pressure)

- [ ] Excellent
- [ ] Good
- [ ] Fair
- [ ] Poor

Which maintenance practices are currently employed?

- [ ] Routine Lubrication
- [ ] Vibration Analysis
- [ ] Thermography
- [ ] Filter Replacement
- [ ] Calibration
- [ ] None

Describe any observed equipment downtime related to material waste (e.g., spills, jams)

Write something...

Date of last comprehensive equipment audit

Enter date...

Are lubricant filters monitored or replaced based on condition?

- [ ] Yes
- [ ] No
- [ ] Not Applicable

Packaging & Transportation

Examines waste generated through packaging materials, transportation practices, and the handling of materials throughout the manufacturing process.

Average Packaging Material Usage (Weight/Unit)

Enter a number...

Description of Current Packaging Materials Used (e.g., cardboard, plastic, foam)

Write something...

Packaging Material Sourcing (Local vs. Remote)

- [ ] Local
- [ ] Remote

Current Packaging Disposal Methods

- [ ] Recycling
- [ ] Landfill
- [ ] Composting
- [ ] Reuse
- [ ] Incineration

Average Transportation Distance (Miles/Unit)

Write something...

Describe current transportation methods (e.g., truck, rail, air)

Write something...

Pallet Type (if applicable)

- [ ] Wood
- [ ] Plastic
- [ ] Reusable

Number of Pallets Used Annually

Enter a number...

Employee Practices & Training

Reviews employee behaviors and training programs relating to waste reduction and proper material handling.

Approximate % of Employees Involved in Material Handling

Enter a number...

Current Waste Minimization Training Frequency?

- [ ] Never
- [ ] Annually
- [ ] Semi-Annually
- [ ] Quarterly
- [ ] Monthly

Briefly describe current employee training content regarding waste reduction.

Write something...

Which of the following topics are covered in current waste minimization training?

- [ ] Proper Material Storage
- [ ] Spill Prevention
- [ ] Waste Segregation
- [ ] Equipment Maintenance Awareness
- [ ] Recycling Procedures
- [ ] Hazardous Waste Handling
- [ ] Other (Please Specify in Long Text)

Employee awareness of company’s waste reduction goals?

- [ ] High
- [ ] Moderate
- [ ] Low
- [ ] Not Assessed

Describe any employee suggestions or concerns regarding waste reduction.

Write something...

What methods are used to communicate waste reduction initiatives to employees?

- [ ] Team Meetings
- [ ] Email Updates
- [ ] Posters/Visual Aids
- [ ] Company Intranet
- [ ] Other (Please specify in Long Text)

Regulatory Compliance & Reporting

Confirms adherence to environmental regulations and internal reporting procedures related to waste management.

Is a Waste Management Plan required by local regulations?

- [ ] Yes
- [ ] No
- [ ] Unsure

Does the facility possess all necessary environmental permits for waste generation and disposal?

- [ ] Yes
- [ ] No
- [ ] Pending/Reviewing

Date of last regulatory compliance audit related to waste management.

Enter date...

Summary of findings from the last regulatory compliance audit (if applicable).

Write something...

Waste generation reporting frequency (e.g., monthly, quarterly, annually).

Enter a number...

Are waste manifests properly completed and tracked?

- [ ] Yes
- [ ] No
- [ ] Partially

Upload copies of recent waste disposal manifests (optional).

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Opportunities for Reuse, Recycling & Recovery

Identifies opportunities to divert waste from landfills through reuse, recycling, and material recovery programs.

Which waste streams are suitable for recycling?

- [ ] Metal Scrap
- [ ] Plastic Scrap
- [ ] Paper/Cardboard
- [ ] Wood Waste
- [ ] Glass
- [ ] Packaging Materials
- [ ] None

Are there opportunities for on-site or off-site reuse of process byproducts?

- [ ] Yes - Internal Reuse
- [ ] Yes - Sold to External Party
- [ ] No
- [ ] Unknown

Describe any existing material recovery programs (e.g., solvent recovery, scrap metal sales).

Write something...

Estimated percentage of waste that could potentially be diverted through improved recycling practices.

Enter a number...

Current method of handling unusable waste materials (e.g., landfill, incineration).

- [ ] Landfill
- [ ] Incineration
- [ ] Waste-to-Energy
- [ ] Other (Specify)

Detail any obstacles preventing wider implementation of recycling or recovery programs. (e.g., contamination, lack of infrastructure, market demand)

Write something...

Is there potential for implementing a closed-loop system for specific materials?

- [ ] Yes
- [ ] No
- [ ] Requires Further Investigation

Data Analysis & Metrics

Evaluates existing data tracking related to waste generation and proposes improved metrics for measuring progress.

Current Total Waste Generated (tons/year)

Enter a number...

Cost of Waste Disposal (annual)

Enter a number...

Baseline Waste Generation Rate (tons/unit produced)

Enter a number...

Description of Current Waste Tracking System (if any)

Write something...

Frequency of Waste Data Collection

- [ ] Daily
- [ ] Weekly
- [ ] Monthly
- [ ] Quarterly
- [ ] Annually

What waste data is currently tracked?

- [ ] Waste Type (e.g., metal scrap, plastic)
- [ ] Waste Quantity
- [ ] Waste Disposal Method
- [ ] Cost per Waste Type
- [ ] Supplier Information

Date of Last Waste Audit

Enter date...

Target Waste Reduction (%)

Enter a number...

Key Performance Indicators (KPIs) for Waste Reduction - list at least 3

Write something...