Work Breakdown Structure (WBS)

Project Name: Implementation of Lean Manufacturing System on Biscuit Production Line

Version: 1.0

Date: March 15, 2025

Level 1: Project Identification

1. Project: Implementation of Lean Manufacturing System on Biscuit Production Line

Level 2: Project Phases

1. Project Management
2. Assessment and Analysis
3. Lean Methodology Training
4. Implementation of Lean Tools
5. Equipment and Resource Setup
6. Staff Involvement and Role Assignment
7. Pilot Phase and Testing
8. Full-Scale Implementation
9. Monitoring, Control, and Continuous Improvement
10. Project Closure

Level 3: Activities and Work Packages

2. Project Management

2.1 Develop Project Charter

Action-Result: Create a detailed project charter to define project goals, schedule, budget, and roles.

Measurable Outcome: Completed project charter document.

2.2 Establish Communication Plan

Action-Result: Set up a communication strategy to ensure effective updates to stakeholders.

Measurable Outcome: Approved communication plan.

2.3 Assign Roles and Responsibilities

Action-Result: Assign team members to specific tasks and responsibilities within the project.

Measurable Outcome: A documented list of assigned roles.

3. Assessment and Analysis

3.1 Conduct Current State Assessment (VSM)

Action-Result: Perform Value Stream Mapping to evaluate the current production line processes and identify inefficiencies.

Measurable Outcome: Completed Current State VSM report.

3.2 Identify Bottlenecks and Wastes

Action-Result: Analyze production data to identify areas of waste and process bottlenecks.

Measurable Outcome: Report on identified bottlenecks and waste.

3.3 Collect Performance Data

Action-Result: Gather data on cycle times, scrap rates, downtime, and production capacity.

Measurable Outcome: Collected performance data.

4. Lean Methodology Training

4.1 Conduct Lean Training for Staff

Action-Result: Deliver training sessions on Lean principles, VSM, and 5S methodology to staff members.

Measurable Outcome: Staff training completion reports.

4.2 Provide SMED (Single-Minute Exchange of Dies) Training

Action-Result: Train team members on reducing changeover times using SMED.

Measurable Outcome: Completed SMED training sessions.

4.3 Provide Kaizen (Continuous Improvement) Training

Action-Result: Train the team on the principles and application of Kaizen for ongoing process improvement.

Measurable Outcome: Kaizen training completion and participant feedback.

5. Implementation of Lean Tools

5.1 Implement Value Stream Mapping (VSM)

Action-Result: Create and implement a future-state value stream map to reduce waste.

Measurable Outcome: Completed future-state VSM.

5.2 Implement 5S Methodology

Action-Result: Organize workspaces and production lines using the 5S methodology.

Measurable Outcome: Completed 5S implementation and workspace audits.

5.3 Implement SMED for Changeover Reduction

Action-Result: Apply SMED to reduce machine changeover times on the production line.

Measurable Outcome: Reduced changeover time report.

6. Equipment and Resource Setup

6.1 Assess Equipment and Tool Requirements

Action-Result: Evaluate and define the tools and equipment required for Lean implementation.

Measurable Outcome: Equipment and tool list.

6.2 Procure Necessary Lean Tools and Equipment

Action-Result: Purchase tools and equipment necessary for Lean transformation.

Measurable Outcome: Procurement completion report.

6.3 Install and Calibrate Equipment

Action-Result: Install and calibrate Lean tools and machines for new processes.

Measurable Outcome: Equipment installation and calibration completion.

7. Staff Involvement and Role Assignment

7.1 Define Staff Roles for Lean Implementation

Action-Result: Assign specific tasks and responsibilities to staff for the Lean project.

Measurable Outcome: Staff roles and responsibilities document.

7.2 Conduct Staff Communication Sessions

Action-Result: Hold communication sessions to inform staff about Lean changes and expectations.

Measurable Outcome: Staff attendance and feedback from sessions.

8. Pilot Phase and Testing

8.1 Implement Lean Tools on Pilot Production Line

Action-Result: Apply Lean tools and practices on a smaller production line for testing.

Measurable Outcome: Pilot implementation report.

8.2 Monitor and Collect Data During Pilot

Action-Result: Track key performance indicators (KPIs) during the pilot phase to assess effectiveness.

Measurable Outcome: Collected data report.

8.3 Evaluate Pilot Results and Make Adjustments

Action-Result: Assess the results of the pilot phase and make necessary adjustments.

Measurable Outcome: Pilot evaluation report with improvement actions.

9. Full-Scale Implementation

9.1 Roll Out Lean Practices Across Entire Production Line

Action-Result: Expand Lean implementation to the entire production line.

Measurable Outcome: Full-scale implementation report.

9.2 Monitor Full-Scale Lean Implementation

Action-Result: Track performance metrics and issues during full-scale implementation.

Measurable Outcome: Performance monitoring report.

10. Monitoring, Control, and Continuous Improvement

10.1 Monitor Lean Performance Regularly

Action-Result: Regularly monitor and evaluate Lean performance using established KPIs.

Measurable Outcome: Monthly performance review reports.

10.2 Identify and Implement Continuous Improvement Actions

Action-Result: Continuously assess and implement improvements based on ongoing performance data.

Measurable Outcome: List of implemented improvement actions.

1. Project Closure

11.1 Complete Final Evaluation of Project Performance

Action-Result: Conduct a final evaluation to assess whether the project goals were met.

Measurable Outcome: Final project evaluation report.

11.2 Close Project and Handover

Action-Result: Officially close the project and transfer responsibility to the operations team.

Measurable Outcome: Project closure documentation.

This Work Breakdown Structure (WBS) provides a comprehensive, sequential list of activities with clear action-result statements and measurable outcomes for the successful implementation of a Lean Manufacturing System on the biscuit production line. Each activity is aligned with project phases and ensures that progress can be tracked effectively.