

Mopex Consulting

LEAN Framework



Operational Excellence, made measurable

Mopex Consulting Ltd

Operational Excellence, made measurable

Mopex LEAN Framework



Deliver measurable operational improvements by applying LEAN principles to reduce waste, improve flow, and enhance customer value.

Pre-Project Assessments



LEAN Maturity Results and 90 Day Roadmap

Dimension	Current Level	Target Level	Gap	Priority	Owner	Notes
Value Definition	3	5	2	Medium	Mopex Lead	Governance dashboard needed
Value Stream Mapping	2	4	2	High	Ops Lead	SPC rollout in progress
Flow Efficiency	2	4	2	High	Analyst	Predictive modelling roadmap
Pull Systems	4	5	1	Low	QA Lead	ISO 9001 embedded
Waste Elimination	3	5	2	Medium	Ops Lead	Toolkit standardisation
Standard Work	3	4	1	Medium	BI Lead	Power BI templates in dev
Continuous Improvement	2	4	2	High	Mopex Lead	Link to Benefits Tracker



90 Day Roadmap

Dimension
Value Stream M
Flow Efficiency
Continuous Imp



LEAN Maturity Scoring Card

LEAN Maturity Scoring Card

Dimension	Focus Area	Score	Description
1 Value Definition	Clarity of customer value and critical-to-quality factors	1	No LEAN awareness, reactive firefighting
2 Value Stream Mapping	Visibility and optimisation of end-to-end flow	2	Basic LEAN concepts known, limited application
3 Flow Efficiency	Bottleneck identification, takt time, throughput	3	LEAN tools deployed, some standardisation
4 Pull Systems	Demand-driven scheduling, inventory control	4	Flow optimised, CI embedded, measurable gains
5 Waste Elimination	Identification and removal of the 8 wastes	5	LEAN culture, proactive improvement, scalable systems
6 Standard Work	Consistency, documentation, and visual controls		
7 Continuous Improvement	Kaizen culture, problem-solving, feedback loops		

Mopex LEAN Maturity Level Scoring

Score	Level	Interpretation
1	Initial	No LEAN awareness, reactive firefighting
2	Emerging	Basic LEAN concepts known, limited application
3	Defined	LEAN tools deployed, some standardisation
4	Managed	Flow optimised, CI embedded, measurable gains
5	Optimised	LEAN culture, proactive improvement, scalable systems

Value Definition

1	No clear value definition, customer needs not understood	<input type="checkbox"/>
2	Basic understanding of value, limited customer input	<input type="checkbox"/>
3	Value defined for key processes, some customer validation	<input checked="" type="checkbox"/>
4	Value consistently defined, customer feedback embedded	<input type="checkbox"/>
5	Value fully aligned with customer outcomes, drives all decisions	<input type="checkbox"/>

Value Stream Mapping

1	No mapping, processes undocumented	<input type="checkbox"/>
2	Basic maps exist, limited use	<input checked="" type="checkbox"/>
3	Key value streams mapped, used for improvement	<input type="checkbox"/>
4	Maps updated regularly, linked to KPIs	<input type="checkbox"/>
5	Fully integrated mapping, drives strategic decisions	<input type="checkbox"/>

Flow Efficiency

1	Frequent delays, bottlenecks, poor flow	<input type="checkbox"/>
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Maturity

LEAN Dimension	Score (1-5)	Notes / Evidence
Value Definition	3	
Value Stream Mapping	2	
Flow Efficiency	2	
Pull Systems	4	
Waste Elimination	3	
Standard Work	3	
Continuous Improvement	2	

Metric

LEAN Maturity Index (%)	54%
Avg. Maturity Score	3
LEAN Maturity Level	Defined

Maturity Scores



LEAN Dimension



Mopex LEAN Project Framework

Purpose: Deliver measurable operational improvements by applying Lean principles to reduce waste, improve flow, and enhance customer value.

Use Cases	Service Description
Manufacturing and service process optimisation	<ul style="list-style-type: none"> ◊ Phase 1: Project Intake & Scoping
Quality and compliance improvement	Purpose: Define the opportunity, scope, and success criteria.
Cost reduction and efficiency gains	<ul style="list-style-type: none"> ◊ Phase 2: Current State Analysis
Cross-functional workflow redesign	Purpose: Understand the process, identify waste, and validate pain points.
	<ul style="list-style-type: none"> ◊ Phase 3: Root Cause Analysis
	Purpose: Validate causes of inefficiency or defects.
	<ul style="list-style-type: none"> ◊ Phase 4: Solution Design & Kaizen Delivery
	Purpose: Implement targeted improvements through rapid cycles.
	<ul style="list-style-type: none"> ◊ Phase 5: Control & Sustainment
	Purpose: Lock in gains and prevent backsliding.

Mopex LEAN Toolkit (Suggested Assets)

Asset	Format	Purpose
Project Charter Template	Word	Define scope and objectives
SIPOC & VSM Templates	Excel/Visio	Map current and future states
Waste Diagnostic Checklist	Excel	Identify and categorise waste
Root Cause Analysis Pack	Word/Excel	Analyse and prioritise causes
Kaizen Event Planner	Excel	Structure rapid improvement
Control Plan Template	Excel	Sustain gains and monitor KPIs
Benefits Tracker & ROI Model	Excel	Quantify impact and payback
Report-Out Slide Deck	PowerPoint	Communicate results to client


LEAN Project Tracking Documents linked to Dashboard

The image displays a collection of interconnected project management tools for the Mopex LEAN project. The central focus is the **Mopex LEAN Project Overview** dashboard, which provides a holistic view of the project's performance. This dashboard includes a navigation menu with sections like Project Charter, Business Case, Benefits & ROI, Metrics, Progress Chart, Risk Register, Issue Register, and Lessons Log. Key metrics shown include a 10% Project Status, 25 Complete Tasks, 4 In Progress tasks, 1 Task On Hold, 1 Task Overdue, and 22 Not Started tasks. A Metric Status of 33% is also indicated.

Surrounding the overview are several detailed reports:

- Mopex LEAN Project Charter:** Defines the project as 'Reduce Rework in Assembly Line A' with a start date of 16/01/2026 and a target completion of 30/04/2026. It notes a rework rate of 12% causing delays and increased costs.
- Mopex LEAN Metrics Register:** A table tracking Quality (95% target, 88% actual), Efficiency (52 min target, 45 min actual), and Inventory (120 units target, 500 units actual). Statuses range from 'At Risk' to 'Off Track'.
- Mopex Risk Register:** Lists risks such as 'Delay in supplier delivery' and 'Integration issues with legacy systems', with impact and likelihood ratings.
- Mopex Issue Register:** Tracks issues like 'API integration failure' and 'SME unavailable for workshop', with assigned owners and resolution strategies.
- Mopex Business Case:** Summarizes the goal of reducing rework rate to ≥ 95% and the problem statement of current 12% rework.
- Mopex Benefits Tracker & ROI Model:** Shows a forecasted benefit of £36,000.00 and an actual benefit of £2,000.00. The ROI is £28,400.00 with a 2.5-month payback period.
- Mopex Project Progress Chart:** A Gantt chart showing task completion from March to April 2026, with a legend for On Track, Low Risk, and Med Risk.

LEAN A3 Project Reporting



Mopex LEAN Project Report

Client/Project Details

Project Title: Reduce Rework in Assembly Line A

Client Name: Muffin & Co Bakery
Mopex Consultant Lead: Mopex Consultant
Date of Report: 04/11/2025
Version Control: V.01
Business Case & Strategic Fit: Supports quality KPIs and audit readiness
Summary of Benefits (£): £36,000 annualised benefit
Project Status (RAG): Work in Progress


Executive Summary

Problem Statement:
Assembly Line A has a rework rate of 12%, causing delays, increased costs, and reduced customer satisfaction


Key Stakeholders & Engagement

Expert/Leaders/Practitioners	Role
Ops Director	Sponsor
Jane Smith	QA Lead
Tom Lee	Line S...

Lean Principles



Project Status



1. Project Intake & Scoping

VOC and CTQ Analysis

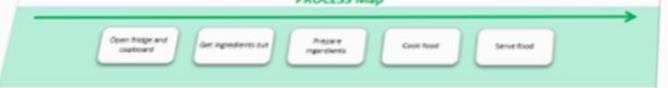
ID	Customer ID	Customer Category	Value of Customer (VOC)	Key Customer Issue(S)	Critical To Customer (CTQ)
#	Who is the customer?	Type of customer?	What did the customer say?	What does the customer need?	What resulting action is required?
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

2. Current State Analysis

VSM, Metrics, Waste and Variation

PROCESS TITLE	SUPPLIERS	INPUT	PROCESS	OUTPUT	CUSTOMER
Resource Provider	Process	High level process flow	From the process	Customer use/require/stock the product	
Grocery Store	Meat	Process 1	Donner cooked	Family	
Veg Stand	Vegetables	Process 2	Family fed		
Cook	Skills	Process 3			
		Process 4			
		Process 5			
		Process 6			
		Process 7			
		Process 8			
		Process 9			
		Process 10			

PROCESS Map



3. Root Cause Analysis

Root Cause, Value Add, Cause & Effect

D Defects

O Overproduction

W Waste

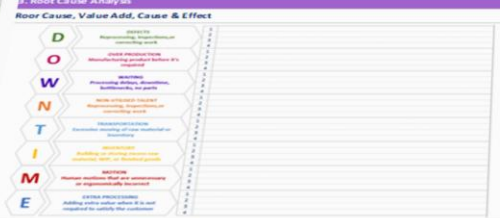
N Non-compliance

T Time

I Inconsistent

M Mistake

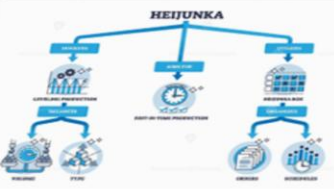
E Error




4. Solution Design and Kaizen Delivery

Brainstorming, Kaizen Events, Future State Mapping


HEIJUNKA



JIT (Just in Time)




Production Kanban




5. Governance and Reporting

Control Plans, SOPs, Visual Management


Kaizen



KAIZEN



Goal: Highest Quality, Lowest Cost, Shortest Lead Time



5M Tools **5S Categories** **5S Tools**

- 5M Tools:**
 - Manpower: What staff have in your process could lead to significant improvements? A professional approach.
 - Methods: Have you got an explicit list of the steps of equipment, and how can you improve them further?
 - Material: Are you utilising maintenance tools effectively to minimise downtime, or is there scope for improvement?
 - Machinery: How can you use TPM to enhance product quality and reduce waste in your process?
 - Measurement: What skills and knowledge during rotation can enhance and improve reliability in 5M?
 - Material: How can you further improve safety, health, and environmental compliance in your organisation's 5M efforts?
 - Manpower: How can you apply 5M principles to standardise administrative processes and improve efficiency?
 - Material: How can you improve the quality of your products, and the management process of your projects?

Some LEAN Project Tools

Mopex Waste Diagnostic

Client & Project Info

Field	Description
Company Name	Muffin & Co Bakery
Director / Industry	Manufacturing
Site / Area Assessed	Muffin Making Area
Assessor Name	Peter
Date of Assessment	03/11/2025
Framework Linkage	LEAN Framework

Waste Scoring Matrix

Waste Category	Definition
Transport	Unnecessary movement
Inventory	Excess stock or digital clutter
Motion	Inefficient movement of people
Waiting	Delays, bottlenecks, idling
Overproduction	Producing more than required
Overprocessing	Doing more than required
Defects	Errors, rework, non-conformance
Skills Misuse	Underutilised talent

Waste Prioritisation Matrix

Waste Type	Frequency
Motion	High
Inventory	Medium
Transport	Low

5S Audit

5S Audit Sheet

Date	Audit Area	Assembly Area	Score	Rating	Description
25/10/2025	Work Station		0	POOR	Activities not conducted at all
Month	SS Auditor	Joe Blogg	1	MARGINAL	Activities implemented between 0-30%
October	SS Leader	Tony Wynne	2	AVERAGE	Activities implemented between 31-60%
Audit Cycle	Monthly		3	GOOD	Activities conducted in a systematic way but could improve, 61-90%
			4	BETTER	Activities implemented and used in systematic way, 91-99%
			5	BEST	Activities fully implemented and used in systematic way 100%

Action Tracker

5S Audit Summary

Category	Score	Average	%	Status
Sort	12	2	48%	AVERAGE
Straighten	19	3	63%	GOOD
Shine	22	3	63%	GOOD
Standardise	13	3	52%	GOOD
Sustain	12	2	40%	AVERAGE
Total Score	78			
Audit Result	53%			

5S Audit Category

Category

Evaluation Criteria

Current State Map

Current State Process Map

Step #	Process Step	Owner	CTQ Link	Metric	Current Value	Notes
1	Receive order	Sales Admin	Delivery	Order entry accuracy	92%	Manual entry, prone to typos
2	Print label	Ops Lead	Quality	Label misalignment rate	3%	Sensor cleaning inconsistent
3	Apply label	Operator	Quality	FPY	89%	No visual guides
4	Seal pack	Operator	Quality	Seal failure rate	2%	Old sealers, inconsistent heat
5	QA check	QA Lead	Flexibility	Rework rate	6%	Manual logging, no alerts

SPC Chart Current State

Process Name: Cookie Process

Part Name: Cookie

Machine/Operator: Pete

Batch: 1

Time: 18/08/2025

Month: August, Year: 2025

Input Section

Parameter	mm
Size	100.0
Target (Nominal)	10.0
.SL	9.5
JSL	10.5
Mean(μ)	10.23
Std Dev (σ)	0.4
Calculating 3 Sigma	
UCL	10
USL	0.19
LSL	7.44
LCL	1.1

Measures

Zone A, Zone B, Zone C, Zone D

Legend: +3 SD UCL, USL, Mean, LSL, -3 SD LCL

Root Cause Matrix

Root Cause Matrix

Issue	Suspected Cause	RCA Method
Label misalignment	Sensor misreads	5 Whys
Seal failure	Material inconsistency	Fishbone
QA delays	No real-time alerts	Interviews
High scrap rate	Rushed setups	Pareto + 5 Why
Barcode errors	Scanner miscalibration	Fishbone

RCA Dashboard

KPI Panel: # causes analysed, % confirmed, top 3 unresolved

Bar Chart: Causes by RCA method

Heatmap: Confirmation status by issue

Slicers: Filter by issue, RCA method, validation status, own

Mopex Kaizen Event Structure

Mopex Kaizen Event Structure

Day	Planned Date	Activities	Outputs
Pre-event		Scoping, data prep, team selection	Charter, baseline metrics, logistics
Day 1		Orientation, process walk, current state mapping	SIPOC, VSM, pain points, data validation
Day 2		Root cause analysis, solution brainstorming	Fishbone, 5 Whys, prioritised ideas
Day 3		Solution design, trials, standard work	Future state map, SOPs, control plan
Day 4		Implementation, training, dashboard setup	Action tracker, training records
Day 5		Report-out, benefits forecast, sustain plan	Presentation, ROI model, sustain checks

Mopex LEAN Framework



Mopex LEAN Project Deliverables

Mopex LEAN Project Framework			
Phase	Element	Description	Check
<i>Project Intake and Scoping</i>			
Phase 1	Problem Statement	"High defect rate in final assembly"	<input type="checkbox"/>
	Project Scope	Boundaries, exclusions, stakeholders	<input type="checkbox"/>
	Voice of Customer	CTQs, expectations, pain points	<input type="checkbox"/>
	Business Case	ROI, strategic alignment, urgency	<input type="checkbox"/>
	Charter	Roles, timeline, success criteria	<input type="checkbox"/>
<i>Current State Analysis</i>			
Phase 2	Process Map	SIPOC / Swimlane / Value Stream	<input type="checkbox"/>
	Data Collection Plan	Metrics, sources, frequency	<input type="checkbox"/>
	Baseline Metrics	Cycle time, defect rate, WIP, lead time	<input type="checkbox"/>
	Waste Identification	TIMWOOD categories (7 wastes)	<input type="checkbox"/>
	Control Charts	Variation and stability analysis	<input type="checkbox"/>
<i>Root Cause Analysis</i>			
Phase 3	Root Cause Analysis	Fishbone, 5 Whys, Pareto	<input type="checkbox"/>
	Value-Added Analysis	VA/NVA breakdown	<input type="checkbox"/>
	Bottleneck Diagnosis	Flow constraints	<input type="checkbox"/>
	Cause & Effect Matrix	Prioritise drivers of waste	<input type="checkbox"/>
	Hypothesis Testing	Validate assumptions	<input type="checkbox"/>
<i>Solution Design and Kaizen Delivery</i>			
Phase 4	Solution Generation	Brainstorming, benchmarking	<input type="checkbox"/>
	Kaizen Events	Rapid improvement workshops	<input type="checkbox"/>
	Future State Mapping	Redesigned process flow	<input type="checkbox"/>
	Pilot Implementation	Test changes in controlled setting	<input type="checkbox"/>
	Risk Assessment	FMEA / mitigation planning	<input type="checkbox"/>
<i>Governance and Reporting</i>			
Phase 5	Control Plan	Monitoring, response triggers	<input type="checkbox"/>
	SOP Updates	Standardisation of new process	<input type="checkbox"/>
	Visual Management	Dashboards, boards, trackers	<input type="checkbox"/>
	Audit Schedule	Sustainment checks	<input type="checkbox"/>
	Benefits Realisation	ROI, savings, performance uplift	<input type="checkbox"/>



LEAN Project Pricing

Mopex LEAN Project Framework				
Fixed Fee Model	Deiverables	Duration (W)	Tier Range	Price Range
OpEx Lite	Diagnostic + Roadmap	2–4	Bronze	£2,280–£3,800
OpEx Core	LEAN Principles to reduce waste	6–8	Silver	£7,600–£11,400
OpEx Plus	OpEx Core + Training + Dashboard	6–12	Gold	£11,400–£19,000
OpEx Enterprise (Retention)	Monthly LEAN CI Governance	TBC	TBC	TBC
Milestone Model	Deliverables	Timing	% of Total Fee	
Kickoff & Current State	Value stream map, waste audit, stakeholder alignment	Week 1–2	20%	
Future State Design	Lean redesign, flow improvements, 5S plan	Week 3–4	25%	
Pilot & Kaizen	Rapid improvement events, pilot results	Week 5–6	25%	
Sustain & Scale	SOPs, control plan, training pack	Week 7–8	20%	
Bonus ROI Pack	ROI forecast, Lean dashboard, comms assets	Optional	10%	
Month Model	Deliverables	Timing	Fee (£)	
Month 1	Waste diagnostic, process walk, Kaizen event, updated SOPs	1	£5,000.00	
Month 2	Final waste map, control actions, training handover	0.5	£2,600.00	

**OpEx Core
Package Example
£7,600.00**

Mopex ROI Forecast Model for LEAN Projects

Mopex ROI Forecast Model for LEAN Projects - it's designed to quantify the financial impact of waste elimination, process optimisation, and flow improvement under the Mopex LEAN Framework.

1. Cost Inputs

Category	Typical Range
Mopex Implementation Fees	£20,000–£50,000 (fixed or day rate)
Internal Resource Allocation	80–250 hours (client-side)
Tooling & Digital Assets	£3,000–£12,000 (Notion, Power BI, Mopex templates)
Kaizen Event Costs	£2,000–£8,000 (venue, facilitation, materials)
Change Management & Training	£2,000–£6,000

2. Value Drivers

Driver	Mopex Impact Range
Waste Elimination (TIMWOODS)	20–60% reduction in non-value-add activities
Cycle Time Reduction	15–35% faster process execution
Productivity Uplift	10–30% increase in throughput
Defect & Rework Reduction	25–50% fewer errors and rework incidents
Cost Avoidance (Labour & Materials)	£15k–£150k saved annually
Capacity Release	Equivalent to 0.5–2 FTEs freed for redeployment

3. Example ROI Scenarios

Scenario	Cost (£)	Value (£)	ROI (%)
SME, LEAN pilot in production cell	£30,000	£110,000	267%
Mid-size, multi-team Kaizen rollout	£50,000	£190,000	280%
Enterprise, LEAN + DMAIC integration	£70,000	£280,000	300%

Mopex LEAN Framework



LEAN Project Tools Available



LEAN Project/Stand-alone Tool Kits

The image displays five overlapping digital toolkits for Mopex 5S audits, arranged in a collage. Each toolkit is a web-based interface with a green gear icon and a 'Disclaimer' button.

- Mopex 5S Audit Sheet:** Shows a summary table with columns for Date, Audit Area, Assembly Area, Score, Rating, and Description. It includes a '5S Audit Summary' section with a table of categories (SORT, STRAIGHTEN, SHINE, STANDARDISE, SUSTAIN) and their respective scores, averages, and percentages. A '5S Summary' diagram shows a pentagon with levels 0-4.
- Mopex 5S Audit Checklist:** Features a table with columns for Area, Step, Criteria, Score (0-5), Notes, and Action Required. It lists items like 'Unnecessary items removed' and 'Tools labelled and stored'.
- Mopex 5S Audit Register:** A table listing audit records with columns for Audit #, Date, Audit Area, Work Station, 5S Auditor, 5S Leader, Sort, Straighten, Shine, Standardise, Sustain, Avg. Score, Status, and Notes.
- Mopex 5S Layout Planner Template:** Includes a 'Header & Context' section with fields for Company Name, Site / Area, Assessor Name, Date of Assessment, Framework Linkage, and Audit Reference. It also features an 'Area Mapping Grid' table with columns for Zone, Function, Key Equipment / Items, Status (5S), Issues / Notes, and Action Required.
- Mopex 5S Action Tracker:** A table with columns for Issue Identified, Action Required, Owner, Due Date, and Status. It lists actions like 'No labels on spill kits' and 'Obstructed walkways'.

At the bottom right, a 'Mopex 5S Audit Analysis' dashboard is shown, featuring a navigation bar with buttons for Audit Sheet, Checklist, Register, Tracker, Layout Planner, and Data. It displays a 'Score 59%' and a 'Category %' pentagon chart. Below the chart are five performance cards with icons and data:

- Sorting of Material: 52% (Average 56%, -4%)
- Set all material in sequence: 66% (Average 71%, -5%)
- Clean the Workplace: 60% (Average 57%, 3%)
- Standardise the Work: 50% (Average 51%, -1%)
- Sustain the defined Standards: 54% (Average 58%, -4%)

The dashboard also includes an 'Audit ID Status' pie chart and a 'Date' selector for the year 2024.