

PERSONNEL & MATERIAL FLOW MAPPING WORKSHEET

A fill-in worksheet for mapping every flow through a food factory — raw materials, packaging, people, waste, rework and equipment — against the hygiene zones they pass through, and registering every point where two flows cross. Use it on a block layout before the design is frozen, and on an existing plant before an expansion.

VERSION 1.0 · JUL 2026 6 SHEETS · 1 CROSSING REGISTER GATES: CONCEPT LAYOUT · HYGIENE REVIEW

HOW TO USE THIS WORKSHEET

- 1 Define the zones first (Sheet 1) and mark them on a block plan with a colour per care level. Every later sheet refers to those zone names, so name them once and use the names consistently.
- 2 Trace each flow on the plan with a line, then write it down here. **The worksheet records what the drawing shows** — do not fill it in from how the process is supposed to work.
- 3 Sheet 5 is the output that matters: **every point where two flows cross, or where a flow steps up a care level**. Those points are where contamination is designed in, and they are cheap to fix only on paper.
- 4 Include the flows nobody draws: waste, returns, rework, engineering access, cleaning equipment, samples to the laboratory, and visitors.

01 ZONE DEFINITIONS

COMPLETE FIRST

Care level follows product exposure and whether a kill step comes after — not the value of the product or the cleanliness of the floor.

REF	ZONE / ROOM	CARE LEVEL	PRODUCT OPEN? AFTER?	KILL STEP	ENTRY RULE

Site / drawing reference _____ Mapped by / date _____

Raw materials, ingredients, packaging, work in progress, finished goods. Note where outer packaging is removed — that is a zone change, whether or not it is drawn as one.

[illegible]

03 PERSONNEL FLOWS

Include engineering, cleaning, QA sampling, contractors and visitors — the routes that are never on the operations flow diagram.

ROLE / GROUP	ENTRY POINT	CHANGE / HYGIENE REQUIREMENT	ZONES ACCESSED	RETURNS?

04 WASTE, REWORK & EQUIPMENT FLOWS

These are the flows that most often run backwards through the plant — out of a dirty zone and into a clean one.

FLOW	FROM	TO	FREQUENCY	CONTROL
Product waste / trim				
Packaging waste				
Rework				
Cleaning equipment				
Tools / spare parts				
QA samples				
Returns / recalled stock				

05 CROSSING REGISTER

THE OUTPUT

Every point where two flows cross, or where a flow enters a higher care level. Decide each one: re-route, separate in time, or engineer a controlled transfer.

NO	LOCATION	FLows INVOLVED & RISK	DECISION — RE-ROUTE / SEPARATE / ENGINEER

ENGINEER'S NOTE

Three crossings appear on almost every layout we review: waste leaving a high-care area through the same door people enter by; engineering reaching a machine only by walking through open product; and rework travelling back upstream past the kill step. All three are trivial to fix while the layout is a drawing, and all three become permanent operating restrictions once the building is standing. The purpose of this worksheet is to find them on the drawing.

NEED THIS ENGINEERED FOR YOUR FACTORY?

PMG has engineered 250+ food & beverage factories across 15+ markets — from concept layout and hygienic design to detailed engineering, construction supervision and commissioning.

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