Association of Food Manufacturing Engineers

BEGINNER'S GUIDE TO ENGINEERING PROJECT MANAGEMENT

Food Manufacturing Engineering | PED-01

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Owner	Association of Food Manufacturing Engineers (AFME)
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Applies to	Project engineers, maintenance engineers, engineering managers, supervisors and first-time project leads
Status	Independent AFME engineering project-delivery framework

Start with the problem, not the solution

Write one sentence describing the business/engineering problem. Then define the measurable outcome. 'Buy a new conveyor' is a solution; 'remove the 12% throughput constraint while maintaining hygienic segregation and safe access' is an objective.

Build the core team early

Identify sponsor, project lead, Operations owner, Technical/Quality, H&S, Hygiene, Procurement/Finance and IT/Automation/Utilities where relevant. You do not need everyone at every meeting, but you need the right people before irreversible decisions.

Define scope and exclusions

State what is included and explicitly excluded: civils, drainage, electrical supply, compressed air, refrigeration, guarding, software integration, product trials, removal of old equipment, training, spares and weekend working. Ambiguity becomes variation cost.

Create the programme

Start from immovable dates such as shutdowns or launch dates. Work backwards through design freeze, order placement, manufacture, FAT, delivery, installation, SAT, commissioning and Technical release. Record dependencies rather than only dates.

Use a RAID log

Risks may happen; assumptions are believed true but need validation; issues have already happened; dependencies rely on another activity/person. Keeping them visible prevents project meetings becoming memory exercises.

Control money

Track approved budget, commitments/POs, actual invoices, forecast-to-complete, contingency and approved changes. A project can be under-spent today and still forecast over budget.

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Review design from the maintainer's position

Ask how you isolate it, access it, lift components, change belts/bearings, clean behind it, calibrate it, recover from PLC failure and source parts in five years. Good project engineering considers the full asset lifecycle.

Treat food safety as a design input

Do not wait until installation for Technical to inspect it. Challenge product-contact materials, cleanability, hollow sections, dead spaces, drainability, lubricants, foreign-body risks, allergen changeover, high-care zoning and validated process controls during design.

Prepare installation before the shutdown

Confirm contractors, RAMS/method statements, CDM arrangements where applicable, permits, isolations, lifting, welfare, access, storage, barriers, hygiene segregation, temporary services, waste and production interfaces.

Test before accepting

FAT proves the supplier build; SAT proves the installed system; commissioning proves it operates; performance testing proves it meets requirements; food-safety/quality validation proves relevant controls are acceptable. Do not collapse these into 'machine runs'.

Handover into maintenance

Create asset IDs, PMs, lubrication tasks, calibration schedules, critical spares, manuals, drawings, backups and training before the project team disappears. The maintenance department should inherit an asset, not a problem.

Close the loop

At 30/60/90 days compare actual benefits, reliability, snag status and performance with the original objective. Record lessons and feed them into the next project.

Example: new automated packing cell

The project objective is 25 packs/minute with defined labour reduction and no deterioration in product safety or quality. The URS defines product formats, washdown conditions, guarding, metal detection/checkweighing interfaces, data requirements and site electrical/controls standards. FAT proves recipes, alarms, guarding logic and dry-cycle performance. Installation readiness confirms hygiene segregation and isolations. SAT proves site interfaces. Product commissioning proves rate, seal quality and inspection-system performance. Handover is not complete until PMs, calibration, spares, software backups, drawings and training are in place.

Ten questions before you say 'project complete'

1. Did it meet the measurable objective?
2. Are all safety actions and statutory requirements closed?
3. Has Technical/Quality accepted relevant food-safety and hygiene controls?
4. Are drawings and manuals correct and available?
5. Are software/PLC/HMI backups controlled?
6. Are PMs and calibration requirements live in the CMMS?

7. Are critical spares identified and ordered?
8. Have operators, engineers and hygiene teams been trained?
9. Are remaining snags risk-assessed, owned and dated?
10. Is a benefits/performance review booked?