

# Mechanical engineering consultancy for manufacturers

Capability statement for Made Smarter Technology Directory submission

Frugal Design helps SME manufacturers define and solve technically ambiguous product, equipment and manufacturing problems. The service is useful where the next step is unclear, development has stalled, or a manufacturer needs practical engineering definition before committing to detailed design, automation, digital tools, suppliers or capital spend.

## Business challenges supported

### Manufacturing product & process design

Product development, product design and definition, design-for-manufacture, supplier-ready technical definition, and process design clarification.

### Manufacturing process

Testing, inspection, validation planning, process optimisation, legacy equipment/product issues, assembly or tooling-related problems, and practical route selection.

## Typical support provided

Early-stage problem framing and requirements capture

Feasibility assessment and options comparison

Mechanical design, CAD, drawings and specifications

Design review, risk review, FEA/analysis and validation planning

Defined-scope engineering sprints for rapid progress

## Example applications

- Improving or replacing legacy mechanical equipment, fixtures, tooling or handling systems
- Clarifying why a product, part, process or piece of equipment is not performing as expected
- Turning a manufacturer's idea, sketch, production issue or customer requirement into a defined engineering brief
- Producing practical mechanical design outputs that suppliers, fabricators or internal teams can act on

## Relevant outputs

### Diagnostic / Phase 0 report

Problem definition, constraints, assumptions, risks, acceptance criteria and recommended route forward.

### Design sprint package

CAD, drawings, specifications, calculations, FEA or review notes for a defined piece of engineering work.

### Validation planning

Practical test, inspection, verification or evidence requirements to support better engineering decisions.

## Fit with Made Smarter

Frugal Design is an engineering consultancy service, not a software platform, automation installer or equipment vendor. The value is in helping manufacturers make better engineering decisions earlier: clarifying the real problem, identifying what should be specified, designed, tested or changed, and reducing wasted development effort before technology investment.

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