

Design for Manufacture

Mechanical Engineering

The sketch-stage decisions that set most of the eventual part cost.

Most of a part's cost is committed long before anything is cut.

Cuts cost

Fewer parts and fewer fasteners

One setup instead of three

Standard tool sizes and radii

Symmetry, or unmistakable asymmetry

Tolerances only where function needs

Adds cost

Tight tolerance on a long dimension

Deep pockets and thin ribs

Internal sharp corners

Finish specified over the whole part

A special or non-stocked fastener

A tolerance one grade tighter than the function needs can double a feature's cost for no benefit at all.