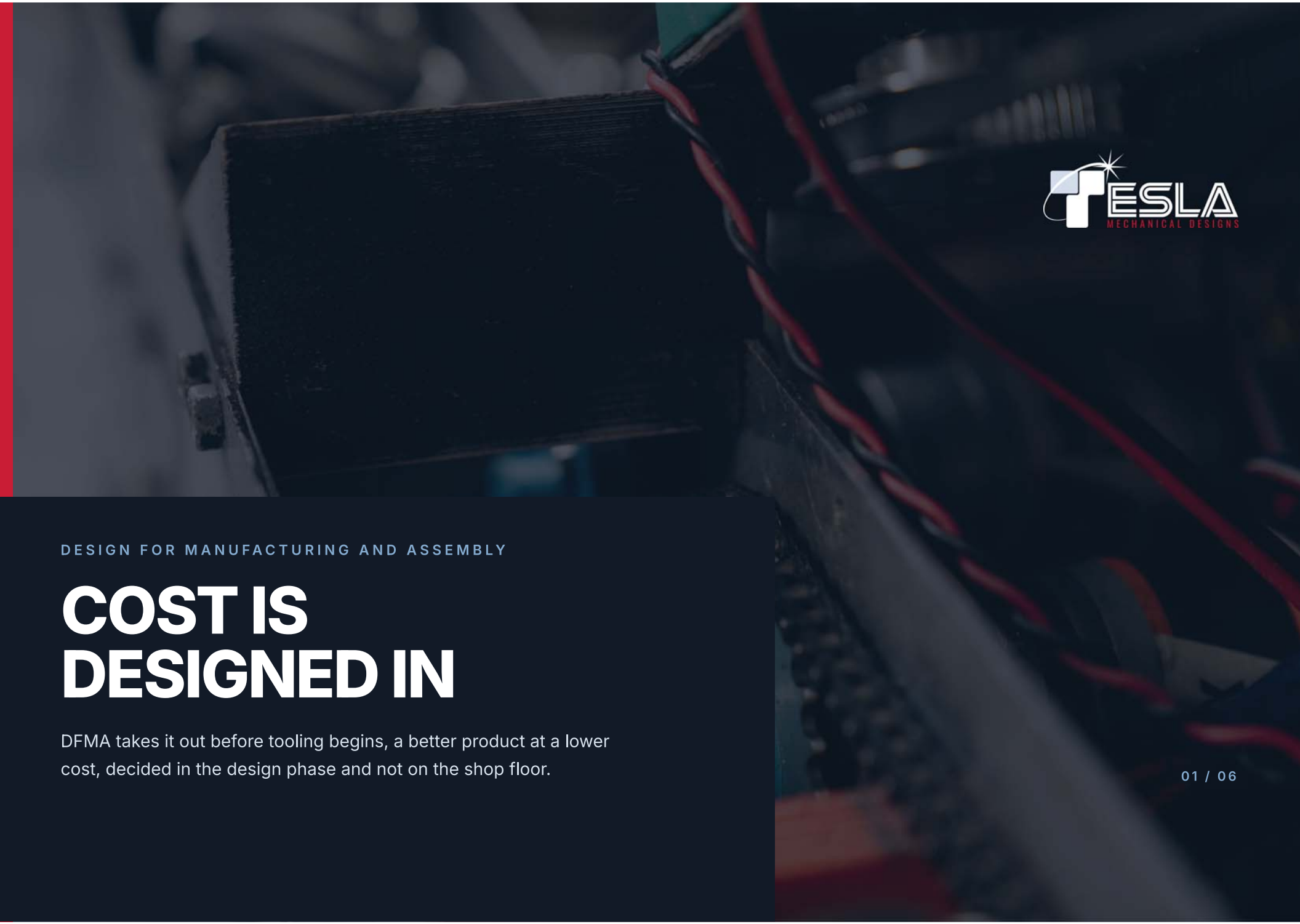


DESIGN FOR MANUFACTURING AND ASSEMBLY

COST IS DESIGNED IN

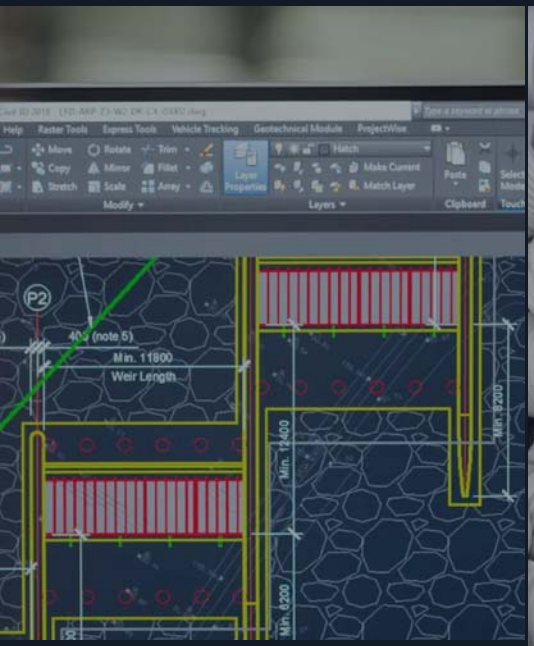
DFMA takes it out before tooling begins, a better product at a lower cost, decided in the design phase and not on the shop floor.

01

PRINCIPLES OF DFMA

Four decisions that govern the part





DESIGN

The drawing must be precise enough for the process to be carried out accurately, and must carry sound manufacturing principles.



MATERIAL

Strength, resistance, transparency or reflectivity, and surface texture all specified, not left to the supplier.



PROCESS

Chosen to suit part quantity, tolerances, material, surface complexity, and any secondary operation.



ENVIRONMENT

No harm to the environment, or production in a controlled one, and correct function under operating conditions.

THE OUTCOME OF EFFECTIVE DFMA

NINE MOVES THAT TAKE COST OUT

01

Minimise the part count

Less material, less assembly labour, lower engineering and shipping cost.

02

Use standardised parts

Already tooled, already meeting quality metrics, cheaper and faster to inspect.

03

Multi-functional parts

One part carrying two functions removes another from the assembly.

04

Ease of fabrication

Material and process suited to fabrication; expensive operations avoided.

05

Minimise handling

Positioning, orienting, and fastening made easy through the line.

06

Maximise compliance

Tapers and chamfers guide insertion and protect the part.

07

Design in modules

Simplifies redesign, allows standard components, reusable next project.

08

Multi-use parts

Shared across different products in the range.

09

Join without fasteners

The most expensive way to hold a product together. Design them out.

WHY FASTENERS GET DESIGNED OUT

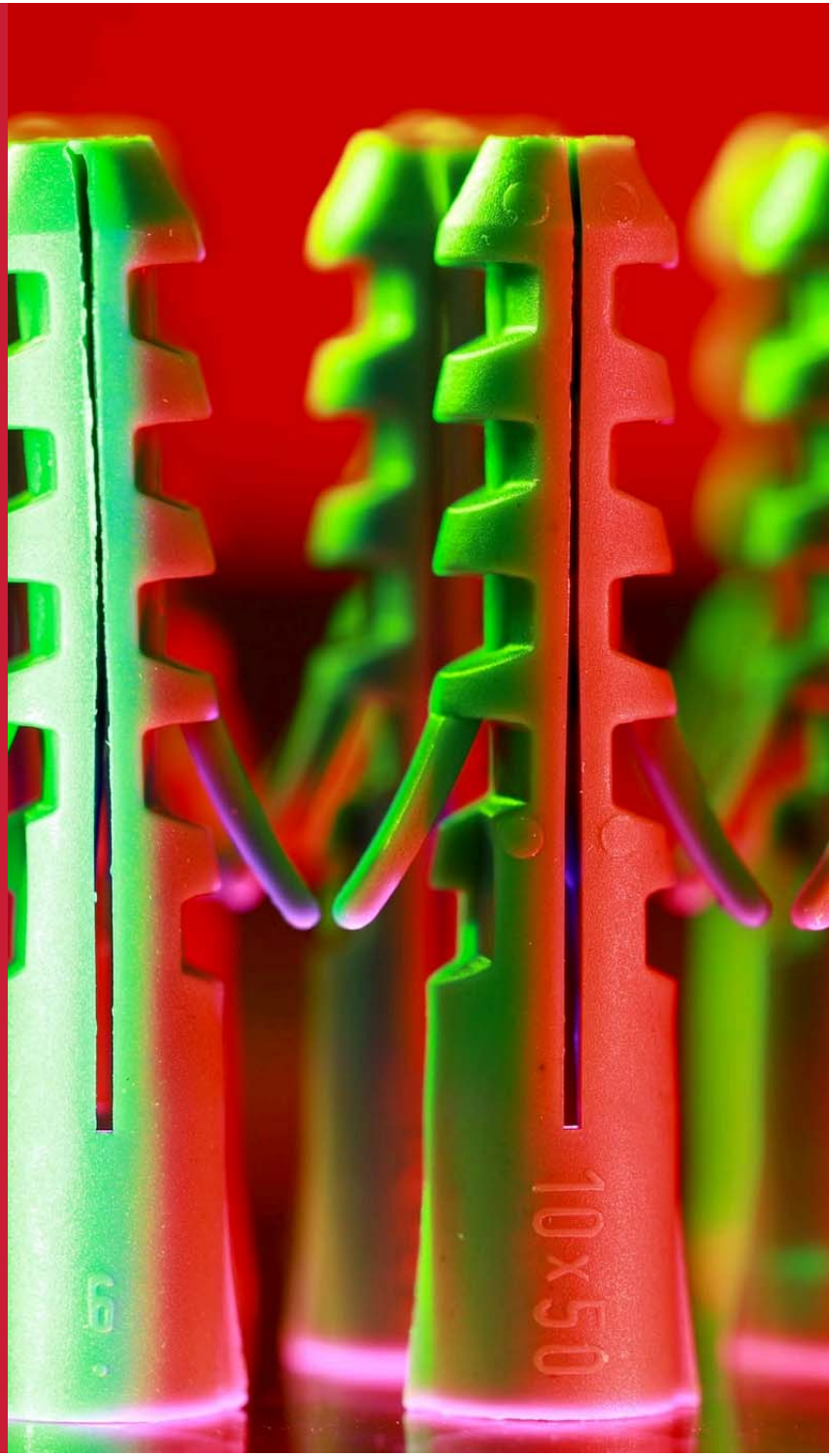
5%

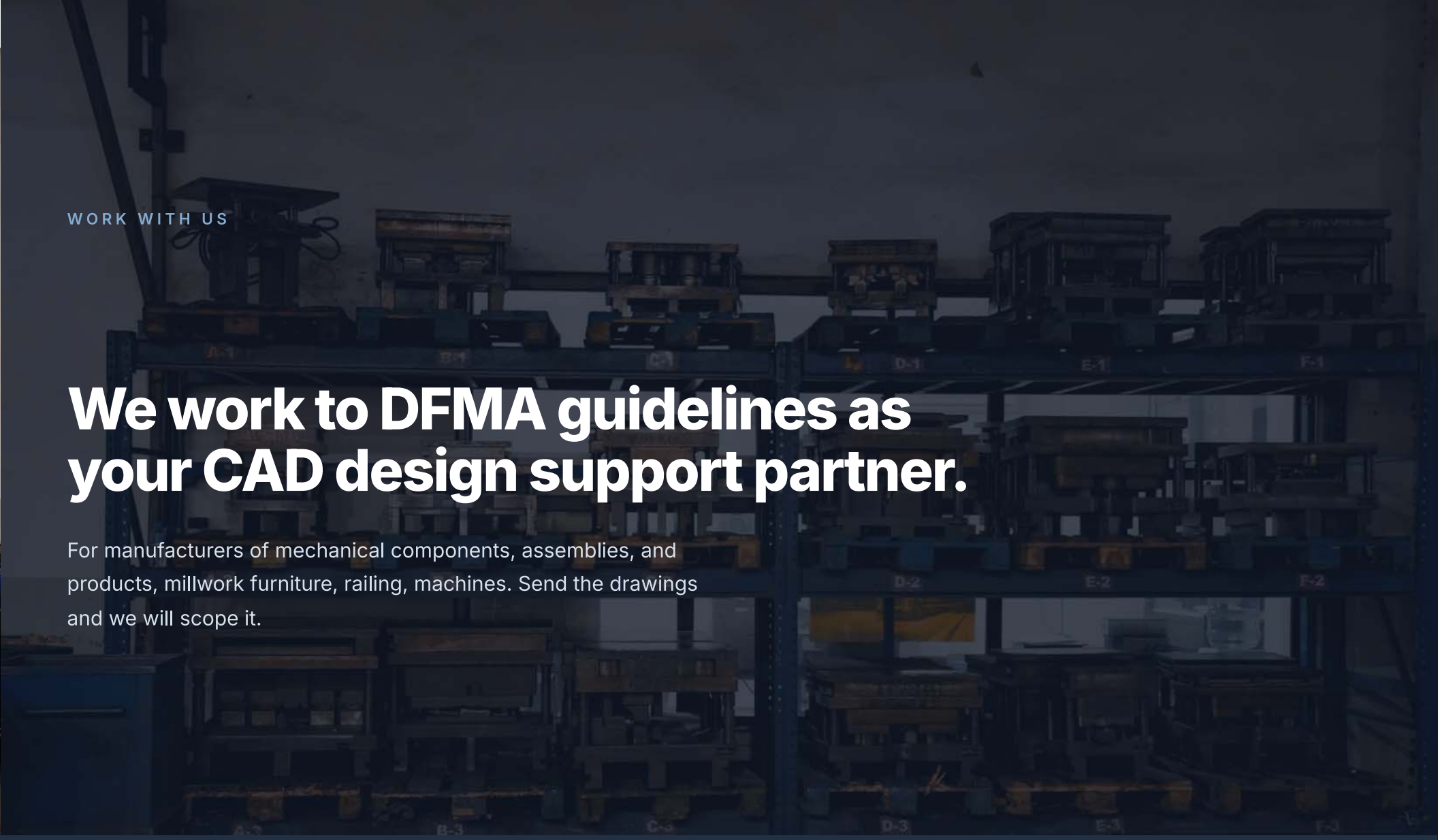
MANUFACTURING COST

75%

ASSEMBLY LABOUR

Screws used in a product add 5% to what it costs to make, and 75% to what it costs to put together.





WORK WITH US

We work to DFMA guidelines as your CAD design support partner.

For manufacturers of mechanical components, assemblies, and products, millwork furniture, railing, machines. Send the drawings and we will scope it.

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MECHANICAL DESIGNS