ELN CONFERENCE 2026 · DEFENSE & SECURITY

FROM AUTOMOTIVE TO DEFENSE

2M Engineering
& PRODUCT DEVELOPMENT

Transferring Lightweight Engineering Capabilities

AUTOMOTIVE → AEROSPACE → DEFENSE

Lightweight structures · Advanced materials · Functional integration

Manuel García
Co-Founder & General Manager · 2M Engineering

MADRID · 4 November 2026

WE DIDN'T START IN DEFENSE.

Our engineering DNA comes from **Automotive.**



OUR BUSINESS UNITS

PRODUCT DEVELOPMENT
Engineering · CAD · Simulation

PROTO LAB
Prototyping · Additive · CNC

JIGS & TOOLS
Fixtures · Tooling · Industrialization

TECHNICAL ENCLOSURES
Lightweight · EMC · Thermal

WWW.2MENGINEERING.TECH

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AUTOMOTIVE: ENGINEERING AGAINST A SPECIFICATION

A highly defined framework drives the engineering solution.

STANDARDS

OEM standards · ISO · VDA · UNECE

MATERIAL

Specified grade · additives · approvals

GEOMETRY

CAD · package · interfaces · thickness

TOLERANCES

GD&T · dimensional targets · gap & flush

VALIDATION

Mechanical · thermal · ageing · environmental

QUALITY

APQP · PPAP · traceability · capability

INDUSTRIALIZATION

Cycle time · process · volumes · takt time

COST

Target price · tooling investment · piece cost

THE REQUIREMENT FRAMEWORK → DEFINES THE SOLUTION SPACE

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DEFENSE: ENGINEERING FOR AN ADVANTAGE

Different requirements. Same objective: gain an operational advantage.

01

LIGHTER

Less mass

Payload · Autonomy

02

FASTER

Higher speed

Response · Deployment

03

STRONGER

More robust

Durability · Survivability

04

FURTHER

More range

Operational reach

05

SMARTER

More function

EMC · Thermal · Integration

LIGHTWEIGHT ENGINEERING → OPERATIONAL ADVANTAGE

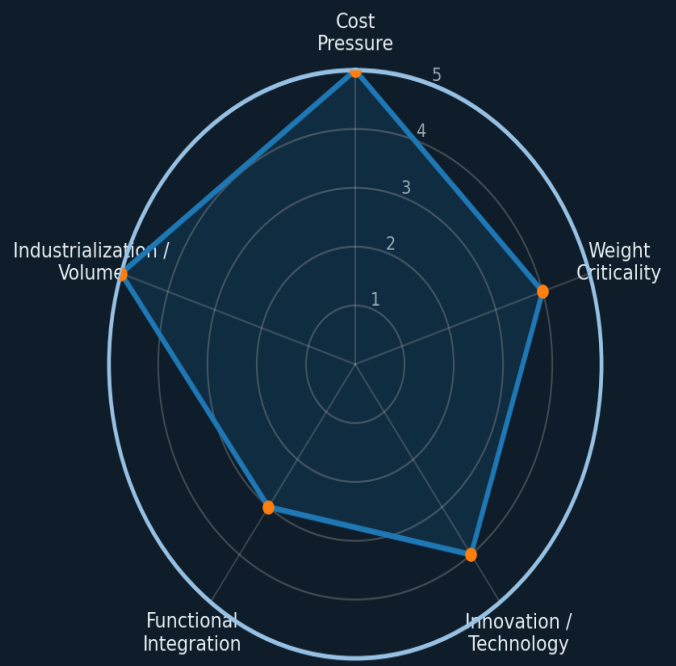
The question is not only "What does it weigh?" — but "What advantage does it enable?"

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DIFFERENT INDUSTRIES. DIFFERENT PRIORITIES

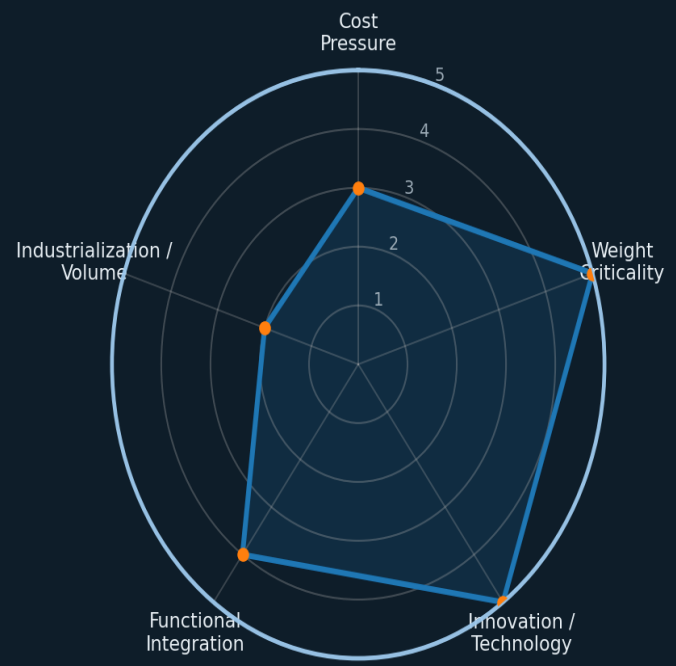
Same engineering capabilities. Different focus.

AUTOMOTIVE



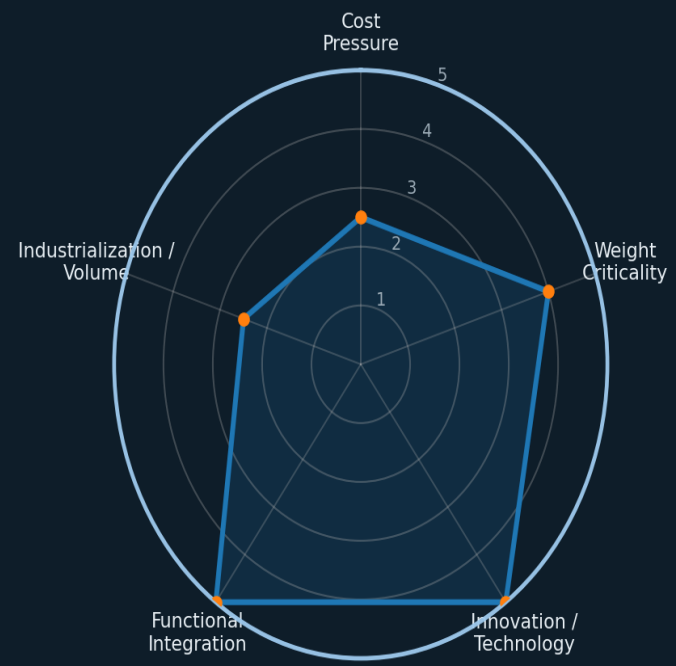
Cost + Industrialization

AEROSPACE



Weight + Technology

DEFENSE



Technology + Functional Integration

Conceptual comparison based on 2M Engineering's cross-sector experience · Scale 1–5

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SO, WHAT CAN WE TRANSFER?

Engineering know-how that can cross industries.

LIGHTWEIGHT STRUCTURES

ADVANCED COMPOSITES

ADDITIVE MANUFACTURING

JIGS & TOOLING

PROTOTYPING

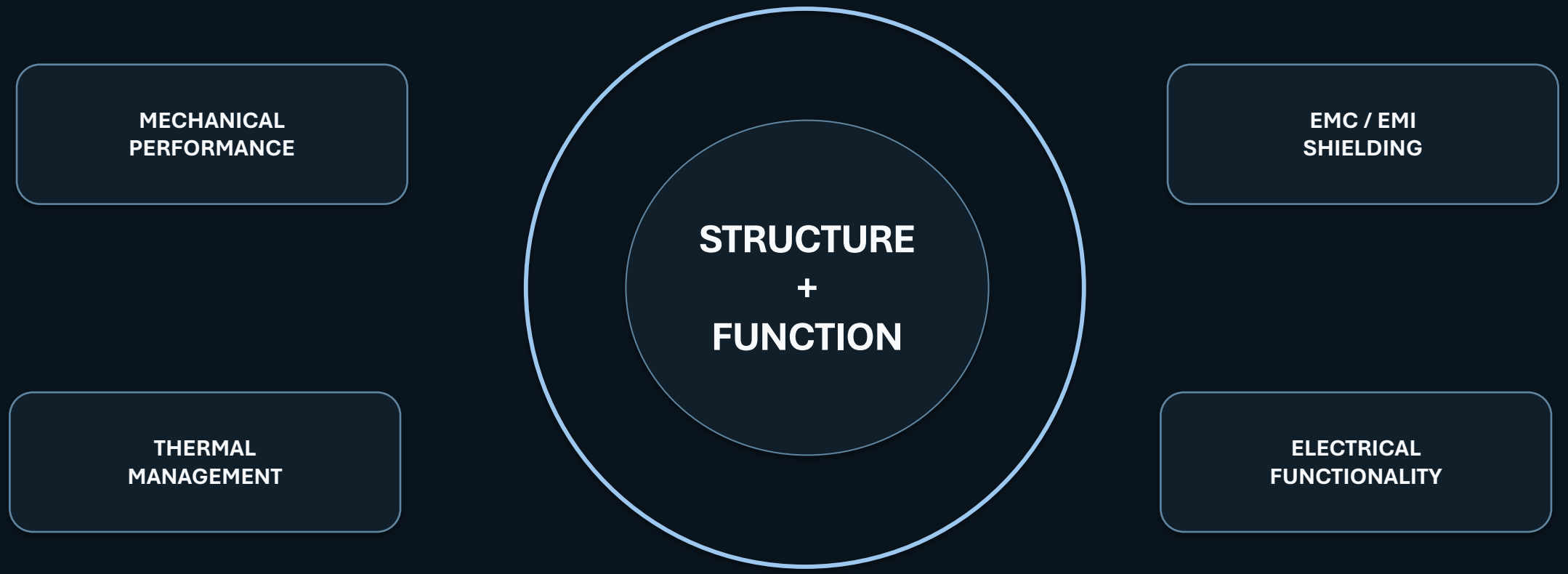
PRODUCT ENGINEERING

ENGINEERING KNOW-HOW

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LIGHTWEIGHT IS MORE THAN REDUCING MASS.

What if the structure can also provide functionality?

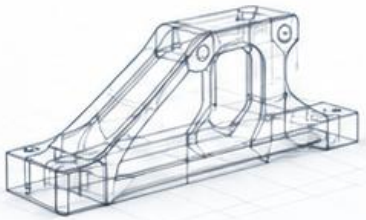


From Concept to Production-Ready Part

Design · Engineering · Optimization · Manufacturing

2M Engineering
PRODUCT DEVELOPMENT

CONCEPT



3D MODELING



OPTIMIZATION



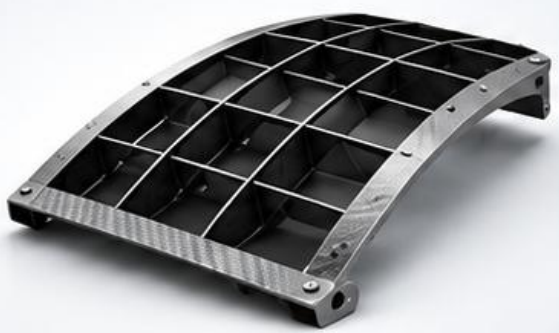
- ☑ Optimized design
- ☑ Lightweight & high performance
- ☑ Production-ready

KEY EXAMPLES OF APPLICATIONS



RADOME

Aerodynamic design and integration of sensors, antennas and fasteners.



AEROSPACE STRUCTURES

Aluminum and composite structures. High strength with minimal weight.



TECHNICAL ENCLOSURES

Lightweight enclosures with EMC/EMI protection and thermal management.



BRACKETS AND MOUNTS

Custom solutions for the secure mounting of equipment, sensors and systems.

TARGET SECTORS

AUTOMOTIVE | AEROSPACE | DEFENSE | UAVs / UAS | SPACE

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FROM ENGINEERING CAPABILITY TO REAL APPLICATIONS.

Examples of what we already do — and where we are going next.

01



PRODUCT DEVELOPMENT

COMPONENTS & SUBCOMPONENTS

- Product engineering
- Plastic & composite components
- CAD · simulation · design validation

02



JIGS & TOOLS

LAMINATION TOOLS · ASSEMBLY JIGS

- Composite lamination tooling
- Assembly & checking fixtures
- Industrialization support

03



TECHNICAL ENCLOSURES

LIGHT WEIGHT - EMC

- Embedded electronics
- Lightweight protection
- EMC / EMI · thermal integration

NEXT STEP

Automotive experience → transferable engineering → Aerospace & Defense applications

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ENTERING DEFENSE DOESN'T ALWAYS MEAN STARTING FROM ZERO.

TRANSFER. ADAPT. COLLABORATE.

THANK YOU

2M ENGINEERING.TECH

Manuel García Lopez

Co-Founder & General Manager · 2M Engineering

MADRID

PROUD MEMBER OF

Part of an ecosystem built around collaboration.

AEROS ECOSISTEMA AERONÁUTICO Y DEL ESPACIO

Clúster Mav MATERIALS AVANÇATS DE CATALUNYA

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