
ENGINEERING ADDITIVE MANUFACTURING PRODUCTS FOR SERIAL PRODUCTION

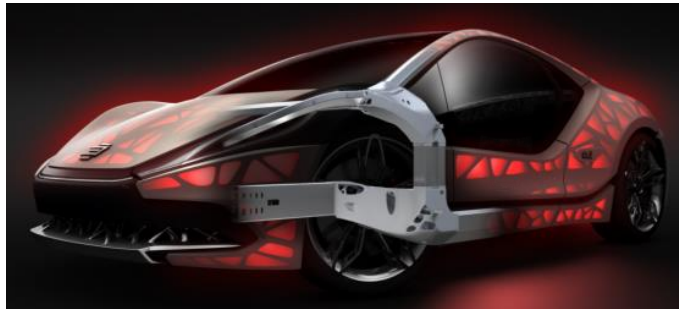
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Fraunhofer IAPT: Leading Edge AM Engineering in Automotive

2016/17 Hybrid Additive Spaceframe I and II



CONCEPTLASER
a GE Additive company

SIEMENS

EDAG 
BLM GROUP

2017/18: Pioneering Titanium Brake Caliper for Super Cars



2019/20: Innovation Cooperation - Integrated Suspension System for Sports Cars

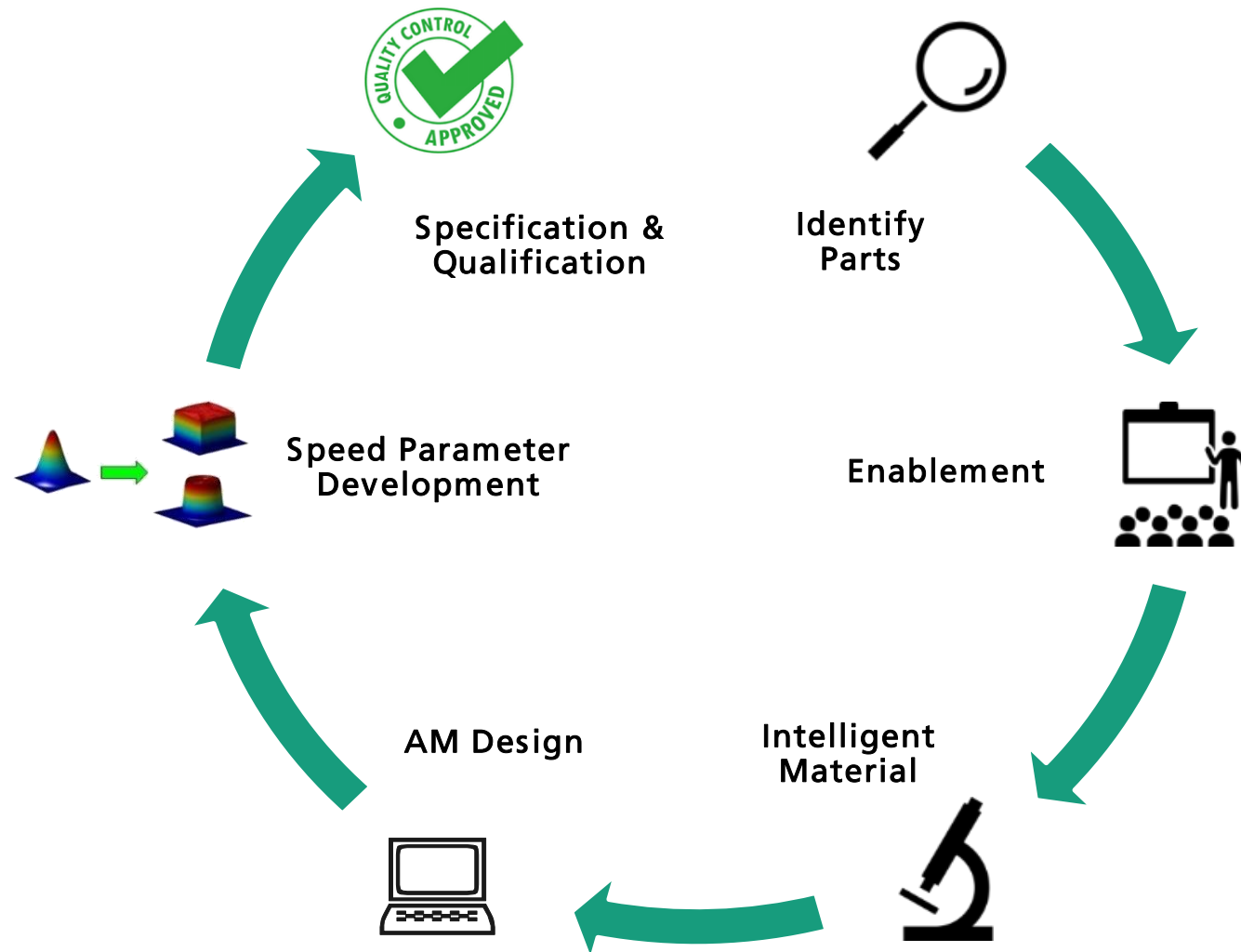


2021: Engineering of a Profitable Serial Application – Door Hinge of a Sports Cars

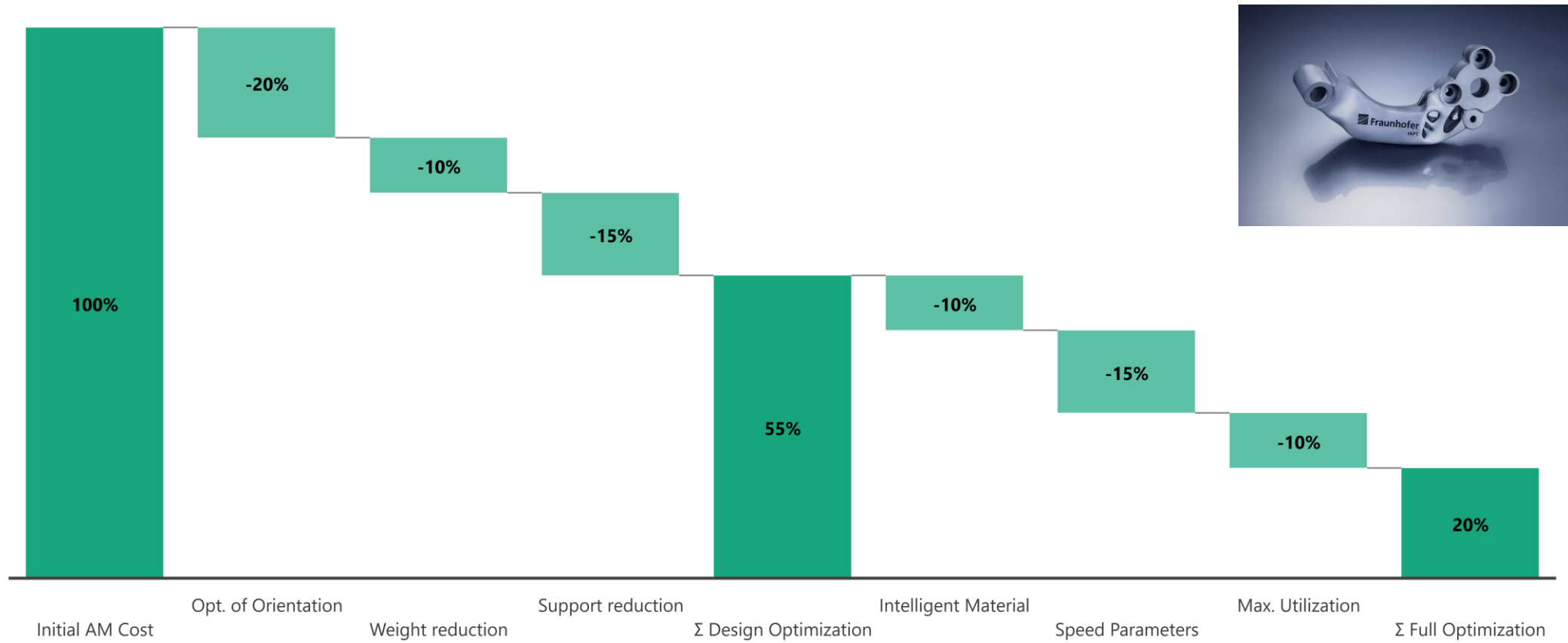


50 % Cost Reduction

Fraunhofer IAPT AM Industrialisation Approach



How much are the AM cost reduced with the IAPT innovation approach?

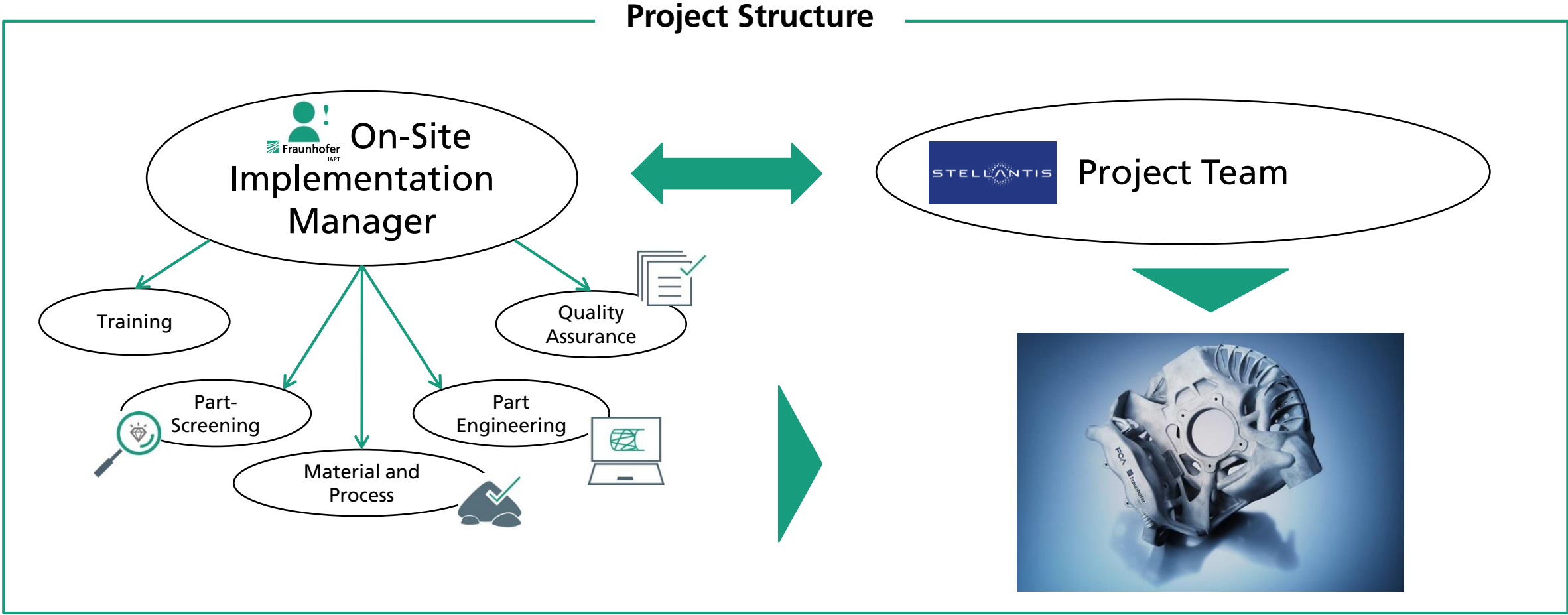




Benefits

- 12 parts integrated to 1
 - Knuckle
 - Hydraulic functions
 - Heat shield
 - Caliper
- 36 % Weight saving
- Increased NVH behaviour

Joint innovation partnership with FCA/Stellantis for knowledge transfer and serial production application



How can you start with us?

Free Part Screening

10 reports for free!

Fraunhofer IAPT

Part specification

Name: Part XY
Dimensions (Outbox): 230 x 184 x 71 mm
Volume of part: 186,713cm³
Weight: 768 gr

Original material: AW60B2
AM-material: ASS10Mag
AM-Process: LBM

Technical feasibility check:

- Dimensions: ●
- Wall thickness check: ●
- Support structure amount: ●
- Risk of warpage: ●

Approximation of printing cost*:

Lot size	LBM	EBM	SI
Lot size 1	1600 € / part		
Lot size 100	900 € / part		

Final evaluation: The component can be printed without restrictions

* The production cost estimate considers only the costs for the raw part production of the current design with a common material. Until the finished product, further costs can arise, e.g. from heat or surface treatment. Threads, fits as well as exact form and position tolerances must be produced by a downstream machining process.

Additive Academy



Additive Academy Workshops 2021:

Basic Training (online)

2 x ½ day for 500 € p.p. on 7th-8th of July and on 2nd-3rd of September

Design for AM Training (online-adapted format)

1.5 days for 1000 € p.p. on the 8th-9th of September

Design for AM Training

2 days for 1700 € p.p. on the 15th-16th of September

Bionic Design for AM Advanced

4 days for 3000€ p.p. 21st-24th of September

Bionic Design for AM Advanced (online-adapted format)

3 days for 2000€ p.p. in October (exact date TBD)

AM Powder Seminar Advanced (online)

½ day for 600 € p.p. on 20th of October

Thank you for your attention!



Contact

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