

MULTI-FUN

Enabling **MULTI-FUN**ctional
performance through multi-material
additive manufacturing



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Kurzdarstellung der Konsortialpartner

21 Partners

8 European countries

8 Austrian Partners

9 SMEs



P01-LKR	P02-VOEST	P03-DLR	P04-BCM	P05-INOCON	P06-FRAUNHOFER	P07-LORTEK
P08-INPHOTECH	P09-ISQ	P10-MIGAL	P11-EWF	P12-RHP	P13-CRANFIELD	P14-WAAM3D
P15-AEROTECNIC	P16-EDAG	P17-PEAK	P18-ALPEX	P19-RUAG	P20-ALUWAG	P21-AVL



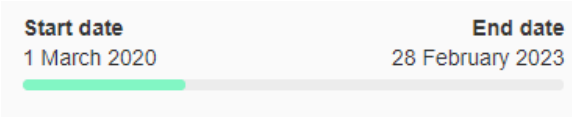
Ziel des Projekts MULTI-FUN

Answering H2020 call DT-NMBP-19-2019 - Advanced materials for additive manufacturing (IA)

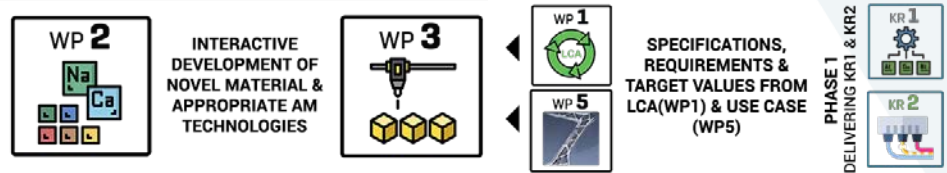
- Developing advanced materials & innovative, cost-effective equipment for Additive Manufacturing of multi-material complex 3D metal parts (without size limitations)
- New material combinations for significant performance & efficiency gain in MAM products
- Fully integrated multi-functionalities using novel active materials, providing embedded electrical conductivity, fibre-optical sensing, heat management, incl. applying nanotechnology
- Significant improvements in efficiency, quality & reliability better than +40%
- Reduced environmental impact as well as lower costs better than minus 35%.



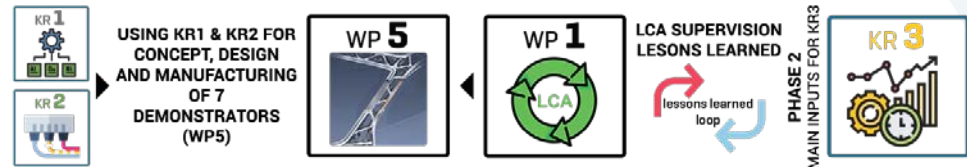
Zeitplan



PHASE 1:



PHASE 2:



PHASE 3:



Angestrebte Verwertung

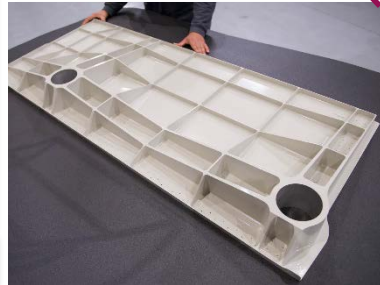
SHM functions integrated into novel Al alloy


Embedded electrical conductors in
(3) Complex “see-through” A-pillar (Steel)
(4) Dashboard carrier (Aluminium)



Actuator housing **Together ahead. RUAG**

1



Bulkhead panel  aerotecnic

2

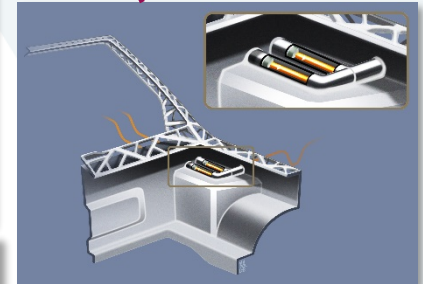
Integrated Thermal Management by -Embedded Cu heat conductors and -Embedded active heaters



See through A-pillar

 **EDAG**

3



Dashboard Carrier

 **EDAG**

4



Angestrebte Verwertung



Mould for
Al Casting

ALUWAG

5

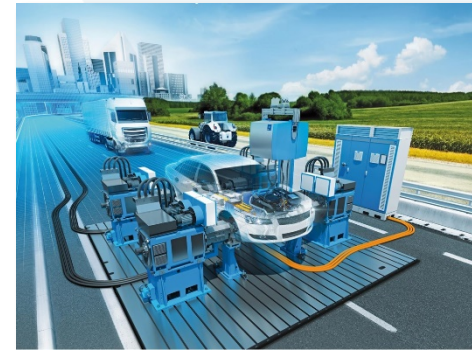


Mould for
CRFP Parts

PEAK
TECHNOLOGY

6

- Integrated Thermal Management by
- Embedded Cu-MMC heat conductors
 - Embedded active heaters



High performance
H₂ components

AVL 

7

Complex 3D flow channel
combined with high thermal
conductivity and sensor integration


**MULTI-
FUN**



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HORIZON
2020

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Fact Sheet

Project Information	
MULTI-FUN	Funded under H2020-EU.2.1.3. H2020-EU.2.1.2.
Grant agreement ID: 862617	
Status Ongoing project	Overall budget € 9 235 953,75
Start date 1 March 2020	End date 28 February 2023
	EU contribution € 7 891 666,51
	Coordinated by LKR LEICHTMETALL KOMPETENZENTRUM RANSHOFEN GMBH  Austria

MULTI-FUN Project information in CORDIS:
<https://cordis.europa.eu/project/id/862617>

MULTI-FUN webpage:
www.MULTI-FUN.eu

