



L A S I M M

Oeiras, November 15<sup>th</sup> 2017

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Foster + Partners



This project has received funding from the European Union's HORIZON 2020 research and innovation programme under grant agreement No 723600.



# FoF-01 Call



H2020-IND-CE-  
2016-17



4 868 262,50 €



FOF-01-2016



36 MONTHS



Large Additive Subtractive  
Integrated Modular  
Machine



1<sup>ST</sup> OCTOBER 2016



# Consortium

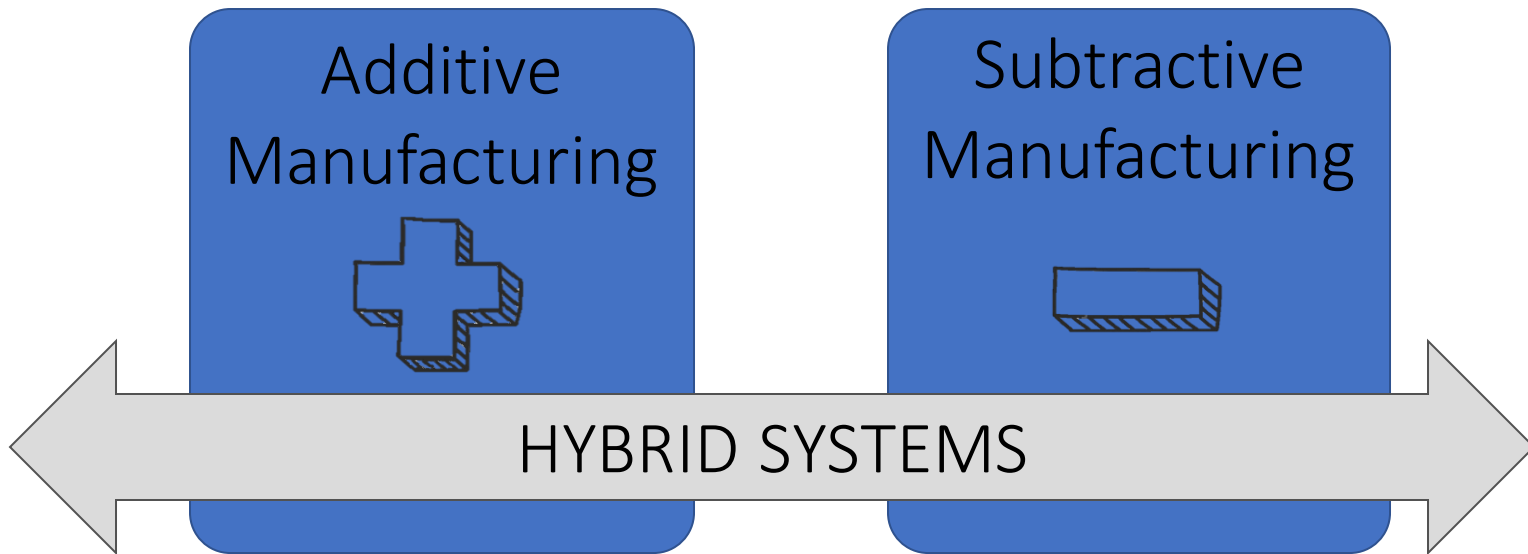


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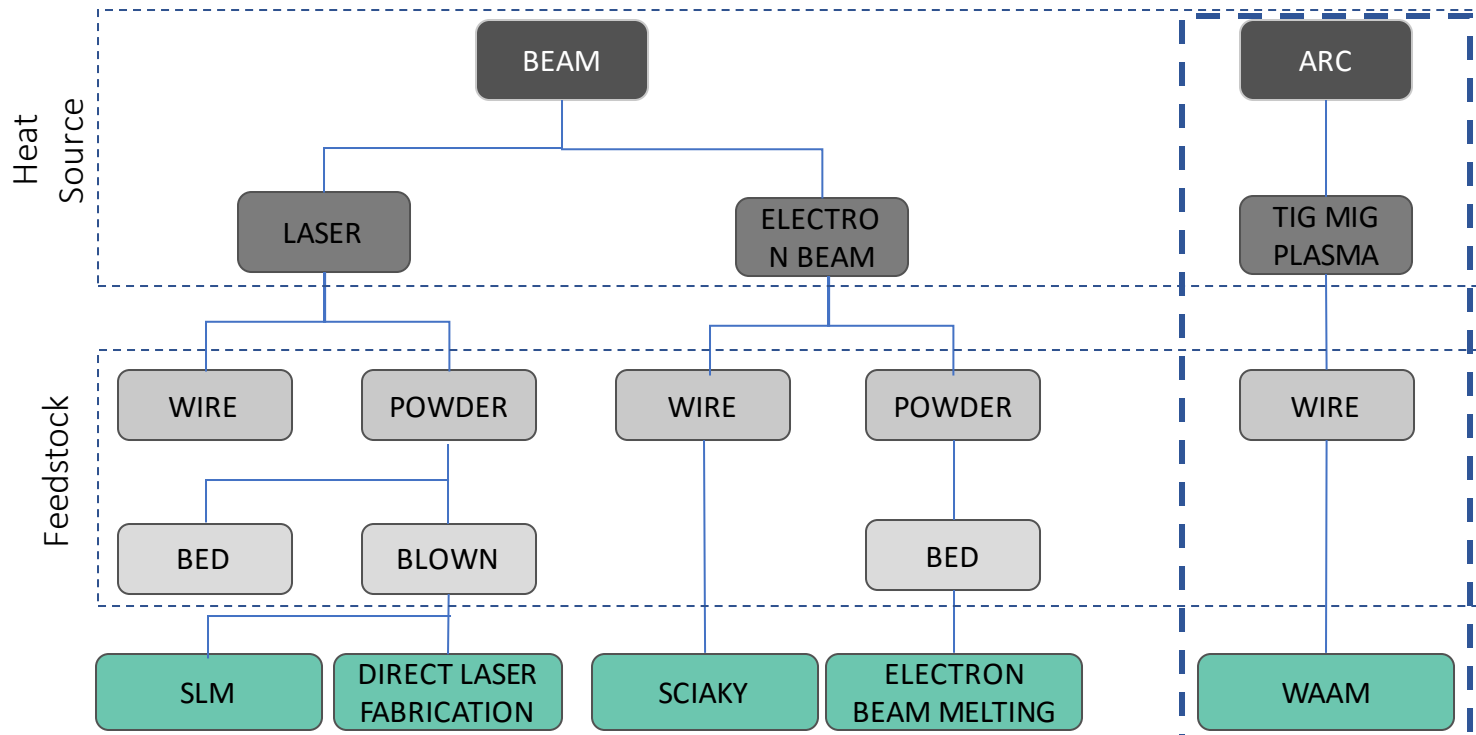




# Introduction to the Project



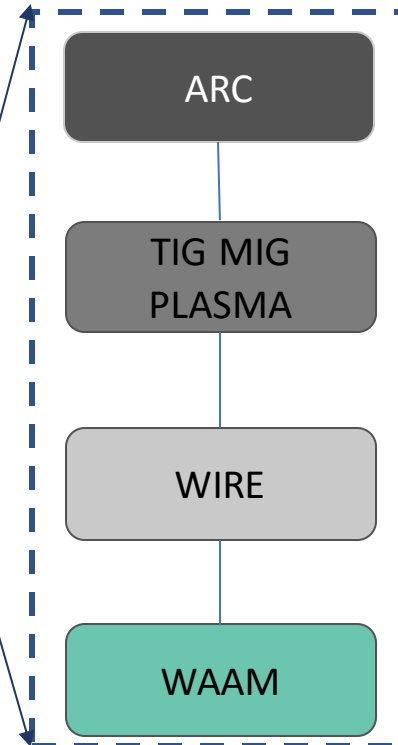
# Introduction to the Project





# Introduction to the project

Deposition Technology to be used in the project



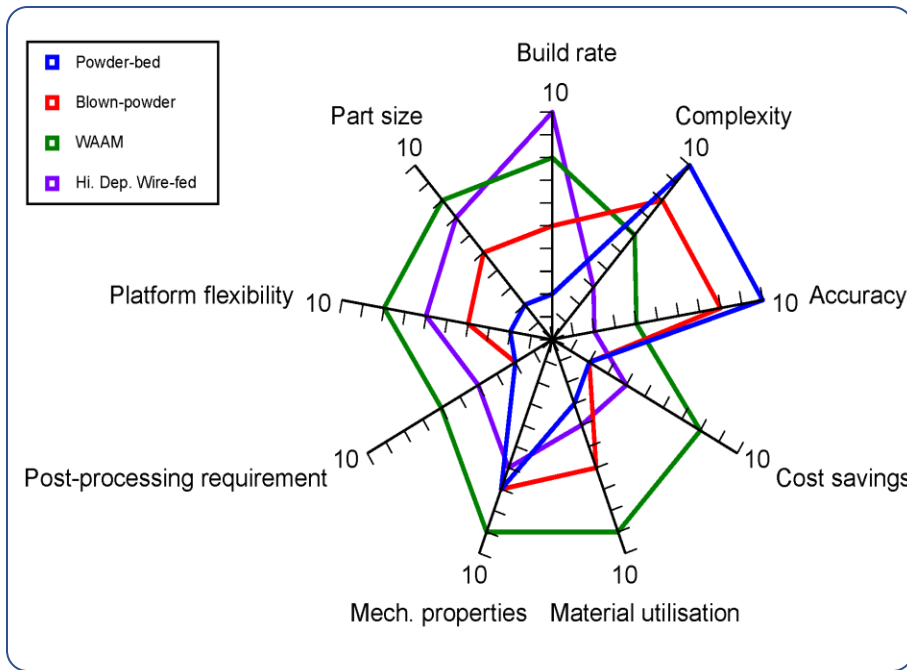


# Background - Additive



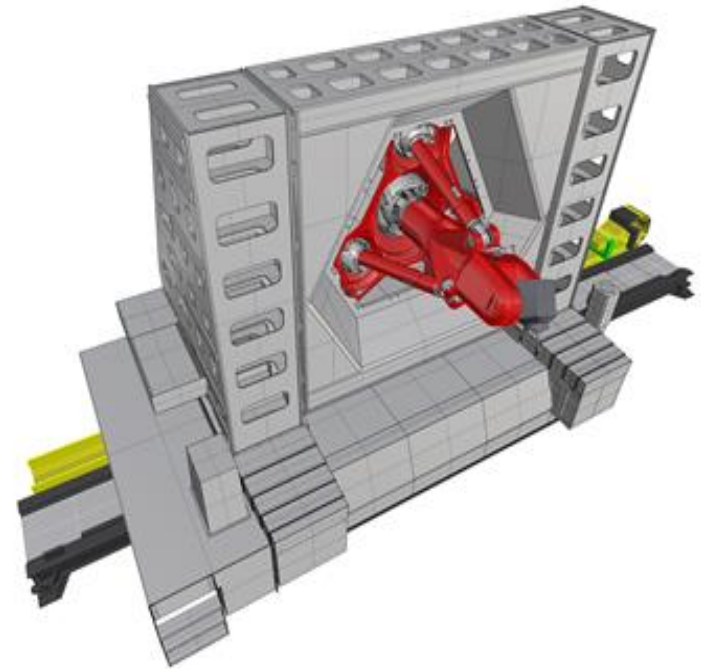


# Background - Additive





# Background - Subtractive





# Overall objectives

**L**arge  
**A**dditive  
**S**ubtractive  
**I**ntegrated  
**M**odular  
**M**achine

## Capabilities LASIMM

- AM
- Machining
- Cold work
- Metrology
- Inspection

## Multiple goals

- High productivity
- Flexibility
- Structural integrity
- Superior performances

## Long term goal

System capable of producing components:

- Fully finished
- Inspected
- Quality assured
- Straight from CAD models at a high productivity rate

Trained workforce

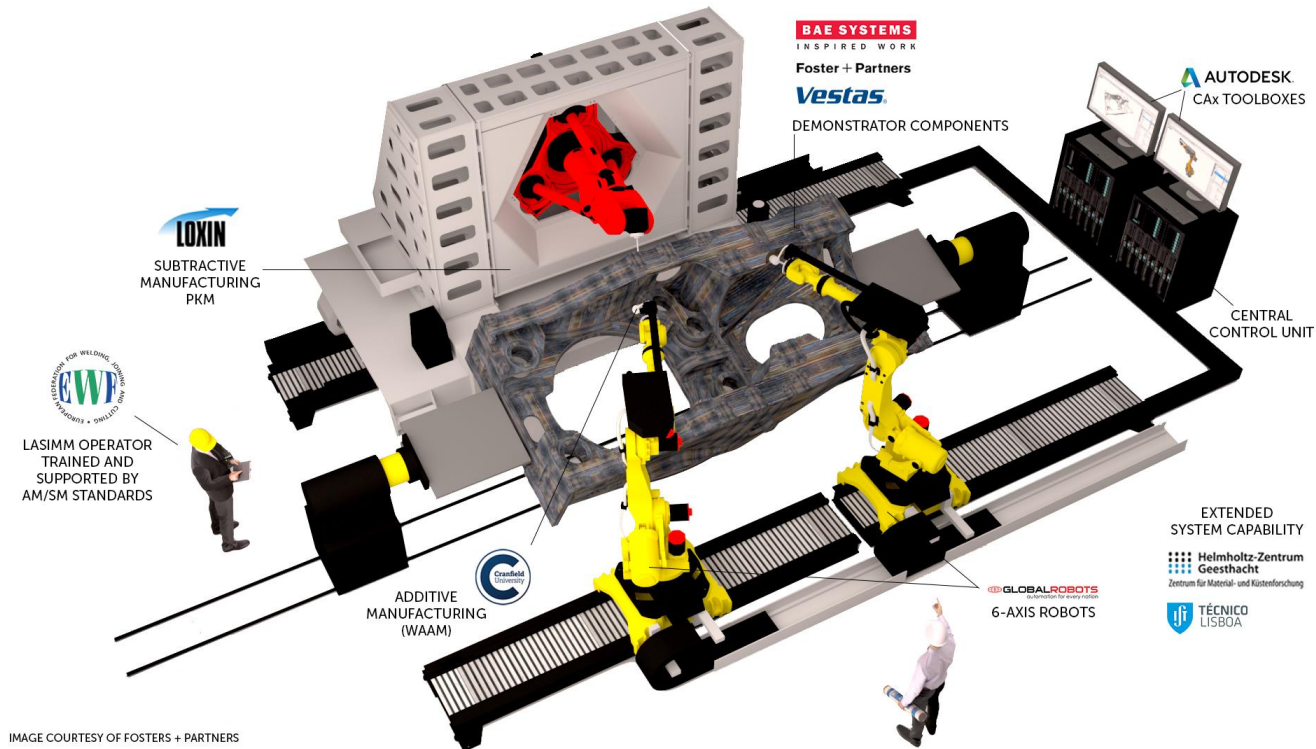


EFWJ 25th Anniversary | 13 – 17 November 2017 | Taguspark, Oeiras, Portugal

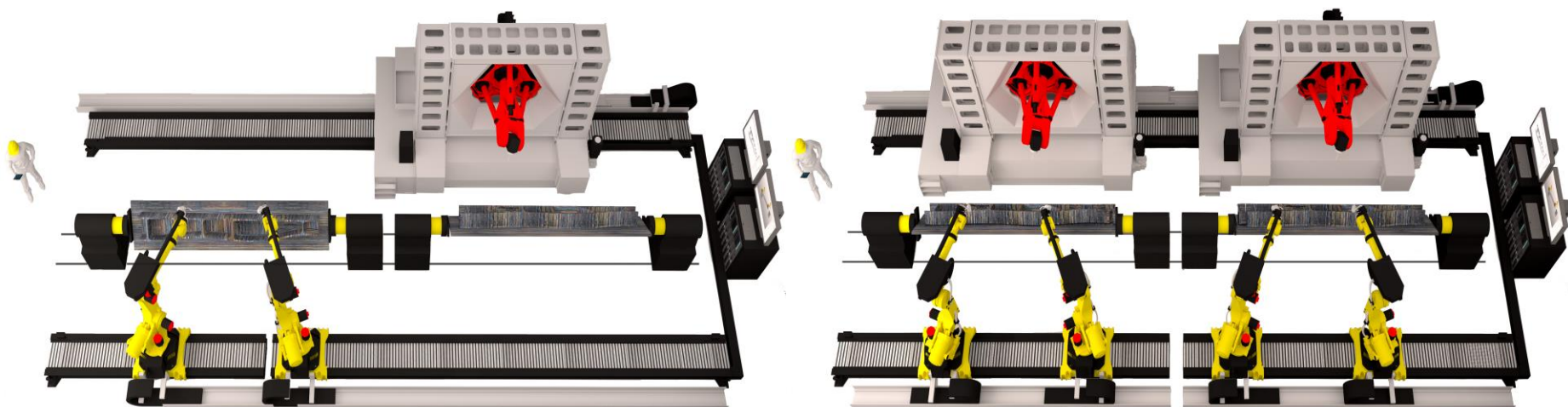




# LASIMM technology - Concept



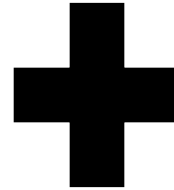
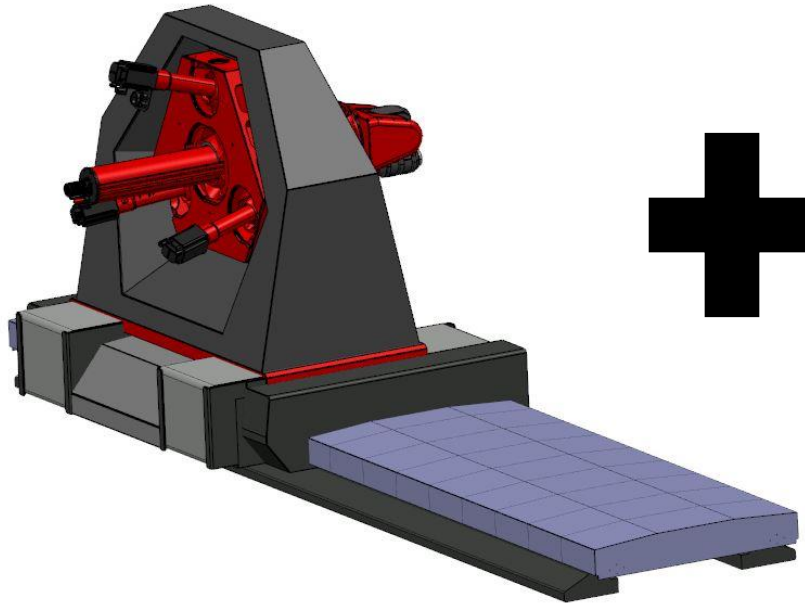
# LASIMM technology – Modular arrangement



Images courtesy of Fosters+Partners



# LASIMM technology - Concept



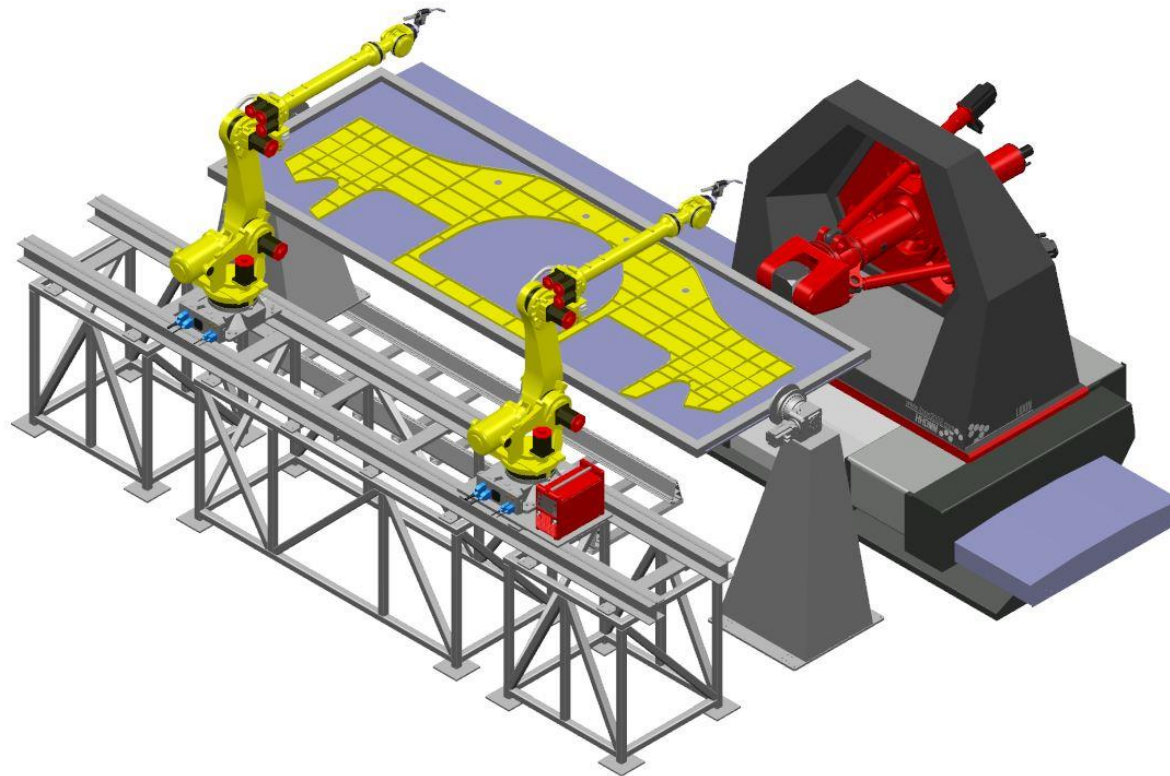
Subtractive Equipment

Additive Equipment



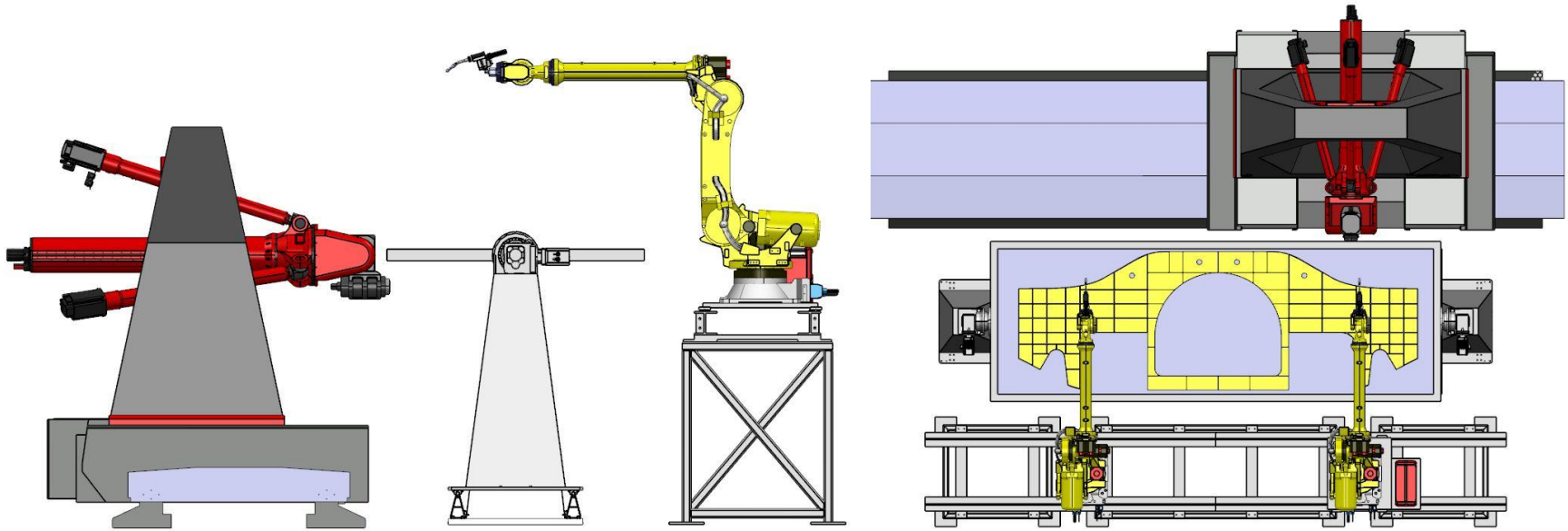


# LASIMM technology - Concept



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# LASIMM technology - Concept



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# Key features

20% ↓

Time and cost, with respect to the current additive and subtractive processes



Production of **finished parts** ready for use

More **flexibility** and **robustness** of the machines to adapt with customisation and changing market needs



20% ↓  
Time and cost, with respect to the current additive and subtractive processes

15% ↑

Productivity for high-volume AM production, with respect to the current additive and subtractive processes



Improved material properties superior to that of forged materials by inclusion for the **first time** of cold work into an AM machine

Contributions to **standardisation** and certification for new hybrid procedures



LASIMM

# THANK YOU

## FOR YOUR CONTINUOUS SUPPORT

 Helmholtz-Zentrum Geesthacht  
Zentrum für Material- und Küstenforschung

**BAE SYSTEMS**  
INSPIRED WORK

Foster + Partners



**Vestas**



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