



WEBINAR

# The impact of additive manufacturing on product sustainability

3 November 2020 | 11.00 AM - 12.10 PM (CET)

# Additive Manufacturing enabling a circular economy?

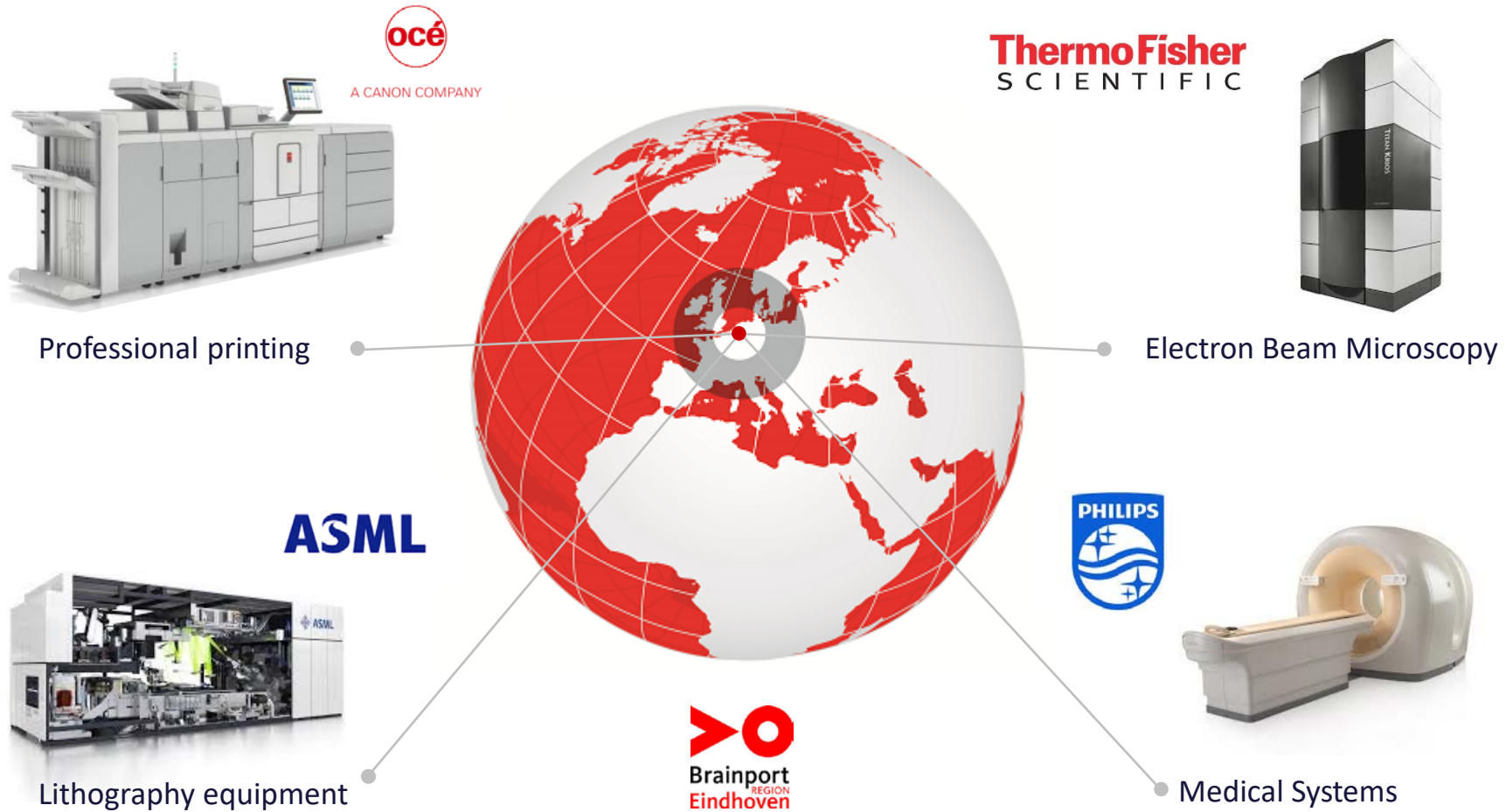
**Harry Kleijnen**

Senior Key Account Manager

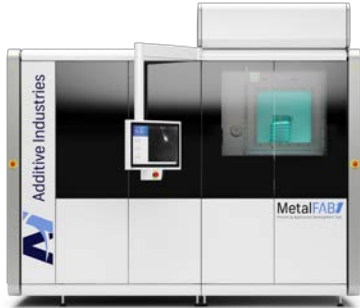
[h.kleijnen@additiveindustries.com](mailto:h.kleijnen@additiveindustries.com)

[www.additiveindustries.com](http://www.additiveindustries.com)

# Additive Industries is born in Brainport, a region in The Netherlands around Eindhoven, famous for its high tech systems & electronics



# Additive Industries drives industrial Additive Manufacturing by providing a modular, fully automated 3D metal printing platform, the MetalFAB1



- 420x420x400 mm platform
- Up to 4 500W full field lasers
- Automatic powder removal and powder reconditioning
- Multi material with multiple AMcores
- Automatic job change



# Additive Manufacturing technology driving product sustainability and enabling circular economy

## **Zero or reduced scrap material**

Depending on the AM technology only the 'functional' material is used, excess material is easily recycled

## **Product life time extension**

Adapt existing equipment to adapt to changing operational conditions

## **Integrating subtraction and additive technology**

Recycling of virgin, residual material from subtraction processes

# Sneak preview, product life time extension, substantially saving energy, reducing carbon emission and downtime

- In many industries operational conditions change over years...
- Equipment efficiency constraints may not apply with current conditions...
- Leading to performance break down, reduced efficiency high energy consumption..

Pump use case in Energy application,  
The pump capacity is not optimal  
anymore due to changed operational  
conditions



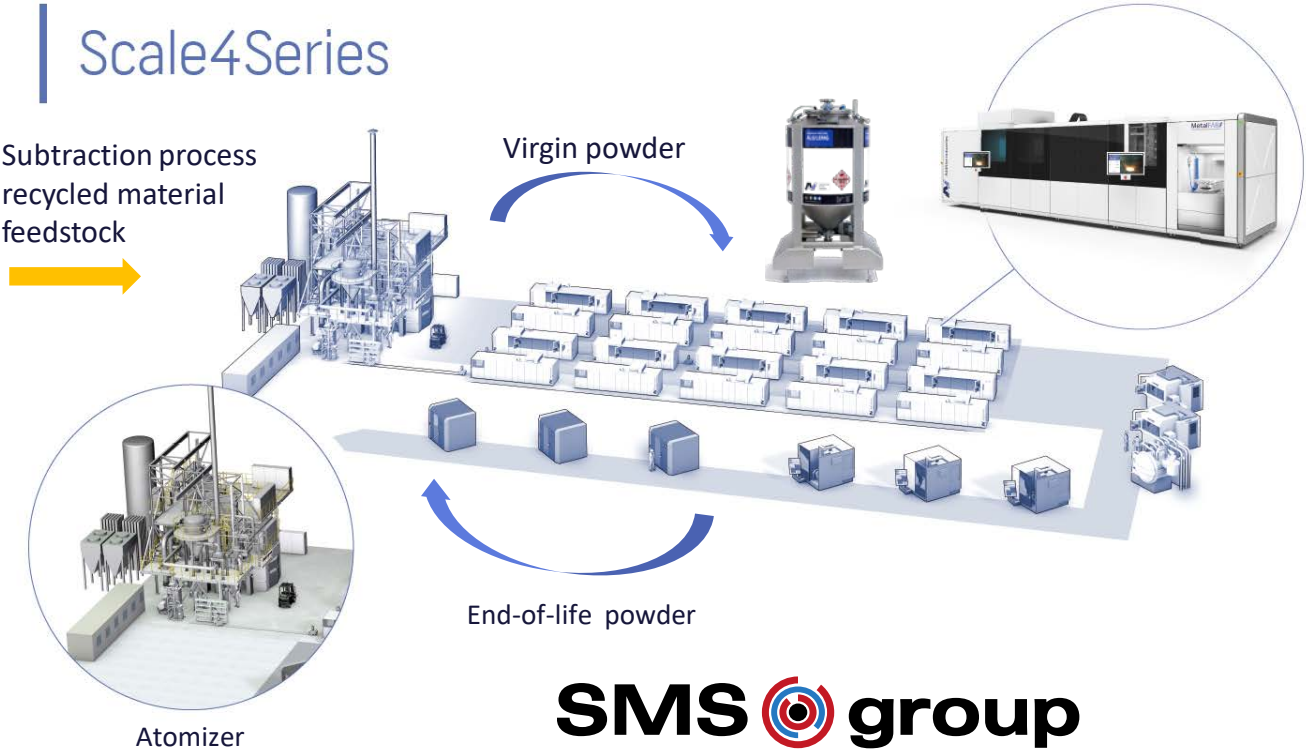
## Option 1 replace with smaller pump

- New design, housing, installation adaptation. expensive
- Long lead time
- Installation downtime
- Scrapping old pump

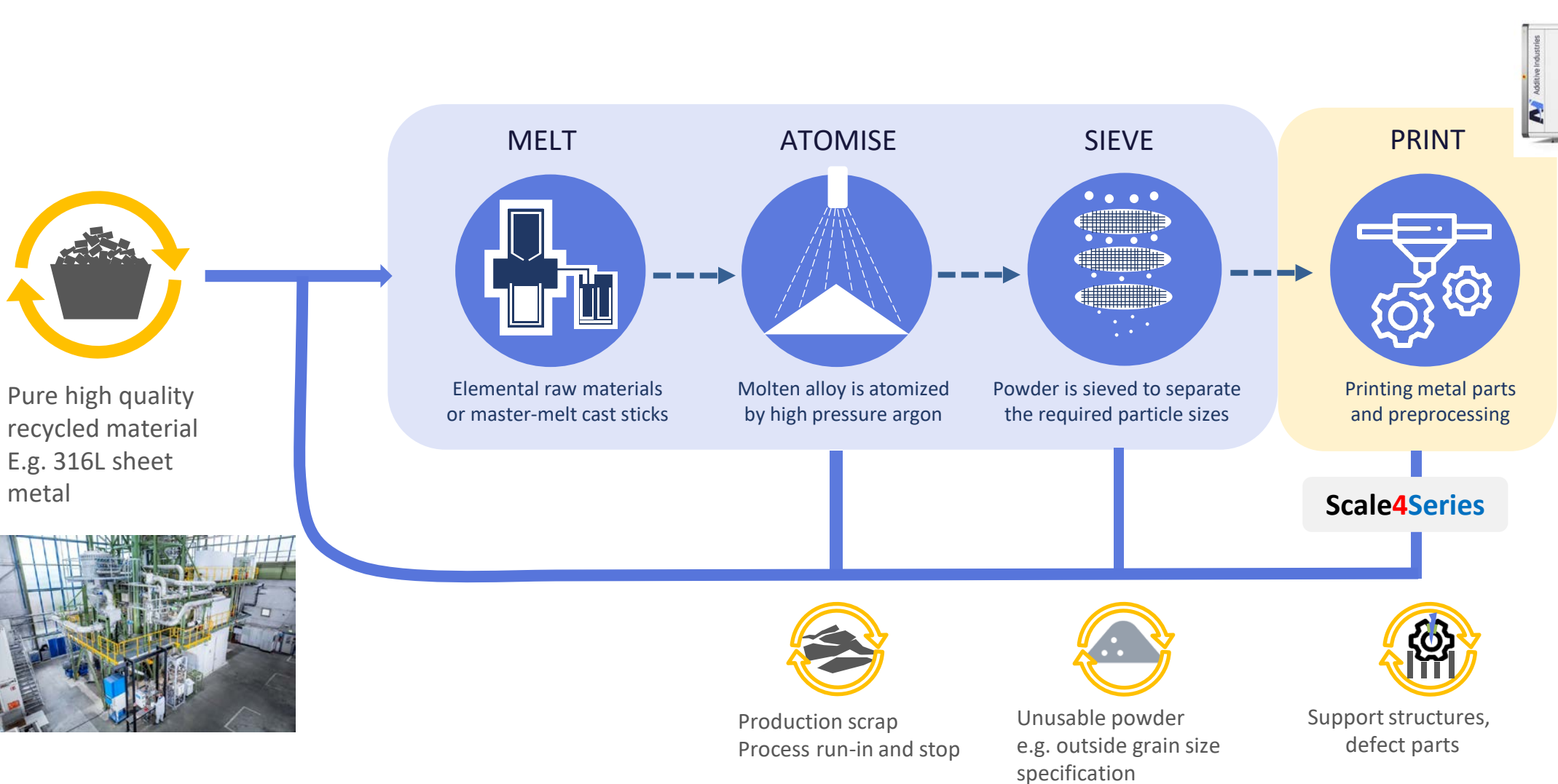
## Option 2 Modify impeller

- Use the freedom of shape of AM to create shapes not possible by traditional casting
- Plug and play replacement

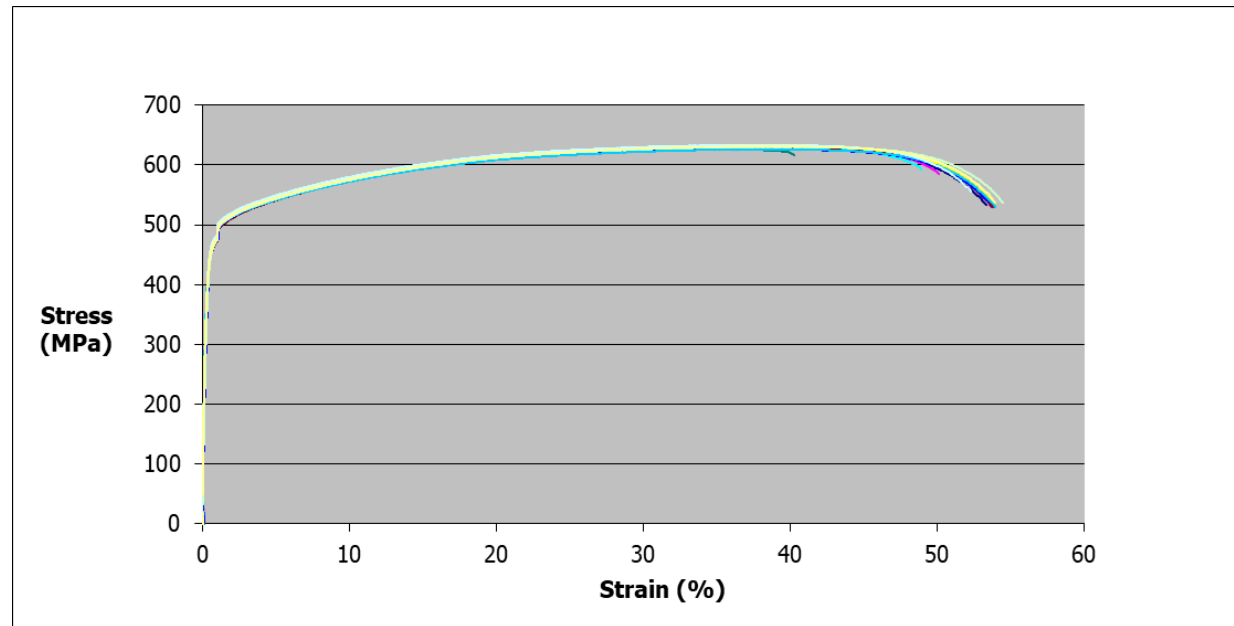
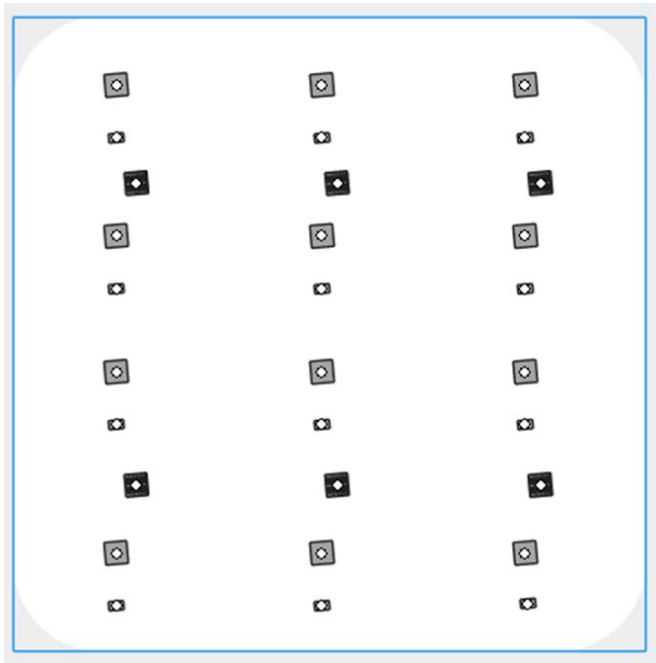
# With the SMS group we are exploring a closed materials processing chain supplied by recycled material



# A circular AM chain recycles all processed material

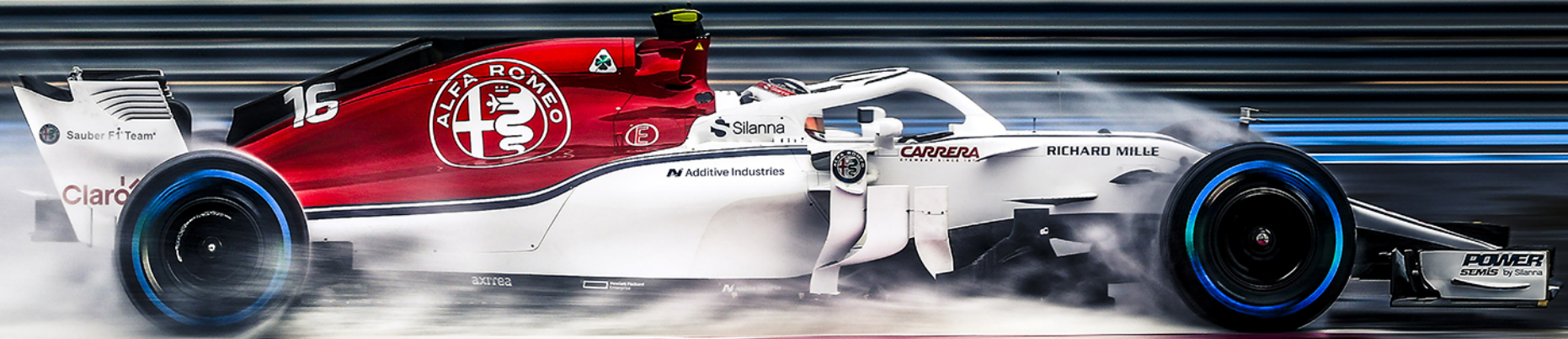


# Recycled material (316L) properties and part quality fulfil all requirements and is equal or better than virgin material





# Additive Industries



Strictly Confidential, Wipro, January 17th, 2020