

Big thinking more than top technology

3D-tulostus yrityksen näkökulmasta

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Wärtsilä Corporation



THIS IS WÄRTSILÄ

Our business areas

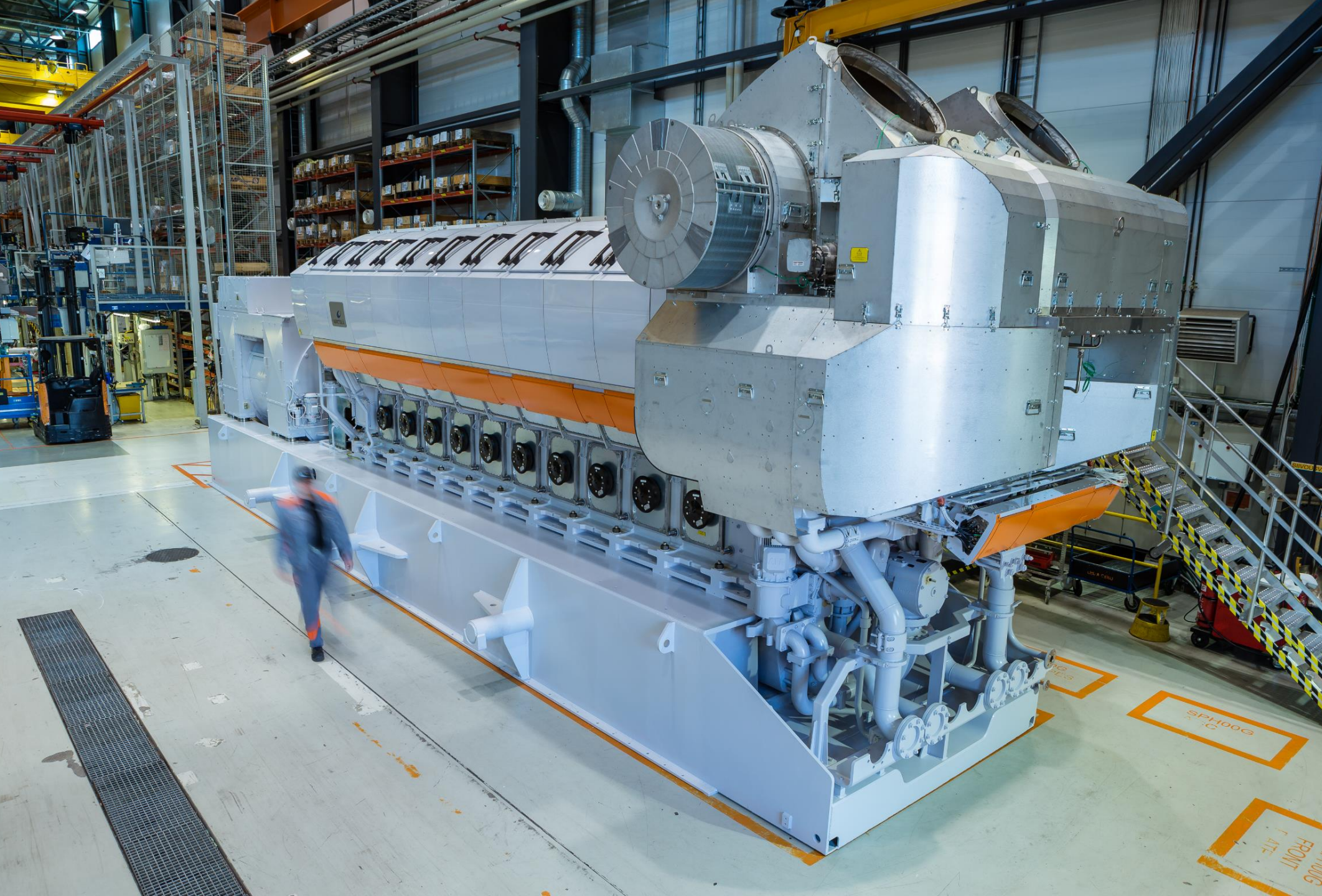
Net sales	4,900 M€
Employees	>19,000



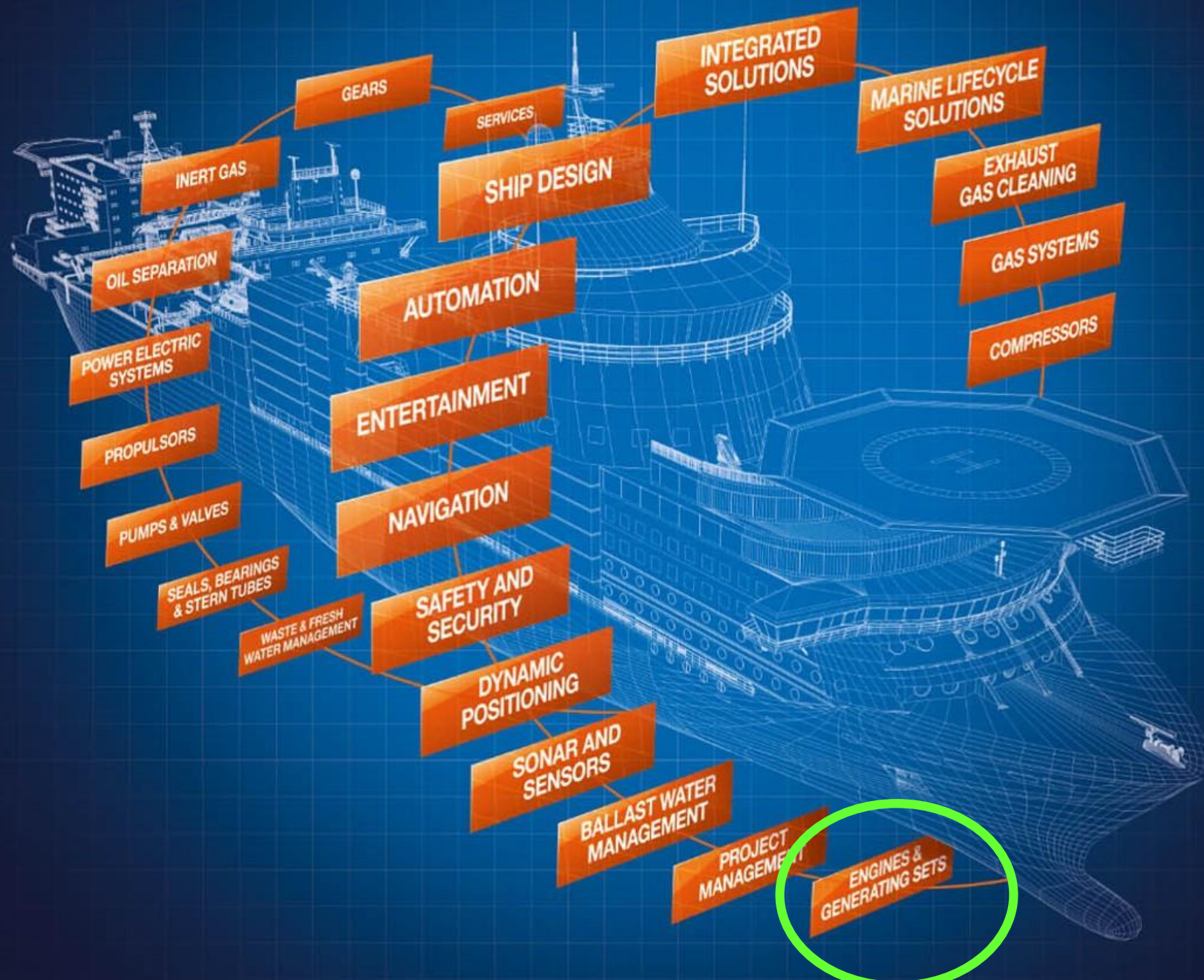
Marine solutions

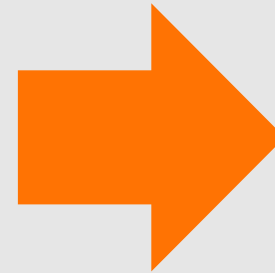


Energy solutions



THE MOST COMPLETE MARINE OFFERING ON EARTH





Yhteistyö

Freedom



Purpose.

”Any ape can reach for a banana, but only human can reach for the stars”





**Generative Design &
Additive Manufacturing**



8 components into 1 part
40% lighter
20% stronger





Benefits of Additive Manufacturing

Component integration

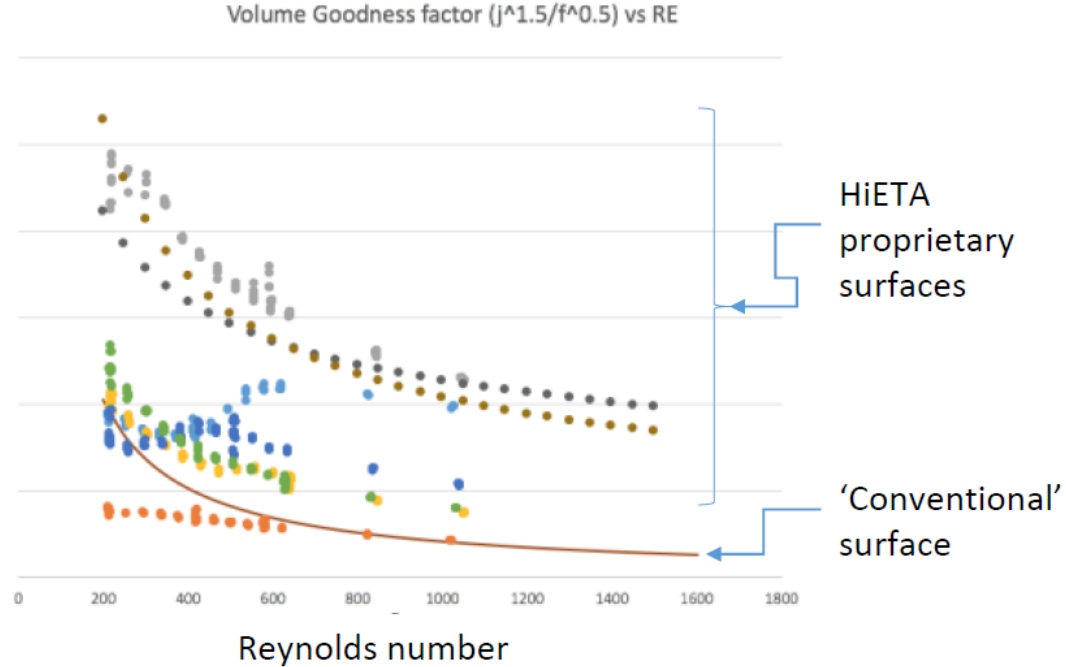
Increased performance

Reduced lead-time

Improved packaging

Reduced weight

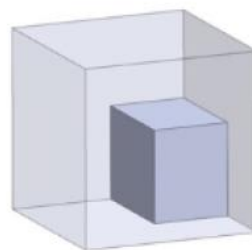
Volume Goodness factor



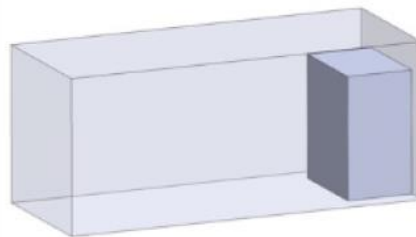
Heat transfer surfaces



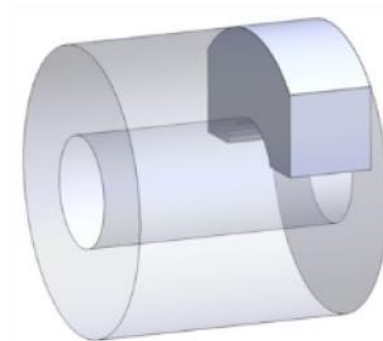
Customer Case Studies



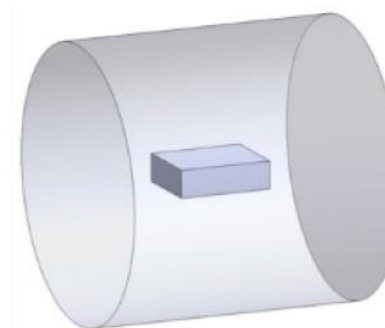
4 l vs 15 l



8 l vs 54 l



4 l vs 51 l



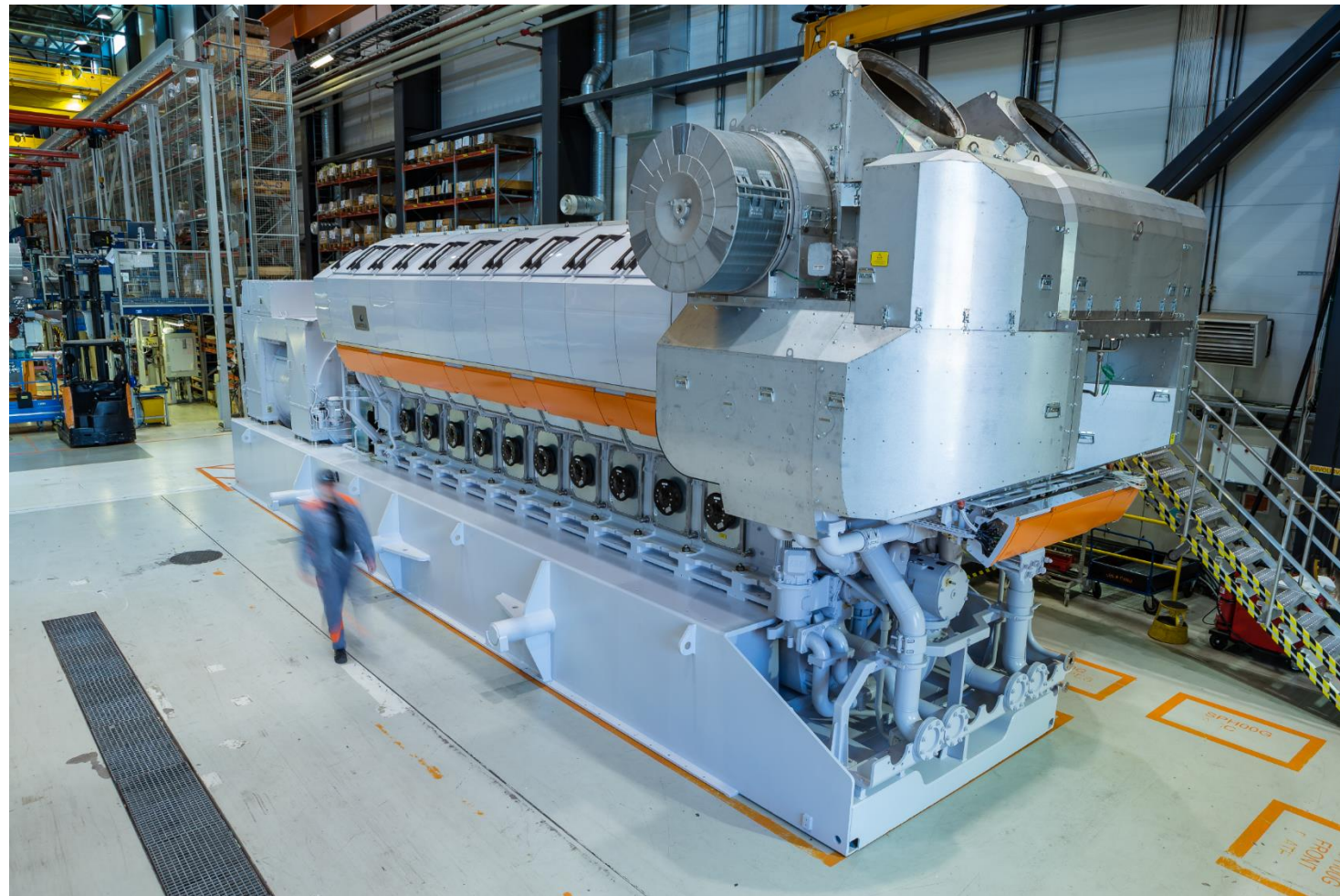
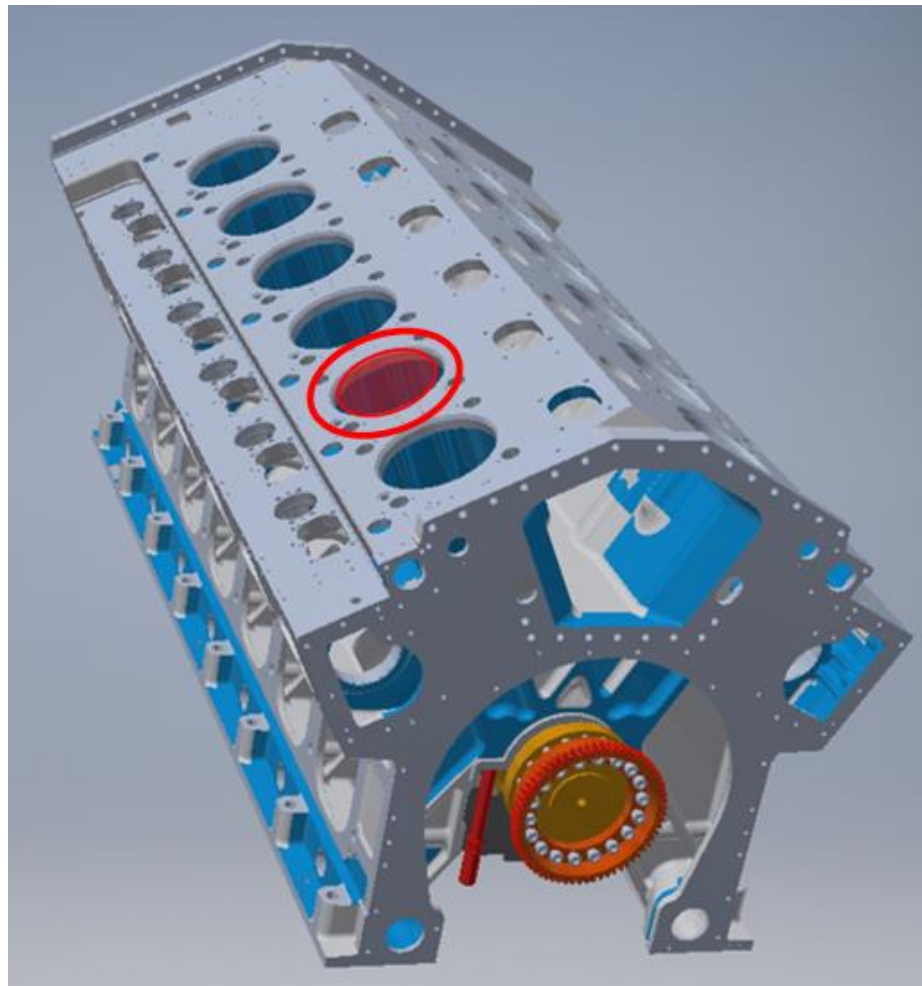
70 kg vs 1.5 t

Our proprietary AM heat transfer surfaces show volume goodness factors >5x conventional surfaces, meaning units can be >5x smaller

Roof is not the limit -
sky is



Case measuring tool





Measuring tool

Function: *Measuring perpendicularity between two round surfaces in engine block with dial gauge*

Weight

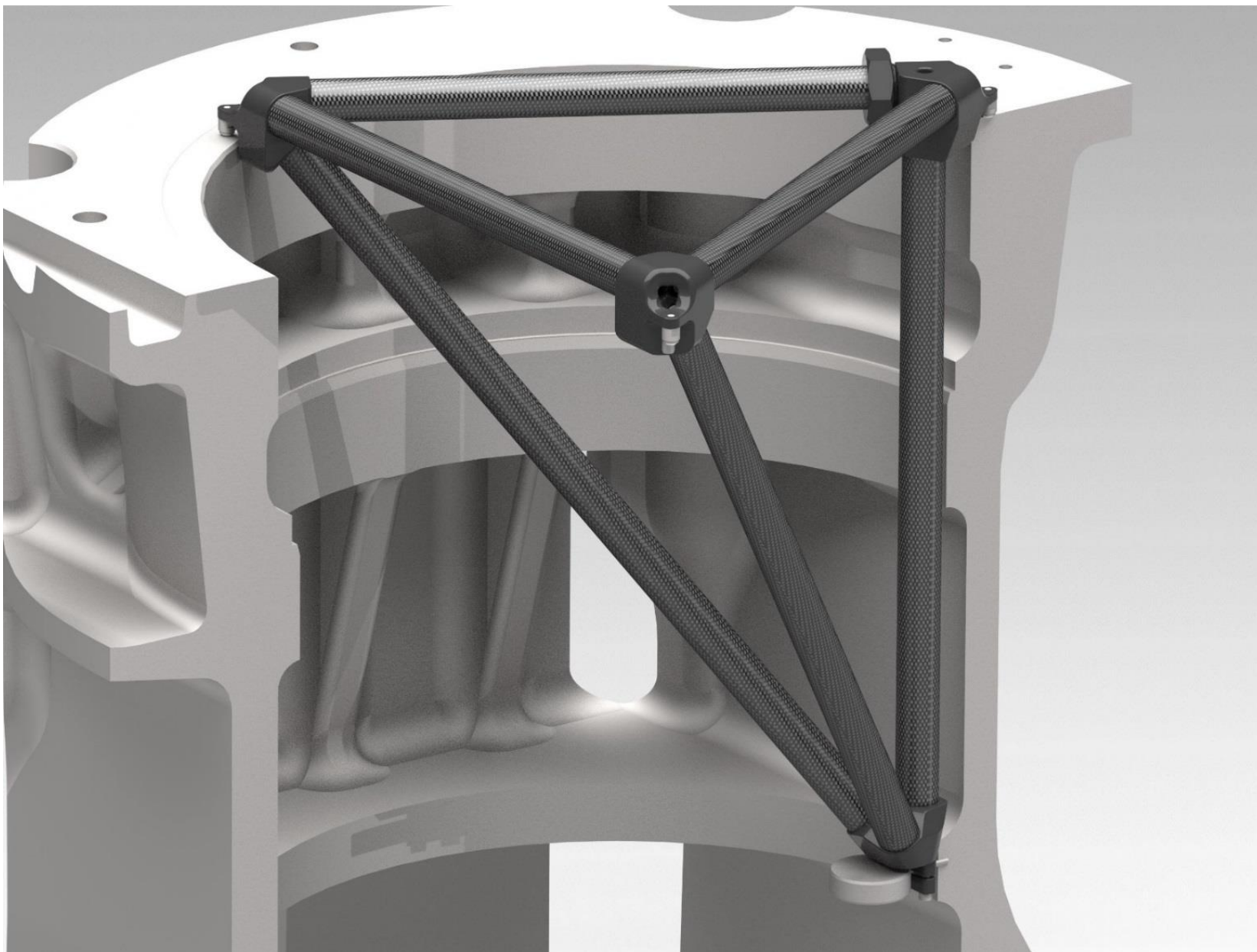
23 kg

Lead time

1-2 months

Cost

10 000 €



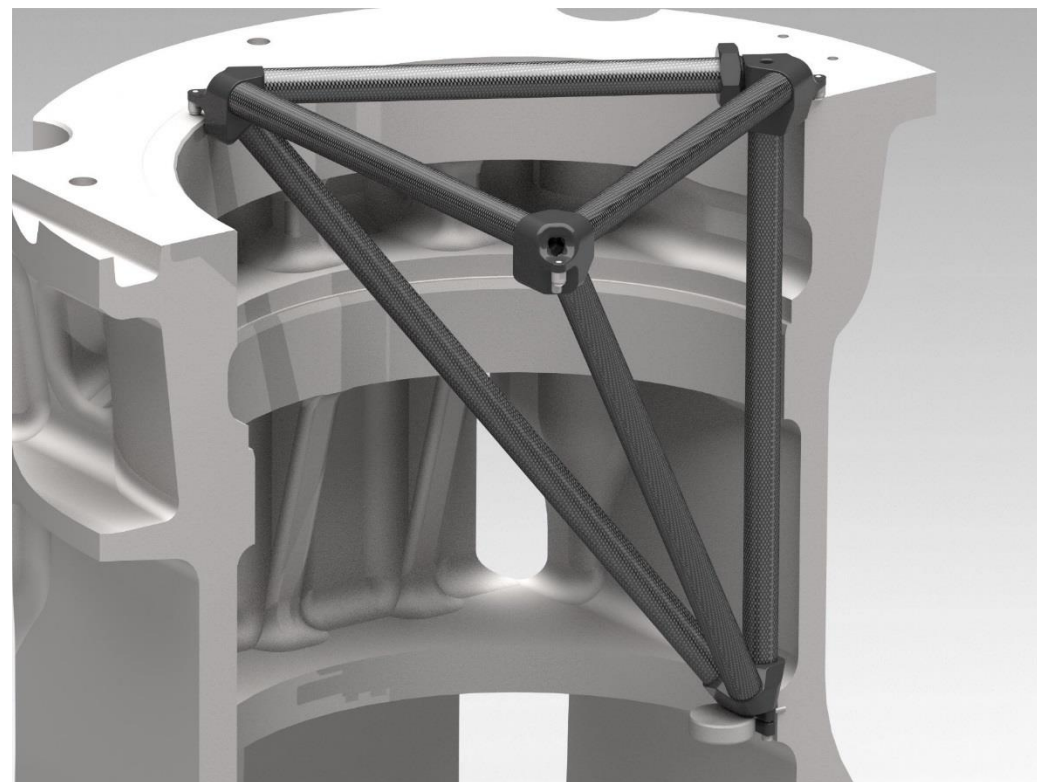
Re-designed measuring tool

Weight	3 kg
Lead time	2-5 days
Cost	1000 €



Old vs new

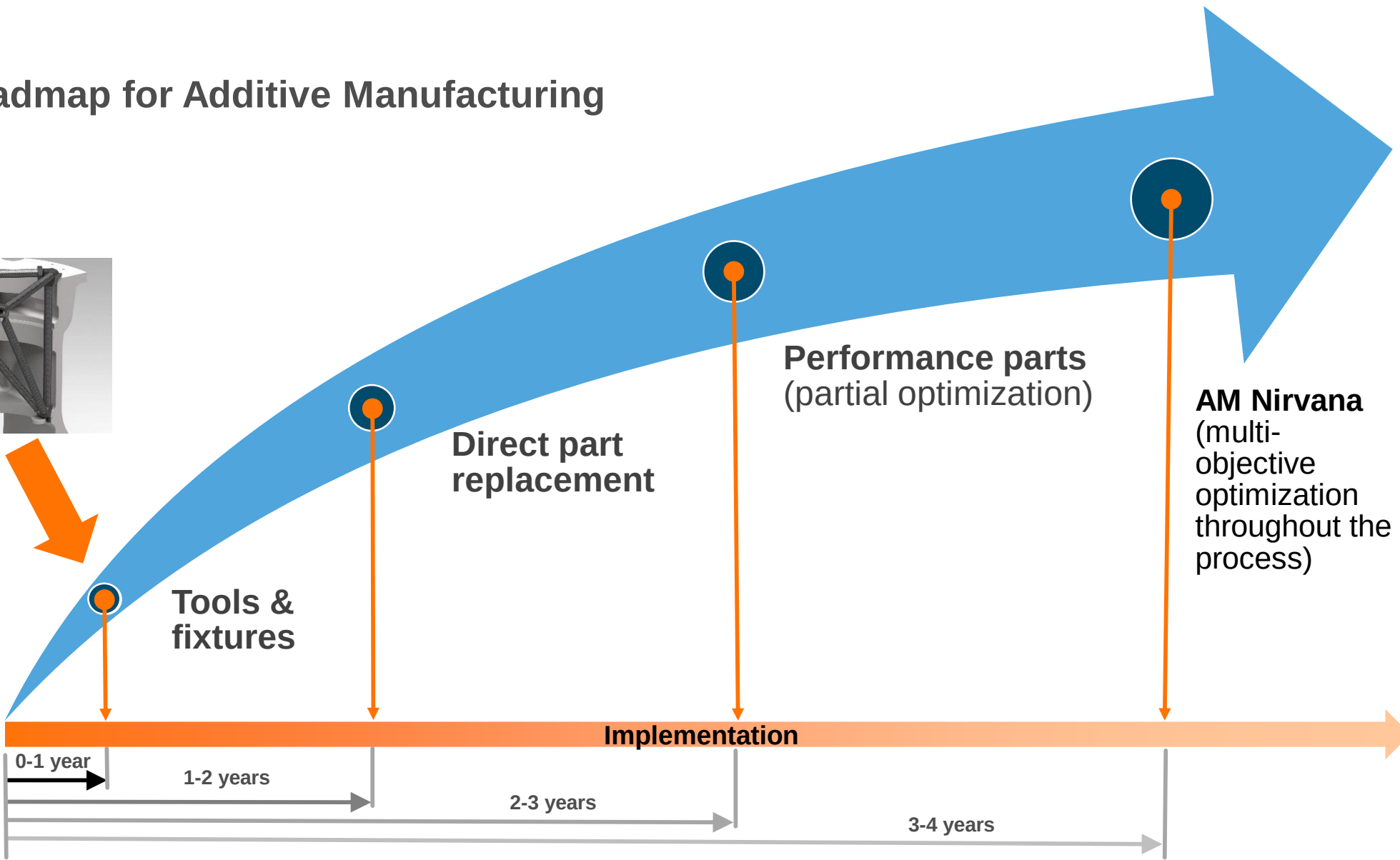
Costs	-90 %
Weight	- 85 %
Lead time	- 90 %



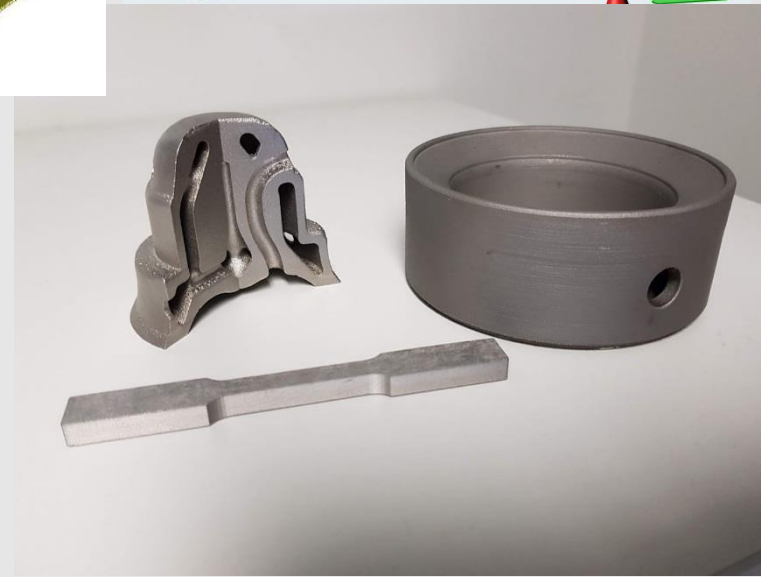
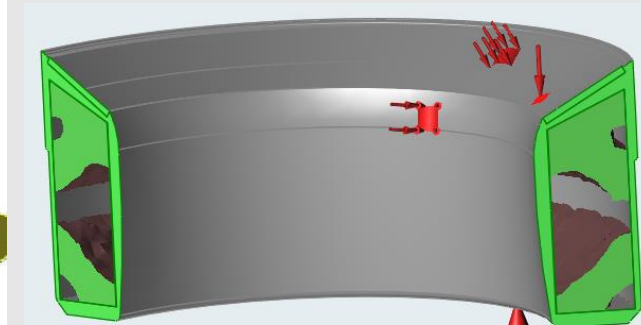
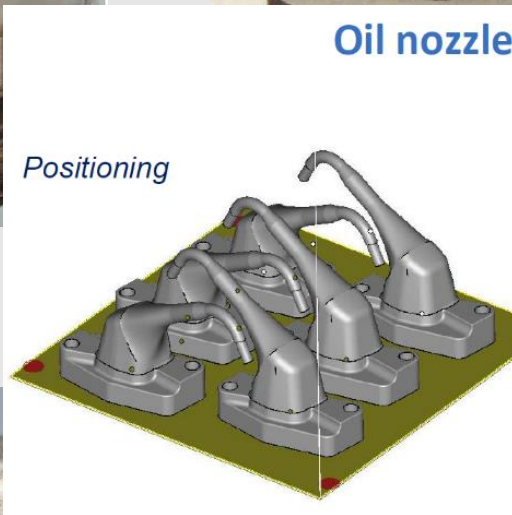
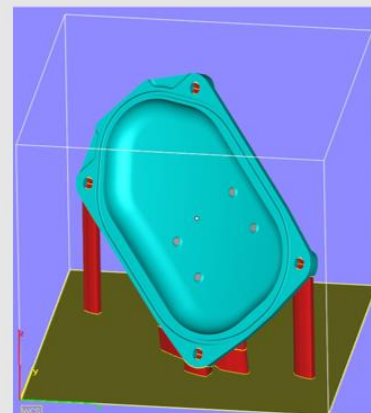


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Roadmap for Additive Manufacturing



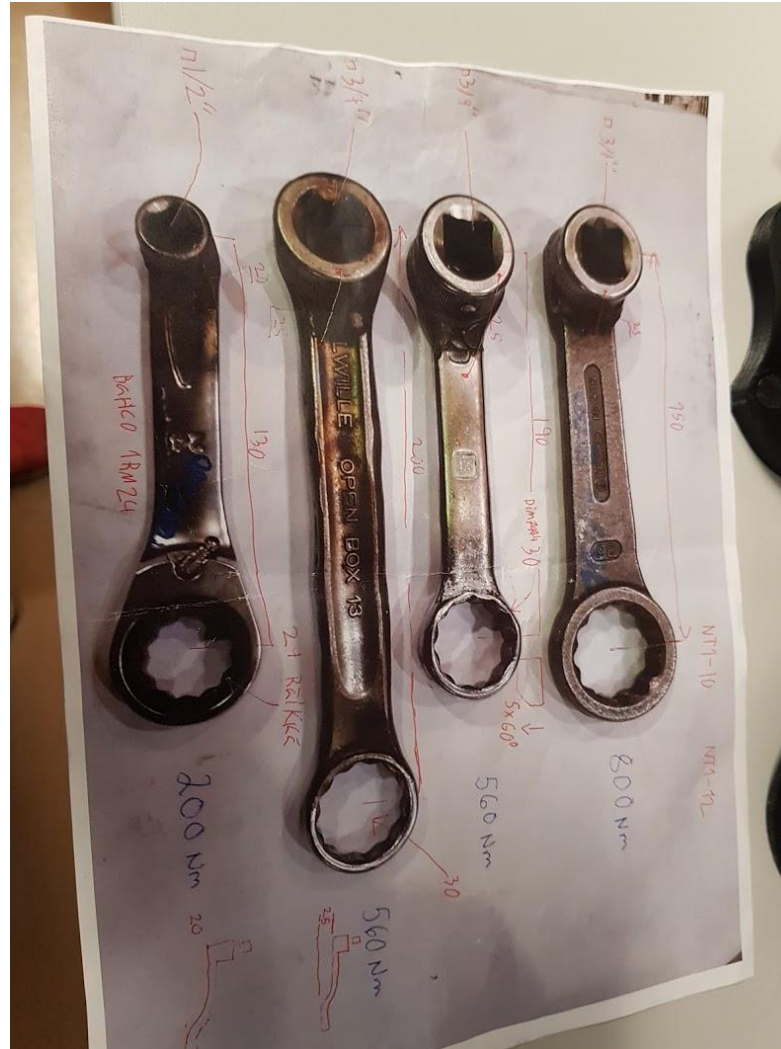
2021-2023



Smart Technology Hub



Markforged Metal X





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