

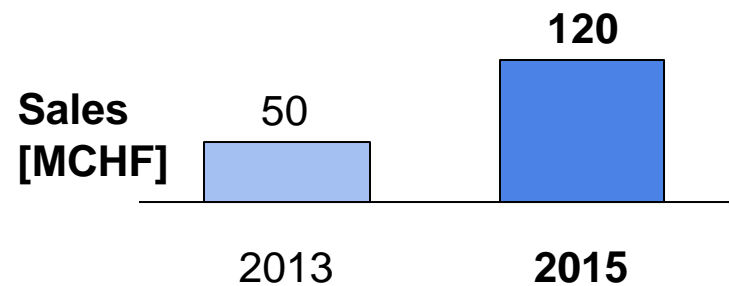


GF Machining Solutions – Expand into higher margin businesses

Advanced Laser Technologies

Pascal Boillat, Head of GF Machining Solutions
Technology Day 2016

Tech Day 2013: Clear success in aerospace

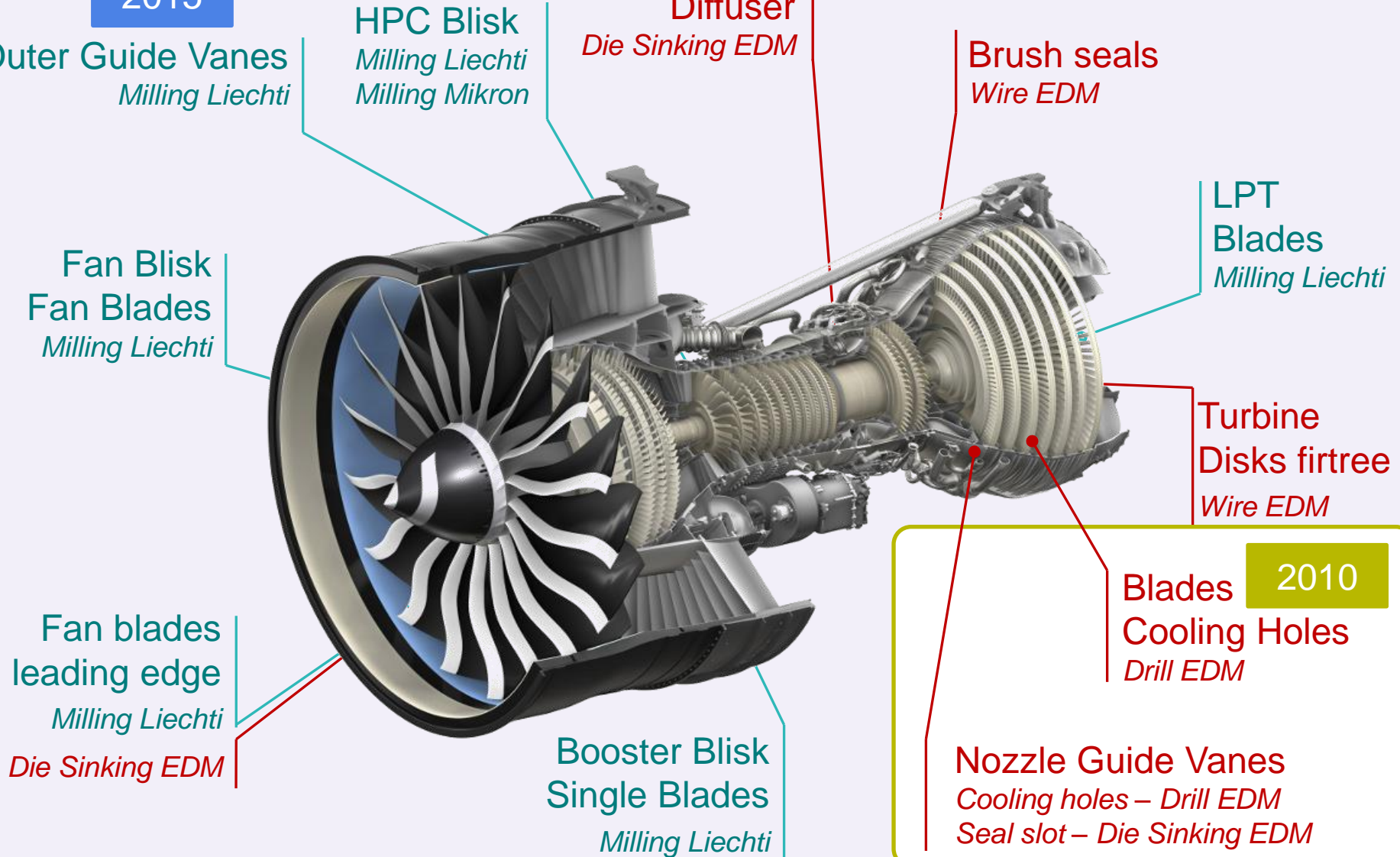


Strengthened partnerships ...



... and range of applications

2015



Strategy 2020 – key elements ...



GF Strategy +
20 + + +
20 + + +

Expand into higher margin businesses ...

... with a comprehensive technology portfolio



Automotive



ICT / Elect.



Medical / Dental



Aerospace



Energy



EDM




Milling



Laser



 Projects in development

Advanced Laser Technologies – poised for profitable growth

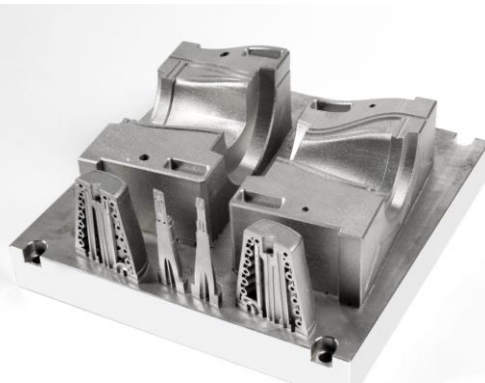
2009

3D Laser Texturing



2015

3D Laser Additive
Manufacturing

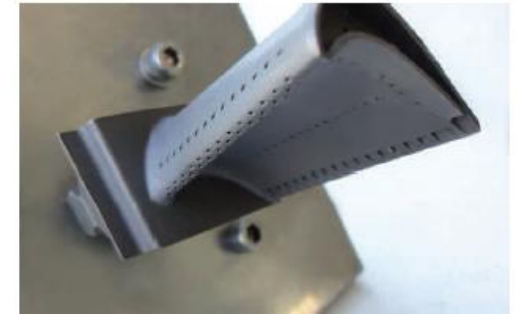


2016

Functional surfaces



Micro Laser Cutting and
Drilling



Ultra hydrophobic surfaces will soon revolutionize present applications

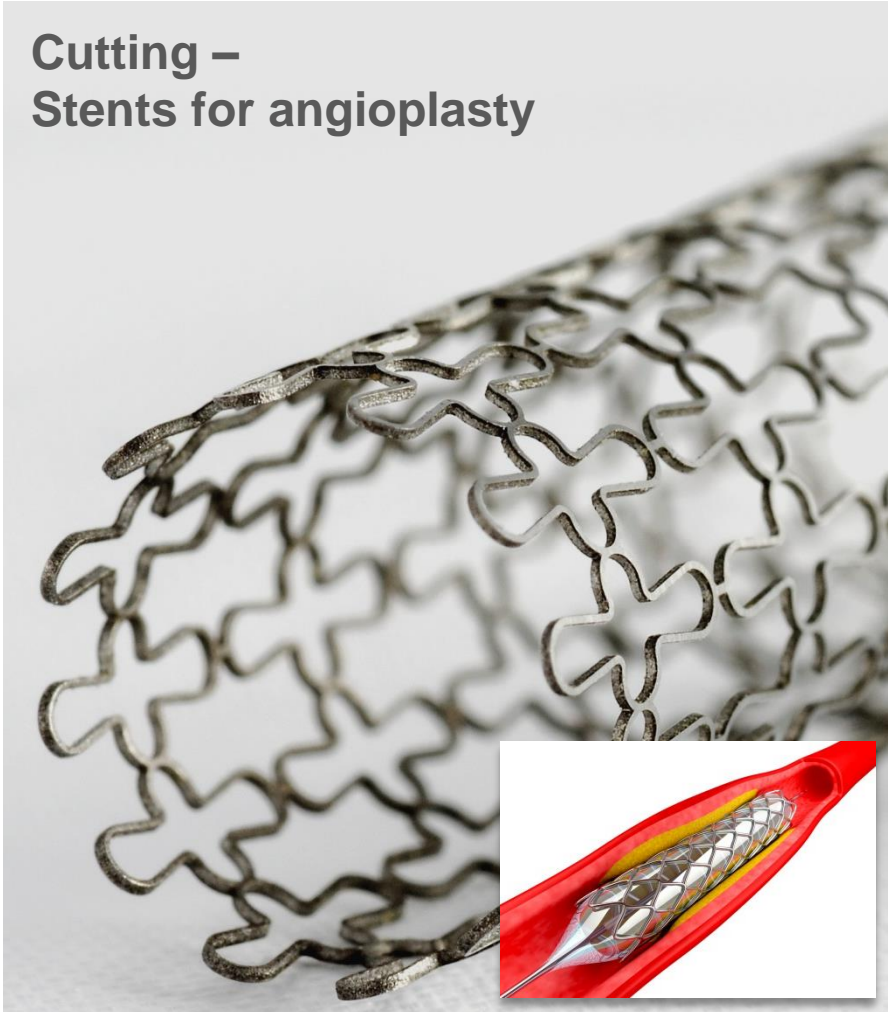


F/O



Micro laser cutting & drilling will simplify manufacturing processes

Cutting –
Stents for angioplasty



Drilling –
Fuel direct injection



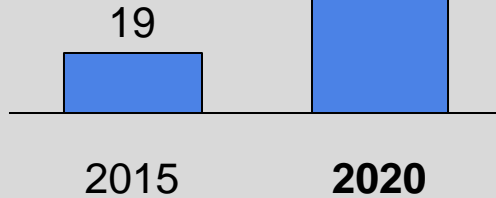
Great potential ahead

- ✓ Large potential market
- ✓ High value business

Expected Sales by 2020
[MCHF]

100-150

* Laser Functional Surfaces
Laser Additive Manufacturing
Laser Cutting & Drilling



■ New Laser Technologies*
■ Laser Texturing (aesthetical)

**Pitot Tube -
Aerospace**



**Dental Implant -
Medical**



**Headlight -
Automotive**



**Smartphone
Lens - ICT**





Advanced Laser Technologies for Innovative Solutions:

*The growing innovative role of
aesthetical and functional surfaces in
GF Machining Solutions main segments*

Armando Pereira

Head of Marketing,
Business Development & Segmentation

**Thank you for
your attention**

+GF+



GF Machining Solutions

**Passion for
Precision**