FLAMEED

SIM
innovating together

Why are we still talking about AM?

Who's in the room?

FLAM3ED

- Independent, non-profit, network
- Unite, represent, support
- Companies, Research, Education, Govt...
- Over 90 members, NL + BE
- Entire ecosystem

Why are we still talking about AM?

Because it's my job to do so

Content

- Introduction
- **Why are we still talking about 3D-printing?**

Description

R. BAKER METHOD OF MAKING DECORATIVE ARTICLES Filed Nov. 12, 1920 April 14, 192s. 1,533,300

l WITNESSES: INVENTOR 1/7

ATTORNEY Patented Apr. 14, 1925 UNITED y 1,53 ATENT ELECTRIC MANUFACTURING COMPANY,

A CORPORATION OF PENNSYLVANIA.

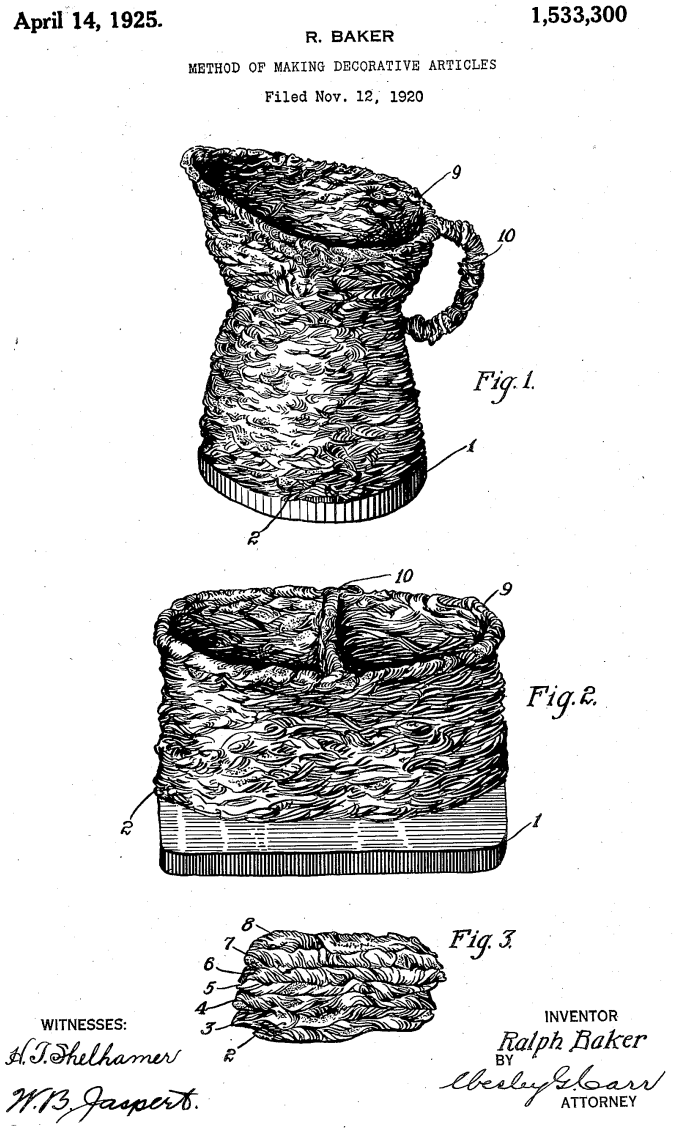
\ METHOD OF MAKING DECORATIVE ARTICLES.

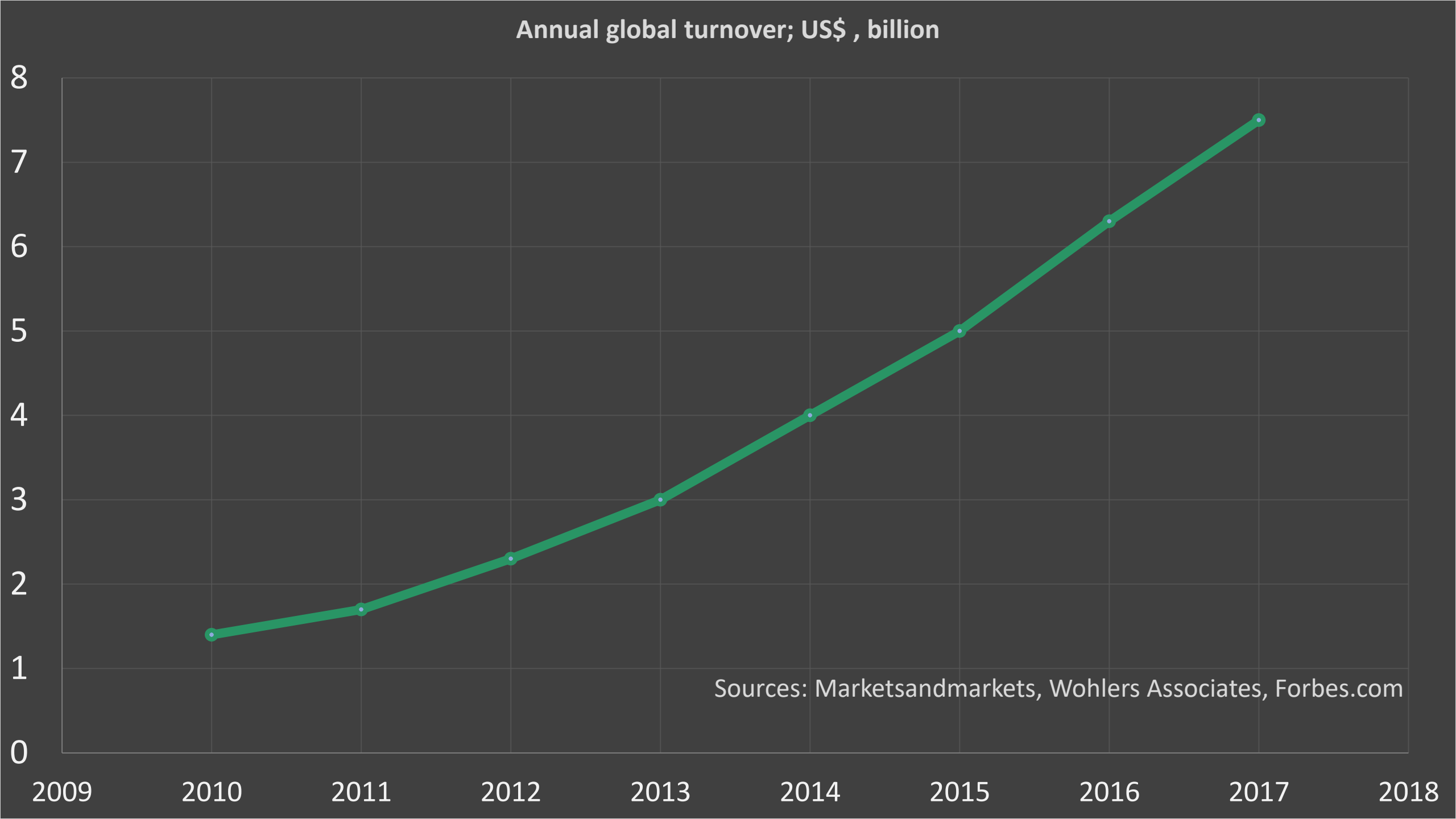
Application filed November 12, 1920. Serial No. 423,647..

To all whom it may concern: Be it known that I, RALPH BAKER, a citizen of the United States, and a resident of 'Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Methods of Making Decorative Articles, of which the following is a specification.

This invention relates to ornamental arc welding, more especially to utilizing an electric arc, such as is ordinarily employed for electric welding, for the formation of deposits to produce receptacles or containers of ornamental and useful shapes.

I have found that metal derived from a fusible metal electrode by the passage of a current therethrough may be so **deposited in superposed layers as to form various articles of an ornamental and useful nature**, it being among the objects of my invention to produce such objects of various designs.

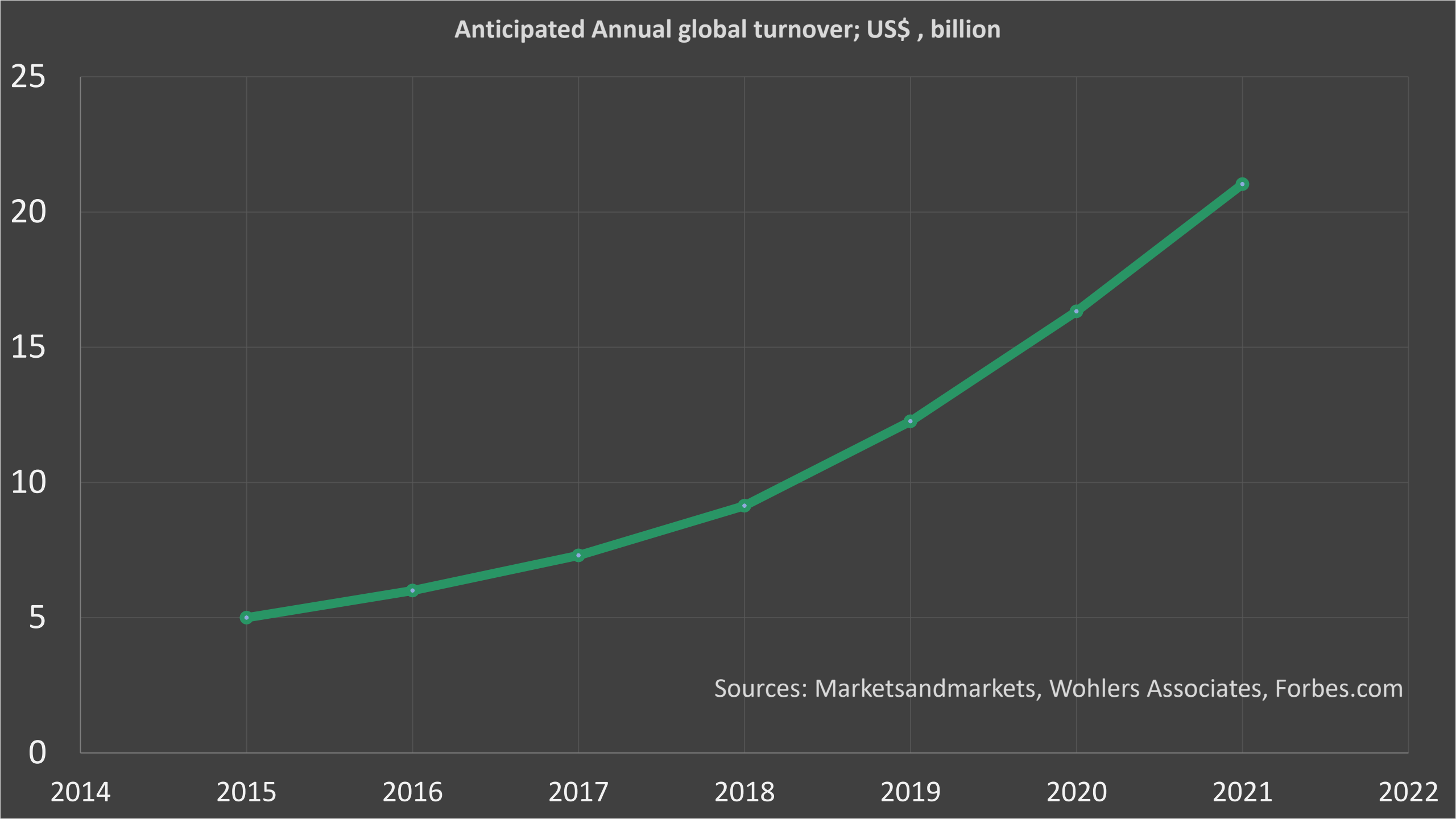



Annual global turnover; US$, billion
8
7
6
5
4
3
2
1
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Sources: Marketsandmarkets, Wohlers Associates, Forbes.com

5087

D23
1,5
© PA

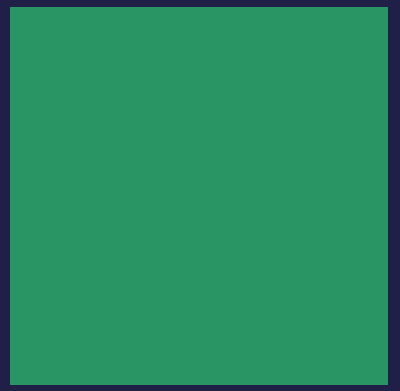
2017


Anticipated Annual global turnover; US$, billion
25
20
15
10
5
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Sources: Marketsandmarkets, Wohlers Associates, Forbes.com

2017

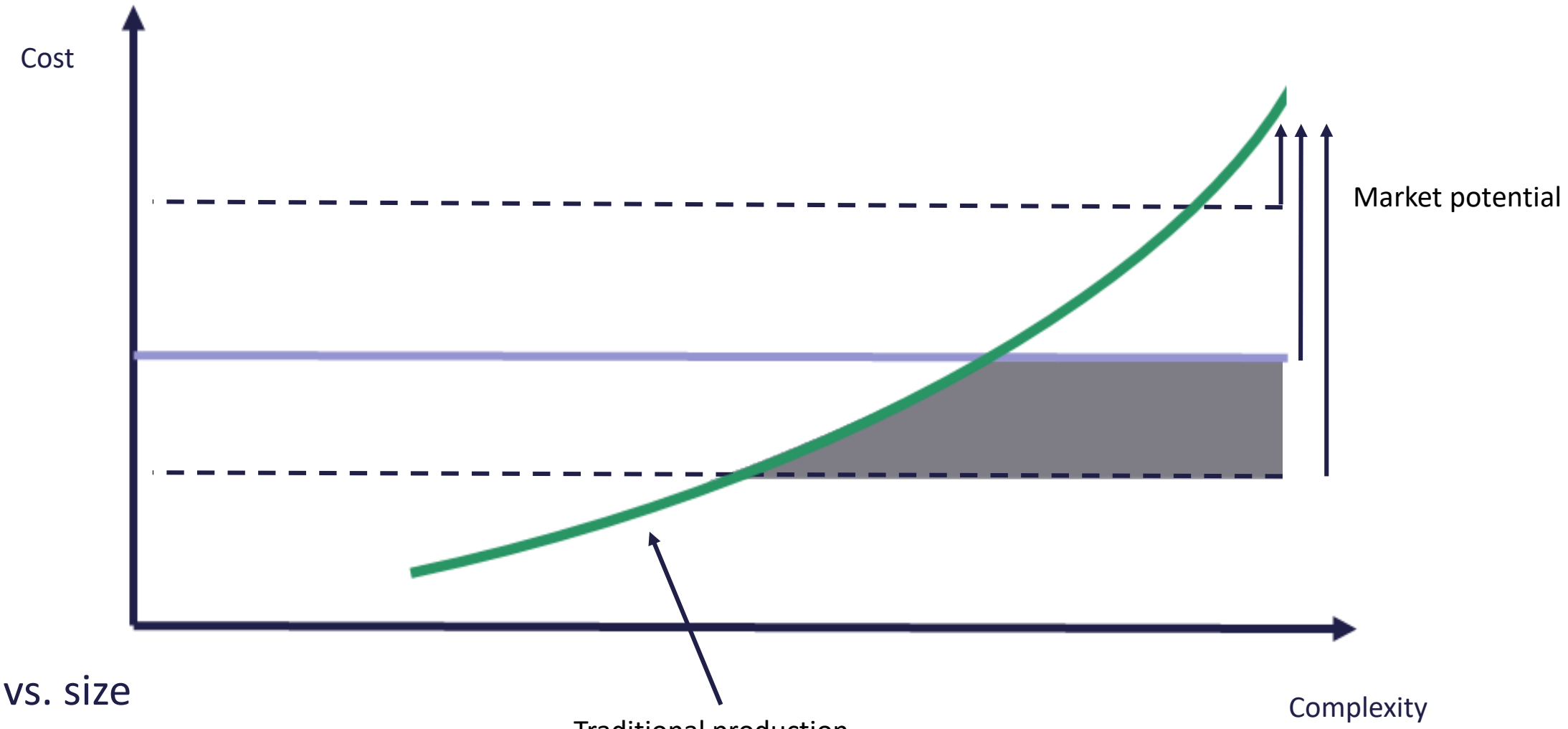
2020

2030



2040 - 2060

Market AM

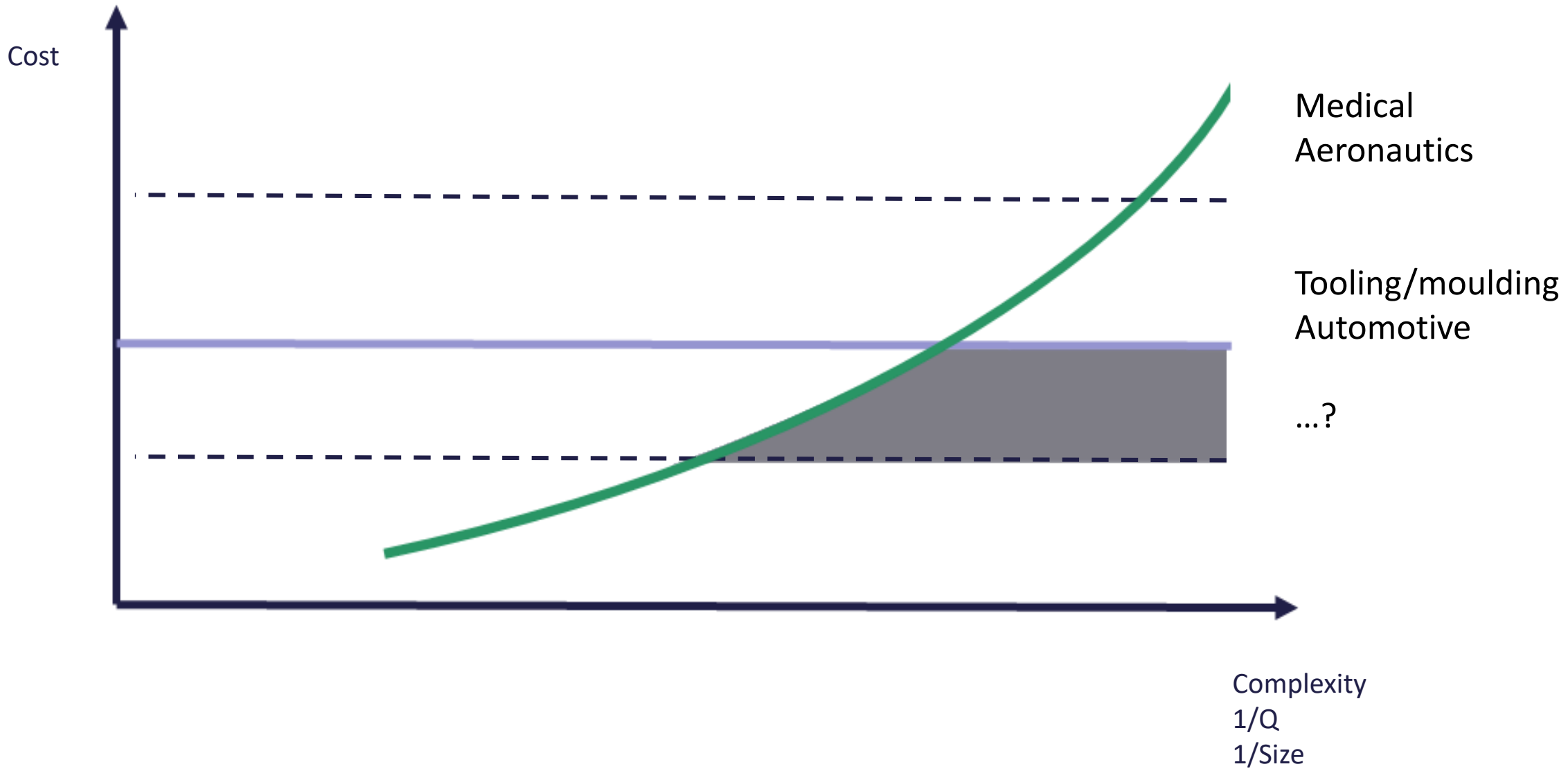


Cost vs. size

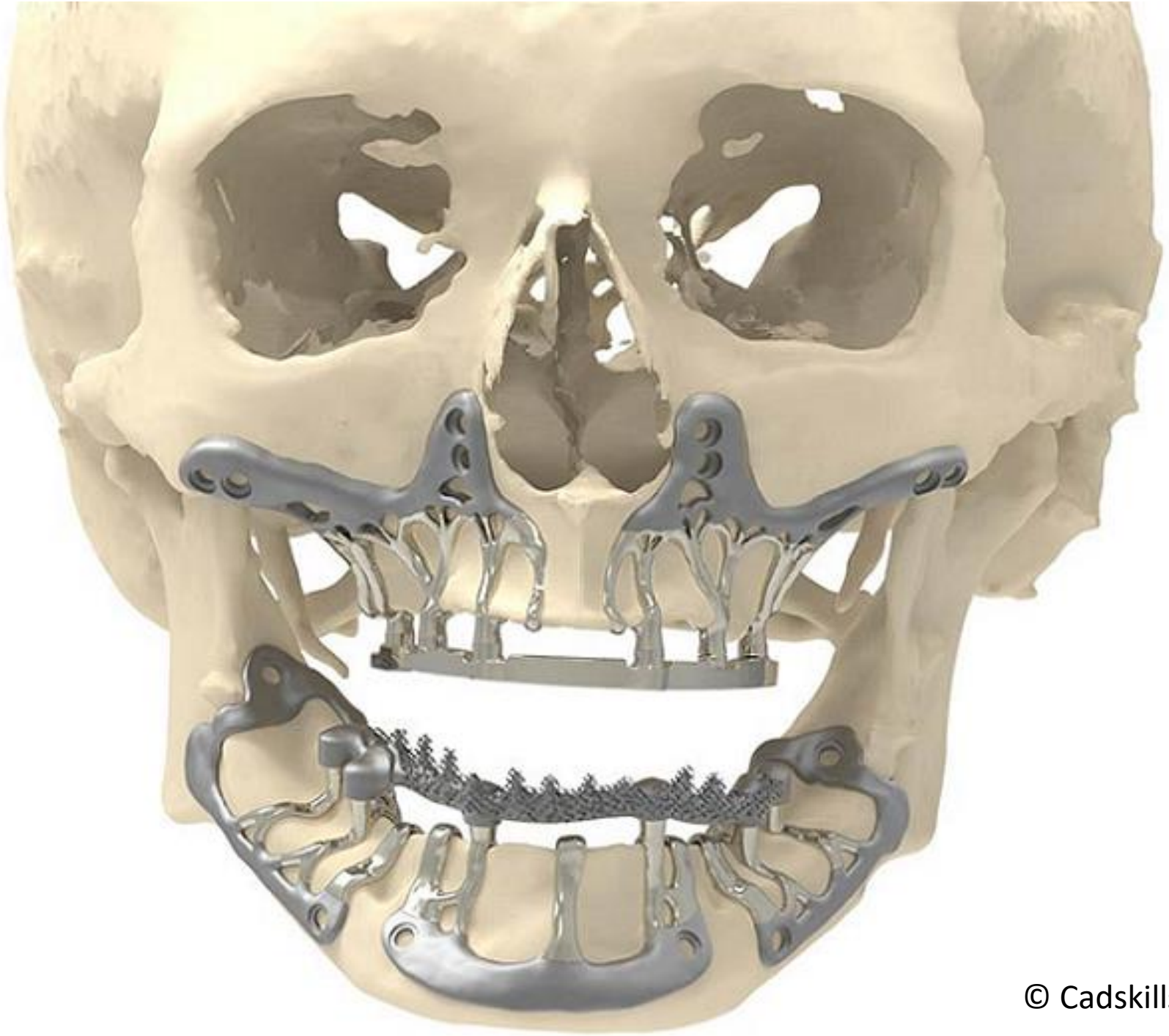
Cost vs. quantity

Credit: Renishaw

Market AM

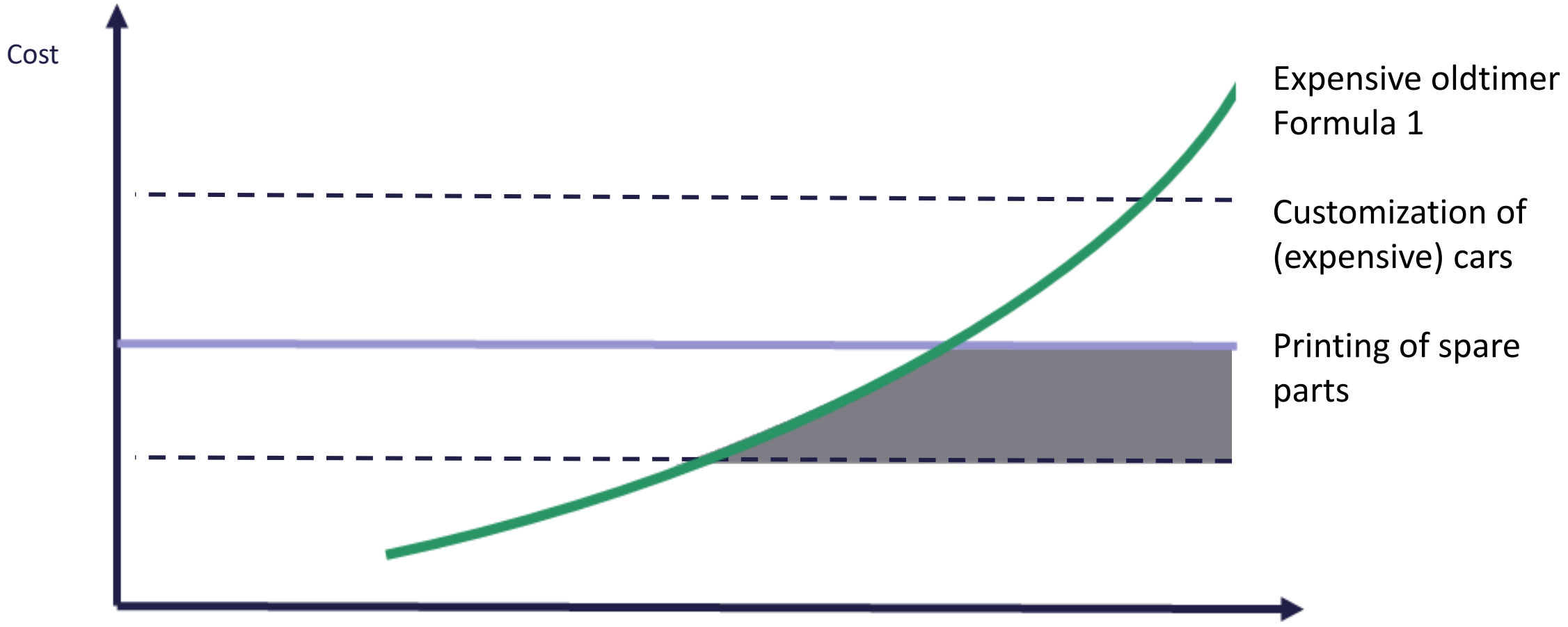

Cost
Medical
Aeronautics
Tooling/moulding
Automotive
…?
Complexity
1/Q
1/Size

© GE



© Cadskills

Market AM


Cost
Expensive oldtimer Formula 1
Customization of (expensive) cars
Printing of spare parts

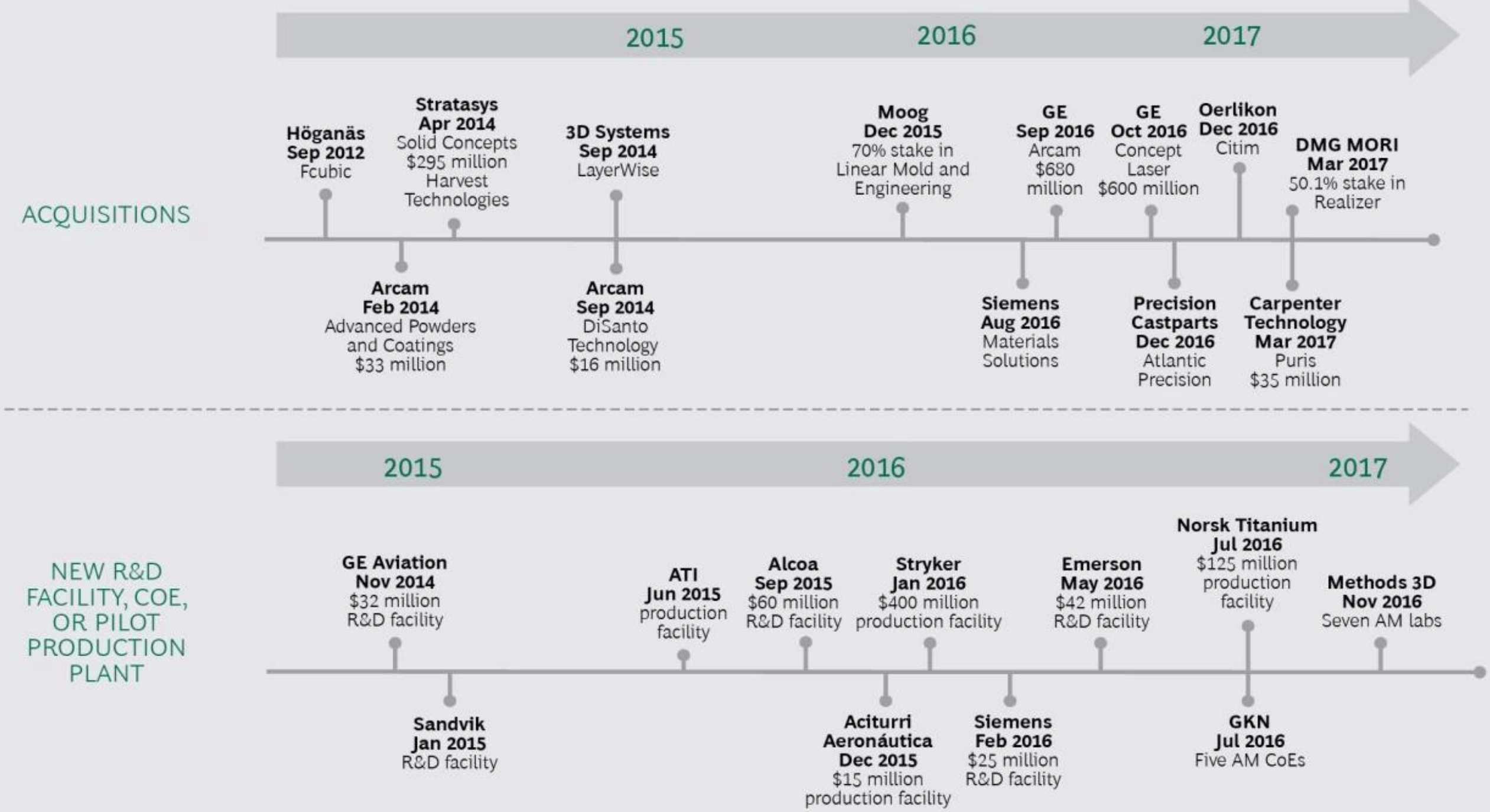
© BMW / TWIKIT

Why are we still talking about AM?

Because it's growing, coming, … or already there

Really?

→ Market



Sources: *Metal AM* magazine; Wohlers Associates; BCG research.

BASF
We create chemistry

BASF Germany Compa

BASF New Bus

About us Scouting

Home > Company / BASF N

BUSINESS & FINANCIAL NEWS

Joint Press Releas

Optimizin
for 3D pr

- BASF and Belgian comp
- Chemical company inve

print magazine
Informerend en inspirerend over 3D in de industrie

HOME TECHNOLOGY MATERIALS APPLICATIONS MANU

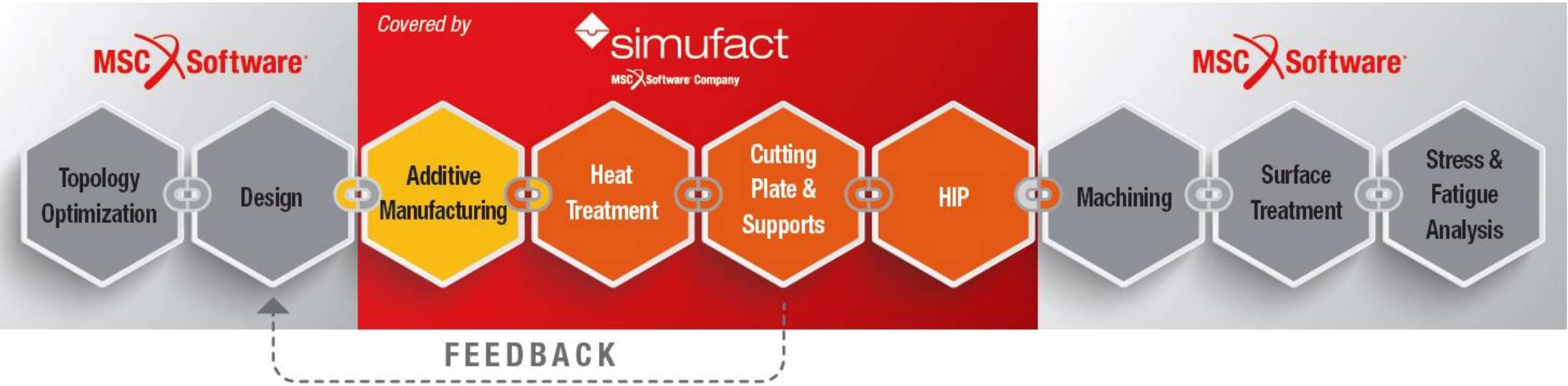
ADDITIVE INDUSTRIES SLUIT CONTRACTEN MET SAUBER EN 3RD DIMENSION

22 okt 2018 | Manufacturers

tnership

achieve serial
e.

Ludwigshafen/Germany, Leuven/Belgium – July 19, 2018 – BASF is expanding its coopera... payload fairing. A new optimized design made
leading supplier of 3D printing technologies. At the same time, BASF has agreed to invest US$25 millio... gether on the qualification of a
company, which is headquartered in Leuven. The two partners are working together within the framework of an ope...
materials and software for various 3D printing technologies and bring them


MSC Software
Covered by
simufact
MSC Software Company
MSC Software
Topology Optimization
Design
Additive Manufacturing
Heat Treatment
Cutting Plate & Supports
HIP
Machining
Surface Treatment
Stress & Fatigue Analysis
FEEDBACK

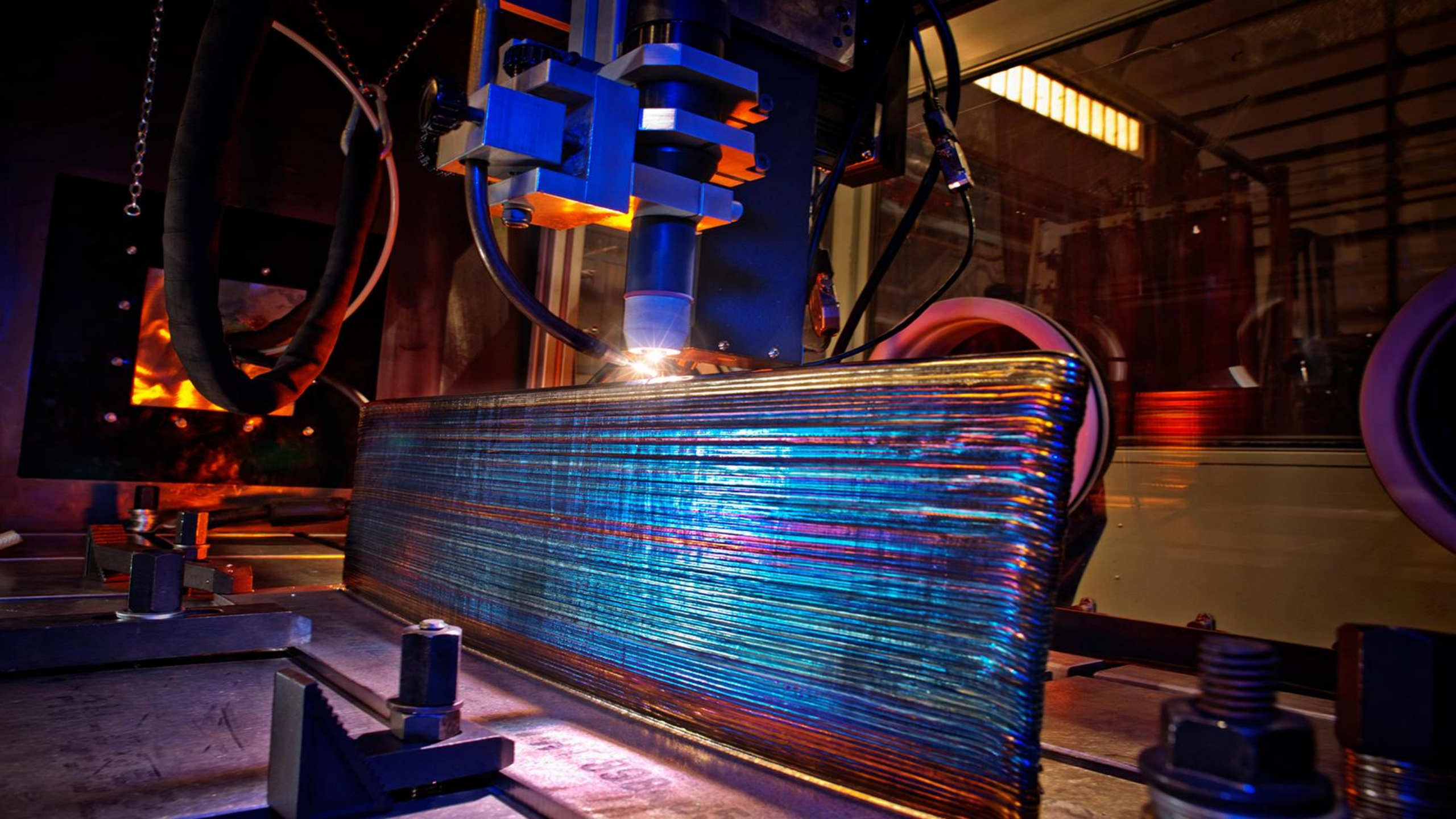
Why are we still talking about AM?

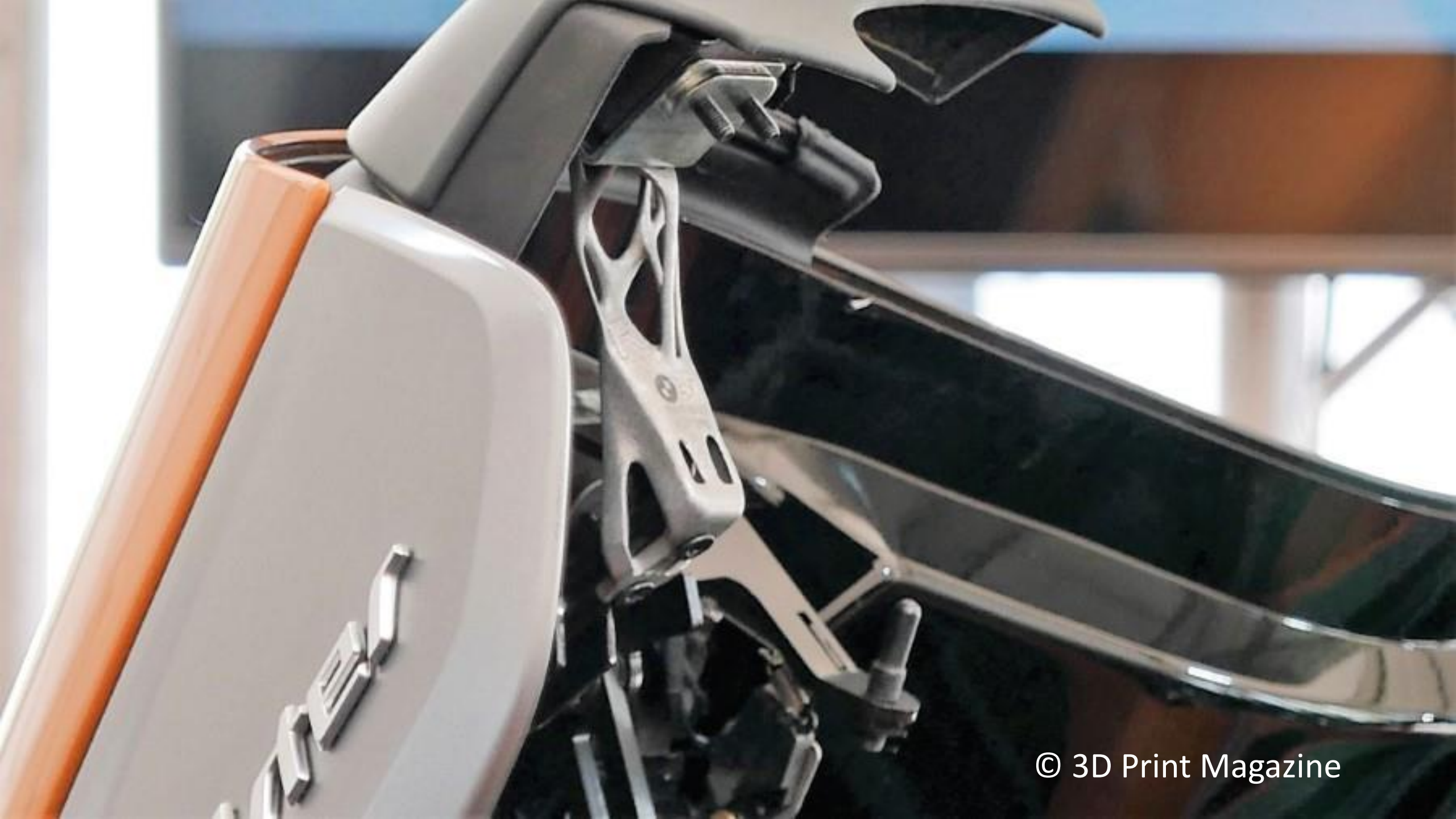
Because it's growing, coming, … or already there

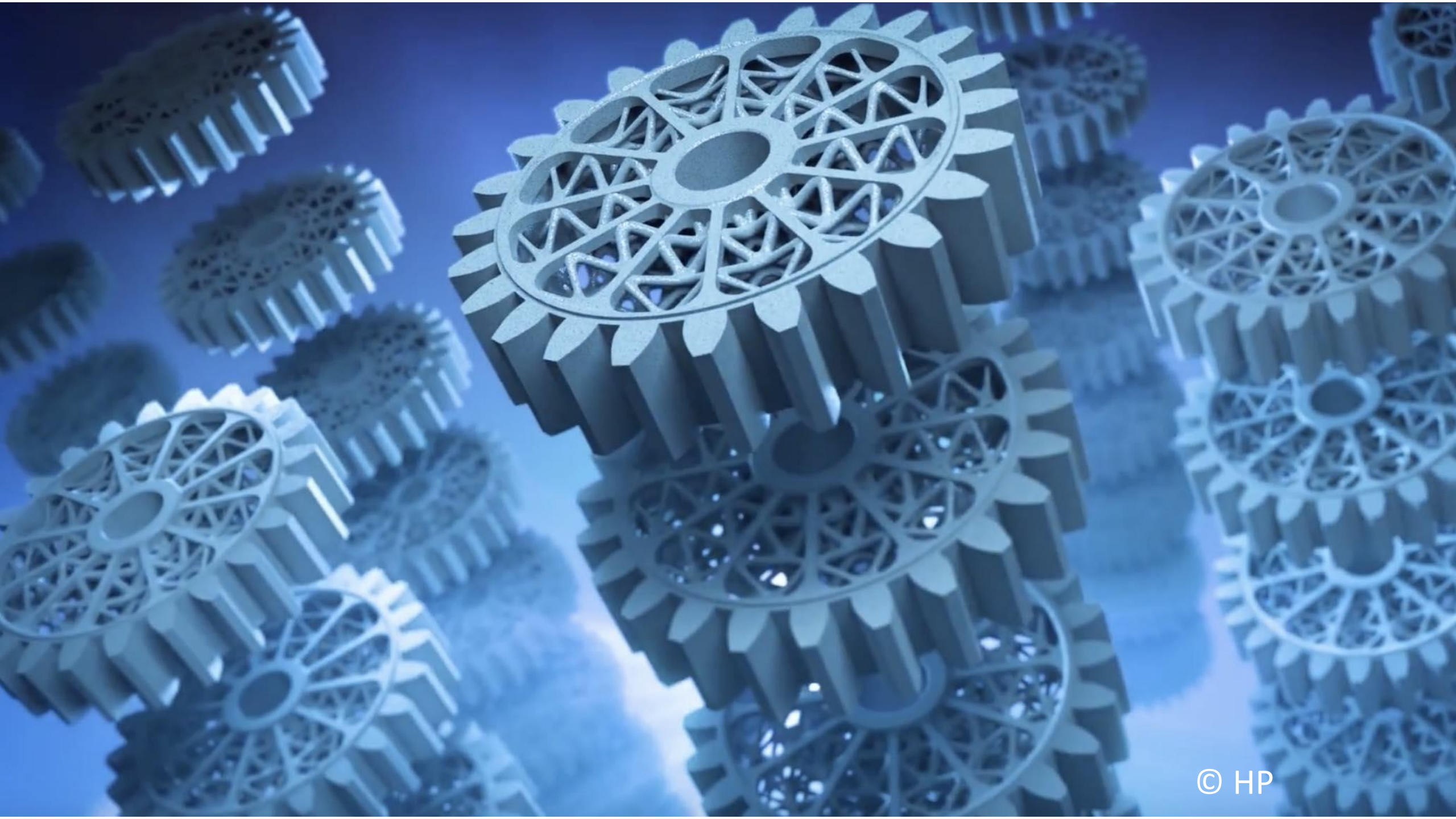
Really?

→ Market

→ Applications




© 3D Print Magazine

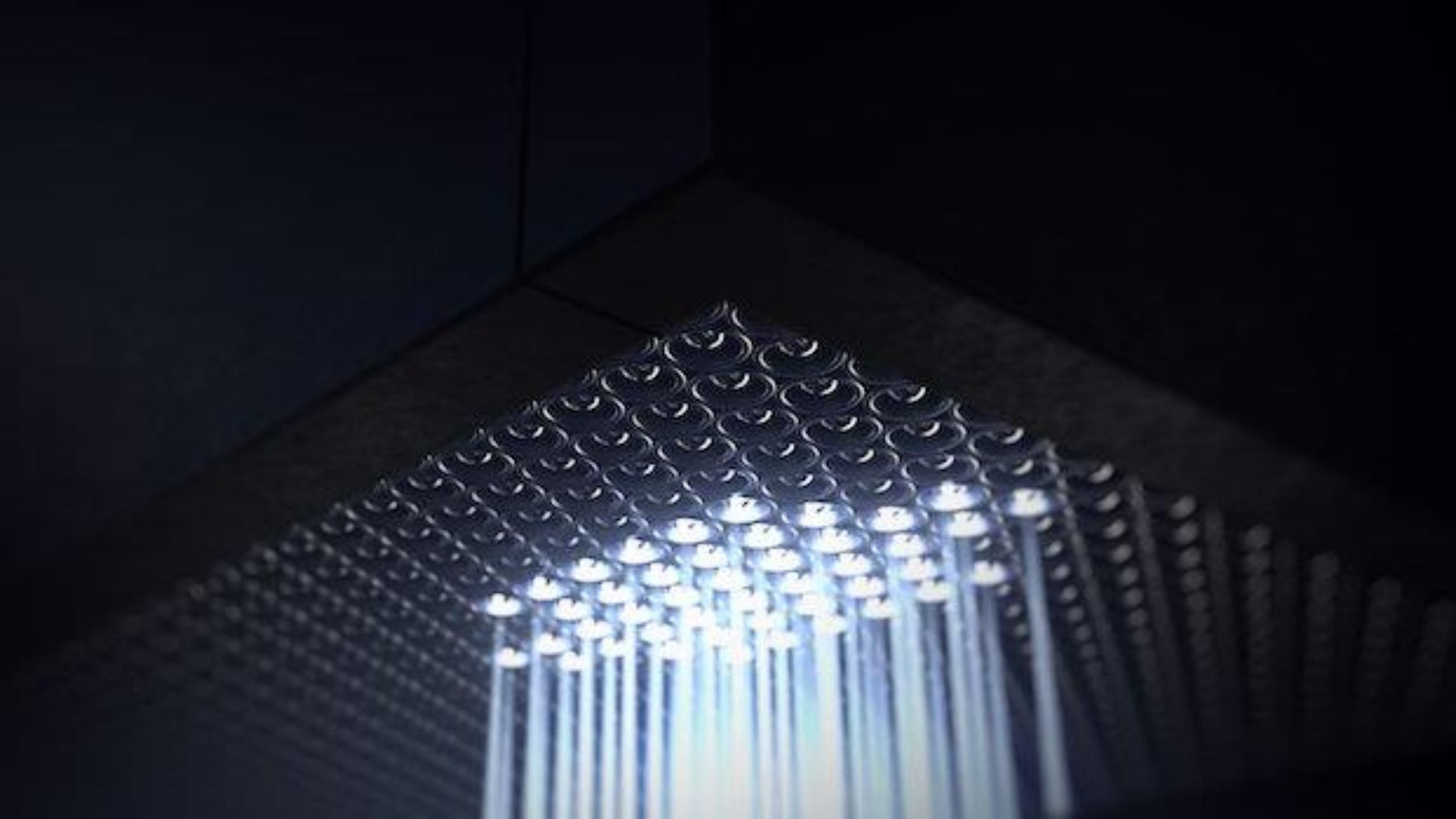

© HP

Why are we still talking about AM?

Because it's growing, coming, … or already there

Really?

→ Market
→ Applications
→ Technology



Why are we still talking about AM?

Because it's an opportunity.

FLAMEED

Thank you !

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