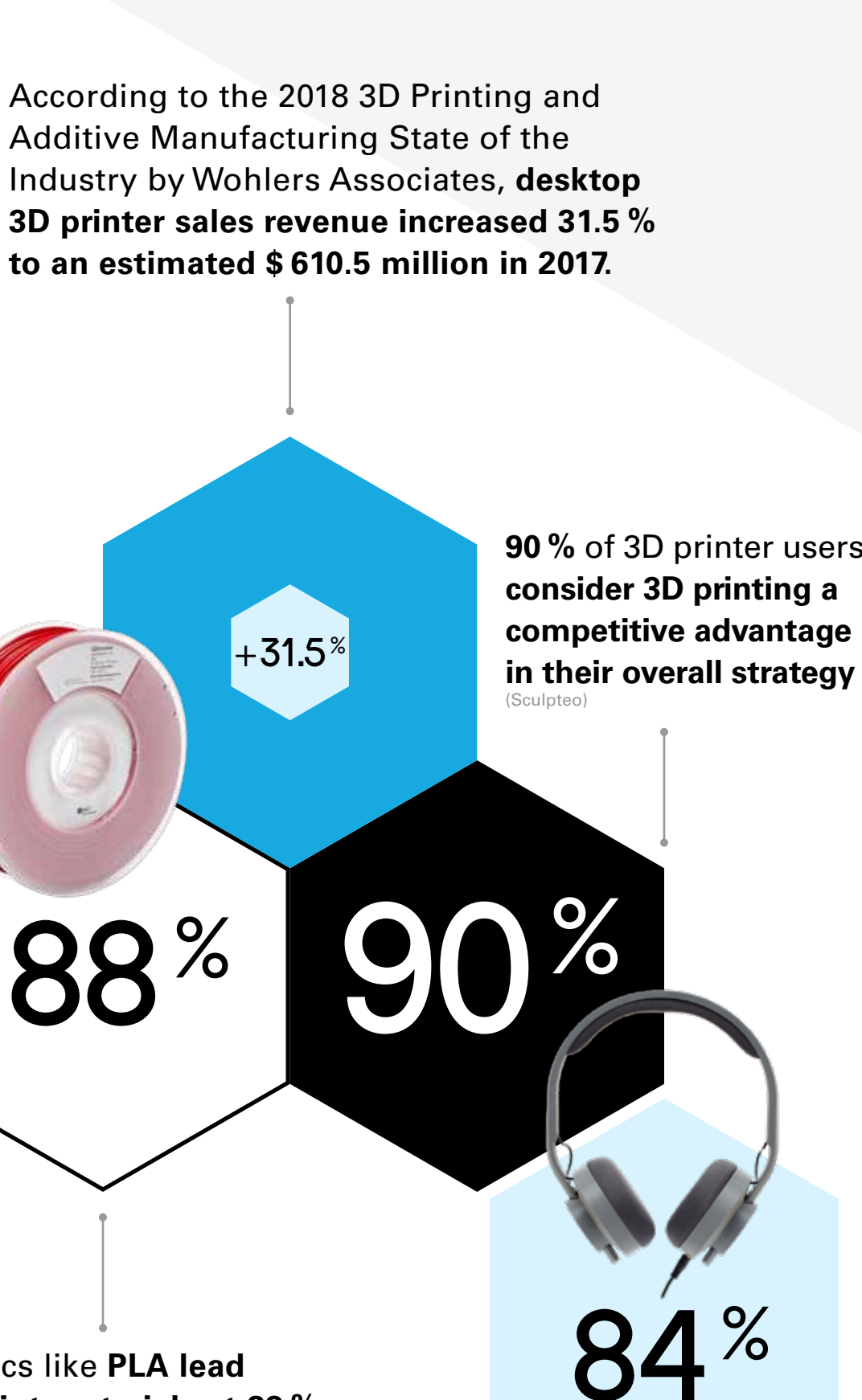


# Developments and trends in 3D printing

3D printing usage in various industries is on the rise, steadily increasing over the past several years. A 2017 Sculpteo study—focused on professionals utilizing additive manufacturing—found that 59 % of Americans and 69 % of Europeans surveyed are skilled 3D printer users. Additionally, 47 % of the canvassed companies saw a greater ROI on 3D printing investments in 2017 than in 2016. The benefits of desktop 3D printing in a professional environment are both financially and operationally rewarding, with enhanced efficiency and cost savings through in-house rapid prototyping and the freedom of iterative design.

## Skilled 3D printer users:



# 3D printing usage at a glance

According to the 2018 3D Printing and Additive Manufacturing State of the Industry by Wohlers Associates, **desktop 3D printer sales revenue increased 31.5 % to an estimated \$ 610.5 million in 2017.**



Plastics like PLA lead 3D print materials at 88 % as of early 2017 (Statista)

In EY's Global 3D Printing Report 2016, 84 % of all companies surveyed use 3D printing for product development

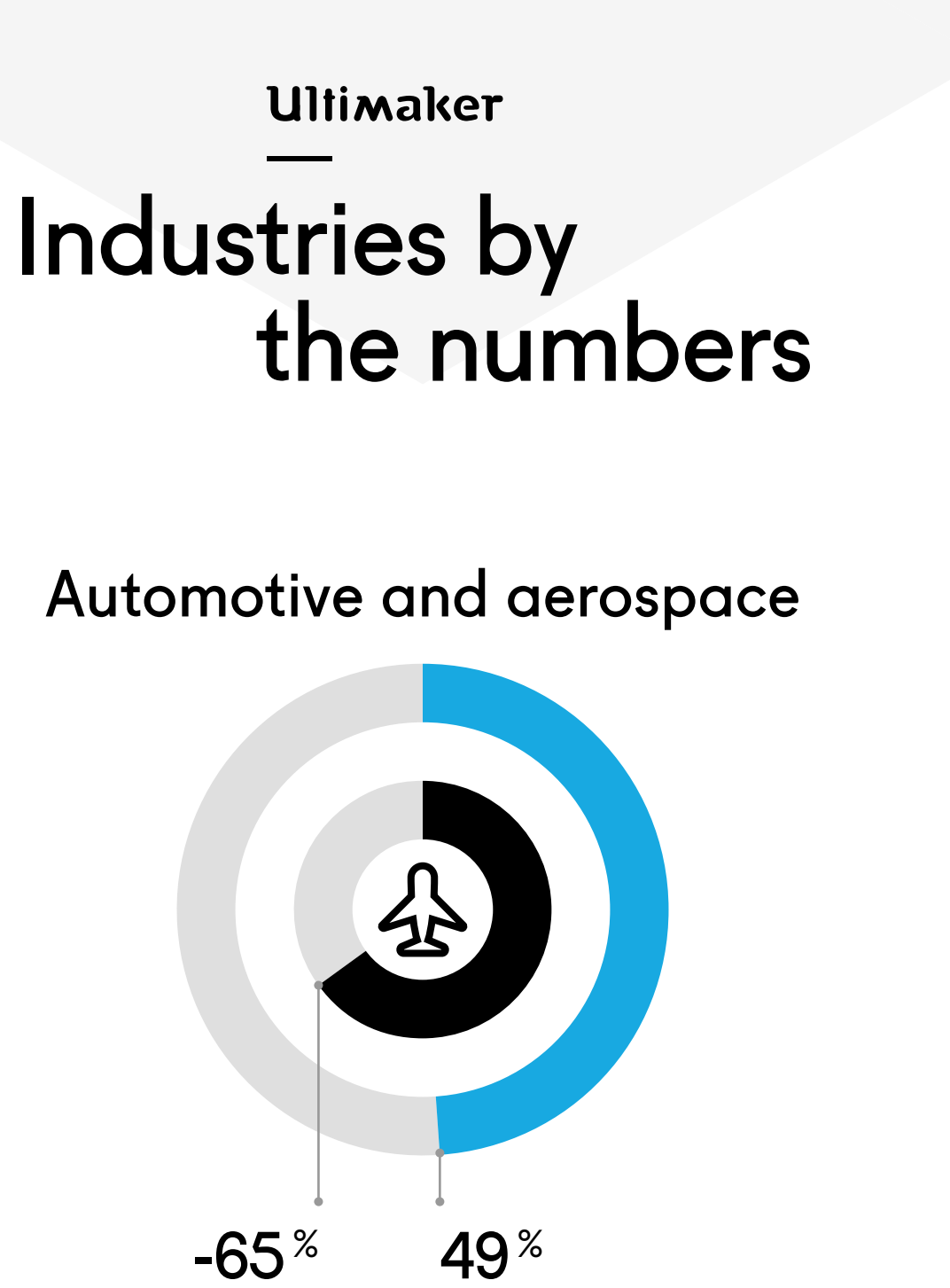
## Usage of 3D printing between 2015 and 2017:



## 3D printing trends (Q1/2018):



Without the need for outsourcing to an SLS service, companies can save money and often experience ROI on their 3D printer after just a handful of uses.

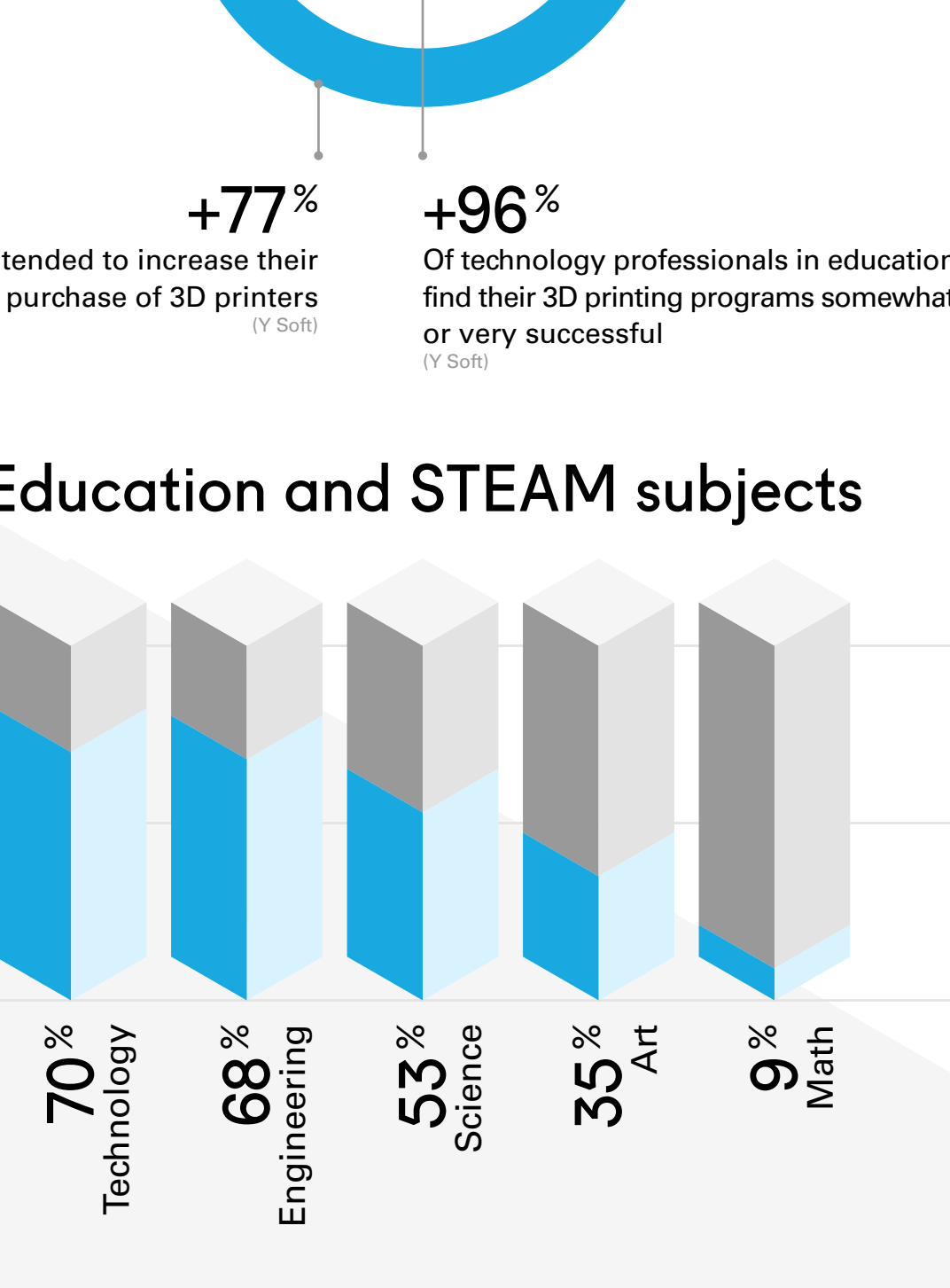


The ability to create multiple iterations of a product prototype or end-use part means greater flexibility in design and more room for creativity.

Bringing design and prototyping in-house decreases the amount of development time to take new products from ideation to creation.

# Impacts of 3D printing on business

EY's Global 3D Printing Report 2016 analyzed 57 case studies from various industries and found that rapid prototyping with 3D printing reduced average prototyping time by 63 % to improve the product development process. Overall benefits include:

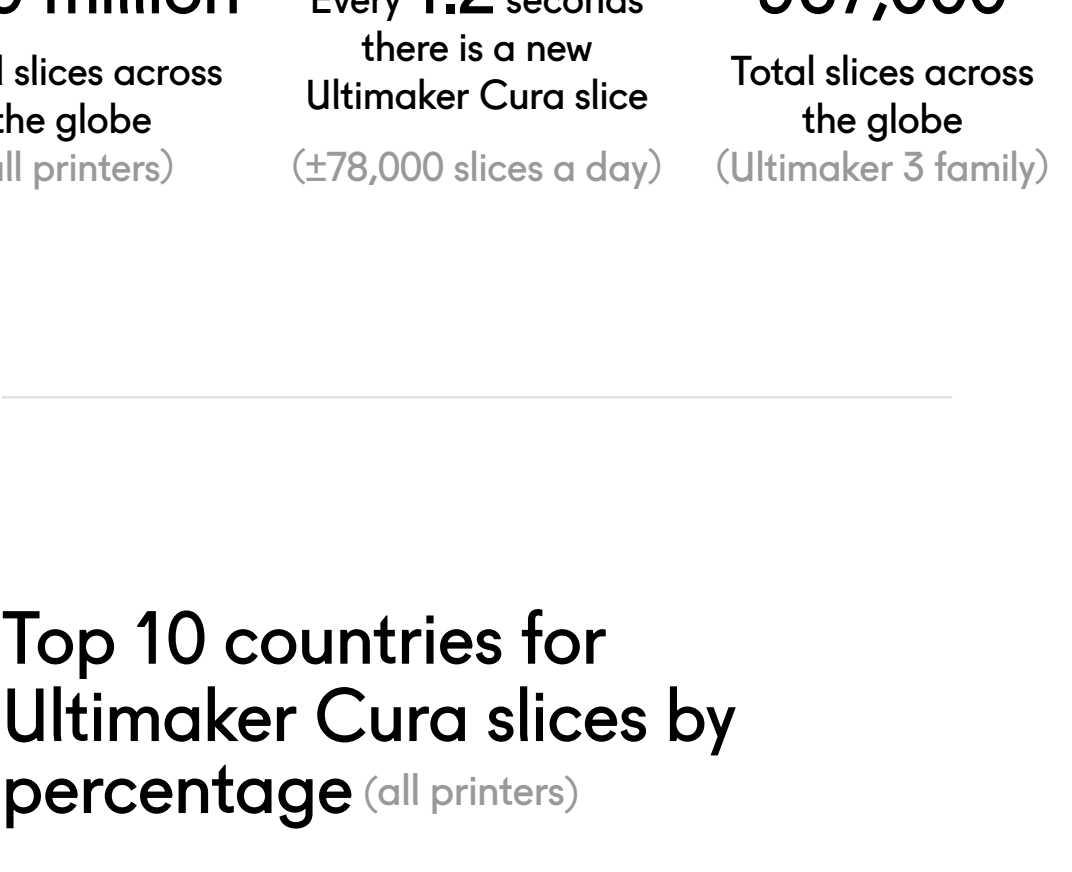


The ability to create multiple iterations of a product prototype or end-use part means greater flexibility in design and more room for creativity.

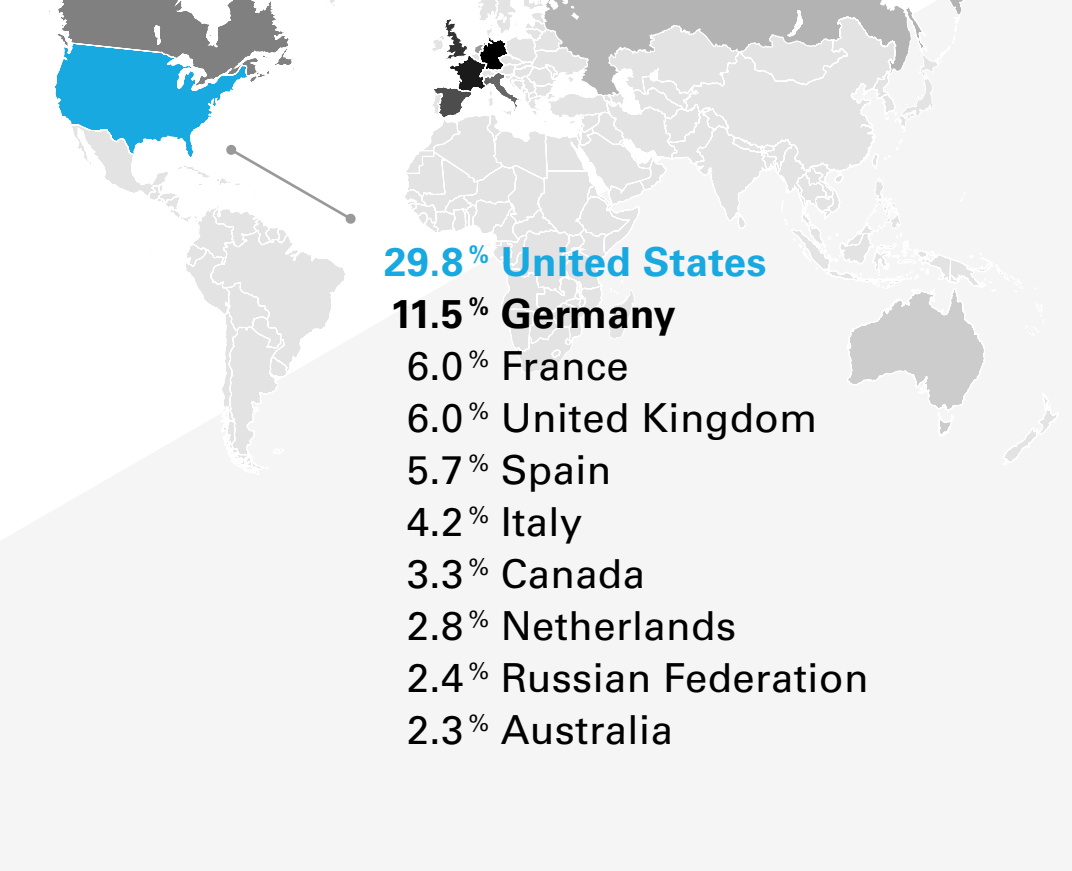
Bringing design and prototyping in-house decreases the amount of development time to take new products from ideation to creation.

# Industries by the numbers

## Automotive and aerospace



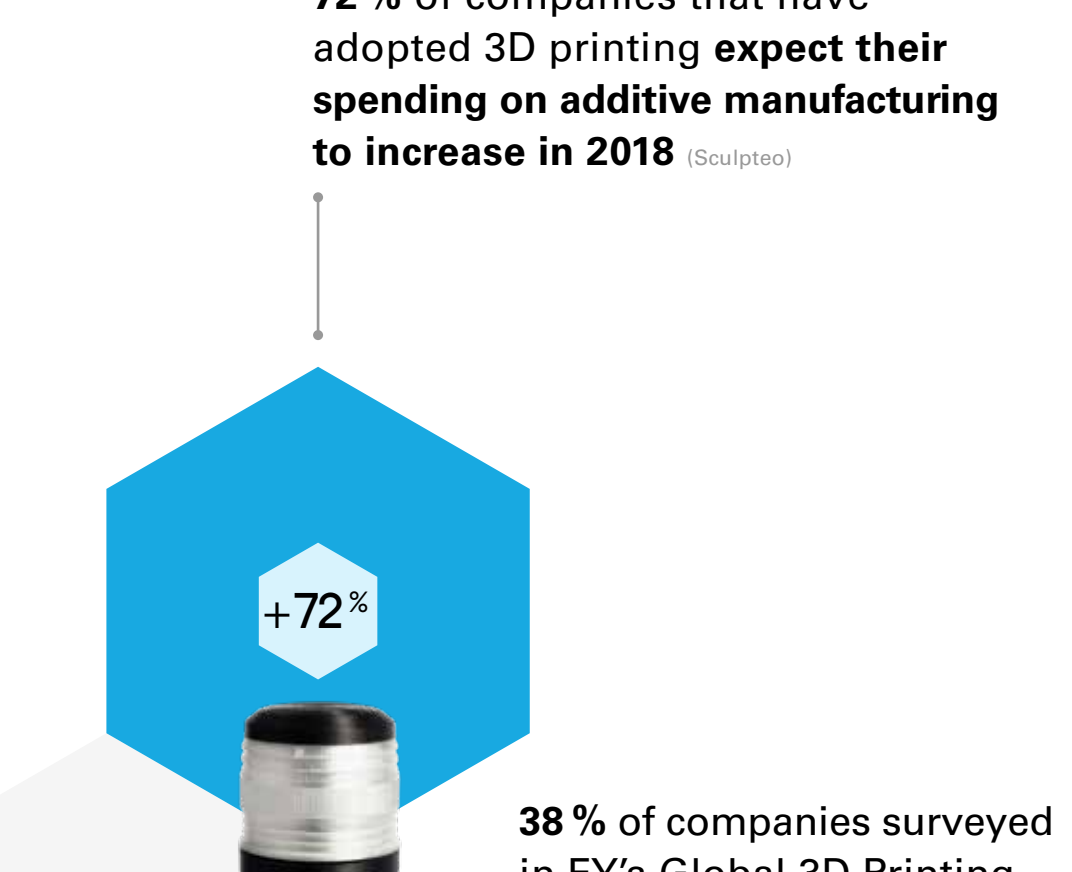
## Industrial and engineering



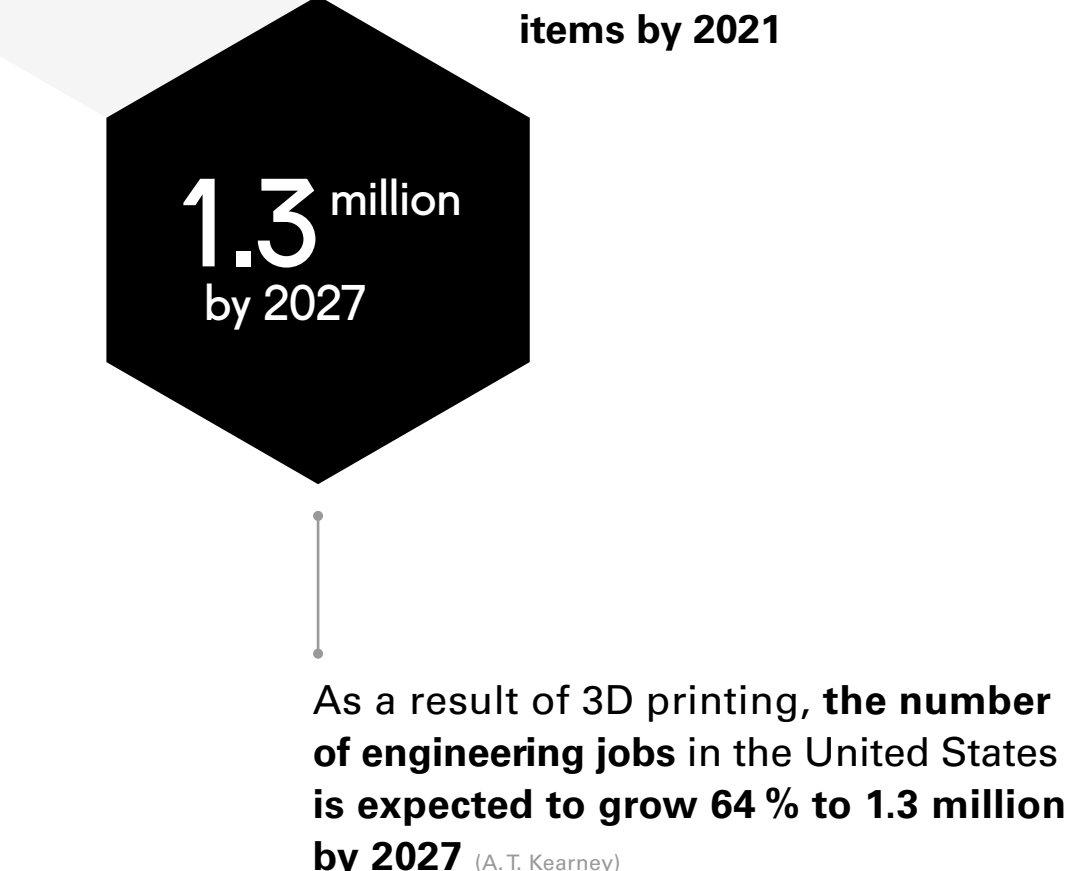
## Medical and dental



## Education and STEAM programs



## Education and STEAM subjects



# Slicing software usage is on the rise

Capable software used for slicing and preparing 3D print models is an essential element for successful design in prototyping and the creation of final parts. Ultimaker Cura, supporting STL, 3MF, and OBJ file formats. As an open source software, it has been widely adopted by 3D printing users and works seamlessly with a variety of 3D printers.



## Top 10 countries for Ultimaker Cura slices by percentage (all printers)



# Looking ahead to the future of 3D printing

The adoption of additive manufacturing in the workplace will continue to expand into varying industries, with the sale of additive manufacturing products and services expected to reach \$ 28 billion in 2023. (Wohlers Associates)



As a result of 3D printing, the number of engineering jobs in the United States is expected to grow 64 % to 1.3 million by 2027 (A.T. Kearney)

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