

Predictions in 3D Printing – What's Next for 2019

According to Statista, the value of the additive manufacturing or 3D printing sector will reach \$20.5 billion by 2020.

Although additive manufacturing has been around for a few years now, it's only recently begun to see rapid growth, thanks to simpler tools, cheaper technology and a wider range of project opportunities. Today, additive manufacturing and 3D printing have the potential to disrupt the global manufacturing space in several different ways.

According to some experts, by 2030, companies with expertise in additive manufacturing will no longer need to use welding machines or cutting machines to produce finished projects, as 3D printing will be able to deliver a complete product.

2019 has the potential to be a turning point in the use of additive printing in the industrial sector. As innovators in 3D printing, the Croft team has put together our list of predictions for the AM space in 2019.

1. Processes will Become Standardised

The manufacturing sector is still uncovering the full potential of additive manufacturing. This means that the technology has a way to go before it's as accessible and straightforward as standard manufacturing processes. Currently, there are seven different ASTM-recognised 3D printing processes available to choose from on the market. Regulation and standardisation may be crucial in the future.

If companies can begin to standardise 3D printing processes and collaborate over best-practices, we can create a more efficient additive manufacturing environment. Currently, standards organisations like ASTM International are already working alongside leading industry partners to develop procedural, safety and material standards.

2. New Material Opportunities Emerge

Plastic is currently the most widely used material for 3D printing, but companies have already begun to experiment with the use of metal as ink instead. At Croft, we already rely on steel and metals to create specific custom filtration systems for clients. In 2019, investment into alternative materials for additive manufacturing will continue to grow.

Recently, the Autodesk Company and Andreas Bastian combined investment casting for metal shaping with 3D metal printing to produce new magnesium-based seats for aeroplanes. These chairs are up to 50% lighter than traditional seats and demonstrate the impact that new printing methods can have on numerous industries.

3. A Rising Demand for Skilled Engineers

In recent years, there has been an influx of more affordable 3D-printing machines becoming available in the manufacturing market. However, not just anyone can use these devices to deliver high-quality products. There are still only a handful of businesses like Croft Filters that have the engineering skill and background to provide reliable components created through additive manufacturing. Going forward into 2019, it's likely that we will start to see more companies searching for the right talent to fill their 3D-printing gaps.

As the value of additive manufacturing continues to grow, many organisations will want to take advantage of the possibilities of this technique. Unfortunately, for now, it's difficult to find enough skilled staff on the market to complete complex projects. The fact that many universities lack educational programs for additive manufacturing doesn't help. That's one of the reasons why Croft Filters is so committed to collaborating with local universities.

4. The Industry Will Invest in Mass Production

There's a strong sense in the manufacturing sector that "production runs" will be one of the next big things in the 3D printing environment. For a while, many companies have limited themselves to using additive manufacturing mainly for prototyping purposes. However, in 2019, the technology will begin to move towards full production campaigns, helping the industry to leverage flexible construction, innovate faster and reinvent their supply chains.

Businesses like HP have played a prominent role in the potential arrival of 3D printing mass production. Recently, the company unveiled its Metal Jet and Multi Jet Fusion printing technologies. Leading automobile manufacturer BMW has already used MJF to create their one-millionth 3D-printed part. The company produced 100 guide rail parts for the BMW i8 roadster in 24 hours.

5. AM Will Grow in the Aircraft and Surgical Sectors

Finally, over the last few years, the industries that have found benefits in 3D printing have ranged all the way from healthcare to agriculture and beyond. However, research company Gartner believes that by 2021, three-quarters of new aircraft will have 3D printed engines. Already, businesses like Boeing have deployed 3D printing technology at 20 different production plants to create over 50,000 lightweight parts for defence and commercial projects. 3D printing also allowed GE (General Electric) to reduce the number of thermally stable AM parts they can produce for commercial projects.

Aside from the opportunities in the automobile and aerospace sectors, Gartner also believes that 25% of surgeons in the future will begin to use 3D patient models to practice surgeries by 2021. Agriculture organisations may also benefit from the ability to create complex spare parts for farming equipment at a rapid pace.