ADDITIVE MANUFACTURING AND THE WAY WE BUILD

It’s a rare thing, but every so often a technological innovation comes along that fundamentally changes the way we live, travel, or work — reorganizing or creating entirely new possibilities and processes. The printing press. The Internet. Industrial robots. Additive manufacturing (AM) is one of those innovations.

While its mainstream adoption has been slow, AM holds the potential to vastly reshape how we make everything — from prosthetic limbs to customizable jewelry. It’s no surprise then, that the next generation of industrial designers and engineers are looking at AM as a future with promise.
THE 21ST CENTURY WORKFORCE

56% OF MILLENNIALS PICKED 3D PRINTING AS A FUTURE CAREER PATH

It’s estimated that by 2020, millennials will make up a third of the global workforce, and they understand that this means greater power in shaping their careers and the industry at large. What this generation wants is to embrace emerging technologies that stand to make a significant impact, like AM. That’s according to a recent survey conducted by Visa, in which a whopping 56 percent of 18- to 34-year-olds cited 3D printing as a future career path.

This result underscores the generational belief in these new technologies, and indicates that millennials are not afraid of pursuing and pushing the technology to its limits to solve complex problems. Challenges related to logistics and waste management, for instance. If items and products are 3D printed, they don’t need to be shipped; they can be printed close to a given location, significantly reducing time-to-delivery. AM also produces little waste compared to subtractive manufacturing techniques, particularly with metals. So, with all this interest in the potential of 3D printing, what types of careers are opening up thanks to this tech?

“We are working in a new frontier and have barely scratched the surface of all the possibilities this technology can bring to the world.”
— Adrian Lannin, 3D Printing Team Manager at Microsoft

WHERE 3D PRINTING BECOMES A CAREER

From research and development to 3D design artists and even legal professions, those with backgrounds and skills in 3D printing will have several career options available to them in industrial markets. Here are just a few examples:

3D CAD DESIGNER
AM techniques rely heavily on designers who can interpret and turn product designs into 3D, print-ready digital blueprints. This role is particularly important with bespoke or custom products that require a unique design approach and CAD expertise.

RESEARCH AND DEVELOPMENT
What products will 3D printing make possible? Wearable tech? Breathtaking, modern prosthetics? High strength, lightweight metal components? These are the questions and challenges that face those who choose to pursue the R&D path.

ARCHITECTURE AND CONSTRUCTION MODELING
As construction industry managers and operators look to streamline and update processes to stay competitive, the ability to quickly render and create a miniature structure with 3D printers becomes important. This may phase out the need for construction documents and shorten the overall development process.
EMPLOYER PREPARATION

40% OF MANUFACTURERS ARE TRAINING EMPLOYEES SPECIFICALLY FOR ADDITIVE MANUFACTURING

As managers begin anticipating the transition from traditional manufacturing to AM, they are taking steps to prepare the incoming workforce. According to a recent survey released by Stratasys, one of the leading 3D printing companies in the world, 40 percent of respondents (mostly industrial and manufacturing companies) said they were training specifically for AM. In response to another question, 40 percent indicated that they were partnering with AM service providers. These two results reveal a rapidly building shift in the industry to plug holes in internal expertise, and invest in the future by training employees specifically for AM.

INTERESTED IN TRAINING?

If this article has piqued your interest in learning more about the intricacies of 3D printing, there are numerous educational resources available. Stratasys hosts an education section on its website. For more on the CAD aspects of AM, check out this SOLIDWORKS video for best practices when designing parts for 3D printing.

PLENTY MORE WHERE THIS CAME FROM

Head back to the SOLIDWORKS The Future of 3D Printing for more on additive manufacturing techniques and insights.

The Future of 3D Printing

Sources:
2. Stratasys Trend Forecast

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