DRONE INDUSTRY SNAPSHOT

CONSTRUCTION AND MINING

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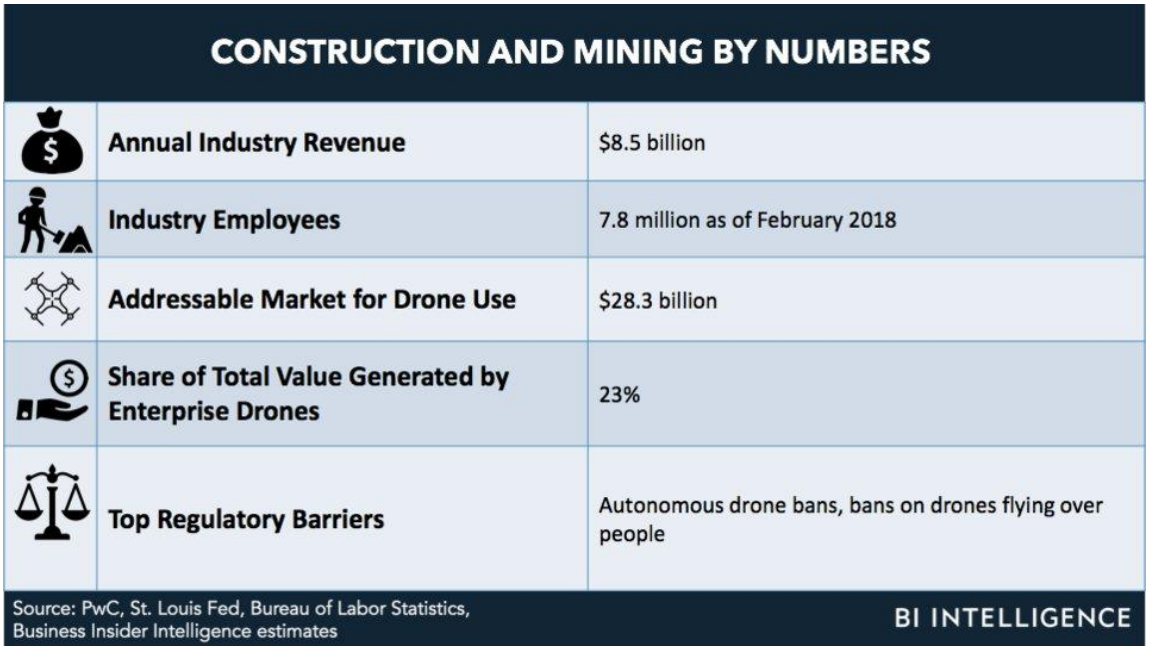
The construction and mining industries are highly regulated to ensure workers stay safe in these extremely dangerous environments. Especially in the mining business, strict regulations are in place to limit deadly accidents, like the one in West Virginia that killed 29 miners back in 2009. Staying in compliance with these laws can be quite burdensome, consuming companies' time and money. One way firms will try to overcome these hurdles is by turning to drone technology. In fact, drone use in construction and mining could eventually become a $28.3 billion global market, according to PwC estimates. That would make it the second-largest segment for commercial drone use, behind only agriculture.



Top Use Cases

Safety inspections. Nearly all states in the US and many foreign governments have legal requirements that mandate construction companies inspect their sites either weekly or daily to ensure they're safe for workers. When done manually, however, this process can take anywhere from 10 hours to a few days, according to The Insurance Journal, slowing down workflows and diverting valuable manpower away from other projects. Drones equipped with the right cameras and sensors can conduct these inspections in as little as 15 minutes, according to industry sources who spoke to Business Insider Intelligence.

Mapping and surveying. Construction and mining sites typically span at least 10 acres and have hundreds of workers and millions of dollars worth of materials, including gravel, concrete, and sand. Keeping track of all these supplies and materials is very difficult, leading to losses and waste. The U.K. Green Building Council estimates that 15% of all materials bought by construction companies around the world every year is wasted. Considering the US construction industry spent $1.23 trillion in 2017, that amounts to about $180 billion worth of wasted materials in the US alone. Drones outfitted with thermal imagers and high-definition cameras can create 3D models of worksites to more accurately track materials at every stage of the building process to reduce inefficiencies. These models can also be used to quickly assess a project's progress, which is especially useful for sites deep inside tunnels that would take human workers over an hour to reach.

What Comes Next

The construction and mining industries globally are in the earliest stages of commercial drone use. Currently, stringent regulations, such as the US' ban on flying drones directly over humans, limit these companies' use of the aircraft to hours when workers aren't on site, typically either during the early morning or late evening. However, revisions to drone regulation are expected to come down the pipeline, opening the door for some of the world's largest markets to eventually permit autonomous flights of drones over project sites. Construction and mining companies will likely begin to automate mandatory inspections using drone technology, helping to streamline workflows and boost efficiencies.

In addition, software, mapping, and analytics will progress to help provide estimates on the quantity of materials companies have left, while equipping project managers with real-time predictions on how much further projects have to go before they're completed. While the market will not reach its full potential for at least another 15 years, dozens of drones will eventually be able to fly over a single construction site and collect millions of data points that can be analyzed to speed up building times and inspections and cut down on wasted materials.

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