

Asteroid mining could start 10-20 years from now, says industry expert

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Mining space rocks for valuable resources can become reality within two decades, according to J.L. Galache of Aten Engineering. However, still many challenges must be overcome to make it happen that soon.

Galache is an asteroid astronomer currently serving as Chief Technology Officer of Aten Engineering and as an adviser to Deep Space Industries (DSI). He has designed and directed asteroid data projects with NASA's

Frontier Development Lab and Oracle. He was also Acting Deputy Director, and head of Strategy and Innovation at the International Astronomical Union's Minor Planet Center.

Galache founded Aten Engineering, which provides technical solutions in the areas of detection, discovery, follow-up and characterization of asteroids. The company's ultimate goal is to pave the way for future human exploration of the solar system via in-space resource extraction and utilization.

Aten Engineering aims to be first with ideas that could shape the future of [asteroid mining](#). Galache is convinced that a good concept will fuel the success of this industry, attracting potential investors and making the exploitation of space resources a reality.

"The first step is always the hardest, but once it is taken and a concept is proven, investment will follow. That is why my partners and I have founded Aten Engineering now, because we want to be there when the industry takes off, with a ready product for the current and future asteroid mining companies," Galache told Astrowatch.net.

He sees Aten Engineering as part of an ecosystem providing supporting services necessary for asteroid mining companies. Such network of supporters could be crucial for a long term development of this segment of commercial space market.

"Asteroid mining on a regular basis, such as terrestrial mining takes place today, with an established industry and an ecosystem of supporting services businesses for the mining companies, could start anywhere from 20 to 50 years is my personal opinion. But any industry must start somewhere, and I think we will see the first asteroid being mined 10 to 20 years from now, at which point the surrounding ecosystem will begin to grow," Galache said.

But in order to successfully start asteroid mining, few obstacles must be overcome. One of them is our insufficient knowledge about particular asteroids. Although our understanding of asteroids as a whole is advanced enough, learning insights about the nature of various types of near-Earth objects could be the key for success.

Galache underlined that mining techniques will have to be tailored to specific types of asteroids.

"For example, you will not send the same equipment to mine an iron-nickel asteroid as you would a carbonaceous asteroid. And you will not send the same equipment to mine a fine regolith-covered asteroid as a rubble pile. I do believe we have figured out what all the unknowns are and it is just a matter of finding answers and solutions to those unknowns," he noted.

Hence, mining companies will need to know what the best asteroids to mine are and where they are. It will be also necessary to know as much as possible about characteristics of these objects.

"This is not information that is being provided by public entities, so Aten Engineering was set up as a private company to address this gap in the asteroid [mining](#) chain: Asteroid prospecting," Galache concluded.

Source: Astrowatch.net

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