



To trim rocket costs, Virgin Orbit leans on Manufacturing software

By Debra Werner

PASADENA, California — Virgin Orbit's campaign to design, build and fly LauncherOne, its air-launched rocket for small satellites, relies on digital manufacturing software.

"We are trying to do two things at the same time: build and launch LauncherOne, a pioneering low-cost small satellite launch vehicle and at the same time design, build and launch a company," said Andrzej Goryca, Virgin Orbit's senior enterprise systems manager told *SpaceNews* at the Space Tech Expo here.

[Virgin Galactic spun off Virgin Orbit](#) in March 2017. Goryca leads an 11-person team helping Virgin Orbit expand manufacturing, supply chain, engineering and operations while increasing efficiency to trim the cost of LauncherOne. As part of that campaign, Virgin Orbit adopted a Manufacturing Execution System (MES) from iBAsEt, a company based in Foothill Ranch, California, that specializes in manufacturing software.

Virgin Orbit relies on the MES to reduce paperwork and create a digital thread, tracing rockets and components from requirements and design through manufacturing, testing and launch. "If something goes wrong we can trace it back electronically and when it goes right, as well," Goryca said. "You don't need an army of people doing it.

Creating a digital thread is particularly important for Virgin Orbit because the company plans to expand LauncherOne production rapidly. Steve Eisele, Virgin Orbit vice president, said during a Space Tech Expo panel March 22 that he wants the firm to be the first to perform 100 dedicated small satellite launches.

At the same time, Virgin Orbit is continually making changes, said Conrad Leiva, iBAsEt vice president of product strategy and alliances.

Those changes occur as Virgin Orbit engineers learn from LauncherOne tests or discover new technologies. "People are working in parallel. To make that efficient, everyone has to know what is going on," Goryca said.