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INDUSTRY 4.0 STANDARDS FOR RIDESHARE AGGREGATION MANAGEMENT.

**Abstract**

The driving forces of the New Space market are getting more commercially oriented, and the industry must adapt by using new tools and methods. Only now, with enough players on the market, Industry 4.0 is starting to influence it. The so-called Fourth Industrial Revolution that promotes machine data exchange, cloud connectedness, autonomous operation, and Big Data analytics is making an impact on both manufacturing and business processes.

With the potential oversupply of launch capacities caused by both new venture class launch vehicles entering the market and the return of heavy-lift rockets, launch providers are forced to operate on a global level. Local demand for orbital flights can hardly fulfill all the launch opportunities upcoming after 2020. Multimodal logistics problem does the choice of a launch vehicle even more complicated: spacecraft that has its own thrusters or uses in-space transportation services is less limited in choice.

At the same time, traditional business development methods like visiting the conferences and face to face networking are poorly scalable. Several launch providers have already created online booking forms on their websites and are more concerned about generating leads online. It brings the market to the idea of simplifying and standardizing the launch campaign process.

In these conditions, the platform economy is a sustainable solution that will facilitate market transparency and make global launch slots inventory possible. A digital matchmaking tool will help to accurately measure the market demand for different types of services. Emerging startups will be able to rely on this data when building technical cases and conducting feasibility studies; launch booking will take less time due to the direct communication with people responsible for the payload accommodation on the launch provider's side; rideshare management will get more realistic: having the full information about updated launch capacities makes late rebookings possible; it is a marketplace for a number of add-on services like insurance procurement and licensing.

There are already several companies that are like Precious Payload advocating for building a global distribution system for smallsat launches as it has been done for airlines, cargo shipments, and hotel bookings. Precious Payload has started with creating the system where payload owners can send their requests for quotations for a launch to the launch providers of their choice. We believe such tools are changing the approach for launch campaign planning and procurement and bring the launch vehicles marketing to a different level.