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Knowledge management for space activities in the digital transformation age (2)

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# SPACE MISSION MANAGEMENT IN THE DIGITAL AGE

**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. Two main tendencies will be shaping the next decades of space exploration: engaging professionals from outside of space industry and shorter project development cycles. In these conditions, having a single platform for mission management will help to increase the number of successful projects.

Old school methods of knowledge and data transfer create a gap between business ideas and their realization. University teams and private companies with no or small space industry experience can benefit from a comprehensive roadmap. Precious Payload has created an algorithm that helps to tailor traditional workflow to the needs of particular project on a very early stage covering everything starting from a concept study report stage to end-of-life operations. Created to save time and avoid routine, this step by step guide with lists of suppliers, documents samples, and best practices is helping space mission managers to keep track of every necessary step that must be completed for a successful space mission even if they are doing it for the first time.

Space projects require cooperation with up to 50 suppliers including ground segment and launch providers, hardware manufacturers, legal advisors, etc. Today, traditional business development methods like conferences and face to face meetings are commonly used even though they are poorly scalable and can be costly for universities and start-ups. Despite an image of the cutting-edge technology industry, space sector has felt the impact of IT boom to a lesser extent. Standardizing communication with suppliers is a solution that helps to make smart choices of service providers and lower operational costs, avoid delays and poor-quality components, decrease the project time from 2 years in general to 6-10 months.

In these conditions, the platform economy is a sustainable solution that will facilitate market transparency and make global supply inventory possible. A digital matchmaking tool will help to accurately measure the market demand for different types of services while a comprehensive tailored roadmap is a way to open space industry to new business ideas.