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MANAGING THE RISK OF THE SPACE PROJECTS FROM THE PERSPECTIVE OF NEWSPACE SME. BURDEN OF CHANGING LANDSCAPE

Abstract

The paper presents a complex approach that should be taken towards managing space projects from the perspective of SMEs and start-up companies in emerging space countries, and towards the everchanging global landscape in terms of space exploration. As an example for the case study, the Polish space industry will be examined, but the idea is to present assumptions, problems and possible solutions that could be applicable to other space sectors at a similar stage of development. The main objective of the paper is to study how small, inexperienced companies from countries that are new to the space industry can find their place on traditional institutional markets, as well as in the emerging New Space environment. The assumption is that the emerging space industry is focused primarily on public support coming from large national and international (mainly ESA) players. The position of SMEs from Poland in the global space value chain for large transnational missions is investigated, both in upstream and downstream markets. Then, after the period of being under the public umbrella, the space SME faces the problem of transforming its business model from RD projects and institutional support into the fully commercial space market projects contracted with big players. When will they know if they are ready for such a step? The burden of leaving the infant age spent in the protective arms of publicly funded projects very often requires a disruptive change in thinking and introducing innovative solutions that would allow the small companies to compete and cooperate with the big players. This is related not only with changing the geographical dimension of activity (from European into global), but introducing innovative business models, project management tools, risk management measures, etc. With this in mind, the authors' aim is to present the difference between contracting with the commercial and institutional space clients, the process of evolving from supplying components into supplying elements or subsystems, as well as the risks related to the transformation process. The study project undertaken by the authors focuses on analyzing various aspects of innovative space entrepreneurship in the transformation process, from participants in publicly funded projects into fully fledged commercial space players. The study takes a complex approach, i.e. analyzing the managerial, engineering and legal aspects of innovative entrepreneurship. As regards the methodology, the study includes an assessment of the various contractual, technical and business risks of such cooperation, presenting some mitigation and coping strategies.