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WHAT DOES IT TAKE TO RUN A NEW SPACE STARTUP? AN EMPIRICAL STUDY ON THE
CHALLENGES AND OPPORTUNITIES IN THE EUROPEAN NEW SPACE MARKET**Abstract**

Among the thousands of New Space startups to date, around one third are locating in Europe. With its distinctive regulatory environment, public offerings, and investment culture, Europe provides a unique market for space entrepreneurs. A question shared by many and that can generate tremendous insight into this market is: what does it take to run a New Space Startup there? Particularly, what are the opportunities and challenges faced by space startups in Europe, regardless of their sizes and value chain positions? Many researchers have attempted to understand this context before, but their approaches have largely concentrated on either industrial-level structural analysis or sectorial mapping and prediction. While it is helpful to investigate from a macroscopic perspective, this paper aims to fill the gap of taking a bottom-up perspective and directing questions at those active players with first-hand experience. The research was drawn on both extensive literature review and in-depth semi-structured interviews with space entrepreneurs from all over Europe, engaging in all sorts of space businesses, ranging from RS data analysis to in-space food manufacturing.

The research revealed five challenges faced by European space entrepreneurs:

- A relatively risk-averse investing culture, particularly compared to that of the US;
- the inconsistency of agendas, standards and budgets among the European Union nations and multilateral space-relevant agencies;
- a homogenous, engineer-dominant workforce with mismatched skillsets to startups' needs;
- stringent technology transfer and export regulations;
- overdominance of established space enterprises due to technological heritage and cumulative bargaining power - leaving limited market share for newcomers.

It also identified three opportunities that are uniquely present in Europe:

- Specific policies such as the European Commission's 2050 Energy Strategy and Germany's Federal Data Protection Action provide comparative advantages to European startups than ones elsewhere;
- a tight entrepreneurial community that highlights aspects of interdisciplinary, international and intercultural;
- self-initiated partner network among startups.

The paper discusses how each challenges and opportunities affect the entrepreneurial landscape in Europe and makes suggestions about how they can be mitigated or leveraged as appropriate. It illustrates this with first-hand insights on running a New Space startup in Europe. Its observations and analysis can be used as a practical guidance to those who are already in the game and those who wish to enter. Despite its focus on Europe, this paper and its strategies also provide great value to the New Space Market worldwide.