Transcending Societal Issues for Space Exploration (12) Transcending Societal Issues for Space Exploration (3) (3)

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## VISUALISATIONS OF TRENDS AMONG NEWSPACE COMPANIES TO HELP THE OPTIMISATION AND MODERNISATION OF CURRENT REGULATORY REGIMES IN SPACE

## Abstract

'NewSpace' initiatives have transformed the space industry from one heavily reliant on governmental oversight to an increasingly private industry attaining record amounts of investment and driving down the costs of space operations to new minimums. Unfortunately, although the importance of this shift has been recognised by new commercial space actors, there has not been an equal transformation by the legal institutions that cater for them. In this presentation, we examine this relationship between space businesses, innovation and regulation by evaluating the driving factors behind each of them, and investigate the possibilities of optimising regulation to better suit the requirements of young companies in the space market. This study aims to shed light on current trends among new businesses in the global space industry and their evaluation of current regulatory frameworks. For the purpose of this research, we have conducted 50 live interviews with founders and executives of small and start-up space companies from all around the world. The interviews are recorded and answers quantified to produce meaningful statistical data. After answering general questions about the foundations of their NewSpace businesses, the research gathers the founders' opinions on the current regulatory regimes of the space industry. The subjects are then asked to evaluate the costs of legal assistance to comply with existing regulatory requirements by sharing personal experiences rather than providing financial or other data that may be deemed confidential for their businesses. Our research revealed that a significant proportion of the respondents were frustrated with the current regulation surrounding space technology. Furthermore, a large group of interviewees stated that they underestimated the amount of 'red-tape' and expenses associated with navigating the legal landscape of space. Some respondents also indicated that, regardless of their geographical location, bureaucracy was a significant hindrance to their technological development. Considering the record-breaking investments in NewSpace enterprises in the last few years, our research details some unfortunate conclusions regarding the state of current space regulation. The results are not surprising, especially considering that the majority of international legal instruments were drafted decades ago and national legislatures have only recently undertaken to improve the regimes within their own territories. Given the general consensus in previous literature that regulation often lags behind technology, our study found this to be the case in the eyes of the NewSpace industry as well. Based on our findings, we are able to produce a reliable report on the current state of space regulation and make actionable recommendations both at the national and international levels to better facilitate global space innovation.