

SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES (D6)  
Commercial Space Flight Safety and Emerging Issues (1)

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EVALUATION OF COMMERCIAL HUMAN SPACEFLIGHT LAWS AND REGULATIONS IN THE  
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**Abstract**

With the end of the Space Shuttle Program, a commercial space market is burgeoning with new aerospace companies vying for a corner of the market. The intent of this paper is to evaluate current human spaceflight regulations and provide recommendations for additional measures or considerations that may be needed to create a safe and marketable commercial human spaceflight industry. A brief history of the human spaceflight industry since its inception will be touched upon to set the stage for the current capabilities and challenges in this industry. It is important to characterize the current market for commercial human spaceflight and understand the different forces influencing the market. Thus far, there are four major categories of enterprises identified in the commercial human spaceflight market: government use (NASA), suborbital tourism, point-to-point access, and research payloads. Especially with emerging markets, new technologies and government influences can cause major disruptions that threaten the growth of the market. Current regulations at the international, national and state levels are identified and evaluated for their strength in creating a safe and marketable industry. Specifically, the regulations of interest entail safety and training requirements for all people involved (passengers, crew, ground personnel), operator certification or licensing, and corporate responsibilities in dealing with insurance coverage, lawful operations, and safety and protection of the uninvolved public. The current regulations are evaluated for their ability to encourage and facilitate market development. By using other industries for comparisons, including aviation, naval, extreme sports, or the military, additional considerations for improving safety or marketability may be uncovered.