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## BUSINESS INNOVATION SYMPOSIUM (E6)

Case Studies and Prizes in Commercial Space (1)

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## DEFINITION AND ANALYSIS OF THE INTERNATIONAL COMMERCIAL SPACEFLIGHT INDUSTRY, 2006-2012

## Abstract

Through exclusive access to proprietary information, this paper presents an uniquely accurate analysis of the emerging commercial spaceflight industry, building upon a dataset that extends back to 2006, currently being updated through 2012.

Since 2006, the market for commercial spaceflight has transitioned from one dominated by development activities funded by investors and governments to an industry realizing meaningful revenues from commercial sources. Revenue from government remains important, and in some cases the government revenue is now coming from policies and programs specifically designed to support this industry.

The paper provides quantitative measures of the overall size of the industry by revenue; the amount of investment raised and spent; the relative percentage of investment sources; facility space devoted to these activities; and overall industry employment.

This paper also presents an evolutionary overhaul to the underlying model that reflects the value chain in the industry. This new model accounts for the emergence of second and third tier suppliers into the industry, and greater integration with more established aerospace players.

The annual study this paper summarizes was conducted with the cooperation of the Commercial Spaceflight Federation (CSF) and its member companies. Data from non-member companies was also obtained for a broader and more global depiction of the industry. The purpose of the study is to provide an accurate picture of the commercial spaceflight industry that is useful to investors, entrepreneurs, regulators, media, and industry analysts. The methodology of the study included:

- Collecting primary source data obtained through interviews with commercial spaceflight companies, augmented with open-source research.
- Characterization by appropriate industry metrics such as traditional financial metrics (revenue, investment), as well as specialized metrics that yield insight on a small, emerging industry (facility space, sources of funding).
- Aggregating company-level data and analyzing industry-level results.

The cooperation of CSF, and the protection of individual organization data through aggregation and other measures, makes this measurement of the industry uniquely accurate. Results show cumulative investment levels committed to the industry through 2012; revenue and deposits for spaceflight services

by year, and additional revenue to commercial spaceflight companies for hardware, hardware development, and support services.

An added focus of this paper is a comparison of the dynamics of the commercial spaceflight industry between the United States and international companies and organizations. The paper will highlight how the structure of the industry differs, and provide quantitative measures of international activity.