

Technology Roadmaps for Space Exploration (09)  
Technology Roadmaps for Exploration (1)

Author: Mr. Jonah Zimmerman  
Stanford University, United States, jonahz@stanford.edu

Prof. Scott Hubbard  
Stanford University, United States, scotthub@stanford.edu

Mr. Ken Davidian  
Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States,  
ken.davidian@faa.gov

## FAA OFFICE OF COMMERCIAL SPACE TRANSPORTATION RESEARCH ROAD MAP

**Abstract**

The Federal Aviation Administration (FAA) Office of Commercial Space Transportation (AST) established a Center of Excellence for Commercial Space Transportation (COE CST) in August, 2010. While drafting the Request For Proposal in preparation for the COE CST competition, four research groups were identified with brief descriptions and examples that fit into each grouping. AST's four research areas include (i) Space Traffic Management and Operations, (ii) Space Transportation Operations, Technologies and Payloads, (iii) Human Spaceflight; and (iv) Space Transportation Industry Viability. During the initial year of COE CST operation, a concerted effort was made to fill in each of the four top-level groupings with details that would (a) identify a comprehensive set of research subdivisions, (b) identify a broad spectrum of research opportunities and options, (c) identify specific tasks for the research subdivisions, and (d) make an attempt to prioritize the tasks to help AST decide what research to undertake first. The result of this effort is the FAA Research Road Map that is the guiding document for AST's four research plans. After giving a brief history of the AST Research Road Map creation, this paper will provide details about each of the four research areas, including a description of how the resulting maps correlate to the fourteen NASA Space Technology Road Maps.