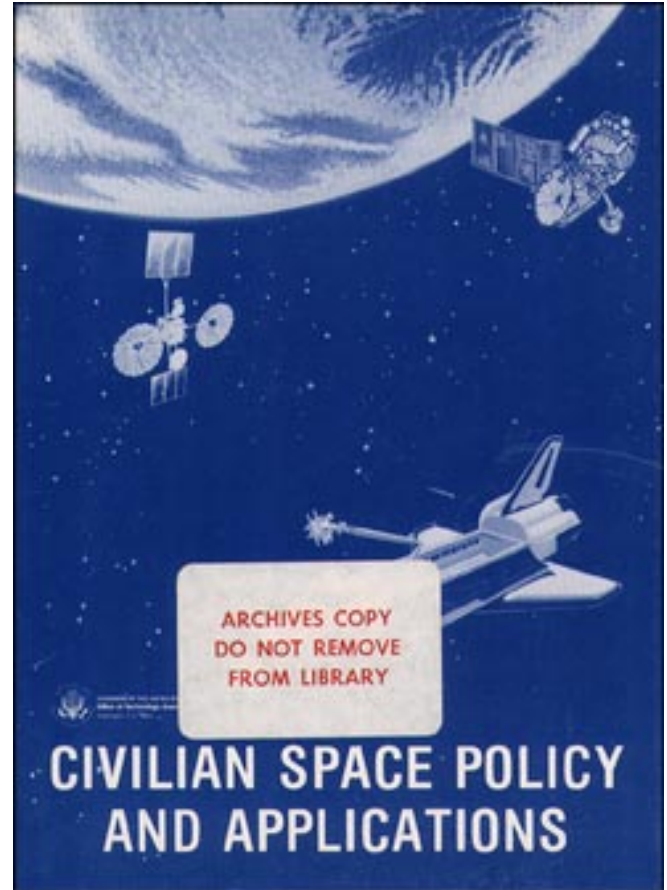


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Foreword

This assessment responds to a request to the Office of Technology Assessment (OTA) from the Senate Committee on Commerce, Science, and Transportation for an evaluation of the present state and possible future directions of space applications technologies in the civilian sector. Four technologies are examined in detail: satellite communications, land remote sensing, materials processing in space, and space transportation. In addition, the assessment investigates the national policy that has guided the development of these and other applications technologies.

For the past quarter century, the United States has been the acknowledged world leader in the exploration of space and the use of technologies developed to operate in the space environment. Now, however, the United States faces increasing foreign competition in many areas of the space program, particularly in applications with commercial promise. *Civilian Space Policy and Applications* examines several means for addressing this competitive challenge. In particular, it investigates the options available for the future deployment of U.S. land remote-sensing systems, and explores the status of advanced satellite communications research within the National Aeronautics and Space Administration. Further, the report assesses the potential for manufacturing useful products in space and for commercializing space transportation systems.

OTA was greatly aided by the advice of the project advisory panel, as well as by participants in several specialized workshops. The contributions of contractors, who provided important analyses, and of numerous individuals and organizations that gave generously of their time and knowledge, are gratefully appreciated.



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