Reducing Launch Operation Costs: New Technologies and Practices

September 1988

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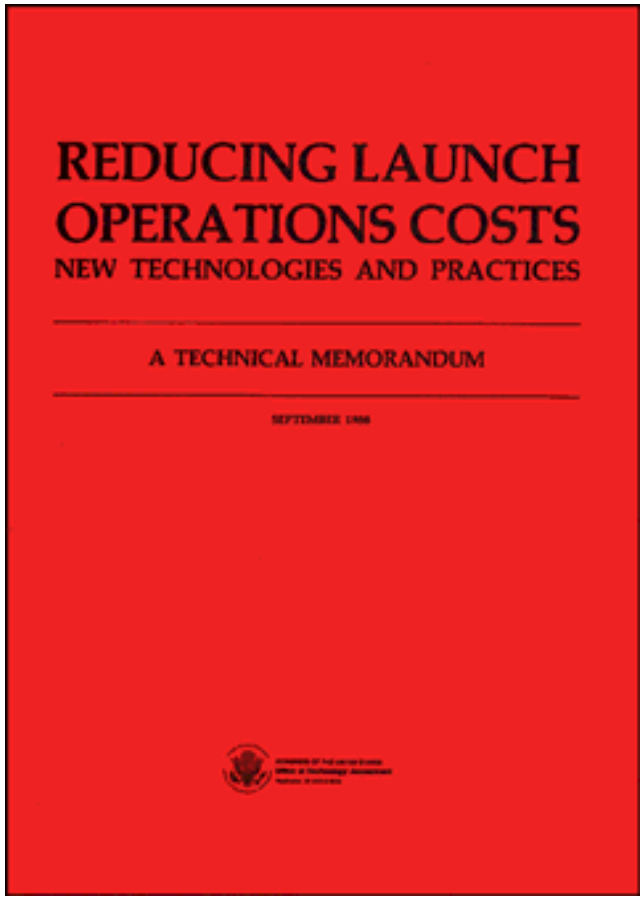

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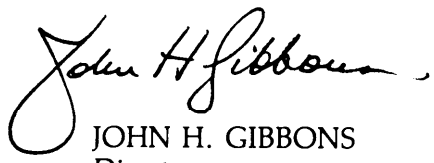
Foreword

Reducing the costs and improving the reliability of space transportation are key to making more effective use of the space environment for commerce, science, exploration, and defense. In order to achieve these objectives, the United States needs to give greater attention to launch and mission operations, the collection of processes and procedures used to ready vehicles and spacecraft for launch and insertion into orbit. Launch operations make up a significant percentage of launch costs.

The United States already uses or has under development a variety of technologies that can make launch operations more reliable, efficient, and cost effective. However, as this technical memorandum explains, the United States has spent relatively little effort in applying them to operations. Just as important as cost saving technologies are appropriate management methods, or strategies, to put these technologies to work. In some cases, OTA has found, cost savings could be achieved by streamlining operations and reducing the burden of documentation and reporting requirements that have slowly expanded over the years.

This memorandum is part of a broader OTA assessment of space transportation requested by the House Committee on Science, Space, and Technology, and the Senate Committee on Commerce, Science, and Transportation. In July, OTA released a companion volume, *Launch Options for the Future: A Buyer's Guide,* which explores several possible options for space transportation systems.

In undertaking this technical memorandum OTA sought the contributions of a broad spectrum of knowledgeable individuals and organizations. Some provided information, others reviewed drafts. OTA gratefully acknowledges their contributions of time and intellectual effort. As with all OTA reports, the content of this technical memorandum is the sole responsibility of the Office of Technology Assessment and does not necessarily represent the views of our advisors or reviewers.



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NOTE: OTA appreciates the valuable assistance and thoughtful critiques provided by the advisory panel members. The views expressed in this OTA report, however, are the sole responsibility of the Office of Technology Assessment. Participation on the advisory panel does not imply endorsement of the report.

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- *Launch Options for the Future: a Buyer's Guide.* OTA-ISC-383, July 1988. GPO stock #052-003-01117-4; $5.00.
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