

Contents

Summary 1

General Findings 2

- Lack of Consensus on U.S. Space Policy Goals 2
- Living Within Severe Budget Constraints 3
- Government Demand Dominates the Space Transportation Market 3
- Current Capabilities Can Meet National Security Requirements 4
- Competing Interests Make Common Strategy Difficult 4

Issues for Congress 4

- **Fundamental Objective #1:** Space Transportation Funding and the Division of Responsibilities 4
 - ▶ **Issue 1a:** Divided responsibility and interagency coordination 6
 - ▶ **Issue 1b:** Potential conflicts and redundancies 6
 - ▶ **Issue 1c:** HLVs drive the EELV program 7
 - ▶ **Issue 1d:** RLV development 7
 - ▶ **Issue 1e:** SSTO? 8
 - ▶ **Issue 1f:** Space Shuttle—beyond 2000 8
- **Fundamental Objective #2:** U.S. Use of Foreign Launch Systems and Components 9
 - ▶ **Issue 2a:** The use of foreign launch technology 9
 - ▶ **Issue 2b:** International trade in launch services 10
 - ▶ **Issue 2c:** Technology transfer and foreign policy objectives 12
- **Fundamental Objective #3:** The Use of Excess Ballistic Missiles 12
 - ▶ **Issue 3a:** Unfair competition or market creation? 13
 - ▶ **Issue 3b:** Russian excess ballistic missiles 13
- **Fundamental Objective #4:** The Private Sector Role in Space Transportation Decisionmaking 13
 - ▶ **Issue 4a:** Will the estimated market support policy goals? 14



- ▶ **Issue 4b:** The nature of the government-industry space transportation partnership 14
- ▶ **Issue 4c:** Risk management—striking the proper balance 15
- ▶ **Issue 4d:** Infrastructure 15
- ▶ **Issue 4e:** Accommodating commercial needs 16
- **Additional Issues for Congress 16**
 - ▶ **Issue 5:** Preservation of long-range ballistic missile capabilities 16
 - ▶ **Issue 6:** The invisible lower industrial tiers 16

Critical Decision Points 17

The National Space Transportation Policy: Issues for Congress 19

Introduction 19

- The U.S. Space Transportation Technology and Industrial Base 21
- The National Space Transportation Policy and Its Implementation Plans 25

Meeting the Fundamental Objectives of the Policy 26

- **Fundamental Objective #1:** Space Transportation Funding and the Division of Responsibilities 26
 - ▶ DOD 27
 - ▶ NASA 31
 - ▶ Issues for Congress 42
 - Issue 1a:** Divided responsibility and inter-agency coordination 43
 - Issue 1b:** Potential conflicts and redundancies 44
 - Issue 1c:** HLVs drive the EELV program 48
 - Issue 1d:** RLV development 49
 - Issue 1e:** SSTO? 51
 - Issue 1f:** Space Shuttle—beyond 2000 55
- **Fundamental Objective #2:** U.S. Use of Foreign Launch Systems and Components 56
 - ▶ Incorporating Foreign Technology into U.S. Launch Systems 58
 - ▶ U.S. Government Use of Foreign Launch Systems 59
 - ▶ International Trade in Launch Services 62
 - ▶ Issues for Congress 69
 - Issue 2a:** Effects of the use of foreign launch technologies on the U.S. aerospace industrial base 69



