

## **1. EXECUTIVE SUMMARY**

This study identifies dominant characteristics, strengths, and weaknesses for a range of non-government organizations (NGO) for managing the utilization of the U.S. elements of the International Space Station (ISS). The five viable options, listed in order of increasing independence from NASA, are NASA Institutes, Consortia, Government Corporations, Government Sponsored Enterprises, and Cooperative Associations. Examples are given for each option highlighting their primary distinguishing characteristics. Most afford financial and management flexibility, relief from restrictive regulations, and some operating cost reduction possibilities. For most, enabling legislation will be required dealing with a) commingling commercial objectives with more traditional research and development, b) liability waivers and indemnification guarantees for its semi-private status, c) exemption from (some) procurement regulations and the Freedom Of Information Act, and d) joint-tenancy for ISS resources with NASA and its International partners.

Non-governmental sources of non-recurring and recurring funds are identified for each option but subsidies and grants will undoubtedly be important in the early phases of ISS operation. In the longer term, self-sustaining operation of the ISS facilities will depend upon the commercial sectors success in using the ISS. Two sources of funding are particularly noted, viz., royalties derived from sales of products created using ISS-developed technology, and access fees for discretionary use by commercial entities. The start-up funding depends upon the approach used to establish the NGO. The approaches identified, in addition to either state or federally mandated, are procurement contracts, grants, cooperative agreements, and Other Transactions.

## **2. INTRODUCTION**

The purpose of this study is to characterize the different organizational options for managing the utilization of the International Space Station and define metrics or features for selecting an optimum approach which is consistent with the objectives and terms stated in the Space Act. The term utilization refers to all activities leading to and performing research, technology development, and commercial process development either as an ISS attached payload or within the pressurized laboratories.

The reduction of costs to provide greater access to space and encourage the growth and innovation of scientific research is a primary aim of the Space Station utilization plan. It is generally assumed that reducing the cost of integration, qualification and launching of payloads encourages greater industry participation and public interest in the Space Station. However, we also need to seek innovative ways of conducting business in order to realize meaningful cost reductions.