



SPACE OPERATIONS, INC.

Executive

Summary

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Point of Contact

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PREFACE

Space Operations, Inc (SpaceOps) is a locally (Huntsville, Alabama) owned and operated company that was established to provide reliable, and technologically sophisticated spacecraft hardware focused on fulfilling the needs of carrying flight crews and vital cargo into space. The Corporation will develop, operate and maintain spacecraft vehicles for use by the U.S. Government, major prime contractors, satellite manufacturers, and other organizations or individuals with a requirement or a desire for space flight.

SpaceOps will use proven flight rated technologies and the latest modern avionics and flight systems available for integration into SpaceOps' newly manufactured flight vehicles. Each vehicle will be fully tested and certified for flight safety by the FAA.

This Business Plan outlines the business, market, technical, financial, and regulatory factors for growing SpaceOps into a robust and substantial corporation. It is important to recognize however, that this plan is only a point of departure for what will necessarily be a dynamic process in a rapidly changing market place. While the authors of this plan have exercised diligence in their efforts and are confident that the scenarios described herein are reasonable and feasible, we have not carried out all of the final negotiations, agreements, and other detailed steps that will be necessary to implement this Plan. It is likely, therefore, that the implementers of the plan will be faced with opportunities and decisions that could differ from the exact conditions and precise sequence of events we have described.

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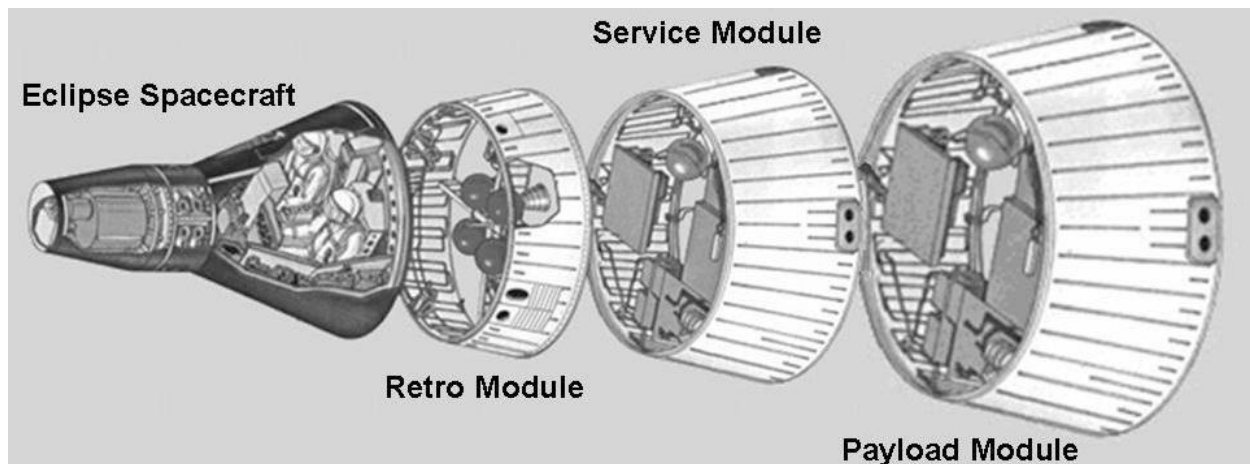
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1.0 EXECUTIVE SUMMARY

Space Operations, Inc (SpaceOps) has been established to satisfy a growing worldwide demand for reliable, affordable, and high quality spacecraft vehicle capacity for carrying flight crews and vital cargo into space. This Business Plan represents SpaceOps' business strategy and objectives to become operational in an emerging and dynamic space flight marketplace. The Plan contents have been developed to provide evidence of the validity and soundness of this endeavor.

1.1 Concept

SpaceOps will utilize previous flight rated and proven technologies to form the basis for manufacturing spacecraft vehicles, and will incorporate the latest modern avionics and flight systems for ensuring safety, reliability, and economical operation. Utilizing the best technology and lessons learned from NASA's Mercury, Gemini, and Apollo Programs will help to develop the new design for SpaceOps' soon to be manufactured spacecraft "Eclipse". The spacecraft will be designed to carry two crew and approximately 10,000 pounds of cargo, depending on the ultimate weight of the spacecraft.



The business model is built to solve the problem of 'blank sheet design' that all other industry players' battle. The Eclipse spacecraft will be a 21st Century version of the Gemini. The structure will be nearly identical to the original NASA plan with avionics and electronics substituted for modern 'off-the-shelf' products that need only be integrated. The research and development activities which typically take decades and billions of dollars have already been completed. In fact, the Gemini has flown thirteen times previously and is already man-rated. SpaceOps has 90% of the original plans converted to a 3-D CAD model. Phase 1 of the business model is approximately 50% completed.

SpaceOps is entering into a Space Act Agreement with NASA. The agreement, which is in the first draft stage as of this writing, will allow SpaceOps to engage NASA facilities, technicians and engineers for some of the manufacturing and system engineering work on the project. The NASA space flight centers, especially Marshall in Huntsville, Alabama and Johnson in Houston, Texas, have many hundreds of available engineers and technicians available for

hire. Additionally, they have specialized manufacturing processes and assembly facilities available for rent.

SpaceOps was established to fill a significant void of readily available modern-day spacecraft in the United States. With the retirement of the Space Shuttle Program, the United States is relying on the Russian Soyuz to launch American crews and cargo into space. Relying on Russian flight hardware to maintain the Space Station is considered by many American space experts as risky, extremely expensive, and politically sensitive. SpaceOps' Eclipse spacecraft will offer an economical and safe alternative for U.S. Government agencies, prime contractors, satellite manufacturers, and other organizations or individuals having a desire or requirement for space flight.

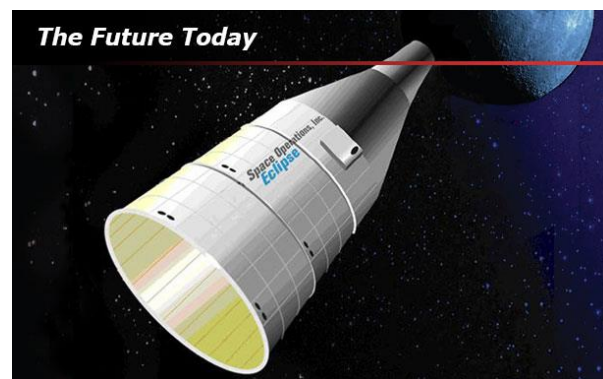
Launch operations will be conducted by proven, certified contractors that have the experience and capacity for safely launching a fully loaded (including crew and cargo) Eclipse spacecraft into orbit. As a result of outsourcing the launch role to a major contractor, SpaceOps can concentrate on crew flight training, planning cargo capacity, and preparing flight manifests, and will as a result, avoid the expense of maintaining a launch operation on a daily basis. In addition, by outsourcing the spacecraft manufacturing, SpaceOps can avoid spending millions of dollars on facilities and equipment infrastructure and engineering manufacturing expertise.

1.2 Mission

SpaceOps' mission is to ensure that reliable, technologically-sophisticated, competitively-priced flight certified spacecraft are developed and properly maintained while performing their assigned space mission. The company will provide a carefully selected array of technologies that are capable of meeting the stringent requirements of traveling into earth orbit. SpaceOps will emphasize affordability, reliability, safety, customer service, and responsiveness in responding to customer's space requirements.

1.3 Background

SpaceOps is a professional spacecraft services company providing support to government agencies, foreign nation space programs, major corporations and other users with a requirement for traveling into earth orbit. Our broad base of expertise enables us to manage the complicated aspects of spacecraft in orbit services from design and construction, through implementation, operations, recovery, and maintenance. Our experience with innovative technologies, combined with attention to quality and detail, enables us to design and implement a state-of-the-art spacecraft and provide space travel services for our customers on schedule and within a competitive price range.



In spite of present economic trends and downturn of NASA and spacecraft engineering companies, there continues to be a major demand for orbital space travel. This growth is in

part, a result of the explosive use of satellite launches by other countries now entering into competition with the United States. As the demand for space travel and maintenance of Space Station systems and satellite repair grows, so does the need for quality and price-competitive manufacturing of new spacecraft vehicles. Customers are demanding more dependable, economical, and trustworthy spacecraft companies that can provide the services necessary to meet their requirements in orbit while maintaining and enhancing their business profitability. By utilizing existing proven and tested designs from previous NASA Programs, SpaceOps will be able to save hundreds of millions of dollars, and will be able to offer its customers an affordable in-orbit alternative to relying on the Russian Soyuz spacecraft.

1.4 The Company

Although officially founded in January, 2011, as a “C” corporation, SpaceOps has been in the planning and development stage since CY2006. The founders have been actively proving the concept of developing a spacecraft that is safe, reliable, and economically efficient. Once the planning for developing the spacecraft was complete, and the feasibility of the methodology and concept proven, the founders officially incorporated the company. The company is privately held by a group of investors/shareholders, officers, and Board of Directors.

The company’s primary goal is to provide spacecraft services that are either not readily available or not available at a reasonable cost and within a reasonable time frame. To meet this challenge, SpaceOps will:

- Partner with Launch Operation Contractors and Hardware Manufacturers in offering spacecraft services.
- Leverage the best of current technology, thus creating a spacecraft that is reliable, capable, cost effective, and of the highest quality.
- Fully utilize the benefits of new technologies that are not widely employed by existing spacecraft developers and/or were not available two or three years ago.
- Carefully select target market segments and tailor the range of service offered to those markets.
- Establish credibility, confidence, and long-term customer loyalty by fostering the rapid development of a fully-redundant, high capability spacecraft that is specifically designed for satisfying and meeting in-orbit requirements.



1.5 Target Market

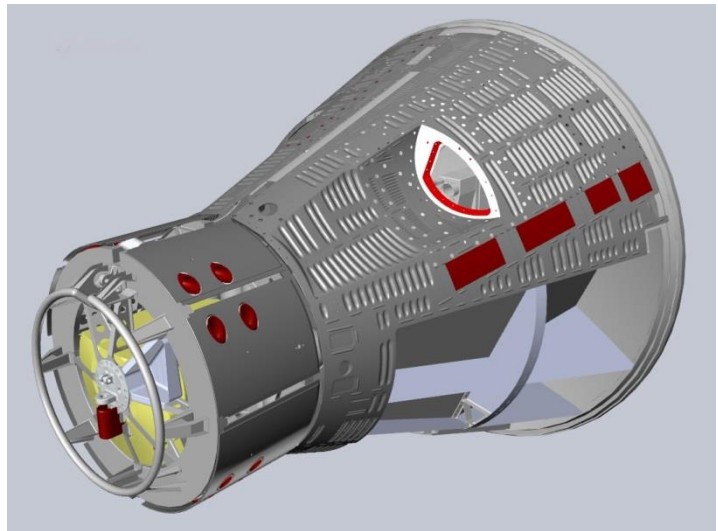
SpaceOps will place special emphasis on marketing the U.S. Government and their agencies, in providing spacecraft services for shuttling astronauts back and forth to the International Space Station, construction and replenishment of space stations, satellite deployment and servicing, and debris de-orbiting. Marketing efforts will also be placed on

supporting manufacturers of satellites and organizations and individuals having a requirement or a desire to travel in space. Although the United States Government will be given first priority for seats and cargo on the spacecraft, whenever the U.S. government has no immediate requirement, other countries, companies, and individuals will be given an opportunity to reserve a seat and/or cargo space.

A major objective of SpaceOps is to propel the company into a prominent market position with steady growth over a relatively short period of time. The current industry demand for spacecraft access combined with the growing interest in the next-generation infrastructure, places SpaceOps in the right industry at the right time. The company will secure contracts one year in advance of launch date for crew seating and cargo reservations. This time period will be utilized for mission planning, crew training for assigned tasks, and preparing the spacecraft for the launch mode.

The plan to position the company is well underway. The company has:

- Identified the major users having in-orbit space travel requirements.
- Organized the users into groups and identified their common needs.
- Conducted meetings with partnering contractors to discuss major milestones and schedule completion dates.
- Conducted meetings with former astronauts on crew requirements and potential customer spacecraft users.



1.6 Management

The present management team consists of experienced professionals who have successfully managed and operated companies specializing in the aerospace industry for a number of years. Their knowledge and contacts within the space industry will prove invaluable in assisting SpaceOps in the achievement of its goals and objectives.

All individuals on the team are highly experienced in the major components that make up a spacecraft development organization, and have unique experience in the design, construction, operations, and maintenance of the major functions associated with developing spacecraft for launching into orbit. The Eclipse Spacecraft will be built and maintained utilizing the same high standards of quality, within budget, and well within time constraints.

1.7 Board of Directors

The SpaceOps Board of Directors membership includes the following individuals:

- Craig Russell Chairman of the Board
- Al Reisz Board Member
- Bonnie Whiteaker-Russell Board Member

Additional members may be appointed by the Board in the future to add certain space industry expertise in assisting the corporation in meeting its goals and objectives.

1.8 Board of Advisors

In addition to the Board of Directors, SpaceOps has recruited experts in the various aspects of manned space flight to serve as advisors. The advisors role is to provide design review, question business and engineering assumptions, facilitate introduction to business and political allies, and provide historical context to original design decisions. These advisors have deep roots in the space business, many working directly with and alongside Dr. Wernher Von Braun and other original rocket team members of the Mercury, Gemini, and Apollo programs. SpaceOps is honored to have the valuable input from these respected and knowledgeable space veterans.

Gordon Woodcock - Gordon Woodcock has been an important contributor to engineering and studies of space exploration and technology development. He has published ~ 100 books and articles including the books Space Stations & Platforms and Space Exploration: Mission Engineering. Some of Mr. Woodcock's articles have even made it into popular venues: an article from the late 1970s in Analog magazine was later reprinted in a book by Robert Zubrin, in which he briefly discussed his study of the occultation technique. Earlier, in the mid-1970s, while a study manager on future space transportation systems, his work on analysis and design of an occulting spacecraft was included as part of the contractor report. Articles by Mr. Woodcock can be found in Resources of Near Earth Space and Solar Power Satellites, and New Destinies: The Paperback Magazine, Volume VII / Spring 1989, among others. Mr. Woodcock has served on several NASA advisory and review committees throughout the latter decades of the 20th century.

William L. Peters - Bill Peters has over 45 years of operational and engineering experience on space related programs. He worked in Mission Control and Engineering directly for NASA for 24 years at the Johnson Space Center (formerly known as the Manned Spacecraft Center) in Houston, TX. He was a flight controller on the Gemini-Agena program, a flight controller and supervisor on the Apollo Lunar Module and Extra Vehicular Activity (EVA) systems, a manager on the Apollo-Soyuz Test Project, the Johnson Space Center leader of the unmanned Skylab reorientation and reentry operation in 1978, the NASA Test Director for the Space Shuttle Avionics Integration Laboratory (SAIL) verifying Space Shuttle avionics hardware and software, and the Systems Engineering Manager for the Space Shuttle Remote Manipulator System (RMS). Mr. Peters worked for 11 years at the Marshall Space Flight Center in Huntsville, AL, as the Chief Engineer on the Spacelab manned module and the unmanned United States

Microgravity Payload, and was Project Manager of the International Space Station Multi-Purpose Logistics Module (MPLM), which has flown inside the Shuttle many times to take cargo to the International Space Station, and as Project Manager for the Spacelab Logistics Pallet, which took the Pressurized Mating Adapter number three to the International Space Station.

Ed Kiker – Ed Kiker is the General Engineer in the Office of the Chief Technology Officer at the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command at the command headquarters in Redstone Arsenal, Al. He is also the Chief Scientist at Kepler Space University.

Additional members of the advisory team include: Herb Guendel, Frank Arena, Gert Schmitz, Ed Keith, Manfred Segewitz, Dan Weiss, and Dr. John Bossard.

1.9 Financing Requirements

Funding requirements for SpaceOps' design, manufacturing, training and launch of the Eclipse spacecraft will be spread over three phases. Phase 1 will cover the design of the spacecraft and associated costs for personnel, supplies, equipment, and the development of flight crew procedures. Phase 2 will pertain to the actual manufacturing of the spacecraft, adding modern avionics, flight systems, safety features and training. Phase 3 will be utilized for launching the spacecraft into orbit and will include the cost of recovery of the vehicle. The minimum funding required for each phase is as listed below:

In utilizing pre-existing (public domain) drawings, proven technologies, and materials, Phase 1 funding has been considerably reduced. Phase 2 will overlap onto Phase 1 and Phase 3 will overlap onto Phase 2 because some milestones will require startup in the previous phases in order to meet launch target milestones. SpaceOps is looking for a total investment of \$130,000,000 to take the company through all three phases of start-up activity. The company is looking for private investors as well as traditional and alternative market lenders.

The company needs a minimum of \$10,000,000 for the completion of Phase 1, an additional \$50,000,000 for Phase 2, and \$70,000,000 for Phase 3. This funding scenario will lengthen the time frame for getting to Phase 3, but will reduce the risk for the investors. Due to the nature of the manufacturing processes, specialized materials which require long lead times, and launch system pre-payment requirements, the process time-frame can be shortened

with additional Phase 1 funding. An ideal funding scenario would be \$40,000,000 for Phase 1 and \$60,000,000 for Phase 2 and \$30,000,000 for Phase 3. In the best case performance scenario where sales goals are met, Phase 3 funding would be reduced or possibly eliminated.

SpaceOps is looking for local, national, and international investors to fund the company operations. The company expects to begin paying off investors in year 3.

1.10 SpaceOps' Keys to Success

The identified major tasks that are necessary for the SpaceOps Organization to be successful are as follows:

- Identifying a critical mass of high probability customers.
- Establishing an efficient organization and obtaining necessary financing.
- Staffing the organization with dedicated employees and managers who have the required technical and business skills.
- Obtaining all necessary leases, agreements, permits and licenses in a timely manner and on reasonable terms.
- Forming partnerships or alliances to share risks. (Launch Operation agreements, manufacturing agreements, et al.)
- Establishing marketing channels and overcoming barriers to entry.
- Controlling costs to meet or exceed pricing objectives.
- Leveraging the best of current and newly-developed technologies to build a top-quality space craft that can be deployed quickly and cost effectively.