

# SPACE OPERATIONS, INC.

# **BUSINESS PLAN**

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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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#### **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 21<sup>st</sup> 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, competitivelypriced 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 as 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 Keplar 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 \$100,000,000 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 \$3,000,000 for the completion of Phase 1, an additional \$50,000,000 for Phase 2, and \$47,000,000 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. The ideal funding scenario would be \$25,000,000 for Phase 1 and \$40,000,000 for Phase 2 and \$35,000,000 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.

# 2.0 SpaceOps Organizational Summary

SpaceOps is incorporated as an Alabama business and is privately held by investors, shareholders, officers, and board members of the corporation. The company's structure is based on proven and successful organizations within industry and U. S. Government agencies that had similar challenges for developing spacecraft to be launched into orbit. Although most of the historically proven organization structures were based on major government space programs, SpaceOps has recognized their spacecraft development is a commercially driven program, and does not have unlimited funds that were available to past government programs. As a result, SpaceOps has carefully chosen a cost effective and efficient structure that will help to ensure that the Eclipse Spacecraft Project is a successful endeavor.

#### 2.1 Business Structure

The Company will partner with other aerospace companies to complete the engineering and production work necessary to build the Eclipse spacecraft. Because it is anticipated that the majority of the customer base will be U.S. Government Agencies, SpaceOps will acquire a government approved auditable accounting system to track all expenses and invoices.

#### 2.2 Management Team and Key Personnel

An experienced cadre of individuals will lead SpaceOps in accomplishing the company's challenge for launching Eclipse spacecraft into orbit. The key management team members have been carefully selected for their demonstrated commitment to quality and their dedication to principal. They have complimentary backgrounds, training, and skills that blend smoothly into a highly functional team that is consistently pro-active, visionary, pragmatic, responsive, and customer oriented. The team has proven itself time and again in starting up new businesses. They know the marketplace, the capabilities of the employees, and most important, they know how to succeed. Additional key management members will be brought into the company once adequate funding is available. The layoff of thousands of aerospace employees associated with the Space Shuttle and other government space programs has resulted in available engineers, scientists, spacecraft technicians, and launch operations personnel that can be recruited by SpaceOps.

#### The SpaceOps Organization Structure



#### **Board of Directors**

Craig Russell, Al Reisz, and Bonnie Whitaeker-Russell are members of the Board of Directors. Their biographies are listed below.

#### **Craig Russell – CEO**

Mr. Russell was the founder and President of, Americans in Orbit-50 Years (AIO-50), a nonprofit education organization with the mission of restoring access to orbit for universities to enable student payloads to be launched into orbit on a regular basis. He created and implemented the International Space Science Education Program (ISSEP). Partnering with the University of Alabama, Huntsville's Dept. of Mechanical and Aerospace Engineering (MAE), students have had the opportunity for "hands on" experience with several ISSEP projects since 2009.

He flew as a pilot for the USAF until 1981 and was dual qualified in both the KC-135 and the T-38 jet aircraft. After leaving the Air Force, Mr. Russell flew corporate aircraft in Huntsville, Alabama. In 1987 he began flying for commercial airlines and retired in 2005. He has over 9000 hours flying time in various aircraft from the B-767 to small seaplanes.

Mr. Russell has been a life-long advocate for space exploration, and recruited recognized space professionals from across the country, to serve as advisory panel members for the AIO-50 organization. As a graduate of the U.S. Air Force Academy, and a certified pilot, he has an excellent working knowledge of both aircraft and spacecraft systems and operations.

#### AL Reisz – Board Member

Mr. Reisz has over thirty years experience in the engineering of industrial and aerospace systems. He has provided engineering design, development and consulting services to industrial corporations and government agencies. The government agencies include The Tennessee Valley

Authority, the US Army Corps of Engineers, the US Army Missile Command, the US Department of Interior, the Southern Naval Facilities Command and NASA. Mr. Reisz has engineered, consulted and served in an advisory capacity on projects that include the International Space Station, missile systems, power plants, airports and industrial processes. His industrial clients have been in the automotive, aerospace, food processing and chemical sectors. His automotive clients include the Chrysler Corporation and Mercedes Benz. For the Chrysler Corp. he helped develop the improved 4-cylinder engine ignition system. He currently is heading up the Reisz Engineers – University of Michigan team effort in developing an improved in-space propulsion engine for NASA deep space missions.

Mr. Reisz was a propulsion engineer with the Boeing Co. in Huntsville during the development and launching of the Saturn V, the launch vehicle of the Apollo lunar landing program that landed men on the moon. He was recognized for his work on the Saturn V development by Boeing and NASA. During the Apollo program he was involved with the development of the J-2 engine. He developed the program for determining the optimum fueloxidizer valve settings and calculated mixture value shift times and engine cutoff times during the J-2 engine firings. In the early seventies he was an engineer with the Skylab program that was built from the Saturn V third stage and used photovoltaic panels to provide mission electricity. Previously, Mr. Reisz served as a Lieutenant with the U.S. Army. He has authored and co-authored several published technical papers relating to his professional work. His technical papers have been presented at Winter Annual Meetings of the American Society of Mechanical Engineers and at other technical symposiums. He is the author of a cover article "Earthrise", co-author of "Engines for the Cosmos" and author of "To Go Beyond", an article on space propulsion for "Mechanical Engineering", the publication of ASME. He is also Author and co-author of several papers presented at the American Institute of Astronautics and Astronautics Joint Propulsion Conferences. He was recognized by Boeing and NASA for his work on the Apollo lunar landing program. His military decorations include the United States Meritorious Service Medal.

Al Reisz was the 2011 AIAA Hermann Oberth Award recipient.

#### **Bonnie Whitaeker-Russell – Board Member**

Ms. Whitaeker-Russell brings a great deal of business expertise to the board. She spent her career working in all aspects of business, from developing a business plan, budgeting, implementation and support. Bonnie was the Director of a major revenue-generating department at Dun & Bradstreet Software, (DBS). Her expertise included software development, maintenance, support, and education, for both the domestic and international markets. Bonnie relocated to Toronto, Canada to head up the Human Resource Division of DBS Canada. During her last five years with DBS, she relocated to Atlanta, Georgia where she directed all activities and functional areas related to worldwide Education and Training. After retiring as a Senior Director, from DBS, Bonnie founded ECHO Professional Services, Inc., a software consulting company.

#### 2.3 Facilities and Corporate Headquarters

Presently, SpaceOps Corporate Headquarters is located in the Huntsville, Alabama at 2901 Wall Triana Highway, Suite 200, Huntsville, AL 35824-1529. Once adequate funding is obtained, SpaceOps will relocate its corporate offices in the Huntsville area to acquire the necessary facilities to include the offices of the CEO, President, and Vice Presidents and their staffs. The functions of human resources, finance, and contracts will also be located in the main corporate office building in addition to any staff engineers.

Upon the completion of several studies and analysis of the Eclipse Spacecraft Project,

SpaceOps determined that the best course of action would be to outsource the manufacturing of the spacecraft vehicles (3), launch operations and spacecraft recovery functions. This management decision will save hundreds of millions of dollars in cost avoidance by having existing manufacturers, and proven launch contractors perform these function. SpaceOps will acquire facilities for management, design engineers, flight crew training personnel and spacecraft technicians required for ensuring the safety, quality, and efficient operation of the spacecraft.



#### **3.0 Products and Services**

SpaceOps will develop three (3) Eclipse Spacecraft which will have the capacity to carry two (2) crew members and 10,000 pounds of cargo/payload into earth orbit. Most of the technology and design drawings pertaining to the proposed spacecraft have already been

developed, and have been flight-certified by NASA, and are now available to the general public. SpaceOps proposes to utilize this existing data and provide up-todate flight systems, avionics and communications modifications, and develop a modern space craft. SpaceOps spacecraft will be patterned after NASA's Gemini capsule technology and the lessons learned from the NASA Mercury, Gemini and Apollo programs. By utilizing this approach, and not having to re-invent new technology, SpaceOps will save hundreds of millions of dollars in research and development costs to its shareholders. Most space experts will agree, that the design of the spacecraft vehicles mentioned above, is the safest and most productive for earth orbit operation.



The Eclipse Spacecraft will service six important customers: (1) the U.S. Government and foreign country governments needing transportation for astronauts to the International Space Station; (2) tourists that want to travel in space and are willing to pay the premium price; (3) those companies and government agencies having a requirement for satellite servicing; (4) new

Satellite deployment; (5) the U.S. Government and private contractors having a requirement for new and existing Space Station construction and resupply modifications; and (6) space debris de-orbit. Revenue for these services will come from two important sources: (1) selling crew member seats; and (2) selling cargo/payload space. Presently, the U.S. Government purchases seats on the Russian Soyuz Spacecraft and pays \$63M per seat. SpaceOps proposes to charge \$60M per seat and \$5,000 per pound of cargo. Therefore, with a two seat capacity and assuming 10,000 pounds of cargo space, SpaceOps could conceivably generate \$150M in revenues for each launch of the Eclipse Spacecraft. It should also be noted, that a nine (9) person backlog presently exists for tourists wanting to travel on the Russia Soyuz Spacecraft. In order to accommodate the nine tourist backlog, Russia could take as long as six (6) to ten (10) years depending on available Soyuz Spacecraft seats. The most recent seat sold to a tourist by the Russians was for \$150M to travel around the moon and back. It is evident, that this data indicates wealthy tourists are willing to pay premium prices to travel in space, in addition to government agencies and companies that have business reasons to pay a premium to travel in space.

#### **3.1 Product Description**

SpaceOps Eclipse Spacecraft will have a similar appearance (exterior) of NASA's former Gemini Capsule, but will have major differences in technology on both the exterior and interior of the space craft. Whereas, Gemini landed in the water on its return to earth, the Eclipse Spacecraft will be recovered on land. Although SpaceOps is using a large amount of the same technology as NASA's Gemini, the Eclipse Spacecraft will include modern up-to-date operating systems that will make the spacecraft much safer and more productive while in earth's orbit. Like the Gemini, the Eclipse Spacecraft will be able to maneuver from one satellite to another in order to make necessary repairs, and will be able to dock with the International Space Station for resupplying the station and/or making modifications to the Station's Operating Systems.

#### **3.2 Markets**

Space Operations plans to participate in markets from three major sources, seats, space cargo and de-orbit missions. The markets, described below, are broken down as such:

#### Seats

3.2.1 Astronaut Transfer3.2.2 Space Tourism3.2.3 Satellite Servicing

#### **Space Cargo**

3.2.4 Satellite Deployment

3.2.5 Space Station Construction & Supply

#### **De-Orbit Services**

3.2.6 Space Debris De-Orbit

3.2.7 ISS Cargo Transfer

#### **3.2.1 Astronaut Transfer**

The final NASA Space Shuttle, Atlantis STS-135, launched on July 8, 2011. With this launch, the United States will exit the low earth orbit manned spaceflight business. U.S. astronauts will be forced to depend on the Russian Soyuz to get to and from the International Space Station. The U.S. Government contracted with Russia to pay \$63M per seat for our astronauts to ride on the Soyuz.

The shuttle program averaged 3.5 missions per year over the past five years with 6 astronauts per mission. Some of these astronauts were from foreign nation space programs. These 21 seat opportunities per year ceased after STS-135 with no reliable substitute source available for American and other foreign nation space programs.

#### **3.2.2 Space Tourism**

Once a fantasy of Johnny Quest, space travel for private citizens has been a reality since April 2001, when Dennis Tito flew on a Russian Soyuz on a 7-day orbital mission at a cost of approximately \$20M. The last private flight in September 2009 is believed to have cost Guy Laliberte approximately \$45M. The U.S. Government has contracted with Russia to pay \$63M per seat per flight. The demand for private orbital space flight continues to increase. With the ending of the U.S. space shuttle program, the United States and other foreign nation space programs will be looking to the Russians to absorb some of those flight opportunities leaving space tourists with virtually no available supply.

A survey of space tourism by space travel agency Space Adventures concluded that approximately 140 private individuals will travel in space through 2020. The study, along with analysis by Futron, an aerospace and technology consulting firm in Bethesda, Maryland, concluded that the biggest obstacle is not the \$20 - \$50 million price tag, but the availability of seats.

#### **3.2.3 Satellite Servicing**

Approximately 1,000 satellites circle the earth providing service to governments, militaries, and private companies. These organizations currently have no way to service their satellites should a failure occur. At an average deployed cost of \$148M, disposing of a failed satellite is a costly proposition (According to a 2008 study by Euroconsult, Paris, France). Replacing a dead battery, refueling or other on-orbit repair is a cost effective solution compared to building and deploying a new satellite. The primary target for satellite servicing is satellites residing in Low Earth Orbit. Approximately 470 satellites orbit in the rage of 250 – 750 miles. Many of these satellites are owned by military and government entities. Currently, no service is available to service satellites.

#### **3.2.4 Satellite Deployment**

According to a 2008 study by Euroconsult, a Paris, France space consulting company, for the ten year period ending 2018, approximately 1,200 satellites are expected to be launched, a nearly 50% increase over the previous ten year period. While the average mass is expected to decrease to 4,166 pounds, the average launch price of approximately \$51M is expected to remain steady, assuming no new launch supply is available.

#### 3.2.5 Space Station Construction & Supply

Several companies have plans for future construction of new space stations located in low earth orbit. The most prominent is Bigelow Aerospace with plans to launch and test an inflatable station "Sundancer" in 2014. NASA has given SpaceX a \$1.6B contract for twelve flights through 2016 to resupply the International Space Station. While SpaceOps has no current plans to compete with SpaceX on resupply contracts for the ISS, we could serve as a backup alternative or would make additional cargo space available to NASA for ISS resupply.

#### **3.2.6 Space Debris De-Orbit**

In the future, large programs like NASA, the U.S. military and likely the international space community will put together programs to start cleaning geostationary orbit (GEO) and low earth orbit (LEO) space. The U.S. Army office of Space and Missile Defense Command has expressed interest in working with Space Operations to develop a program to de-orbit 'dead' satellites. These 'dead' satellites pose a threat to large-scale communication systems, military and secret government systems.

The Defense Advanced Research Projects Agency (DARPA) made a study called "The Catcher's Mitt Study" to address the orbital debris problem and find solutions. The central finding of their study was to remove the large debris from LEO and GEO preemptively. While space stations and craft can maneuver around and away from debris large enough to track, the large debris itself has no control and is in danger of crashing into other debris creating more and more small objects too small to track and therefore avoid. Travelling at over 17,000 miles an hour, even a very small object like a bolt or flake of paint can cause catastrophic damage to orbiting systems and craft.

Further complicating the problem, the sun is entering the active period of its elevenyear weather cycle. The peak of this solar activity will occur in 2012 and 2013 causing the Earth's atmosphere to expand and increasing drag on orbiting objects. This is especially dangerous as higher altitude debris begins to 'rain down' on spacecraft in lower orbits. With over 500,000 pieces of debris larger than a marble, the issue is real and serious. From DARPA's study, "...failure to address this problem has significant implications for the success of future space missions due to the potential increased number of on-orbit collisions with non-trackable, yet lethal, debris fragments."

#### **3.2.7 International Space Station Cargo Transfer**

With the United States cancelling the shuttle program, a tremendous loss in mission capability now inhibits the ISS. One of the largest losses is the ability to bring experiments back to earth and swap material and equipment. Even as the Russians exert over-reaching control of the ISS operations, several groups are lining up to bring supplies to the station. However, no one can bring cargo back from the station.

SpaceOps has begun discussions with NASA to enter into a Space Act Agreement to modify our cargo module to allow for delivery of ISS cargo back to earth. The capability has been accomplished by loading ORU's (Orbital Replaceable Units) into the cargo bay of the shuttle. These special cargo containers are used for packing replacement equipment, spare parts and experiments for transfer back and forth between Earth and the ISS.

Equipment used on the ISS is highly specialized and quite expensive. Equipment that is broken or in need of service is transferred back to Earth for the necessary work and readied for re-use. Likewise, valuable experiments conducted in the low gravity environment of the ISS need to be brought back to Earth for completion of those missions. Crystals and other substances 'grown' on orbit have no value until delivered to their sponsor for further research or application on Earth.

#### 3.3 Product/Services Competition

There is little doubt that Russia's Soyuz Spacecraft offers competition to SpaceOps' Eclipse Spacecraft Program. Earlier in this Plan, we discussed the backlog that Russia has in its tourist seats for the Soyuz Spacecraft. SpaceOps however, has the benefit of the Commercial Space Act of 1998 that states: "The Federal Government shall acquire space transportation services from United States commercial providers whenever such services are required in the course of its activities. To the maximum extent possible, the Federal Government shall plan missions to accommodate the space transportation services capabilities of United States commercial providers." The obvious reasons for Russia's success in selling seats to tourists and to United States Government or to our businesses. SpaceOps has to immediately take advantage of this Space Act and develop the capability for crews and cargos to be launched into earth orbit. Once this occurs, SpaceOps will have very little competition, especially in the government and business sector of the United States. The majority of satellites and crews launched into space are for U.S. businesses and government agencies. This marketplace will be available to the SpaceOps Spacecraft upon it first successful launch.

In addition to the Russian Soyuz, five companies have or are intending to develop crew capsule capabilities. Those companies are:

- SpaceX located in Hawthorne, California, Space Exploration Technologies (SpaceX) has successfully launched five "Falcon 9" rockets from Cape Canaveral since 2010. In addition to being our partner for launch services, they are attempting to develop a crew capsule ("Dragon") capable of carrying seven (7) crewmembers and a 13,200 pound cargo to low Earth orbit. SpaceX received \$22M in second round funds from NASA's Commercial Crew Development Program (CCDev-2).The Dragon capsule is expected to be ready for manned flights in 2017.
- **Boeing** headquartered in Chicago, Illinois, Boeing is developing an Apollo-style Crew Space Transportation capsule ("CST-100"). Boeing was awarded \$92M in CCDev-2 funds and expects to fly the CST-100 by 2017 2018.
- Sierra Nevada Corp. headquartered in Sparks, Nevada, a top Woman Owner Government Contractor, Sierra Nevada Corp. (SNC) was awarded \$80M in CCDev-2 funding to further develop its "Dream Chaser" space plane. The Dream Chaser design, based on NASA's Space Shuttle, is reusable like the Shuttle. SNC has announced no release date for the Dream Chaser and is not considered a short-term threat.
- Blue Origin the Kent, Washington based Blue Origin was started by Amazon founder Jeff Bezos. The company received \$3.7M under CCDev (the original

funding in 2009) and another \$22M under CCDev-2. The company is extremely confidential in its operations and has not released any information about development schedule of its "New Shepard" spaceship. Original estimates suggested sub-orbital flights would begin in 2011. Blue Origin is not believed to be a short-term orbital flight competitor.

 Excabilar Almaz – located in Isle of Man, British Isles, Excalibur Alamz (EA) is focusing on a similar approach to SpaceOps except they are utilizing original Soyuz capsules that have been refurbished. It is believed that EA has only two (2) of the 50+ year-old Soyuz capsules for its use.



# **Eclipse Milestone Timeline Schedule**



# **3.4 Eclipse Launch Schedule**

The Launchschedule for SpaceOps' Eclipse spacecraft is depicted below.



# 4.0 Marketing Strategy and Implementation Summary

#### 4.1 Market Competitive Edge

SpaceOps' competitive edge stems from its desire to make superior products and services available to target markets in a timely manner and at prices far lower than the competition has traditionally been able to offer. With the 1998 Space Act, SpaceOps will have a competitive advantage for the next several years until NASA and/or other U. S. Government Agencies decide to develop spacecraft to carry larger payloads than the SpaceOps' Eclipse Spacecraft is capable. However, it may be more cost effective for the U.S Government to continue to utilize SpaceOps' vehicle due to the cost savings that would result and the great expense of starting up major government programs. Russia's Soyuz threat is minimized by the Space Act, and the country's nine tourist backlog indicates Russia already has limited capacity to satisfy new customers and maintain their own interest in space.

Upon having the Eclipse Spacecraft flight certified by the FAA, SpaceOps will have little competition from U.S. industry or other countries. The window of opportunity for SpaceOps is very important and the planning indicates that a three to five year window exists for the company to maintain the competitive advantage. The four major customers for SpaceOps' Eclipse Spacecraft are listed below.

- U.S. Government/NASA/Military and foreign government space programs seeking astronaut transportation to the International Space Station.
- Satellite Manufacturers and/or providers (Communications satellites, Observation, etc) seeking to service on-orbit satellites.
- Government Agencies/NASA/Commercial enterprises resupplying the International Space Station and construction of new space stations and the deployment of satellites.
- Tourist Travel (Wealthy individuals having the desire to go into space).

#### 4.2 Marketing Strategy

SpaceOps' marketing strategy is built around the competitive advantages described in the previous section. SpaceOps will respond with speed and agility to market opportunities. To accomplish this strategy, SpaceOps will perform the following:

- Demonstrate to customers that SpaceOps is using the latest technology to provide a top-quality spacecraft that is reliable, capable, and cost effective.
- Explain the benefits of new technologies that are not widely employed by other spacecraft developers.
- Partner with business, government, and/or third party service providers.
- Carefully select market segments and tailor the marketing effort to those segments.
- Establish credibility, confidence, and long term customer loyalty by rapidly deploying a fully redundant, high capability, space craft that is specifically designed for phased and orderly expansion as customer demand grows.

#### **4.3 Pricing Strategy**

As a local and an American initiative, SpaceOps enjoys the recognition and good will of the potential customers and partners who called for its creation. SpaceOps intends to carry out service and pricing policies that will sustain and build upon this advantage. SpaceOps has selected its markets so that it can offer specific services at prices well below those of its competitors. Utilizing previously tested and proven space technology, provides SpaceOps with a competitive advantage over all other countries except for Russia. The 1998 Space Act will minimize Russia as a major competitor as soon as SpaceOps has a successful launch. In addition, their own space missions utilize most of the available seats on the Soyuz missions.

The following prices have been established for SpaceOps' Eclipse Spacecraft in servicing its customers with a requirement to travel into earth orbit:

#### **4.3.1 Space Flight Seats**

Two seats for each flight after Test Flight (Flight 1201.01) will be sold assuming the following pricing:

SpaceOps will charge \$60M per seat for a standard orbital mission. Additional services, such as space walks (extra vehicle activity 'EVA') will carry an additional charge. While the Company is assuming that the price per seat will only increase for the term of the plan, they have shown a decrease in price per seat for the purposes of being extra conservative.

#### 4.3.2 Space Cargo

Cargo will be sold up to 10,000 lbs. Assume \$30M (10,000 Lbs. Cargo) per flight. The final flight weight of the capsule will determine the maximum cargo availability. For business planning purposes, assume a maximum cargo weight of 8,500 pounds. This is a very conservative cargo schedule. We assume at least 10,000 pounds of cargo will be available for each launch and that we will max out the capacity within a few percent of that available. In reality, we expect to have between 8,500 - 11,000 pounds of cargo per flight.

#### 4.3.3 Other Missions

No additional revenue has been predicted for the other missions described in section 3.2 of this plan. This market is expanding rapidly and the business model remains largely undefined. SpaceOps plans to be the first commercial company to enter into Space Act agreements for some of these markets, we have chosen to be conservative and omit this revenue from our plan. As no company has yet to enter into a contract to de-orbit space debris, service satellites or transfer cargo from the ISS back to Earth, the company has chosen to be conservative and add no additional revenue for this service. SpaceOps expect this business model to be robust.

#### **4.4 Sales Forecast**

The sales forecast for SpaceOps' Eclipse Spacecraft Services is located in the pro-forma in Attachment A to this Plan. The sales are based on how many launches are possible in each year of operation. The Launch Schedule is depicted in Section 3.4 of this Plan. The revenues generated for each launch are depicted in Section 4.3 "Pricing Strategy" depicted above.

# **4.5 Revenue Forecast**

	Spa	ce Operati	ons, Inc.		
	5 Year Reve	nue Projecti	ons (Millions)		
	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	\$0	\$194,375	\$519,750	\$660,250	\$795,000
Contract Services	22,750	115,125	207,875	297,500	358,417
Operating Expenses	3,952	10,078	21,629	25,902	30,609
NIBT	(\$26,702)	\$69,172	\$290,246	\$336,848	\$405,974
Income Taxes	•	15,289	101,298	121,265	146,151
Net Income	(26,702)	53,883	188,948	215,583	259,824
EBITDA	(26,580)	71,667	303,769	353,911	428,151



# 4.6 Cash Flow Forecast

	Space	Operatio	ns, Inc.		
5	Year Cash F	low Project	tions (Millio	ons)	
	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Collected	\$0	\$194,375	\$519,750	\$660,250	\$795,000
Contract Services	35,914	190,134	226,106	332,901	393,818
Operating Expenses	3,830	7,583	8,106	8,839	8,433
Income Taxes	-	15,289	101,298	121,265	146,151
Net Cash Flow	(39,743)	(18,631)	184,240	197,244	246,599





# 5.0 Financial Plan

		2	bace Operation	s, Inc.		
		•	rojected Balance	Sheet		
			Years 1 - 5			
ets		Year 1	Year 2	Year 3	Year 4	Year 5
Current Assets						
Cash		\$3,258,105	\$4,629,978	\$188,869,996	\$386,114,493	\$632,713,272
Accounts Re	eceivable	•	201,400,000	248,100,000	341,500,000	341,500,000
Inventory		•	•	•	•	•
Total Current Ass	ets	3,258,105	206,029,978	436,969,996	727,614,493	974,213,272
Fixed Assets						
Flight Hardv	vare		28,480,854	78,322,349	85,442,564	85,442,566
Property, Pl	ant & Eqpt.	684,989	684,989	684,989	684,989	684,989
(Less Acc. D	epreciation)	(122,309)	(7,364,831)	(29,092,397)	(58,062,485)	(94,275,095)
Total Fixed Asset	S	562,680	21,801,012	49,914,941	28,065,068	(8,147,540)
ral assets		\$3,820,785	\$227,830,990	\$486,884,937	\$755,679,561	\$966,065,732
oilities & Owner	's Equity					
<b>Current Liabilitie</b>	s					
Accounts Pa	iyable	22,437,333	9,115,267	9,115,267	44,162,999	44,162,999
Short-Term	Debt	•	•	•	•	•
Total Current Lia	oilities	22,437,333	9,115,267	9,115,267	44,162,999	44,162,999
Long-Term Liabili	ties					
Long-Term	Debt	•	•	•	•	•
Deferred In	come Taxes	•	•	•	•	•
Total Long-Term	Debt		ı		•	
Owner's Equity						
Shareholde	r's Capital	43,000,000	66,500,000	66,500,000	66,500,000	66,500,000
Retained Ea	rnings	(61,616,548)	152,215,723	411,269,670	645,016,562	855,402,733
Total Owner's Eq	uity	(18,616,548)	218,715,723	477,769,670	711,516,562	921,902,733
TAL LIARILITIES &	<b>FOUITY</b>	\$3,820,785	\$227,830,990	\$486 884 937	\$755,679,561	<b>5966 065 732</b>

# 5.1 Year 1 – Year 5 Projected Balance Sheet

					Space Pro Forn	e Operati	ons, Inc.						
						Year 1							
	Mo-1	Mo-2	Mo-3	Mo-4	Mo-5	9-0W	Mo-7	Mo-8	Mo-9	Mo-10	Mo-11	Mo-12	Year 1
TOTAL REVENUE													
Scharter Cartero										1			
Other						2	•						
TOTAL REVENUE	•		•				•			•		•	
Contraction of the Association o													
CONTRACT SERVICES Engineering Services	•	35,000	35,833	35,833	35,813	35,833	35,833	35,833					250,000
Capsule Refurb													
Launch Services			•				•			10,000,000		12,500,000	22,500,000
TOTAL CONTRACT SERVICES		35,000	35,833	35,833	35,813	35,833	35,833	35,833		10,000,000	•	12,500,000	22,750,000
OPERATING EXPENSES													
Advertising/Marketing		7,500	10,000	10,000	7,500	7,500	5,000	500	1,500	1,500	500	500	52,000
Bank Charges		25	22	25	22	22	25	22	25	2	25	25	275
Bldg Maint & Repairs			×	100	100	100	100	100	100	100	100	100	005
Business Insurance	•	8,000		•	3,650			25,000		•			36,650
Dues & Subscriptions			765	200	200	200	200	200	200	200	200	200	2,565
Depreciation	4	11,119	11,119	11,119	11,119	11,119	11,119	11,119	11,119	11,119	11,119	11,119	122,309
Employee Benefits		38,891	38,891	38,891	38,891	38,891	38,891	38,891	38,891	86,628	86,628	86,628	571,012
Equipment Leasing			602	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	10,387
Licenses & Permits	250	100	•		•		•	*				28,150	28,500
Office Expense	150	250	2,500	500	500	500	200	500	500	650	650	650	7,850
Office Salary		107,640	107,640	107,640	107,640	107,640	107,640	107,640	107,640	254,107	254,107	254,107	1,623,440
Officer's Salary		35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	385,147
Payroll Taxes	•	10,913	10,913	10,913	10,913	10,913	10,913	10,913	10,913	22,118	22,118	22,118	153,657
Payroll Expense		85	53	85	12	85	85	58	85	12	85	100	950
Director's Fees	•	•	•	•	•		•						
Professional Fees	1,500	5,591	4,091	4,841	4,091	4,091	4,291	4,091	4,091	4,291	4,091	4,091	49,150
Rent	200	500	10,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	101,500
Telephone/Internet			750	750	750	750	750	750	750	750	750	750	005'1
Travel & Entertainment	•	9,840	9,840	9,840	9,840	9,840	9,840	4,500	4,500	7,500	7,500	7,500	00'5'06
Worker's Comp Ins.	•	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	2,250	2,250	2,250	15,150
Start-Up Costs		255,364	103,612		•	•				262,385	71,128		692,489
TOTAL OPERATING EXPENSES	2,400	491,881	347,396	242,055	242,455	238,805	236,505	251,465	227,465	108'669	151'105	464,388	3,951,971
NET INCOME BEFORE TAXES	(2,400)	(526,881)	(383,230)	(277,888)	(278,288)	(274,638)	(272, 338)	(882,785)	(227,465)	(10,699,807)	(158'105)	(12,964,388)	(116,701,971)
Income Taxes	-												
NET INCOME	(2,400)	(188,852)	(383,230)	(277,888)	(278,288)	(274,638)	(272,338)	(857,785)	(227,465)	(10,699,807)	(158'105)	(12,964,388)	(116'101'92)

# **5.2 Income Statement Projections**

# 5.2.1 Year 1 Income Statement Projection

# 5.2.2 Year 2 Income Statement Projection

					Space	Operation	s, Inc.						
					Pro Form	na Income St	atement						
						Year 2							
	Mo-1	M0-2	Mo-3	Mo-4	Mo-5	M0-6	1.0W	Mo-8	Mo-9	Mo-10	Mo-11	Mo-12	Year 2
TOTAL REVENUE Astronaut Seats					10.000.000	30,000,000		30,000,000	10.000.000		30,000,000	10.000.000	120.000.000
Space Cargo		21,250,000				10,625,000	•	31,875,000				10,625,000	74,375,000
Other			1										
TOTAL REVENUE	,	21,250,000		•	10,000,000	40,625,000	•	61,875,000	10,000,000		30,000,000	20,625,000	194,375,000
CONTRACT SURVICES													
Engineering Services													
Capsule Refurb	•	•		•		•	•	000/005	2,375,000	1,583,333	1,583,333	1,583,333	7,625,000
Launch Services			22,500,000		12,500,000	12,500,000		2,500,000	22,500,000		12,500,000	22,500,000	107,500,000
TOTAL CONTRACT SERVICES	•		22,500,000	4	12,500,000	12,500,000		3,000,000	24,875,000	1,583,333	14,063,333	24,083,333	115,125,000
OPERATING DOPENSES													
Advertising/Marketing	650	000	000	650	650	009	650	650	650	650	650	650	7,800
Bank Charges	115	125	125	125	125	125	125	115	125	125	125	125	1,500
Bidg Maint & Repairs	125	125	125	125	125	125	125	125	125	125	125	125	1,500
Business Insurance		25,000		•	3,650	1,000,000		25,000	1,000,000		•	1,000,000	3,053,650
Dues & Subscriptions	750	750	1,575	750	750	750	730	750	750	730	750	750	9,825
Depreciation	10,193	10,193	10,193	10,193	10,193	10,193	405,760	405,760	405,760	405,760	405,760	405,750	2,495,720
Employee Benefits	87,355	87,355	87,355	87,355	87,355	65,356	165'85	165'85	165'85	165'85	59,054	59,054	854,605
Equipment Leasing	1,087	1,087	1,087	1,067	1,087	1,087	1,067	1,087	1,087	1,087	1,067	1,087	13,047
Licenses & Permits	615						•	•	•	•	•	28,150	28,765
Office Expense	650	059	659	650	650	659	650	650	650	650	650	650	7,800
Office Salary	265,763	265,763	265,763	265,763	265,763	281,233	140,313	340,313	140,313	340,313	140,313	140,313	2,451,930
Officer's Salary	38,515	38,515	38,515	\$15,82	38,515	48,048	48,048	48,048	48,048	48,048	57,677	57,677	548,167
Payroll Taxes	23,277	23,277	23,277	23,277	23,277	25,190	14,410	14,410	14,410	14,410	15,146	15,146	229,507
Payroll Expense	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Director's Fees	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Professional Fees	4,367	4,167	4,167	13,917	4,167	4,167	4,367	4,167	4,167	4,367	4,167	4,167	60,350
Rent	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	120,000
Telephone/Internet	788	\$2.	788	200	788	282	768	788	788	788	788	788	9,450
Travel & Entertainment	7,500	7,500	7,500	7,500	2,500	7,500	7,500	12,000	12,000	12,000	12,000	12,000	112,500
Worker's Comp Ins.	2,250	2,250	2,250	2,250	2,250	2,250	2,250	1,450	1,450	1,450	1,450	1,450	23,000
TOTAL OPERATING EXPENSES	458,130	482,295	458,120	467,045	460,945	1,462,211	699,514	728,014	1,703,014	703,214	713,942	1,741,992	10,078,316
NET INCOME BEFORE TAXES	(458,110)	20,767,705	(22,958,120)	(467,045)	(2,960,945)	26,662,789	(609,514)	58,146,986	(16,578,014)	(2,286,547)	15,202,825	(\$750°325)	69,171,684
Income Taxes								15,289,097					15,289,097
NET INCOME	(458,110)	20,767,705	(22,958,126)	(380/198)	(2,960,945)	26,662,789	(699,514)	42,857,889	(16,578,014)	(2,286,547)	15,202,825	[5780,325]	53,882,587

# 5.2.3 Year 3 Income Statement Projection

					Space	Operations	, Inc.						
					Pro Forma	Year 3	tement						
	Mo-1	Mo-2	Mo-3	Mo-4	Mo-5	Mo-6	Mo-7	Mo-8	Mo-9	Mo-10	Mo-11	Mo-12	Year 3
TOTAL REVENUE		000000	000000		000 000 65	000 000		000 000 10	100 000 s	000 000 VS	R4 000 000	0.000.000	000 000 125
Space Carpo		11,875,000	-		21.250,000	10.625,000		31.875,000	10.625.000	-	31.875,000	10.625.000	148.750.000
Other	•	-	•	•			•			•		-	
TOTAL REVENUE		121,875,000	000'000'6	•	78,250,000	19,625,000	•	115,875,000	19,625,000	20,000,000	115,875,000	19,625,000	\$19,750,000
CONTRACT SERVICES													
Engineering Services			•				•			•	•		•
Capsule Refurb	2,375,000	200,000	2,375,000	1,583,333	1,583,333	1,583,333	2,375,000	200,000	2,375,000	1,583,333	2,083,333	3,958,333	22,875,000
Launch Services		2,500,000	35,000,000		12,500,000	35,000,000	•	15,000,000	35,000,000		15,000,000	35,000,000	185,000,000
TOTAL CONTRACT SERVICES	2,375,000	3,000,000	37,375,000	1,583,333	14,063,333	36,583,333	2,375,000	15,500,000	37,375,000	1,583,333	17,083,333	38,958,333	207,875,000
OPERATING EXPENSES													
Advertising/Marketing	750	750	750	750	750	750	750	750	750	750	750	062	6,000
Bank Charges	250	250	250	250	250	250	250	250	097	250	250	250	3,000
Bidg Maint & Repairs	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Business Insurance		25,000	1,000,000	•	3,650	1,000/000	•	25,000	1,000,000	•		1,000,000	4,053,650
Dues & Subscriptions	950	996	1,900	920	990	900	800	950	999	920	360	950	12,350
Depreciation	405,760	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	13,522,719
Employee Benefits	59,357	59,357	59,357	59,357	59,357	59,357	59,357	59,357	59,357	59,357	39,580	29,980	113,531
Equipment Leasing	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	13,047
Licenses & Permits	15,000			•		4	•		•		•	28,150	43,150
Offlice Expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Offlice Salary	146,636	146,636	146,636	146,636	146,636	146,636	146,636	146,636	146,636	146,636	146,636	146,636	1,759,628
Officer's Salary	57,677	57,677	57,677	57,677	57,677	57,677	21,677	57,677	57,677	57,677	70,666	70,666	718,098
Payroll Taxes	15,630	15,630	15,630	15,630	15,630	15,630	15,630	15,630	15,630	15,630	16,624	16,624	139,546
Payroll Expense	115	115	115	115	115	115	115	115	115	115	115	115	1,380
Director's Fees	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	132,000
Professional Fees	6,500	6,250	6,250	22,000	6,250	6,250	6,500	6,250	6,250	6,500	6,250	6,250	91,500
Rent	10,000	10,000	10,000	10,000	10,000	10/000	10,000	10,000	10,000	10,000	10,000	10,000	120,000
Telephone/Internet	827	827	827	827	827	827	827	827	827	827	827	827	9,923
Travel & Entertainment	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	144,000
Worker's Comp Ins.	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	17,400
TOTAL OPERATING EXPENSES	751,239	1,547,679	2,523,629	1,538,429	1,526,329	2,522,679	1,522,929	1,547,679	2,522,679	1,522,929	1,537,285	2,565,435	21,628,922
NET INCOME BEFORE TAXES	(3,126,239)	117,327,321	(30,398,629)	(3,121,762)	62,640,338	(19,481,012)	(3,897,929)	98,827,321	(20,272,679)	16,893,738	97,254,381	(21,898,769)	290,246,078
Income Taxes	-	37,922,047			10,303,181		•	27,161,417			25,911,601		101,298,246
NET INCOME	(3,126,239)	79,405,273	(30,898,629)	(3,121,762)	52,337,157	(19,481,012)	(3,897,929)	71,665,904	(20,272,679)	16,893,738	71,342,780	(21,898,769)	188,947,832

# 5.2.4 Year 4 Income Statement Projection

					Pro Forma	perations, Income Stat	Inc.						
						Year 4							
	Mo-1	Mo-2	Mo-3	Mo-4	Mo-5	Mo-6	Mo-7	Mo-8	Mo-9	Mo-10	Mo-11	Mo-12	Year 4
TOTAL REVENUE													
Astronaut Seats		89,000,000		52,000,000	54,000,000	32,000,000	24,000,000	59,000,000	24,000,000	52,000,000	51,000,000	32,000,000	469,000,000
Space Cargo	•	31,875,000	10,625,000	•	31,875,000	10,625,000	21,250,000	10,625,000	31,875,000	•	42,500,000	•	191,250,000
Other							•						
TOTAL REVENUE		120,875,000	10,625,000	\$2,000,000	85,875,000	42,625,000	45,250,000	69,625,000	55,875,000	52,000,000	93,500,000	32,000,000	660,250,000
CONTRACT SERVICES													
Engineering Services	•		•		•	•	•	•	•	•	•		
Capsule Refurb	3,958,333	2,083,333	3,958,333	3,958,333	2,083,333	3,958,333	3,958,333	2,083,333	3,958,333	3,958,333	2,083,333	3,958,333	40,000,000
Launch Services		25,000,000	25,000,000	10,000,000	27,500,000	22,500,000	12,500,000	37,500,000	12,500,000	35,000,000	15,000,000	35,000,000	257,500,000
FOTAL CONTRACT SERVICES	3,958,333	27,083,333	28,958,333	13,953,333	29,583,333	26,458,333	16,458,333	39,583,333	16,458,333	38,958,333	17,083,333	38,958,333	297,500,000
OPERATING EXPENSES													
Advertising/Marketing	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,250	1,250	1,250	1,250	13,000
Bank Charges	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Bldg Maint & Repairs	300	500	500	500	500	500	500	300	750	750	750	250	7,000
Business Insurance	3,650	1,000,000		25,000	1,000,000		•	1,000/000	•	25,000	1,000,000		4,053,650
Dues & Subscriptions	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,650	1,650	3,650	1,650	19,000
Depreciation	1,192,451	1,192,451	1,192,451	1,192,451	1,192,451	1,585,796	1,585,796	1,585,796	1,585,796	1,585,796	1,585,796	1,585,796	17,062,326
Employee Benefits	60,444	60,444	60,444	60,444	60,444	60,444	61,328	61,328	61,618	61,618	61,618	61,613	731,788
Equipment Leasing	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	13,047
Licenses & Permits	*				*	•		28,150	15,000	•			43,150
Office Expense	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,500	1,500	1,500	1,500	16,000
Offlice Salary	153,274	153,274	153,274	153,274	153,274	153,274	153,274	153,274	155,371	155,371	155,371	155,371	1,847,679
Offlicer's Salary	73,675	73,675	73,675	73,675	73,675	73,675	92,093	92,093	96,043	96,043	96,043	96,043	1,010,407
Payroll Taxes	17,362	17,362	17,362	17,362	17,362	17,362	18,771	18,771	19,233	19,233	19,233	19,233	218,644
Payroll Expense	115	115	115	115	115	115	115	115	115	115	115	115	1,380
Director's Fees	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	282,000
Professional Fees	6,250	6,250	6,500	6,250	6,250	6,500	6,250	6,250	6,500	6,250	6,250	22,000	91,500
Rent	10,300	10,300	10,300	10,300	10,300	10,300	10,300	10,300	10,300	10,300	10,300	10,609	123,909
Telephone/Internet	808	868	898	898	368	868	898	868	912	912	912	912	10,592
Travel & Entertainment	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	36,000	36,000	36,000	36,000	336,000
Worker's Comp Ins.	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	17,400
TOTAL OPERATING EXPENSES	1,572,725	2,569,075	1,569,325	1,594,075	2,569,075	1,962,671	1,983,132	3,011,282	2,018,325	2,028,075	3,005,075	2,019,134	25,901,971
NET INCOME BEFORE TAXES	(5,531,059)	91,222,591	[19,902,659]	36,447,591	53,722,591	14,203,996	26,808,534	27,030,384	37,398,342	11,013,592	73,411,592	(8,977,467)	336,848,029
Income Taxes		30,848,952		5,956,176	19,340,133	5,113,439	9,651,072	9,730,938	13,463,403	3,964,893	23,156,285		121,265,290
NET INCOME	[5,531,059]	60,373,640	(19,902,659)	30,491,416	34,382,458	9,090,558	17,157,462	17,299,446	23,934,939	7,048,699	50,215,307	(8,977,467)	215,582,738

# 5.2.5 Year 5 Income Statement Projection

					Pro Forma	Income Stat	ement						
	Mo-1	Mo-2	Mo-3	Mo-4	Mo-5	Mo-6	Mo-7	Mo-8	9-0M	Mo-10	Mo-11	Mo-12	Year 5
	-	-											
TOTAL REVENUE Astronaut Seats	48,000,000	52,000,000	48,000,000	52,000,000	48,000,000	32,000,000	48,000,000	52,000,000	48,000,000	32,000,000	48,000,000	32,000,000	540,000,000
Space Cargo	42,500,000		42,500,000	•	42,500,000		42,500,000		42,500,000	•	42,500,000		255,000,000
Other	•						•						
TOTAL REVENUE	000'005'06	52,000,000	000'005'06	52,000,000	000'005'06	32,000,000	90,500,000	\$2,000,000	000'005'06	32,000,000	000'005'06	12,000,000	000'000'561
CONTRACT SERVICES													
Engineering Services				-		-							
Capsule Refurb	4,458,333	3,958,333	3,666,667	6,333,333	3,666,667	6,333,333	3,666,667	6,333,333	3,666,667	6,333,333	3,666,667	6,333,333	58,416,667
Launch Services	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	300,000,000
TOTAL CONTRACT SERVICES	19,458,333	181,958,333	18,666,667	41,333,333	13,666,667	41,333,333	18,666,667	41,333,333	18,666,667	41,333,333	13,666,667	41,333,333	358,416,667
OPERATING EXPENSES													
Advertising/Marketing	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	15,000
Bank Charges	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Bidg Maint & Repairs	054	750	750	750	750	750	750	750	750	750	750	750	000'6
Business Insurance	•	25,000	1,000,000		3,650	1,000,000		25,000	1,000,000			1/000/000	4,053,650
Dues & Subscriptions	1,650	1,650	3,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	21,800
Depreciation	1,585,796	1,585,796	1,385,796	1,585,796	1916/6/6/1	1,979,141	1,979,141	1,979,141	1,979,141	1,979,141	1,979,141	1,979,141	22,176,313
Employee Benefits	61/618	61,618	61,618	61,618	61,618	61,618	61,618	61/618	61,618	61,618			616,179
Equipment Leasing	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	13,047
Licenses & Permits	15,000	•			•	-	•						15,000
Offlice Expense	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000
Offlice Salary	155,371	155,371	155,371	156,371	155,371	155,371	155,371	155,371	155,371	155,371	•		1,553,714
Officer's Salary	96,043	56,043	96,043	96,043	56,043	96,043	96,043	96,043	96,043	96,043	•	•	960,427
Payroll Taxes	19,233	19,233	19,233	19,233	19,233	19,233	19,233	19,233	19,233	19,233	•		192,332
Payroll Expense	115	115	115	115	115	115	115	115	115	115	115	115	1,380
Director's Fees	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	282,000
Professional Fees	6,500	6,250	6,250	22,000	6,250	6,250	6,500	6,250	6,250	6,500	6,250	6,250	605'16
Rent	10,300	10,300	10,300	10,609	10,609	10,609	10,609	10,609	10,609	10,609	10,609	10,609	126,381
Telephone/Internet	912	912	912	912	912	912	912	912	912	912	912	912	10,940
Travel & Entertainment	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	432,000
Worker's Comp Ins.	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	1,450	17,400
TOTAL OPERATING EXPENSES	2,018,325	2,028,075	3,005,075	2,019,134	2,400,379	3,396,729	2,396,979	2,421,729	3,396,729	2,396,979	2,064,464	3,064,464	30,609,063
NET INCOME BEFORE TAXES	69,023,342	11,013,592	68,828,258	8,647,533	69,432,954	(12,730,063)	69,436,354	8,244,937	68,436,604	(11,730,313)	69,768,869	(12,397,797)	405,974,270
Income Taxes	24,848,403	3,964,893	24,778,173	3,113,112	24,995,863		20,414,265	2,968,177	24,637,177	•	16,430,673	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	146,150,737
NET INCOME	44,174,939	7,048,699	44,050,085	5,534,421	44,437,091	(12,730,063)	49,022,089	5,276,760	43,799,427	[11,730,313]	53,338,196	(12,397,797)	259,823,533

					Pro F	Year 1	how						
	1			1	144.6		1				11.00	11.10	
CONT	T-004	7-0M	6-0W	1-014	C-014	9-0W	1-014	e-ow	E-OW	NT-DW	TT-OW	7T-OW	Tear 4
stronaut Seats		•			9	•	•	•	-	•		•	
pace Cargo	•	•	•	•	•	•	•	•	•	•		5	,
ther	•		•			•		•	•				
ASH RECEIPTS	,			•	x	•	•		•	•		•	•
ACT SERVICES													
ngineering Services		35,000	35,833	35,833	35,833	35,833	35,833	35,833	•		1.0		250,000
apsule Manufacture	•			*	38				1	8,761,933	2,159,233	2,242,567	13,163,733
apsule Refurb	•			2									
aunch Services				-	•				•	10,000,000	8	12,500,000	22,500,000
ONTRACT SERVICES		35,000	35,813	35,833	35,833	35,833	15,813	35,813	•	18,761,911	2,159,213	14,742,567	35,913,733
ING EXPENSES													
dvertising/Marketing		7,500	10,000	10,000	7,500	7,500	5,000	200	1,500	1,500	200	500	52,000
ank Charges	•	22	2	25	25	2	25	52	23	25	25	2	275
dg Maint & Repairs				100	100	100	100	100	100	100	100	100	006
usiness Insurance	•	8,000	•		3,650			25,000	•				36,650
ues & Subscriptions	•	•	765	200	200	200	200	200	200	200	200	200	2,565
nployee Benefits	•	38,891	38,891	163,85	38,891	38,891	38,891	168,851	38,891	86,628	\$6,628	86,628	210,172
pulpment Leasing		•	602	1,087	1,087	1,067	1,087	1,087	1,067	1,087	1,087	1,087	10,387
censes & Permits	250	100	•		•	•						28,150	28,500
Hice Expense	150	250	2,500	200	200	200	500	200	500	650	630	650	1,850
fice Salary	•	107,640	107,640	107,640	107,640	107,640	107,640	107,640	107,640	254,107	254,107	254,107	1,623,440
ficer's Salary	•	35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	35,013	385,147
wroll Taxes		10,913	10,913	10,913	10,913	10,913	10,913	10,913	10,913	22,118	22,118	22,118	153,657
wroll Expense	•	85	12	85	85	12	85	\$	85	85	85	100	056
rector's Fees	•	•	•		,	•	•	•	•	,	•	2	
ofessional Fees	1,500	5,591	4,091	4,841	4,091	4,091	4,291	4,091	4,091	4,291	4,091	4,091	49,150
ent	200	200	10,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	101,500
elephone/Internet			230	750	130	250	750	730	750	750	750	750	1,500
avel & Entertainment		048'6	9,840	9,840	048'6	9,840	9,840	4,500	4,500	7,500	7,500	7,500	90,540
orker's Comp Ins.		1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	2,250	2,250	2,250	15,150
art-Up Costs		255,364	103,612			•	•	•		262,385	71,128	•	692,489
PERATING EXPENSES	2,400	480,762	336,277	230,936	231,336	227,686	225,586	240,346	216,346	688,688	496,232	453,269	3,829,662
H FLOW BEFORE TAXES	(2,400)	(515,762)	(111,111)	(266,769)	(267,169)	(261,519)	(261,219)	(276,179)	(216,346)	(19,450,622)	(2,655,465)	(15,195,835)	(301,141,305)
come Taxes			•										
HFLOW	(2,400)	(\$15,762)	(111,576)	(266,769)	(267,169)	(261,519)	(261,219)	(276,179)	(216,346)	(19,450,622)	(2,055,405)	(318,391,21)	(36,743,395)
VESTMENT	4,000	3,000,000							40,000,000				
ATME CAGE FLOW	1 6000	3 49C 928		a nave perm				The second second					

# **5.3 Cash Flow Projections**

# 5.3.1 Year 1 Cash Flow Projection

					Space (	Derations	Inc.						
					Pro P	Year 2	DWV						
	Mo-1	Mo-2	Mo-3	Mo-4	Mo-5	Mo-6	Mo-7	Mo-8	Mo-9	Mo-10	Mo-11	Mo-12	Year 2
CASH RECEIPTS Astronaut Seats					10.000.000	30.000.000		30.000.000	10.000.000		30.000.000	10.000.000	120.000.000
Space Cargo		21,250,000				10,625,000		31,875,000				10,625,000	74,375,000
Other						*			1.000	•			
TOTAL CASH RECEIPTS		21,250,000	•		10,000,000	40,625,000		61,875,000	10,000,000	•	30,000,000	20,625,000	194,175,000
CONTRACT SERVICES													
Engineering Services		1.4.1									10.8	•	
Capsule Manufacture	2,159,233	2,242,567	2,159,233	2,159,233	2,242,567	2,159,233	9,315,267	17,523,867	8,761,933	8,761,933	8,761,933	8,761,933	75,008,934
Capsule Refurb				•	•			500,000	2,375,000	1,583,333	1,583,333	1,583,333	7,625,000
Launch Services	•		22,500,000		12,500,000	12,500,000		2,500,000	22,500,000	•	12,500,000	22,500,000	107,500,000
TOTAL CONTRACT SERVICES	2,159,233	2,242,567	24,659,233	2,159,213	14,742,567	14,659,233	9,315,267	20,523,867	33,636,933	10,345,267	22,845,267	32,845,267	190,133,934
OPERATING EXPENSES													
Advertising/Marketing	650	650	650	650	650	650	650	650	650	650	650	650	7,800
Bank Charges	125	125	125	125	125	125	125	125	125	125	125	125	1,500
Bldg Maint & Repairs	125	125	125	125	125	125	125	125	125	125	125	125	1,500
Business Insurance	•	25,000			3,650	1,000,000		25,000	1,000,000		•	1,000,000	3,053,650
Dues & Subscriptions	750	750	1,575	730	750	750	750	230	750	750	750	750	528'6
Employee Benefits	87,355	87,355	87,355	87,355	87,355	65,356	165'85	58,591	58,591	165'85	59,054	59,054	854,605
Equipment Leasing	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	13,047
Licenses & Permits	615				•	•	•					28,150	28,765
Offlice Expense	650	650	650	650	650	650	650	650	650	650	650	650	7,800
Office Salary	265,763	265,763	265,763	265,763	265,763	281,233	140,313	140,313	140,313	140,313	140,313	140,313	2,451,930
Officer's Salary	38,515	38,515	38,515	38,515	38,515	48,048	43,048	48,048	43,048	48,048	57,677	57,677	548,167
Payroll Taxes	23,277	23,277	23,277	23,277	23,277	25,190	14,410	14,410	14,410	14,410	15,146	15,146	229,507
Payroll Expense	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Director's Fees	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Professional Fees	4,367	4,167	4,167	13,917	4,167	4,167	4,367	4,167	4,167	4,367	4,167	4,167	60,350
Rent	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	120,000
Telephone/Internet	788	788	788	788	788	788	2882	2882	788	788	788	788	9,450
Travel & Entertainment	7,500	7,500	7,500	7,500	7,500	7,500	7,500	12,000	12,000	12,000	12,000	12,000	112,500
Worker's Comp Ins.	2,250	2,250	2,250	2,250	2,250	2,250	2,250	1,450	1,450	1,450	1,450	1,450	23,000
TOTAL OPERATING EXPENSES	447,917	472,102	447,927	456,852	450,752	1,452,018	293,754	322,254	1,297,254	297,454	308,081	1,336,231	7,582,596
NET CASH FLOW BEFORE TAXES	(2,607,150)	18,535,331	(25,107,160)	(2,616,085)	(5,193,319)	24,513,748	(9,609,020)	41,028,879	(24,934,187)	(10,642,720)	6,846,652	(13,556,498)	(3,341,530)
Income Taxes								15,289,097					15,289,097
NET CASH FLOW	(2,607,150)	18,535,331	(25,107,160)	(2,616,085)	(5,193,319)	24,513,748	(020/609/6)	25,739,783	[281,934,187]	(10,642,720)	6,346,652	(11,556,498)	(18,630,626)
CASH INVESTMENT		20,000,000											
CUMULATIVE CASH FLOW	653,454	39,188,785	14,081,625	11,465,540	6,272,221	30,785,969	21,176,949	46,916,732	21,982,544	11,339,824	18,186,476	4,629,978	

### 5.3.2 Year 2 Cash Flow Projection

	12 Year 3		0 148.750.000		0 519,750,000		•	18,230,534	13 22,875,000	0 135,000,000	1226,105,534		000/6 0	3,000	000'1 000	0 4,053,650	12,350	113,531	13,047	0 43,150	0 12,000	6 1,759,628	118,098	383,546	1,180	0 192,000	005'16 0	0 120,000	125'6 22	141,000	17,400	\$5 8,106,203	8) 285,538,264	101,298,246	8] 184,240,018
	Mo-	00 000 0	10.625.00		19,625,00				3,958,33	35,000,00	38,958,33		52	25	52	1,000,00	95	59,98	1,08	28,15	1,00	146,63	70,66	16,62	11	16,00	6,25	10,00	82	12,00	1,45	1,372,98	(20,706,31	•	[20,706,11
	Mo-11	AA AAA AAA	31,875,000		115,875,000				2,083,333	15,000,000	17,083,313		750	250	250		950	59,980	1,087		1,000	145,636	70,666	16,624	115	16,000	6,250	10,000	827	12,000	1,450	344,835	58,446,832	25,911,601	72,535,231
	Mo-10				20,000,000				1,583,333		1,583,333		750	250	250		950	59,357	1,087		1,000	146,635	57,677	15,630	115	16,000	6,500	10,000	827	12,000	1,450	330,478	18,086,188	•	18,086,188
	Mo-9	0.000.000	10.625.000		19,625,000				2,375,000	35,000,000	37,375,000		750	250	250	1,000,000	950	59,357	1,087		1,000	146,636	57,677	15,630	115	16,000	6,250	10,000	827	12,000	1,450	1,330,228	(877,080,01)		(19,080,228)
	Mo-8	an non non	31.875.000		115,875,000		35		200,000	15,000,000	15,500,000		750	250	250	25,000	956	59,357	1,087		1,000	146,636	57,677	15,630	115	16,000	6,250	10,000	\$27	12,000	1,450	355,228	100,019,772	27,161,417	72,858,155
Flow	Mo-7				•				2,375,000		2,375,000		750	250	250		950	59,357	1,087		1,000	146,636	57,677	15,630	115	16,000	6,500	10,000	827	12,000	1,450	330,478	(2,705,478)		(2,705,428)
Forma Cash I Year 3	Mo-6	4 000 000	10.625.000		19,625,000		4		1,583,333	35,000,000	101,082,00		150	250	250	1,000,000	950	59,357	1,087	-	1,000	146,636	57,677	15,630	115	16,000	6,250	10,000	827	12,000	1,450	1,330,228	(18,288,562)		(18,288,562)
Pro	Mo-5	000 000 63	21.250.000		78,250,000		84		1,583,333	12,500,000	14,083,333		052	250	250	3,650	950	59,357	1,087	-	1,000	146,636	57,677	15,630	115	16,000	6,250	10,000	827	12,000	1,450	333,878	63,832,788	10,303,181	809/625/15
	Mo-4								1,583,333	•	1,583,333		750	250	250	•	950	59,357	1,087		1,000	146,636	57,677	15,630	115	16,000	22,000	10,000	827	12,000	1,450	345,978	(216,929,312)		(1,929,112)
	Mo-3	a non non	-		9,000,000				2,375,000	35,000,000	37,375,000		750	250	250	1,000,000	1,900	59,357	1,067		1,000	146,636	57,677	15,630	115	16,000	6,250	10,000	827	12,000	1,450	1,331,178	(8/1'90/'67)		(29,706,178)
	Mo-2	000 000 000	31.875.000		121,875,000			18,230,534	000'005	2,500,000	21,230,534		750	250	250	25,000	950	59,357	1,087	•	1,000	146,636	57,677	15,630	115	16,000	6,250	10,000	827	12,000	1,450	355,228	100,289,238	37,922,047	62,367,191
	Mo-1				•		8		2,375,000	•	2,175,000		750	250	250		950	59,357	1,087	15,000	1,000	146,636	57,677	15,630	115	16,000	6,500	10,000	827	12,000	1,450	345,478	(2,720,478)		(2,720,478)
		CASH RECEIPTS	Scace Carpo	Other	TOTAL CASH RECEIPTS	CONTRACT SERVICES	Engineering Services	Capsule Manufacture	Capsule Refurb	Launch Services	TOTAL CONTRACT SERVICES	OPERATING EXPENSES	Advertising/Marketing	Bank Charges	Bidg Maint & Repairs	Business Insurance	Dues & Subscriptions	Employee Benefits	Equipment Leasing	Licenses & Permits	Office Expense	Office Salary	Officer's Salary	Payroll Taxes	Payroll Expense	Director's Fees	Professional Fees	Rent	Telephone/Internet	Travel & Entertainment	Worker's Comp Ins.	TOTAL OPERATING EXPENSES	NET CASH FLOW BEFORE TAXES	Income Taxes	VIET CASH FLOW

# 5.3.3 Year 3 Cash Flow Projection

# 5.3.4 Year 4 Cash Flow Projection

					Space Pro F	Operations, orma Cash Fic Year 4	Inc.						
CASH INCODERS	Mo-1	Mo-2	Mo-3	Mo-4	Mo-5	Mo-6	Mo-7	Mo-8	Mo-9	Mo-10	Mo-11	Mo-12	Year 4
Astronaut Seats		89,000,000		52,000,000	54,000,000	32,000,000	24,000,000	59,000,000	24,000,000	52,000,000	51,000,000	32,000,000	469,000,000
Space Cargo		31,875,000	10,625,000	•	31,875,000	10,625,000	21,250,000	10,625,000	31,875,000	•	42,500,000	•	191,250,000
Other			•						•	•	•		
TOTAL CASH RECEIPTS	•	120,875,000	10,625,000	52,000,000	85,875,000	42,625,000	45,250,000	69,625,000	55,875,000	\$2,000,000	93,500,000	32,000,000	660,250,000
CONTRACT SERVICES													
Engineering Services		•				4	3	•			•	•	-
Capsule Manufacture		8,761,933	8,761,933	8,761,933	9,115,267				100000				35,401,067
Capsule Refurb	3,958,333	2,083,333	3,958,333	3,958,333	2,083,333	3,958,333	3,958,333	2,083,333	3,958,333	3,958,333	2,083,333	3,958,333	40,000,000
Launch Services		25,000,000	25,000,000	10,000,000	27,500,000	22,500,000	12,500,000	37,500,000	12,500,000	35,000,000	15,000,000	35,000,000	257,500,000
TOTAL CONTRACT SERVICES	3,958,333	35,845,267	37,720,267	22,720,267	38,698,600	26,458,333	16,458,333	59,583,333	16,458,333	38,958,333	17,083,333	38,958,333	332,901,067
OPERATING EXPENSES													
Advertising/Marketing	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,250	1,250	1,250	1,250	13,000
Bank Charges	250	250	250	250	250	250	250	250	250	002	250	250	3,000
Bldg Maint & Repairs	500	2005	500	500	500	500	500	500	750	250	250	750	7,000
Business Insurance	3,650	1,000,000		25,000	1,000,000	•		1,000,000	•	25,000	1,000,000		4,053,650
Dues & Subscriptions	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,650	1,650	3,650	1,650	19,000
Employee Benefits	60,444	60,444	60,444	60,444	60,444	60,444	61,328	61,328	61,618	61,618	61,613	61,618	731,788
Equipment Leasing	1,087	1,087	1,067	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,067	13,047
Licenses & Permits						4		28,150	15,000		•		43,150
Office Expense	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,500	1,500	1,500	1,500	16,000
Offlice Salary	153,274	153,274	153,274	153,274	153,274	153,274	153,274	153,274	155,371	155,371	155,371	155,371	1,847,679
Officer's Salary	73,675	219,675	73,675	CT0/ET	73,675	219,675	92,093	92,093	36,043	96,043	110/96	040,043	1,010,407
Payroll Taxes	17,362	17,362	17,362	17,362	17,362	17,362	18,771	18,771	19,233	19,233	19,233	19,233	218,644
Payroll Expense	115	2115	2115	211	115	115	215	211	115	115	2115	211	1,380
Director's Fees	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	282,000
Professional Fees	6,250	6,250	6,500	6,250	6,250	6,500	6,250	6,250	6,500	6,250	6,250	22,000	91,500
Rent	10,300	10,100	10,300	10,300	10,300	10,300	10,100	10,300	10,300	10,100	10,100	10,609	123,909
Telephone/Internet	868	898	868	368	868	898	868	868	912	912	912	912	10,592
Travel & Entertainment	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	36,000	36,000	36,000	36,000	336,000
Worker's Comp Ins.	1,450	1,450	1,450	1.450	1,450	1,450	1,450	1.450	1,450	1,450	1,450	1,450	17,400
TOTAL OPERATING EXPENSES	380,275	1,376,625	\$76,875	401,625	1,376,625	376,875	397,336	1,425,486	432,529	442,279	1,419,279	433,338	8,839,145
NET CASH FLOW BEFORE TAXES	(4.338,606)	83,653,109	(27,472,141)	28,878,109	\$11'661'58	15,789,792	28, 394, 330	28,616,180	381,984,138	12,599,388	14,997,188	(1781,96.7)	318,509,788
Income Taxes		30,848,952		5,956,176	19,340,133	5,113,439	5,651,072	9,730,938	13,463,403	3,964,893	23,196,285		121,265,290
NET CASH FLOW	(4,138,608)	52,804,157	(27,472,341)	\$16'126'22	26,459,643	10,676,154	18,741,258	18,885,242	25,520,715	8,634,495	51,801,101	(1/9/161/2)	297,244,497
CASH INVESTMENT													
CUMULATIVE CASH FLOW	184,531,388	237,335,545	209,863,404	232,785,337	259,244,979	269,921,533	288,664,591	307,540,832	333,070,567	341,705,062	\$13,506,164	386,114,493	

# 5.3.5 Year 5 Cash Flow Projection

					Space ( Pro F	Operations, orma Cash Flo Veor 5	inc.						
						CIRC							
	Mo-1	Mo-2	Mo-3	Mo-4	Mo-5	Mo-6	No-7	Mo-8	Mo-9	Mo-10	Mo-11	Mo-12	Year 5
Astronaut Seats	48,000,000	52.000,000	48,000.000	52.000.000	43,000.000	32,000,000	43.000.000	52.000,000	43.000.000	32.000.000	43.000.000	32,000,000	540,000,000
Space Cargo	42,500,000	•	42,500,000		42,500,000	•	42,500,000	•	42,500,000	•	42,500,000		255,000,000
Other					•				•	•			
TOTAL CASH RECEIPTS	000'005'06	52,000,000	90,500,000	\$2,000,000	90,500,000	32,000,000	90,000,000	52,000,000	90,500,000	32,000,000	000'005'06	32,000,000	795,000,000
CONTRACT SERVICES													
Engineering Services			•	•	à	•	1		•	•			
Capsule Manufacture	8,761,933	8,761,933	8,761,933	9,115,267						10.000			35,401,067
Capsule Refurb	4,458,333	3,958,333	3,666,667	6,333,333	3,666,667	6, 333, 333	3,666,667	6,333,333	3,666,667	6,333,333	3,666,667	6,333,333	58,416,667
Launch Services	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	15,000,000	35,000,000	100,000,000
TOTAL CONTRACT SERVICES	28,220,267	47,720,267	27,428,600	50,448,600	18,666,667	41,333,333	13,666,667	41,333,333	18,666,667	41,333,333	18,666,667	41,333,333	993,817,734
OPERATING EXPENSES													
Advertising/Marketing	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	15,000
Bank Charges	250	250	230	250	250	250	250	250	250	250	250	250	3,000
Bldg Maint & Repairs	750	84	750	282	750	750	750	250	750	952	750	250	00016
Business Insurance		25,000	1,000,000	•	3,650	1,000,000		25,000	1,000,000	•	•	1,000,000	4,051,650
Dues & Subscriptions	1,650	1,650	3,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	21,800
Employee Benefits	61,618	61,618	61,618	61,618	61,618	61,618	61,618	61,618	61,618	61,618			616,179
Equipment Leasing	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	13,047
Licenses & Permits	15,000				•							•	15,000
Office Expense	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000
Offlice Salary	155,371	155,371	155,371	155,371	155,371	155,371	155,371	155,371	155,371	155,371		*	1,553,714
Officer's Salary	56,043	96,043	\$6,043	96,043	\$6,043	96,043	96,043	96,043	56,043	68,043	1	9	121/096
Payroll Taxes	19,233	19,233	19,233	19,233	19,233	19,233	19,233	19,233	19,233	19,233			192,332
Payroll Expense	115	215	211	2115	211	115	115	115	211	115	2115	2115	1,380
Director's Fees	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	282,000
Professional Fees	6,500	6,250	6,250	22,000	6,250	6,250	6,500	6,250	6,250	6,500	6,250	6,250	91,500
Rent	10,300	10,100	10,300	10,609	10,609	10,609	10,609	10,609	10,609	10,609	10,609	10,609	136,361
Telephone/internet	912	912	912	912	912	912	912	912	912	912	912	912	10,940
Travel & Entertainment	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	432,000
Worker's Comp Ins.	1,450	1,450	1,450	1,450	1,450	1,450	1.450	1,450	1,450	1,450	1.450	1,450	17,400
TOTAL OPENATING EXPENSES	432,529	442,279	1,419,279	433, 558	421,238	1,417,588	417,838	442,588	1,417,588	417,858	\$5,323	1,085,323	8,432,750
NET CASH FLOW BEFORE TAXES	61,847,204	3,837,454	61,652,121	1,118,062	71,412,095	(10,750,921)	71,415,495	10,224,079	70,415,745	(8,753,371)	71,748,010	(30,418,656)	392,749,516
Income Taxes	24,848,403	3,964,893	24,778,173	3,113,112	24,995,863		20,414,265	2,968,177	24,637,177		16,430,673		146,150,737
NET CASH FLOW	108'866'98	(127,439)	36,871,948	(1,995,050)	46,416,212	(10,750,921)	\$1,001,230	1,255,901	45,778,568	(171,127,0)	2017/10/35	(10,418,656)	246,598,779
CASH INVESTMENT													
CUMULATIVE CASH FLOW	423,113,294	422,985,855	459,859,803	457,864,753	504,280,985	493,530,063	544,531,294	561,787,185	591,565,763	587,814,591	643,131,928	632,713,272	

#### 5.3.6 Year 1 - Year 5 Cumulative Cash Flow Projection



# **5.4 Financial Plan Assumptions**

#### **5.4.1 Income Statement**

#### Revenue

#### **Astronaut Seats**

Two seats for each flight after Test Flight (Flight 1201.01) will be sold assuming the following pricing:

Year	Price/Seat	Price/Flight
1	N/A	N/A
2	N/A	N/A
3	\$50M	\$100M
4	\$50M	\$100M
5	\$45M	\$90M
6	\$40M	\$80M
7	\$40M	\$80M

At this time we are anticipating no loss in seat price due to competition and supply and demand forces. Announced competitive seat capacities are not expected to be available until 2016 or later. However, we have shown a decrease in seat pricing to be conservative.

Assume payment terms of:

Payment	Event	Advance of Launch
10%	Seat Reservation	15 Months
20%	Reservation Confirmation	12 Months
30%	Progress Payment	9 Months
30%	Begin Training	6 Months
10%	Launch Prep	1 Month

All payments for launch services due to Space Operations, Inc. will be received prior to launch.

Most tourists will want to purchase an EVA add-on package to their launch flight. The EVA package will include a tethered space walk for an additional \$10M. These space walks are not typically available from the International Space Station. Space Operations, Inc. will be offering the only scheduled space walk available. We assume that all initial tourist flights will be purchased with the space walk.

Currently, lunar orbital flights are being marketing by Space Adventures on the Russian Soyuz for \$150M per seat. While we can offer such a flight with a slightly modified support module and a larger launch configuration from SpaceX, we are assuming no lunar orbital flights in the projections. If such demand is presented, we will likely participate in this market. There are no significant additional technological hurdles versus a regular orbital flight.

#### Space Cargo

Assume \$30M (10,000 Lbs. Cargo) per flight. The SpaceX Corporation launch contract includes 23,000 pounds of cargo. The final flight weight of the capsule will determine the maximum cargo availability. For business planning purposes, assume a maximum cargo weight of 10,000 pounds. This is a very conservative cargo schedule. We assume at least 10,000 pounds of cargo will be available for each launch and that we will max out the capacity within a few percent of that available. In reality, we expect to have between 8,500 – 10,000 pounds of cargo per flight.

Cargo space on the first two flights will likely be sold to Google Lunar X Prize teams. Cargo space on the test flight will be sold at \$3,500/Lb. assuming a full 10,000 Lbs. cargo. Cargo space on the second flight will be sold at \$4,500 assuming a full 10,000 Lbs. cargo.

Payment	Event	Advance of Launch
50%	Signed Contract	6 Months
25%	Progress Billing	2 Months
25%	Launch	@ Launch

Assume payment terms of:

All payments for launch services due to Space Operations, Inc. will be received prior to launch.

#### **Other Revenue**

While many additional revenue sources are planned and available, we are assuming no other income for business planning purposes. Income from satellite servicing and debris deorbit is expected to begin with 2015 missions. However, because of the unknown income level of these missions, we are assuming no additional income. The actual additional mission income is expected to be significant for these activities.

#### **Contract Services**

#### **Gemini Final Build Blueprint Licensing**

SpaceOps has negotiated with an outside consultant to acquire 3D digital plans of the original Gemini spacecraft. The arrangement is for an exclusive license of the existing plans. The consultant has been working at the National Archives in Dallas, Texas on and off over the past twenty years to copy of the final 'as built' version of the Gemini plans. He currently has scanned and converted to digital files approximately 90% of the Gemini spacecraft. He will take a position with SpaceOps as Drawing Coordinator traveling from Ohio to Texas on an as needed basis to coordinate the remaining scanning process by the contractor.

#### **Gemini Final Build Blueprint Scanning**

SpaceOps has negotiated with CAD/CAM Services, Inc., of Celina, Texas to scan the Gemini spacecraft blueprints into a digital format. They have agreed to place the appropriate equipment and personnel to copy the plans we request within a three-month period for \$240,000.

#### **Astronaut Space Suits**

SpaceOps has begun negotiating with Orbital Outfitters, Inc. to provide space suits for astronauts and space travelers. We have been led to believe that the suits will retail for approximately \$100,000 each. In the plan, we have assumed a price of \$150,000 each, or \$300,000 for a pair of suits. Suits will be purchased 6-months prior to each launch. Due to the relatively low price of each suit, passengers will be able to keep their suit after the mission has ended. We are assuming a 10% increase in the price each year beginning in 2014.

# Capsule 1<sup>st</sup> Article Build Cost by System (ALL Costs ROM Status)

ITEM	SYSTEM	VENDOR	ROM Cost
1.0	Structure Integration	WestWind Technologies, Inc.	\$3,800,000
		Huntsville, AL	
1.1	Tooling and Facilitation	WestWind Technologies, Inc.	\$1,000,000
		Huntsville, AL	
1.2	Capsule Structural	WestWind Technologies, Inc.	\$11,400,000
	Components Materials	Huntsville, AL	
1.3	Windows	PPG Industries	\$33,333
		Huntsville, AL	
1.4	Support Module Components	AAR Summa Technologies	\$4,000,000
		Huntsville, AL	
2.0	Heat Shielding	SpaceX Corporation	\$1,000,000
		Hawthorne, CA	
3.0	Escape System	Goodrich Aircraft Interiors	\$300,000
		Colorado Springs, CO	
4.0	Automatic Control System	Stone Aerospace/PSC	\$500,000
		Del Valle, TX	
5.0	Manual Control System	WestWind Technologies, Inc.	\$200,000
		Huntsville, AL	
6.0	OMS-RCS Propulsion System	Dynetics Corporation	Ş7,814,400
		Huntsville, AL	40.000.000
7.0	Retrograde Rocket System	ATK Aerospace Systems	\$2,500,000
		Magna, UI	4000.000
8.0	Environment Control System	Stone Aerospace/PSC	\$333,333
		Del Valle, 1X	¢222.222
9.1	Landing Gear	Grove Aircraft	\$333,333
0.2	Landing Coon Company Sustan	El Cajon, CA	¢167.666
9.2	Landing Gear Support System	Grove Aircraft	\$167,666
10.0	Cooknit Controls System	El Cajoli, CA	\$167.666
10.0	Cockpit Controls System	Huntavillo Al	\$107,000
11.0	Instruments and Avienies	Stone Acrosness /DSC	\$666.667
11.0	instruments and Avionics		\$000,007
12.0	Navigational Aids	WestWind Technologies Inc	Ś500.000
12.0	Navigational Alus	Huntsville Al	\$500,000
13.0	Communication Equipment	WestWind Technologies Inc	\$167.666
13.0		Huntsville Al	Ŷ±07,000
14 0	Recording Equipment	WestWind Technologies Inc	\$167.666
14.0	Leonang Equipment	Huntsville. AL	<i>\</i> 207,000
14.2	Power Supply	Acopian Technical Company	\$105.000
171E		Easton. PA	÷100,000
15.0	Spacecraft Batteries	Fagle-Picher Technologies	\$115 000
		Joplin. MA	÷=10,000
	Total Capsule Build Cost		\$35.601.067
15.0	Spacecraft Batteries Total Capsule Build Cost	Eagle-Picher Technologies Joplin, MA	\$115,000

Contract services are to be supplied by the listed or a substitute Vendor. The ROM Costs are a rough order of magnitude cost, or a 'not to exceed' estimate from the Vendor listed. Once the system requirements are known and manufacturing drawings are complete, hard quotes will be solicited from the listed Vendor and other likely service providers. The ROM Costs are expected to decrease as more information is available on product materials, required systems and available substitutions are determined.

Build	1 <sup>st</sup>	2 <sup>nd</sup> & 3 <sup>rd</sup>	4 <sup>th</sup> +
Month			
1	25.00%	25.00%	25.00%
2	6.25%	10.00%	12.50%
3	6.25%	10.00%	12.50%
4	6.25%	10.00%	12.50%
5	6.25%	10.00%	12.50%
6	6.25%	10.00%	25.00%
7	6.25%	10.00%	
8	6.25%	15.00%	
9	6.25%		
10	25.00%		

For financial projection purposes, we have assumed the following payment terms for the general contract services for the capsule and three service modules construction:

While the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> article construction process may take slightly longer than depicted above, this tighter construction payment schedule will serve to make the financial projections slightly more conservative and does not affect the flight schedule.

<b>Capsule Recovery and Refurbi</b>	sh Cost by System	(ALL Costs ROM Status)
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ITEM	SYSTEM	VENDOR	ROM Cost
20.0	Capsule Recovery	Spaceport America	\$200,000
		Upham, NM	
20.1	Capsule Shipping	Common Carrier	\$300,000
21.0	Support Module Components	AAR Summa Technologies	\$3,000,000
		Huntsville, AL	
22.0	Heat Shielding	SpaceX Corporation	\$1,000,000
		Hawthorne, CA	
23.0	OMS-RCS Propulsion System	Dynetics Corporation	\$2,000,000
		Huntsville, AL	
24.0	Retrograde Rocket System	ATK Aerospace Systems	\$2,500,000
		Magna, UT	
25.0	Environment Control System	Stone Aerospace/PSC	\$500,000
		Del Valle, TX	
26.0	Recording Equipment	WestWind Technologies, Inc.	\$500,000
		Huntsville, AL	
	Total Recovery & Refurbish		\$10,000,000

Assume payment terms of:

Payment	Event	Advance of Launch
100%	Capsule Recovery &	After Launch
	Shipping Cost	
25%	Refurbish Contract Award	1 Months
50%	Spread Over 3 Monthly	3 Months
	Progress Billings	
25%	Article Completion	4 Months

#### Capsule Launch Service (ALL Costs ROM Status)

ITEM	SYSTEM	VENDOR	ROM Cost
30.0	Launch Service	SpaceX Corporation	\$60,000,000
		Hawthorne, CA	
	Total Launch Service		\$60,000,000

Capsule launch service based on contract with SpaceX Corporation. We assume that the actual price of a launch contract will drop substantially with a multi-launch contract. However, we will assume no reduction in cost for purposes of being conservative. Assume payment terms of:

<b>Months Prior to Launch</b>	%	Cost
12 Months	20%	\$20,000,000
9 Months	25%	\$12,500,000
6 Months	25%	\$12,500,000
3 Months	25%	\$12,500,000
@ Launch	5%	\$2,500,000

#### Astronaut Training Cost (ALL Costs ROM Status)

ITEM	SYSTEM	VENDOR	ROM Cost
40.0	Training Simulator	Aurora Aerospace/Space	\$350,000
		Operations	
41.0	Astronaut Training	Aurora Aerospace	\$1,000,000
		Tampa, FL	
	<b>Total Training/Simulation</b>		\$1,200,000

A one-time currently unknown cost thought not to exceed \$100,000 is expected to build a training simulator. For financial planning purposes, we will assume a cost of approximately \$200,000. The system is expected to be ordered for delivery by 2013.

Astronaut training is expected to last approximately 6 months and cost Space Operations, Inc. approximately \$500,000 - 1,000,000 per astronaut (assume \$1,000,000 for

financial modeling purposes). For financial planning purposes, we will assume that cost will not change and will be paid based on the payment terms listed below. In reality, Space Operations, Inc. will investigate the option of bringing astronaut training in-house. No decision has been made at this time. That decision will likely not be considered until 2013.

Months Prior to Launch	Cost per	
	Astronaut	
9 – 12 Months	\$250,000	
6 Months	\$125,000	
5 Months	\$125,000	
4 Months	\$125,000	
3 Months	\$125,000	
2 Months	\$125,000	
1 Month	\$125,000	

Assume payment terms of:

#### **Operating Expenses**

- Bank Charges: \$25/Mo in 2011, \$125/Mo in 2012, \$250/Mo in 2013+ at First Commercial Bank, Hughes Road, Madison, AL
- Building Maintenance & Repairs: Assume minimal cost for sundry items.
- **Dues & Subscriptions**: Madison Chamber of Commerce \$250, Huntsville Chamber of Commerce \$515, All Other \$200/Month.

Business Insurance: Insurance services provided by J. Smith Lanier & Assoc., Huntsville, AL Business Liability Insurance Estimate Phase 1: \$8,000/6 Mo.'s Phase 2: \$25,000/6 Mo.'s Phase 3: \$25,000/6 Mo.'s Officer (Key Man) Life Insurance Estimate \$1MM Term Life Policy on CEO, CTO & CFO @ \$3,650/Yr Total Cost Product Liability Insurance: PLUG \$1,000,000/Qtr Beginning Phase 3

**Depreciation**: Furniture: Furniture is depreciated on a 7-year straight line basis. Equipment & Software: Computer equipment and software is depreciated on a 5-year straight line basis.

Capsules & Flight Modules: Capsules and Flight Modules are depreciated on a 7 ½ year basis beginning the month after delivery. Refurbish costs of approximately \$10,000,000 is expensed in the month incurred. SEE **Capsule Recovery and Refurbish Cost by System** above for expected billing schedule.

Equipment Leasing: The Lioce Group, Huntsville, AL. Lease 2 digital copiers.
Canon 3245i Digital Copier \$430.31/Mo., 36 Mo. Term w/\$1 Buyout, \$55/Mo.
Maintenance
Canon iRC5035 Digital Copier \$526.95/Mo., 36 Mo. Term w/\$1 Buyout, \$75/Mo.
Maintenance

#### License & Permits:

Permit/Year	Year 1	Year 2	Year 3	Year 4	Year 5
Huntsville City Business	\$250	\$28,150	\$28 <i>,</i> 150	\$28 <i>,</i> 150	\$28,150
License					
State Business Privilege Tax	\$100	\$615	\$15,000	\$15,000	\$15,000

Business licensing assumes a business location within the Huntsville City Limits. At this time, no decision has been made as to the physical location of the corporate office. We will have discussions with city officials in the Madison and Huntsville prior to making a final location decision. Rates in Madison, AL are significantly less, so the higher rates are used for the projections.

#### **Employee Benefits**:

Health Insurance: \$1,200/Mo/EE @ 75% Company Paid Short-Term Disability: \$100/Mo/EE 100% Company Paid Dental Insurance: \$225/Mo/EE 75% Company Paid 401(k): Company match up to 6% of EE Salary (Assume 80% Participation) Employee Entertainment: Summer Picnics and Christmas Parties Other: Other Miscellaneous EE expenses

#### **Office Salary:**

Assume all employees are hired immediately after funding. In reality, this will take place over four to six weeks. Especially administrative employees will be delayed until necessary.

Engineering Positions	Rate	Phase 1	Phase 2	Phase 3
Copy Coordinator	\$40	1		
Sr. System Engineer	\$55	1	1	1
System Engineer	\$40	5	15	5
Sr. Design Engineer	\$42	1	1	1
Design Engineer	\$35	5	15	5
Project Manager	\$40		2	2
Admin Assistant	\$14-\$16	1	2	2
<b>Operation Positions</b>		Phase 1	Phase 2	Phase 3
Executive Admin	\$20	1	1	1
Controller	\$35	1	1	1
Accounting Clerk	\$16		1	2

HR Manager	\$30	1	1	1
HR Clerk	\$20	1	1	1
Contracts Manager	\$42			1
Credit Manager	\$35			1
Marketing Administrator	\$25		1	1

**Officer's Salary:** Assume officer salaries begin once Phase 1 funding is secured.

**Payroll Expense:** Cost to administer bi-monthly payroll for company using QuickBooks Payroll service or similar type service. Assume small increases to cover possible new employees or fee increases.

#### Worker's Comp Insurance: Assume \$600/Yr/Employee

#### Professional Fees:

- CPA Fees: Seaman, Shinkunas & Lindgren, P.C., Huntsville, AL Initial consultation and advisory services from CPA \$1,500. Quarterly Tax Return Preparation of \$200 increasing to \$250 in 2013, Annual Tax Return preparation of \$750. Annual audit 2012 - \$9,000, 2013 forward - \$15,000.
- Legal Fees: Huntsville, AL law firm to be decided. Legal fees 2011 - \$45,000, 2012 - \$50,000, 2013+ - \$75,000.
- **Rent:** Continue renting Madison Blvd office @ \$500/Mo. through first month of funding. Begin renting 7,500 Square Foot office with all-in rate of \$16.00 beginning after Phase 1 funding secured. Assume 3% annual increase beginning April 2014.
- **Telephone/Internet:** Telephone & Internet service provided by CenturyLink. Space Operations, Inc. will utilize VoIP telephone service at \$747.65/Mo. increasing 5%/Yr.
- Travel & Entertainment: Drawing Coordinator will travel between Huntsville and Dallas weekly. Average \$1335 per week. [Flight should average \$450, Hotel \$375 (\$125/Night @ 3 nights), Food \$200 (\$50/Day @ 4 Days), Car \$310]. Other travel as necessary, assume \$4,500 per month for Phase 1, \$7,500 for Phase 2, and \$12,000 for Phase 3. Increases by \$12,000 per month in 2014 and 2015.
- **Start-Up Expenses:** Start-Up Expenses consist of furniture, computer hardware and software to get company started. Additional Start-Up Expenses are incurred in Phase 2 for additional employees expected to start in that phase as well as furniture and equipment necessary to build a small mission control facility within the Space Operations, Inc. office.
- **Income Taxes:** Income taxes are assumed on an average 35% basis on net income. Initial losses are carried forward until completely offset against future profits.

#### **5.4.2 Balance Sheet**

#### **Accounting Basis**

The balance sheet is a hybrid between cash and accrual basis to try to reflect the level of profitability and owner's equity in the company. Contract payments are shown as payables on the date the payment is scheduled and has been reflected as paid when due, creating no payable in the balance sheet. Likewise, all receivables reflect payments being made when due and thus creating no account receivable balance.

#### Assets

**Accounts Receivable:** Accounts Receivable for sales of astronaut seats, cargo and other services are recorded as contracts are entered. All receivables are assumed paid when due.

**Flight Hardware:** Capsule and Flight Module costs are capitalized as expenses are incurred. Depreciation begins the month after delivery of each on a 7 ½ year straight-line basis. Capsules are assumed to have a useful life of 10 flights. Flight Modules are replaced each flight.

#### Liabilities

**Accounts Payable:** Accounts Payable for equipment purchases, launch services and the like are recorded as contracts are entered. All payables are assumed paid when due.

**Short-Term/Long-Term Debt:** While the management assumes that the company will enter into a working line-of-credit arrangement at some point in the future, that financial arrangement does not play a significant role in company operations and is not shown in the projections.

**Accrued Items:** Items typically shown as accrued, such as payroll and income taxes, as assumed to be completely paid within the year.