

# SPACEPORT PUERTO RICO

Brief for PROMESA: An Economic Development project for  
introducing the space industry in Puerto Rico.

Industry: Aerospace & Defense



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## 1. INTRODUCTION

Commercial space companies are interested in providing launch services from Puerto Rico due to its geographical location with access to all orbital inclinations. A unique characteristic that none other U.S. location has. As progress continues in the development of its commercial launch site, Spaceport Puerto Rico, will require the support of PROMESA to facilitate alliances with Federal and Local Government Agencies. Spaceport Puerto Rico is positioned to be a major catalyst in the Island's economic development.

Spaceports are spurring in the United States and around the world due to high investment in the development of new launch vehicles and high demand for launch services. The Federal Aviation Administration's (FAA) Economic Impact of Commercial Space Transportation on the U.S. Economy in 2009 report states that the commercial space transportation and enabling industries has seen a growing economic activity of \$61 billion to \$208 billion from 1999 to 2009, respectively. Space Foundation's 2013 Report revealed that in 2012 the global space economy was valued at \$300 billion and is expected to grow to \$600 billion by 2030. The growth is evident as the FAA has licensed over 8 commercial launch sites within the past decade and more are being proposed as seen in Figure 1.

Puerto Rico's government must follow in the foot step of space-faring States and find innovate ways to be competitive. For example, States are investing in launch site license and infrastructure, are incentivizing space companies to establish at their launch site and have passed liability laws to protect prospective spaceflight operators from excessive liability claims in case of a flight-related mishap. With the support of PROMESA, Spaceport Puerto is positioned to be the center of a sustainable knowledge-based community, create hundreds and even thousands high paying jobs and inspire the next generation of students.



Figure 1: FAA-AST 2013 launch sites.

## 2. OVERVIEW

SPACEINNOVA, a private company, is proposing to be the sole license operator of a space launch site to be called ‘Spaceport Puerto Rico’. Spaceport Puerto Rico will be a horizontal take-off and landing (HTL) port for operations and research, dedicated to the innovation of commercial activities related to space, to be located within the premises of Jose Aponte de la Torre Airport (RVR), at former naval base Roosevelt Roads, Ceiba, Puerto Rico.

Spaceport Puerto Rico’s space launch operations will be separate from the RVR airport aviation current activities. It will become a spaceport once it receives a FAA-AST commercial launch license, process of 1 to 2 years. SPACEINNOVA will design the spaceport functions, real estate allocation, and safety planning.

The business model is based on commercial activity operation and logistics work geared towards utilization of the runway for HTL activities of sub-orbital and orbital space-planes. Companies and organizations interested in flying from Spaceport Puerto Rico, which will conduct microgravity research, launch small satellites, and send tourists to space to experience zero gravity, could utilize the runway by contacting SPACEINNOVA for membership rates and services.

Spaceport Puerto Rico success requires transparency and clear communications with the government, the private sector and local community. Spaceport Puerto Rico is a potential catalyst of economic development at underrepresented zone Roosevelt Roads, and as such, we proposed a Public-Private Alliance (PPA) among the RVR airport owner, Puerto Rico Port Authority (PRPA), the aerospace incentive provider, Puerto Rico Industrial Development Company (PRIDCO), and the founder and space industry expert, SPACEINNOVA. This alliance (Figure 2), will be at the forefront to attracting many companies to the Island and be part of our economic growth.



Figure 2: Public-Private Alliance (PPA) for aerospace industry economic development.

### 3. JUSTIFICATION & BENEFIT OF SPACEPORT PUERTO RICO

Spaceport Puerto Rico offers the following direct and indirect benefits.

- Potential economic impact of \$197 million over the next 10 years.
  - a. Increase in high-tech manufacturing (satellites, vehicle and payloads) and engineering services.
  - b. Increase in air traffic to RVR airport terminal from regional airports of tourists willing to 'site see' the launch of a suborbital space planes.
  - c. New air traffic of charter jets of individuals who would be flying in a suborbital space planes.
  - d. Increase in local tourism and foot traffic due to the significance of a space launches.
- Direct and Indirect Employment.
  - a. Over 1000 jobs could be created in 10 years.
  - b. Will increase business for local supplier and engineering services providers.
- Competitive Advantages.
  - a. Unique. The ONLY launch site within the U.S. with access to all orbits.
  - b. Efficient. The most efficient launch site for do-east and equatorial launches within the U.S. due to its proximity to the equator.
  - c. Capable of point-to-point intercontinental space transportation.
- Global acknowledgments of RVR as a space launch site due to obtaining FAA-AST spaceport licensing of its runway.
  - a. Puerto Rico will be able compete to attract launch services providers like Boeing, Sierra Nevada Corporation, Virgin Galactic, XCOR Aerospace, Generation Orbit, besides others.
  - b. The spaceport will be used as marketing tool for attracting manufacturing of satellite, space vehicles and aerospace components.
- Long-term investments in runway repair and infrastructure required for space vehicle launch.
  - a. Potential to attract new business based on large cargo aircraft.
  - b. From a national security point of view the runway repairs are essential to be capable to sustain all Army, Air Force and Navy aircraft as it was originally design for.
  - c. Space operation will not interfere with aviation operations. Both parts will benefit from runway repairs.
- Increase in real estate value by the addition of a high technology hangar facilities.
  - a. Investment is expected from companies for the construction of new facilities and refurbishment.
- Increase outreach from NASA, and other space organizations.
- Inspirational.
  - a. It will inspire student to follow STEM careers and the next generation of professionals.



#### 4. NEED AND CHALLENGES

Spaceport Puerto Rico project Public Private Alliance (PPA) proposal was submitted to the Governor, PRPA and PRIDCO by SPACEINNOVA LLC. For the success of Spaceport Puerto Rico, there is a need to encourage a healthy collaboration and understating between Federal and Local Government Agencies, PROMESA, research institutions, the local community and academia.

The challenges for Puerto Rico are largely caused by lack of access of incentives in form of liquid capital, poor communications between government agencies, and slow and inefficient contractual process between government agencies and private industry. For Puerto Rico to compete in the space transportation, satellite and innovation industry, it must address the following challenges:

1. Legislative support: In the U.S., various states have passed the bill “Spaceflight Liability and Immunity Act” that protects prospective spaceflight operators from excessive liability claims in case of a flight-related mishap. It is imperative to pass similar legislation in Puerto Rico to be able to compete with the other space-faring States.
2. PRPA regulations: Airport lease regulation regarding electrical and water services must be reviewed. The current regulation charges the user electrical and water fee without providing the service nor the infrastructure. This is deterrent to potential airport and spaceport tenants, economic development, and it may slow the growth of the aerospace industry in Puerto Rico.
3. Identify funding for infrastructure: To serve the high demand of small satellite launches, Federal funding is required to repair of RVR runway. It was once capable of accepting all class of Naval and DoD aircraft, today the runway requires repairs and current federal funding do not sump up to help the fixes to reach the capability that will boost economic development.
4. Provide government support and incentives: PRIDCO has allocated reimbursement incentives for SPACEINNOVA’s launch site licensing efforts. The funds should remain and continue even in case of change of government administration. Furthermore, tax incentives will be required to attract the commercial space industry to Puerto Rico and to be able compete in the \$300-billion-dollar global market.
5. Maintain strong government relationships: Spaceport Puerto Rico stakeholders and the government must work together to cooperatively manage resources and serve a variety of customers.
6. Provide great service: To attract and retain spaceport tenants and new business, Puerto Rico will need to promote investment assurance, and engage in efficient and reliable government/public services at every opportunity.

SPACEINNOVA is here to create a sustainable innovative community with reliable, easy and fast access to space that integrates Puerto Rico's existing infrastructure assets, skilled workforce, and local supply chain capabilities. Space, like land, air and water, is a medium of transportation and resources and is the next frontier for economic growth. Spaceport Puerto Rico has the potential to be a catalyst and an engine for economic development and request to be consider a priority in PROMESA.

Regards,

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