

### WHITE PAPER





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### Introduction

The range of human activity has grown from land to water, ocean to atmosphere, and atmosphere to outer space. Space technology development in the 1950s ushered in a new era of human space travel. Humanity's space operations, advancing quickly for about 50 years, have achieved extraordinary feats, considerably aided the growth of social productivity and progress growth, and caused significant and far-reaching repercussions. One high technology area that has shown to have the greatest impact on contemporary culture is space technology. The ongoing advancement and use of space technology have grown significantly in the global modernisation effort.

The Company is creating vital infrastructure, technology, and systems that are required to advance the commercial space industry and its viability on a worldwide scale.

According to statistics, the future prosperity of Earth depends on the commercialisation of space. Our world is becoming more interdependent, resource-constrained, and urgently needing innovation that may break down barriers and improve people's lives.



### Mission

We aim to support space missions and engagement activities for research and education in the space sector. It enables us to reach beyond the boundary of the Earth and travel into space to build networks spanning multiple universes, resulting in the evolution of the human species and utilising our advanced space technology. To enable humankind to explore far-off, undiscovered galaxies, we offer cutting-edge technology delivered at an extremely rapid pace.



# Features

### Opportunities to Experiment in Social, Economic, and Political Areas

Since space settlements would be geographically and environmentally isolated from one another, it would be possible to experiment with new ideas without damaging others. Equal chances for experimentation would arise from the mass movement of people into space settlements, which would not exploit local communities but instead tap into the global dissatisfaction of people feeling powerless to alter their flawed systems. Success in the space industry would probably and eventually lead to the return of novel ideas and products to Earth without the risk of human exploitation.

# General Space Manufacturing and Industrialization

Eventually, many, if not all, extractive industries and their downstream manufacturing processes may relocate to space due to the declining cost of space-based manufacturing and the rising cost of manufacturing on Earth (due to increased scarcity, environmental impacts, labour standards, etc.). Such a change would have a significant impact since it would move these activities' side effects away from our biological ecosystems, threatened species, and human populations. The immensely bigger realm of space would offer practically limitless operating room, energy, and resources.



### Human Population Expansion into Space

Creating new habitats for people to live, work, and explore is one of the fundamental reasons for space development. The space community is currently on a clear route to developing a commercial space tourism business and establishing modest but long-term human outposts on the Moon and Mars, even though only a very limited number of people have been able to go to space so far.

#### **Motivating Factor for Steam Education**

Beyond economics, a thriving space industry will continue to excite young and older people about new frontiers, discoveries, and technologies. It will also encourage interest in STEAM (science, technology, engineering, art, and math), which contributes to developing a scientifically literate society capable of participating in a world that is becoming increasingly dependent.

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#### Extraterrestrial Colonies and Reducing Climate Change

The amount of scientific evidence supporting climate change is overwhelming, and in as short as 50 years, there is a chance that cities and entire nations may be destroyed by droughts, heat waves, and floods, which would also cause freshwater and crop catastrophes.

Existing space programs are looking for the ideal locations in the solar system to build colonies that may, for instance, supply some of our agricultural needs to lessen the greenhouse gases that this industry emits on our planet, as well as being used for human settlement.



#### **Space Launch Services**

In 2021, the market for space launch services was estimated to be worth USD 12.67 billion. The market is anticipated to increase at a CAGR of 12.25%, from USD 14.21 billion in 2022 to USD 31.90 billion by 2029. Demand for space launch services has been lower than expected across all regions compared to pre-pandemic levels due to the unprecedented and staggering COVID-19 pandemic. According to data, there was a 14.13% reduction in the global market in 2020 compared to 2019.

#### Growing Space Program Will Increase Demand for Launching Services

Many people and organisations are interested in space exploration initiatives, and large nations have controlled the global reusable launch vehicle market by showing their space expertise. The growth of the global spacecraft market has also been supported by expanding space and R&D projects. The demand for reusable launch vehicles is also increasing due to the expansion of cooperation between international space institutes to integrate technology and finance.



# **OST Products**

OST has an online store where custom branded clothing and various hi-tech products are available to purchase directly. The store will be updated continuously with new products. The store is aimed at both the consumer and corporate market.





### Technologies

We can better understand and care for our planet by exploring the universe. Effective communication, building, and sustainability advances result from these spin-offs.

### DEVELOPMENT OF NEW SPACE TECHNOLOGY

The space industry has advanced to the point where it appears feasible to approach an orbiting spacecraft and securely meet with it at any time. Small-satellite-based orbital inspection, maintenance, and deorbiting capabilities are currently being developed. Aurora Plasma Break, created by businesses like Aurora Propulsion, is intended to deorbit a satellite from orbits as high as 1,000 kilometres. The viability of orbital refuelling service is no longer in doubt because such logistics for in-orbit servicing have already been created. This is attributable to the contributions made by the New Space participating organisations, particularly Orbit Fab and Space Logistics, who have been driving the effort in this changing sector. Additionally, the investments made by existing participants show how established businesses are becoming more involved in the New Space economy.



### COMMUNICATION FROM SPACE

You've benefitted from space exploration if you've ever taken a selfie or used a computer in a public place. In the 1990s, the fundamental technology was developed in every smartphone camera, which NASA's Jet Propulsion Lab created to capture high-resolution images of space.

We intend to make previously unachievable communications possible by hosting one of the most advanced multi-universe networks and revolutionising galactic navigation.

### **INTERPLANETARY PROTECTIONS**

It isn't easy to penetrate Earth's atmosphere and orbit the planet at thousands of miles per hour. It is necessary to build satellites, telescopes, and spacecraft that can resist harsh environments and potential risks from space debris. Equipment like shock absorbers, iceresistant electronics, and fire retardant materials was developed in space to safely. These advancements make it possible for skyscrapers to withstand earthquakes, prevent aeroplanes from freezing in winter and reduce the risk of firefighters suffering serious burns.



### A Growth Opportunity for In-Space Services Is Orbital Fueling

By replacing the empty propellant tanks of satellites that have lost their ability to maintain their respective stations in orbit, orbital refuelling helps to resurrect defunct satellites in Geostationary Orbit (GEO). Resulting in the satellites to extending their mission length in space allows satellite operators to obtaining a better returns on their investments and offers adequate replacement time. The journey that started with orbital refuelling has now come full circle, touching base on goals like but not limited to in-space manufacturing, inorbit servicing (inspection, repair, replacement), space-based situational awareness, and more.

Small satellite technology has contributed to the industry's expansion by enabling such avant-garde concepts, particularly in the New Space sector. Both startups and established players are currently developing in-orbit servicing capabilities. According to a business intelligence analysis released by BIS Research, the market for in-space manufacturing, servicing, and transportation is predicted to grow to \$7.55 billion by 2030. There are several important market drivers and opportunities after reviewing the market analysis. ORBITAL SPACE TECHNOLOGY will collaborate with other businesses to create and implement a cutting-edge communication network and orbit fuel solutions.

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### FUTURE OF SPACE TECHNOLOGY

Small satellites can be used for small-scale in-orbit servicing (including refuelling) missions, and they already are. However, improved versions of these missions may use larger platforms, depending on the servicing payload. A scheduled in-orbit operation for the orbital refuelling service, which involves an in-orbit refuelling station that can receive, store, manage, and supply fuel to several flights, is now in progress. The in-orbit hub for various in-orbit servicing capabilities, such as orbital spacecraft refuelling, inspection, repair, and replacement, in-orbit assembly, satellite deorbiting, and satellite life extension, might be used for this.

Orbital refuelling capabilities will continue to be essential given the numerous deep space missions being planned by the government and commercial agencies to recover from and avoid anomalies that could threaten a mission's major goals. Orbital refuelling services are anticipated to serve a wide range of space operations in addition to extending satellite missions in orbit (the extent of support is subjective, varying from mission to mission). As the replacement deadlines for satellite missions are prolonged, this will improve investment return and lessen the timing pressure on launch services.

We could be looking at yet another profitable New Space market segment that would propel the space industry into the next wave of operational and technological development if orbital refuelling evolves into the future core of the in-orbit servicing business. The entire space industry benefits from it, and in the end, new and enhanced products and services are delivered to various global downstream markets.



### Investers' Opportunities

The last ten years have seen several young companies start looking for ways to make money in an area where most of the money was made through space mission contracts or costly communications satellites. As a result, the space sector is currently undergoing a significant transition.

- Large aerospace and other space industries continue to dominate the estimated \$400 billion space sector, serving government and publicly funded interests. Investors are relying on the consensus of Wall Street that in the next 10 to 20 years, the space industry will grow to be a multitrillion-dollar industry.
- The state of humanity on Earth is deteriorating year by year. Why devote so much money to space exploration when there are already so many resources in short supply due to pandemics, economic instability, and climate change? This debate frequently arises because there are significant issues to resolve on Earth, and space travel is expensive. This oversimplification disregards the motivations for making humanity the dominant species on Earth. Space exploration is crucial if we intend to keep that state.



# New Research and Technologies

Despite not having evolved for space travel, humans nonetheless venture there. This inspired the development of numerous technologies that benefit the economy and enhance life on Earth. Without space missions, we wouldn't have GPS, precise weather forecasting, solar cells, or ultraviolet filters in eyeglasses and cameras. Additionally, there is currently medical research in space that may be able to treat diseases and lengthen human lives but cannot be carried out on Earth. The study of space might save your life.



### Mining in Space Could Save the World

Our natural resources are under more and more stress as the population keeps growing at an unstoppable rate. There are many precious resources in space, but the extraction of rich minerals has caused some issues, including environmental degradation and human exploitation. Asteroids would provide OST Technology with an almost limitless supply of rare raw minerals currently in short supply on Earth.



## Asteroids Mining Machine

Mining is the extraction of minerals and other resources from the Earth to create new products. Mining can occur above ground or underground, requiring a wide range of equipment and technological advancements.

OST's mining mission will assist researchers in learning more about asteroids and their potential riches. These missions will provide crucial asteroid exploration technology that might help NASA, a private enterprise, and anyone else interested in exploring or mining asteroids.

The Sun is orbited by millions of asteroids ranging in size from a few meters to hundreds of kilometres. Even a little, house-sized asteroid, which we'll probably never visit, might have lots of metal for Earth's future technology or water ice for deep space exploration.



# Pre IDO Sale

Projects issuing coins or tokens before the initial DEX (decentralized exchange) offering are referred to as pre-IDOs. A pre-IDO allows everyone to invest in future DeFi initiatives, unlike a pre-sale, when tokens are only offered to a restricted number of investors. Pre IDO sale of currency being launched OSTT the orbital space technology token. All the funds generated by pre- IDO sales will be fully invested in manufacturing products. IDOs sales are one way to raise money for a project, but the state of the market has a big impact on how much the tokens cost. But even in a volatile market, developers can raise money with a pre-IDO. That was decided upon before the pre-launch. Our Pre-IDO offers a relatively large pricing advantage and more democratized investment

access.

# Conclusion

As a result of the information submitted in this document, it should be noted that OST'S proposed projects aim to transform lives here and in space positively. The Company is driven by delivering the latest state-of-the-art technology, Helping forward our motion in becoming a multi-planetary species by engaging in the latest research and development procedures whilst consecutively improving life here on Earth with developed technologies. The platform focuses on developing the latest and modern techniques, which would help inner space making it easier for research and development to locate such a habitat for Humanity's survival. The planet and OST to collaborate in making such solutions and technologies for the benefit of human kind.

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