



# The Future of Space Exploration is in our Hands

InStelForce Ltd

Investor Pitch Deck

September 2022



# About IntStelForce Ltd

- **We are a London-based aerospace start-up that is developing revolutionary quantum propulsion systems and new types of space vehicles propelled by those systems.**
- **To date the company has managed to develop the basic concept of the new propulsion system and is ready to develop it further into a fully operational flying prototype.**
- **Our team includes experienced, skilled and highly motivated engineers and scientists determined to make quantum propulsion technology a reality.**
- **We conduct our development program in partnership and close cooperation with Imperial College London and Cranfield University.**
- **The first and the most obvious applications of the quantum propulsion systems are the commencement of space mining on a massive industrial scale and the commencement of regular interstellar flights aiming at exploration of deep space and colonisation of habitable planets.**
- **Our activity is supported and admired by almost 60,000 Facebook followers and many aerospace industry professionals who are connected with us via our LinkedIn page.**

# OUR MISSION

- **We are aiming to resolve the looming mineral resources crisis by arming humankind with ultimate tools that will allow us to commence practical exploration of abundant mineral resources located in space.**
- **We are aiming to resolve the looming crisis of Earth overpopulation by arming humankind with means of interstellar transportation and colonization of habitable planets orbiting distant stars.**
- **We are aiming to protect our planet with an ultimate rapid reaction system that will allow us to intercept and destroy asteroids that could represent any threat to our civilization's survival within hours after their detection.**



# OUR MANAGEMENT TEAM

**Our entire team includes experienced, skilled and highly motivated engineers and scientists determined to make quantum propulsion technology a reality. The actual team consists of 10 people and is projected to grow to 20 after seed funding.**



**Alex Loskevich is the founder, CEO and one of the main technical consultants. He is an electronics engineer who has got more than three decades of project management experience in the aerospace and IT industry. Skills include electronics engineering, software engineering, aerospace electronics engineering, radiocommunications electronics engineering, team management, project management, project budgeting and financial supervision.**



**Mushfiqul Alam is professor and lecturer in flight dynamics at Cranfield University, with a focus on flight control and flight simulations. Accredited with major qualifications from various universities including (a) a PhD in Philosophy, Flight Dynamics and Control, and Signal Processing, (b) a Masters in Space Automation and Control and (c) European Masters in Space Science and Technology.**



**Peter Banks has had an illustrious career holding senior positions that span 25 years covering multiple industry sectors. He presently holds the positions of Co-founder & Fractional Director of Sales & Marketing and Non-Executive Director of the Sales Marketing Operations for Explore My Stores. He has got extensive experience as business advisor, negotiator and communicator.**



**Lt. Col. (Ret) Nick "N.J." Joist is aviator, aerospace and defense professional, military and security advisor and international affairs specialist. He has a strong operational background, in-depth expertise and first-hand experience in all aspects of aerospace, maritime and defence, as well as geopolitics and international affairs. Nick has extensive experience as a NAVY pilot and in astronaut training.**

# SPACE EXPLORATION PROBLEMS

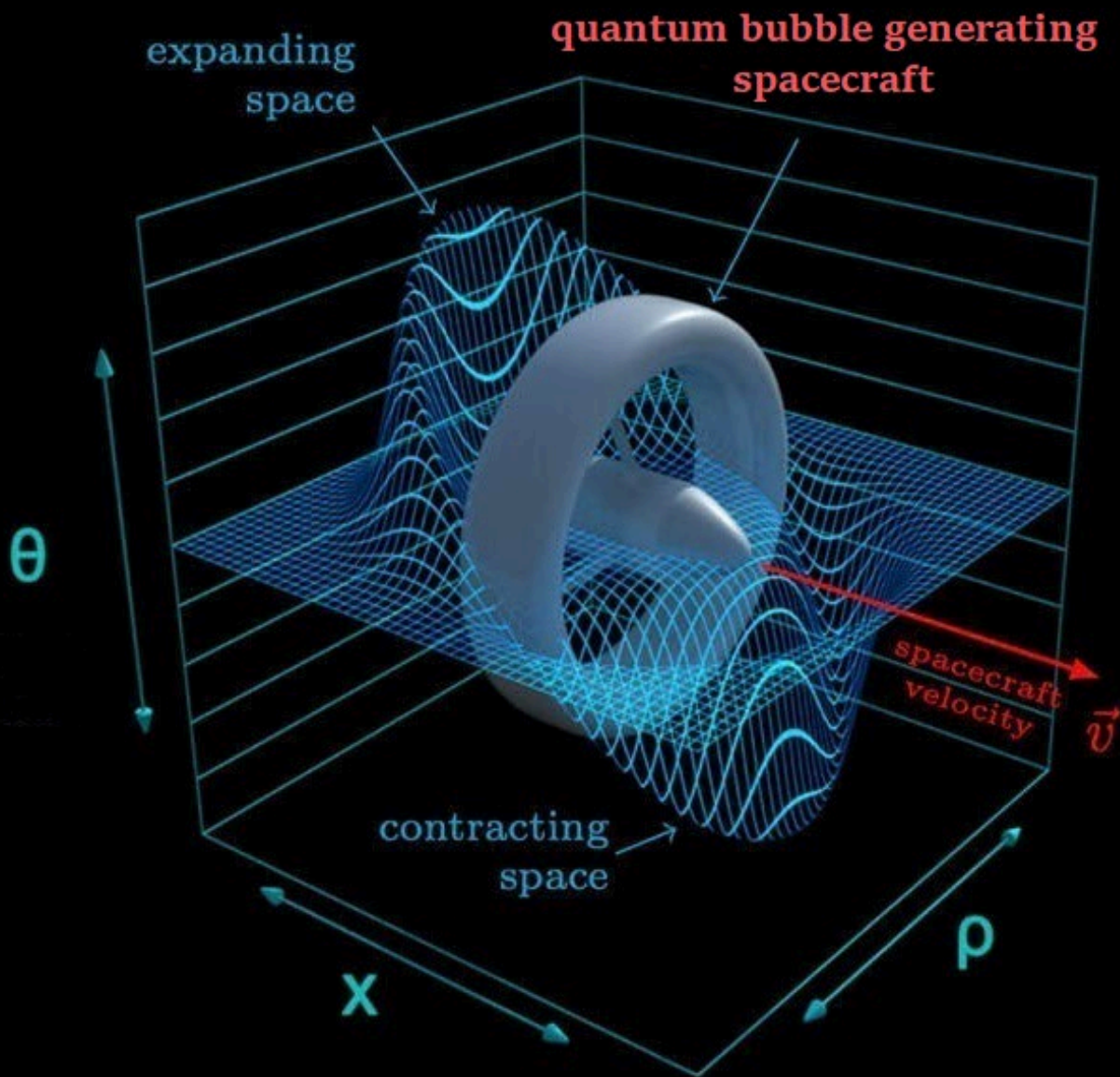


- Incredibly slow speed of contemporary spacecraft.
- Extremely low lifting capacity of contemporary spacecraft.
- Enormous costs of space flight and space exploration in general.
- Chemical fuel jet spacecraft will never become truly reusable.
- Complexity of spacecraft that is greatly increasing costs and safety of space flight.
- Absence of any realistic way to protect space crews against space radiation.
- Problems of weightlessness irreversibly affecting space crew members' health.
- Unsuitability of contemporary space technology for exploration of space resources.
- Unsuitability of contemporary space technology for interstellar travel.

# ULTIMATE SOLUTION

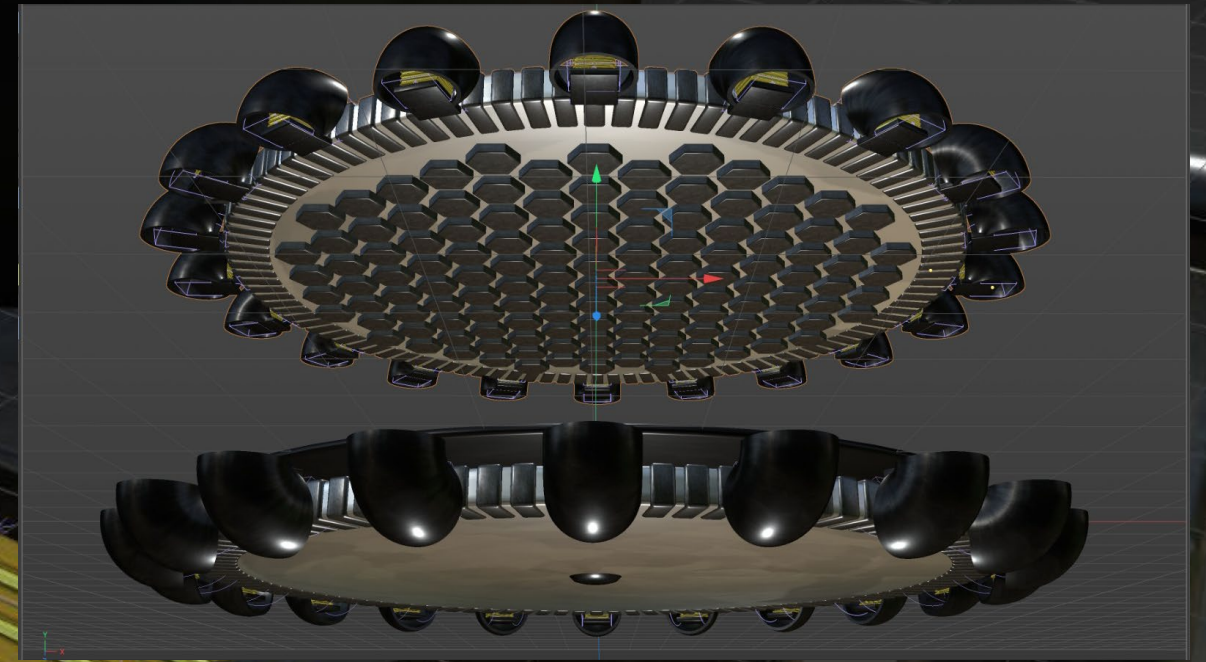
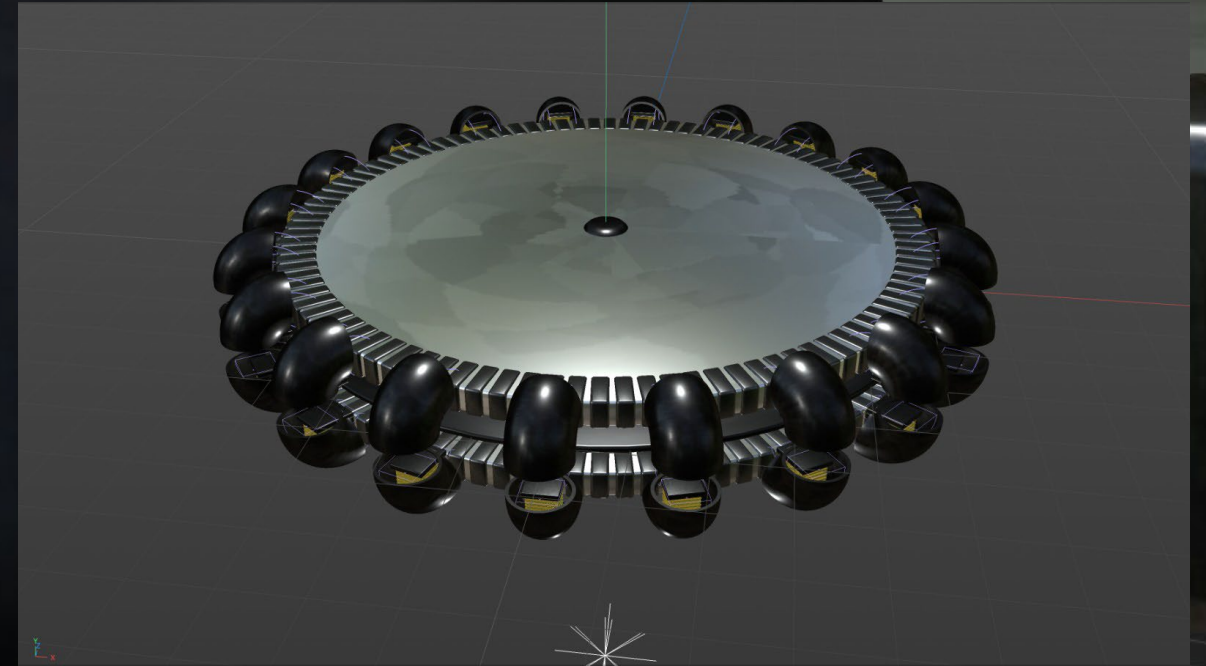
Quantum propulsion system that we are currently developing is the ultimate solution to absolutely all existing and potential problems that space exploration and aviation are facing today. It provides us with space vehicles that will be capable of:

- Flying with the speed of light and facilitating interstellar travel and colonization of habitable planets.
- Transporting hundreds of tones of cargo to any point of our solar system and beyond. Opening the possibility of commercial exploitation of limitless space metal and mineral resources.
- Providing 100% protection from solar and open space radiation for the crew and onboard equipment.
- Cutting down space travel time to days and hours, thus making space travel a comfortable and safe journey.
- Cutting spacecraft production costs and making interstellar flying machines no more mechanically complicated and no more expensive than today's passenger jetliner.



# REVOLUTIONARY TECHNOLOGY

Quantum propulsion systems operating principle is based on generating a quantum cocoon (or bubble) around spacecraft that distorts the influence and resistance of outside physical forces giving it absolute freedom of speed and maneuver. This principle is not new. It appears to be that many flying insects using it to propel and protect themselves for hundreds of millions of years. We are reverse engineering this mechanism creating electromechanical devices that generate quantum cocoons in the same way as designers of the first airplanes mimicked birds' wings design and operations.



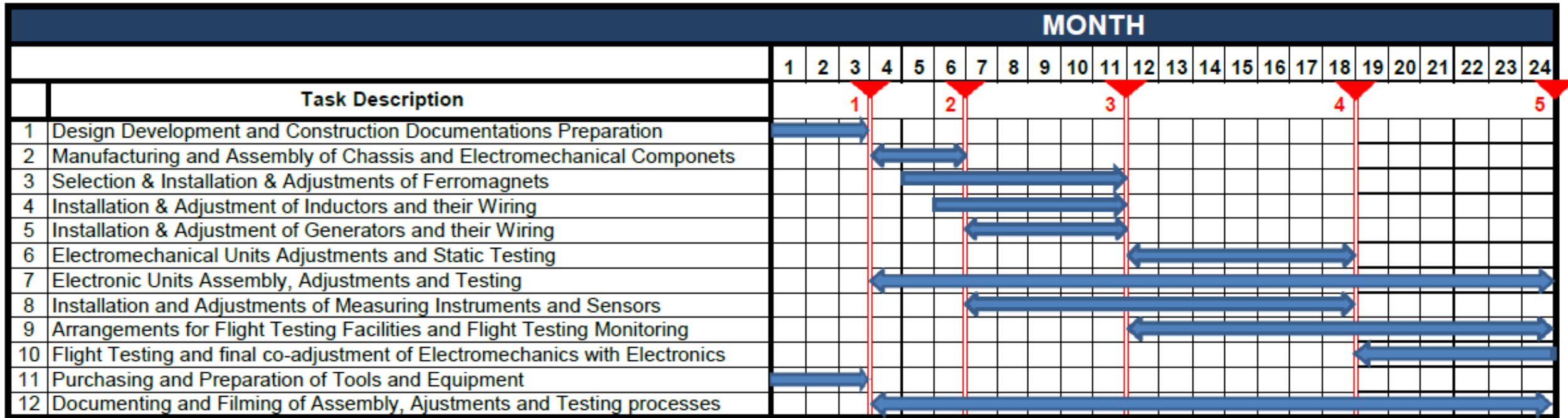
# FINAL PRODUCT we will build



- Unmanned scouting vehicle that can be used as a space exploration probe within our solar system (in 2-3 years)
- Four-seater manned space vehicle that could be used for manned space exploration, space tourism, geological survey and experimental small-scale asteroid mining operations within our solar system (in 5-10 years)
- Large, high-capacity transport spaceship that will be capable to support industrial-scale commercial space mining and construction of planetary bases within our solar system (in 10-15 years)
- Large interstellar transport space vehicle that could be used for exploration of distant planetary systems and colonisation of habitable planets (in 15-20 years)
- Experimental space vehicles and devices that could be used for experimentations with possible interdimensional travel, teleportation and time travel (20 years plus)



# PROJECT PLAN



## MAJOR MILESTONES:

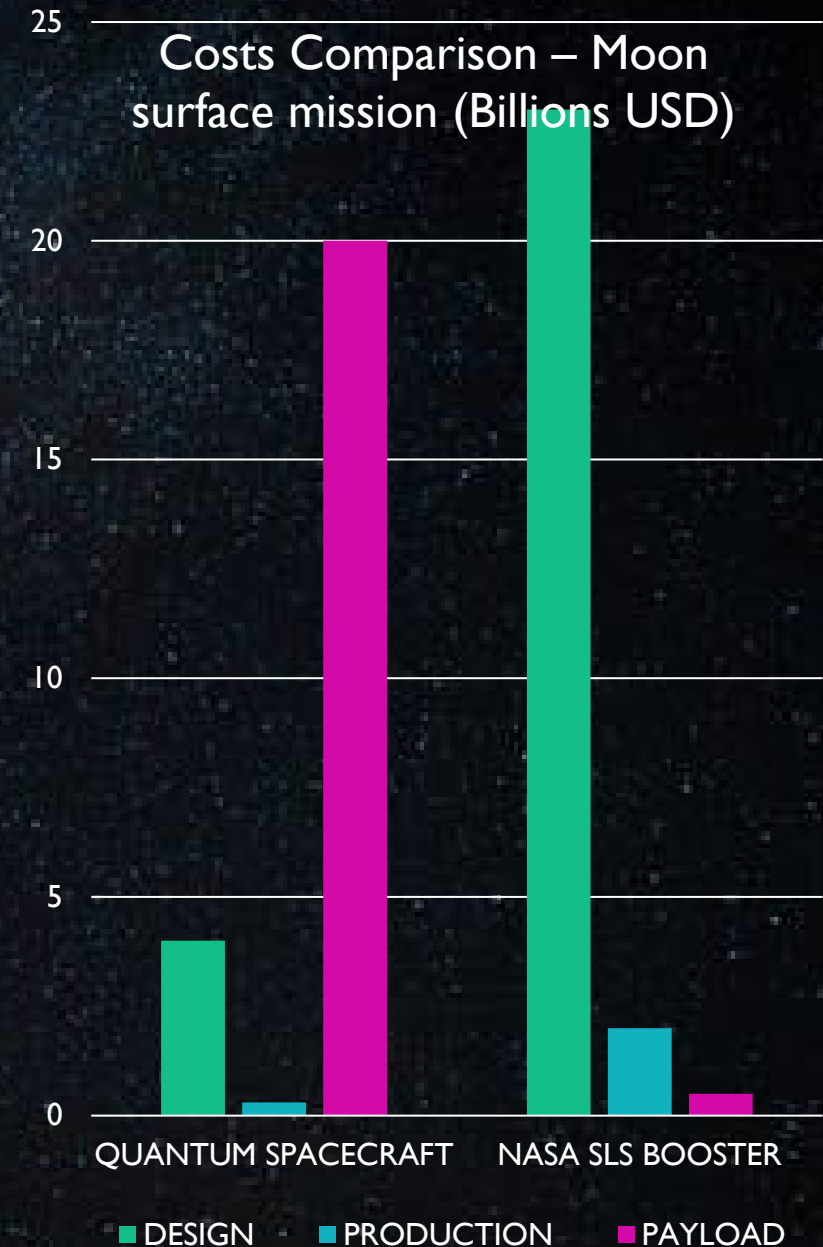
1. Design and assembly documentation preparations complete
2. Chassis are ready for instalation of units and components
3. Electromechanical part is fully assembled and ready for testing
4. The prototipe is staticly tested and prepared for flight testing
5. The prototype is fully tested and ready for demo flights

## Tasks' Interdependence Legend:

- ← - Task cannot start untill previous task completed
- ←→ - Interdependent with previous task and next tasks
- - Next task cannot start untill this task completed

# MARKET OPPORTUNITY

- Production and launch costs of newly designed and built NASA's Space Launch System (SLS) vehicle in combination with Orion interplanetary spaceship costs are about 4 billion USD, and this is the expendable launch vehicle. At its most powerful configuration it will be able to deliver about 46 tones of cargo to the low Moon orbit and it will take 3 days.
- Production costs of Quantum Space Vehicle are about half of billion USD. This machine is fully reusable and can fly to space hundreds of times before undertaking major refitting. Launch costs, which in fact are costs of some checks and adjustments, are going to be less than 100 thousand USD. This machine is much smaller than SLS, but it will be able to deliver 200-250 tones of cargo to any point of our solar system and it will take just a few hours.
- Tremendous commercial advantages and remarkable cost efficiency of quantum space vehicles are obvious. No existing aerospace corporation would be able to compete with us and we will have real opportunity to replace all existing chemical fuel jet air and space craft with our much more efficient and economical space vehicles. The world aerospace market certainly belongs to quantum technologies, it belongs to us.



# OUR BUSINESS MODEL

## OUR OWN ENTERPRISES

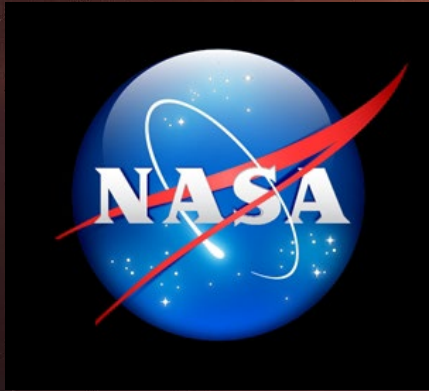
- Launching satellites and other space vehicles to LEO and other planetary orbits
- Cargo transportation to and from surfaces of our solar system celestial bodies
- Space mining operations including extraction and sales of metal ore and minerals
- Transportation and support of scientific, commercial and military space expeditions
- Creation and exploitation of our own civil air transportation corporation

## DIRECT SALES

- Selling our flying machines directly to our customers which will include crew training, ongoing systems support and maintenance
- Leasing our aerospace vehicles to air transportation corporations and space exploration companies and agencies
- Purpose designing and selling our propulsion systems to the large aerospace corporations that will design their own flying machines based on our quantum technology

# OUR POTENTIAL CUSTOMERS

Quantum propulsion systems are going to replace chemical fuel systems as soon as they are available, and it would be no exaggeration to say that the world aerospace industry and their major players are our future customers.



***NORTHROP GRUMMAN***



**Rolls-Royce**<sup>®</sup>

***LOCKHEED MARTIN***



**Raytheon**  
Technologies



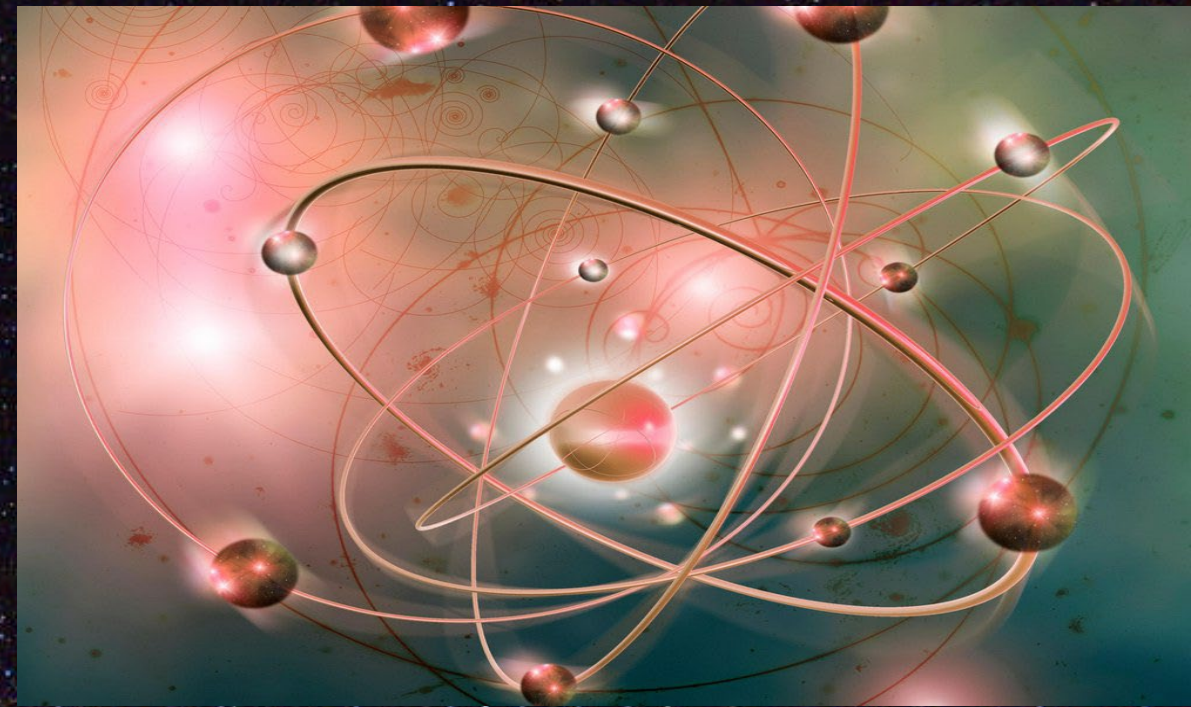
# COMPETITION

A photograph of Earth from space, showing the curvature of the planet and the sun rising over the horizon, creating a bright glow and lens flare effect.

There are no known players in the market offering our quantum propulsion system or concept for space vehicles. We will be the very first organisation that holds the secret of a practically working quantum cocoon generator that allows spacecraft to achieve sustained powered flight.

# FINANCIALS

- No revenue for the first three years whilst the prototype is being developed.
- The expenses will be recorded as an asset under development (the Quantum Propulsion System prototype).



<b>Profit &amp; Loss Statement</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Revenue</b>	-	-	-
Less Cost of Sales	-	-	-
<b>Gross Profit</b>	-	-	-
Less Expenses			
Labour	467,000	675,000	328,000
Overheads	120,000	140,000	65,000
Materials	123,000	127,840	23,000
Tools and Equipment	521,000	30,650	12,670
Subcontracting	125,700	356,000	237,500
Travel and Subsistence	87,100	94,500	117,800
Transfer to Asset	- 1,443,800	- 1,423,990	- 783,970
Total Expenses	-	-	-
<b>Net Profit Before Tax</b>	-	-	-
Income Tax	-	-	-
<b>Net Profit After Tax</b>	-	-	-

- We are seeking for £3.6 million in early stage financing
- We believe this round of financing will last approximately 24-36 months
- With this round of financing we will ramp up technology to build our prototype

# WE ARE LOOKING for £3.6 million investment

List of the expenses over the three year  
period:



		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>TOTALS</b>
<b>1</b>	<b>Labour</b>	467,000	675,000	328,000	<b>1,470,000</b>
<b>2</b>	<b>Overheads</b>	120,000	140,000	65,000	<b>325,000</b>
<b>3</b>	<b>Materials</b>	123,000	127,840	23,000	<b>273,840</b>
<b>4</b>	<b>Tools and Equipment</b>	521,000	30,650	12,670	<b>564,320</b>
<b>5</b>	<b>Subcontracting</b>	125,700	356,000	237,500	<b>719,200</b>
<b>6</b>	<b>Travel and Subsistence</b>	87,100	94,500	117,800	<b>299,400</b>
		<b>1,443,800</b>	<b>1,423,990</b>	<b>783,970</b>	<b>3,651,760</b>

Thank you

**We would love to  
hear your feedback  
on our presentation**

**Let's chat**

**Alex Ioskevch**

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