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Precision Orbital Placement Services

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CURRENT PROBLEMS

- 1) Limited orbit and inclination options for small spacecraft
- 2) Long wait times and limited launch opportunities for small spacecraft
- 3) Currently too expensive to offer satellite servicing and orbital tug services for orbiting spacecraft

CURRENT SERVICING AND LAUNCH OPTIONS

Spaceflight Industries

Limited Inclinations

Orbital/ATK

GEO Gov. Satellites Only

Space Station

Limited inclinations/Altitude

Small-Sat Propulsion

Limited Fuel

Small-Sat Launch Vehicles

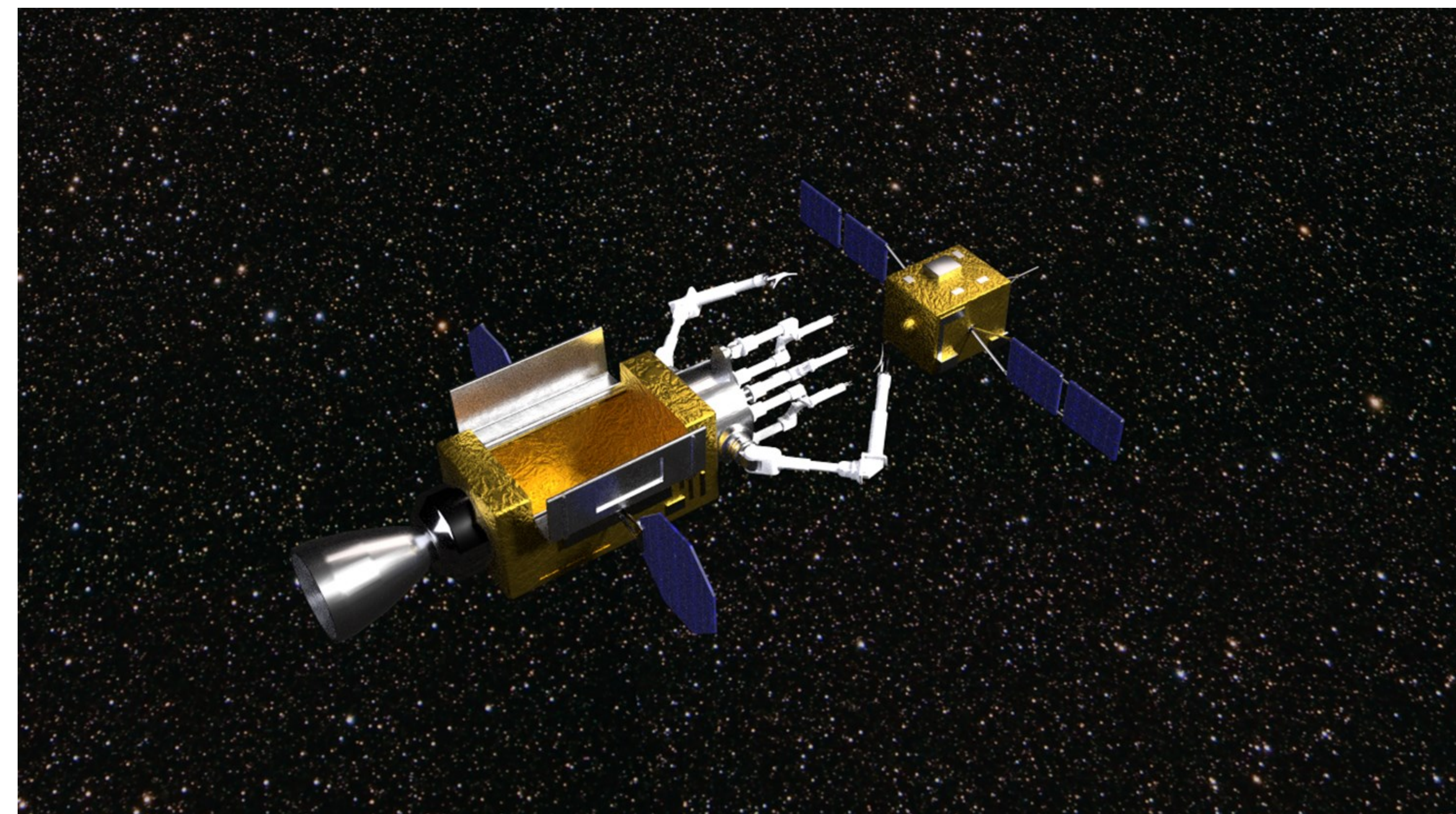
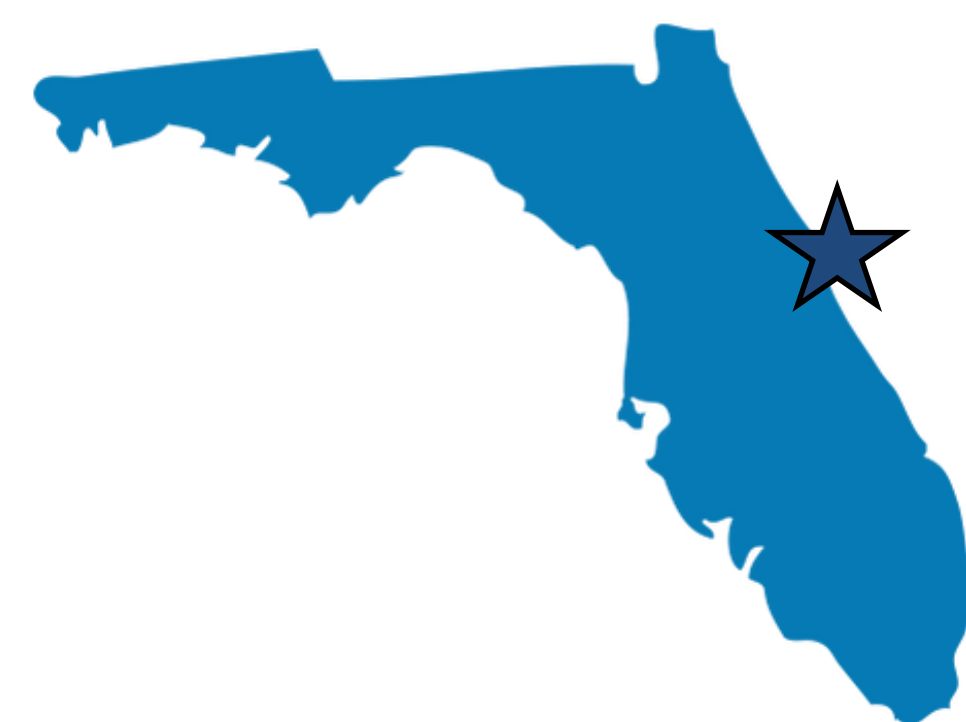
Limited Altitude/Payload

OUR SOLUTIONS

- 1) Reusable vehicle providing precision orbital placement services for multiple small satellites per launch
- 2) Offer secondary orbital tug and satellite servicing capabilities with the same vehicle once in orbit
- 3) Use our precision orbital placement services to cover launch costs and scalability so we can offer the most affordable satellite servicing and tug services to industry

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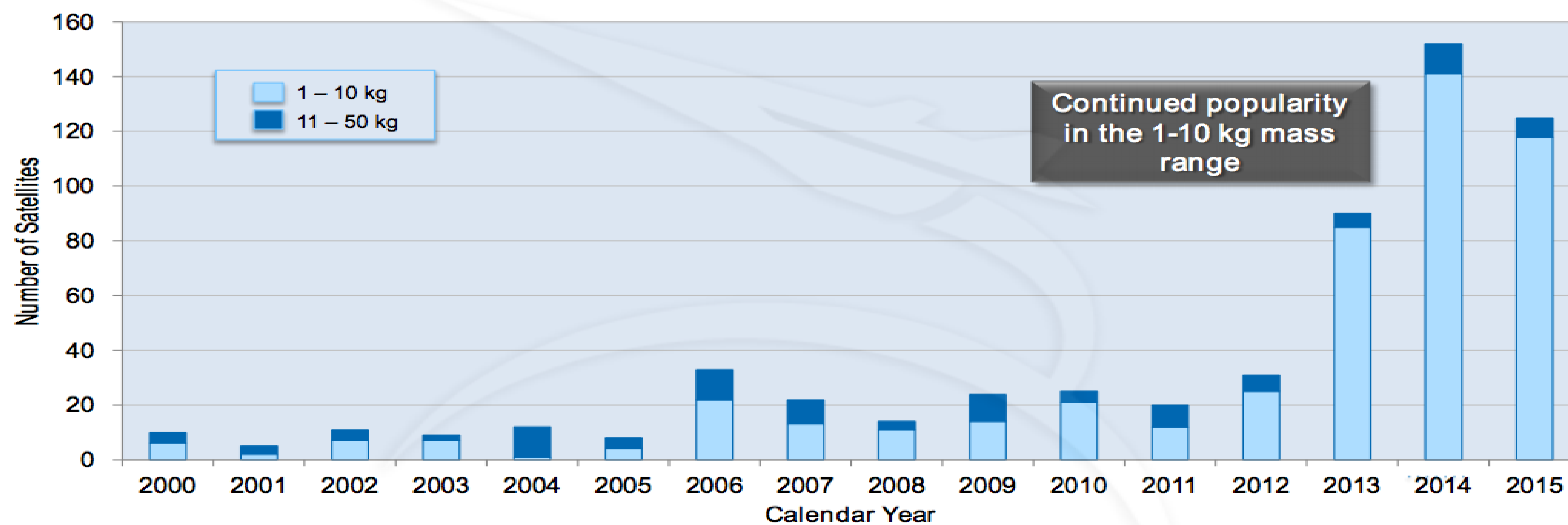


OUR SERVICES

[2019 ----- 2020 ----- 2021]

<p>Precision Orbital Placement</p> <ul style="list-style-type: none"> • Multiple customers per mission • Specific Inclinations • Specific Orbits • Reusable • In-orbit resupply • >10yr lifespan 	<p>Orbital Tug Services</p> <ul style="list-style-type: none"> • Altitude Boosting • Inclination Changing • Relocation • Debris Mitigation • Asteroid Mining • Visual Inspection • >10yr lifespan 	<p>Orbital Servicing</p> <ul style="list-style-type: none"> • Repair • Maintenance • Refueling • In-orbit construction • In-orbit demolition • Debris Mitigation • >10yr lifespan
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Historical Nano/Microsatellites Launched: 2000 - 2015 (1 - 50 kg)



Continued popularity in the 1-10 kg mass range

With over 40% average annual growth in attempted deliveries since 2012 the nanosatellite (1-10 kg) market continues to attract both government and commercial interest

Nano/Microsatellite Launch History and Forecast (1 - 50 kg)

Projections based on announced and future plans of developers and programs indicate as many as 3,000 nano/microsatellites will require a launch from 2016 through 2022

