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Steering NewSpace in the Right Direction

Green, In-Space, Propulsion

NewRocket is developing an innovative rocket engine that is powerful, cost effective and nontoxic. This advanced solution has similar performance to legacy hydrazine-based bi-propellants, paving the way for NewSpace applications, while dramatically reducing fueling and ground service costs.

The Market

- NewSpace companies are beginning to launch **constellations planned for thousands of satellites.**
- **Leading technology companies and investors** are joining the industry.
- Private investments in space companies are adding up to **$5.8 billion in 2019.**

The space industry is moving fast. However, despite vast development, specific areas are still lacking optimal solutions.

Market Gap

Existing, high specific impulse, in-space propulsion systems are currently based on non-storable, cryogenic propellants or on highly toxic hydrazine-based bi-propellant compounds. Usage of hydrazine-based compounds are expected to be banned in Europe and it leads to high opex and capex which is effectively prohibitive for usage in new-space oriented applications such as launchers' maneuverable upper stages and for space tugs.

Cost-effective, storable, high specific impulse, nontoxic solution is required for in-space propulsion.

Competitive Landscape

Advanced ,non-toxic, high-impulse alternative in-space propulsion technologies include:

Electrical propulsion systems

- High power consumption
- Higher Isp (specific impulse)
- Very low thrust

Chemical propulsion systems

- Low-hazard propellants
- Lower Isp (specific impulse)
- Higher thrust

The frequent thrust, high thrust levels and long duration operation required by launcher upper stages and space-tugs makes chemical propulsion systems the more appropriate choice.

A high-impulse, high-thrust, hypergolic, storable chemical propulsion solution is the way forward.

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NewRocket Solution

NewRocket's Propulsion System is an advanced, hypergolic bi-propellant green propulsion system, based on innovative gel-propellant technology.

- Hypergolic bi-propellant technology enables spontaneous chemical ignition upon contact of the propellant components, with no igniter required.
- Gel fuel combines the benefits of both solid and liquid fuels - it is **powerful, controllable, safe, simple and environmentally friendly.**

Solution Benefits

- **Significantly higher Isp** than existing green chemical propulsion
- **Fast response time**
- **Less electrical power consumption**
- **Low-hazard propellant**
- **Easily integrated, tested and shipped**

Current Status

NewRocket won contracts with technology companies and is developing a tailored propulsion system for launcher upper-stage in-space propulsion system.

About NewRocket

- Led by a team of expert engineers and leading scientists with vast experience in the space industry.
- Projects currently being executed amount to $6 million.
- Awarded a prestigious development grant by the Israeli Space Agency.
- Associated with the Technion - Israel Institute of Technology, one of the world's leading universities for science and technology research.
- Seed investment from Incubit ventures (owned and backed by Elbit Systems Ltd.) and the Israel Innovation Authority.

Investment Opportunity

Seeking strategic partnerships in the space industry and an investment.

- Raising series A investment.
- Investment will fund:
  - Product development
  - Commercialization
  - Penetration into the global aerospace market

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