RESEARCH IN OUTER SPACE

Facilitating access to space supporting scientific and technological advancement



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11 May 2022

THE NEW SPACE ECONOMY IS ENABLING MULTIPLE SECTORS ON EARTH

TELECOMMUNICATION, INTERNET, IOT



OIL AND GAS INDUSTRY

EARTH OBSERVATION, CLIMATE CHANGE

- Information on water cycle and
- air quality
- Forecast and mitigate pollution

FOREST MANAGEMENT

- Detect and monitor leakages
- Find new potential resources





AUTONOMOUS DRIVING, NAVIGATION Monitor and predict traffic Detect parking slots



In Orbit Demonstration/Validation (IOD/IOV)

"In-Orbit demonstration/Validation (IOD/IOV) is a unique tool to boost industry's competitiveness by eliminating the famous "valley of death" and accelerating the deployment of innovative technology"

"This maturity level is crucial to enable the competitiveness, non-dependence and innovation of the European space sector."



(European Commission)

SCIENCE & TECHNOLOGY IN MICROGRAVITY

APPLICATIONS

Technology Demonstrations	Science	Earth Observation & Remote Sensing	Space Situational Awareness
Moving from the lab to the real world (i.e., from TRL 5 to 7).	Life & Physical science (e.g. biology, physics, chemistry, astronomy, earth science, engineering, medicine) All branches of space science can potentially benefit from in-orbit experimentation	Land Mapping, Monitoring and Management	Collision avoidance, debris monitoring, nuclear detection and still imagery

ION Satellite Carrier: Space Transportation and IOD/IOV

THE FASTEST SOLUTION FOR MULTIPLE PAYLOADS TO REACH TRL 9

A "cargo" satellite capable of transporting satellites into the right orbit and into the right place in space

Technology developed in-house since 2011 and proven in space provides the foundation for current and future services

1. FASTER TIME-TO-REVENUES and positioning in target orbit

- 2. LAUNCH COST REDUCTION: deploy a constellation in multiple orbits on a single mission
- 3. FASTER TIME-TO-SPACE: ride on the first available launcher
- 4. REDUCTION IN NUMBER OF SATELLITES: ION replenishes constellations faster so there is less need for spare satellites
- 5. LOWER MANUFACTURING COST: reduced need for propulsion decreases costs



ION ADVANCED SERVICES



IN-ORBIT VALIDATION AND DEMONSTRATION



BACKUP SATELLITE FOR AN EXISTING CONSTELLATION



INTEGRATING SATELLITE SERVICES VIA PAYLOADS HOSTED ON ION



SATELLITE COMMUNICATION HUB SERVICES



Time reduction from launch to revenues

Up to

85%

40% Lower cost for constellation deployment

Up to

COMPETITIVE ADVANTAGE

FOR GOVERNMENTS, COMPANIES, ENTREPRENEURS, SCIENTISTS, RESEARCHERS, AND STUDENTS

Simpler	Customer provides the payload (e.g., experiments, technology), D-Orbit brings it into orbit. Oustomer needs only to focus on the experiment/technology itself, greatly simplifying the development cycle.	
Frequent Launch Opportunities	Multiple launch opportunities per year: launch as soon as you are ready!	
More Affordable Service	Low-cost space missions for Research & Innovation (R&I): (1) use of existing commercial ground facilities, (2) sharing the platform's power supply, (3) avoid cost of building and launching a satellite, (4) more cost-effective alternative to traditional space launches into orbit).	
Scalable, Versatile and Customized	Possible to integrate payloads taking into consideration specific user needs.	
Tech. and Research Advancement	Customer's product is market-ready sooner. Shorter timescales for research results.	

