

Mission Space Logistics: DHL moves from Global to Galactic Forwarding

- **DHL Global Forwarding transports ION Satellite Carrier from Milan to Cape Canaveral, Florida**
- **Logistics provider DHL and New Space Company D-Orbit jointly tackle terrestrial challenges and leverage galactic opportunities**

Bonn, December 16, 2020: DHL Global Forwarding, the air and ocean freight specialist of Deutsche Post DHL Group, normally moves goods that stay in the Earth's atmosphere. Now they have partnered with D-Orbit, a specialized company covering the entire lifecycle of a space mission, including logistics services, for the first time. Together with the company's own innovation team DHL Customer Solutions & Innovation (CSI), the freight forwarding expert set up logistics to help the ION Satellite Carrier in its journey into space. Developed and designed by D-Orbit, the satellite carrier is planned to launch at Cape Canaveral, the world's most famous space base in Florida in January 2021.

Tim Scharwath, CEO, DHL Global Forwarding, Freight, states: "We are excited about this partnership for two key reasons. First, D-Orbit shares our vision of reliable, safe and sustainable logistics to connect people and to improve lives. D-Orbit developed its solutions by placing intelligent, safe, and efficient orbital transportation at the heart of its corporate vision, for commercial and human expansion that must be - first and foremost – sustainable. Secondly, this project came to life because of collaboration within the company. It is a perfect example on how we work closely together with our innovation experts from DHL CSI to develop pioneering industry-tailored solutions and put innovation into practice."

"With the advent of satellite constellations and habitable bases, space logistics is an emerging niche within the industry. While the core of logistics remains the same, whether in space or on Earth, more stringent constraints and extreme conditions challenge the safe transport, storage, and delivery of materials and products beyond Earth's atmosphere and back," says Mario Zini, CEO of DHL Global Forwarding Italy. "We are proud to support our partner D-Orbit with this critical mission, as we believe that space logistics will witness great expansion over the next few years, which we also highlighted for the first time in the latest edition of the [DHL Logistics Trend Radar](#). There are enormous opportunities on the horizon for service providers in this sector. We firmly believe in the possibility of developing cutting-edge and sustainable solutions, especially for the transportation and storage of the future."

ION Satellite Carrier shipment: terrestrial challenges and galactic opportunities

ION Satellite Carrier is a cargo vehicle for microsatellites, able to transport them into orbit and release them into precise orbital slots, guaranteeing faster deployment, more rapid commissioning, and a more efficient use of their lifespan. The satellite carrier, with a total weight of around 200 kg, was loaded into a special metal platform to be shipped from Milan Malpensa airport to Miami with a stopover in Luxembourg, on December 13. After an eleven-hour flight, DHL brought the ION Satellite Carrier to Cape Canaveral via road freight. Along with the satellite carrier, a comprehensive set of essential test equipment was transported, equipment that ensures the satellite's integrity and safety before it is launched into space. In January 2021, after lengthy analysis and strict controls, the ION Satellite Carrier will be launched into space.

To tackle this challenge, DHL Global Forwarding teamed up with the company's own innovation centre. Businesses can profit from innovations along the entire supply chain that directly address the logistics challenges of today and tomorrow. The DHL innovation experts bring together customers, research and academic institutions, industry partners, and logistics experts within the business divisions to enable collaboration.

Space Logistics: new demands and opportunities for a zero-gravity supply chain

As a result of great technological advancement and successes in the last decade, the vision of living and colonizing space has slowly reawakened. In addition, the space sector is significantly adding to life on earth, like for instance monitoring the climate and collecting important data from space. With exciting developments in the private and public sector, there are growing questions that need to be answered for space logistics to be successful and sustainable in the future: How will supply chains be planned and managed? How will the accumulation of space debris be curbed and reversed? As launch rates and emissions increase, are there more sustainable ways to transport objects into space? How can products be packaged to survive the extreme forces of a rocket launch and the exposure to high radiation and extreme temperatures of the space environment? Despite the change of location, distances, and gravitational levels, the challenge facing the logistics industry is always the same: delivering goods from point A to point B - safe, on-time, and with the greatest efficiency possible.

Satellite logistics is the newest facet of the logistics industry, with tens of thousands of low- and medium-Earth-orbit (LEO and MEO) satellites expected to be launched in the next few years. Expansive constellations of hundreds to thousands of linked orbiters are planned to provide

various services from global internet provision to data collection. In tandem with this, many operators are seeking viability by cutting launch, operational, and decommissioning costs. D-Orbit, headquartered in Italy, targets this demand with solutions that are not unlike those offered by logistics companies on Earth, delivering satellites to their proper destination in orbit and providing close-up damage inspection services. D-Orbit estimates that it can save satellite operators 40% in costs for constellation deployment and extend satellite life by up to five years. D-Orbit also provides safe decommissioning services for end-of-life satellites, to combat growing space debris and has a vision for the future that includes possible in-space orbital warehouses for satellites.

“DHL Global Forwarding is a world leader in logistics, and D-Orbit is an emerging leader in the space logistics and transportation sector”, says Jonathan Firth, Chief Operating Officer at D-Orbit. “The success of our recent ION Satellite Carrier mission established D-Orbit as the first orbital transport company, with the ability to deploy satellites into precise orbital slots. The next step in our roadmap will be In-Orbit Servicing: moving existing satellites from one orbit to another, performing repair and refuelling operations for vehicles in orbit, and to removing satellites at the end of their mission, thus optimizing resources and keeping space clean”.

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Media Contact:

Deutsche Post DHL Group
Media Relations
David Stoeppler
Phone: +49 228 182-9944
E-mail: pressestelle@dpdhl.com

On the Internet: dpdhl.de/press

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DHL – The logistics company for the world

DHL is the leading global brand in the logistics industry. Our DHL divisions offer an unrivalled portfolio of logistics services ranging from national and international parcel delivery, e-commerce shipping and fulfillment solutions, international express, road, air and ocean transport to industrial

supply chain management. With about 380,000 employees in more than 220 countries and territories worldwide, DHL connects people and businesses securely and reliably, enabling global sustainable trade flows. With specialized solutions for growth markets and industries including technology, life sciences and healthcare, engineering, manufacturing & energy, auto-mobility and retail, DHL is decisively positioned as “The logistics company for the world”.

DHL is part of Deutsche Post DHL Group. The Group generated revenues of more than 63 billion euros in 2019. With sustainable business practices and a commitment to society and the environment, the Group makes a positive contribution to the world. Deutsche Post DHL Group aims to achieve zero-emissions logistics by 2050.

D-Orbit is a New Space company, with capabilities in satellite manufacturing, launch, deployment, satellite operations, end-of-life strategies and solutions, space propulsion and related critical software. Its products and services cover the entire lifecycle of a space mission, including mission analysis and design, engineering, manufacturing, integration, testing, launch, mission control, and end-of-life decommissioning. Founded in 2011, D-Orbit currently employs approximately 95 people. The Company is based in Como, Italy with subsidiaries in Lisbon, Portugal, Harwell, UK, and Washington DC, USA.