MANAGED TEMPERATURE CONTROLLED FREIGHT

CUSTOMIZED SOLUTION FOR HIGH-VALUE, TIME-SENSITIVE, TEMPERATURE-CONTROLLED AIR AND OCEAN SHIPMENTS

Pharmaceutical companies with high-value life-saving products have strict time- and temperature-sensitive requirements. Global visibility, shipment control, and a single point of contact are needed to enable the highest level of service reliability, timely delivery, and regulatory compliance. This reduces the risk to patient care and the company's brand reputation.

TYPICAL BUSINESS CHALLENGES

- Cutting the complexity and risk of product handling and transportation
- Ensuring product integrity and regulatory compliance
- Responding rapidly and appropriately to supply chain events and disruption
- Reducing high shipping and insurance costs



DHL SOLUTION

Incorporating the DHL LifeTrack[®] cold chain tracking app, this solution is customized to the specific needs of each pharmaceutical company. It provides timely shipment data, artificial intelligence, and the dedicated services of a highly competent team to deliver on exacting standards of service and compliance.

SOLVING YOUR BUSINESS CHALLENGES

✓ Cutting the complexity and risk of product handling and transportation

Purpose-built solution to meet service/cost performance requirements; visibility and insights to manage complexity and risk; shipment temperature sensors and trackers.

✓ Ensuring product integrity and regulatory compliance Life sciences staff trained in GxP and regulatory compliance; processes are pre-agreed and then deployed, executed, and audited; excursion and handling events are documented ✓ Responding rapidly and appropriately to supply chain events and disruption

With a single point of contact, event response is well managed; recovery actions are finalized and executed through the DHL service suite including Same Day specialty courier services

Reducing high shipping and insurance costs

Data-driven shipment visibility, integrity, and compliance; shipment data and analytics applied to reduce service level risk; simplified event management; multiple perspectives on cost reduction.

KEY BENEFITS FOR YOUR BUSINESS

Controlled Freight

Managed

Temperature

INNOVATE AND IMPROVE EXPERTISE FOR PEACE

Innovations to improve OF Constructions to improve Glob operations. Mindset of Scient continuous improvement professional continuous improvement of the second seco

OF MIND Global pool of Life Science certified professionals

REACH &

SAFETY & SUSTAINABILITY

Priority of Health & Safety instilled in operations. Clear Sustainability goals and action plans. OPTIONS Global network of assets, resources and partners of Life Science competencies

DHL's LifeConEx : Temperature Controlled Air and Ocean Freight Solutions

Physical Components Services Documented, auditable. Description of physical components Process regulatory-compliant Processes Understanding your Products Products temperature requirements **DHL Same Day Specialty Courier** SOP & LRA LSHC trained and certified staff. |.lıl Partners Working with qualified ين سي Documented and enforced processes Partners Customized / White glove solutions **Visibility & Intervention** (SOPs) Patients People GxP compliant IT platform **B**. Consultative services **Root Cause & CAPA** Tracking and temperature monitoring devices Trained People **_** Packaging **Data analytics Temperature Control** Knowledge of Places Validated airline and service partners Packaging capabilities In the Places & limitations you are or want **Real time tracking devices** 囲 Customization to be

Temperature Management Solutions

DHL Airfreight Pharma and Temperature Controlled Solutions Suite

Business Scenario & Key Customer Challenges / Requirement	DHL Solution Value Proposition
 Business Scenario: A biotech company needs to move temperature- sensitive products internationally, and requires a high level of visibility and strict quality control. Complexity: Maintain strict quality standards with sensitive products moving through a complex supply chain Risk: Shipment delays caused by carriers or customs, temperature excursions, and poor product security put patient health at risk Regulatory: Essential to know and conform to regulations governing pharmaceutical products (e.g., serialization, GxP requirements, customer compliance, and counterfeiting) Costs: Manage the industry-wide pressure to lower the cost of bringing medical products to patients Disruption: To ensure patient safety, lower the impact of supply chain disruption caused by natural or man-made events 	 Solution Features: Dedicated, single point of contact for each process implementation Real-time, active sensors to monitor temperature, humidity, GPS position, transportation visibility, and risk Telemetry / IoT agnostic Advanced analytics / Data-as-a-service Lane and shipment risk assessment Packaging analysis and consulting Same-day specialty courier Expedited quotation and pickup within 60-90 min Next flight out and on-demand charter Dangerous goods and/or clinical trials Predictive analytics for transportation
The DHL Managed Temperature-Controlled Freight solution is available for pharmaceutical customers requiring the highest level of reliability. A dedicated team of specialists will customize a purpose-built solution to meet the needs of high-value, time- sensitive, temperature-controlled shipments. This solution includes the DHL LifeTrack [®] cold chain tracking app and supply chain risk analytics.	 Predictive analytics for transportation <u>Value Proposition:</u> Tailored processes expedite shipment processing Flexibility in new route design extends market reach Quality control validation and qualification of trade lanes and packaging solutions Faster speed to market (e.g., new product launch) Continuous improvement through the use of big data and advanced analytics Visibility to benchmark capabilities and compare performance and risk metrics