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.

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

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<th>Physical Components</th>
<th>Services</th>
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<tr>
<td>Description of physical components</td>
<td>SOP &amp; LRA</td>
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<tr>
<td>• LSHC trained and certified staff.</td>
<td>Visibility &amp; Intervention</td>
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<td>• Documented and enforced processes (SOPs)</td>
<td>Root Cause &amp; CAPA</td>
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<tr>
<td>• GxP compliant IT platform</td>
<td>Temperature Control</td>
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<td>• Tracking and temperature monitoring devices</td>
<td>Customization</td>
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<td>• Validated airline and service partners</td>
<td>DHL Same Day Specialty Courier</td>
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<td>Customized / White glove solutions</td>
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<td>Consultative services</td>
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<td></td>
<td>Data analytics</td>
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<td></td>
<td>Real time tracking devices</td>
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</tbody>
</table>

KEY BENEFITS FOR YOUR BUSINESS

INNOVATE AND IMPROVE
Innovations to improve customer experience and operations. Mindset of continuous improvement

EXPERTISE FOR PEACE OF MIND
Global pool of Life Science certified professionals

SAFETY & SUSTAINABILITY
Priority of Health & Safety instilled in operations. Clear Sustainability goals and action plans.

REACH & OPTIONS
Global network of assets, resources and partners of Life Science competencies

DESCRIPTION OF PHYSICAL COMPONENTS

- LSHC trained and certified staff
- Documented and enforced processes (SOPs)
- GxP compliant IT platform
- Tracking and temperature monitoring devices
- Validated airline and service partners

DESCRIPTION OF SERVICES

- SOP & LRA
- Visibility & Intervention
- Root Cause & CAPA
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# Temperature Management Solutions

DHL Airfreight Pharma and Temperature Controlled Solutions Suite

<table>
<thead>
<tr>
<th>Business Scenario &amp; Key Customer Challenges / Requirement</th>
<th>DHL Solution Value Proposition</th>
</tr>
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<tbody>
<tr>
<td><strong>Business Scenario:</strong> A biotech company needs to move temperature-sensitive products internationally, and requires a high level of visibility and strict quality control.</td>
<td><strong>Solution Features:</strong></td>
</tr>
<tr>
<td>1. <strong>Complexity:</strong> Maintain strict quality standards with sensitive products moving through a complex supply chain</td>
<td>- Dedicated, single point of contact for each process implementation</td>
</tr>
<tr>
<td>2. <strong>Risk:</strong> Shipment delays caused by carriers or customs, temperature excursions, and poor product security put patient health at risk</td>
<td>- Real-time, active sensors to monitor temperature, humidity, GPS position, transportation visibility, and risk</td>
</tr>
<tr>
<td>3. <strong>Regulatory:</strong> Essential to know and conform to regulations governing pharmaceutical products (e.g., serialization, GxP requirements, customer compliance, and counterfeiting)</td>
<td>- Telemetry / IoT agnostic</td>
</tr>
<tr>
<td>4. <strong>Costs:</strong> Manage the industry-wide pressure to lower the cost of bringing medical products to patients</td>
<td>- Advanced analytics / Data-as-a-service</td>
</tr>
<tr>
<td>5. <strong>Disruption:</strong> To ensure patient safety, lower the impact of supply chain disruption caused by natural or man-made events</td>
<td>- Lane and shipment risk assessment</td>
</tr>
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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.

**Value Proposition:**
- 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

[Click here to find out more about DHL's Logistics Solutions for Pharmaceutical Businesses]