Engineering a Multimodal Lithium Battery Logistics Programme Across Four Countries

Multimodal Project Logistics

Road, Air & Sea Freight

Röhlig combined technical feasibility planning with coordinated road, air and ocean execution for a manufacturer of lithium-ion batteries.



TRUSTED PARTNER SINCE 1852

Röhlig LOGISTICS

Project Highlights

Project Detail	Verified Information
Customer Industry	Industrial technology / lithium-ion batteries
Origin	United Kingdom; Australia
Destination	Germany; United Kingdom; Canada
Transport Modes	Road freight, air freight and sea freight
Teams Involved	United Kingdom, Germany, Australia and Canada
Additional Services	Feasibility review, onboarding, packing coordination, crane handling, lashing, on-site supervision and shipment tracking
Cargo	Battery pack and power-system components
Air Import Weight	1,158 kg
Ocean Units	7.7 t main unit plus 400 kg supporting crate
Main Unit Dimensions	Approximately 4.4 m × 2.0 m × 2.9 m

Project Overview

The Customer Requirement

The manufacturer needed an operating method for oversized power-system equipment, specialist loading and multiple international transport modes. The immediate task was a road movement from the United Kingdom to Germany. The scope then expanded to a 1,158 kg air import from Australia to the United Kingdom and ocean units from the United Kingdom to Canada.

Röhlig connected technical handling decisions, supplier readiness, country teams and shipment visibility through one operating plan, drawing on its **Project Logistics** and **Renewable Energy Logistics** capabilities.



The Challenge

Operational Complexity

Handling Concept Risk

The proposed reefer and slip-sheet method introduced avoidable handling complexity and operational risk for the oversized battery equipment.

Integrated Specialist Coordination

Packing, crane operations, lashing, road transport and destination handling had to be coordinated as one sequence rather than as separate bookings.

Cross-Border Scope Expansion

One complex road movement became the foundation for a wider international logistics programme spanning road, air and ocean freight.

Multi-Country Visibility

Activity across four countries required consistent onboarding, handovers and visibility, with completed and confirmed work clearly distinguished.

The Solution

How Röhlig Responded



Redesigning the Handling Concept

Röhlig began with a feasibility review of the cargo, access conditions and proposed loading method. The team recommended flat-rack and crane handling instead of the reefer and slip-sheet concept, allowing the lifting and securing plan to be designed around the actual dimensions and operating environment of the cargo.



Bringing the Specialist Network Together

Röhlig coordinated the packing company, crane provider, lashing specialists, road carrier and destination team. Equipment and suppliers were aligned before loading, and more than ten hours of on-site supervision supported controlled execution.



Creating One Cross-Border Operating Plan

Structured onboarding and historic lane data helped participating teams work from a shared operational picture across the United Kingdom, Germany, Australia and Canada.



Matching Each Shipment to the Right Mode

The programme used road, air and ocean freight according to cargo and lane requirements. Röhlig's **Air Freight** and **Sea Freight** services were coordinated with the project-handling plan, while two trackers provided added shipment oversight.

The Result

Verified Outcomes

One completed road move from the United Kingdom to Germany, including successful unloading.

A confirmed 1,158 kg air import from Australia to the United Kingdom and an ocean scope from the United Kingdom to Canada covering a 7.7 t main unit and a 400 kg supporting crate.

One operating plan connecting origin, destination and specialist suppliers across four countries.

A documented base of dimensions, photographs, milestones and handling decisions for future planning and regional reuse.

Röhlig Perspective

> *"This project shows why complex logistics begins before the cargo moves. By testing the proposed method, bringing the right specialists together and giving every country team one operating plan, we created a handling approach that could support the customer's wider programme."*

Holly Bond
Customer Solutions Supervisor
Röhlig UK



Frequently Asked Questions

How do you plan logistics for oversized lithium-battery equipment?

Planning starts with verified cargo dimensions and weights, route and site access, the lifting and securing method, and any applicable dangerous-goods requirements. The transport mode and equipment should then be selected against those facts, with packing, crane, lashing and destination partners involved before loading begins.

Why did Röhlig recommend flat-rack and crane handling for this project?

The feasibility review found that flat-rack and crane handling was better suited to the oversized equipment than the proposed reefer and slip-sheet method. It reduced avoidable handling complexity and allowed the lifting and cargo-securing plan to be built around the unit's actual dimensions. The right method will always depend on the cargo, route and site conditions.

How can visibility be maintained across a multimodal, multi-country logistics programme?

Use one operating plan with clear ownership, common milestones and structured handovers between origin, destination and specialist suppliers. For this programme, historic lane data, coordinated onboarding, on-site supervision and two trackers supported oversight across the road, air and ocean scopes.

Let's Connect

Facing a complex logistics challenge? We are your trusted partner.

Connect with your local Röhlig representative or reach out to your nearest Röhlig office today. Alternatively, you can sign up to our customer portal for quoting, shipping and tracking all in one place.