

Workshop Report: Innovative Multimodal Transport of LCL and LTL Cargo by Rail

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Purpose and context

The workshop, hosted by CargoBeamer and ETP-ALICE at TL2025, brought together logistics professionals, researchers, and infrastructure experts to explore the future of Less-than-Container Load (LCL) and Less-than-Truck Load (LTL) cargo via rail, with a spotlight on the CBoXX solution. The aim was: to assess its real-world potential, identify adoption barriers, and gather input from the audience.

What the poll highlighted

Audience polling revealed both interest and opportunity:

- **56%** of attendees were already familiar with CBoXX through demos or presentations.
- **57%** said their companies have *extensive experience* with intermodal solutions—suggesting high readiness for innovation.
- Top descriptors for CBoXX included: *innovative, extra-large container box, sea box?*, and *new wagon innovation* [poll-results_CBOXX](#).

However, key challenges also emerged:

- **Speed and cost** still beat sustainability for many.
- Operational complexity, **lack of interoperability**, and limited infrastructure hinder wider use.

CBoXX: A game changer in rail logistics for LTL

CBoXX is a high-capacity rail container optimized for LTL cargo:

- **Payload:** up to 104 EU pallets or 34 tons—**more than 3x a 40' container**.
- **Loading time:** fully automated in **10 minutes** using CargoBeamer's GateModule.
- **Cost & CO₂:**
 - **30–40% cost reduction** vs. conventional transport
 - **42% lower CO₂ emissions** vs. road freight
 - **23% shorter lead time** on tested routes

Market potential

Smart Freight Center presented advanced freight modeling tools.

Analysis focused on the Kaldenkirchen–Domodossola corridor indicated:

- Potential cargo volume: **5.5 million tonnes**
- Limited modal shift from other rail modes; major gains expected from road-to-rail conversions
- Clear benefits for **urban distribution, e-commerce, and palletized industrial freight**

Key insights from the audience

Interactive sessions revealed real-world perspectives:

- **Economic viability** remains a top concern—particularly terminal costs.
- **Standardization and digital integration** are essential to adoption.

- Stakeholders see strong potential for CBoXX where **volume, reliability, and automation** can be leveraged.

Next steps

Participants expressed strong interest in continuing the conversation:

- Modeling of more corridors and routes
- Policy support for terminal infrastructure upgrades
- Closer alignment between shippers, terminal operators, and regulators

During the early second semester, CargoBeamer will run a live pilot in Calais (France) and is eager to invite all interested key stakeholders

The CBoXX solution is not just an innovation—it is a prompt to redesign how we think about rail freight for the modern logistics era.

Let's shape the next steps—together.
