NATIONAL CARGO BUREAU - GLOBAL RESTRICTED CARGO DATABASE

a centralized restricted cargo database designed to consolidate and standardize restrictions across the maritime supply chain

the challenge

NCB's decades of experience operating the global Hazcheck Restrictions system proves carriers can confidently manage restrictions provided they have access to accurate, authoritative data. Restricted cargo includes Dangerous Goods, Military Cargo, Sensitive Cargo, Self-Reactive Cargo, and Hazardous and Non-Hazardous Waste. These cargoes are vital to global trade, yet they carry significant risks when misdeclared or mishandled, leading to incidents that endanger lives, property, and the environment. Through years of supporting major carriers, NCB has seen firsthand that even minor inconsistencies in restrictions can cause operational delays, misdeclared shipments, and preventable safety hazards.

Current industry practices for managing cargo restrictions data are fragmented and inconsistent. Variations in acceptance criteria and documentation requirements across carriers and ports leads to miscommunication, delays, and operational errors such as improper stowage. These gaps increase the likelihood of accidents and often result in abandoned containers, cargo degradation, and costly disruptions. The lack of standardization makes it challenging for frontline workers to handle cargo safely and efficiently. Without a real-time unified platform, stakeholders rely on manual updates and inconsistent communication, making it difficult to track evolving requirements. This reactive approach undermines safety and efficiency across the supply chain.

The centralized database now being implemented by NCB expands the proven Hazcheck Restrictions model to ports, terminals, and other supply chain stakeholders, providing a single authoritative source for real-time restriction data. This improves safety, reduces voyage disruptions, minimizes delays, and enhances compliance. It also supports better coordination between shore-side facilities and vessels, ensuring safer and more efficient logistics operations.

the innovation

While attention often focuses on vessel incidents, shore-side facilities such as ports and terminals face equally critical risks. This initiative extends the established Hazcheck Restrictions capability already used by most global carriers. Complex global logistics and varying restricted cargo acceptance criteria across carriers, ports and terminals have created a fragmented compliance landscape.

This fragmentation causes delays, inefficiencies, and sometimes container abandonment due to improper documentation or misaligned restrictions. These issues are exacerbated by the absence of a centralized system capturing cargo restrictions across the global network and by limited visibility into whether regulations originate from governmental authorities or private terminal operators.

Recognizing this need, NCB has built the foundation for a centralized restricted cargo database designed to consolidate and standardize restrictions across the maritime supply chain. The platform is built on a secure, scalable infrastructure, integrating seamlessly with existing terminal and carrier systems, enabling stakeholders to access accurate data during booking, planning, and compliance checks. The database is intended to be continuously updated by ports, terminals and carriers, ensuring users always have current information.

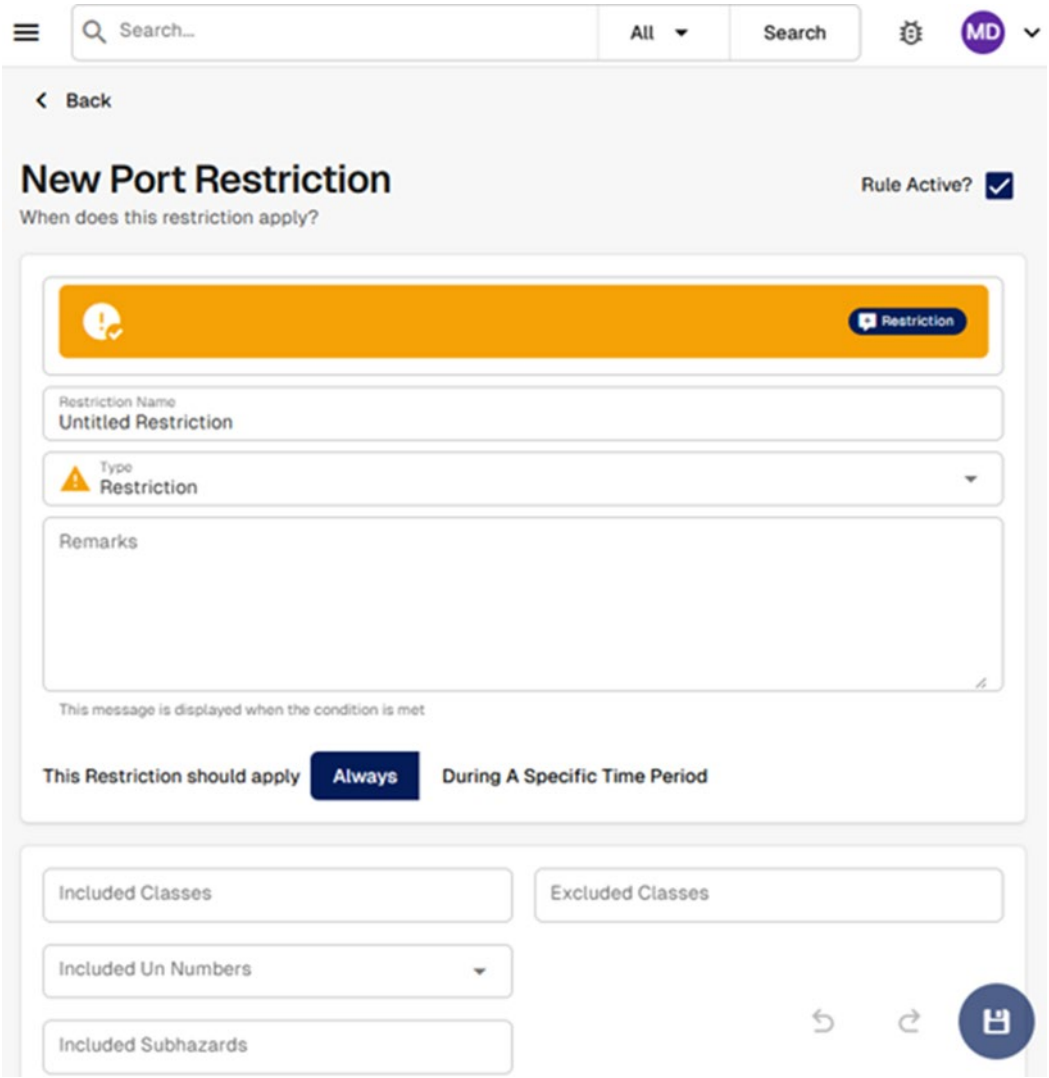
Aviation has long shown that centralized restrictions systems provide clarity and safety benefits, and applying this proven model to maritime operations is essential given the complexity of port, terminal and carrier requirements.

Early collaboration with carriers and terminal operators is underway. By adopting this approach, stakeholders can move toward a safer and more connected method of managing restricted cargo, supporting modern logistics while protecting people, property and the environment.

how it was implemented

The implementation builds directly on the Hazcheck Restrictions infrastructure already integrated into the systems of most major carriers. Stakeholders have consistently expressed the need for port and terminal restrictions to be available in the same structured format, and this extension now delivers that capability.

With the database being built on existing software used by the majority of carriers, the platform is live and operational with a secure, scalable architecture supporting global data ingestion. It uses ISO 27001-compliant security protocols and role-based access controls to ensure data integrity. API integration enables carriers and terminals to embed the database into booking and compliance workflows, reducing manual outreach and errors.



To drive adoption, NCB has conducted workshops and feedback sessions with carriers and terminal operators to refine usability and align with operational needs. Early trials are underway with carriers and terminals, and participation is offered at no cost to encourage industry-wide collaboration.

The Global Restricted Cargo Database, while fully functional, depends on ports, terminals and carriers to contribute and maintain current data. For the Database to reach full coverage and operational and safety benefits, the participation of the parties in the maritime supply chain is essential. This collaborative approach ensures the system evolves with industry input, driving a culture shift toward transparency and proactive risk management.

what was the result

Although the initiative is still in its early implementation phase, the work completed so far has delivered several clear results. Engagement with carriers, ports and terminals confirms strong agreement that a centralized restrictions database is needed to reduce uncertainty and improve safety. Stakeholders recognize that the current fragmented approach, where each organization maintains its own restrictions independently, leads to operational inefficiencies, inconsistent decision-making and avoidable safety risks.

The consultation and design work has created alignment on the benefits of centralization and has clarified the practical challenges of sharing restrictions data across different systems, regulatory requirements and operating environments. These discussions have helped refine the data structure, establish governance expectations and define the principles required for secure and trusted information sharing.

Early technical validation, using representative sample data from key partners, has shown that the platform can successfully consolidate restrictions from different sources into one structured and consistent format. This provides a clear proof of concept that the maritime sector can achieve the same level of clarity that centralized systems already provide in aviation.

The main remaining challenge relates to commercial and data sharing considerations. This is normal for a new industry-wide resource and work is underway with stakeholders to address these points. While full global adoption requires continued collaboration and resolution of commercial and data-sharing considerations, the results so far confirm that the concept is sound, the technical approach is viable, and there is strong industry commitment to progress.

conclusion

The centralized database delivers clear operational efficiency by reducing manual communication, streamlining checks, and supporting faster yard and vessel planning. It enhances safety and compliance by providing ports, terminals, and carriers with a single authoritative, continuously updated source of restrictions. The platform also strengthens risk mitigation by reducing exposure to fines, legal issues, abandoned cargo, and mismanaged consignments. In addition, it improves inventory and throughput management by supporting more accurate forecasting and cargo flow planning, including for time-sensitive classes such as Class 1 explosives.

Building on the proven Hazcheck Restrictions model already used across the global carrier community, the database expands this capability across the wider supply chain. The technical platform is operational, early adoption is underway, and NCB is now working with a growing group of partners as part of the proof-of-concept phase. As participation increases, the system will continue to enhance safety, consistency, and decision-making across the industry. The foundation is proven; the next phase focuses on broad adoption to deliver industry-wide benefits.

LINK: https://hazcheck.com/

NCB
SAFETY OF LIFE AND CARGO AT SEA

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