FEDERATIVE SERVICES

Circle Group

Circle S.p.A. is the Innovative SME at the head of the **Circle Group**, the Group specialising in the analysis and development of products for the innovation and digitalisation of the port and intermodal logistics sectors and in international consultancy on the topics of Green Deal and energy transition.

In addition to Circle, the softwarehouses **Info.era**, **NEXT Freight**, **NEXT Customs** and **Cargo Start**, and the consulting companies **Magellan Circle** and **Magellan Circle Italy**, in the field of advocacy at European institutions.

The synergies between the individual components of the Circle Group have made it possible to expand the portfolio of solutions offered in the areas of IoT, Optimisation, Digital Twin, Big Data and Process Automation, and to strengthen the software products.

Completing the supply chain offering are the so-called "**Federative Services**", which can make the migration of customers to a digital business model more efficient and are offered in cloud mode.

Through its subsidiary **eXyond S.r.l.** (92%), it is active in the offer of advanced Gate Automation solutions aimed at port and intermodal nodes, in advanced traffic monitoring and management services on the Italian road and motorway network (Infomobility), and in the offer of telematic services (Truck).
NEXT Customs, active in customs optimisation digital services and functional to the continuation of initiatives aimed at the harmonisation of customs processes, Circle also covers this highly strategic area for the evolution of the Connect 4 Agile Growth path.

In addition, Circle owns 21% of the share capital of **ACCUDIRE**, an Innovative Startup that provides a Collaborative Digital Platform capable of helping actors along global supply chains in the exchange of information and management of document flows, starting with e-CMR (or electronic waybill) and e-DDT.

FEDERATIVE SERVICES FOR CUSTOMS PURPOSE

MODELS, OPTIMISATION TOOLS & AI

OTHER FEDERATIVE SERVICES

Federative services for customs purposes

It is a set of tools and services that allow for easy and up-to-date interoperability between the different actors in the logistics chain and customs processes.

These services allow customs information to be shared between the parties involved in the import/export process, guaranteeing data security and reliability.

Integration with the latest services provided by national customs makes the tools more advanced available to shippers, carriers and MTOs.

The benefits include geoeral control of data and information, an improvement of the logistics process in terms of quality of service and in terms of security (impedating fraud and manual errors), a reduction in security and operational costs, a reduction in transit and dwell time, and a positive environmental impact.

Sportello Unico Doganale dei Controlli

(S.U.Do.Co)

It was created with the aim of creating a single entry point to **optimise time, costs and logistics at ports.**

It is a fully automated, full digital process that allows significant time savings of the entire customs clearance process.

The real advantage is

- **Lower costs**
- **Coordination** between all parties involved
- **Interoperability** with the port of reference for information on the outcome of controlled goods

PORTS & TERMINALS   FREIGHT FORWARDERS

## International Fast & Secure Trade Lane

(IFSTL)

End-to-end solution designed to optimise maritime, logistics and transport processes, improving supply chain efficiency and security. It uses **Internet of Things (IoT) technologies** to simplify and integrate information flows. It focuses on digitising and standardising document flows, improving overall operational efficiency.

Benefits:

- **Full visibility**
- **Improved security**
- **Simplified customs**
- **Faster operations**
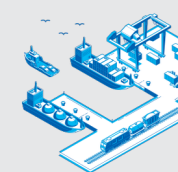
FREIGHT FORWARDERS   PORTS & TERMINALS   INDUSTRIES

Fast Corridor Procedures
Land / Sea / Rail

Intermodal Controlled Customs Corridors (road, rail, sea) created with the aim of forwarding unloaded goods to the final logistical node without further bureaucracy, offered in **full digital interoperability**, which enable the transfer of goods to warehouses, warehouses, industries.
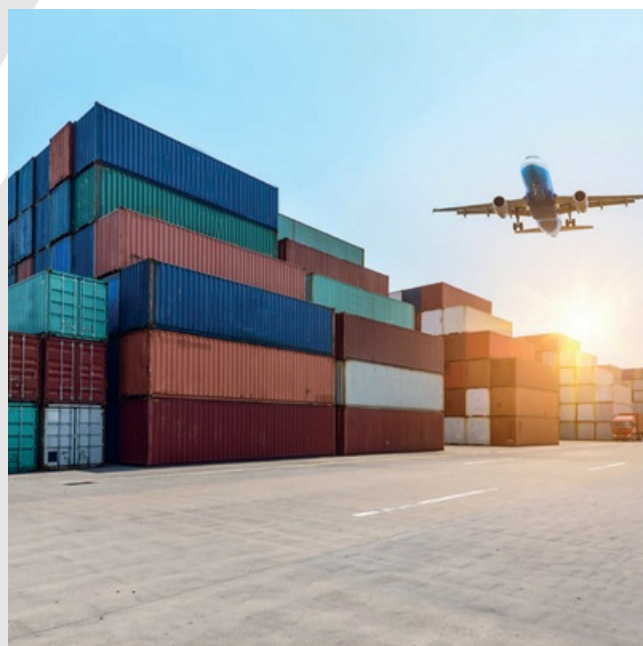
They are aimed at ensuring:

- Full traceability of goods
- Direct dialogue with monitoring platforms
- Reduced customs clearance time
- Reduced congestion in areas
- Real-time monitoring

INDUSTRIES   FREIGHT FORWARDERS


Procedures of controlled air corridors
(Air Fast Transfer)

Controlled Air Corridor created with the objective of **improving the process of transferring goods** arriving from a non-European country, allowing the owner or person in charge of the goods to move them from the airport hub of arrival (temporary storage facilities) to another external customs clearance location increasing flexibility, optimisation of dwell times of the goods and storage/warehouse logistics costs.

The process involves the use of a digital transfer corridor which includes **the possibility of transferring goods subject to customs supervision** by means of geolocalised monitoring of the transfer.

OPERATORS WORLD AIRPORT
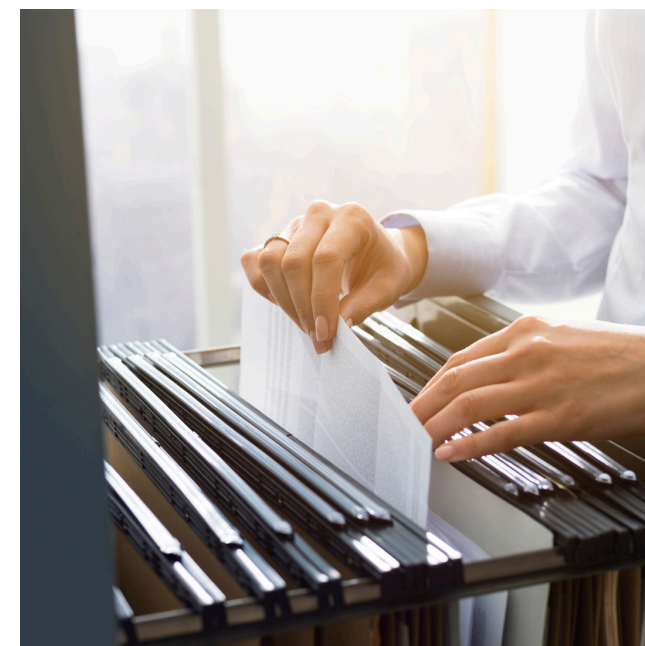
Customs Drawer

This is a functionality offered by the Customs and Monopolies Agency to every operator for archiving and managing all customs-related documents and records.

Among the features it offers:

- Secure archiving of documents
- Facilitated access & data integrity
- Integration with customs systems to simplify the submission and processing of documents
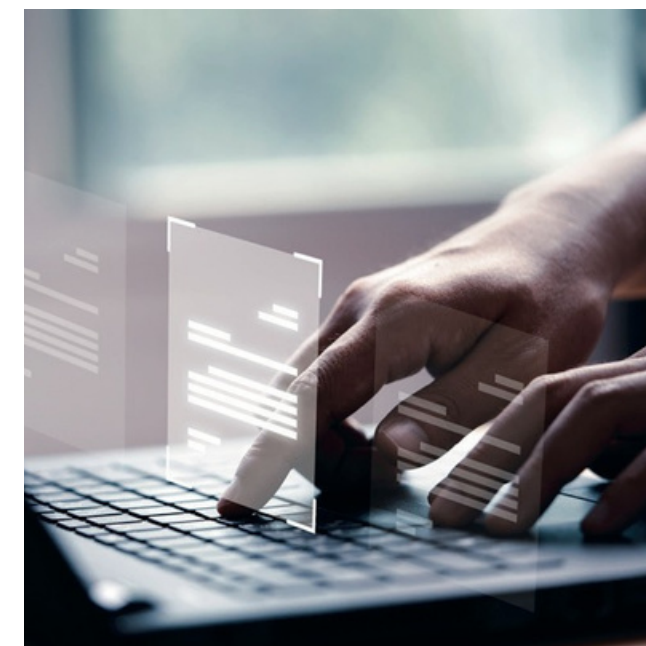
All with the aim of **reducing paperwork** and **manual filing**, **ensuring compliance** and **security of customs documents**, and **speeding up customs audits and procedures.**.

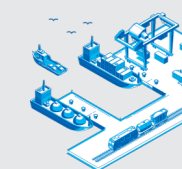INDUSTRIES   FREIGHT FORWARDERS

Customs Register

Software for the digital management of goods brought into an approved location, temporary storage and customs warehousing.

The objective is to:

- Ensure full digital management of what is visible from Customs Information System and within your warehouse
- Simplify customs procedures
- Ensure regulatory compliance and secure storage

INDUSTRIES   PORTS & TERMINALS   FREIGHT FORWARDERS

Models, optimisation tools & AI

Set of solutions dedicated to planning, optimising and monitoring the Supply Chain, combining the power of **Optimisation, Artificial Intelligence and Machine Learning.**

The services provided are a valuable support for operators in the transport sector, enabling them to make optimal operational and strategic decisions at all times and achieving significant results in increasing overall efficiency.

These Federative services, already extensively tested and concretely useful in operational management, make optimisation, machine learning and artificial intelligence no longer abstract concepts, but everyday aids to efficiency.
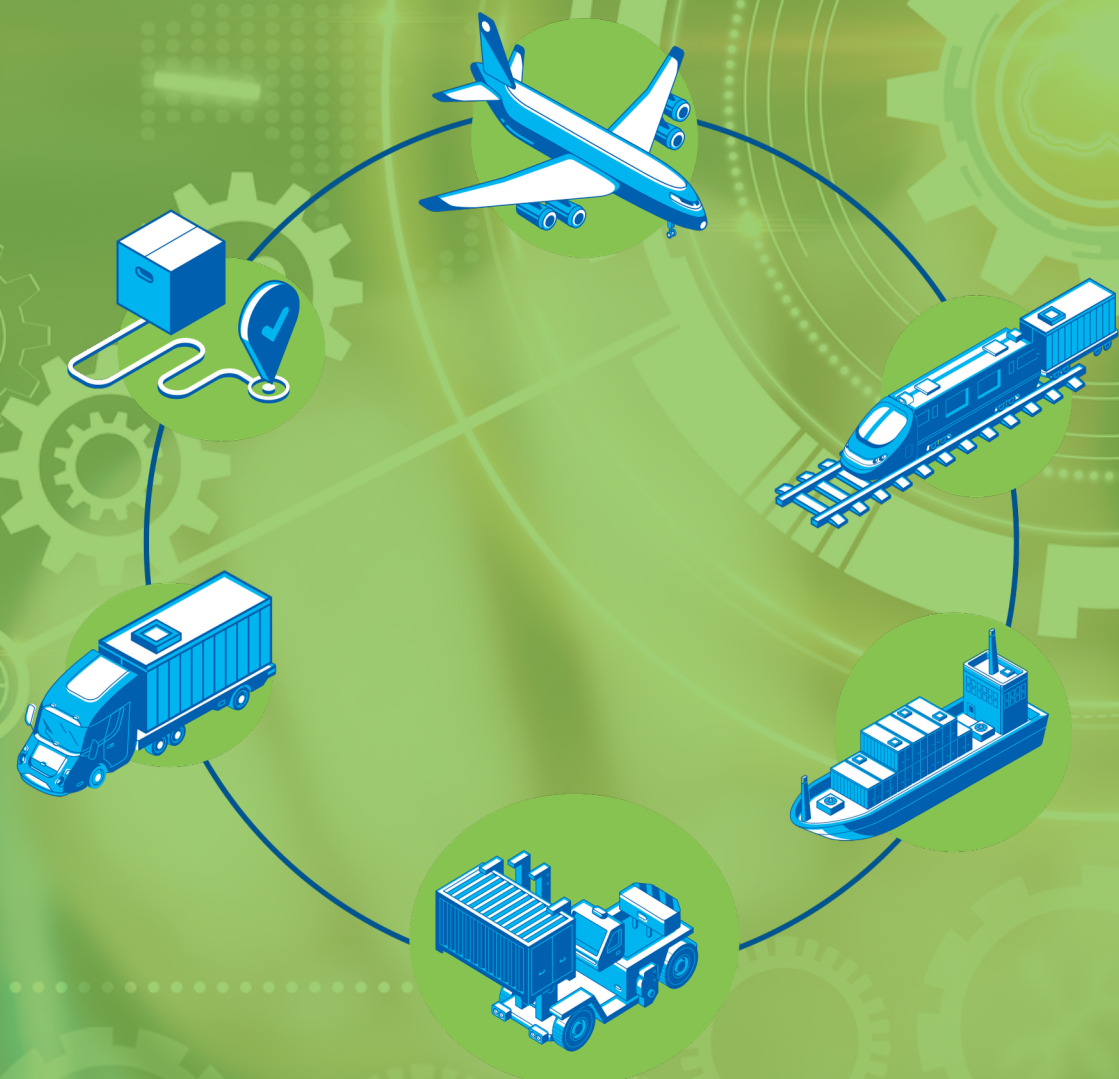
Suggested ranking transporters

By means of a customised dashboard, it is possible to **generate a "ranking list" of the best carriers to deploy on the route in relation to selected key performance indicators** (KPI), thus examining different forecast scenarios in a data-driven logic.

MULTIMODAL TRANSPORT OPERATORS
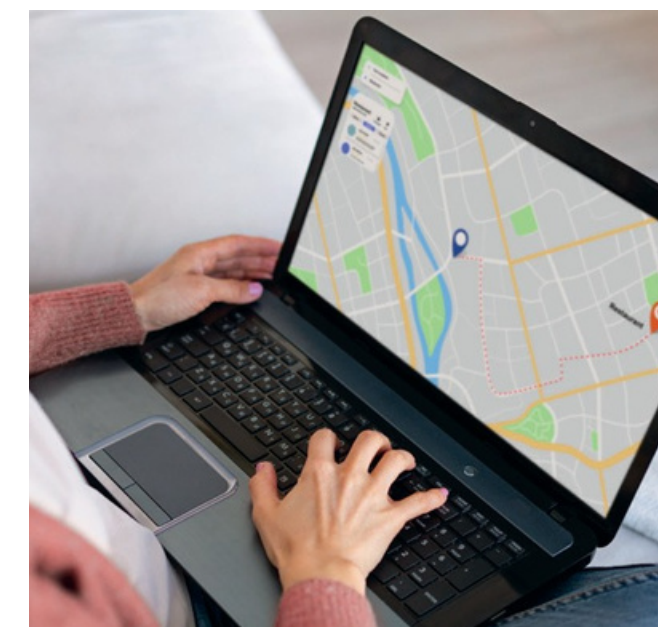
Intelligent truck trip planning

Service designed for multimodal transport operators who need to **streamline road trip management** (in terms of costs, time, distances travelled and environmental impact) with a focus on reducing empty trips and introducing possible triangulations.
This system ensures that all customers are served in accordance with the required conditions and that **costs and time are minimised.**

INDUSTRIES   MULTIMODAL TRANSPORT OPERATORS   FREIGHT FORWARDERS

Optimising the railway cycle

A solution designed to **support rail cycle operations within the terminal,** with a focus on the **efficiency of train loading and unloading processes.**
A pilot project is currently underway at a terminal, focusing on optimising the activities of the crane involved in unloading train convoys.

- Can be integrated into the rail module of the TOS (Terminal Operating System)
- Ongoing collaboration with the terminal
- Optimisation of work queues in the train unloading process
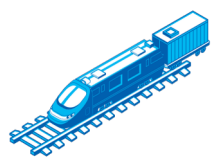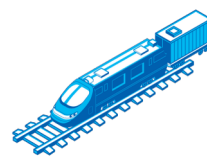

RAILWAY OPERATORS

Optimising port rail manoeuvring

Solution designed fo**r railway shunting managers in the port area, with the ai**m of improving operational efficiency by providing **strategic support in shunting planning**, taking into account operational constraints and stakeholder needs.
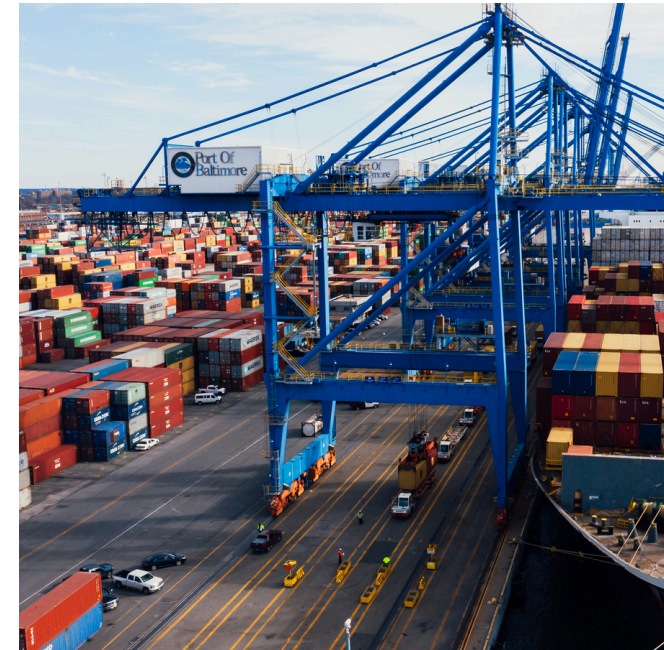
- Optimisation of operations
- System status monitoring
- Simulation
- Performance improvement
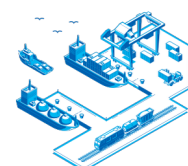
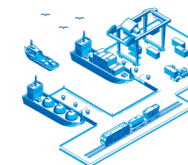PORTS & TERMINALs

RAILWAY OPERATORS

Railway shunting simulation & Digital Twin

The developed module is a strategic tool for the management of **port rail manoeuvres**. Through a realistic digital representation (Digital Twin), it allows **simulating, monitoring and analysing operations** in real time, supporting informed decisions and timely interventions.
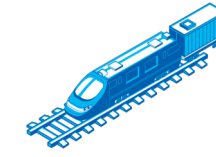It promotes a clear view of operational dynamics and drives process optimisation.
Key strategic functionalities

- Simulation-based decision support
- Operational and management optimisation
- Continuous performance improvement
- Real-time agile rescheduling
- Constant system monitoring

PORTS & TERMINALs

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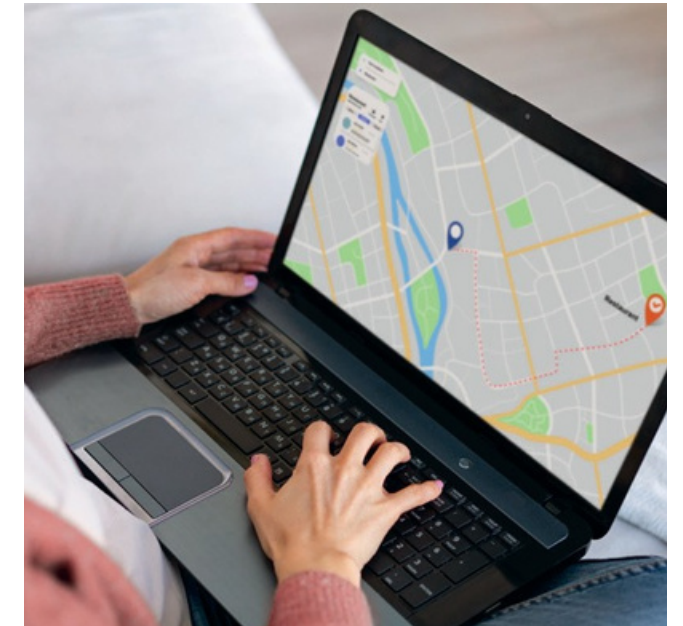
Predictive flow models in logistics nodes

This forecasting module for intermodal transport uses predictive models and algorithms to dynamically adjust **estimated times and facilitate efficient flow management** through the node.

- Congestion prevention
- Improve resource allocation
- Optimise efficiency and operations
- Improve performance

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Other Federative Services

Circle Group's Federative Services enable fast and simple interoperability between existing intermodal supply chain platforms, improving the efficiency of decision-making processes and optimising operations.

Using customised connectors, legacy systems can easily and self matically dialogue with the surrounding logistics environment, effectively integrating information

made available by third-party connected systems.

The main benefits are a reduction of costs and time, increasingly reliable, secure data and updated without manual errors, a positive environmental impact, availability of "smart systems with active decision support, and compliance with data protection regulations
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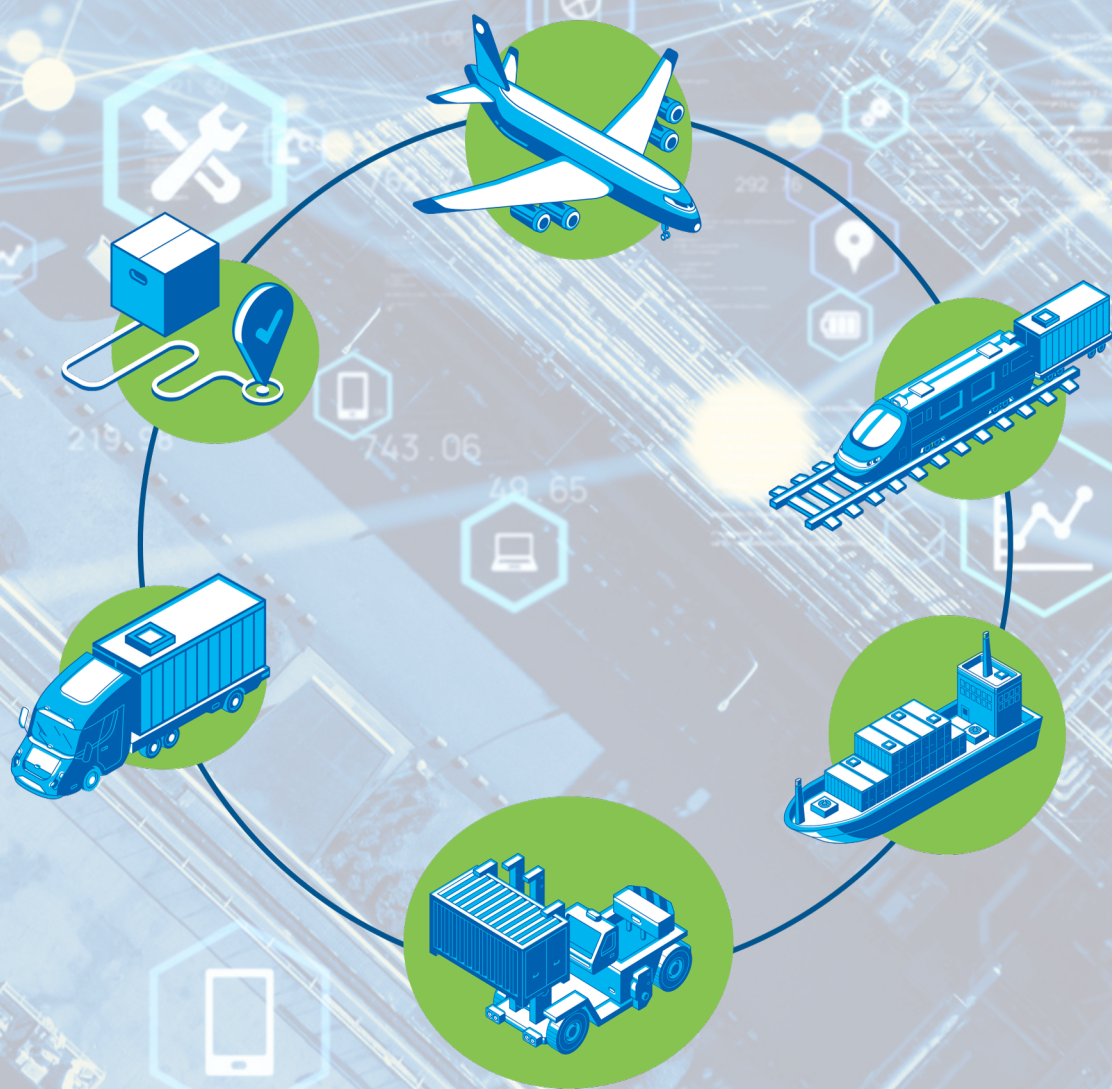
Federative Transport Platform (TFP)

It is a software solution with a dashboard for active monitoring of units, interoperable with the operator's IT systems. Thanks to Application to Application (A2A) interoperability, it includes a mobile app for the operational management of received orders, sharing of events and uploading of documents or images.

- **Active monitoring**: Software with dashboard to track and monitor ITUs in real time.
- **Mobile App** for operators and drivers: Order management, event tracking (arrivals, loading, unloading, etc.), document/image uploading for smoother operations.
- **Interoperability**: Connection with third-party IT systems and Application-to-Application (A2A) integration, even without using the mobile app.

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INTERMODAL LOGISTICS NODES

Intermodal Appointment

Platform that simplifies dock access scheduling for industries, logistics gates and distribution centres, optimising resources and staff efficiency.

- **Autonomous booking**: Carriers can book via web or mobile app, providing visibility and flexibility to warehouse operators, customers and suppliers.
- Real-time notifications: SMS, email and app updates to keep carriers informed.
- **API integration**: Automatic creation and confirmation of appointments with third-party systems.
- **Reduced** operational costs and waiting time
- **Increased process efficiency, coordination of real-time communication**

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HAULIERS
LOGISTICS NODES

Document Dematerialisation (e-CMR / e-DDT)

The solution simplifies and modernises international transport management by **eliminating paper documents through e-CMR.**
This innovative approach allows you to:

- speed up delivery times;
- improve operational efficiency;
- significantly reduce the risk of errors associated with manual handling of documentation.

The service is fully compliant with the new requirements of the Customs and Monopolies Agency (ADM), which **came into force on 2 December**, and allows the automation of customs flows, ensuring a smoother and more transparent management of export operations.
Digital proofs of delivery, export and tax compliance are provided, valid for both domestic (**e-DDT**) and international (**e-CMR**) documents.

eFTI Platform (in accordance with EU Regulation 2020/1056)

Regulation (EU) 2020/1056 introduces the regulatory framework for the use of digital information in freight transport, promoting interoperability and shared standards at European level.
Circle Group's solutions comply with this regulation and enable the secure and structured exchange of data between companies and authorities, reducing time, costs and paper usage.
The adoption of eFTI favours:

- more efficient logistics
- sustainability
- alignment with European digitisation targets.

Sustainability Services & ESG Solutions

Circle Group's ESG solution for the **automatic calculation of the carbon footprint** along the client's entire multimodal supply chain is compliant with European and ISO standards and is available in SaaS mode.
It is constantly updated and able to generate customised dashboards and environmental reports useful for monitoring and reporting on sustainable performance.
A concrete support to each company's green transition and ESG strategy, with digital tools designed to facilitate informed and measurable decisions.

Green reporting (in accordance with the European CBAM)

Our solutions are **fully compliant with the CBAM**, ensuring the proper management of carbon emissions through the integration of certificates calculated on the basis of EU ETS prices, as required by Regulation 2023/956 of 10/05/2023.
This approach ensures transparency and adherence to the new regulations, helping to counteract "carbon leakage" and supporting the EU's goal of reducing greenhouse gases by 55% by **2030**, with full implementation from 1 January 2026 and the first reporting due in 2026.

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Electronic and Notarised Railway Waybill

Notarisation of the train consignment note with the aim of activating "**validation/certification**" of documents related to the 'train wagon list' for the management of railway movements between Ports and Multimodal Transport Operators.
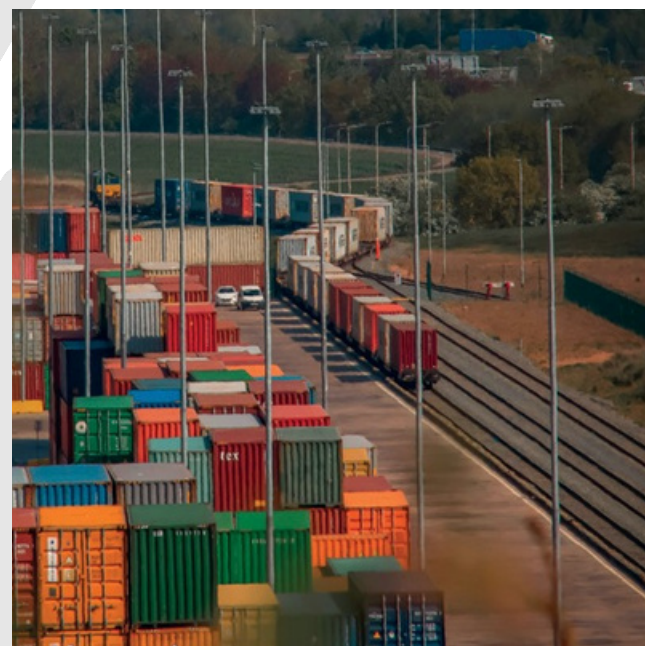
Railway flow management according to the H30 standard TAF TSI compliant

Integration between the systems of the Railway Undertaking and those of the MTO (Multimodal Transport Operator) for the **exchange of train composition information** according to the H30 railway standard, as well as TAF TSI compliant.
Specifically, this integration has been developed on Interail's MTO through the federated services that allow the acquisition and interpretation of train composition messages in H30 format coming from   railway undertakings that use the same standard
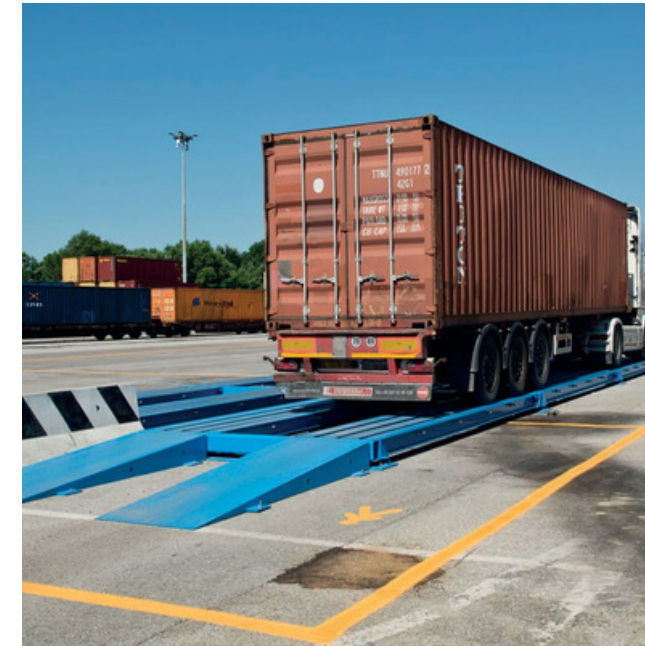
Digital container gross mass verification (VGM) service

The International Maritime Organisation (IMO) amended the SOLAS Convention by requiring, as a condition for loading a packed container onto an export ship, that the container has a verified **Verified Gross Mass (VGM)**. The amendments to SOLAS 74, in their current version, place the onus on the shipper to obtain and document the verified gross mass of the container.
The VGM is transmitted to the Terminal Port Community System and has a 'logistical value', as it allows to speed up the gate-in process of containers with certified weights within the spaces of terminals. The shipper (or his delegate) must in any case also transmit the data to the shipping lines, according to the modalities foreseen by each of them..


Adoption of IOT for automated nodes, gates and controls

Service for the provision and interoperability of IOT tags and seals for the optimisation and automation of gate-in and gate-out procedures through the use of IOT devices and in particular passive RFID e-seals applied on containers passing through the terminal. The e-seals comply with the international standards for **RFID** interrogation systems and tags.

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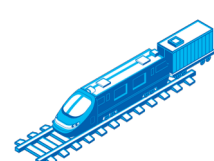
RAILWAY OPERATORS

MULTIMODAL TRANSPORT OPERATORS

HAULIERS
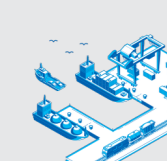
FREIGHT FORWARDERS & SHIPPING AGENCIES

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PORTS & TERMINALS

MULTIMODAL TRANSPORT OPERATORS

PORTS & TRANSPORT NODES

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