Orders – Toll cost calculation

Understand how Qargo calculates toll costs for orders and loads, including how to configure routing profiles per vehicle type and how to exclude specific toll systems from rate card charge calculations.

Updated May 26, 2026

Introduction

Qargo uses **PTV for route and toll cost calculation**. The toll cost calculation logic for an order differs slightly from the logic for a load.

A **default order routing profile** can be configured in transportation services and the vehicle category. When an order is created, sequential logic determines the correct vehicle type for routing and toll calculations.

Rate card charges can also be configured to **exclude specific toll systems**. Carriers whose base rates already include certain tolls (e.g., Belgian road tolls) can then avoid double-charging without manual order adjustments.

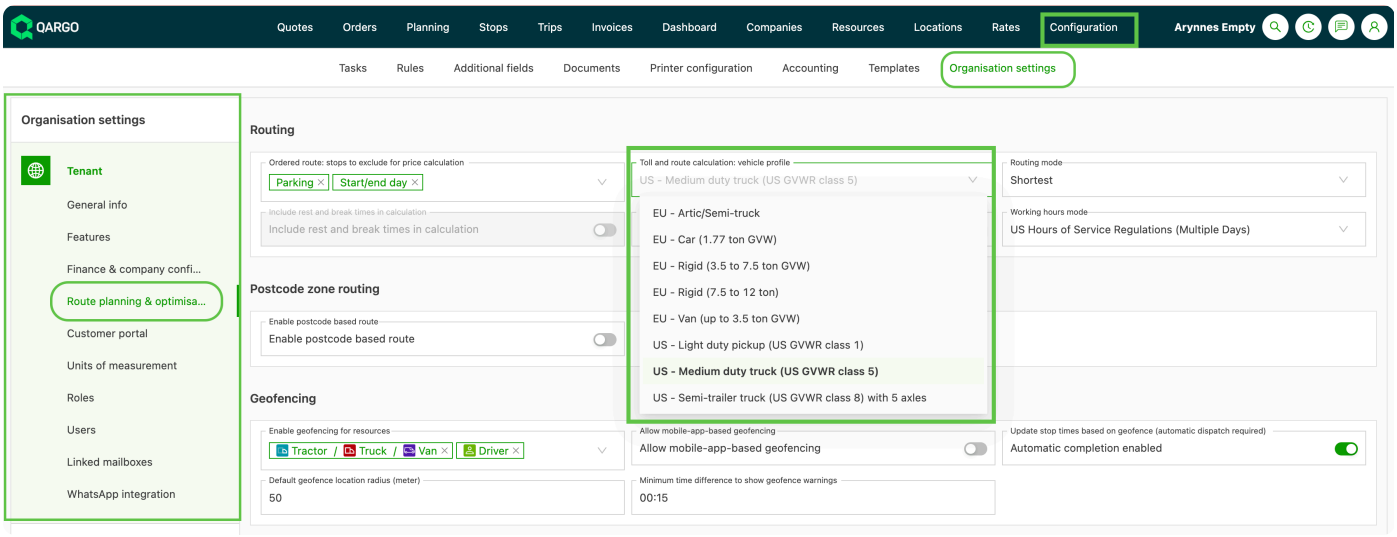
Terminology

Term	Definition
PTV	A routing and toll cost calculation engine used to determine distances, travel times, and toll charges based on vehicle type and route.
Routing profile	A set of rules in Qargo that define how routes and tolls are calculated for a given vehicle type. Can be configured at the organization, transportation service, or vehicle category level.
Vehicle category	Classification of vehicles in Qargo (e.g., Van, Rigid, Semi-truck) that determines the applicable routing profile and toll calculations.
Order	Represents a customer shipment request. Routing and toll costs at the order level are determined by the configured routing profile, before the load is created.
Load	The operations phase of an order, where resources such as drivers, tractors, trucks, vans, and trailers are assigned. Toll calculations at this level are based on the actual resource vehicle type.
Organization settings	A global configuration in Qargo that defines the default routing profile to be used when no specific profile is set in transportation services or vehicle categories.
Transportation services	A configuration area in Qargo where routing profiles can be defined per transportation service, influencing toll and routing calculations at the order level.
Resource	Operational unit used in loads, including driver, tractor, truck, van, and trailer. The resource type determines the vehicle profile applied to the load.
GVW (gross vehicle weight)	The total weight of a vehicle, including its maximum payload, used to classify vehicles into categories (e.g., Van up to 3.5 t, Rigid 7.5–12 t, Semi-truck up to 40 t).
Axle configuration	Details about the number and arrangement of axles on a vehicle or trailer. In some regions, toll costs depend on axle configuration in addition to vehicle category.
Contract carrier resource	External resources (e.g., contract carrier drivers or vehicles) assigned to loads. If limited information is available, toll calculation falls back on organization-level routing profiles.
Fallback profile	The routing profile applied when no specific vehicle-based or service-based routing profile is configured. Defaults to the organization settings profile.
Toll system	A named toll operator or scheme returned by PTV routing (e.g., *Viapass*, *Autoroutes de France*, *Liefkenshoektunnel*, *Eurovignet*).
Per toll system metric	A calculation metric on a rate card charge that evaluates toll cost filtered by toll system name, rather than returning a combined total across all systems.
Charge template	A reusable rate card charge configuration that can be applied across multiple rate cards.
Rate card	A rating configuration in Qargo that defines how charges are calculated for a customer or transportation service.

Configuring routing profiles

1.) Validate routing in organization settings

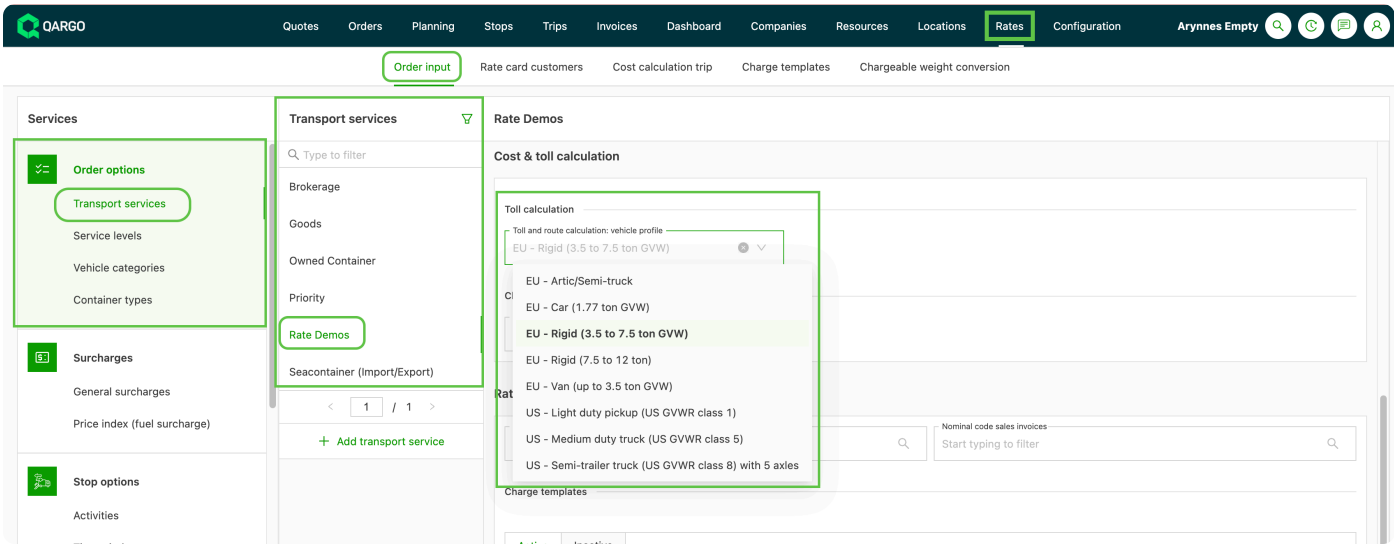
1. Navigate to **Configuration > Organization settings > Route planning & optimization**
2. From the **Routing** panel, validate the default vehicle profile set
3. Update to the appropriate profile if required
4. **Save** the profile



📚 This is used in both orders and loads as a fallback (if required).

2.) (Optional) Set default routing in transportation services

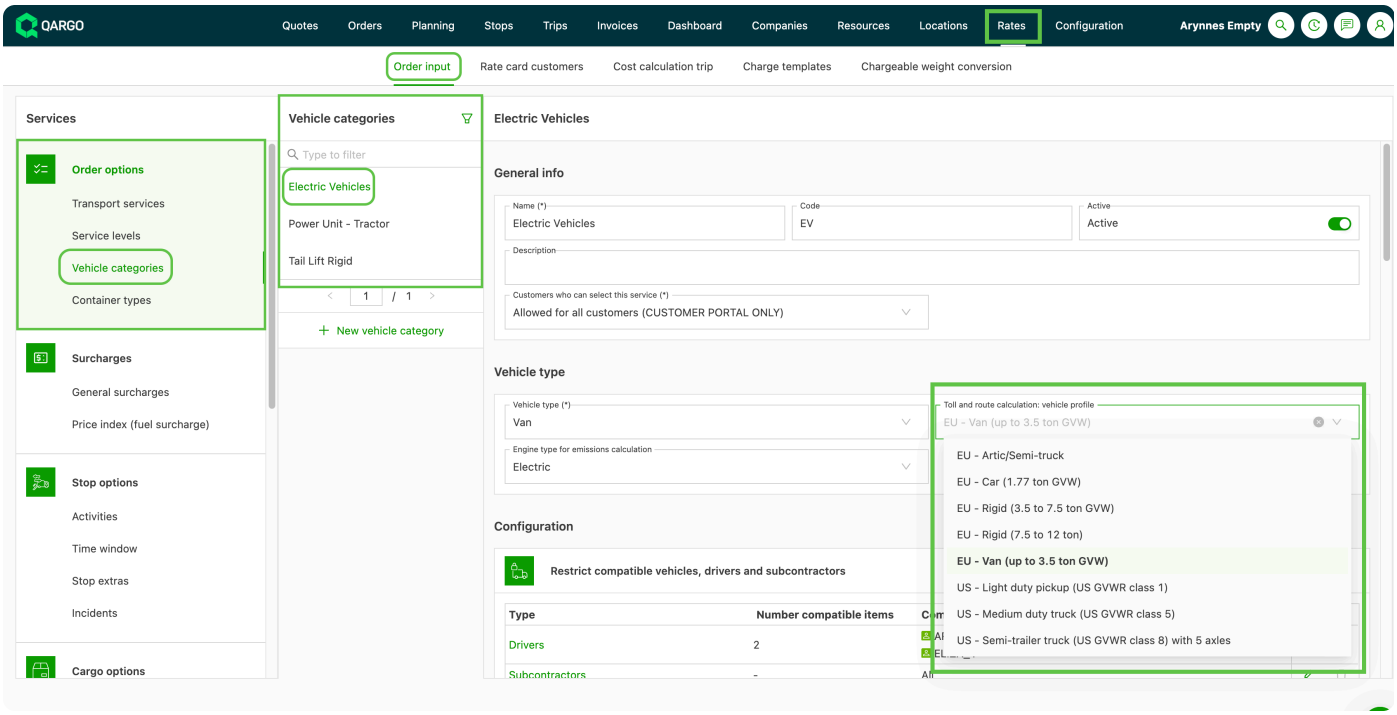
1. Navigate to **Rates > Order input**
2. From the left-hand menu, select **Transportation services**
3. Select the transportation service to update
4. Navigate to the **Cost & toll calculation** section
5. Select the appropriate routing profile from the dropdown
6. Save the profile



A routing profile can be set for each transportation service offered. Profiles can be unique to each service.

3.) (Optional) Set default routing in vehicle categories

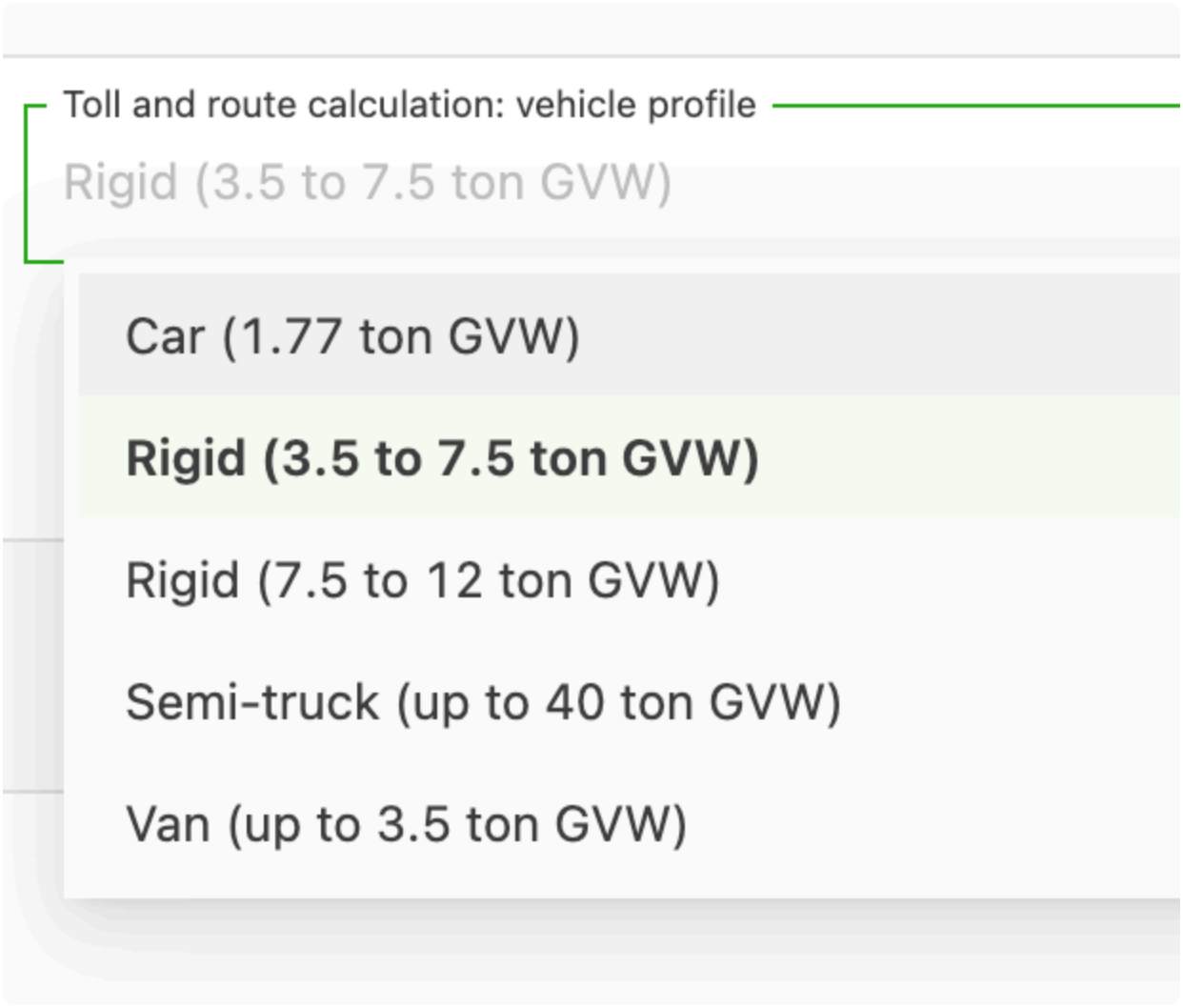
1. Navigate to **Rates > Order input**
2. From the left-hand menu, select **Vehicle categories**
3. Select the vehicle category to update
4. Navigate to the **Vehicle type** section
5. Select the appropriate routing profile from the dropdown
6. Save the profile



📚 Configured routing profiles for transportation services and vehicles apply to **orders only (routing and tolls).** If no optional profiles are set, the default is the routing profile from the organization settings.

Qargo vehicle profile and the equivalent PTV category

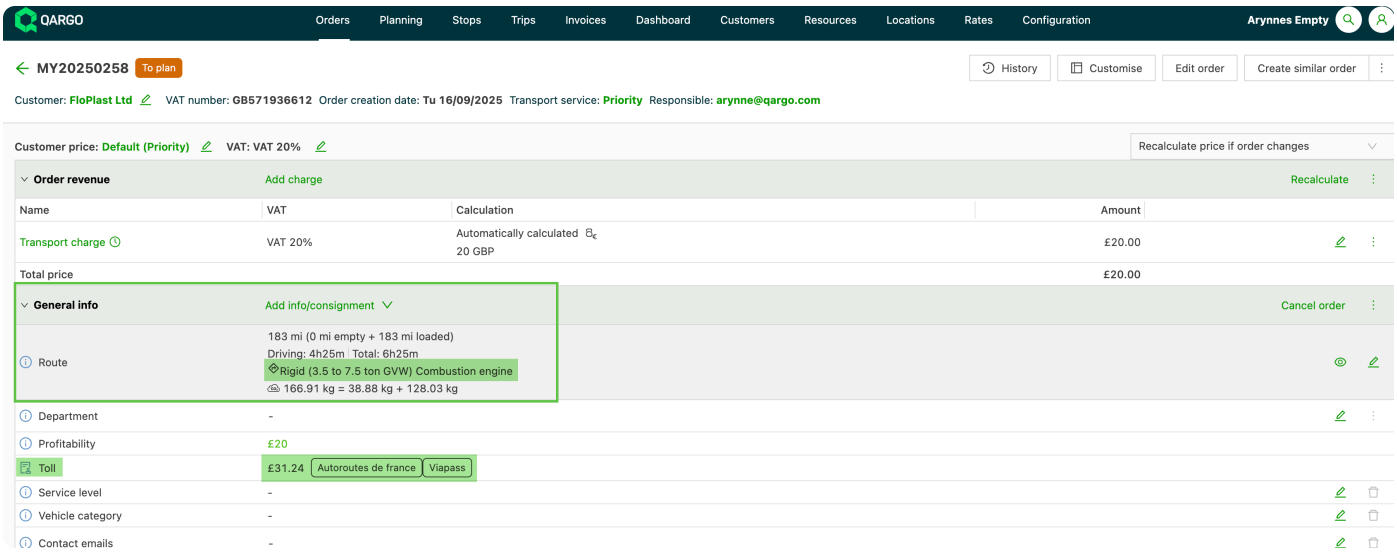
Routing profile category	PTV routing category	Description
Car	EUR_CAR	up to 1.77 t GVW
Van	EUR_VAN	up to 3.5 t GVW
Rigid	EUR_TRUCK_7_49T	3.5 t–7.5 t GVW
Rigid	EUR_TRUCK_11.99T	7.5 t–12 t GVW
Semi-truck	EUR_TRAILER_TRUCK	up to 40 t GVW



Toll cost on orders

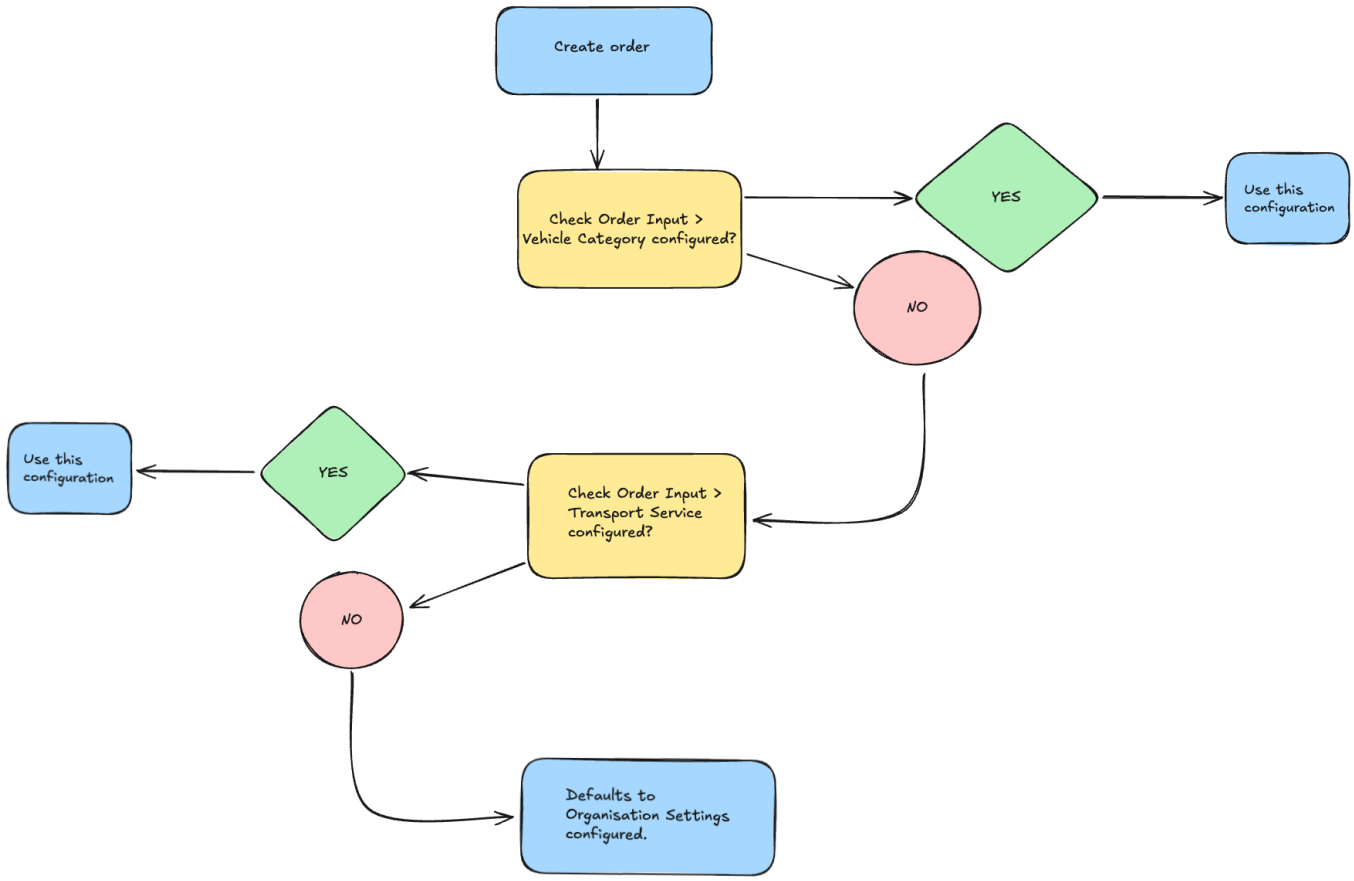
When an order is created, Qargo uses logic based on the configurations to check the vehicle type.

- In the order, under **General info**, the route details display the default vehicle profile
- This is based on the configured routing profile
- Toll calculations are based on the vehicle profile shown here



- If time windows are enforced, the planned operations time determines whether day or night rates apply, ensuring accuracy based on the order's schedule.

Order logic workflow to set vehicle profile



‼️ Routing profiles need to be set in the transportation service or vehicle category before the order is built. Updates to these do not update the vehicle profile on the order.

Toll cost on loads

Once a **Resource** is assigned to a load, the ***vehicle type*** associated with the resource is used to generate the routing and the toll.

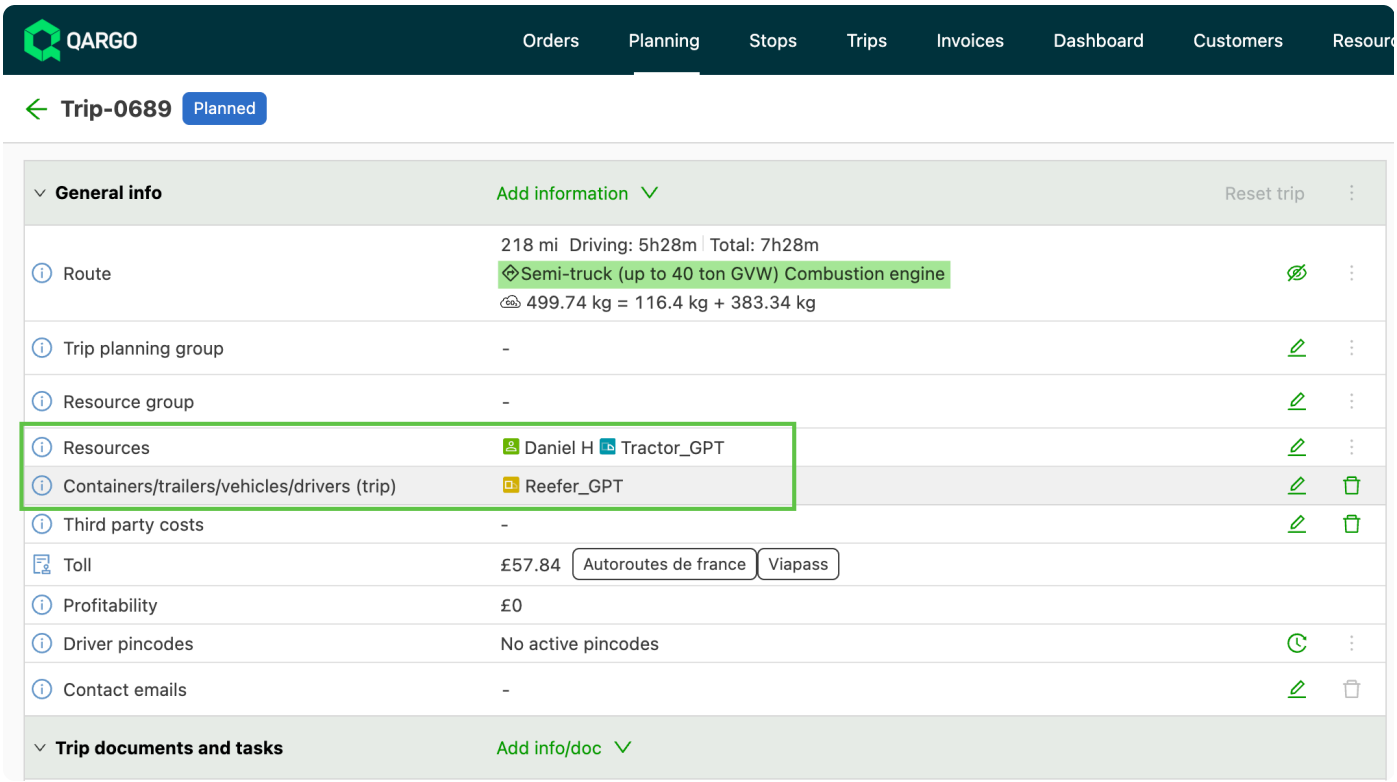
📚 Vehicle type is set when adding a new resource and can include Tractor, Truck, Van, and Trailer.

Qargo vehicle profile and the equivalent PTV category

Routing profile category	PTV routing category	Description
Van	EUR_VAN	up to 3.5 t GVW
Rigid (Truck 3.5–7.5 t)	EUR_TRUCK_7_49T	3.5 t–7.5 t GVW
Semi-truck (Tractor and/or Trailer)	EUR_TRAILER_TRUCK	up to 40 t GVW

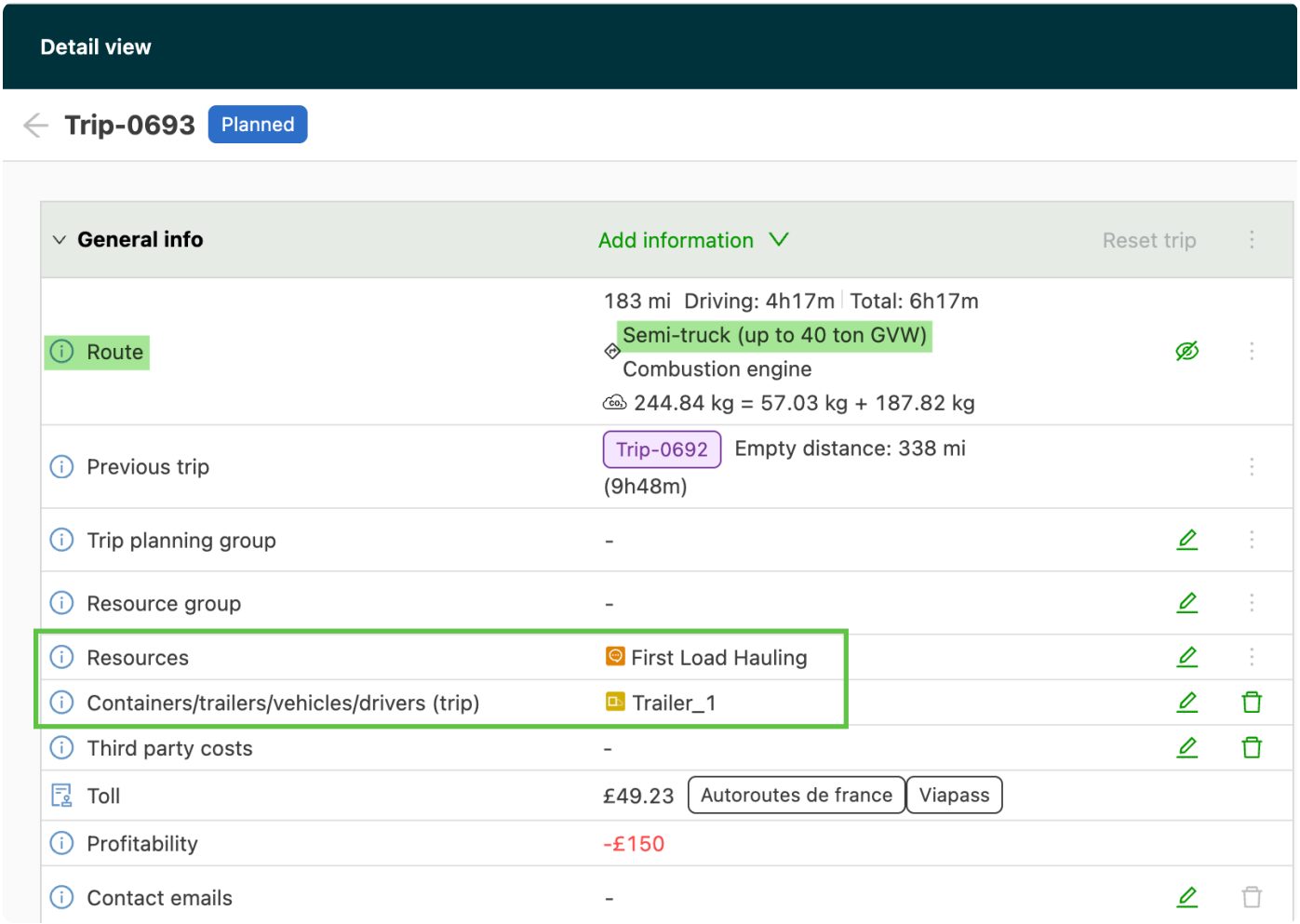
📚 This does not impact the routing associated with the order, which still shows the default used (if any) when the order was originally created.

Use case 1: Own resources
Own resources, including driver, vehicle, and trailer. The vehicle profile defaults to Semi-truck based on the vehicle and trailer resources.

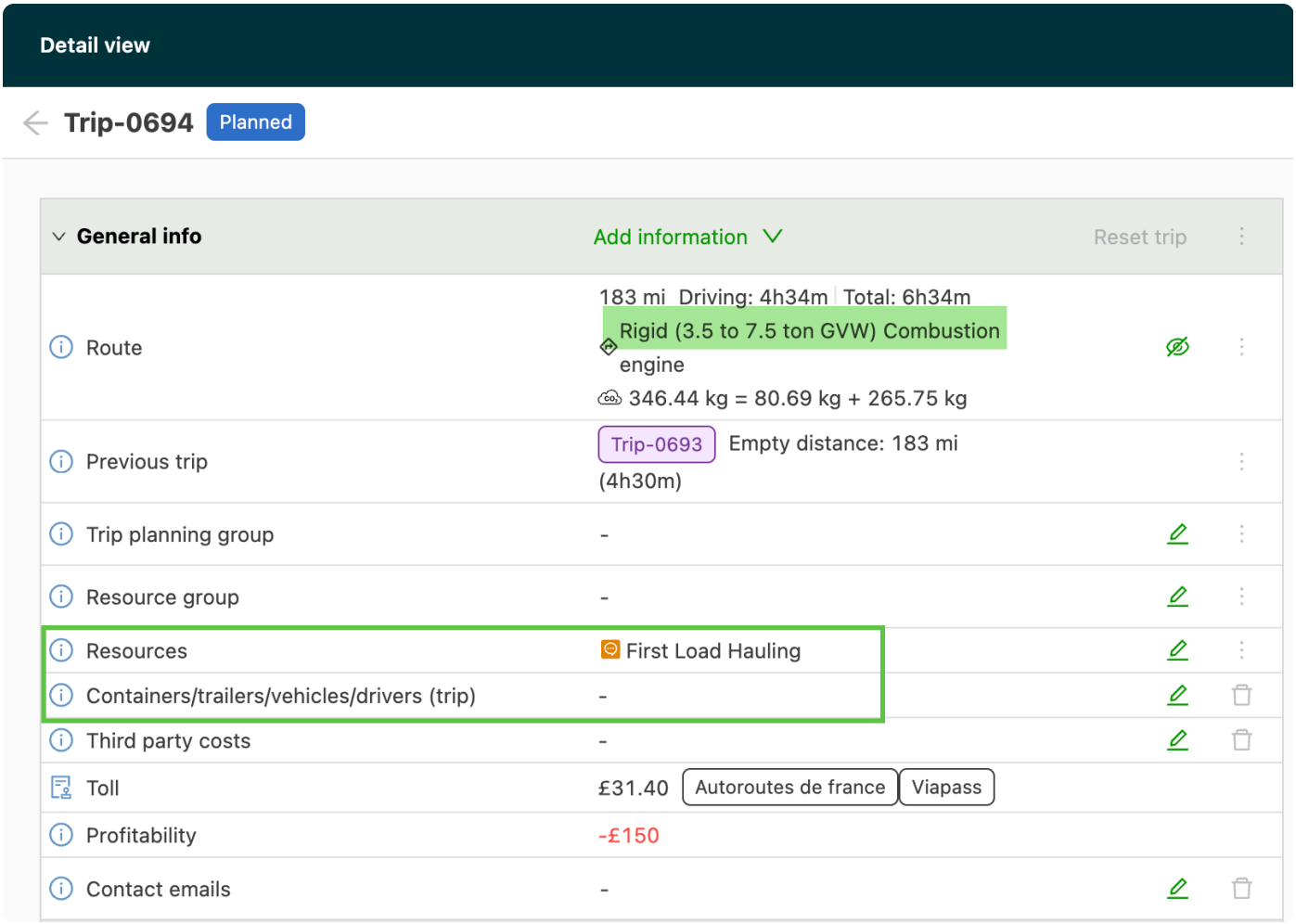


Use case 2: Contract carrier resource (driver)
A contract carrier resource (driver) is assigned with the company's own internal trailer. The vehicle profile defaults to Semi-

truck based on the assigned trailer resource, on the assumption that a semi is required to haul the trailer.



Use case 3: Contract carrier load — no trailer
Only a contract carrier is assigned, with no additional resources. The vehicle profile defaults to the **Organization settings** routing profile, as the actual vehicle resources are unknown.
Load workflow logic is based on resource type. Where multiple resources are assigned (e.g., Truck and Trailer), the highest-weight resource is used to calculate route and toll.



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Resource type	Qargo vehicle profile	Contract carrier resource
Tractor	Semi-truck (up to 40 t GVW)	As per Qargo vehicle profile
Trailer	Semi-truck (up to 40 t GVW)	As per Qargo vehicle profile
Truck	Rigid (3.5 t–7.5 t GVW)	As per Qargo vehicle profile
Van	Van (up to 3.5 t GVW)	As per Qargo vehicle profile
Driver only	Vehicle profile selected in organization settings	As per Qargo organization settings
Generic contract carrier	Vehicle profile selected in organization settings	As per Qargo organization settings

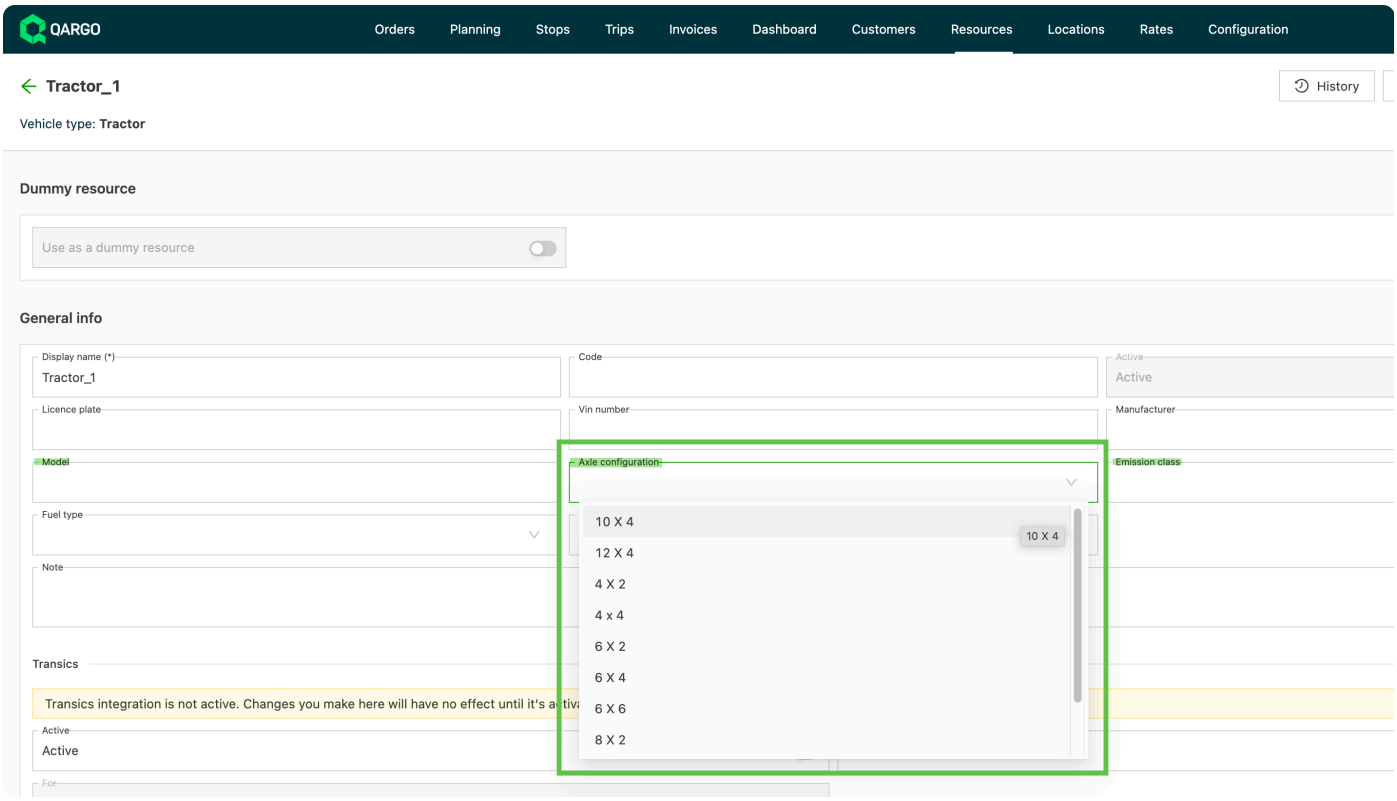
Examples:

- A trailer and a tractor → Semi-truck (up to 40 t GVW)
- A rigid truck (3.5 t–7.5 t GVW) + trailer → Semi-truck (up to 40 t GVW)
- A driver (organization settings profile) + tractor → Semi-truck (up to 40 t GVW)

To change the vehicle profile used in the load, the resource must be changed.

📚Users can change the time to recalculate if another vehicle profile is selected in organization settings. This updates the order to reflect the change.

- In some regions, tolls can also be calculated based on the **Axle configuration** specified in the resource profile.
  - This typically applies to trailers, but can also apply to tankers if used.



🧰 Complete the axle configuration in the resource profile to help ensure accurate toll calculations.

📚 **Where toll rates vary depending on the time of day, use enforced time windows in the order to ensure the correct rate is used in the calculation.**
By setting **Start** and/or **Arrival** times and enabling the **Enforce window** option, Qargo ensures toll rates align with expected operations times. This is especially critical for locations like the Liefkenshoektunnel, where rates differ between day and night hours.

Excluding toll systems from rate card charges

Rate card charges can be configured to **exclude specific toll systems** from the toll cost calculation using the *Per toll system* metric. This is useful when a carrier's base rate already includes certain tolls (e.g., Belgian road tolls via Viapass). It avoids double-charging without manual adjustment on every order.

📚 The ***Per toll system* metric** lets users filter which toll systems are included in a charge.

Use cases

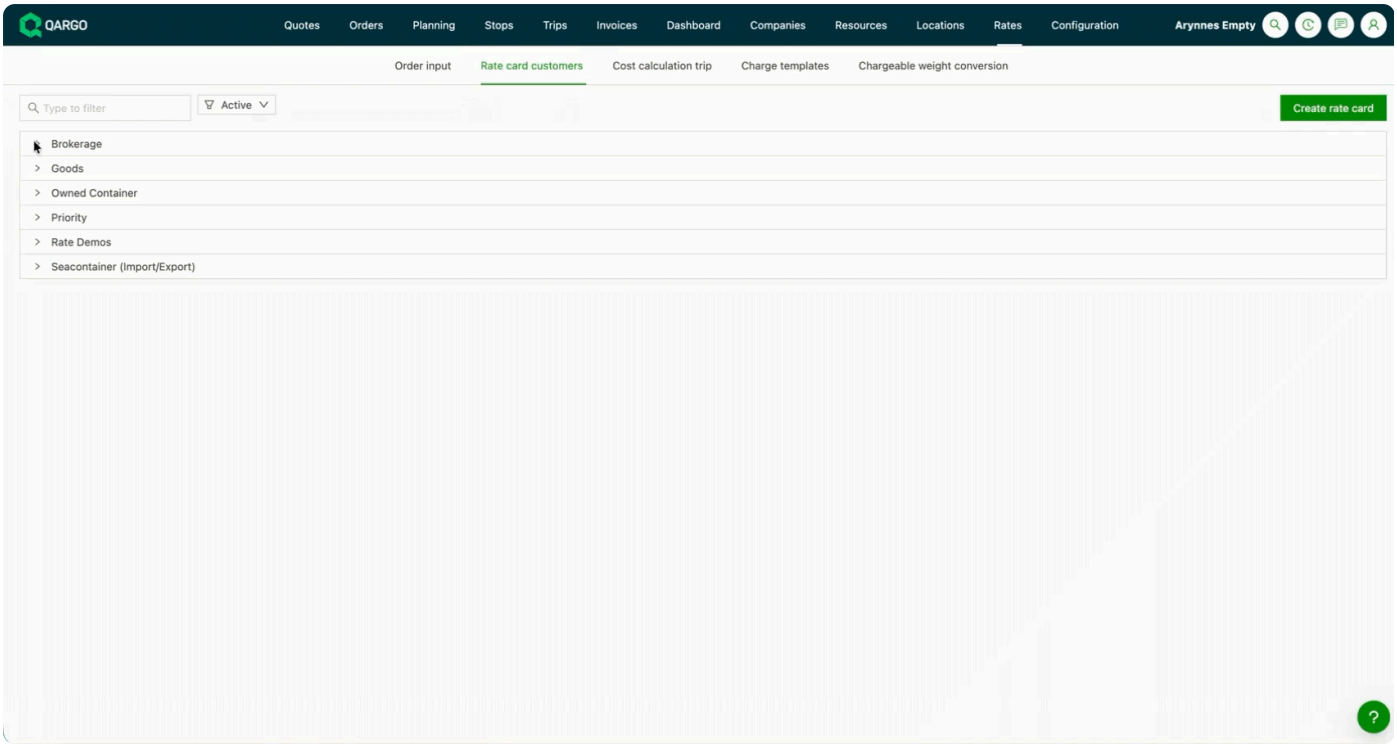
- A carrier includes Belgian road tolls in the base transport rate → exclude *Viapass* and charge only for other systems (e.g., *Autoroutes de France*)
- A carrier holds a separate tunnel contract → exclude *Liefkenshoektunnel* from the standard Qargo toll charge
- A carrier manages vignette costs separately → exclude *Eurovignet* from the Qargo toll calculation
- An intermodal operator needs system-level exclusion because different contract carriers use different routes through different toll systems

Configure a per toll system exclusion on a rate card

1. **Navigate** to **Rates > *Rate card customers***
2. **Open** the relevant rate card and locate the toll cost charge, or **add** a new charge
3. **Set** the calculation metric to *Route / Total toll cost / Per toll system*
4. **Set** a condition row:
    - Metric: *Per toll system*
    - Operator: *Not in* (to exclude), or *In* to set an allow list for specific systems
    - Value: type the name of the toll system (e.g., *Viapass*); a list of known available systems displays
5. **Add** additional condition rows for each further toll system to exclude; each condition is evaluated independently
6. **Save** the rate card; the exclusion applies automatically to all future orders and loads on this rate card

Configure a per toll system exclusion on a charge template

1. **Navigate** to **Rates > *Charge templates***
2. **Open** the relevant charge template or **create** a new one
3. **Follow** steps 3–5 from the rate card configuration above
4. **Save** the template and apply it to the relevant rate cards to propagate the exclusion



Stacking multiple exclusions

Multiple toll systems can be excluded by adding several condition rows on the same charge, each with the ***Not in*** operator. Each condition filters independently: all matching systems are removed from the toll cost total before the charge is calculated.
Alternatively, add separate charge calculations within the same rate card if different exclusion rules are needed for different scenarios.

Troubleshooting

Issue	Likely cause	Resolution
The *Per toll system* metric does not appear in the calculation metric list	Toll routing is not active or the rate card charge is on an older version	Verify that PTV routing is enabled for the transportation service; refresh the rate card editor
The toll system name does not appear in the autocomplete list	The system is not in Qargo's current toll system list (~204 systems sourced from PTV production data)	Type the system name exactly as it appears in PTV; contact support if the system is missing and expected
The toll charge still shows the full combined toll cost	The *Per toll system* metric is set but no condition row has been added	Confirm that a *Per toll system* condition row with the correct operator and value has been saved on the charge
Eurotunnel costs cannot be excluded via this feature	Eurotunnel is globally excluded from Qargo's toll calculation by default	No action required; Eurotunnel costs are never included in Qargo's toll charge
A new toll system does not appear in autocomplete	The autocomplete list is updated periodically from PTV production data	Contact support to request a list refresh that includes the new system

Additional information

PTV provides an overview of toll systems by country (see the PTV toll overview) and a map with toll sections.

For rate card configuration, see also: Rates – Rate card customers.