

Price Benchmarking Methodology

Sea



INTRODUCTION

Containerized maritime transport is at the heart of international supply chains, but the complexity of rate structures (freight, BAF, CAF, THC, local surcharges, etc.) makes it particularly difficult to interpret “market prices.” Upply’s maritime benchmarking methodology aims to capture this reality in a **statistically robust, transparent, and actionable** way for both our clients and our internal teams.

This document describes in detail how our “**long-term**” **maritime benchmark model** works for **FCL (Full Container Load)** flows. It is based on **actual billing data** from shippers (BCOs) and freight forwarders/NVOCCs, which is collected and anonymized before being modeled by our algorithms. Based on these millions of transactions, Upply estimates a weekly **price distribution** (Min, Low, Median, High, Max) for a given port-to-port route, a service type (PTP, DTD, etc.), and a set of parameters (container type, hazardous cargo, THC included or not, etc.).

The scope of this methodology is intentionally **limited to the long-haul maritime model**. It **does not include**:

- > **short-term** benchmarks, based on published rate schedules from shipping lines,
- > other modes (road, air, rail, etc.), which are documented in dedicated fact sheets.

Beyond describing the algorithms, this methodology aims to **provide a common framework for interpretation**. It specifies:

- > the **nature of the data** used and its source,
- > the **geographic and operational scope** (FCL, types of services, role of THC, distinction between long-term and short-term),
- > how we convert raw data into a **weekly price distribution**,
- > the construction and interpretation of our **confidence index (A-E)**,
- > the **known limitations** of the model and best practices for using the results in benchmarking, negotiations, or management.

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DEFINITION OF A LONG-TERM MARITIME BENCHMARK

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At Upply, a maritime benchmark is a **statistical estimate of the “market price”** for FCL containerized transport on a given route (lane) and a set of parameters: service type (Port-to-Port, Door-to-Door...), container type (20GP, 40GP, reefer...), presence of dangerous goods, inclusion or exclusion of THC, etc.

Instead of a single figure, we publish a **price distribution by reference period**, expressed in the publication currency (generally **USD per container**, e.g., \$/40GP). This distribution is derived from **actual**, anonymized, and aggregated **billing transactions** spanning several years, and describes **the range within which most comparable shipments are negotiated** on the **long-term** market.

In this section, the term **“benchmark”** refers **exclusively** to the long-term maritime model. **Short-term** rates **published** by shipowners are based on a separate methodology.

1.1 GRANULARITY

The long-term maritime benchmark is published on a weekly basis in the tool. For each calendar week, we compile a sample of comparable shipments and estimate the corresponding price distribution.

The distributions become more detailed and stabilize as the week progresses:

- > at the start of the week, the signal primarily reflects the first few days (for example, Tuesday mainly reflects Monday);
- > as new invoices are integrated daily, the current week gradually aggregates all completed transactions until the close.

When the statistical signal for a given week is not yet sufficiently distinct (low number of observations or atypical composition), the previous “week effect” can be temporarily retained, then replaced as soon as the current week exhibits its own signature.

In practice, reading the data starting on Thursday significantly reduces initial noise: the distribution then incorporates most of the week’s shipments and becomes much more stable. This recommendation does not prevent using the information earlier, but it contextualizes the increasing stability of the values within the week.

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The underlying median can be estimated on a weekly or monthly basis depending on the amount of data available for the lane:

- > on dense corridors, the estimate is weekly;
- > on very low-density corridors, it may be monthly, to ensure a sufficient volume of observations.

In all cases, the benchmark presented to the user corresponds to the most appropriate reference period to ensure a balance between responsiveness and statistical robustness.

1.2 STATISTICALLY SPEAKING

The central statistic chosen to represent the “reference price” of a shipping lane is the **median** of the reference period, denoted P50. It is preferred over the mean because it is more robust to **asymmetric distributions** and **extreme values** often observed in the shipping market (congestion peaks, capacity shortages, calendar effects, etc.).

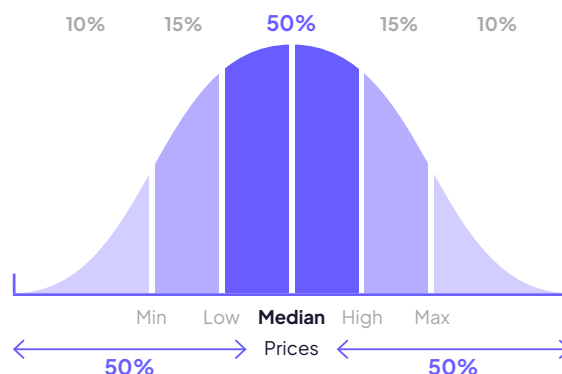
Five **quantiles** are published around this median:

- > **P10** - displayed as “**Min**”
- > **P25** - displayed as “**Low**”
- > **P50** - **median**
- > **P75** - displayed as “**High**”
- > **P90** - displayed as “**Max**”

We **do not display raw min/max values**, as they are often linked to atypical and unrepresentative situations, for example:

- > container repositioning or backhauls at heavily discounted rates,
- > emergency operations or “distressed cargo” with significantly higher rates,
- > exceptional events (terminal closures or extreme congestion, severe weather conditions, strikes),
- > special cases of contracts or bilateral agreements that are not representative of the market,
- > reporting errors (currency, container type, number of containers, etc.).

The use of the **P10–P90** range ensures a **consistent and robust** interpretation from one period to the next, while covering the **vast majority of transactions possible** in the long-term maritime market.



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THE LONG-TERM MARITIME FCL MODEL

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2.1 SCOPE

Upply's Long-Term Maritime FCL Model covers **containerized** transport on the world's major corridors. It is based on actual billing data and applies exclusively to **the long-term market** (contracts, rates with a duration of ≥ 3 months), excluding **short-term** rates, which are covered by a separate methodology.

Geographically, the model draws on a database of over **340 ports** across **96 countries**, organized into **64 major** continent-to-continent **corridors** (Asia-Europe, Europe-Asia, Trans-Pacific, Intra-Asia, Trans-Atlantic, etc.). This coverage allows for benchmarking most FCL flows between major ports. Coverage levels naturally vary by region and port: some port-to-port pairs have a dense historical record, while others rely more on zone/region fallback mechanisms. A coverage map and/or a table of ports by corridor can be used to provide a **qualitative order of magnitude** (from "very low" to "very high"), to be read in conjunction with the lane-by-lane **confidence index**.

In terms of segments, the methodology covers:

- > **standard dry LCL** (20GP, 40GP, 40HC);
- > **reefers** (refrigerated containers) by container type (20RF, 40RF, 40RH);
- > **dangerous goods (DG)** via a dedicated parameter.

The following are not included in the scope of the long-term Maritime FCL model:

- > LCL/containerized groupage;
- > bulk cargo (dry bulk, liquid bulk), Ro-Ro, and non-containerized break bulk;

The concept of a **maritime lane** is primarily **port-based**: a lane is defined by a **port of origin** and a **port of destination**, uniquely identified via their **UN/LOCODE** and linked to a zone and then a region. When the user selects a **Door-to-Door** (or Door-to-Port / Port-to-Door) service type, the "door" addresses or cities entered are internally linked to a reference port: the model remains fundamentally based on a **port-to-port** relationship, to which the corresponding pre- and post-carriage by road are added.

The reference list of covered ports and countries is maintained in an internal Upply repository, based on **ISO 3166-1 alpha-2 country codes** and official **UN/LOCODE** codes. In all our data imports/exports and partner integrations, the systematic use of these codes significantly reduces ambiguities (homonymous ports, spelling variations, special territories).

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Reading note:

- The presence of a port (and its country) in the repository allows for the creation of lanes involving that port. The **actual quality** then depends on the flow of observations available at the time of the query and is reflected by the **A→E confidence** score.
- The scope may evolve (addition of ports, countries, corridors). Any update to this reference database must be considered a **functional evolution** of the product and must be documented in a **methodology changelog**.

2.2 DATA AND SOURCES

This section describes how we transform raw data streams (maritime shipping invoices) into a robust price distribution by port-to-port lane. It formalizes the steps, quality safeguards, handling of outliers, temporal weighting, smoothing, geographic fallback mechanisms, and consideration of import/export asymmetry.

2.2.1 INGESTION AND NORMALIZATION

The data streams (EDI/FTP/API) provided by shippers (BCOs) and freight forwarders/NVOCCs are validated for format, standardized, and then enriched:

- > **Geography** - we accept various port identifiers (internal codes, port names, local spellings). Everything is mapped to a standardized Uply port via its UN/LOCODE. Each port is linked to a port zone (e.g., “North China”) and then to a region (e.g., “Asia”), which are subsequently used for fallback mechanisms.
- > **Units** - harmonization of currencies (typically published in USD) with conversions based on reference exchange rates; harmonization of pricing units to convert each record to a price per container (e.g., \$/20GP, \$/40GP, \$/40HC). When the invoice covers multiple containers, the unit price is recalculated per container.
- > **Parameters** - mapping of service type (Port-to-Port, Door-to-Port, Port-to-Door, Door-to-Door), container type (20GP, 40GP, 40HC, reefers), Hazardous status (yes/no), and actual inclusion of THC (when information is available). The scope is limited to the long-term market.
- > **Deduplication** - probabilistic matching (close dates, same port-to-port pair, same container type, same amount, same B/L or hash) to avoid double-counting the same shipment (e.g., freight forwarder invoice + shipper invoice for the same shipment).

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2.2.2 QUALITY CONTROLS AND BUSINESS SAFEGUARDS

Prior to estimation, we exclude entries that are clearly inconsistent:

- > **Physical and business constraints** - - e.g., zero or excessive number of containers, inconsistent combination of container type and price level (a 40GP Asia–Europe shipment at \$50 or \$50,000 without justification), impossible dates.
- > **Geographic validation** - unknown ports, incorrect or unrecognized UN/LOCODE codes, inconsistent port–country associations (e.g., a Chinese port declared as being in Europe), mapping errors between contributor codes and the Uply repository. Ambiguous cases are corrected if possible; otherwise, they are rejected.
- > **Monetary consistency** - zero or anomalous amounts, unknown currencies, inconsistent currency/amount combinations (e.g., typical value in USD but declared in JPY).
- > **Typological consistency** - contradictions between service type, container type, hazardous status, and known information about the shipment (e.g., missing DG code for a line clearly labeled IMDG by the contributor).

These checks ensure that the published distribution is based on plausible observables, consistent with the reality of FCL maritime transport.

2.2.3 DETECTION AND HANDLING OF OUTLIERS

We distinguish between two categories:

- > **“Technical” outliers:** - data entry errors, residual duplicates, reversed units (price entered in cents rather than dollars), incorrect currency, wrong port, incorrect container type. These are systematically excluded from the benchmark.
- > **“Economic” outliers:** real but rare situations (heavily discounted container repositioning, significantly marked-up “distressed cargo” emergencies, exceptional surcharges due to extreme congestion, terminal closures, strikes, major weather events).

We identify them using robust rules (interquartile ranges and/or absolute median deviation around a distribution core) and limit their influence by publishing P10–P90 rather than raw min/max values.



“Technical” exclusion removes pure errors; “economic” attenuation does not censor information, but prevents a few extreme cases (repositioning, emergencies, market spikes) from distorting the market reading for the reference period.

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2.2.4 CONSTRUCTION OF THE WEEKLY SAMPLE

For each port-to-port lane and combination of parameters (service type, container type, hazardous, THC, etc.), we aggregate the observations for the current week.

- > Consolidation is done daily: Tuesday mainly reflects Monday, Thursday generally aggregates the first three days, and so on.
- > As long as the signal for the week is not sufficiently distinct (weak, atypical composition), we temporarily retain the “week-1 effect,” then switch over as soon as the current week exhibits its own signature.
- > On certain very low-density lanes, the median may be estimated on a monthly rather than weekly basis; this switch is automatic and driven by data density.

This rule prevents overreaction at the start of the week while ensuring a rapid update as soon as volume allows.

2.2.5 WEIGHTING AND SMOOTHING

We do not use aggressive smoothing. Two mild mechanisms improve stability:

- > **Intra-week recency weighting:** within the week, the most recent days carry greater weight, while retaining the foundation of previous days to avoid artificial volatility.
- > **Minimal inter-week smoothing:** in cases of very low data density, the displayed value is primarily that of the current week; if the signal is insufficient, the “week-1 effect” is temporarily maintained (mechanism described above).

In all cases, the published quantiles remain **robust quantiles of the sample specific to the period** (week or month); this is not a multi-week average.

2.2.6 LOW-DENSITY LANES AND GEOGRAPHIC FALLBACK

When the density is too low for a reliable direct calculation on a port-to-port pair, we activate a hierarchical fallback, following the “**nearest first**” principle:

- > **Progressive geographic aggregation:** - port → port area (group of neighboring ports) → region (e.g., East Asia, Northwest Europe) → region-region corridor (e.g., Asia ↔ Europe).
- > **Proximity check:** geographic consistency (maritime basins, main routes), port hierarchy (hubs vs. secondary ports), traffic patterns (import/export flows) to avoid nonsensical pairings (e.g., mixing the Baltic and Mediterranean without justification).
- > **Reintegration:** as soon as a port-to-port lane becomes sufficiently dense again, we revert to a direct estimate without fallback.

The result from a fallback retains a **lower confidence score**; this is reflected in the A→E rating presented to the user.

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2.2.7 DIRECTION OF TRAFFIC AND IMPORT/EXPORT

We systematically distinguish between A→B and B→A directions on a maritime corridor:

- > On major routes (e.g., Asia → Europe vs. Europe → Asia, Asia → North America vs. North America → Asia), price levels can vary significantly between import and export.
- > When both directions have sufficient volume, we estimate two independent distributions, reflecting the actual asymmetry.
- > When one direction has low volume, we can partially inherit the signal from the other direction via an empirical differential observed historically on the corridor and comparable lanes, to avoid displaying an arbitrary price in the weaker direction.
- > As soon as the weaker direction regains volume, we revert to a direct estimate specific to that direction.

2.2.8 PUBLICATION OF STATISTICS

After cleaning and checks, we calculate and publish P10, P25, P50 (median), P75, P90:

- > **P50** - is our central reference statistic (more robust than the mean on maritime distributions that are often asymmetric).
- > **P10/P90** replace the raw min/max values to exclude rare cases (heavily discounted repositionings, heavily marked-up emergencies, episodes of extreme congestion) that do not reflect the general state of the market, while covering the bulk of feasible transactions.

These five levels (Min=P10, Low=P25, Median=P50, High=P75, Max=P90) constitute the market envelope within which to situate users' actual prices.

2.2.9 INTERPRETING "UNPARAMETERIZED" ITEMS

In the maritime sector, several price components do not yet have dedicated filters in the product:

- > **BAF (Bunker Adjustment Factor), CAF (Currency Adjustment Factor)**, - security surcharges, congestion, peak season...: not individually configured. They are sometimes included, sometimes billed separately depending on contractual practices.
- > **Local charges , documentation, specific terminal fees, demurrage & detention**, extended storage: rarely standardized in invoices and therefore not configurable.
- > **Origin/destination THC** are exceptions: they can be explicitly configured via the "Origin THC included" / "Destination THC included" checkboxes.

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The sample will therefore mix shipments “with” and “without” these non-configurable items; the heterogeneity is reflected in the P10–P90 range, and the median reflects the most common practice over the period.

For “strictly all-in” or “freight + minimal surcharges” comparisons, we recommend:

- > systematically using the available parameters (service type, container type, hazardous, THC included/not included),
- > and, ideally, to **contribute your data** with detailed flags (BAF/CAF included, local charges included, D&D included, etc.) to improve future granularity (see the “Contributing” section).

2.2.10 TRACEABILITY AND QUALITY

Each step of the pipeline (ingestion, normalization, checks, outlier handling, sample construction, fallback) is **logged**:

- > The lane-by-lane **confidence index** aggregates signals for **volume**, **source diversity**, **recency**, and **algorithmic quality**.
- > Versions of **external repositories** (THC per port, exchange rates) and conversion rules are **dated**.
- > Major methodological changes (new geographic scope, changes to fallback rules, parameter modifications) are **versioned** and documented in a **Governance/Versioning** section.

2.2.11 KNOWN LIMITATIONS

- > **Very low-density lanes:** stronger influence of geographic shift and import/export differentials; results provided with lower confidence (C/D/E), to be cross-checked against internal data and expertise.
- > **Unparameterized items** (BAF, CAF, local charges, D&D, etc.): the inclusion mix broadens the distribution; the median is robust but does not necessarily correspond to a standard contract used by all shipowners.
- > **Door-to-Door Services:** pre- and post-cargo road transport is modeled using average port access patterns; for very specific cases (atypical sites, significant access constraints), the benchmark should be interpreted as an order of magnitude.
- > **Hazardous Goods (DG) Flows:** Since volumes are lower, the confidence index is often lower and the P10–P90 spread wider; detailed DG surcharges are not isolated.

In summary, the robustness of the long-term maritime model rests on a simple trio: **standardize correctly**, **filter properly**, and **publish quantiles rather than extremes**. The mechanisms of recency, back-sliding, and import/export differentials ensure reliable results when data for the period is still scarce, without masking the information once it becomes available.

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2.3 DATA DICTIONARY & STANDARDS

The long-term Maritime FCL model accepts inputs for **origin and destination** (city, port, country), **reference date**, **service type** (PTP, DTP, PTD, DTD), whether or not to include THC (Terminal Handling Charges) at origin and destination, **container type**, **number of containers**, **Hazardous** status, as well as utility fields (Price Value, Shipment ID, Comment). Required fields, their default values, and validation constraints are defined in the following sections.

The unit of the maritime model is the **FCL container**, not weight/volume. Weight may be included in certain data flows for other purposes (CO2 calculation, regulatory checks), but it does not directly factor into the benchmark estimate.



The absence of a parameter does not mean it is “excluded” from the price (except for fields explicitly intended for adding or removing an item, such as **Origin/Destination THC**). For example, Uply does not currently offer transshipments, which means our final benchmark includes both routes with and without transshipments.

2.3.1 DATA DICTIONARY FOR THE LONG-TERM MARITIME FCL MODEL

This section documents the **“data contract”** expected by the algorithm: which variables are required, how they combine, which default values apply, and what the consequences are when a field is left blank.

Value	Required field	Default value	Possibles values	Example
Origin Location	✓	-	Zipcode, city, seaport	Shanghai
Origin Country	✓	-	Country code, country name	CN
Destination Location	✓	-	Zipcode, city, seaport	FRLEH
Destination Country	✓	-	Country code, country name	France
Date	✓	Today	Month/Day/Year	07/01/2026
THC Origin	✓	Yes	Yes, No	Yes
THC Destination	✓	Yes	Yes, No	No
Service Type	✓	PTP	DTD, DTP, PTD, PTP	PTP
Hazardous	✓	No	Yes, No	Yes
Container Size	✓	40GP	20GP, 40GP, 40HC, 2ORF, 4ORF, 4ORH	4ORH
Number of Containers	✓	1	10	2
Price Value	✓	-	Price of the shipment (in USD)	1200
Id Shipment	✓	-	-	ID-526D82
Comment	✓	-	-	Hello

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Explanations and best practices:

- > **Origin / Destination (Location + Country)** - The model accepts a wide variety of inputs: city, port (name or code), postal code, country. To ensure comparability, all inputs are **normalized to a seaport** via its official **UN/LOCODE** (e.g., CNSHA for Shanghai, FRLEH for Le Havre, NLRTM for Rotterdam). Each port is then linked to a **port area** (e.g., “North China”) and then to a **region** (e.g., “Asia”), a hierarchy used for geographic fallback mechanisms.
- > **Date** - This is the **reference date** used to place your query within the **current week (or month)** and to apply temporal parameters (currency conversions, THC repository versions, etc.).
 - **Default value:** “Today” in benchmark interfaces; in smartscans, the date must fall within a valid range (e.g., from 01/01/2016 to today).
 - **Effect if empty or out of bounds:** empty → use of the current date at ingestion; out of bounds → rejection of the observation.
- > **THC Origin / THC Destination** - These two binary fields (Yes / No) indicate whether Terminal Handling Charges are included in the price of the provided invoice or in the price to be benchmarked.
 - **Default value: Yes** (- THC included) at both origin and destination, in most screens and templates.
 - **Role:** The “THC Origin included” / “THC Destination included” checkboxes in the interface allow you to add or remove THC from the Upply repository by port.
- > **Service Type** - This field defines the geographic scope of the transport and determines which segments are included in the price.
 - **Possible values:**
 - **PTP** (Port-to-Port) - sea leg only,
 - **DTP** (Door-to-Port) - road pre-haul + PTP,
 - **PTD** (Port-to-Door) - PTP + post-carriage by road,
 - **DTD** (Door-to-Door) - pre-haul + PTP + post-haul.
 - **Default value: PTP** in data templates; in the interface, the user explicitly selects via the “Service Type” drop-down menu.



Best practice: Be consistent over time (always report contributor prices using the same THC convention) to avoid artificially creating data variability.

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> **Hazardous (Dangerous Goods)** - This binary field (**Yes / No**) distinguishes dangerous goods (DG, IMDG regulations) from other shipments.

- **Default value: No.**
- **Statistical effect:**
 - **Yes** → - the sample is restricted to shipments identified as DG (generally more expensive, less dense ⇒ often lower confidence index).
 - **No** or empty → the sample may be mixed, dominated by non-DG shipments but potentially containing a few mislabeled DG observations.



Best practice: Always select “Yes” for any shipment that is actually DG when you want a specific dangerous goods benchmark. Otherwise, leaving the box unchecked (No) reflects a “general” market where DG shipments are in the minority.

> **Container Size** - This field determines the **container type** and the price display unit (e.g., \$/40GP, \$/20GP).

- **Possible values** (standard codes):
 - **20GP** - 20-foot General Purpose container,
 - **40GP** - 40-foot General Purpose container,
 - **40HC** - 40-foot High Cube container,
 - **20RF** - 20-foot reefer container,
 - **40RF** - 40-foot reefer container,
 - **40RH** - 40-foot High Cube Reefer container.
- **Default value: 40GP.**
- **Purpose:** Filters the sample by type (dry/reefer, 20'/40') and allows for the comparison of similar configurations.

> **Number of Containers** - This field indicates the number of containers involved in the shipment.

- **Expected value:** positive integer (1, 2, 10...).
- **Default value: 1.**
- **Role:**
 - **Ingestion** side: allows the **total invoice price** to be converted to a **unit price per container**.
 - **Benchmark** side: certain economies of scale effects can be incorporated into the modeling if this information is sufficiently present in the data.



Best practice: Always enter the actual value. Leaving “1” as the default on a multi-container invoice would lead to interpreting the total price as a unit price, distorting the observation.

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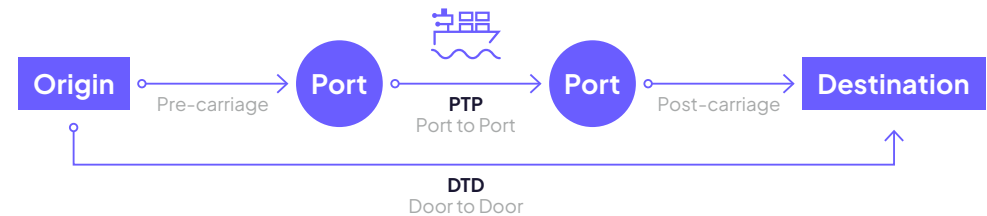
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2.3.2 ADDITIONAL INFORMATION

This section puts the previous dictionary into context with three key sections, visible in the maritime template and the benchmark interface.

Min and max weight values				Container	
Column	Unit	Min	Max	Code	Description
Date	-	01/01/2016	Today	20GP	20-foot General Purpose container
kg	EUR/USD	0,01	99999.99	40GP	40-foot General Purpose container
				40HC	40-foot High Cube container
				20RF	20-foot Reefer container
				40RF	40-foot Reefer container
				40RH	40-foot Reefer High Cube container



- Door to Port - DTP = pre-carriage + PTP
- Port to Door - PTD = PTP + post-carriage
- PTP represents the main leg.

> Container types and standard codes

The “Container” table in the template shows the correspondence between the codes and their descriptions.



Note: In practice, the majority of volumes in the long-term model are 40-foot containers (40GP/40HC/40RF/40RH). 20-foot benchmarks may be less dense and have a lower confidence index, especially on certain secondary lanes.

> Service Type Diagram (DTP / PTP / PTD / DTD)

This diagram is key to understanding how a Door-to-Door price is reconstructed from:

- actual PTP observations (port-to-port invoices),
- road pre- and post-transportation models estimated by the system,

> Unparameterized surcharges (BAF, CAF, local charges, D&D...)

Due to the lack of dedicated fields in the interface or template, their inclusion varies depending on contributors and contractual practices. This heterogeneity is inevitably present in the distribution and contributes to the P10–P90 range. Currently, only THC are explicitly configurable.

- The lower end of the range (P10) often reflects configurations close to “freight + minimum surcharges.”
- The upper end of the range (P90) reflects more “all-in” configurations (with numerous surcharges included).
- The median (P50) reflects the most common practice over the period.

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2.4 COMPONENTS OF THE LONG-TERM FCL OCEAN FREIGHT RATE

All long-term FCL maritime publications are expressed in a **reference currency** (generally **USD**). When a source provides us with a different currency, we convert it using **standardized exchange rates**. This approach eliminates intraday exchange rate volatility without obscuring movements relevant to the shipping market.

A key point governs the interpretation of prices: **only the parameters visible in the application explicitly filter the sample** (service type, container type, Hazardous, Origin/Destination THC). For all other cost items — **BAF, CAF, congestion surcharges, peak season, local charges, demurrage & detention, documentation, cleaning, inspection, etc.** — there is not yet a dedicated filter. In practice, our price distribution therefore aggregates shipments “with” and “without” these elements.

The published **P10–P90** range serves as a price envelope:

- > The **lower end of the range (P10)** resembles a price close to “freight + minimal surcharges”;
- > The **top of the range (P90)** reflects more “all-in” prices where several additional items are included;
- > The **median (P50)** represents the most typical case observed over the period.

If you have already paid less than our “min” or more than our “max,” this is not an inconsistency: we display **P10/P90** (rather than the raw extremes) to exclude rare cases and maintain a consistent reading across lanes.

2.4.1 SERVICE TYPES AND ASSOCIATED CHARGE CODES

The service type defines the geographic scope of the price and determines which segments and which charge codes (cost items) are included in the estimate. Each shipping invoice received by Uply contains a set of charge codes that detail the various billed items. These codes are standardized internally and associated with a Service Type (PTP, DTP, PTD, or DTD).

The table below lists all charge codes recognized by the Long-Term Maritime FCL model, their descriptions, and the Service Type to which they are linked.

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Table of Charge Codes by Service Type

Charge Code	Label	Service Type
FREIGHT	Freight Charge	PTP
BAFADJM	Bunker Adjustment Factor	PTP
CAFADJM	Currency Adjustment Factor	PTP
OTHCHGE	Terminal Handling Charges (Origin)	PTP
DTHCHGE	Terminal Handling Charges (Destination)	PTP
HAZSGDS	Hazardous Goods	PTP
OHAZGDS	Dangerous Goods (Origin)	PTP
DHAZGDS	Dangerous Goods (Destination)	PTP
CONCHGE	Congestion Surcharge	PTP
PSEASON	Peak Season Surcharge	PTP
EBSFRTC	Emergency Bunker Surcharge	PTP
LOSULPH	Low Sulphur Surcharge	PTP
INSSECF	ISPS (Security Fee)	PTP
OSECFEE	Security Fee (Origin)	PTP
DSECFEE	Security Fee (Destination)	PTP
OBOLFEE	Bill of Lading Fee (Origin)	PTP
DBOLFEE	Bill of Lading Fee (Destination)	PTP
ODOCFEE	Documentation Fee (Origin)	PTP
DDOCFEE	Documentation Fee (Destination)	PTP
DDELORD	Delivery Order	PTP
OADVMNF	AMS Fee (Origin)	PTP
DADVMNF	AMS Filing (Destination)	PTP
OAGENCY	Export Declaration	PTP
DAGENCY	Customs Clearance (Destination)	PTP
OEXPCFE	Export Customs Clearance Fee	PTP
DEXPCFE	Import Customs Clearance Fee	PTP
OPRTCHS	Port Charges (Origin)	PTP
DPRTCHS	Port Charges (Destination)	PTP
OHNDMAN	Handling (Origin)	PTP
DHNDMAN	Handling (Destination)	PTP
DCLNFEE	Cleaning	PTP
DINSPFE	Inspection Fee	PTP
DLOLOFE	Lift On/Lift Off (Destination)	PTP
OLOLOFE	Lift On/Lift Off (Origin)	PTP
OVGMASS	VGM (Verified Gross Mass)	PTP
CUSTDTY	Customs Duty	PTP
ZPSHARE	Special surcharge Freight	PTP
OCARTFE	Pick Up (Cartage Origin)	DTP
OFUELSC	Cartage Fuel Surcharge (Origin)	DTP
DCARTFE	Delivery (Cartage Destination)	PTD
DFUELSC	Cartage Fuel Surcharge (Destination)	PTD

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> Table Key

- **PTP (Port-to-Port):** includes all maritime charges (freight, surcharges, THC, local port charges, documentation, etc.).
- **DTP (Door-to-Port):** includes PTP items + road pre-transportation items (OCARTFE = Pick Up, OFUELSC = Fuel Surcharge Origin).
- **PTD (Port-to-Door):** includes PTP items + post-land transport items (DCARTFE = Delivery, DFUELSC = Fuel Surcharge Cartage Destination).
- **DTD (Door-to-Door):** includes all PTP + DTP + PTD items (pre-transport + maritime + post-transport).

> Pricing Rules by Service Type

When a ocean freight invoice is imported into the Upply system:

1. The **charge codes** present in the invoice are identified and mapped to the reference table above.
2. The **Service Type** of the invoice is determined based on the charge codes present:
 - If only **PTP** codes are present → Service Type = **PTP** .
 - If **OCARTFE/OFUELSC** codes are present in addition to PTP codes → Service Type = **DTP** .
 - If **DCARTFE/DFUELSC** codes are present in addition to PTP codes → Service Type = **PTD** .
 - If DTP + PTD codes are present → Service Type = **DTD** .
3. The **total invoice price** is the sum of all applicable charge codes.
4. This price is then **standardized** (currency conversion, unit price per container) and included in the sample corresponding to the identified Service Type.

> Implications for the benchmark

- When the user selects a **Service Type** in the interface (e.g., “Door to Door”), the model filters the sample to include only invoices with that Service Type and reconstructs a consistent price distribution.
- **Charge codes not individually configured** (e.g., CONCHGE, PSEASON, DCLNFEE...) remain “**within the spread**”: their presence or absence in the source invoices contributes to the **P10–P90** range.
- Only **THCs** (OTHCHGE / DTHCHGE) can be explicitly configured via the “THC Origin included” / “THC Destination included” checkboxes in the interface.

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2.4.2 CONTAINER TYPES (CONTAINER SIZE)

The container type determines the pricing unit and filters the sample to homogeneous configurations. Each container type also has a default weight used for certain auxiliary calculations (e.g., CO₂).

> Dry containers (General Purpose)

Code	Description	Default Weight (kg)
20GP	20-foot General Purpose container	2,300
40GP	40-foot General Purpose container	3,800
40HC	40-foot High Cube container	4,100

- **20GP:** standard 20-foot container for dry cargo. Less common than the 40-foot container on most routes; may have a lower reliability rating on certain secondary routes.
- **40GP:** standard 40-foot container for dry cargo. **Most common type** in the sample; default value in most interfaces.
- **40HC:** 40-foot high-cube container (9'6" instead of 8'6"). Very common for bulky or lightweight cargo; often priced at the same level as the standard 40GP, sometimes with a slight surcharge.

> Reefer containers (Refrigerated)

Code	Description	Default weight (kg)
20RF	20-foot Reefer container	3,100
40RF	40-foot Reefer container	5,000
40RH	40-foot Reefer High Cube container	5,400

- **20RF:** 20-foot refrigerated container for temperature-controlled cargo. Less common than 40-foot reefers; sometimes with a lower density of units.
- **40RF:** standard 40-foot refrigerated container. The most common type of reefer.
- **40RH:** 40-foot high-cube refrigerated container. Used for bulky goods requiring temperature control.



Note: Reefer containers implicitly include energy costs (terminal power connections, gensets, temperature monitoring) and reefer surcharges that are not itemized separately. These items are “included in the spread” and contribute to raising the median and widening the P10–P90 range compared to dry containers.

> Dominance of 40' containers in the sample

In practice, the majority of volumes contributing to the long-term model are in 40' containers (40GP/40HC/40RF/40RH). The 20' benchmarks may be less dense and have a lower confidence index, especially on certain secondary lanes or under-served corridors.

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2.4.3 HAZARDOUS GOODS

The **Hazardous** parameter is used to compare your lane exclusively with shipments actually carried out under the IMDG (International Maritime Dangerous Goods Code) regulations.

> Identification of Hazardous Flows

In the Upply system, a shipment is marked Hazardous = True if the invoice contains the HAZSGDS (Hazardous Goods) charge code. This code may appear in different variations in source invoices:

- **HAZSGDS** - Hazardous Goods (generic code)
- **OHAZGDS** - Dangerous Goods (Origin)
- **DHAZGDS** - Dangerous Goods (Destination)

When one of these codes is present, the shipment is automatically tagged as Hazardous in the ingestion pipeline.

> Behavior in the interface

- **Checkbox unchecked (default):** - the sample selects the non-DG universe (Hazardous = False or absent).
- **Checkbox checked:** the sample is restricted to shipments identified as DG (Hazardous = True).

The sorting is based on identifications transmitted by our contributors (BCOs, NVOCCs, freight forwarders) and validated in our pipelines. If certain partners do not consistently tag Hazardous, a residual mix may remain on the “Non” side—this is rare and can be observed in the P10–P90 range. The confidence index (A→E) takes into account the actual density and diversity of DG flows on the lane.

> Impact on prices

Enabling “Hazardous” generally shifts the distribution upward and may broaden it: the DG regime requires additional expertise, equipment, and constraints:

- Specific team training,
- Mandatory IMDG documentation,
- Maritime route restrictions (certain ports, certain vessels),
- Specific DG surcharges (load codes HAZSGDS, OHAZGDS, DHAZGDS),
- Enhanced handling and storage procedures.

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These items are not configured individually: they are “included in the spread” when applicable. Interpret the median (P50) as the most common level observed over the period; P10 corresponds to “freight + minimal DG surcharges” scenarios, while P90 reflects more “all-inclusive” situations (inspections, delays, additional equipment, route restrictions).



Check “**Hazardous**” only if your shipment actually requires it; otherwise, leave it set to “No” to benefit from the most comprehensive database. If the confidence index is C or D/E with “Hazardous” enabled, consider slightly broadening the geographic granularity (exact port → port area → region) or checking at the end of the period (full weekly/monthly consolidation).

2.4.4 TERMINAL HANDLING CHARGES (THC)

THC (Terminal Handling Charges) refer to the costs **of handling and managing the container within the port terminal**. In the Uply system, they are identified by the following charge codes:

- **OTHCHGE** - Terminal Handling Charges (Origin)
- **DTHCHGE** - Terminal Handling Charges (Destination)

> Configuration in the application

THC are the only shipping line items that can be explicitly configured via two checkboxes in the interface:

- **THC Origin inclus** (checked by default),
- **THC Destination inclus** (checked by default),

When a checkbox is selected, the benchmark includes the corresponding THC value (from an Uply reference database by port, updated at least once a year).

When a checkbox is deselected, the benchmark excludes the THC component from the total price.

> THC Database

- A THC rate per port is maintained, separate for origin and destination.
- This rate is generally the same for 20’ and 40’ containers in most ports (working assumption; to be confirmed port by port if necessary).
- The reference is updated at least once a year and versioned to ensure traceability.

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> Recommended reading

- **Checked boxes (default):** The benchmark reflects a “THC included” price, corresponding to the most common practice in source invoices.
- **Unchecked box(es):** the price is adjusted by removing the corresponding THC component, allowing for comparisons of “ex-THC” configurations or the reconstruction of a “freight only + ocean surcharges” price.



THC can vary significantly from one port to another (from a few dozen to several hundred dollars per container). For accurate comparisons between ports, it is recommended to uncheck THC and treat them separately, or conversely, to check them systematically for a consistent “all-in” reading.

2.4.5 OCEAN FREIGHT SURCHARGES (BAF, CAF, ETC.)

In maritime transport, numerous surcharges may apply in addition to the base freight (code FREIGHT). Unlike THC, they cannot be configured individually in the current application.

> Bunker Adjustment Factor (BAF)

- **Charge code:** BAFADJM
- **Definition:** Always included in source prices and therefore in the benchmark. There is no “Fuel surcharge” toggle equivalent to the one in road transport that allows it to be isolated or removed.
- **Interpretation:** The BAF is integrated into the overall price level; its fluctuations over time are reflected in changes to the weekly/monthly median.

> Currency Adjustment Factor (CAF)

- **Charge code:** CAFADJM
- **Definition:** currency surcharge offsetting exchange rate fluctuations between the billing currency and the shipowner’s reference currency.
- **Status:** not configurable; included inconsistently depending on contributors and contractual practices.
- **Interpretation:** contributes to the width of the P10–P90 spread.

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> Currency Adjustment Factor (CAF)

Charge Code	Label	Description
CONCHGE	Congestion Surcharge	Applied in the event of port congestion
PSEASON	Peak Season Surcharge	Applied during peak season (pre-Chinese New Year, pre-Christmas)
EBSFRTC	Emergency Bunker Surcharge	Emergency Fuel Surcharge
LOSULPH	Low Sulphur Surcharge	Related to environmental regulations (IMO 2020)
INSSECF / OSECFF / DSECFF	Security Fee / ISPS	Port security fees

All these surcharges are statistically “within the spread”:

- Sometimes included in source invoices, sometimes billed separately;
- Their presence or absence contributes to the heterogeneity of the distribution and the P10–P90 range;
- The lower end of the range (P10) reflects configurations close to “freight + minimal surcharges”;
- The upper end of the envelope (P90) reflects more “all-in” configurations (many surcharges included);
- The median (P50) reflects the most common practice over the period.



Future developments: discussions are underway to better isolate or configure certain surcharges (particularly the BAF), but this functionality is not yet available in the product. In the meantime, the recommended approach is to consider P50 as the “typical market” level and P10–P90 as the range of variability associated with different practices regarding the inclusion or exclusion of surcharges.

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2.4.6 LOCAL CHARGES AND DOCUMENTATION FEES

Numerous local charges may be billed in addition to ocean freight and the main surcharges. They are identified by specific charge codes in the source invoices.

> Main local charges

Charge Code	Label	Description
OBOLFEE / DBOLFEE	Bill of Lading Fee	Bill of Lading Issuance Fee
ODOCFEE / DDOCFEE	Documentation Fee	General Documentation Fee
DDELORD	Delivery Order	Delivery Order
OADMNF / DADMNF	AMS Fee / AMS Filing	Manifest Declaration Fee (US)
OVMGMASS	VGM (Verified Gross Mass)	Weighing and weight certification
DCLNFEE	Cleaning	Container cleaning
DINSPFE	Inspection Fee	Sanitary/Phyosanitary Inspection
DLOLOFE / OLOLOFE	Lift On/Lift Off	Special Handling (oversized containers, etc.)
OPRTCHS / DPRTCHS	Port charges	Miscellaneous Port Charges
OHNDMAN / DHNDMAN	Handling	Additional handling

> Customs

In the Uply system, a shipment is marked Customs = True if the invoice contains one of the following charge codes:

- **OAGENCY** - Export Declaration
- **OEXPCFE** - Export Customs Clearance Fee
- **DAGENCY** - Customs Clearance (Destination)
- **DEXPCFE** - Import Customs Clearance Fee
- **CUSTDTY** - Customs Duty

These codes identify flows with explicitly billed customs duties. However, this parameter is not displayed in the user interface; it therefore remains “in the spread.”

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> Status in the benchmark

- Not individually configured.
- Their inclusion varies by contributor, contractual practices, and ports.
- Contribute to the heterogeneity of the distribution and the P10–P90 range.

> Recommended reading

- These fees are generally moderate in amount (a few tens to a few hundred dollars per container) but can add up.
- For comparisons between “strictly freight + ocean surcharges” and “all-in with local charges,” it is recommended that you contribute your data with detailed flags (local charges included/not included) to improve the future granularity of the model.

2.4.7 DEMURRAGE & DETENTION (D&D)

Demurrage and detention refer to the charges applied when a container remains immobilized beyond the free time period:

- **Demurrage:** fees for storing the container within the terminal grounds beyond the free time.
- **Detention:** fees for retaining the container outside the terminal (at the customer’s location, in transit) beyond the free time.

> Status in the benchmark

- Not currently configured (no dedicated charge code identified in the current reference database).
- Rarely included in the source invoices used for the long-term benchmark (most invoices reflect “normal” operations without D&D).
- When present, they contribute to the upper end of the range (P90) and widen the spread.

The recommended interpretation is to consider the benchmark as reflecting “normal” operations (without significant D&D) and to treat D&D as exceptional items to be managed separately in operational analyses.

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2.4.8 PRE- AND POST-CARRIAGE BY ROAD (DTP/PTD/DTD SERVICES)

Door-to-Port, Port-to-Door, and Door-to-Door services include road haulage segments upstream and/or downstream of the maritime leg. These segments are identified by specific load codes.

> Pre-haulage load codes (DTP)

Charge Code	Label	Description
OCARTFE	Pick Up (Origin Haulage)	Road transport from origin to port of loading
OFUELSC	Fuel Surcharge (Origin)	Fuel surcharge for pre-transport

> Post-transportation charge codes (PTD)

Charge Code	Label	Description
DCARTFE	Delivery (Destination Haulage)	Road transport from the port of discharge to the destination
DFUELSC	Fuel Surcharge (Destination)	Fuel surcharge for onward transport

> Included in pre- and post-carriage

- Road transport of the container (tractor + chassis + container),
- Any intermediate road or rail transshipments,
- Administrative costs associated with these movements (scheduling, transport documentation, tracking).

> Not specified / “included in the spread”

- Site-specific factors: difficult access, restricted urban areas (LEZ), “inside” deliveries, upper floors, remote industrial sites.
- Multi-stops: routes with multiple loading/unloading points.
- Delays: waiting times during loading/unloading, tight time slots, off-hours.
- Equipment: tailgate, loading assistance, specific safety requirements.

These factors are not isolated in the current model and contribute to the variability of DTP/PTD/DTD prices.

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> Recommended reading

- Pre- and post-carriage are modeled based on average port access patterns (road distances, standard costs).
- For very specific cases (atypical sites, significant constraints), the benchmark should be interpreted as an order of magnitude and compared with operational expertise.
- The lower end of the envelope (P10) reflects simple configurations (direct access, no waiting, no constraints); the upper end (P90) reflects more complex configurations.

2.4.9 TWO EXAMPLES FOR REFERENCE

> Asia → Europe (high-traffic corridor, 40GP, PTP, non-hazardous, THC included)

- **Sample:** very dense, numerous contributors, confidence index generally **A** or **B**.
- **Typical charge codes:** FREIGHT, BAFADJM, CAFADJM, OTHCHGE, DTHCHGE, CONCHGE, INSSECF, OBOLFEE, DBOLFEE, DDOCFEE.
- **P10:** price close to “FREIGHT + BAFADJM + OTHCHGE + DTHCHGE + minimal surcharges”.
- **P50:** Most typical level, including standard surcharges (BAF, CAF, moderate congestion, security, documentation).
- **P90:** “all-in” configurations with peak season surcharges (PSEASON), multiple local charges, and any exceptional surcharges.
- **P10–P90 range:** moderate, reflecting the heterogeneity of surcharge inclusion practices but on a dense and diversified basis.

> Europe → Latin America (less dense corridor, 20GP, DG, PTD, THC included)

- **Sample:** smaller, fewer contributors, confidence index possibly **C** or **D**.
- **Typical charge codes:** FREIGHT, BAFADJM, HAZSGDS, DHAZGDS, OTHCHGE, DTHCHGE, DCARTFE, DFUELSC, DAGENCY, DINSPFE.
- **P10:** price close to “FREIGHT + BAFADJM + HAZSGDS + OTHCHGE + DTHCHGE + DCARTFE + minimal surcharges”.
- **P50:** typical level, including standard DG surcharges, average post-transportation costs, customs, and inspection.
- **P90:** configurations with maximum DG surcharges, complex post-transportation, potential delays or site constraints, multiple local charges.
- **P10–P90 range:** wider, reflecting both the heterogeneity of practices and the lower density of the sample.

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2.4.10 HOW TO OBTAIN MORE HOMOGENEOUS COMPARISONS

The quickest way is to enter all available parameters (service type, container type, Hazardous, Origin/Destination THC included) and to interpret the P10–P90 range as an indicator of the heterogeneity of the data.

For “strictly all-in” analyses or, conversely, “freight only + minimal surcharges,” it is best to submit your data with structured flags that allow for the precise identification of the cargo codes included in each invoice:

- BAF included (BAFADJM present) / not included,
- CAF included (CAFADJM present) / not,
- Local charges included (OBOLFEE, DDOCFEE, DCLNFEE, etc. present) / not included,
- D&D included / not included,
- Congestion / Peak Season included (CONCHGE, PSEASON present) / not included.

We can then filter your corridors more precisely and narrow the spread around the median relevant to your use.

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2.4.11 OPERATIONAL SUMMARY

Component	Load Code(s)	Status	Reading
Base Freight	FREIGHT	Included (PTP)	Always included in PTP invoices
Service type	OCARTFE/OFUELSC (DTP), DCARTFE/DFUELSC (PTD)	Configurable	Determines whether pre- or post-carriage is included
Container type		Configurable	Filter on 20GP/40GP/40HC/ reefers; 40' dominant
Hazardous materials	HAZSGDS, OHAZGDS, DHAZGDS	Configurable (default No)	Toggle "with/without" DG; DG overloads "in the spread"
THC Origin / Destination	OTHCHGE, DTHCHGE	Configurable (default Yes)	Only items that can be explicitly added/ removed
Currency		Included (USD publication)	Conversion based on standardized rates
BAF	BAFADJM	Included, not configurable	Always included in the price; no "fuel" toggle
CAF	CAFADJM	Not configurable (mix)	Included in some, excluded in others
Congestion / Peak Season	CONCHGE, PSEASON	Not configured (mix)	Present or absent depending on period and corridor
Emergency Bunker / Low Sulfur	EBSFRTC, LOSULPH	Not configured (mix)	Environmental/ emergency surcharges
Security / ISPS	INSSECF, OSECFEE, DSECFEE	Not configured (mix)	Port security fees
Documentation	OBOLFEE, DBOLFEE, ODOCFEE, DDOCFEE, DDELORD	Not configured (mix)	BL, delivery order, general documentation
AMS / VGM	OADVMNF, DADVMNF, OVGMASS	Not configured (mix)	Declaration fees (US) and weighing
Customs	OAGENCY, OEXPCFE, DAGENCY, DEXPCFE, CUSTDTY	Not configured (mix)	Customs fees; identified but not disclosed
Local charges	OPRTCHS, DPRTCHS, OHNDMAN, DHNDMAN, DCLNFEE, DINSPFE, DLOLOFE, OLOLOFE	Not configured (mix)	Port charges, handling, cleaning, inspection
D&D	(Aucun code identifié)	Not configured (mix)	Rarely included; when present, pull P90 upward
Pre/post-transfers	OCARTFE, OFUELSC, DCARTFE, DFUELSC	Included depending on Service Type	Modeled using average schemes; site-specific details "within the spread"

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This section formalizes the core interpretation rule for long-term maritime FCL: anything not explicitly specified is statistically “within the spread.” P10–P90 defines the range, P50 defines the core.



Interpreting P10–P90 (min–max): prices may exist below P10 or above P90; they are simply not displayed so as not to distort market interpretation. This does not mean that these prices do not exist, but that they are statistically rare (< 10% or > 90% of the distribution) and often linked to exceptional situations (repositioning, emergencies, episodes of extreme congestion, billing errors, etc.).

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3.1 SERVICE TYPES: PORT-TO-PORT, DOOR-TO-PORT, PORT-TO-DOOR, DOOR-TO-DOOR

The platform allows users to select a service type that defines the geographic scope of the shipment and determines which segments are included in the benchmarked price. This distinction is essential for comparing comparable offers and understanding the maritime rate structure.

3.1.1 PORT-TO-PORT (PTP)

> Definition

The Port-to-Port service covers exclusively ocean freight between the port of loading and the port of discharge. This is the reference scope of the long-term ocean freight model.

> Included charge codes (PTP)

When an invoice is identified as PTP, it typically contains the following charge codes:

- **FREIGHT** – Freight Charge (base ocean freight)
- **BAFADJM** – Bunker Adjustment Factor (fuel surcharge)
- **CAFADJM** – Currency Adjustment Factor (currency surcharge)
- **OTHCHGE** – Terminal Handling Charges (Origin)
- **DTHCHGE** – Terminal Handling Charges (Destination)
- **CONCHGE** – Congestion Surcharge
- **PSEASON** – Peak Season Surcharge
- **EBSFRTC** – Emergency Bunker Surcharge
- **LOSULPH** – Low Sulfur Surcharge
- **INSSECF / OSECFEE / DSECFEE** – Security Fee / ISPS
- **HAZSGDS / OHAZGDS / DHAZGDS** – Hazardous Goods (if applicable)
- **OBOLFEE / DBOLFEE** – Bill of Lading Fee
- **ODOCFEE / DDOCFEE** – Documentation Fee
- **DDELORD** – Delivery Order
- **OADV MNF / DADV MNF** – AMS Fee / AMS Filing
- **OAGENCY / DAGENCY** – Customs Clearance
- **OEXPCFE / DEXPCFE** – Export/Import Customs Clearance Fee
- **OPRTCHS / DPRCHS** – Port Charges
- **OHNDMAN / DHNDMAN** – Handling
- **DCLNFEE** – Cleaning
- **DINSPFE** – Inspection Fee
- **DLOLOFE / OLOLOFE** – Lift On/Lift Off
- **OVMGMASS** – VGM (Verified Gross Mass)
- **CUSTDTY** – Customs Duty

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> What is included

- **Ocean freight** (including any transshipments),
- **Marine surcharges** (BAF, CAF, congestion, peak season, security, low sulfur, etc.),
- **THC** (Terminal Handling Charges) at origin and destination if the corresponding boxes are checked,
- **Local port charges** (documentation, BL, AMS, VGM, cleaning, inspection, customs, etc.) when they appear on the source invoices.

> What is excluded

- Any pre-carriage by road from the origin to the port of loading,
- Any post-carriage by road from the port of discharge to the final destination.

> Recommended usage

Select **PTP** when:

- The shipper/consignor manages the pre- and post-carriage themselves,
- You want to isolate the purely maritime cost to compare shipping lines or corridors,
- You want to analyze trends in ocean freight independently of road costs.

3.1.2 DOOR-TO-PORT (DTP): PRE-TRANSPORT + MARITIME

> Definition

The Door-to-Port service covers road pre-carriage from the origin (“door” address) to the port of loading, plus the PTP maritime leg.

> Additional charge codes (DTP)

In addition to all PTP charge codes, a DTP invoice contains:

- **OCARTFE** - Pick Up (Origin Haulage): road transport from the origin to the port of loading
- **OFUELSC** - Cartage Fuel Surcharge (Origin): fuel surcharge for pre-transport

> What is included

- Everything included in PTP,
- Pre-carriage road transport (tractor + chassis + container),
- Pre-transport fuel surcharge (OFUELSC),
- Any intermediate road or rail transshipments,
- Administrative costs related to pre-carriage (scheduling, documentation, tracking).

> What is excluded

- Any post-transportation road haulage from the port of unloading to the final destination.

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> Pre-transport modeling

When the user enters a “door” origin (address or city) in the interface:

1. The system identifies the closest or most relevant reference loading port for the requested corridor.



The identification of the nearest port is detailed in the Upply Tech article: [Rebours Baptiste, Finding the Most Relevant Port Using Weighted K-Nearest Neighbors](#)

2. Road pre-routing is modeled based on:

- average port access patterns (road distances, standard costs),
- actual observations of DTP invoices on comparable lanes.

3. The final DTP price is the sum of: PTP price + estimated pre-transportation cost.

> Recommended use

Choose **DTP** when:

- The freight forwarder/shipper handles pickup from the origin to the port of loading,
- The shipper/consignor handles receipt at the destination port themselves,
- You want to benchmark an “origin door → destination port” offer.

Limitations and precautions

- Pre-carriage is modeled using average scenarios; for very specific cases (non-standard locations, difficult access, restricted urban areas, multiple stops), the benchmark should be interpreted as an order of magnitude.

3.1.3 PORT-TO-DOOR (PTD): MARITIME + FINAL DELIVERY

> Definition

The Port-to-Door service covers the PTP maritime leg plus the road post-delivery from the port of unloading to the final destination (“door” address).

> Additional charge codes (PTD)

In addition to all PTP charge codes, a PTD invoice contains:

- **DCARTFE** - Delivery (Destination Haulage): road transport from the port of discharge to the destination
- **DFUELSC** - Cartage Fuel Surcharge (Destination): fuel surcharge for the onward transport

What is included

- Everything included in PTP,
- Post-carriage road transport (tractor + chassis + container),
- The post-carriage fuel surcharge (DFUELSC),
- Any intermediate road or rail transshipments,
- Administrative costs related to post-carriage (scheduling, documentation, tracking).

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> What is excluded

- Any pre-transportation by road from the origin to the loading port.

> Post-transport modeling

When the user enters a “door” destination (address or city) in the interface:

1. The system identifies the closest or most relevant unloading port for the requested corridor.



The identification of the nearest port is detailed in the Upply Tech article: Rebour Baptiste, [Finding the Most Relevant Port Using Weighted K-Nearest Neighbors](#)

2. Road transport is modeled based on:

- average access patterns from ports (road distances, standard costs),
- actual observations of PTD invoices on comparable lanes.

3. The final PTD price is the sum of: PTP price + estimated post-delivery cost.

> Recommended useé

Choose **PTD** when:

- The shipper/consignor manages the transport to the port of loading themselves,
- The freight forwarder/shipper handles final delivery from the port of discharge,
- You want to benchmark a “port of origin → door-to-door” offer.

> Limitations and precautions

Same as for DTP: post-transportation is modeled using average scenarios; for very specific cases, the benchmark should be interpreted as an order of magnitude.

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3.1.4 DOOR-TO-DOOR (DTD): PRE-TRANSPORT + MARITIME + POST-TRANSPORT

> Definition

The Door-to-Door service covers the entire transport process: pre-haul by road + PTP sea leg + post-haul by road. This is the “turnkey” solution where the freight forwarder/shipper handles the transport from start to finish.

> Charge codes included (DTD)

A DTD invoice contains all PTP + DTP + PTD charge codes:

- All PTP charge codes (freight, ocean surcharges, THC, local charges),
- The DTP charge codes (OCARTFE, OFUELSC),
- PTD charge codes (DCARTFE, DFUELSC).

> What is included

- Everything included in PTP, DTP, and PTD,
- Pre-carriage road transport (origin → port of loading),
- The ocean leg (port of loading → port of discharge),
- Post-carriage road transport (port of discharge → destination).

> DTD modeling

When the user enters a “door-to-door” origin and a “door-to-door” destination in the interface:

1. The system identifies the most relevant reference loading and unloading ports for the corridor.



The identification of the nearest port is detailed in the Upply Tech article: Rebour Baptiste, [Finding the Most Relevant Port Using Weighted K-Nearest Neighbors](#)

2. The final DTD price is the sum of: $\text{DTD Price} = \text{Pre-transportation Cost} + \text{PTP Price} + \text{Post-transportation Cost}$

> Recommended use

Choose **DTD** when:

- You want a comprehensive end-to-end quote,
- You want to compare “door-to-door” solutions among different freight forwarders/shippers,
- You want to benchmark the total cost of containerized transport, including all segments.

> Limitations and precautions

- The DTD price is the sum of three separately modeled blocks; interactions between segments (logistical optimizations, operator synergies) are not captured in detail.
- For highly precise analyses of complex operational scenarios (multi-stop, strict site constraints), it is recommended to break down the query into DTP + PTP + PTD and to cross-check each block against operational expertise.

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3.1.5 SUMMARY COMPARISON OF SERVICE TYPES

Service type	Scope	Additional code load	Recommended use
PTP	Port → Port (maritime only)	None (PTP codes only)	Isolate ocean freight costs, compare carriers/routes
DTP	Door → Port (pre-purchase + ocean freight)	OCARTFE, OFUELSC	Pickup included, delivery to port by the customer
PTD	Port → Door (sea freight + post-purchase)	DCARTFE, DFUELSC	Transport to port by customer, final delivery included
DTD	Door → Door (pre- + maritime + post)	OCARTFE, OFUELSC, DCARTFE, DFUELSC	Complete door-to-door service

3.2 LONG-TERM VS. SHORT-TERM: TWO COMPLEMENTARY VIEWS OF THE MARITIME MARKET

The Maritime Upply model offers **two distinct approaches** for benchmarking maritime prices, each addressing different needs: the **long-term** (based on actual invoices) and the **short-term** (based on rates published by shipping lines). This section clarifies the fundamental differences between these two views, their respective data sources, and the recommended use cases.

3.2.1 DEFINITIONS AND SCOPES

> Long terme (this document)

- **Data source:** actual shipping invoices (invoiced shipments) - from shippers (BCOs) and freight forwarders/NVOCCs.
- **Nature:** prices actually paid for shipments that were actually carried out.
- **Time horizon:** data collected continuously, with a history dating back to 2018.
- **Time granularity:** weekly (or monthly on low-volume lanes).
- **Geographic coverage:** 340 ports in 96 countries, 64 major corridors.
- **Methodology:** statistical modeling (machine learning algorithms) to estimate price distributions (P10/P25/P50/P75/P90) across all lanes, including those not directly observed, via geographic fallback mechanisms (port → zone → region).

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> Short term (see dedicated documentation)

- **Data source: FAK** (Freight Ali Kinds) - rates published directly by shipping companies (shipowners / VOCCs).
- **Nature:** catalog prices offered by shipowners, valid for < 3 months .
- **Time horizon:** forward-looking rates (future validity), collected in real time.
- **Time granularity:** daily (updated in real time with each carrier publication).
- **Geographic coverage:** 30+ shipping lines (including the global top 10), on major trade lanes.
- **Methodology:** direct aggregation of published rates; no geographical fallback to neighboring ports (strictly port-to-port catalog prices).

3.2.2 FUNDAMENTAL DIFFERENCES

Time Horizon	Long term	Short term
Nature of the price	Actual prices paid (invoices)	FAK listprice (published rates)
Source	Shippers (BCO) + Freight forwarders (NVOCC)	Shipping lines (VOCC)
Timeframe	Historical (since 2018)	Forecast (validity < 3 months)
Update frequency	Weekly (or monthly)	Daily (real-time)
Coverage	340 ports, 96 countries	30+ shipping lines, major corridors
Geographical coverage	Yes (port → zone → region)	No (strictly port-to-port pricing)
Confidence index	Yes (A→E, based on volume/ diversity/recency)	Yes (A→E, based on volume/ diversity/recency)
Primary use case	Historical analysis, benchmarking of actual invoices, contract negotiations, procurement management	Real-time rate monitoring, short-term forecasting, carrier comparison, spot tenders

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3.2.3 WHY TWO COMPLEMENTARY PERSPECTIVES?

> **The long-term perspective answers the question: “What is the actual market price?”**

- **Advantages:**

- Reflects the **prices actually paid** by shippers, including negotiations, discounts, and actual surcharges.
- Allows you to **benchmark your own invoices** against the actual market.
- Extensive historical data (since 2018) to analyze **underlying trends** and **market cycles**.
- Wide geographic coverage thanks to **fallback mechanisms** (useful for secondary lanes).

- **Limitations:**

- **Time lag:** invoices arrive with a certain delay (a few days to a few weeks); the benchmark for the current week may be less stable at the beginning of the week.
- **Less responsive** to very short-term movements (surcharge announcements, sudden congestion spikes).

> **The short term answers: “What is the list price offered by shipowners today?”**

- **Advantages:**

- **Maximum responsiveness:** updated daily, reflects shipowners’ announcements in real time.
- Useful for **anticipating** short-term price changes (3 months).
- Allows for **comparing shippers** against each other on a list price basis.

- **Limitations:**

- **List prices ≠ actual prices paid:** short-term FAK rates are often “list prices” that are subject to negotiation, discounts, and adjustments.
- **No geographical coverage:** if a port-to-port pair is not covered by the surveyed carriers, no price is available (unlike long-term rates, which can be extrapolated).
- **Less historical depth:** short-term FAK rates are forward-looking and have a short validity period; the historical data is less extensive than for long-term rates.

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3.2.4 RECOMMENDED USE CASES

Need	Recommended view
Benchmark my actual invoices against the market	Long-term
Analyze price trends over several years	Long term
Negotiate an annual or multi-year contract	Long term
Manage my transportation purchases (KPIs, dashboards)	Long term
Forecast price trends 1–3 months ahead	Short term
Compare carriers against each other (list prices)	Short term
Prepare a spot tender	Short term
Real-time rate monitoring (shipper announcements)	Short term

3.2.5 CAN LONG-TERM AND SHORT-TERM CONTRACTS BE COMPARED?

Yes, but with caution.

The two perspectives are complementary but not directly comparable:

- > Long-term rates reflect actual prices paid (including negotiations, discounts, actual surcharges, and a mix of contributors).
- > The short term reflects list prices (before negotiation, published by shipowners).

In practice:

- > In a tight market (strong demand, limited capacity), list prices may be close to or higher than actual prices paid (little room for negotiation).
- > In a relaxed market (overcapacity, low demand), the prices actually paid may be significantly lower than list prices (negotiations, discounts).

Recommendation: Use both views in parallel to get a complete picture:

- > Long-term for invoice benchmarking and historical analysis,
- > Short-term for price monitoring and short-term forecasting.

3.3 HIERARCHICAL (MULTILEVEL) MODELING: FROM PORT TO CONTINENT

The Upply long-term FCL Maritime model is based on a hierarchical approach (multilevel modeling) that allows for robust price estimation even when data is scarce or absent for a specific port-to-port pair. This section explains the principle, the geographic levels, and the impact on the confidence index and the accuracy of estimates.

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3.3.1 GENERAL PRINCIPLE: “MORE DATA = MORE TARGETED PREDICTIONS”

The central idea behind hierarchical modeling is simple: the more data we have on a specific lane, the more accurate and targeted our estimate is for that lane. Conversely, when data is scarce, we rely on more aggregated geographic levels to stabilize the estimate.

Concrete example:

- > **Shanghai (CNSHA) → Le Havre (FRLEH):** - very dense corridor, numerous weekly observations, **port-to-port** estimation (maximum accuracy).
- > **Shanghai (CNSHA) → Mombasa (KEMBA):** less dense corridor, few direct observations for this exact pair, estimate **at the Shanghai → East Africa level** (lower precision but robust estimate).

This approach ensures that:

- > We never publish “random” prices due to a lack of data,
- > We do not “leave blank” potentially relevant lanes,
- > We clearly indicate the level of estimation accuracy via the confidence index (A→E).

3.3.2 GEOGRAPHIC HIERARCHY: 4 LEVELS

The Upply maritime model structures geography into **4 hierarchical levels**:

Level	Description	Example
1. Port	Individual seaport (UN/LOCODE)	CNSHA (Shanghai), FRLEH (Le Havre), KEMBA (Mombasa)
2. Port area	Group of neighboring ports / same basin	"North China" (CNSHA, CNTAO, CNTXG...), "ARA ports" (NLRTM, BEANR, DEHAM...)
3. Country	Port country	China (CN), France (FR), Kenya (KE)
4. Region / Continent	Broad geographic region	"Asia", "Europe", "Africa", "North America", "South America", "Oceania"

Each port is linked to a zone, each zone to a country, and each country to a region. This hierarchy is fixed and versioned in the Upply geographic repository.

3.3.3 HIERARCHICAL FALLBACK MECHANISM

When the model estimates a price for a given lane, it proceeds in successive steps:

> Step 1: Port-to-port estimation

The model first attempts to estimate the price at the finest level: port of origin → port of destination.

- Condition: sufficient volume of observations for this exact (or very similar) pair during the reference period.
- Result: very accurate estimate, confidence index generally A or B.
- Example: CNSHA → FRLEH (Shanghai → Le Havre): ultra-dense corridor, direct estimation at the port-to-port level.

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> Step 2: Aggregation to the zone–zone level

If the volume of port-to-port observations is insufficient, the model aggregates the data at the port area → port area level.

- Condition: insufficient volume at the port-to-port level, but sufficient at the zone-to-zone level.
- Result: less accurate estimate than at the port-to-port level, but robust; confidence index generally B or C.
- Example: CNSHA → KEMBA (Shanghai → Mombasa): little direct data on this pair, but sufficient “North China → East Africa” data to stabilize the estimate.

> Step 3: Fallback to country–country level

If the volume of zone-zone observations is still insufficient, the model aggregates at the country–country level.

- Condition: insufficient volume at the zone-zone level, but sufficient at the country–country level.
- Result: indicative estimate, confidence index generally C or D.
- Example: Secondary port in China → Secondary port in Africa: estimate based on “China → Africa”.

> Step 4: Fallback to the region–to–region level (continent–to–continent)

As a last resort, if the volume of country–country observations is still insufficient, the model aggregates at the region–region level.

- Condition: insufficient volume at the country–country level, but sufficient at the region–region level.
- Result: highly indicative estimate, confidence index generally D or E.
- Example: Very minor port in Asia → Very minor port in Africa: estimate based on “Asia → Africa”.

3.3.4 CONSISTENCY AND PROXIMITY CHECKS

Hierarchical fallback is not automatic: the model applies consistency checks to avoid absurd pairings:

- > **Geographical proximity:** ports in the same zone must be **geographically** close (same sea basin, same coastal region).
- > **Traffic patterns:** ports in the same zone must share **similar traffic characteristics** (hubs vs. secondary ports, major trade corridors).
- > **Flow consistency:** the model verifies that the flows observed at neighboring ports are **comparable** (no mixing of highly asymmetric headhaul and backhaul flows, for example).

If these checks fail, the model **does not publish an estimate** rather than forcing an inconsistent alignment.

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3.3.5 IMPACT ON THE CONFIDENCE INDEX

The confidence index (A→E) directly reflects the **geographic level actually used** for the estimate:

Index	Typical geographic level	Interpretation
A	Port-to-port (very dense data)	Very high confidence; very accurate estimate
B	Port-port (dense data) or Zone-zone (very dense data)	High confidence; accurate estimate
C	Zone-to-zone (moderate data) or Country-to-country (dense data)	Moderate confidence; robust but less accurate estimate
D	Country-country (sparse data) or Region-region (average data)	Low confidence; indicative estimate
E	Region-region (limited data)	Very low confidence; order of magnitude only

Recommended reading:

- > **A/ B:** solid basis for negotiation, simulation, indexing, and procurement management.
- > **C:** Actionable information, but should be further cross-checked against internal prices and operational expertise.
- > **D / E:** Order of magnitude, useful for framing a discussion, but to be used with caution ; do not use for critical operational decisions without further validation.

3.3.6 DETAILED EXAMPLE: SHANGHAI → MOMBASA

Let's take the example of a CNSHA (Shanghai) → KEMBA (Mombasa) request for a 40GP container, PTP, non-hazardous, THC included.

> Scenario 1: Dense data at the port-to-port level

- Volume of observations: 50+ invoices in the current week for the exact CNSHA → KEMBA pair.
- Geographic level used: port-to-port (CNSHA → KEMBA).
- Confidence index: A or B.
- Interpretation: Very accurate estimate, reflecting actual transactions on this exact pair.

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> Scenario 2: Sparse data at the port-to-port level, fallback to zone-to-zone

- Number of observations: only 5 invoices in the current week for CNSHA → KEMBA.
- Fallback: the model aggregates data at the “North China” → “East Africa” level (including CNSHA, CNTAO, CNTXG to KEMBA, TZDAR, MZMPM...).
- Aggregated volume: 100+ invoices in the current week for “North China” → “East Africa”.
- Geographic level used: zone-zone.
- Confidence index: B or C.
- Interpretation: robust estimate, but less precise than at the port-to-port level; reflects transactions at ports near Shanghai and Mombasa.

> Scenario 3: Very low data, country-to-country decline

- Number of observations: only 2 invoices in the current week for “North China” → “East Africa”.
- Aggregation: the model aggregates at the “China” → “Kenya” level.
- Aggregated volume: 50 invoices for the current week for “China” → “Kenya”.
- Geographic level used: country-country.
- Confidence index: C or D.
- Interpretation: indicative estimate, reflecting transactions between China and Kenya without detailed port-level breakdown.

> Scenario 4: Extremely low data, region-to-region decline

- Number of observations: only 1 invoice for the current week for “China” → “Kenya”.
- Aggregation: the model aggregates at the “Asia” → “Africa” level.
- Aggregated volume: 500+ invoices in the current week for “Asia” → “Africa”.
- Geographic level used: region-region.
- Confidence index: D or E.
- Interpretation: order of magnitude only, reflecting transactions between Asia and Africa without distinguishing between countries or ports.

3.3.7 ADVANTAGES OF THE HIERARCHICAL APPROACH

1. **Maximum coverage:** permet de fournir des estimations sur des lanes peu denses ou rares, 1. allows for estimates on low-density or rare lanes, without “leaving blank” potentially relevant corridors.
2. **Statistical robustness:** by aggregating data at broader levels, we avoid “noisy” estimates based on 1 or 2 isolated observations.
3. **Transparency:** the confidence index (A→E) clearly indicates the level of precision of the estimate, allowing the user to contextualize the reading.
4. **Automatic reintegration:** as soon as a lane becomes sufficiently dense at the port-to-port level, the model automatically reverts to a fine-grained estimate, without manual intervention.

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3.3.8 LIMITATIONS AND BEST PRACTICES

> Limitations

- On very low-density lanes (**D** or **E** index), the estimate reflects an **aggregated market** and may not capture the specific characteristics of a particular port or corridor.
- Significant **import/export asymmetries** may be “smoothed out” when aggregated.

> Best Practices

- **Always check the confidence index** before using a price in an operational analysis or negotiation.
- For **D** or **E** lanes, **cross-reference** the Uppy benchmark with other sources (internal expertise, internal prices, shipowner quotes) before making a critical decision.
- **Contribute your data:** the more you share your invoices on a lane, the better the model can estimate at the port-to-port level and improve the confidence index for all users.

3.4 TERMINAL HANDLING CHARGES (THC): REFERENCE, CONFIGURATION, AND IMPACT

Terminal Handling Charges (THC) are the only maritime items that can be explicitly configured in the benchmark interface. This section details which charges are involved, how they are accounted for in the model, and how to interpret them.

3.4.1 DEFINITION AND SCOPE OF THC

THC (Terminal Handling Charges) correspond to the costs of handling and managing containers within the port terminal. They cover:

- > **Loading/unloading of the vessel** (container lift on/lift off),
- > **Movements within the terminal** (positioning, temporary storage, internal transfers),
- > **Gate-in/gate-out access** (container entry/exit from the terminal),
- > **Sometimes** a portion of **chassis fees / short-term storage** (depending on the port and local practices).

THC are billed **separately** from the base ocean freight (FREIGHT) and appear on source invoices under the following **charge codes**:

- > **OTHCHGE** - Terminal Handling Charges (Origin)
- > **DTHCHGE** - Terminal Handling Charges (Destination)

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3.4.2 UPPLY THC REFERENCE DATABASE

Upply maintains a **THC reference database by port**, separate for **origin** and **destination**. This database is built from:

- > Actual data from source invoices (charge codes OTHCHGE / DTHCHGE),
- > Public data (published terminal rates, industry surveys),
- > Partner contributions (BCO, freight forwarders sharing their THC rates).

> Characteristics of the database

- One THC rate per port: each port has an origin THC value and a destination THC value.
- Generally identical for 20' and 40' containers: in most ports, the THC is the same for a 20-foot container and a 40-foot container (working assumption; to be confirmed port by port if necessary).
- Updated at least once a year: the reference database is revised annually to reflect terminal rate changes.
- Versioning: each version of the reference document is dated and tracked to ensure the reproducibility of calculations.

> Example of a THC reference (excerpt)

Port	UN/LOCODE	THC Origin (USD)	Destination THC (USD)
Shanghai	CNSHA	150	120
Le Havre	FRLEH	180	200
Rotterdam	NLRTM	170	190
Los Angeles	USLAX	250	280
Mombasa	KEMBA	200	220

Note: These values are indicative and may vary depending on the version of the standard.

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3.4.3 CALCULATING THE PRICE WITH/WITHOUT THC

The model proceeds in two steps:

1. Estimation of the “THC included” price (default):

- The model estimates the price distribution (P10/P25/P50/P75/P90) based on the source invoices, which generally include THC.

2. Adjustment based on the status of the checkboxes:

- If a THC checkbox is **unchecked**, the model **subtracts** the corresponding THC value (from the reference database) from the estimated price.
- Formula: Price excluding THC = Price including THC – Reference THC value

> Numerical example:

- Route: CNSHA (Shanghai) → FRLEH (Le Havre), 40GP, PTP, non-hazardous.
- Estimated median price (THC included): **\$2,500**.
- Origin THC (CNSHA): **\$150** (benchmark).
- Destination THC (FRLEH): **\$200** (benchmark).

Configuration	Calculation	Displayed price
THC O + THC D included	\$2,500 (no adjustment)	\$2,500
THC O excluded, THC D included	\$2,500 - \$150 = \$2,350	\$2,350
THC O included, THC D excluded	2,500 - 200 = 2,300 USD	\$2,300
THC O + THC D excluded	2,500 - 150 - 200 = \$2,150	\$2,150

3.4.4 VARIABILITY OF THC BY PORT

THC can vary significantly from one port to another, depending on:

- > **Terminal efficiency** (automation, productivity),
- > **Congestion levels** (congested ports = higher THC),
- > **Local regulations** (port taxes, security fees),
- > **Geographic location** (major hubs vs. secondary ports),
- > **Competition between terminals** (ports with multiple competing terminals).

Typical range (in USD per container):

- > **Asie (hubs majeurs):** \$100–200
- > **Europe du Nord (ARA ports):** \$150–250
- > **Europe du Sud (Méditerranée):** \$100–200
- > **Amérique du Nord (côte Ouest):** \$200–350
- > **Amérique du Nord (côte Est):** \$150–300
- > **Afrique:** \$150–300
- > **Amérique latine:** \$150–300

Note: These ranges are approximate and may change over time.

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3.4.5 LIMITATIONS AND PRECAUTIONS

Actual THC values may vary

The THC values in the Uply database are standardized averages derived from multiple sources. Actual THC charges may vary depending on:

- > The specific terminal used (some ports have multiple terminals with different rates),
- > The type of contract (high-volume shippers may negotiate reduced THC rates),
- > Periods of congestion (some terminals apply temporary surcharges),
- > Additional services (inspection, cleaning, VGM, etc.) which may or may not be included in the THC..

THCs are not always the same for 20' and 40' containers

The current working assumption is that THCs are generally the same for 20' and 40' containers in most ports. However, some ports apply different rates. If you notice significant discrepancies, we recommend contributing your data to enrich the database.

THCs do not cover all terminal fees

THC covers basic terminal handling charges, but does not necessarily cover:

- > Chassis fees when billed separately,
- > Extended storage fees (storage, demurrage) beyond the free time,
- > Lift-on/lift-off fees for oversized containers or those requiring special handling,
- > Inspection, cleaning, and VGM fees when billed separately.

These items remain “within the spread” P10–P90 and cannot be configured individually.

3.4.6 BEST PRACTICES

- > Always include THC for a consistent “all-in” view, or always exclude them for a consistent “freight only” view; avoid mixing the two approaches in the same analysis.
- > Compare ports on an “excluding THC” basis to isolate the effect of ocean freight, then add THC separately to reconstruct the total cost.
- > Contribute your data: if you have invoices that precisely detail THC by port, share them with Uply to enrich the database and improve accuracy for all users.

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4.1 A TRANSPARENT MEASURE OF RELIABILITY

The Uply Confidence Index aims to indicate, for each price estimate, the associated level of statistical reliability.

It reflects the strength of the data available at the time of calculation and complements the price reading by providing a clear indicator of its robustness.

Each result displayed on the platform is accompanied by a rating ranging from A (very reliable) to E (not very reliable).

This simple scale helps users understand the quality of the data underlying a benchmark.

4.2 THE FOUNDATIONS OF THE INDEX

The index is based on three key principles:

- > **The volume of observations:** the more data collected for a link, the higher the confidence in the estimate.
- > **The diversity of participants:** the presence of data from multiple companies enhances the index's representativeness of the market.
- > **Temporal regularity:** continuous and recent observations ensure greater stability and reflect the current state of the market.

These dimensions are analyzed together to produce an indicator that reflects both the historical depth and the recency of the data.

4.3 THE GEOGRAPHIC COMPONENT

The geographic dimension forms the main basis for calculating the confidence index for maritime transport.

It assesses the density of available information on connections between ports and port areas.

For each origin-destination pair:

- > the observed volumes are analyzed at two levels of granularity: ports and maritime regions;
- > a weighting factor gives greater importance to the port level, which is more precise than the regional level;
- > within each level, complete corridors (port ↔ port, region ↔ region) are prioritized over single origins or destinations, as they better represent actual flows.

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The index also takes into account the diversity of shipping lines operating on each corridor, as well as the consistency of volumes over time:

- > a corridor whose data comes from many distinct shipping companies receives a higher score,
- > a corridor where volumes have remained stable over the last few quarters is valued, while one-off or irregular activity is penalized.

This approach highlights, within the confidence score, the data volumes actually observed per corridor, weighting their contribution according to the stability, diversity, and density of the flows.

4.4 OTHER FACTORS TAKEN INTO ACCOUNT

Beyond geography, several characteristics of the transport adjust the confidence index:

- > **Type of equipment:** certain segments, such as the standard 40' container, are more representative than others that are more specialized (20', 45', reefer, open top, flat rack, etc.).
- > **The presence of dangerous goods (IMO):** these flows are rarer and may exhibit greater variability.
- > **Contract type:** the index distinguishes between data from long-term contracts and data from spot rates (FAK) to account for the diversity of purchasing practices.
- > **Surcharges and ancillary fees:** the completeness of rate components (BAF, THC, port surcharges, war risk) influences the comparability of observations and thus confidence in the estimate.

Each of these dimensions helps refine the confidence measure, ensuring that the index accurately reflects the structure and representativeness of the data used.

4.5 REGULAR UPDATES

The index is recalculated weekly to continuously reflect the latest collected data.

It evolves at the same pace as the Upply database, which is updated daily with new data streams.

Thus, the confidence score displayed on the platform always corresponds to the actual state of the data at the time of consultation.

4.6 INTERPRETATION OF THE INDEX

- A Extensive, recent, and varied data:** robust and highly representative estimates.
- B**
- C Average data:** a reliable indicator but should be interpreted with caution.
- D Sparse or irregular data:** indicative information, to be considered as a trend.
- E**

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The benchmark describes a credible market distribution but does not constitute a firm quote. For specialized equipment (reefer, open top, flat rack), accuracy is lower due to smaller observation volumes; specifying the equipment type, corridor, and shipping line simultaneously improves comparability. The absence of explicit parameters for certain rate components (port surcharges, war risk, congestion, peak season) can lead to a “mixed” sample and contribute to the P10–P90 spread. Finally, quality depends on data density: the A→E index must be consulted systematically, keeping in mind that retroactive revisions may occur when new data is incorporated (backfill).

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Why isn't my "min" the lowest observed value?

We do not display the lowest or highest "raw" prices seen in our data. Instead, we show a "min" and a "max" that have been "cleaned": the min corresponds to the 10th percentile (P10) and the max to the 90th percentile (P90). In other words, P10 is the price below which only 10% of observations fall, and P90 is the price above which only 10% of observations fall.

This approach excludes very rare or atypical cases that can distort the market reading (highly discounted container repositioning, "distressed cargo" emergencies, exceptional surcharges due to extreme congestion, terminal closures, strikes, data entry errors, or currency errors). It makes comparisons between corridors more stable and representative of the "core" of the market.

Example: if observed prices for a 40GP Shanghai→Le Havre shipment range from \$800 to \$4,500, but 80% of shipments are priced between \$1,400 and \$3,200, we will display min = \$1,400 (P10) and max = \$3,200 (P90). There may therefore be isolated invoices below or above this range, but they do not reflect the central trend.

What does moving from B to C (in the confidence index) mean?

Moving from B to C means that, for the query and week in question, statistical reliability has shifted from "good" to "average." Specifically, at least one of the three components of the score has weakened: the volume of available observations on the corridor, the diversity of contributors (shippers, freight forwarders, NVOCCs), or the regularity/recency of the data.

In maritime shipping, this may also reflect a shift in the geographical level of the estimate: a lane rated B may rely on dense port-to-port data, while a downgrade to C may indicate a shift to a zone-to-zone or country-to-country level. The C-rated price remains usable, but it should be interpreted with a bit more caution than the B-rated one—particularly by comparing it to your internal prices and operational expertise.

How to correctly enter a port? (example: ports with the same name or ambiguous names)

The maritime model identifies each port via its official UN/LOCODE (e.g., CNSHA for Shanghai, FRLEH for Le Havre, NLRTM for Rotterdam). Always specify the country in the dedicated field (Origin/Destination Country). This resolves nearly all ambiguities, particularly for ports with similar names or local spellings.

If the search still fails, try entering the UN/LOCODE directly in the port field, or use the port city's name along with the country code. Avoid non-standard abbreviations or informal names.

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Best practices at a glance:

- > use the UN/LOCODE whenever possible (e.g., “DEHAM” for Hamburg);
- > always enter the country in the country column;
- > if the search fails, use the city name + country to resolve ambiguity;
- > be careful with multi-terminal ports (e.g., Shanghai = Yangshan + Waigaoqiao): the model aggregates at the UN/LOCODE port level, not the terminal level.

Why doesn't the container type seem to affect the price?

There are two common reasons.

1. You are comparing 40GP and 40HC containers: on most routes, the price difference between a standard 40-foot container and a 40-foot High Cube container is small or even nonexistent, as carriers often price them identically in the long-term market.
2. You are on a sparsely covered lane (C/D/E index): when the density of observations per container type is too low, the model may rely on a broader sample (hierarchical fallback to zone or region) that combines several similar container types, partially neutralizing the effect. However, the difference between a dry (40GP) and a reefer (40RF/40RH) is generally well captured, as these segments are treated separately.

Point of attention: the majority of volumes in the long-term model are in 40' containers (40GP/40HC/40RF/40RH). The 20' benchmarks may be less dense and have a lower confidence index, especially on certain secondary lanes.

How should a transshipment lane (or indirect corridor) be interpreted?

Our prices reflect actual invoices and therefore a mix of practices: some routes are direct services, while others pass through one or more transshipment hubs (e.g., Tangier Med, Colombo, Singapore). The model does not currently account for transshipment, which means the sample mixes observations with and without transshipment.

How to interpret the distribution:

- > P10 is close to a “freight + minimal surcharges” cost, often associated with direct services or competitive configurations;
- > P50 (median) represents the most common case observed this week;
- > P90 often corresponds to more “all-in” configurations (multiple surcharges, longer transit times, local charges included).

Example: on an Asia→Europe corridor, it is normal for the P10–P90 range to be wider than on a short intra-Asia corridor: it covers both competitive direct services and routings via hubs with additional surcharges. To align with your practice, position yourself relative to the median and the P10–P90 range.

#FAQ

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FAQ

Does the displayed price include THC (Terminal Handling Charges)?

Short answer: by default, yes. Unlike road transport, where tolls cannot be configured, the maritime section has two explicit checkboxes in the interface: “Origin THC included” and “Destination THC included,” both of which are checked by default.

When a box is checked, the benchmark includes the corresponding THC value from the Upply database (one rate per port, updated at least once a year). When a box is unchecked, the model removes the THC component from the total price.

Example: on CNSHA→FRLEH in a 40GP container, if the estimated median price is \$2,500 (THC included), with a THC Origin Shanghai of \$150 and a THC Destination Le Havre of \$200:

- > THC O + THC D included → \$2,500;
- > THC O excluded, THC D included → \$2,350;
- > OTH + DTH excluded → \$2,150.

However, other maritime surcharges (BAF, CAF, congestion, peak season, security, low sulfur, etc.) cannot be configured individually: they are “within the P10–P90 spread.” The lower end of the range (P10) reflects configurations close to “freight + minimal surcharges,” while the upper end (P90) reflects more “all-in” configurations.

Best practice: Always check THC for a consistent “all-in” view, or always uncheck it to isolate freight—but avoid mixing the two approaches in the same analysis.

Disclaimer

The prices published by Upply are aggregated statistical estimates intended for benchmarking. They do not constitute a firm quote or a commercial offer. The inclusion of certain cost components may vary when they are not explicitly configured. The confidence index should be used to assess the quality of each result; any interpretation outside the scope described in this document should be made with caution.

Upply, plateforme technologique qui révolutionne la gestion du transport de marchandises.

Sa mission: simplifier l'analyse, la prise de décision et l'exécution des opérations de fret grâce à la data et à la tech. Forte d'un ADN technologique unique et de plus d'1 milliard de données, Upply conçoit des solutions au service de l'efficacité opérationnelle des chargeurs, transporteurs et commissionnaires de transport. Analyse des prix, sourcing, suivi, gestion administrative, évaluation CO₂: sa plateforme booste la performance et la durabilité de la supply chain.

Basée à Paris, l'entreprise réunit aujourd'hui plus de 50 collaborateurs engagés à rendre le transport de fret plus accessible, transparent et efficace pour des milliers d'acteurs du secteur.

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