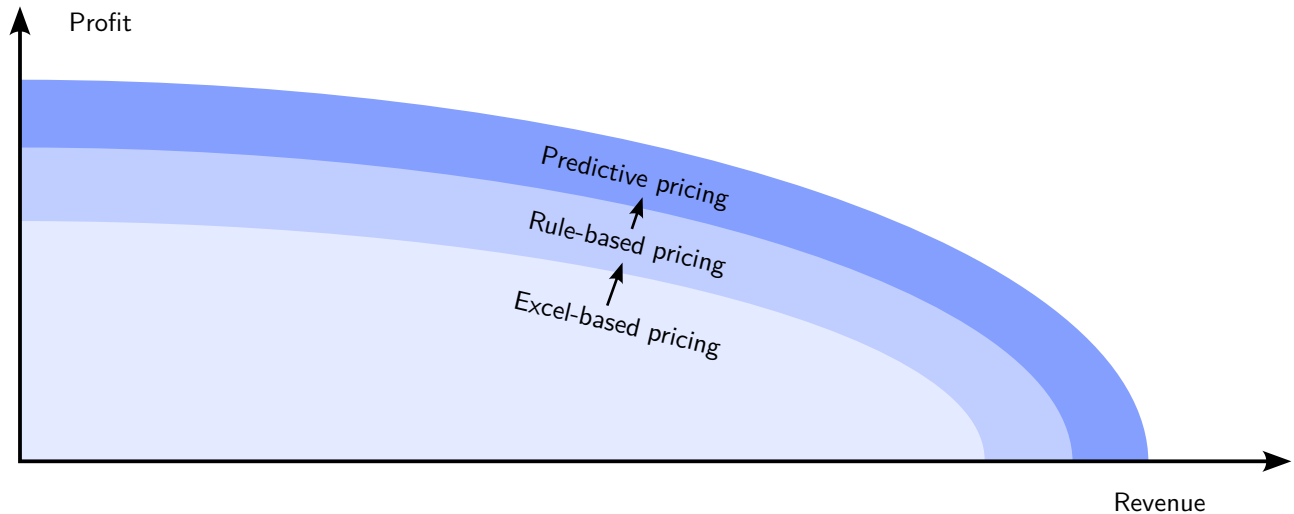


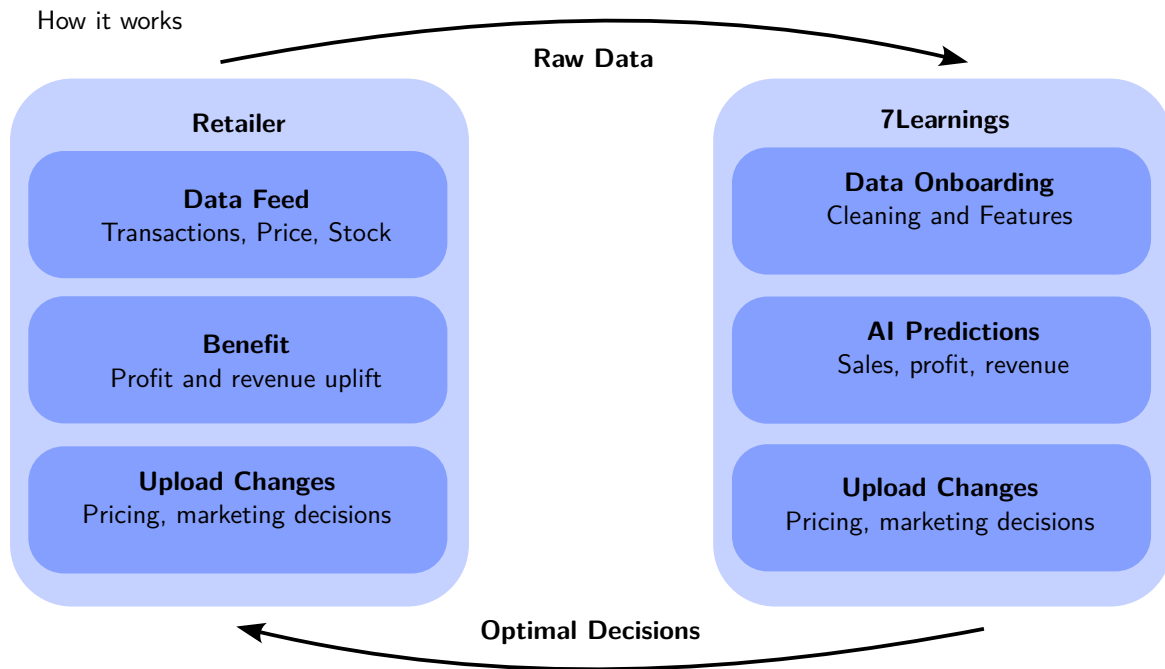
7Learnings Documentation

1 Introduction

Thank you for your interest in the most advanced optimization service for retailers. This document introduces you to our predictive pricing service and provides you with initial information on data transport and data definitions:



Before we get to the details of data format and API, we show how we optimize your pricing and marketing decisions:



More specifically, we provide the Input Data Specification (description of the data we consume, next section 3) and the Output Data Specification (description of the data we produce, section 5).

2 Data Integration APIs

The following table lists which input APIs we support:

Table 1: Supported Data Integration APIs

| No. | Source | Tables | Format | Recommended |
|-----|----------------------|---|---------------------|-------------|
| 1 | BigQuery | All | database table | +++ |
| 2 | Snowflake | All | database table | +++ |
| 3 | Microsoft Fabric | All | database table | +++ |
| 4 | Google Cloud Storage | All | CSV/parquet files | ++ |
| 5 | Amazon S3 Storage | All | CSV/parquet files | + |
| 6 | Azure Blob Storage | All | CSV/parquet files | + |
| 7 | SFTP | All | CSV/parquet files | + |
| 8 | HTTPS | All | CSV/parquet files | + |
| 9 | FTPS | All | CSV/parquet files | + |
| 10 | Amazon | Transactions | Amazon API | ++ |
| 11 | Google Analytics | Traffic | Google API | +++ |
| 12 | Amazon Ads | Traffic | Amazon Ads API | +++ |
| 13 | Google Shopping | Traffic | Google Shopping API | +++ |
| 14 | Tradebyte | Prices, Stock, Attributes | Tradebyte API | +++ |
| 15 | Shopify | Prices, Stock, Attributes, Transactions | Shopify API | +++ |

3 Input Data Specification

Our input data comprises of required tables that are needed for our service to run and optional additional tables. The optional tables can also be added to the project at a later stage.

Table 2: Input Data Tables

| Table name | Short description | Transfer |
|--------------------------|---|-----------------------|
| Channels | Current list of sales channels | initial |
| Purchase Prices | Current purchase prices of your products | automated |
| Transactions | Sales data of products with revenues, profits, and costs | initial and automated |
| Prices | Current price information | initial and automated |
| Product Attributes | Current and historical product information | automated |
| Price Points | Lists of price points | initial and automated |
| Stock | Current stock information | automated |
| Promotions | Promotion activity | initial and automated |
| Traffic | Organic and paid activity information | initial and automated |
| Competitor Prices | Current competitor prices | automated |
| Bundles | Table containing the mapping of bundles and its composition. | automated |
| Forecast Commission Rate | Current list of commission rates for products, based on their price ranges. | automated |

Info: Tables colored **blue** are **required**. Tables colored **gray** are **optional**.

3.1 Channels

Table 3: Channels: Contains current list of the sales channels for which you would like to optimize prices. To reduce channel complexity and cost, you can send us virtual channels from which optimization results get replicated into several actual channels (e.g., the prices for the market EU will be replicated into the markets DE, FR, IT, and ES).

| Column | Possible Data Types | Description |
|----------------------------------|---------------------|---|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| conv_fkt_to_main_currency | decimal, integer | Factor the foreign currency has to be multiplied with to get to values in the main currency (e.g. 1.2 to get from GBP to EUR) |
| channel_currency | text | Three letter code for local channel specific currency according to ISO 4217 (e.g. EUR for Euro currency) |
| upload_market | text | The country code according to ISO 3166 format (e.g., DE for Germany). This is used to differentiate the market ISO code from any additional sub-channel definitions. |
| upload_currency | text | The currency code according to ISO 4217 format (e.g., EUR for Euro). This is used to differentiate the channel currency from any additional sub-channel definitions. |
| upload_channel | text | The sales domain where prices will be uploaded (e.g., amazon.de for Amazon sales channel). This is used to distinguish the primary channel in the optimization process from any additional sub-channel where prices are uploaded (e.g., zafr for Zalando France if optimized prices should be sent via an API call to tradebyte). |
| upload_conv_fkt_to_main_currency | decimal, integer | The factor by which the foreign currency has to be multiplied to convert to values in the main currency (e.g., 1.2 to convert from GBP to EUR). This is used to differentiate conversion factors from any additional sub-channel definitions. |

Info: Columns colored **blue** are **required**, **gray** are **optional**, and **red** are **recommended**.

3.2 Purchase Prices

Table 4: Purchase Prices: Contains the current purchase prices of the products you would like to optimize. If the same product has a different purchase price depending on the market or channel, then please provide the corresponding markets and channels as well. Monetary values such as purchase prices should be sent as net values in the main accounting currency, while other prices should be sent as gross values in the local market currency.

| Column | Possible Data Types | Description |
|----------------|---------------------|--|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| purchase_price | decimal, integer | Net landed cost of a single unit sold, including freight cost from the production facility to the warehouse, customs duties, tariffs, insurance, handling fees, and any other import-related expenses in main currency (i.e., COGS or cost of goods sold). |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.3 Transactions

Table 5: Transactions: Contains your sales data, including revenues, profits, and costs for the past two to three years. Our system either handles daily updated snapshots of the full history. Or our system receives the full history once and then daily snapshots of new transactions of the last three months or if previous transactions were changed. Monetary values such as purchase costs, outbound costs or voucher spendings should be sent as net values in the main accounting currency.

| Column | Possible Data Types | Description |
|-----------------------------|---------------------|---|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| sales_before_returns | integer | Number of non-cancelled items ordered (e.g. 2 if two items were ordered) |
| revenue | decimal, integer | Net revenue in main currency after returns, vouchers, and discounts |
| profit | decimal, integer | Net profit in main currency after all delivered costs |
| purchase_cost | decimal, integer | The sum of net landed cost of all products sold in the transaction, including freight cost from the production facility to the warehouse, customs duties, tariffs, insurance, handling fees, and any other import-related expenses in main currency (i.e., COGS or cost of goods sold). |
| conv_fkt_to_main_currency | decimal, integer | Factor the foreign currency has to be multiplied with to get to values in the main currency (e.g. 1.2 to get from GBP to EUR) |
| tax_rate | decimal, integer | Rate of sales tax used to calculate net revenue from gross price. This value must be provided as a decimal (e.g. 0.19 for 19% for most products in Germany) |
| voucher_spending | decimal, integer | Sum of net voucher spending after returns in main currency (e.g. $5/(1+0.19)=4.2$ EUR voucher for newsletter). |
| order_id | text, integer | Unique identifier for the order to which the product belongs |
| returns | integer, decimal | Number of items returned |
| time | time stamp | Date and time when the items were ordered as an ISO 8601 UTC timestamp (e.g. 2024-02-06 22:54:51+00:00) |
| red_price_discount_spending | decimal, integer | The total net value of extra discounts (e.g., customer-specific rebates) in the main currency, other than voucher spending. |
| basket_position | integer, decimal | Rank that SKU has in the basket |
| inbound_cost | decimal, integer | Logistic and discard costs in main currency linked to handling these returns. |
| outbound_cost | decimal, integer | Costs in main currency of sending these products from the warehouse to the customer. You can add logistic cost, shipment cost, call center cost, and payment cost. And you can subtract shipping revenue paid by the customer. |
| marketing_cost | decimal, integer | Net marketing costs (SEA, price comparison commission, other advertising) linked to these sales after returns |
| commission_cost | decimal, integer | Net commission costs in main currency paid for selling these products on a third party platform (e.g. Zalando, or Amazon) |
| other_cost | decimal, integer | Other costs in main currency you consider in your profit calculation for these sales |

Continued on next page

Table 5: Transactions: Contains your sales data, including revenues, profits, and costs for the past two to three years. Our system either handles daily updated snapshots of the full history. Or our system receives the full history once and then daily snapshots of new transactions of the last three months or if previous transactions were changed. Monetary values such as purchase costs, outbound costs or voucher spendings should be sent as net values in the main accounting currency. (Continued)

| Column | Possible Data Types | Description |
|-------------------------|---------------------|---|
| upload_market | text | The country code according to ISO 3166 format (e.g., DE for Germany). This is used to differentiate the market ISO code from any additional sub-channel definitions. |
| upload_channel | text | The sales domain where prices will be uploaded (e.g., amazon.de for Amazon sales channel). This is used to distinguish the primary channel in the optimization process from any additional sub-channel where prices are uploaded (e.g., zafr for Zalando France if optimized prices should be sent via an API call to tradebyte). |
| customer_lifetime_value | decimal, integer | Incremental future profit increase driven by the transaction in main currency. Is typically higher for new customers and customers with higher repurchase rates. |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.4 Prices

Table 6: Prices: Contains a snapshot of current prices of all products. Generally, prices should be sent as gross values in the local market currency. It is possible to process a full price history initially.

| Column | Possible Data Types | Description |
|-------------------|---------------------|--|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| gross_black_price | decimal, integer | Gross price before vouchers in local currency including sales taxes |
| gross_red_price | decimal, integer | Gross price after discounts and before vouchers in local currency including sales taxes |
| gross_recom_price | decimal, integer | Recommended Retail Price (RRP) provided by the supplier of the product in local currency including sales taxes |
| active_since | time stamp | Time at which the values in this row changed as an ISO 8601 UTC timestamp (e.g. 2022-04-24T22:54:51Z) |
| tax_rate | decimal | Rate of sales tax used to calculate net revenue from gross price. This value must be provided as a decimal (e.g. 0.19 for 19% for most products in Germany) |
| is_active | truth value | Indicator that determines if the product is available for purchase in the specified period, regardless of stock levels or other factors you are already sending. |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.5 Product Attributes

Table 7: Product Attributes: Contains product information. Besides current products, it should also include products you do not sell anymore (i.e., products in the transaction history). The optional and recommended columns for this table are exemplary. Please send attributes in your naming convention.

| Column | Possible Data Types | Description |
|--------------------|------------------------|---|
| product_id | text | Unique identifier of the product or SKU |
| product_group_id | text | Marks products belonging together (e.g. across sizes) - can be used for prices to move in the same direction |
| product_category_1 | text | Top-level category the product belongs to (ideally less than 20 distinct category values) |
| product_category_2 | text | Product sub-category the products belongs to |
| product_category_3 | text | Product sub-sub-category the products belongs to |
| name | text | Name of the product |
| producer | text, integer | Manufacturer of the product |
| brand | text, integer | Name of the brand of the product |
| product_url | text | URL where the product can be found |
| ean | text | 13 digit International Article Number (also known as European Article Number) |
| color | text | Main color of the product |
| size | decimal, integer, text | Size of the product |
| is_own_brand | text, truth value | True if retailer owns the brand |
| picture_url | text | URL to a Thumbnail of a product picture. Common thumbnail sizes include 75x75, 100x100, 150x150, and up to 300x300 pixels. Typical sizes ranging from 10 KB to 50 KB. |
| shelf_location | text | Row in an offline shelf where product is usually placed |
| season | text | Main sales period of the product (e.g. summer, winter, ...) |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.6 Price Points

Table 8: Price Points: Contains lists of price points that the optimizer will use for pricing. Here, you can send all possible price points on a granularity level of your choosing. To be able to assign the possible price points to each SKU, please define the level of granularity using columns also sent in product attributes.

| Column | Possible Data Types | Description |
|--------------------|---------------------|--|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| product_group_id | text | Marks products belonging together (e.g. across sizes) - can be used for prices to move in the same direction |
| product_category_1 | text | Top-level category the product belongs to (ideally less than 20 distinct category values) |
| brand | text, integer | Name of the brand of the product |
| upload_currency | text | The currency code according to ISO 4217 format (e.g., EUR for Euro). This is used to differentiate the channel currency from any additional sub-channel definitions. |
| allowed_price | decimal | A price option that the optimizer can select |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.7 Stock

Table 9: Stock: Contains current stock and availability information. Here, you can also send future stock changes (e.g., restocking, write-offs, and other inventory adjustments). If you wish to use the end liquidation optimization feature, please include `start_liquidation_date`, `end_liquidation_date`, and `end_liquidation_value` as mandatory columns.

| Column | Possible Data Types | Description |
|--------------------------|---------------------|--|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| active_since | time stamp | Time at which the values in this row changed as an ISO 8601 UTC timestamp (e.g. 2022-04-24T22:54:51Z) |
| stock_start_of_day | integer | Number of items available for sale in the beginning of the day |
| start_liquidation_date | date | Date from which the Sell Through Rate of the product is calculated (e.g. season start date) in ISO 8601 format (i.e. YYYY-MM-DD; e.g. 2025-03-01) |
| end_liquidation_date | date | Date by which the product should reach the Target Sell-Through Rate (e.g. season end date) in ISO 8601 format (i.e. YYYY-MM-DD; e.g. 2025-06-30) |
| end_liquidation_value | decimal | Product's net value in main currency at liquidation end date to calculate the write-off for the seasonal profit calculation. The purchase price is the default value if not specified. |
| stock_change | integer | Changes to your inventory in the future (e.g. restocking, write-offs, and other inventory adjustments) |
| sell_through_rate_target | decimal | Share of Stock that should be sold out at Liquidation End Date |

Info: Columns colored **blue** are **required**, **gray** are **optional**, and **red** are **recommended**.

3.8 Promotions

Table 10: Promotions: Contains promotion and campaign activity like voucher, e-mail and other promotions. Please don't include pure performance marketing campaigns which should go to the traffic table. It should contain current activity, and optionally past data.

| Column | Possible Data Types | Description |
|----------------|---------------------|---|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| active_since | time stamp | Time at which the values in this row changed as an ISO 8601 UTC timestamp (e.g. 2022-04-24T22:54:51Z) |
| active_till | time stamp | Timestamp until which a KPI had a certain value (ISO 8601 UTC 2022-04-24T22:54:51Z) |
| promotion_name | text | Name of the promotional activity |
| voucher_rate | decimal | Share of net revenue after returns spend on vouchers/coupons in percent |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.9 Traffic

Table 11: Traffic: Contains organic and paid activity information on your website. It should contain current activity, and optionally past data.

| Column | Possible Data Types | Description |
|------------------------------|---------------------|--|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| active_since | time stamp | Time at which the values in this row changed as an ISO 8601 UTC timestamp (e.g. 2022-04-24T22:54:51Z) |
| marketing_cost | decimal, integer | Net marketing costs (SEA, price comparison commission, other advertising) linked to these sales after returns |
| marketing_option_explanation | text | Description of the campaign type used to steer the marketing intensity. We support "CpC" in which case marketing_option_float is the Cost per Click steering, "tROAS" in which case marketing_option_float = 100 / tROAS (e.g. 0.25 for a 400% tROAS), "ACoS" in which case marketing_option_float is Advertising Cost of Sale = Marketing Cost / Revenue (e.g. 0.25 for a 25% ACoS) |
| marketing_option_float | decimal | The intensity of the marketing steering (e.g. 0.7 for 70 cent max cost per click campaigns OR 0.25 for 25% ACoS OR 0.25 for 400% tROAS) |
| active_till | time stamp | Timestamp until which a KPI had a certain value (ISO 8601 UTC 2022-04-24T22:54:51Z) |
| total_clicks | decimal, integer | Total number of visitors to the product's dedicated detail page from paid and unpaid sources (decimal in case several products share traffic) |
| paid_clicks | decimal, integer | Number of visits from paid sources |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.10 Competitor Prices

Table 12: Competitor Prices: Contains current prices of competing offers.

| Column | Possible Data Types | Description |
|----------------------|---------------------|---|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| active_since | time stamp | Time at which the values in this row changed as an ISO 8601 UTC timestamp (e.g. 2022-04-24T22:54:51Z) |
| ean | text | 13 digit International Article Number (also known as European Article Number) |
| comp_name | text | Name of the company selling the crawled product |
| comp_gross_red_price | decimal | Gross Red Price after discount including taxes in local currency excluding Shipping Price |
| comp_shipping_price | decimal | Price for shipping the product from the competitor warehouse to the end customer in local currency |
| comp_is_active | truth value | True if the product is online in the webshop and could be bought by the end customer in that period |
| comp_url | text | Link where the Competitor Price was crawled from |
| comp_delivery_days | integer | Number of days the competitor needs for shipping the product to the end customer |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.11 Bundles

Table 13: Bundles: Table containing the mapping of bundles and its composition.

| Column | Possible Data Types | Description |
|-------------|---------------------|---|
| product_id | text | Unique identifier of the product or SKU |
| bundle_id | text | Unique identifier of a bundle of products. Is mapped as product_id in all other tables (i.e. transactions, prices). |
| product_qty | integer, decimal | Amount of products within a bundle e.g. a table tennis bundle contains 4 balls |

Info: Columns colored blue are required, gray are optional, and red are recommended.

3.12 Forecast Commission Rate

Table 14: Forecast Commission Rate: Table containing the commission rate for each product based on its price range. Each product has its own set of price limits, and a specific commission rate is applied depending on where the gross red price falls within those limits.

| Column | Possible Data Types | Description |
|----------------------------------|---------------------|--|
| market | text | Country where the product was sold using ISO 3166 format (e.g. DE for Germany) |
| channel | text | Sales domain where the product was sold (e.g. amazon.de for Amazon sales channel) |
| product_id | text | Unique identifier of the product or SKU |
| commission_start_gross_red_price | decimal | Gross Red Price in local currency from which the corresponding commission rate should be applied. The corresponding commission rate will be applied up to the next highest Start Gross Red Price. If no higher Start Gross Red Price is specified, the corresponding commission rate will be applied to all prices higher than that price. |
| commission_rate | decimal | Share of the gross red price spend on commission cost for selling these products on a third party platform (e.g. Zalando, or Amazon) |

Info: Columns colored blue are required, gray are optional, and red are recommended.

4 Formula specification

This section defines the mathematical formulae and logic used for the calculation of core Key Performance Indicators (KPIs) within the data platform.

4.1 Revenue

The revenue is derived from the net price per unit (gross red price converted to the main currency and adjusted for tax) multiplied by the quantity kept. The total voucher spending and total red price discount spending for the order line are then subtracted directly:

$$\text{revenue} = \frac{\text{gross_red_price} \cdot \text{conv_fkt_to_main_currency}}{1 + \text{tax_rate}} \cdot (\text{sales_before_returns} - \text{returns}) \\ - \text{voucher_spending} - \text{red_price_discount_spending}$$

4.2 Profit

The profit is calculated by subtracting all associated costs from the calculated revenue. These costs include outbound, marketing, purchase, commission, other costs, and the positive adjustment of the customer lifetime value, along with the inbound cost associated with returns. Since the inputs represent absolute total costs per order line, they are subtracted directly:

$$\text{profit} = \text{revenue} \\ - (\text{outbound_cost} + \text{marketing_cost} + \text{other_cost} + \text{purchase_cost} + \text{commission_cost} + \text{inbound_cost}) \\ + \text{customer_lifetime_value}$$

5 Output Data Specification

For delivering optimized prices and marketing decisions, we can connect to the APIs listed in the following table and provide the data in the corresponding formats. Other formats or connections to other APIs are possible as customizations.

5.1 Data APIs

Optimizations and predictions can be shared in multiple ways.

Table 15: Supported Data Output format

| No. | Tables | Format | Target | Recommended |
|-----|-------------------------|-------------------|----------------------|-------------|
| 1 | Price/Marketing Changes | BigQuery table | BigQuery project | ++ |
| 2 | Price/Marketing Changes | Snowflake table | Snowflake project | ++ |
| 3 | Price/Marketing Changes | CSV file | User computer | + |
| 4 | Price/Marketing Changes | CSV/parquet files | Google Cloud Storage | ++ |
| 5 | Price/Marketing Changes | CSV/parquet files | Amazon S3 Storage | + |
| 6 | Price/Marketing Changes | CSV/parquet files | Azure Blob Storage | + |
| 7 | Price/Marketing Changes | CSV/parquet files | SFTP server | + |
| 8 | Price/Marketing Changes | CSV/parquet files | HTTPS server | + |
| 9 | Price/Marketing Changes | API Call | Custom API | ++ |
| 10 | Price Changes | Price Book XML | Salesforce | +++ |
| 11 | Price Changes | API Call | Commercetools | +++ |
| 12 | Price Changes | API Call | Tradebyte | +++ |
| 13 | Price Changes | API Call | Plentymarkets | +++ |
| 15 | Price Changes | API Call | Shopify | +++ |

We output price/marketing changes as well as customized tables.

6 7Learnings Optimization Rules

These are the rules we support by default in our frontend:

Table 16: Default Rules

| Name | Purpose | Example |
|---|--|---|
| Discount = value (in %) | Limit discount to a particular value relative to gross black price | Discount = 20% |
| Profit Margin \geq value (in %) | Limit minimum profit margin | Profit margin \geq 50% |
| Profit Margin \leq value (in %) | Limit maximum profit margin | Profit Margin \leq 20% |
| Net Optimal Price \geq Purchase Price \times value (in %) | Avoid falling below the purchase price in case of revenue maximizing optimizations | Purchase price = 40 EUR, Value = 1 \Rightarrow Optimal Price \geq 40 EUR |
| Net Optimal Price \leq Purchase Price \times value (in %) | Avoid very high margins | Purchase price = 40 EUR, Value = 3 \Rightarrow Optimal Price \leq 120 EUR |

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Table 16: Default Rules (Continued)

| Name | Purpose | Example |
|--|---|--|
| $ \text{Price Change} \leq \text{value (in \%)}$ | Limit maximum price change | Value = 0.1 \Rightarrow Price Change \leq 10% |
| Price Change \geq value (in %) | Limit minimum price change | Value = 0.1 \Rightarrow Price Change \geq 10% |
| Price Change \leq value (in %) | Limit maximum price change | Value = 0.1 \Rightarrow Price Change \leq 10% |
| Current Price OR $ \text{Price Change} \geq \text{value (in \%)}$ | Change prices by at least a certain percent or keep the current price | Value = 0.1 \Rightarrow Price Change = 0 OR price_change \geq 10% |
| Current Price OR $ \text{Price Change} \geq \text{value}$ | Change prices by at least a certain amount or keep the current price | Value = 1.0 \Rightarrow Price Change = 0 OR price_change \geq 1€ |
| Optimal Price \geq value | Set minimum current price | Value = 20.00 \Rightarrow Optimal Price \geq 20.00 |
| Optimal Price \leq value | Set maximum optimal price | Value = 50.00 \Rightarrow Optimal Price \leq 50.00 |
| Marketing Cost Change < value (in %) | Limit change of Marketing Cost | Value = 40% \Rightarrow Only options allowed, where product specific Marketing Cost are predicted to change by less than 40% |
| $ \text{Marketing Intensity Change} \leq \text{value}$ | Limit change of Marketing Intensity to avoid strong marketing steering changes on product level | Value = 0.1 \Rightarrow $ \text{Marketing Intensity Change} \leq 0.1$ |
| Marketing Intensity \geq value | Set minimum Marketing Intensity to avoid very low marketing spending on specific products | Value = 0.3 \Rightarrow Marketing Intensity \geq 0.3 |
| Marketing Intensity \leq value | Set maximum Marketing Intensity to avoid very high marketing spending on specific products | Value = 0.5. Rule \Rightarrow Marketing Intensity \leq 0.5 |
| Optimal Price \geq Current Price \times value (in %) | Set minimum price to current price multiple | Current Price = 60.00, Value = 1 \Rightarrow Optimal Price \geq 60.00 |
| Optimal Price \leq Current Price \times value (in %) | Set maximum price to current price multiple | Current Price = 60.00, Value = 1 \Rightarrow Optimal Price \leq 60.00 |
| Optimal Price = Current Price \times value (in %) | Set optimal price to specific price | Current Price = 60.00, Value = 1 \Rightarrow Optimal Price = 60.00 |
| Optimal Price \geq Min Comp Price \times value (in %) | Set minimum optimal price to minimum competitor price multiple | Min Comp Price = 20.00, Value = 1 \Rightarrow Optimal Price \geq 20.00 |
| Optimal Price \leq Min Comp Price \times value (in %) | Set maximum price to not price too far away from competition | Min Comp Price = 100.00, Value = 1.2 \Rightarrow Optimal Price \leq 120.00 |
| Optimal Price = Min Comp Price \times value (in %) | Set optimal price to minimum competitor price multiple | Min Comp Price = 20.00, Value = 1 \Rightarrow Optimal Price = 20.00 |

Continued on next page

Table 16: Default Rules (Continued)

| Name | Purpose | Example |
|---|---|---|
| $ \text{Price Distance to Min Comp Price} \leq \text{value (in \%)}$ | Limit maximum price distance to competitor price | Min Comp Price = 20.00, Value = 0.1 \Rightarrow 18.00 < Optimal Price < 22.00 |
| Discount \geq value (in %) | Set minimum discount relative to the gross black price | Value = 0.4 \Rightarrow Discount \geq 40% |
| Discount \leq value (in %) | Set maximum discount relative to the gross black price | Value = 0.5 \Rightarrow Discount \leq 50% |
| Stock Reach in Weeks \leq value | Reduce the price to sell-off a product after a defined number of weeks | value = 2, current + expected stock = 20 \Rightarrow Select Optimal Price where predicted sales/week > 10 items |
| Stock Reach in Weeks \geq value | Increase the price, so that there still is stock available after a specified number of weeks | value = 2, current stock + expected stock from returns = 20 \Rightarrow Select Optimal Price where predicted sales/week < 10 items |
| Min days after last price change = value | Wait a specified number of days after the last price change | Value = 7, Last Price Change 3 days ago \Rightarrow Price Change = 0% |
| Reach Max Liquidation End Profit \times value (in %) | Consider long-term profitability | Value 70%, If the highest possible Liquidation End Profit is 100€, only options where Liquidation End Profit is bigger than 70€ will be allowed |
| Liquidation End STR \geq value (in %) | Make sure to reach a defined Sell Through Rate at the Liquidation End for the whole Optimization Group. Please also set a minimum margin when you use this rule will reduce prices to reach the desired STR not checking the profit impact. | Value 80%, Liquidation End STR \geq 80% |
| Min Salvage Value > value (in %) | Set a product specific lower price boundary as share of purchase price after inbound/outbound cost consideration | Value 50%, Inbound/Outbound cost 3, Purchase Cost 12 \Rightarrow Net red price > 9 |
| Optimal Price \leq RRP \times value (in %) | Limit Optimal Price to be smaller or equal RRP | Value = 1, RRP = 49.99 \Rightarrow Optimal Price \leq 49.99 |
| Optimal Price = RRP \times value (in %) | Ensure that Optimal Price is equal RRP | Value = 1, RRP = 49.99 \Rightarrow Optimal Price = 49.99 |
| Filter allowed Marketing Intensities | Make sure to select a limited set of Marketing Intensities that correspond to your marketing campaign settings. | You have an Amazon Campaign with 5 Ad Groups with ACoS of 3%, 5%, 7%, 9%, 11% and want to limit the optimizer to select only one of these |

Continued on next page

Table 16: Default Rules (Continued)

| Name | Purpose | Example |
|--|--|--|
| Optimal Price = Last Season Price \times value (in %) | Set optimal price to specific price in ordering optimization. Can be used to disable the pricing-optimization by setting value to 1. | Last season price = 10.00 EUR, Value = 1 \Rightarrow Optimal Price = 10.00 EUR |
| Bundle Price = Product Prices \times value | Make bundle prices follow the price of the products they contain | nan |
| Bundle Price \leq Product Prices \times value | Make bundle prices follow the price of the products they contain | nan |
| Optimal Price = value | Limit optimal price to a particular value | Value = 30.00 EUR. Rule \Rightarrow Optimal Price = 30.00 EUR |
| Optimal Price \geq End Liquidation Value \times value (in %) | Limit minimum optimal price to end liquidation value multiple | nan |
| Liquidation End STR \geq Target STR * value (in %) | Make sure to reach a percentage of the defined Sell Through Target Rate at the Liquidation End for the whole Optimization Group. Please also set a minimum margin when you use this rule will reduce prices to reach the desired STR not checking the profit impact. | Value 100%, STR Target 80% \rightarrow Liquidation End STR \geq 80% |
| Liquidation End STR \leq Target STR * value (in %) | Make sure to limit the Sell Through Rate to a percentage of the defined Sell Through Target Rate at the Liquidation End for the whole Optimization Group. | Value 100%, STR Target 80% \rightarrow Liquidation End STR \leq 80% |
| Promotion Rank Top 5% Discount = value (in %) | Set 5% of optimization groups most recommended for a promotion to a certain discount | Value = 0.4 \Rightarrow Discount = 40% for 5% of the optimization groups most recommended for a promotion |
| Promotion Rank Top 10% Discount = value (in %) | Set 10% of optimization groups most recommended for a promotion to a certain discount | Value = 0.4 \Rightarrow Discount = 40% for 10% of the optimization groups most recommended for a promotion |
| Promotion Rank Top 15% Discount = value (in %) | Set 15% of optimization groups most recommended for a promotion to a certain discount | Value = 0.4 \Rightarrow Discount = 40% for 15% of the optimization groups most recommended for a promotion |
| Promotion Rank Top 20% Discount = value (in %) | Set 20% of optimization groups most recommended for a promotion to a certain discount | Value = 0.4 \Rightarrow Discount = 40% for 20% of the optimization groups most recommended for a promotion |
| Promotion Rank Top 25% Discount = value (in %) | Set 25% of optimization groups most recommended for a promotion to a certain discount | Value = 0.4 \Rightarrow Discount = 40% for 25% of the optimization groups most recommended for a promotion |