Accelerate Sales Insights Package

Version 1.9

February 2023

Accelerate Sales Insights Package (SIP)

This package helps you get started with the analytical capabilities of Pricefx. It allows you to set up all necessary data structures to be able to start quickly analyzing sales data – with minimum effort and limited requirements for the initial data set.

- Setup
- Included Dashboards
- Required Data Set

Setup

To set up this package, go to the Marketplace in PlatformManager and select 'Sales Insights'. You will be guided through several steps in which you upload all information needed to make the package work (such as products, customers and transactions). The system then automatically adds exchange rates and conversion factors for different units of measures. As a result, you get an initialized PriceAnalyzer module with an initial set of dashboards.

> Please keep in mind that Sales Insights Package and Customer Insights Package share a common library – therefore if both are in use at a partition, they both need to be deployed in their most recent versions.

Included Dashboards

- Waterfall Dashboards
- Revenue and Margin Dashboard
- Regional Revenue and Margin Dashboard
- Revenue Breakdown Dashboard
- Margin Breakdown Dashboard
- Outliers Dashboard
- Causality Dashboard
- Period Over Period Dashboard

Required Data Set

Data Table	Mandatory Data	Optional Data

Products	• Product Id • Product Label	Up to 30 custom product attributes
Customers (Optional since 1.6.0)	• Customer Id • Customer Name	Up to 30 custom customer attributes

Sales Data (Transactions)	• Unique Id
	• Product Id
	• Customer Id
	• Pricing Date
	• Invoice Price
	• Gross Margin
	• Quantity
		• Currency
		• UoM
		
		Mandatory data for selected dashboards:
		
		• Period Over Period:
		  ◦ List price
		  ◦ Net price
		• Regional Revenue and Margin:
		  ◦ Continent
		  ◦ Country
		  ◦ City / Region
		
		For additional waterfall fields, refer to the waterfall dashboard.

Product Info (SIP)

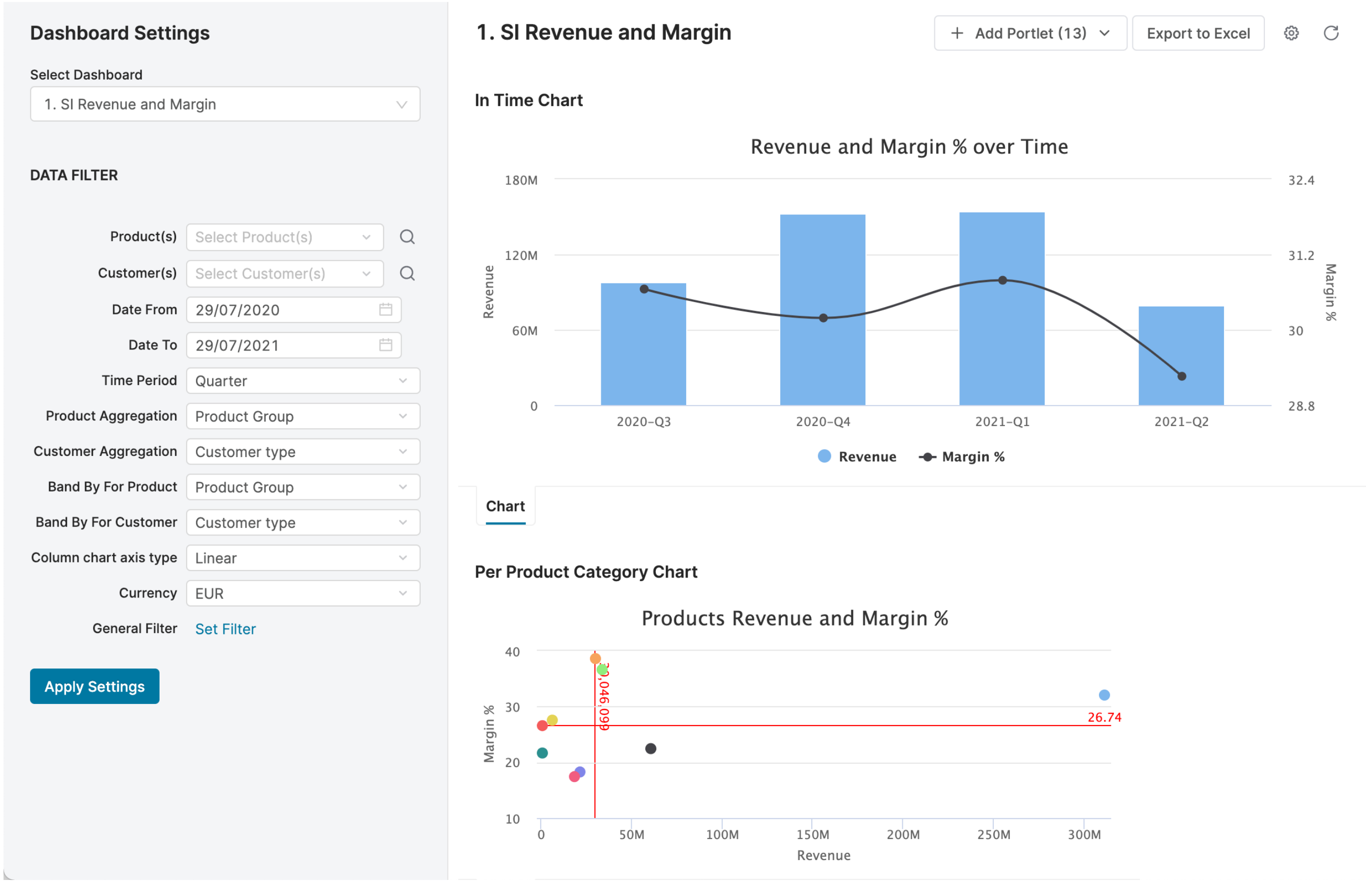
Accelerate Sales Insights Package comes with several dashboards (or pre-defined analyses) and additional standard analysis templates which every company can benefit from.

This package includes:

- Revenue and profitability over time and by geography
- Highest and lowest performing products and customers
- Price waterfall analysis and comparisons per time, product and customer
- Revenue and margin breakdowns

These analyses can help you recognize trends so that you can adjust strategies to reflect opportunities or challenges in the market. Of course, companies will want to go further, so that is where the additional ad-hoc analytics capabilities come into play.

The out-of-the-box standard analysis templates enable pricing analysts and pricing managers to drill deeper into their company’s data (across products, customers, and transactions), uncovering hidden insights and validating what they see on those dashboards.



Installation (SIP)

This tutorial will guide you through the installation of the Sales Insights Accelerator.

Pre-requisites

Before you start, ensure that you have:

- Access to a partition on the Pricefx server (8.0 or newer). You will need:
  - Server URL
  - Partition name
  - Username and password for a partition user with sufficient rights for using the Accelerator
  - License on the partition must cover the Analytics and Dashboards modules
- Access to Pricefx PlatformManager
  - Username and password for PlatformManager user
  - The user must have the following permissions for your partition (to which you plan to deploy the Accelerator):
    - Permission *Marketplace Templates - deploy*
- Transaction data in the Datamart structure with **required fields** containing the following data:

Requirement Description The field name must contain:	**Deployment Label**	**Data Type**
Unique ID in the Datamart	Unique Id	String
Customer ID in the Datamart (mandatory if customer master is deployed)	Customer Id	String
Product ID in the Datamart	Product Id	String
Pricing date in the Datamart	Pricing Date	Date
Invoice price in the Datamart	Invoice Price	Money/Number
Gross margin in the Datamart	Gross Margin	Money/Number
Quantity in the Datamart	Quantity	Quantity/Number

For more details see https://pricefx.atlassian.net/wiki/spaces/ACCDEV/pages/2763653124/Mandatory+Data+for+Accelerators#Accelerate-Sales-Insights-Package.

- Optional Transaction data (mandatory for specific dashboards):
  - Period Over Period:
    - List price
    - Net price
  - Regional Revenue and Margin:
    - Continent
    - Country
    - City / Region
  - For additional waterfall fields, refer to the waterfall dashboard.

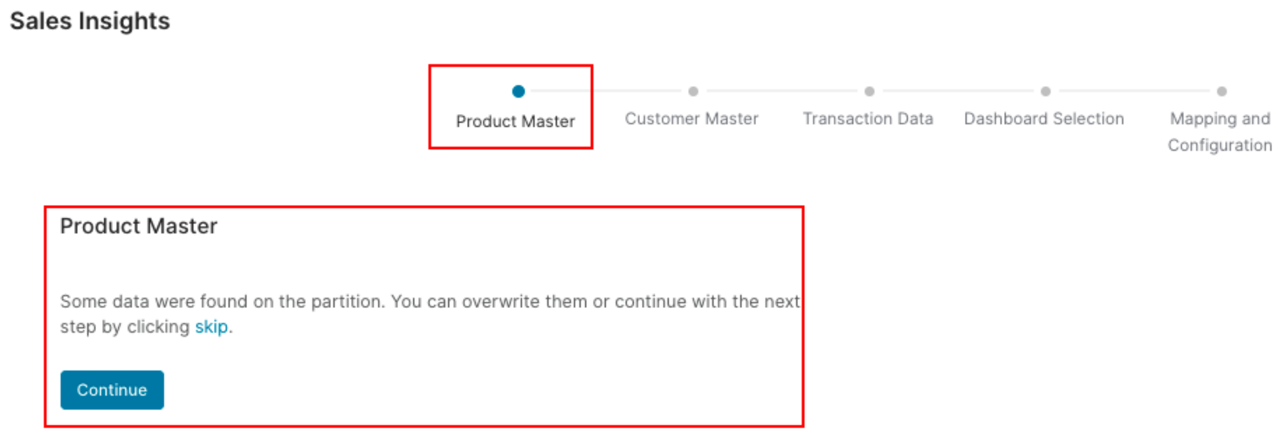
Installation Steps

Select Partition for Deployment

1. In PlatformManager, navigate to **Marketplace > Accelerator Packages**, find *Sales Insights.*
2. Click **Deploy** and select a partition to which you want to deploy the package.
3. Click **Deploy**.
4. A warning dialogue will appear. After you read the warning text and agree with the conditions, you can click **Continue**.
   If you need to leave the deployment process before it is finished, you can always come back later. The wizard will offer you to either start again, or continue in the previously started process.

Go Through All the Deployment Steps

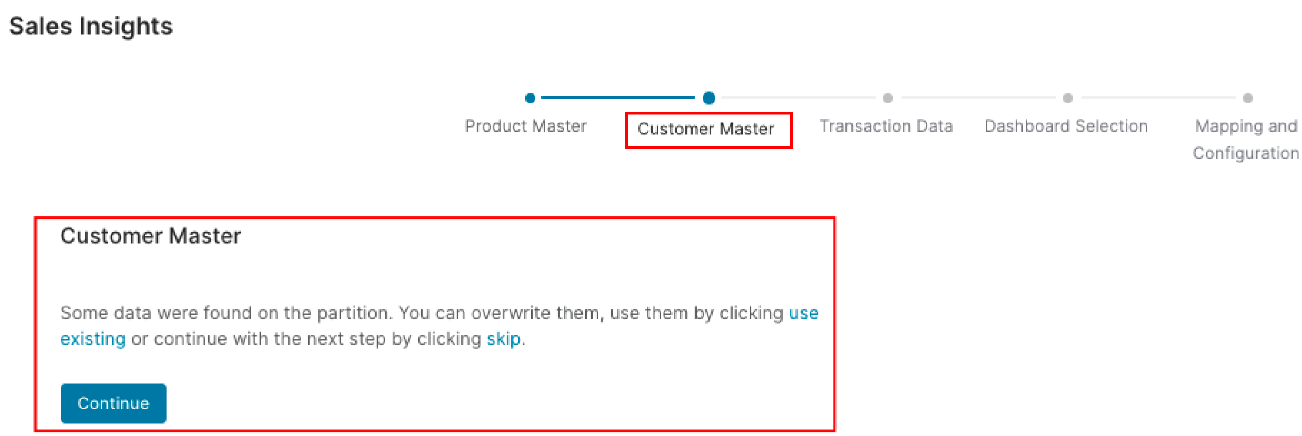
1. Product Master Step



You have these options:

- **Continue** – Click this button if you want to upload your product data.
- **Skip** – Click this link if you want to use the existing product data on the partition.

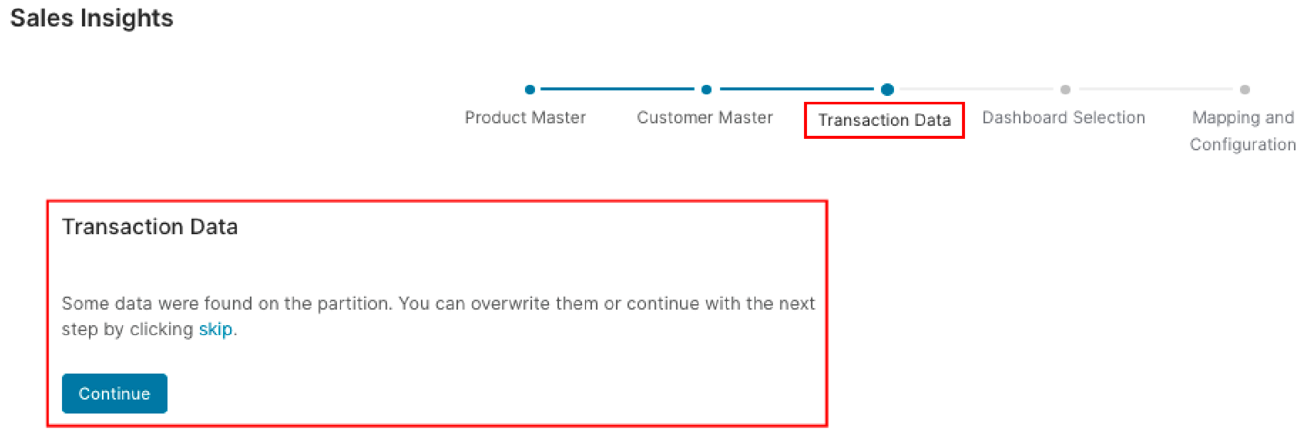
2. Customer Master Step



You have these options:

- **Use Existing** – Click this link if you want to use the existing customer data on the partition.
- **Skip** – Click this link if you do not want to use the customer data. Then there is only the Product(s) input used and displayed after the deployment, there is no Customer(s) input filter.
- **Continue** – Click this button if you want to upload your customer data.

3. Transaction Data Step

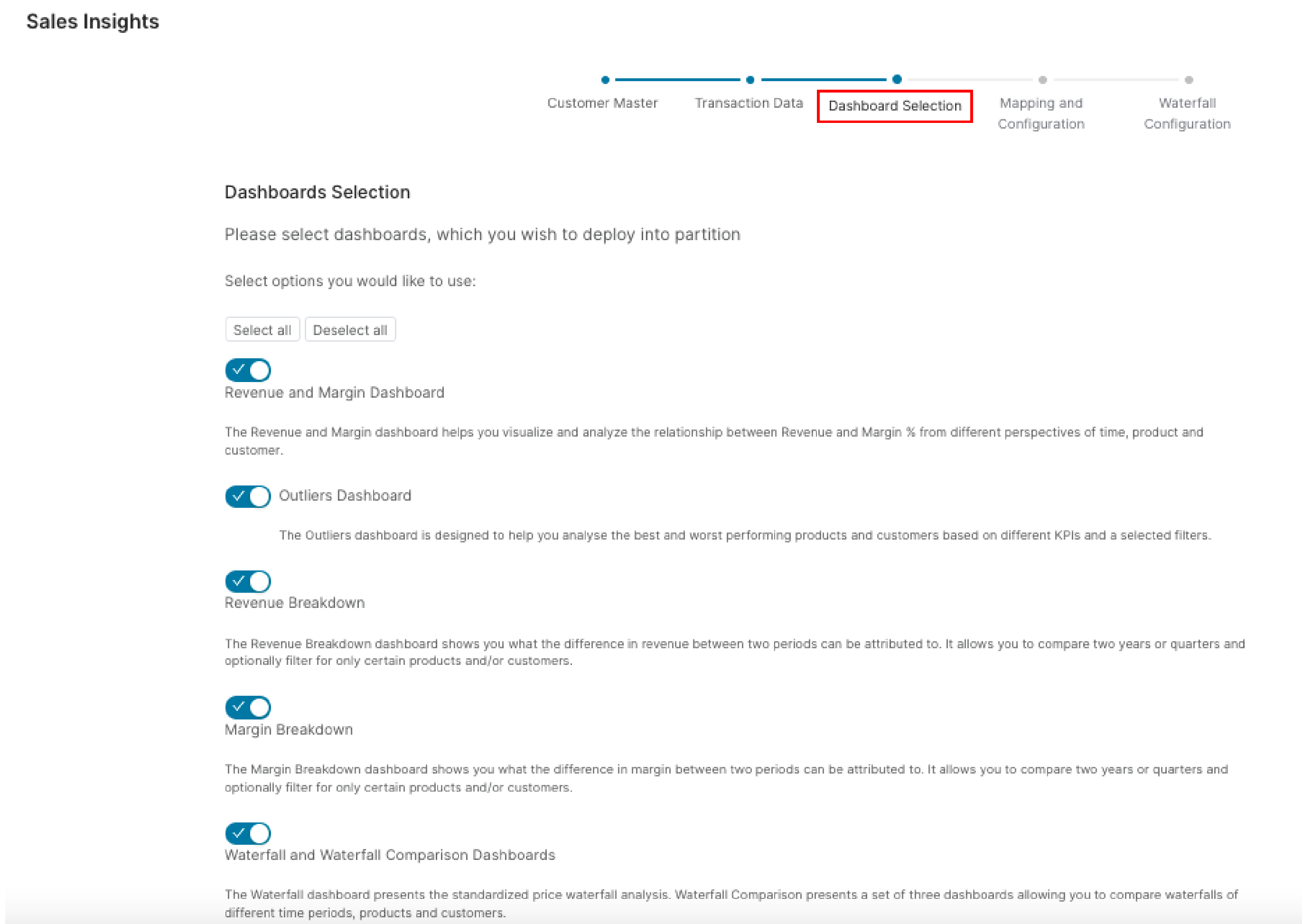


You have these options:

- **Continue** – Click this button if you want to upload your transaction data.
- **Skip** – Click this link if you want to use the existing transaction data on the partition.

4. Dashboard Selection Step

Select which dashboards you want to deploy into the partition.

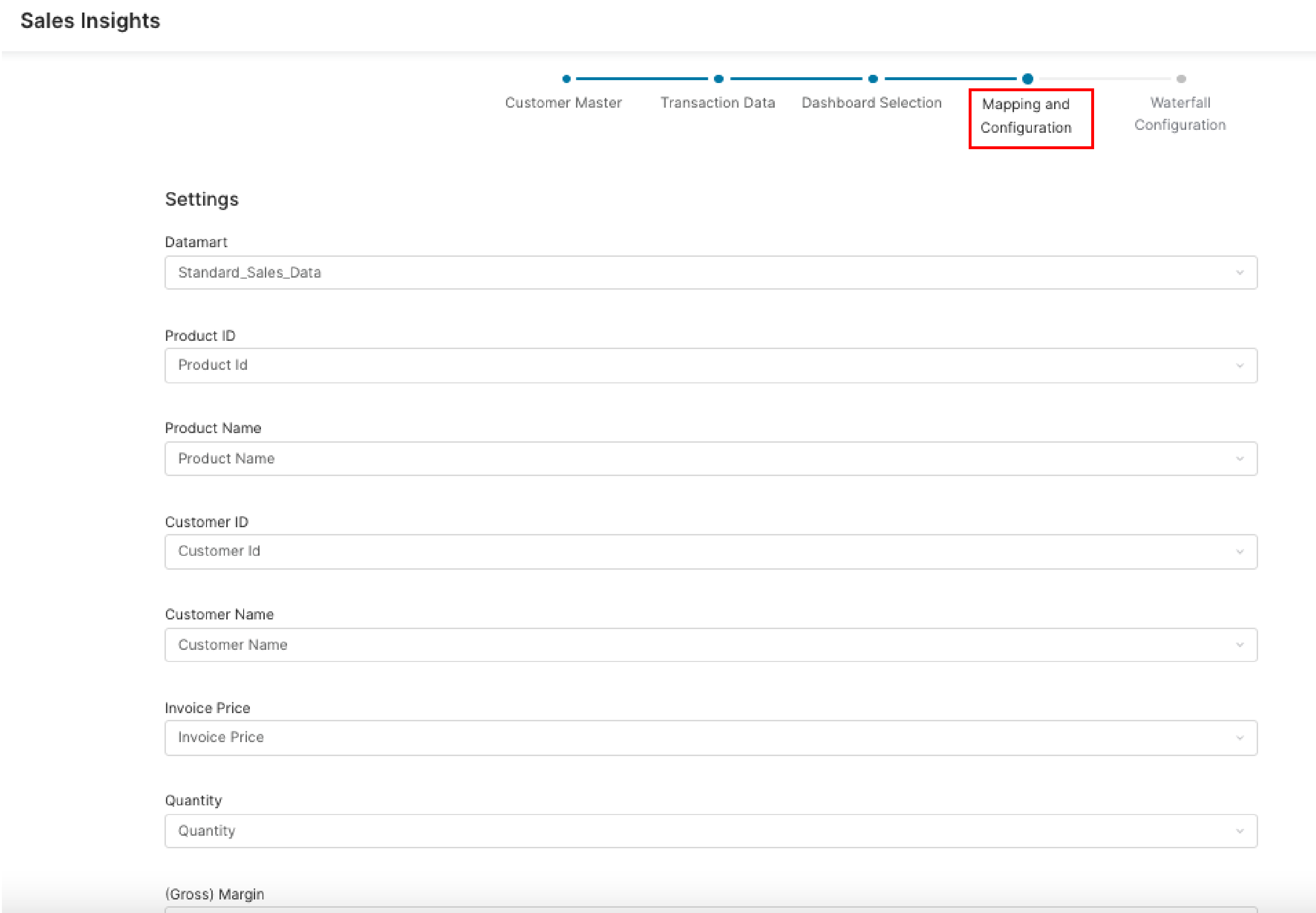


5. Mapping and Configuration Step

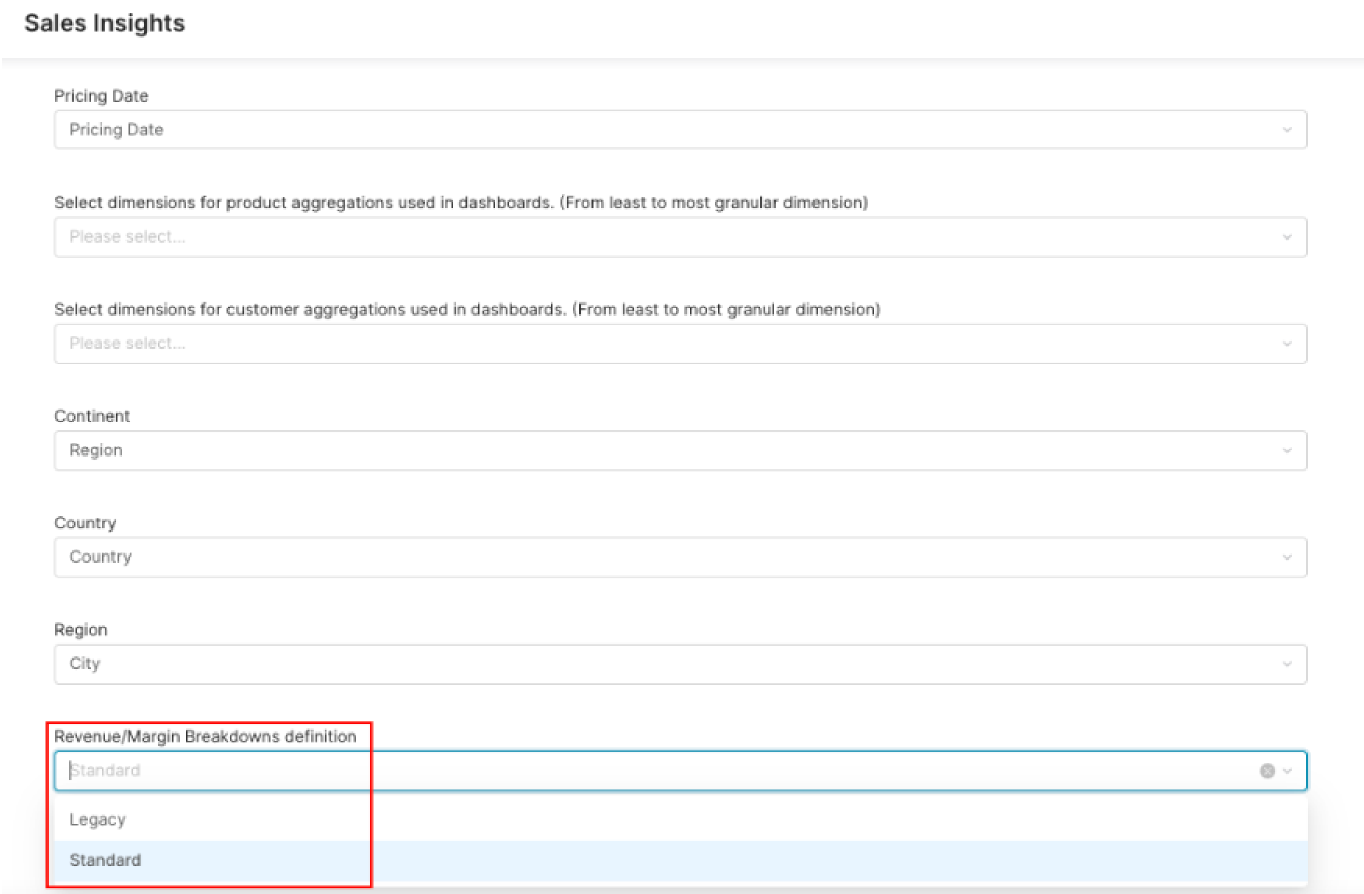
The Sales Insights Dashboard requires certain data fields available in the Datamart. In this step you will select which fields of your Datamart contain certain specific pieces of data, e.g. product ID, customer ID, invoice price, etc. required by the dashboards.

Some of the data values are required, some of them are optional, and some are used only in specific dashboards.

In case you skipped the Customer Master step, please **do not map the Customer ID and Customer Name field** in this step. You also should have the Region, Country, City field in your Datamart if you want to use the Regional Revenue and Margin dashboard.



Revenue/Margin Breakdowns Definition



The Revenue/Margin Breakdowns definition field has been introduced in version 1.7.0. It identifies the formulas which are used to calculate the effect in breakdowns.

There are two options in the dropdown:

- **Legacy** – The previous formulas might be used for older versions or existing customers who still want to use it. The formula definitions can be found in the archived documentation of the previous versions: https://pricefx.atlassian.net/wiki/download/attachments/3907062629/Accelerate_Sales_Insights_Package-1.6.1.pdf?api=v2 (Revenue Breakdown Dashboard - Fields Definition, MarginBreakdown Dashboard - Fields Definition chapters).
- **Standard** (default) – The current and enhanced formulas used by default.
  For more details see:
  - Revenue Breakdown Dashboard - Fields Definition
  - Margin Breakdown Dashboard - Fields Definition

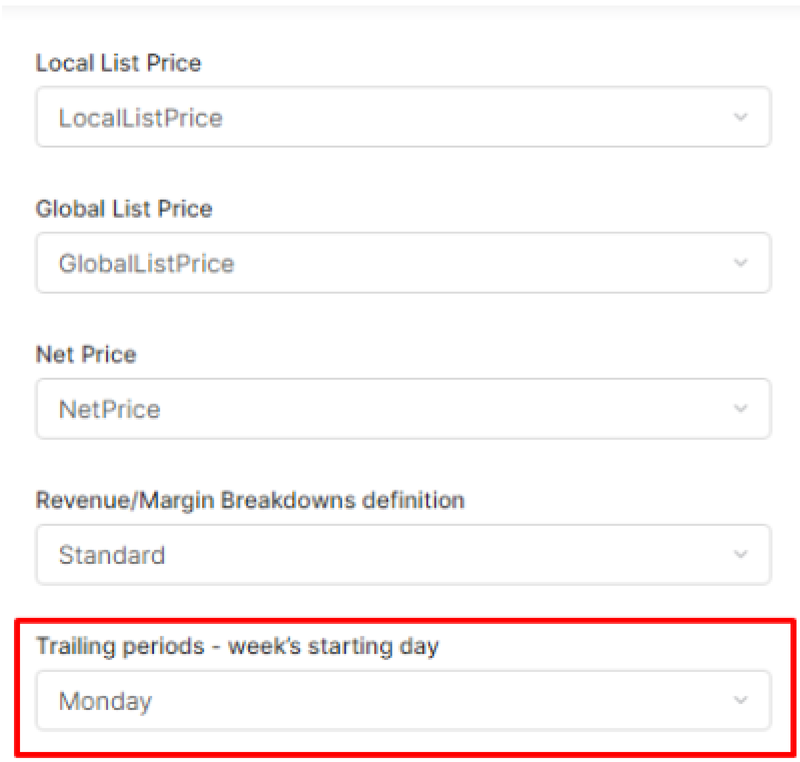
The settings are stored in **Configuration** > **System Configuration** > **Advanced Configuration Options**, under the option ***SIP_AdvancedConfiguration*** with the name ”breakdownMode” and can be updated manually after the deployment.

Sample of *SIP_AdvancedConfiguration*:

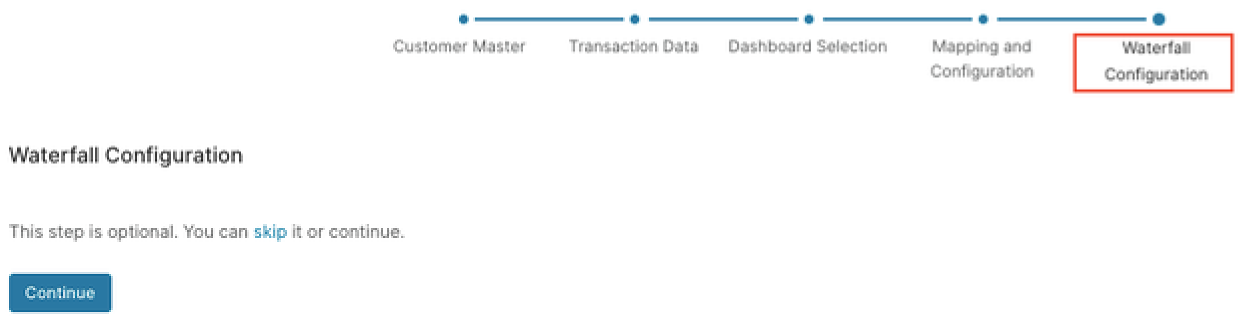
```json
{
    "datamartName": "Standard_Sales_Data",
    "productId": "ProductId",
    "productName": "ProductName",
    "productGroup": "ProductGroup",
    "customerId": "customerId",
    "customerName": "CustomerName",
    "invoicePrice": "InvoicePrice",
    "quantity": "Quantity",
    "pricingDate": "PricingDate",
    "pricingDateYear": "PricingDateYear",
    "grossMargin": "GrossMargin",
    "continent": "Region",
    "country": "Country",
    "region": "City",
    "sector": "",
    "costs": "OtherCOGS",
    "productDimensions": ["ProductId", "ProductClass", "ProductGroup"],
    "customerDimensions": ["CustomerId", "Country", "Region",
"CustomerClass"],
    "breakdownMode": "Standard"
}
```

Period Over Period Dashboard Definition

The Period Over Period Dashboard uses calendar units (periods) based on a week definition while the starting day of a week can be configured by providing a value for the “Trailing periods - week’s starting day” input (default is Sunday).



6. Waterfall Configuration Step (Optional)



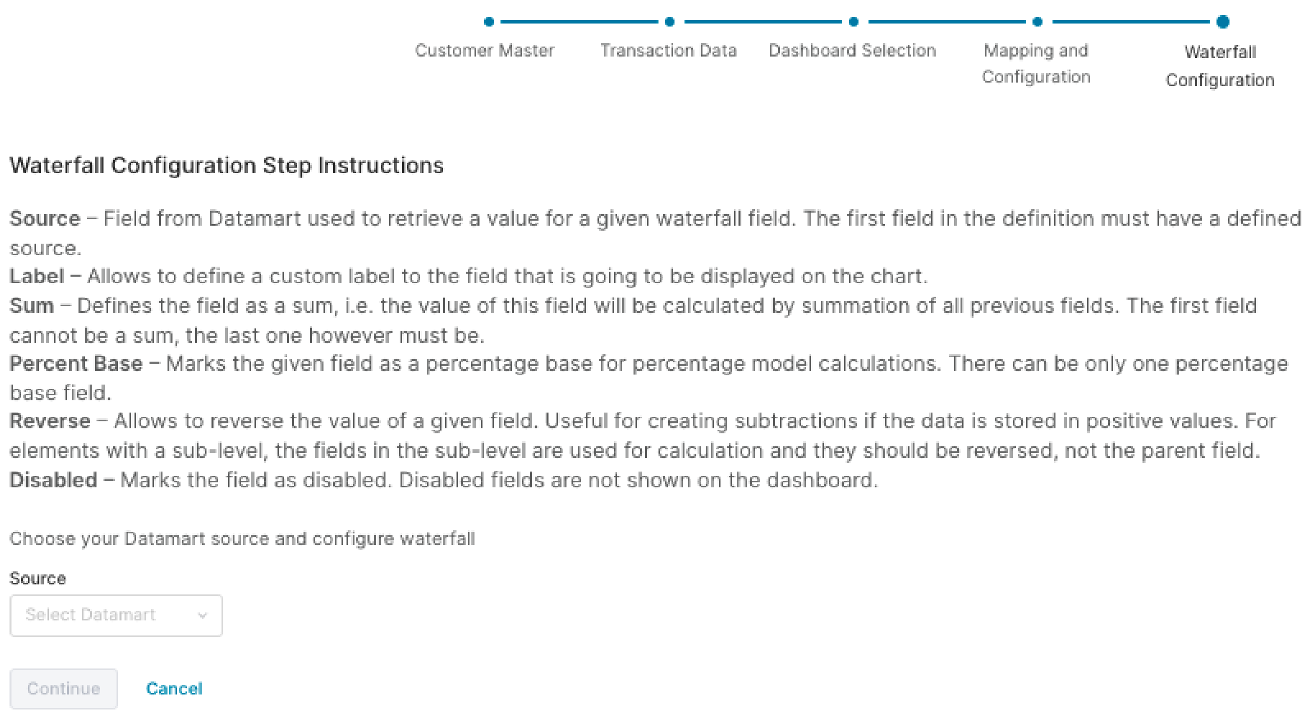
You have these options:

- **Continue** – Click this button if you want to map the waterfall configuration.
- **Skip** – Click this link if you do not want to map the waterfall configuration. In this case, the Waterfall and Comparison Waterfall dashboard will show no data after the deployment.

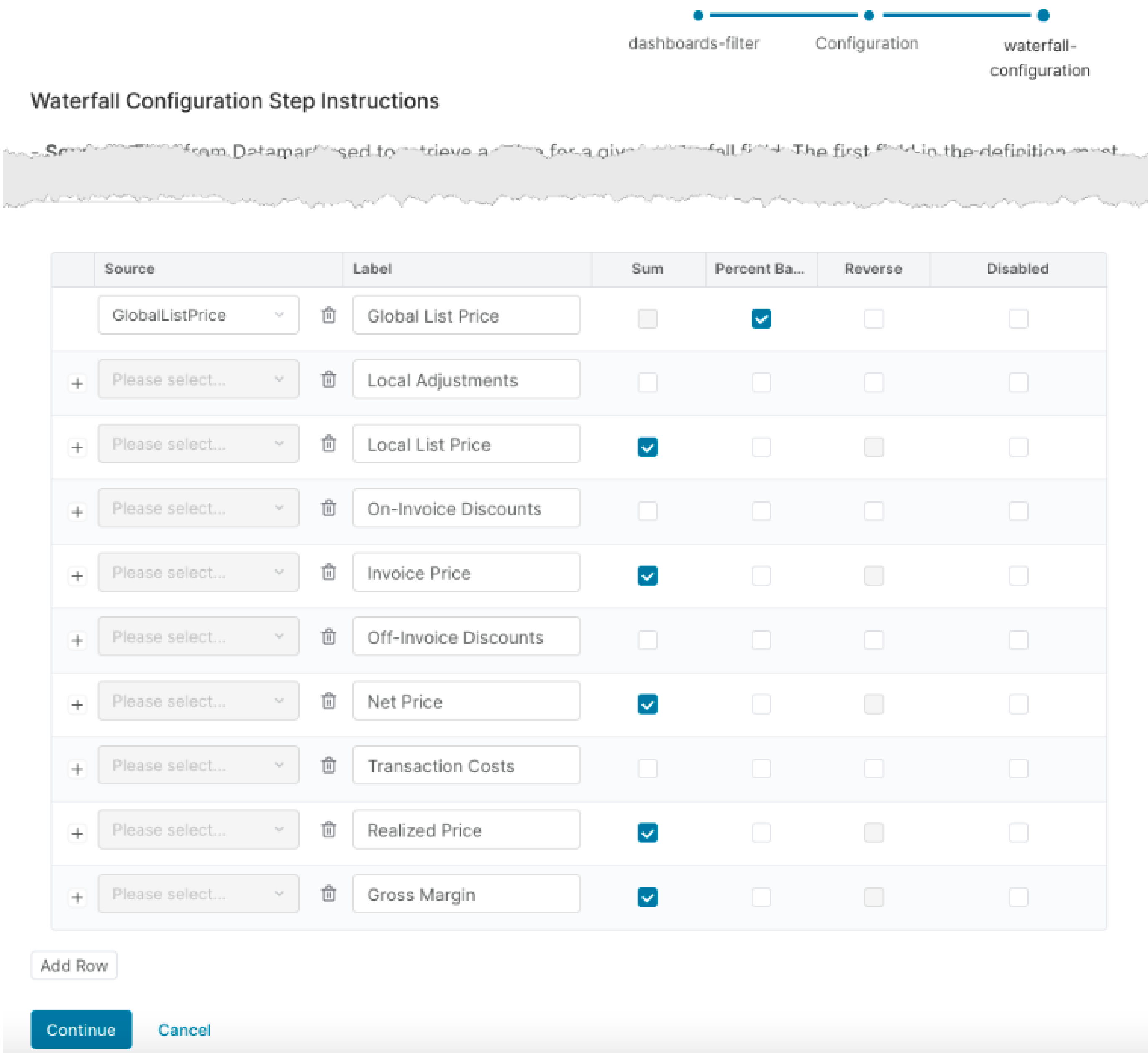
To map the waterfall configuration:

a. Click **Continue** to configure the price waterfall elements to be used in the Waterfall dashboard.

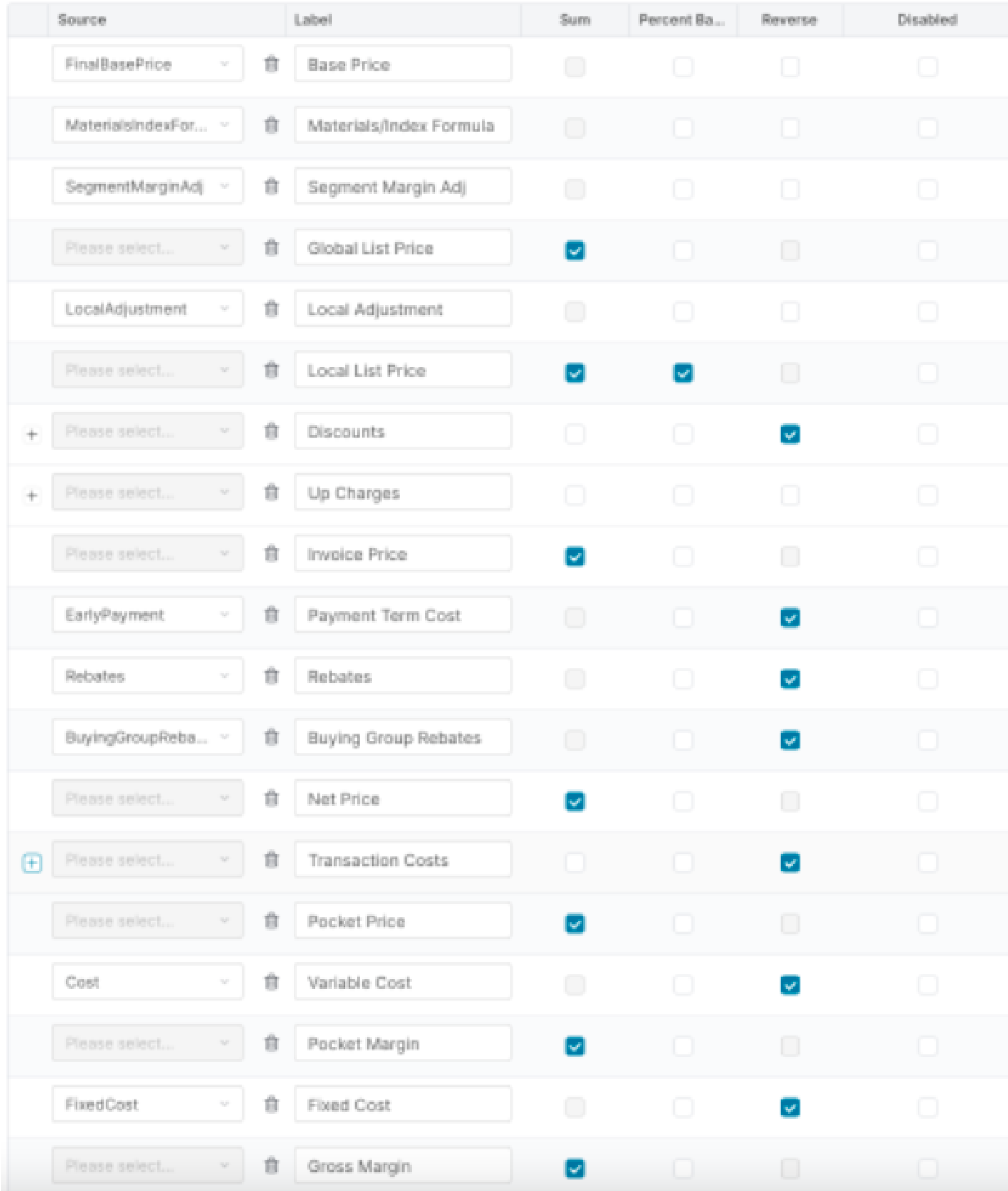
b. Select the Datamart to be used for the Waterfall dashboard.



c. Once you selected the Datamart, the fields will appear. They are automatically pre-populated to guide you. Review the sample waterfall configuration, review your Datamart fields, and then continue with the next step.



d. Set up the waterfall chart elements according to your Datamart fields.



Note:

- The value of the first price point element comes from a Datamart field, whereas the next price points (marked with *Sum*) are only virtual.
- We marked one price point as *Percent Basis*, so if the user would like to see the waterfall chart in percentage scale (instead of money), such a price point will be 100% and all other waterfall elements will be proportional to that price point.
- We marked some adjustments as *Reverse* because their value stored in the Datamart is positive, but they should appear as negative adjustments.
- We placed some adjustments into groups (they have the "plus" sign on the left), so that the user can collapse and expand them.

If you want to update/change the mapping, you can do it manually in **Configuration** > **System Configuration** > **Advanced Configuration Options**, under the option ***waterfall-configuration***.

Sample of *waterfall-configuration*:


```
{
    "waterfall-configuration": {
        "dataMart": "Standard_Sales_Data",
        "fields": [{
                "name": "GlobalListPrice",
                "label": "Global List Price",
                "isSum": false,
                "isPercentBase": true,
                "disabled": false,
                "isSubtract": false
            }, {
                "name": null,
                "label": "Local Adjustments",
                "isSum": false,
                "isPercentBase": false,
                "disabled": false,
                "isSubtract": false,
                "subLevel": [{
                        "name": "ForeignExchangeAdjustment",
                        "label": "Foreign Exchange Adjustment",
                        "disabled": false,
                        "isSubtract": true
                    }, {
                        "name": "LocalAdjustment",
                        "label": "Local Adjustment",
                        "disabled": false,
                        "isSubtract": true
                    }
                ]
            }, {
                "name": null,
                "label": "Local List Price",
                "isSum": true,
                "isPercentBase": false,
                "disabled": false,
                "isSubtract": false
            }, {
                "name": null,
                "label": "On-Invoice Discounts",
```


e. Once all waterfall chart elements are defined, click **Continue**. This process takes around a minute to finish.

Dashboards (SIP)

- Waterfall Dashboards
- Revenue and Margin Dashboard
- Regional Revenue and Margin Dashboard
- Revenue Breakdown Dashboard
- Margin Breakdown Dashboard
- Outliers Dashboard
- Causality Dashboard
- Period Over Period Dashboard

Waterfall Dashboards

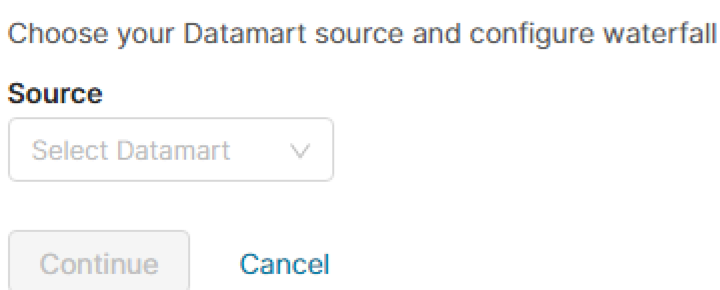
- PlatformManager Configuration
- Advanced Configuration
- Waterfall Dashboard
- Waterfall Comparison Dashboard

PlatformManager Configuration

- Datamart Selection
- Preloaded Template
- Waterfall Definition Glossary
- Form Controls
- Configuration Deployment

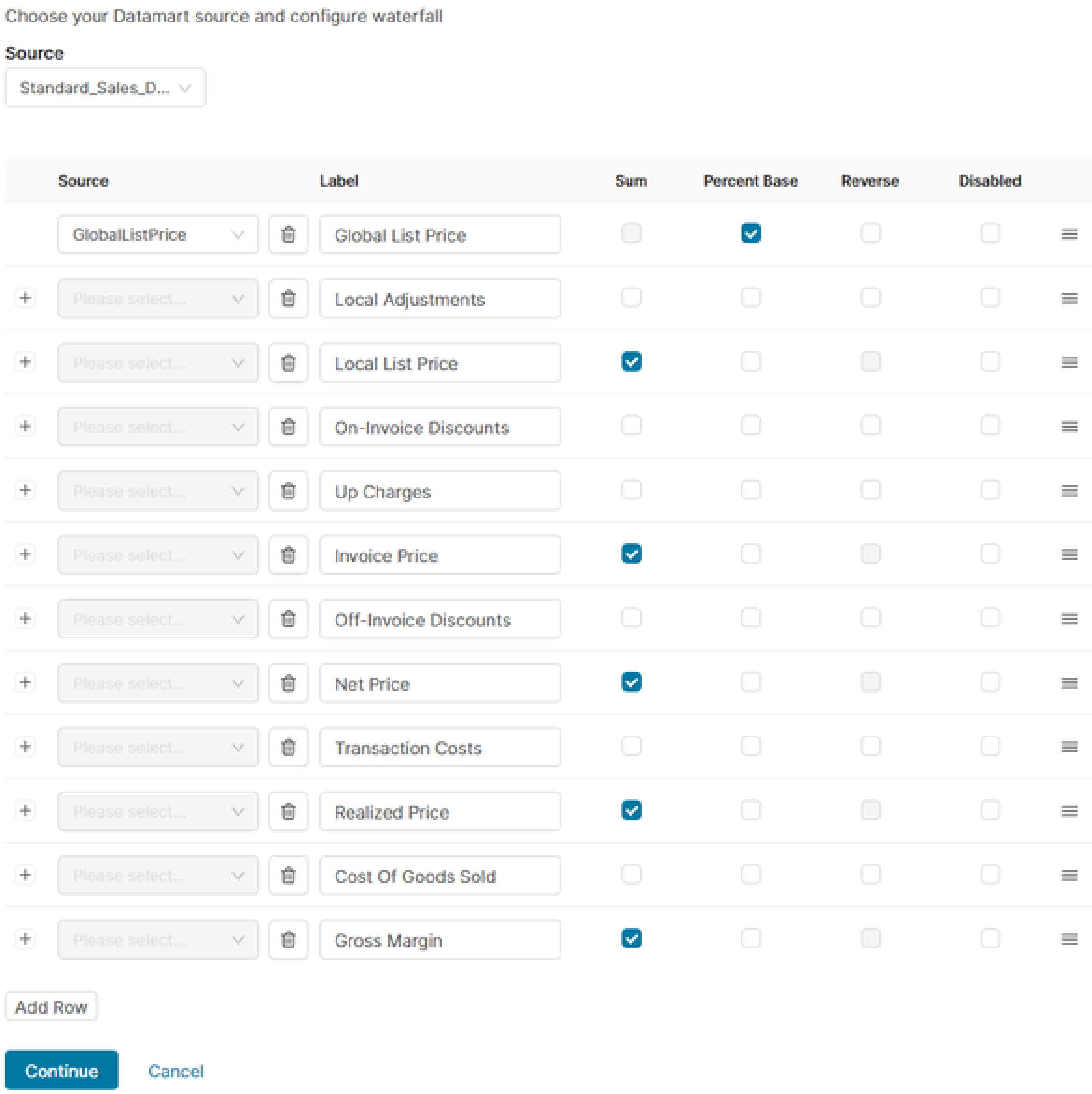
Datamart Selection

The initial step to start the waterfall configuration is selection of the source Datamart from which data will be fetched. SIP uses its own Datamart called Standard_Sales_Data.



Preloaded Template

If the Standard_Sales_Data DM is selected, the user will be presented with a predefined structure that can be used as a guide for further operations.



Any fields that are not defined in the selected DM will be automatically removed from the predefined template.

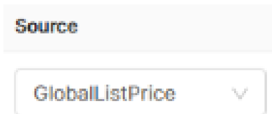
If configuration of the waterfall step is already present on the partition, it will be loaded instead of the the default template.

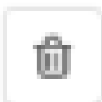
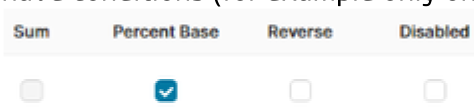
Waterfall Definition Glossary

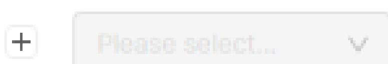
- **Source** – Field from Datamart used to retrieve a value for a given waterfall field.
- **Label** – Allows to define a custom label to the field that is going to be displayed on the chart.
- **Sum** – Defines the field as a sum, i.e. the value of this field will be calculated by summation of all previous fields. The first field cannot be a sum, the last one however must be.
- **Percent Base** – Marks the given field as a percentage base for percentage model calculations. There can be only one percentage base field.

- **Reverse** – Allows to reverse the value of a given field. Useful for creating subtractions if the data is stored in positive values.
  ⚠️ For elements with a sub-level, the fields in the sub-level are used for calculation and they should be reversed, not the parent field.
- **Disabled** – Marks the field as disabled. Disabled fields are not shown on the dashboard.

Form Controls

- **Source selection** – This input is used to select Datamart fields.
  

- **Remove** – This button allows you to remove the waterfall field definition.
  
- **Radio buttons** – These buttons allow you to select appropriate field parameters. Keep in mind they have conditions (for example only one radio button with Percent Base can be selected).
  

- **Move button** – This button allows you to move fields up and down. You need to click and hold it for 1 or 2 seconds before the move can happen.
  
- **Add sub-level** – Allows you to add sub-level fields for the drilldown functionality. Keep in mind that fields with sub-levels (parents) cannot have Datamart representations, but the sub-level fields can (children).
  

- **Add row** – Allows you to add a new waterfall field.
  

Configuration Deployment

After setup the configuration will be deployed to the partition in the Advanced Configuration section under the name "waterfall-configuration".

Advanced Configuration

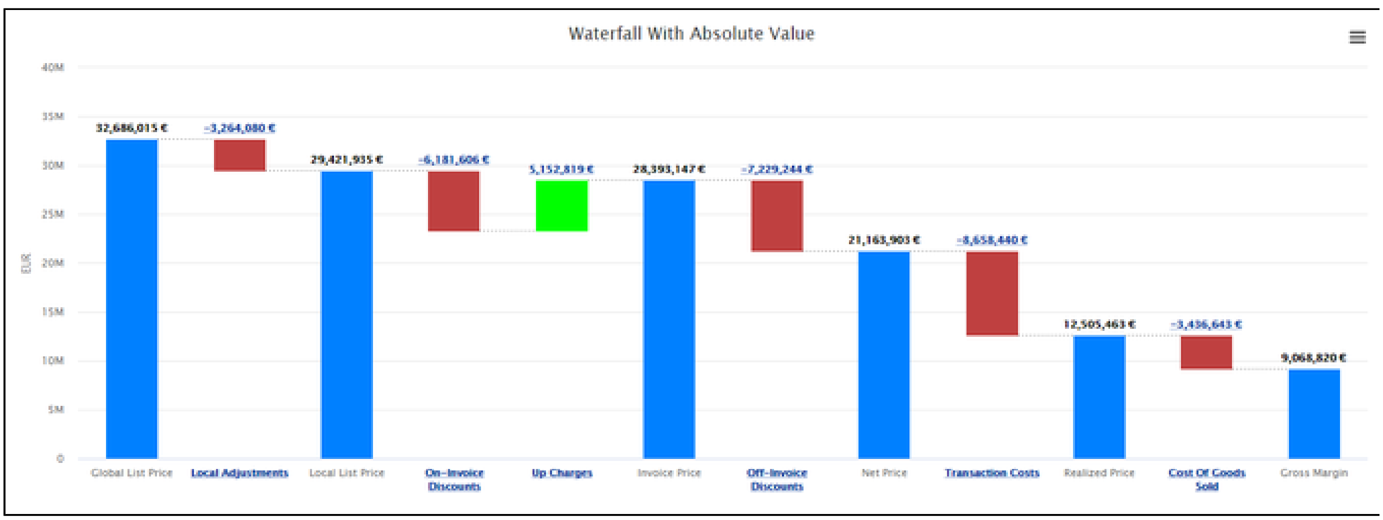
waterfall-configuration							
Field name	name	label	isSum	isPercentBase	disabled	isSubtract	subLevel

Values	{name of the field from transactions DM}	{custom label for the field to be displayed on the dashboard}	{true/false}	{true/false}	{true/false}	{true/false}	{list of elements that are used for drilldown under this field}
Description	Defines which transaction DM fields will be displayed in the waterfall dashboard. The names have to match exactly those from the DM.	Allows the user to set up a custom displayed value. For example: DM field Sales_Value_5 can be renamed to InvoicePrice.	Determines whether a given element should display the total sum across the entire series. Defaults to false. ⚠ The first entry is marked as **isSum = "No"**. ⚠ The last entry is marked as **isSum = "Yes"**.	Defines the base for percentage calculations. Only the first field marked with "Yes" will be taken into account. Defaults to false.	Determines whether a given field should no longer be displayed. Defaults to false.	Determines whether the value of the given field should be reversed. Defaults to false. ⚠ The values defined as isSubtract have their value multiplied by -1.	Defines the drilldown structure for a given field. The field definition follows the same structure as the parent element (without the isPercentBase column)

Field with both isSum and isSubtract set as "false" or left empty will display as a gain. Gains are displayed in green in the dashboard, losses in red.

Waterfall Dashboard

Waterfall Dashboard presents the standardized price waterfall analysis. The chart helps you understand how an initial value is affected by a series of intermediate positive or negative values. The columns are color-coded for distinguishing between positive and negative values.



In this section:

- Waterfall Dashboard - Set Up Data and Filters
- Waterfall Dashboard - Analyze Results
- Waterfall Dashboard - Details on Configuration

Waterfall Dashboard - Set Up Data and Filters

For this dashboard you can set the following inputs:

- **Product(s)** – Allows you to choose one of product attributes to be used for the analysis.
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Customer(s)** – Allows you to choose one of customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Date From/To** – Filters data for the analysis according to the given time range.
  - By default Date From is set to one year back.
  - By default Date To is set to today's date.
- **Waterfall Model** – Allows you to choose the display model used in the waterfall.
  - Currently there are 4 models available:
    1. Absolute (selected by default) – Displays raw data with a thousands separator and currency symbol. Includes a drill-down defined in the Advanced Configuration "waterfall-configuration".
    2. Percentage – Displays data converted to percentages. The percentage base is defined by the user in the Advanced Configuration "waterfall-configuration".
    3. Absolute Detail – Displays the same data as Absolute but without the drill-down functionality.
    4. By Absolute Unit – Displays data by unit value. Includes a drill-down defined in the Advanced Configuration "waterfall-configuration".
- **Select currency** – Allows you to choose the currency used in the dashboard. The exchange rate for the selected currency is fetched from system the "ccy" Data Source, the currency symbol is fetched from the "CurrencySymbols" PP.
- **Generic Filter** – Allows you to set up a generic transaction data filter. For example: display only data from Europe, or Asia.

Waterfall Dashboard - Analyze Results

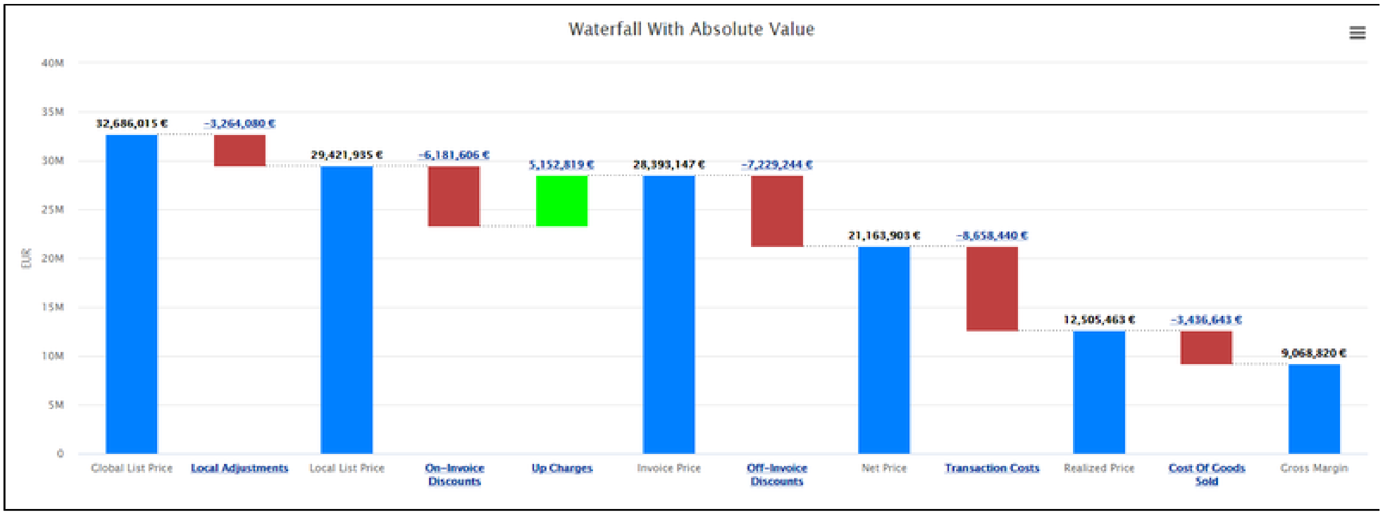
The dashboard provides the following models:

- Absolute
  - Default View
  - Drill-down for On-Invoice Discounts
- Percentage
- Absolute Detail
- By Absolute Unit

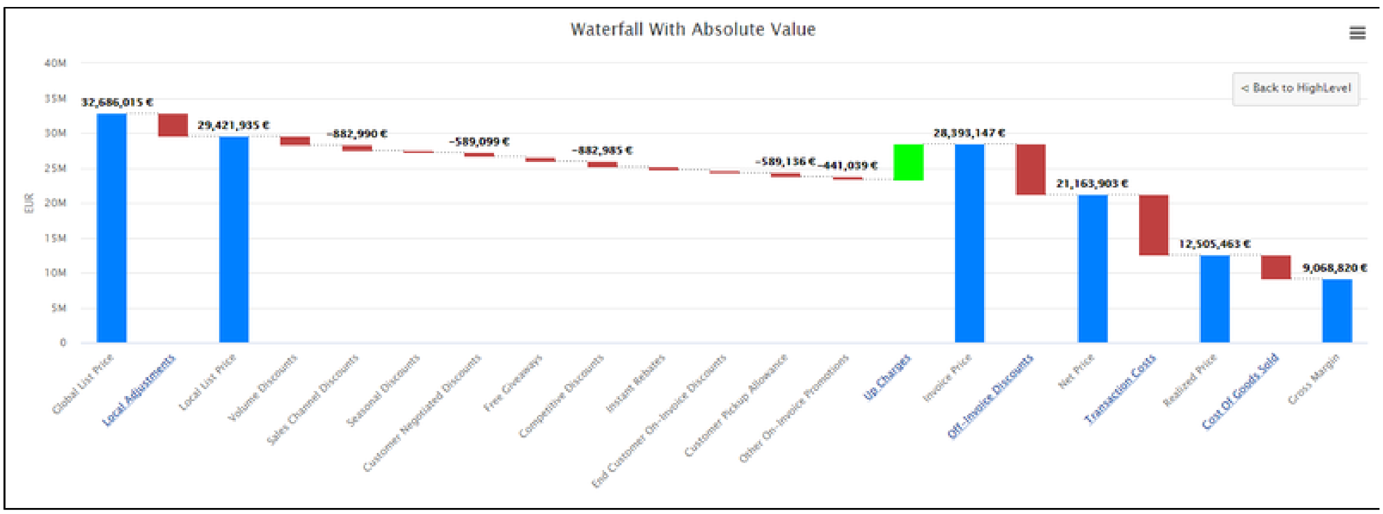
Visibility of the waterfall elements depends on availability of data in the transactional data and Price Parameter tables setup.

Absolute

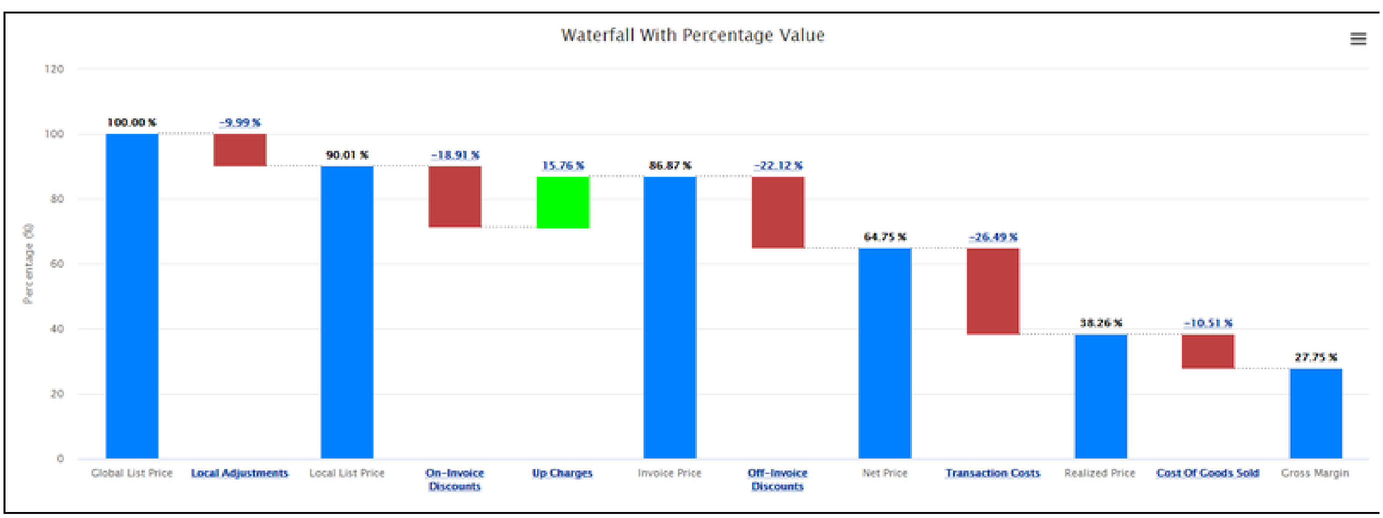
Default View



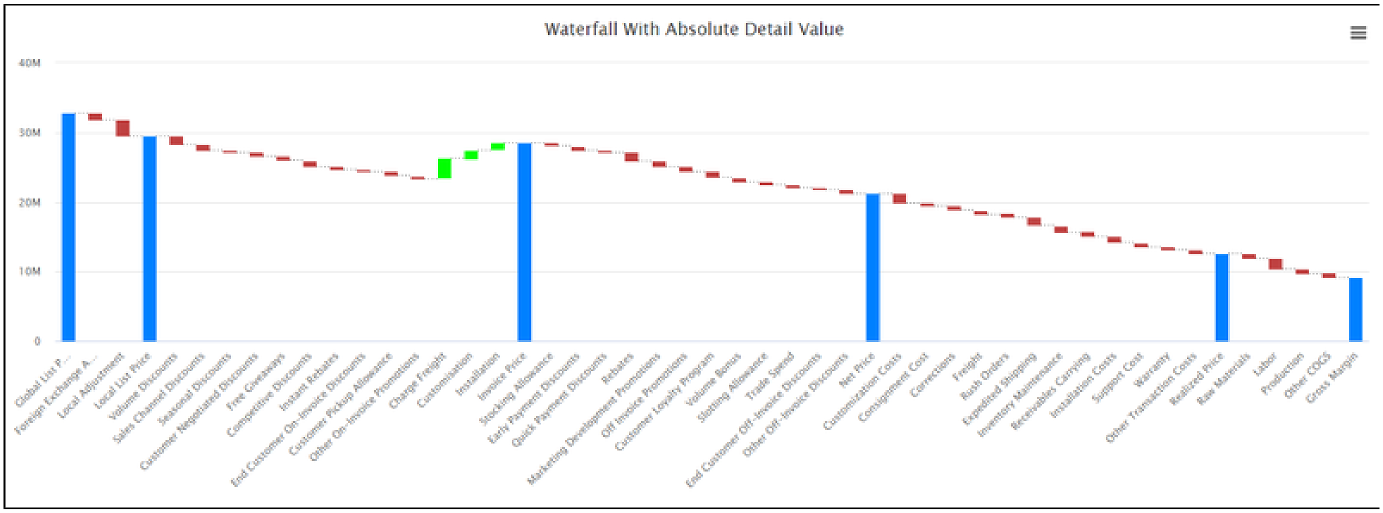
Drill-down for On-Invoice Discounts



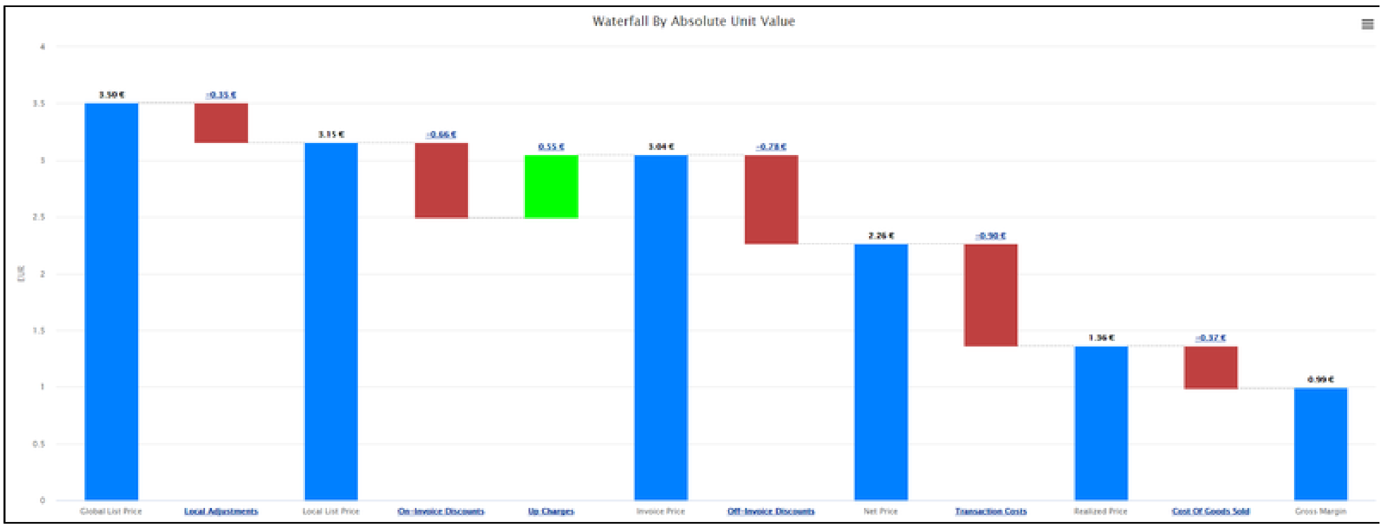
Percentage



Absolute Detail



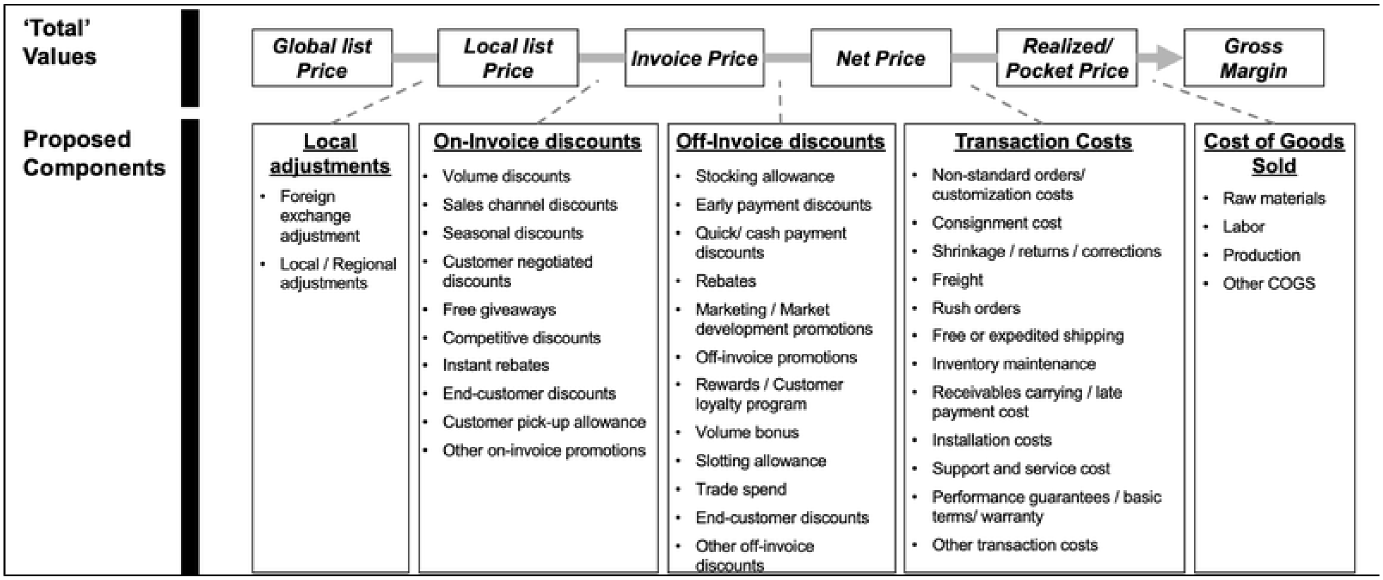
By Absolute Unit



Waterfall Dashboard - Details on Configuration

- Waterfall Dashboard - Fields Definition
- Waterfall Dashboard - Field Calculation

Waterfall Dashboard - Fields Definition



Total Value	Component	Description
Local adjustments	**Foreign exchange adjustment**	Adjustments due to exchange/currency issues
	Local/Regional adjustments	Adjustments for local costs (e.g. tariffs), regional customer preferences and market competitiveness
Volume discounts	**Volume discounts**	Discounts for bulk purchases
	Sales channel discounts	Discounts for a specific sales channel
	Seasonal discounts	Discounts for seasonal sales objectives (e.g. reduce inventory)
	Customer negotiated discounts	Customized discounts negotiated with the customer
	Free giveaways	Free services or products given to customer with a purchase and shown on the invoice
	Competitive discounts	Discretionary discounts negotiated before the order is taken based on competitors' prices
	Instant rebates	Rebates given before the invoice price
	End-customer discounts	Discounts for end-customer rather than retailer or distributor (typically large end-customers)
	Customer pick-up allowance	Allowance paid for customers who pick up the goods by themselves
	Other on-invoice promotions	Others

Stocking allowance	**Stocking allowance**	Discounts paid to wholesalers/retailers to make large purchases into inventory (often before seasonal demand increase)
	Early payment discounts	Negotiated discounts or deduction from the invoice if the payment is made early
	Quick/cash payment discounts	Deduction from the invoice price if payment is made quickly
	Rebates	Refunds given for purchasing at certain times, early orders or for selling a product to a specific customer
	Marketing/Market development promotions	Allowance paid to support advertising of manufacturer's brand or to promote sales in a specific market segment or during a promotional time period
	Rewards/Customer loyalty program	Redeem points for gifts or receive one-time promotions for those in loyalty programs; long-term agreements
	Volume bonus	End-of-year bonus paid to customers if the preset purchase volume targets are met
	Slotting allowance	Allowance paid to retailer to secure the set amount of shelf space and product positioning
	Trade spend	Allowance for retailer to discounts from MSRP (manufacturer's suggested retail price)
	End-customer discounts	Discounts for end-customer rather than retailer or distributor, types of pass-through
	Other off invoice discounts	Others
Non-standard orders / customization costs	**Non-standard orders / customization costs**	Costs associated with manufacturing and delivering a non-standard or customized order
	Consignment cost	Cost of funds when the supplier provides consigned inventory to a retailer or wholesaler
	Shrinkage / returns / corrections	Cost of defective or damaged products
	Freight	Cost of transporting goods to customer
	Rush orders	Higher costs associated with filing and transporting orders more quickly
	Free or expedited shipping	Higher costs of transporting goods to a specific customer

	Inventory maintenance	Cost to hold goods in inventory
	Receivables carrying / late payment cost	Cost of funds from the moment the invoice is sent until the payment is received; cost of delayed payments
	Installation costs	Cost of installing products, including transportation and labor costs
	Support and service cost	Cost of maintenance, general customer services, dedicated services, additional support, etc.
	Performance guarantees / basic terms/ warranty	Discounts that seller agrees to give buyers if the seller misses performance targets (e.g. quality levels, delivery times, price protects)
	Other transaction costs	Others
Raw materials	**Raw materials**	Cost of materials used to manufacture the product
	Labor	Wages for employees directly involved in manufacturing the product
	Production	Cost to manufacture the product
	Other COGS	Others

Waterfall Dashboard - Field Calculation

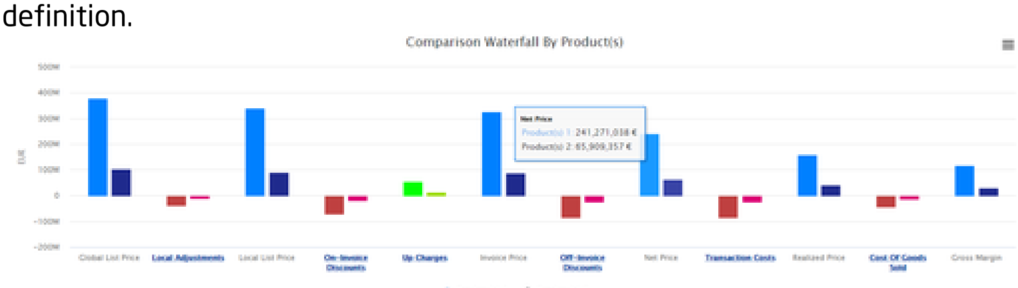
Each field value defined in the Advanced Configuration "waterfall-configuration" retrieved by querying its SUM from the Datamart.

The exceptions are fields marked as isSum – these are calculated based on previous field values.

For additional information about the configuration, see PlatformManager Configuration.

Waterfall Comparison Dashboard

The Waterfall Comparison dashboard allows you to compare waterfalls of different time periods, products, and customers. The dashboard is built on top of a standardized Waterfall Dashboard and follows the same definition.



In this section:

- Waterfall Comparison Dashboard - Set Up Data and Filters

- Waterfall Comparison Dashboard - Analyze Results
- Waterfall Comparison Dashboard - Details on Configuration

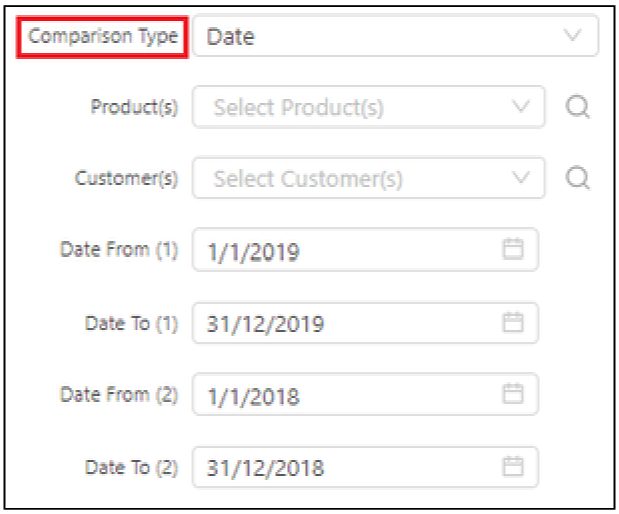
Waterfall Comparison Dashboard - Set Up Data and Filters

When setting up data for Waterfall Comparison Dashboard, there are some common user inputs and some which are specific for each type of the comparison.

- Specific User Inputs
  - Comparison Waterfall per Date
  - Comparison Waterfall per Product
  - Comparison Waterfall per Customer
- Common User Inputs

Specific User Inputs

The user inputs slightly differ for each type of the comparison: per Date, Product or Customer.



Comparison Waterfall per Date

- **Comparison Type** – Date
- **Product(s)** – Allows you to choose one of the product attributes to be used for the analysis.
- **Customer(s)** – Allows you to choose one of the customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
- **Date From/To (Period 1)** – Defines a date range for data used in the analysis – the first range.
  - By default Date From (1) is set to the first day of January one year back.
  - By default Date To (1) is set to the last day of December one year back.
- **Date From/To (Period 2)** – Defines a date range for data used in the analysis – the second range for comparison.
  - By default Date From (2) is set to the first day of January two years back.
  - By default Date To (2) is set to the last day of December two years back.

Comparison Waterfall per Product

- **Comparison Type** – Product
- **Product(s) 1** – Allows you to choose one of the product attributes to be used for the analysis.

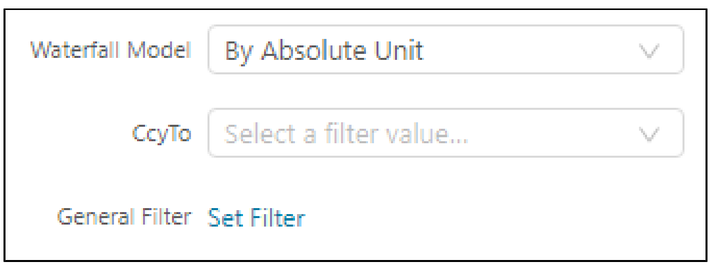
- **Product(s) 2** – Allows you to choose one of the product attributes to be used for the analysis for comparison.
- **Customer(s)** – Allows you to choose one of the customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
- **Date From/To** – Filters data for the analysis according to the given time range.
  - By default Date From is set to the first day of January one year back.
  - By default Date To is set to the last day of December one year back.

Comparison Waterfall per Customer

- **Comparison Type** – Customer
  - Available for selection only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
- **Product(s)** – Allows you to choose one of the product attributes to be used for the analysis.
- **Customer(s) 1** – Allows you to choose one of the customer attributes to be used for the analysis.
- **Customer(s) 2** – Allows you to choose one of the customer attributes to be used for the analysis for comparison.
- **Date From/To** – Filters data for the analysis according to the given time range.
  - By default Date From is set to the first day of January one year back.
  - By default Date To is set to the last day of December one year back.

Common User Inputs

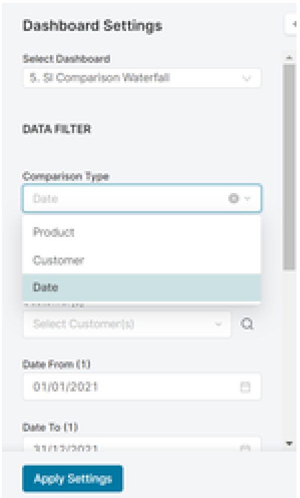
There are also common inputs that do not change based on the selected Comparison Type:

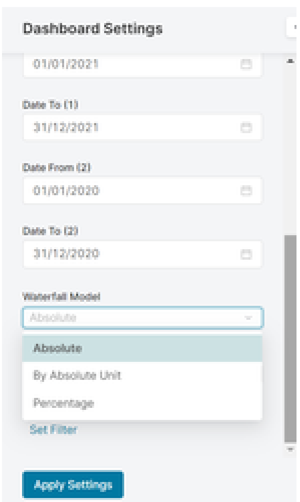


- **Waterfall Model** – Allows you to choose the display model used in the waterfall.
  - Currently there are 4 models available:
    1. Absolute (selected by default) – Displays raw data with a thousands separator and currency symbol. Includes a drill-down defined in the Advanced Configuration "waterfall-configuration".
    2. Percentage – Displays data converted to percentages. The percentage base is defined by the user in the Advanced Configuration "waterfall-configuration".
    3. Absolute Detail – Displays the same data as Absolute but without the drill-down functionality.
    4. By Absolute Unit – Displays data by unit value. Includes a drill-down defined in the Advanced Configuration "waterfall-configuration".
- **Select currency** – Allows you to choose the currency used in the dashboard. The exchange rate for the selected currency is fetched from system the "ccy" Data Source, the currency symbol is fetched from the "CurrencySymbols" PP.
- **Generic Filter** – Allows you to set a generic transaction data filter. For example: display only data from Europe or Asia.

Waterfall Comparison Dashboard - Analyze Results

For all three comparisons which are Product, Customer, and Date, there are the Waterfall Model types Absolute, Percentage, and By Absolute Unit. With enabled drill-down for adjustments.

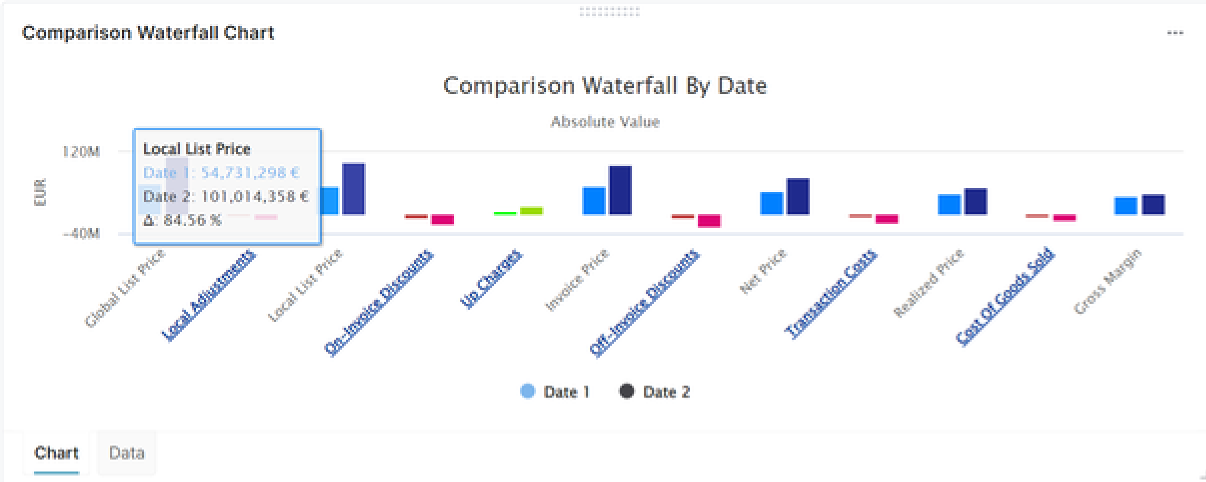




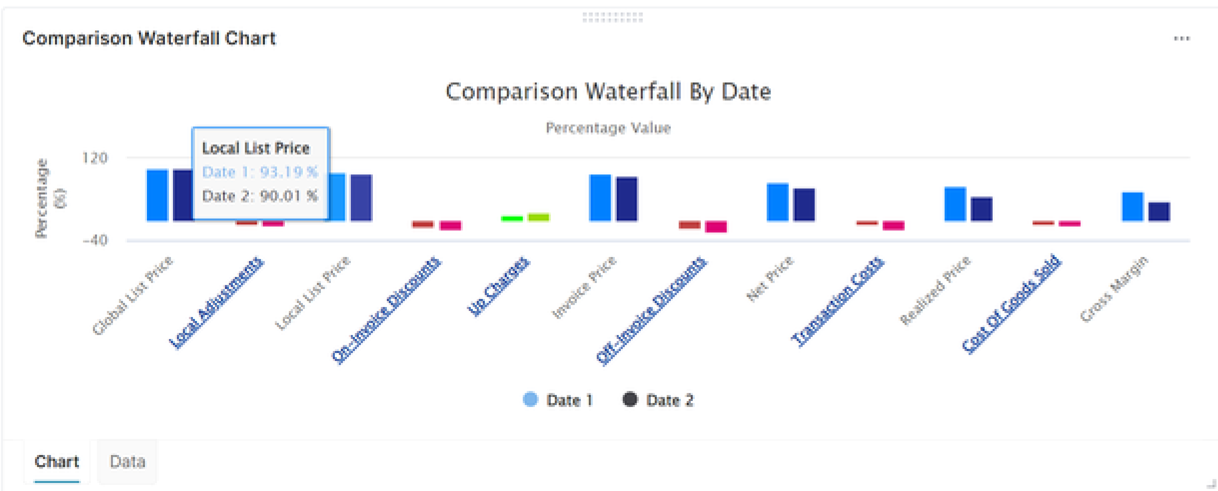
- Comparison Waterfall per Time Period
- Comparison Waterfall per Product(s)
- Comparison Waterfall per Customer(s)

Comparison Waterfall per Time Period

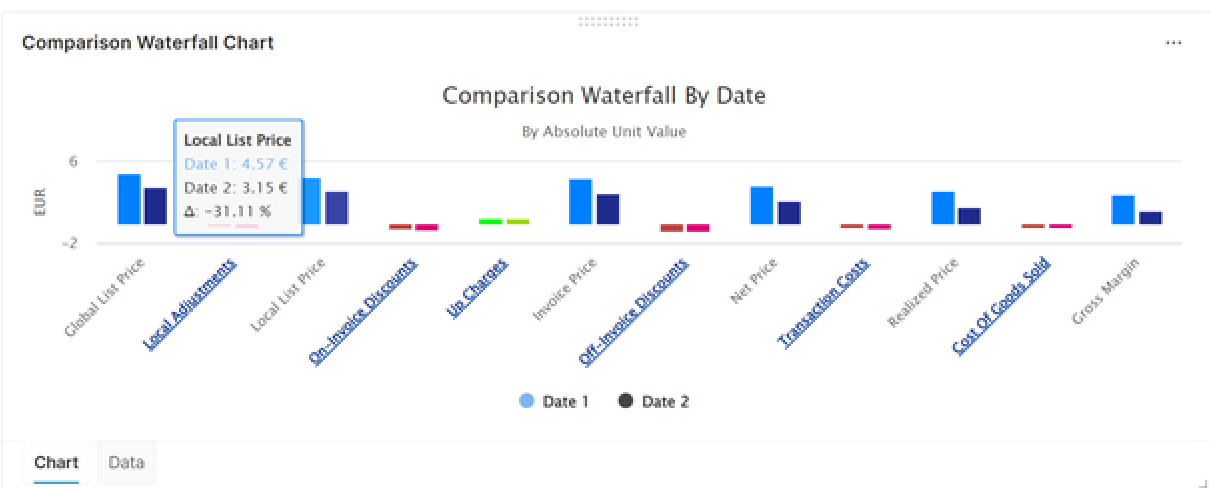
When the Waterfall Model is Absolute:



When the Waterfall Model is Percentage:

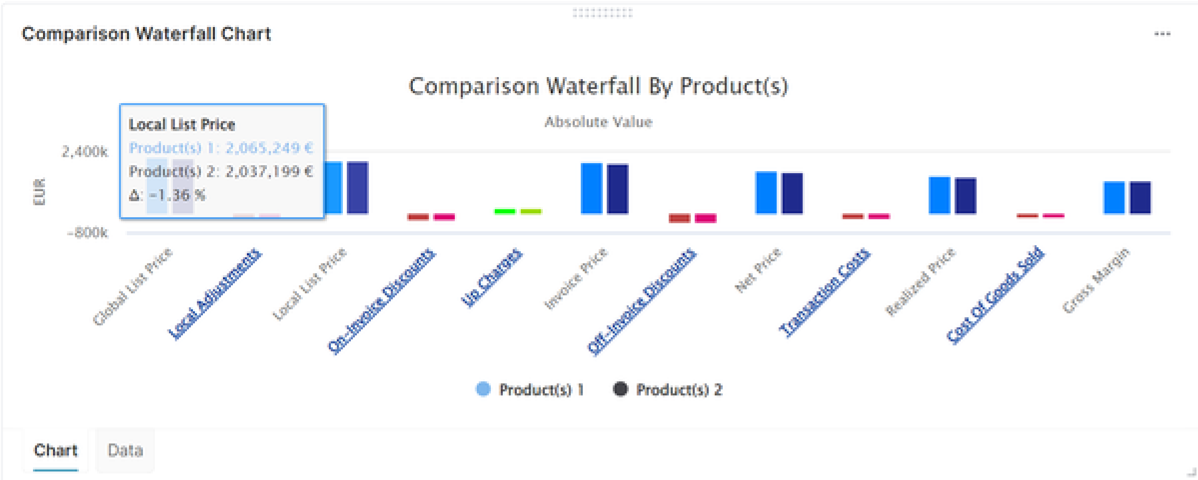


When the Waterfall Model is By Absolute Unit:

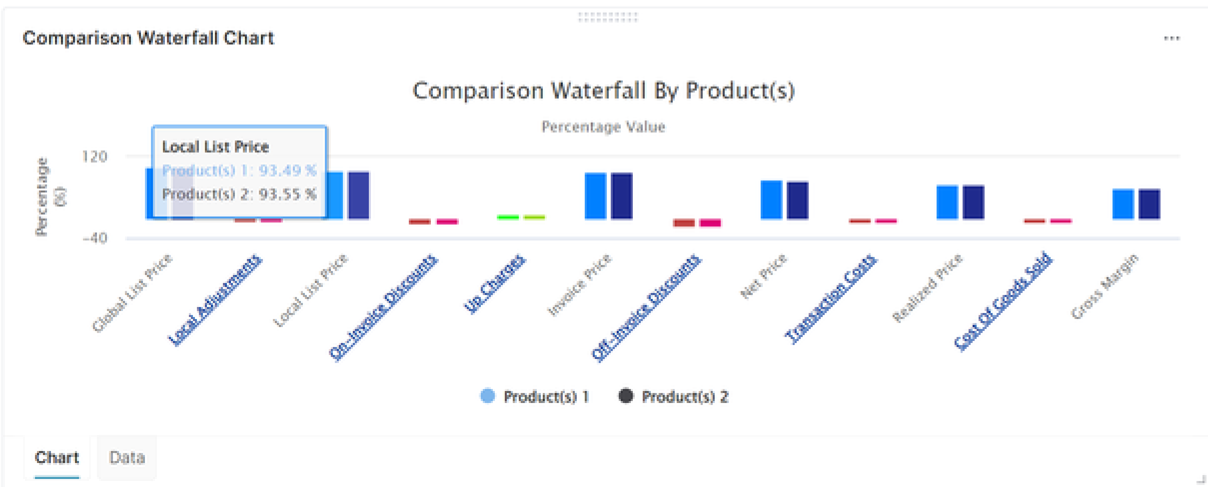


Comparison Waterfall per Product(s)

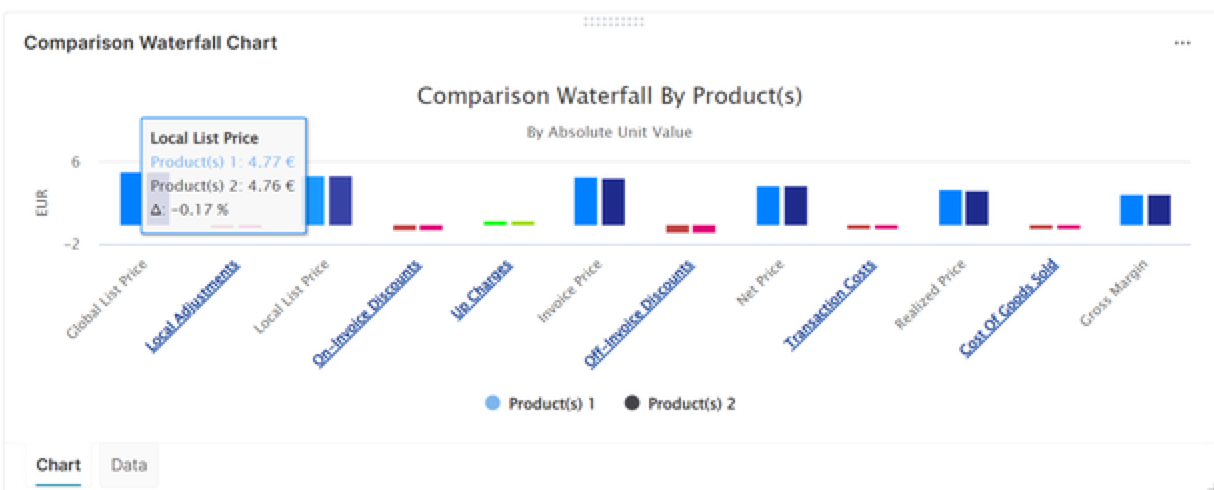
When the Waterfall Model is Absolute:



When the Waterfall Model is Percentage:

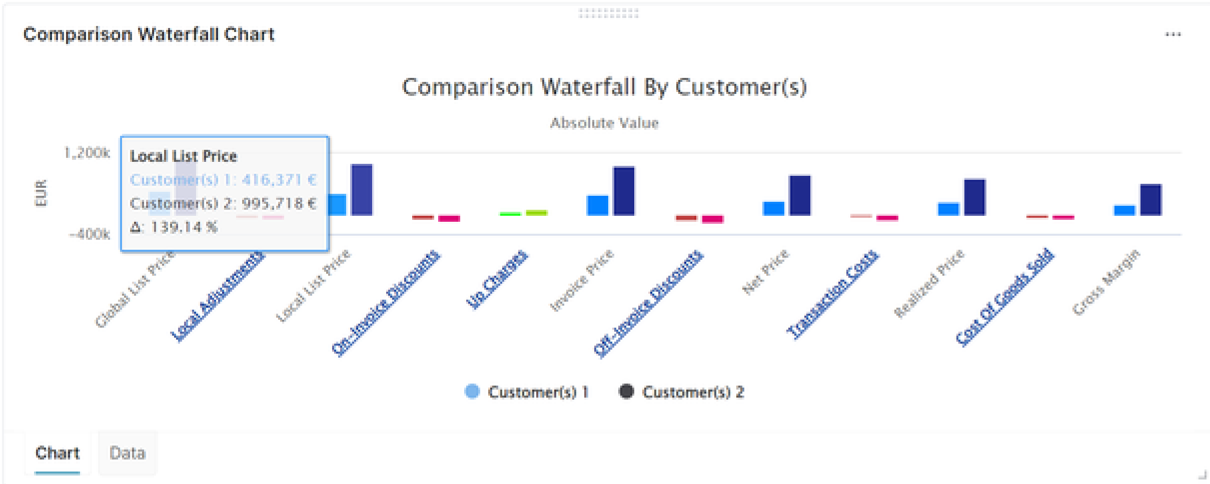


When the Waterfall Model is By Absolute Unit:

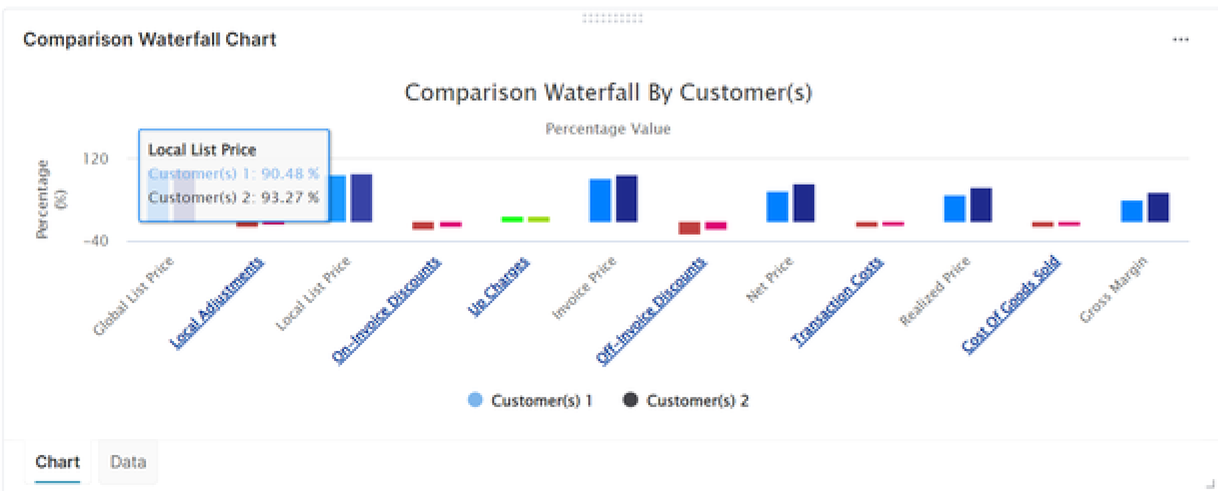


Comparison Waterfall per Customer(s)

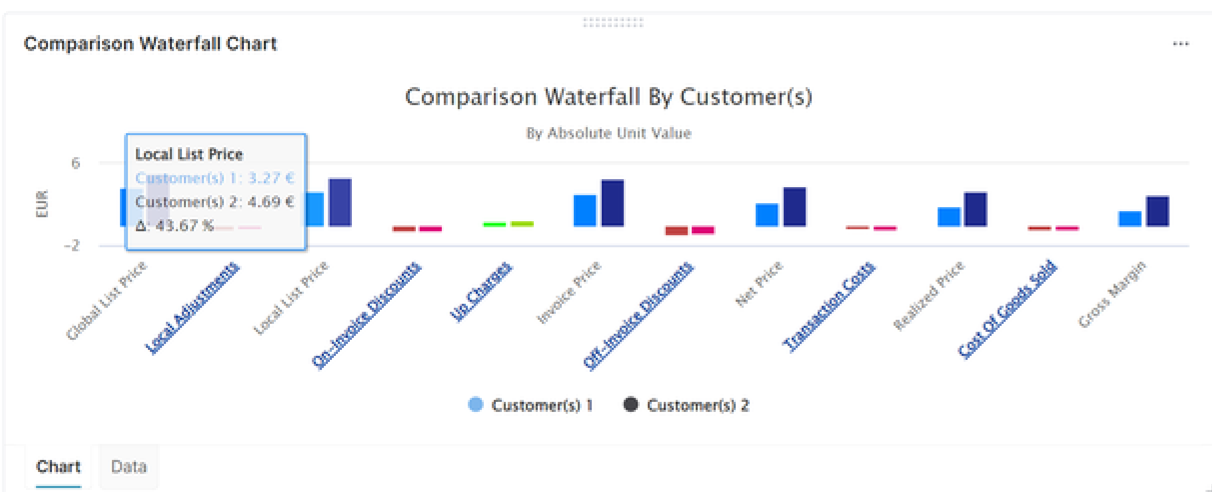
When the Waterfall Model is Absolute:



When the Waterfall Model is Percentage:



When the Waterfall Model is By Absolute Unit:



Waterfall Comparison Dashboard - Details on Configuration

- Waterfall Comparison Dashboard - Used Advanced Configuration Fields

Waterfall Comparison Dashboard - Used Advanced Configuration Fields

Waterfall Comparison uses the following fields from SIP_AdvancedConfiguration:

- datamartName
- pricingDate
- productId
- customerId (optional)
- quantity

Revenue and Margin Dashboard

Revenue and Margin Dashboard helps you visualize and analyze the relationship between Revenue and Margin % from different perspectives of time, product and customer. You can customize the date range and set of products/customers for analysis.

In this section:

- Revenue and Margin Dashboard - Set Up Data and Filters
- Revenue and Margin Dashboard - Analyze Results
- Revenue and Margin Dashboard - Details on Configuration

Revenue and Margin Dashboard - Set Up Data and Filters

For this dashboard you can set the following inputs:

- **Product(s)** – Allows to choose one of product attributes to be used for the analysis.,
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Customer(s)** – Allows to choose one of customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Date From/To** – Filters data for the analysis according to the given time range.
  - By default Date From is set to one year back.
  - By default Date To is set to today’s date.
- **Time Period** – Allows you to define data aggregation for the ”Revenue and Margin % in Time” analysis. The available values are: Week, Month, Quarter (default), Year.
- **Product Aggregation** – Allows to define a custom grouping dimension to reduce the granularity of the product data. The product dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.

- **Customer Aggregation** – Allows to define a custom grouping dimension to reduce the granularity of the customer data. The customer dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration)
- **Band By for Products** – Allows to define additional grouping of data points in the analysis by a different dimension related to the products.
- **Band By for Customer** – Allows to define additional grouping of data points in the analysis by a different dimension related to the customers.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration)
- **Column chart axis type** – Allows to define type of Y axis used on the chart. The available values are: Linear (default), Logarithmic.
- **Select currency** – Allows you to choose the currency used in the dashboard. The exchange rate for the selected currency is fetched from system the "ccy" Data Source, the currency symbol is fetched from the "CurrencySymbols" PP.
- **Generic Filter** – Allows you to set up a generic transaction data filter. For example: display only data from Europe, or Asia.

Revenue and Margin Dashboard - Analyze Results

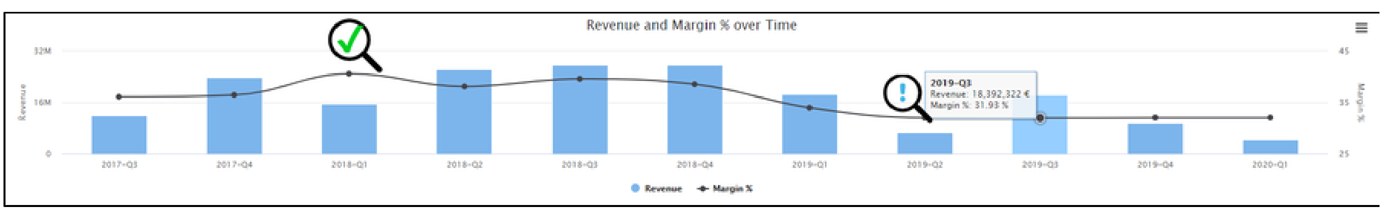
The dashboard provides the following summaries:

- Revenue and Margin % in Time
- Revenue and Margin % per Product
- Revenue and Margin % per Customer
- Revenue and Margin Contribution per Product/Customer
- Revenue Pareto per Product/Customer

Revenue and Margin % in Time

Helps you analyse the relationship between Revenue and Margin % in the time aggregated per the defined time dimension.

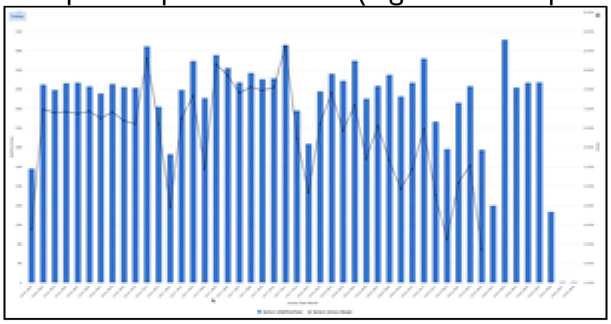
- X axis displays the time period aggregation as defined by the Time Period input.
- Left hand side Y axis shows the Revenue scale.
- Right hand side Y axis shows the Margin % scale.



What to look out for:

- Generally, if the revenue is low at a certain period, at least we want to keep the margin high.
- Pay attention to those periods where both margin and revenue are low and make sure it does not stay this way.

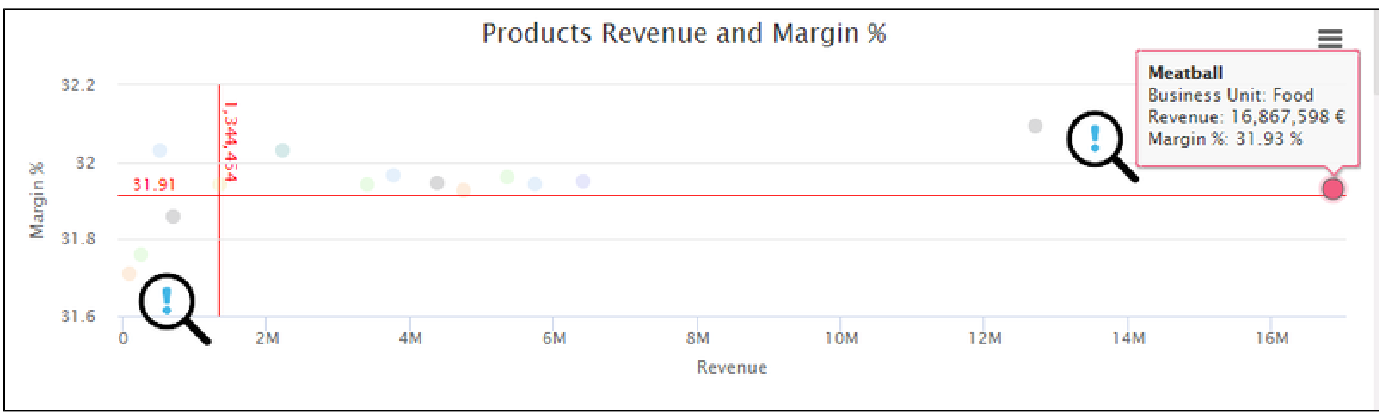
- This chart helps you discover whether there is any seasonal pattern in your data. You can use this as an input for price decisions (e.g. lower the price in less busy periods). See an example:



Revenue and Margin % per Product

Helps you analyse the relationship between Revenue and Margin % on the product level using the selected aggregation. The data points in the analysis can be colored by the product dimensions set by 'Band By For Product' which helps visualize the correlation per the chosen product attribute.

- X axis displays the sum of Revenue per chosen product aggregation.
- Y axis displays the sum of Margin % per chosen product aggregation.
- The first line is horizontal and at a defined percent value of the lowest margin (typically 10%), the second line is vertical and at a defined percent value of the lowest revenue. This divides the chart in four sections.



What to look out for:

- **Bottom left section** – Shows products with low margin % & low revenue. For these products consider raising their price, so that they move up to the top (their margin increases) or work on increasing the volume of sold products (and thus move right towards a bigger revenue). The optimal move here is to go with the product to the top right sections (i.e. increase both margin and revenue).
- **"Risky business" in top right section** – This may mean that a customer buys large quantities for a high price. There is a risk of losing such a customer if they find out that others get the same product for a lower price. The optimal scenario is to have the dots grouped around some average price value.

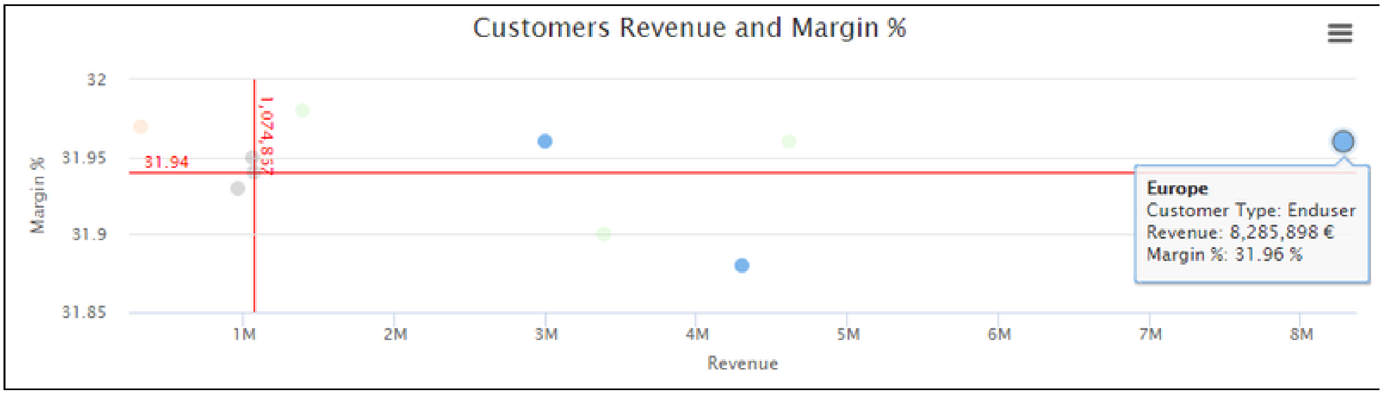
⚠ Due to performance reasons this chart is limited to display only top 50 products. These product values are used to calculate the plot lines.

Revenue and Margin % per Customer

Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).

Helps you analyze the relationship between Revenue and Margin % on the customer level using the selected aggregation. The data points in the analysis can be colored by the customer dimensions set by 'Band By For Customer' which helps you visualize the relationship per the chosen customer attribute.

- X axis displays the sum of Revenue per chosen customer aggregation.
- Y axis displays the sum of Margin % per chosen customer aggregation.
- The first line is horizontal and at defined % of the lowest margin, the second line is vertical and at defined % of the lowest revenue. This divides the chart in four squares: the bottom left square shows low margin %, low revenue customers. It can be worthwhile to look into raising prices for these customers.



What to look out for:

- The chart shown above illustrates that it may happen that large customers generating large revenue may not reach the optimal margin, yet it pays off to keep these customers.
- On the other hand, small customers get the products for higher prices and generate larger margin.

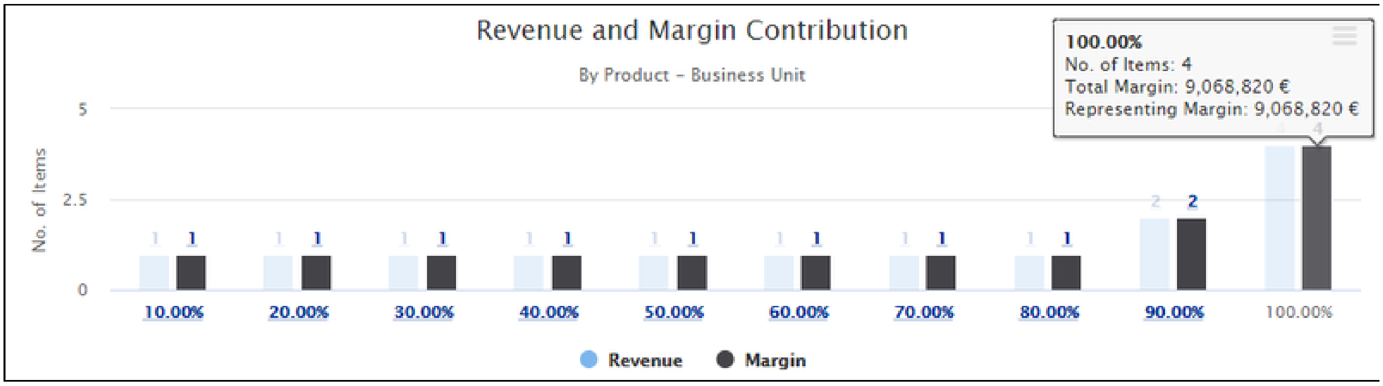
Due to performance reasons this chart is limited to display only top 50 customers. These product values are used to calculate the plot lines.

Revenue and Margin Contribution per Product/Customer

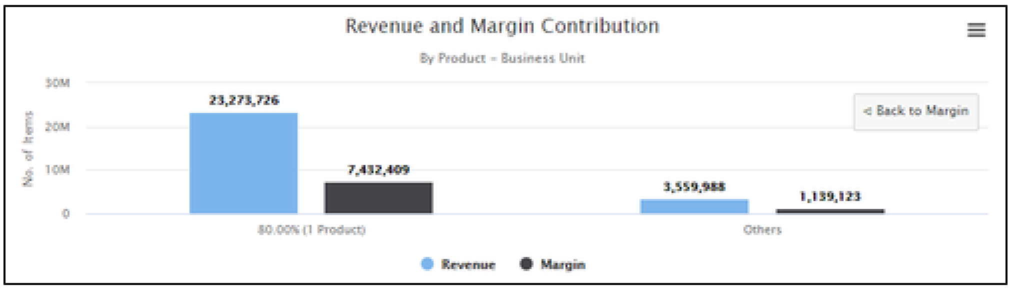
These two charts display Revenue and Margin split into defined buckets to visualize the number of product/customer aggregation levels needed to cover each bucket (cumulative contribution).

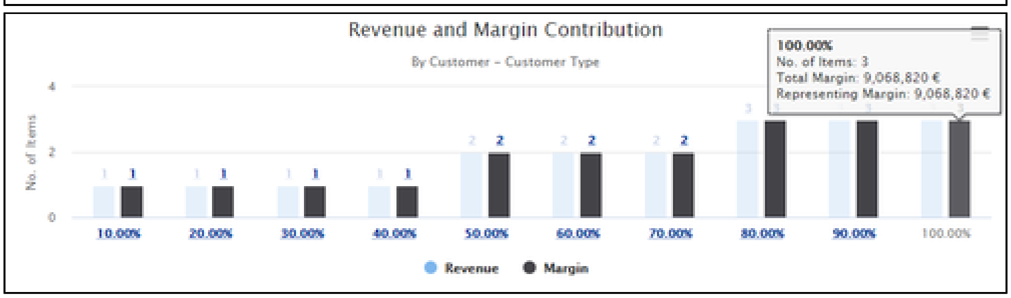
Customer Revenue and Margin Contribution are displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).

Each data point displays the number of items in the bucket, the total revenue/margin of the items in the bucket and the revenue/margin representing the bucket.
In the screenshot below, 80% of the revenue and margin is covered by 8 products, whereas the remaining 20% are covered by 6 products.



There is also a possibility to preview each of the bucket contents by clicking on the percentage labels. It displays which particular customers/products contribute to the bucket.





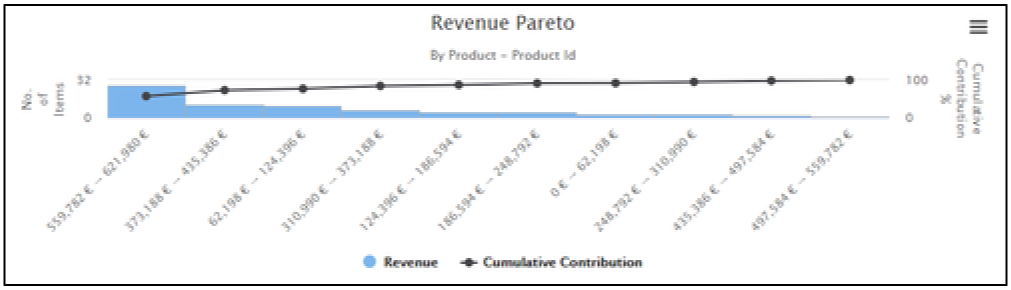
What to look out for:

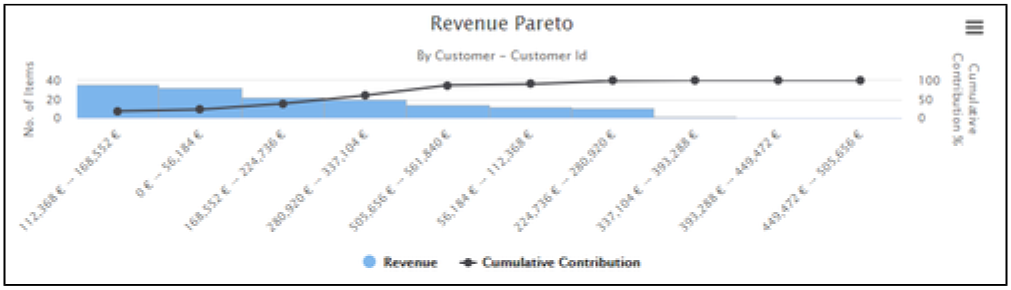
- It is good to have the buckets filled in evenly; i.e. not to rely on just one product/customer contributing most.

Revenue Pareto per Product/Customer

These two charts display Revenue and Margin % split into some bins to visualize the number of product /customer aggregation levels needed to cover each bin (cumulative contribution).

> Customer Revenue and Margin Pareto are displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).





Revenue and Margin Dashboard - Details on Configuration

- Revenue and Margin Dashboard - Used Price Parameters
- Revenue and Margin Dashboard - Field Calculation
- Revenue and Margin Dashboard - Data Requirements

Revenue and Margin Dashboard - Used Price Parameters

PFXTemplate_DB_RevenueAndMargin

Name	Value	Description
bucketStartPercent	0-1, e.g. 0.2	Defines the starting percentage for the buckets in the Contribution charts.
bucketEndPercent	0-1, e.g. 0.8	Defines the ending percentage for the buckets in the Contribution charts.
numberOfBuckets	any Integer, e.g. 10	Defines the number of buckets in the Contribution charts. The values displayed on each bucket will depend on start/end values.
histogramBins	any Integer, e.g. 10	Number of bins displayed in the Pareto charts.
scatterPlotPercent	0-1, e.g. 0.1	Defines the percentage at which the revenue/margin plot lines will be displayed on the Revenue and Margin % charts.

Revenue and Margin Dashboard - Field Calculation

- Revenue = SUM(revenue)
- Margin = SUM(grossMargin)
- Margin % = SUM(grossMargin) / SUM(revenue) * 100

There are some default filters put on various fields to ensure proper calculations. These are:

- Only entries with **not null grossMargin** are considered.
- Only entries with **not null invoicePrice** are considered.

Revenue and Margin Dashboard - Data Requirements

Before deploying this package, it is possible to modify some parameters of this dashboard to adapt to an existing Datamart. The following fields are used for the setup:

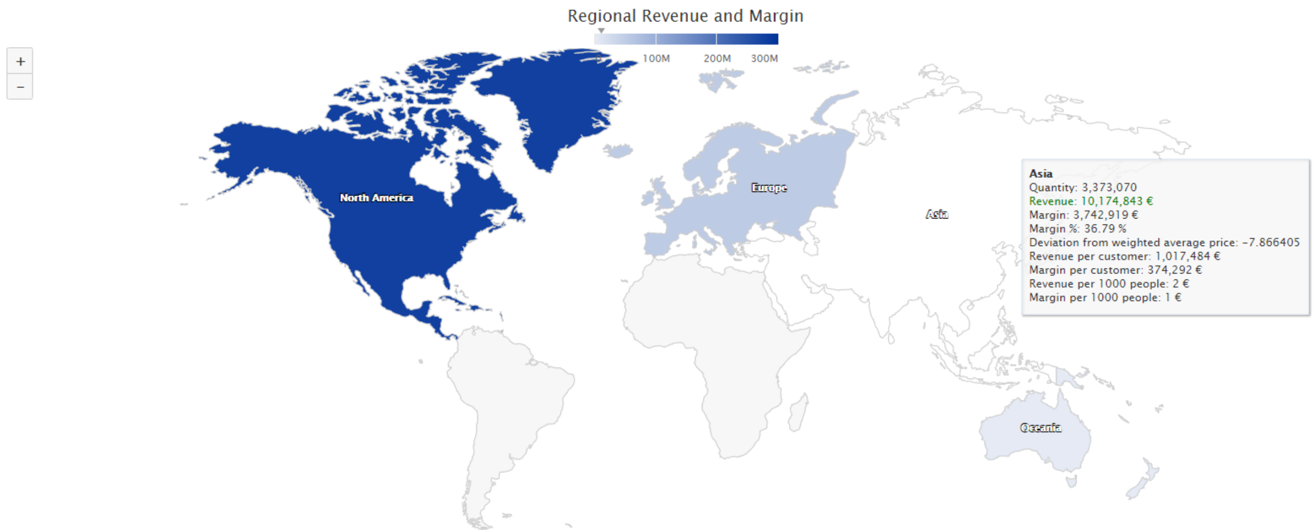
Field Name	Description	Required
Datamart	Datamart used in the analysis	Yes
Product Id	Product Id field in the transactional data	Yes
Customer Id	Customer Id field in the transactional data	No
Invoice Price	Field representing revenue in the transactional data	Yes
Gross Margin	Field representing margin in the transactional data	Yes
Pricing Date	Field representing date of the transaction in the transactional data	Yes
Product Name	Product name field in the data	No
Customer Name	Customer name field in the data	No

Regional Revenue and Margin Dashboard

The Regional Revenue and Margin Dashboard presents KPIs distribution on the world map. It helps you analyze relationships between different continents, countries or regions based on a KPI distribution.

The dashboard provides four levels of a view based on the available Datamart data and configuration:

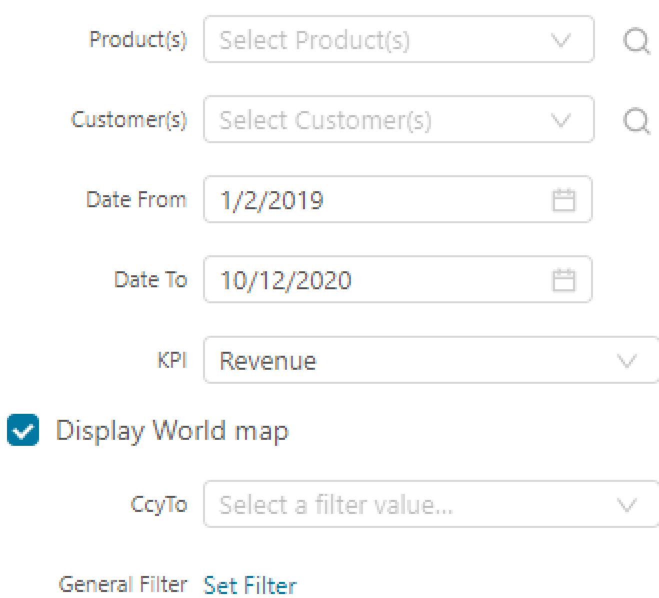
- World
- Continent
- Country
- Region



In this section:

- Regional Revenue and Margin Dashboard - Set Up Data and Filters
- Regional Revenue and Margin Dashboard - Analyze Results
- Regional Revenue and Margin Dashboard - Details on Configuration

Regional Revenue and Margin Dashboard - Set Up Data and Filters



For this dashboard you can set the following inputs:

- **Product(s)** - Allows you to choose one of the product attributes to be used for the analysis.
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Customer(s)** - Allows you to choose one of the customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Date From/To** - Filters data for the analysis according to the given time range.

    - By default Date From is set to one year back.
    - By default Date To is set to today's date.
- **KPI** – Allows you to choose from the following KPIs for the analysis:
    - Quantity
    - Revenue (selected by default)
    - Margin
    - Margin %
    - Deviation from Weighted Average Price (WAP)
    - Revenue per Customer
        - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
    - Margin per Customer
        - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
    - Revenue per 1000 people (see the note on population)
    - Margin per 1000 people (see the note on population)
- **Region Configurator** – Allows you to choose which hierarchy level to display on the map.
    - Depending on what is selected, the map behaves differently:
        - If you select to display world The map will show Level 1: World (continents of the world shown).
        - If you choose Continent and do not choose Country. The map will show Level 2: Continent (countries of this continent shown).
        - If you choose Continent, Country and do not choose Region. The map will show Level 3: Country (regions of this country shown).
          See the Supported Maps page for more details.
        - If you choose Continent, Country, Region. The map will show Level 4: Region (sectors of this region shown).
          There is no sector support for now.
    - The world level is displayed by checking the "Display World map" checkbox.

    - If the world level is unchecked, the selection boxes come up and allow users to select other defined hierarchy levels.

- **Select currency** – Allows you to choose a currency to be used in the dashboard. The exchange rate for the selected currency is fetched from the system"ccy" Data Source, the currency symbol is fetched from the "CurrencySymbols" PP.
- **Generic Filter** – Allows you to set a generic transaction data filter. For example: display only data from Europe, or Asia.

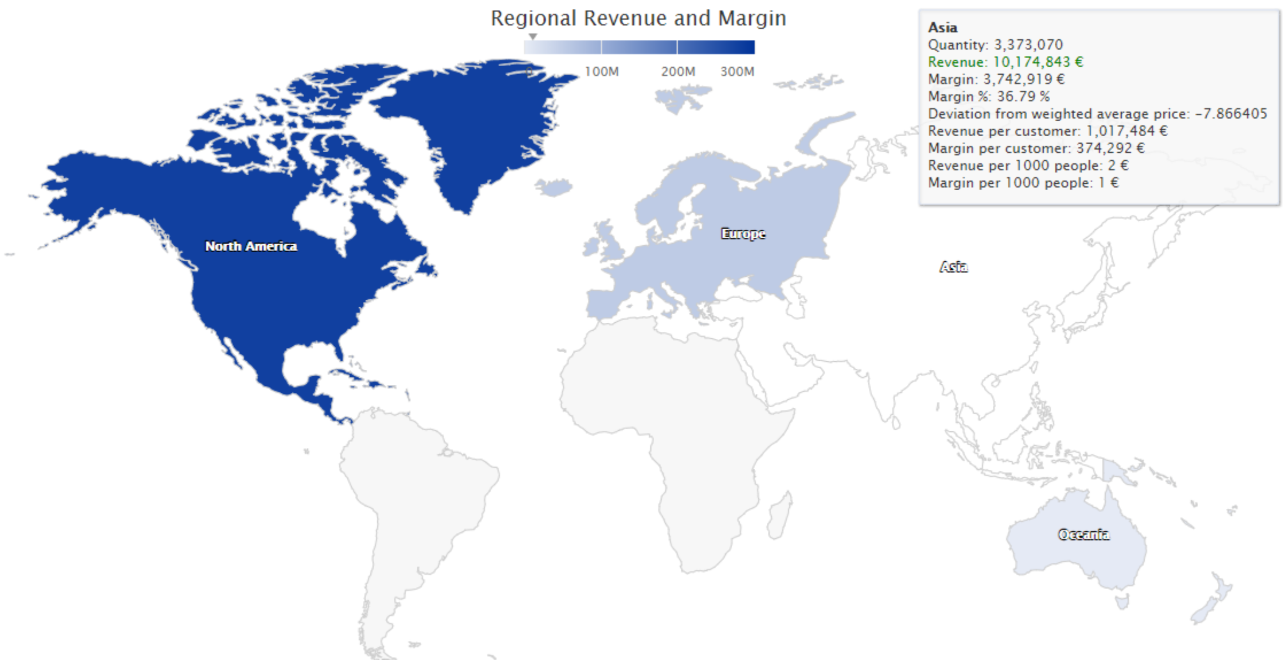
Regional Revenue and Margin Dashboard - Analyze Results

The following map models are available:

- World Map
- Continent Map
- Country Map

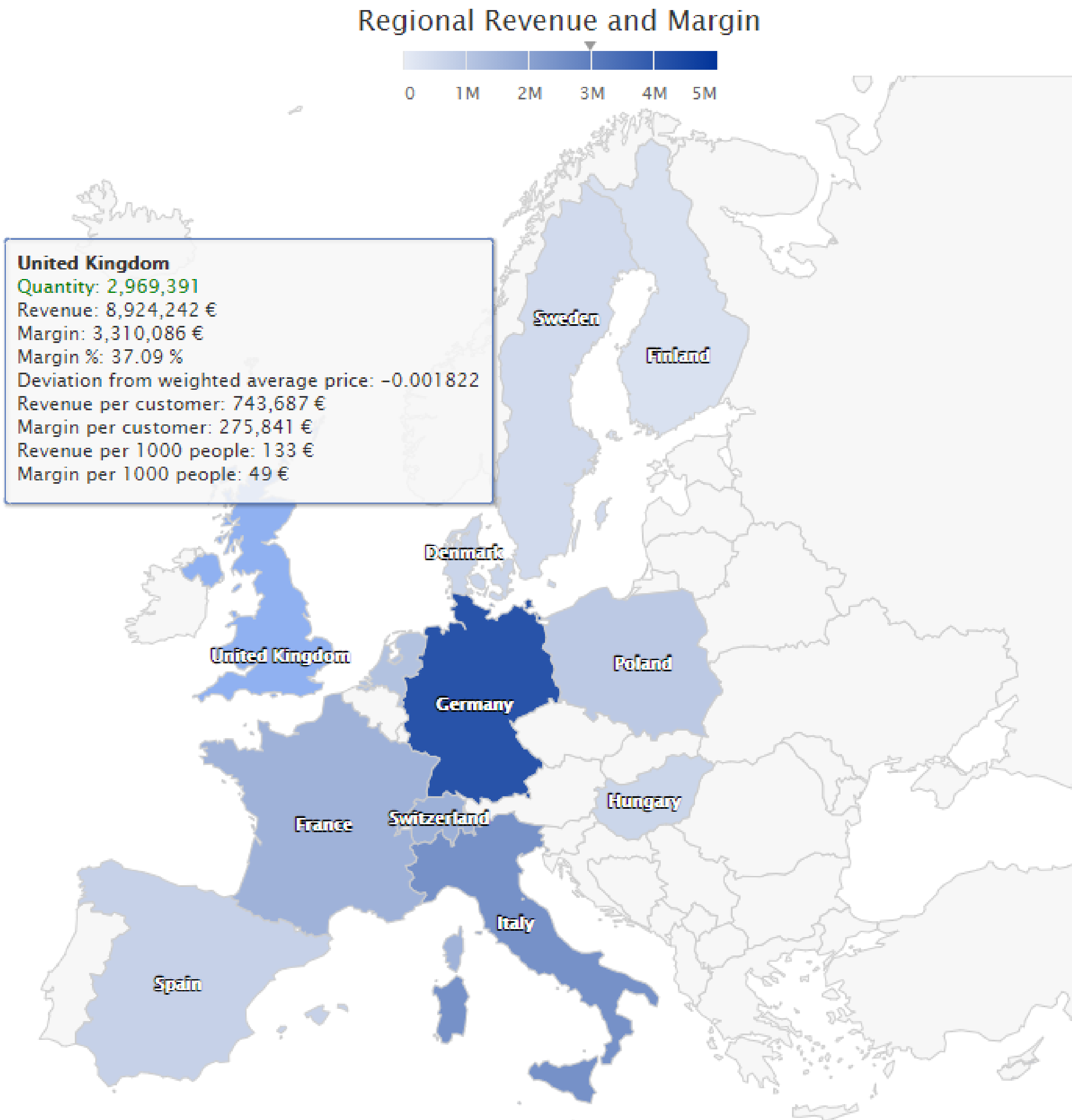
World Map

Helps you analyze the selected KPI (in this case Revenue) distribution between different continents. Beside the selected KPI, it also shows information on other KPIs for each continent.



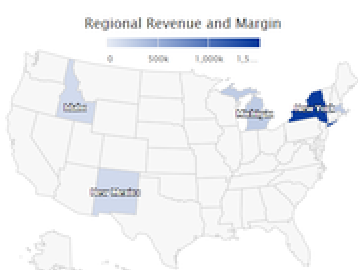
Continent Map

Helps you analyze the revenue distribution between different countries of a selected continent. Beside the selected KPI, it also shows information on other KPIs for each country.



Country Map

Helps you analyze the revenue distribution between different regions of a selected country. Beside the selected KPI, it also shows information on other KPIs for each region.



Note on Population

To calculate Revenue or Margin per 1000 people, we need to work with the continent/country/region /sector population, so we have a Price Parameter table to store it. If you need to update the population, you can update it in the PP table named "SIP_Population".

Regional Revenue and Margin Dashboard - Details on Configuration

- Regional Revenue and Margin Dashboard - Supported Map Types
- Regional Revenue and Margin Dashboard - Fields Definition
- Regional Revenue and Margin Dashboard - Used Advanced Configuration Fields
- Regional Revenue and Margin Dashboard - Used Price Parameters
- Regional Revenue and Margin Dashboard - Data Requirements and Deployment

Regional Revenue and Margin Dashboard - Supported Map Types

World

- World Continents

Continents

- Europe
- North America
- Asia
- Oceania
- Africa
- South America

Countries

All the countries listed under the Countries heading on the Map Collection page are supported with the exception of countries that have more than one map – in this case only the primary map is supported (e.g., 'Burundi' is supported but 'Burundi, admin2' is not).

For more details see How to Add a Map to Dashboard.

Regional Revenue and Margin Dashboard - Fields Definition

Fields displayed on the dashboard are calculated in the following manner (using the Advanced Configuration field notation):

- Revenue = SUM(revenue)
- Margin = SUM(grossMargin)
- Quantity = SUM(quantity)
- Margin % = SUM(grossMargin) / SUM(revenue) * 100
- Deviation WAP = (item revenue / item quantity) - (total revenue / total quantity)
- Revenue per Customer = (item revenue) / (number of customers in a given area)
- Margin per Customer = (item grossMargin) / (number of customers in a given area)
- Revenue per *X* People = X * (item revenue) / (population in given area)
- Margin per X People = X * (item grossMargin) / (population in given area)

By default X is set to 1000.

The following default filters are put on various fields to ensure proper calculations:

- Only entries with **not null grossMargin** are considered.
- Only entries with **not null invoicePrice** are considered.
- Only entries with **not null quantity** are considered.
- Only entries with **not null continent** are considered (if applicable).
- Only entries with **not null country** are considered (if applicable).
- Only entries with **not null region** are considered (if applicable).

Regional Revenue and Margin Dashboard - Used Advanced Configuration Fields

Regional Revenue and Margin Dashboard uses the following fields from SIP_AdvancedConfiguration:

- datamartName
- pricingDate
- productId
- customerId (optional)
- continent
- country
- region
- grossMargin
- quantity
- invoicePrice

Regional Revenue and Margin Dashboard - Used Price Parameters

- Configuration Price Parameters
- Data Price Parameters

Configuration Price Parameters

SIP_MapHierarchyConfig

This PP allows you to define which hierarchy levels are used in the dashboard. This can be useful when users do not have data for the Country level but they do for Continents.

This PP table also controls which inputs will be available on the dashboard configurator.

The hierarchy of the configuration needs to be kept: World Continent Country Region

So you cannot use Regions if you do not have data for Continents/Countries. Each lower hierarchy level needs to have all the higher levels enabled. This also means that in order to use the World level, you need to have the Continent data in the DM.

SIP_MapHierarchyConfig		
Column name	Label	Is Used
Value	• World • Continent • Country • Region	Yes/No
Description	Describes which hierarchy level is being configured.	Enables or disables the given configurator entry.

	These values should not be edited.	

SIP_MapCodeOverrides

This PP allows to map Datamart data to ISO codes, if it is not already in that form. This can be useful for users who do not store regional information in the ISO code format.

Additionally this PP allows you to set up custom display labels for entries. If the "User Display Label" is not set, the default label will be used. For example, it is possible to override the default label "United States of America" to "USA".

⚠ Keep in mind that by default the Highmaps defined values of hierarchy level names are used. If any User Display Label is defined, all entries need to have the User Display Label defined.

SIP_MapCodeOverrides				
Column name	Hierarchy Level	ISO Code	User DM Field	User Display Label
Value	• Continent • Country • Region	{ISO code of the entry on the selected hierarchy level} For regions use the ISO 3166-2 codes	{DM field representing the entry marked with ISO Code in user data}	{custom user label for the entry to be displayed on the chart}
Description	For example: Country	For example: US or US-NY	For example: USA	For example: USA

SIP_GeoOverrides

This PP allows to move country entries between continents. This can be useful if e.g. users have data for a country in different continent data. For example, users use the EMEA business region which leads to Oman being included in the EU data, but since it is not on the map it cannot be displayed. Users can then set the GeoOverride for Oman to be displayed in the Asia data set.

ⓘ The country ISO code needs to be in the set of ISO codes for the given continent in order to be properly displayed on the continent level.

⚠ GeoOverrides work only on the country level: only countries can be moved between continents. Regions cannot be moved.

If a country is moved to a continent it does not belong to, its data will be displayed on a the world level but not on the continent level.

SIP_GeoOverrides			
Column name	ISO Code	Parent ISO Code	Override ISO Code
Value	{ISO code of country to be moved}	{ISO code of the continent entry for the given country}	{ISO code of the continent for the country to be moved to}
Description	For example: OM	For example: EU For the case described above, there would also	For example: AS

		need to be EMEA EU mapping done in SIP_MapCodeOverrides.	

Data Price Parameters

SIP_Population					
Column name	Continent	Country	Region	Sector	Population
Values	{2 letter ISO code of a continent}	{2 letter ISO code of a country}	{ISO code of a region}	{Code of a sector}	{given entry population}
Description			The default value is "*" (= none region specified for a given continent/country combination). Each region needs its own population specified in order to work properly. For regions use the ISO 3166-2 codes.	The default value is "*" (= none sector specified for given continent/country /region combination) Note: Currently no Region maps are supported as stated at the Supported Maps page, the support will be added on demand. This field is prepared for future use.	

Regional Revenue and Margin Dashboard - Data Requirements and Deployment

Before deploying this package, it is possible to modify some parameters of this dashboard to adapt to an existing Datamart. The following fields are used for the setup:

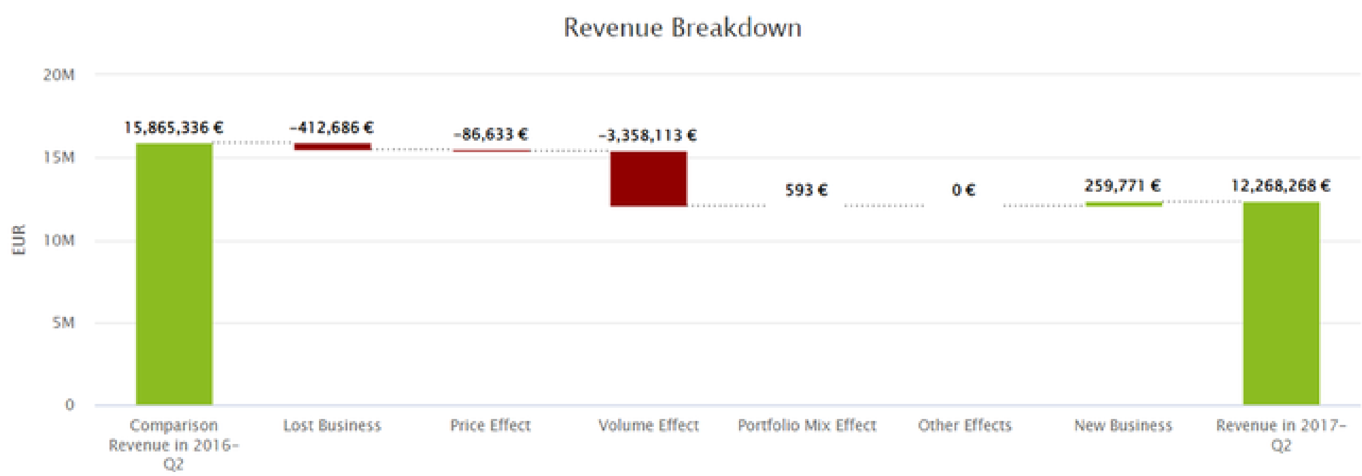
Field Name	Description	Required	Note
Datamart	Datamart used in the analysis	Yes	
Product Id	Product field in the transactional data	Yes	
Customer Id	Customer field in the transactional data	No	
Invoice Price	Field representing revenue in the transactional data	Yes	
Gross Margin	Field representing margin in the transactional data	Yes	
Pricing Date	Field representing date of the transaction in the transactional data	Yes	
Quantity		Yes	

	Field representing quantity in the transactional data		
Continent	Field representing continent in the transactional data	Yes	Required to display the world map.
Country	Field representing country in the transactional data	No	Required to display the country map on a given continent.
Region	Field representing region in the transactional data	No	Required to display the region map on a given country.

Revenue Breakdown Dashboard

From version 1.7.0, the calculation formula has been changed to show more clarity and accuracy of measurement for business decision-making. The old formula is referred to as Legacy and the new one is referred to as Standard. Standard is also the default formula when deploying the package since 1.7.0.

Revenue Breakdown Dashboard shows you what the difference in revenue between two periods can be attributed to. It allows you to compare two years or quarters and optionally filter for only certain products and/or customers.



In this section:

- Revenue Breakdown Dashboard - Set Up Data and Filters
- Revenue Breakdown Dashboard - Analyze Results
- Revenue Breakdown Dashboard - Details on Configuration

Revenue Breakdown Dashboard - Set Up Data and Filters

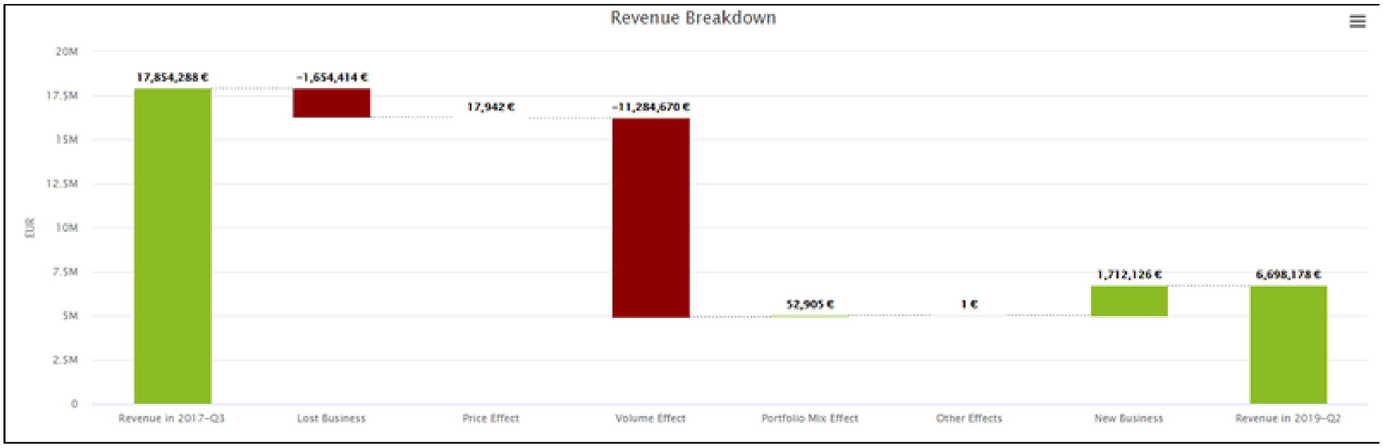
For this dashboard you can set the following inputs:

- **Period Type** – Allows you to select the period type for both comparison periods.
  - Available time units: Week, Quarter, Month, YTD, Custom

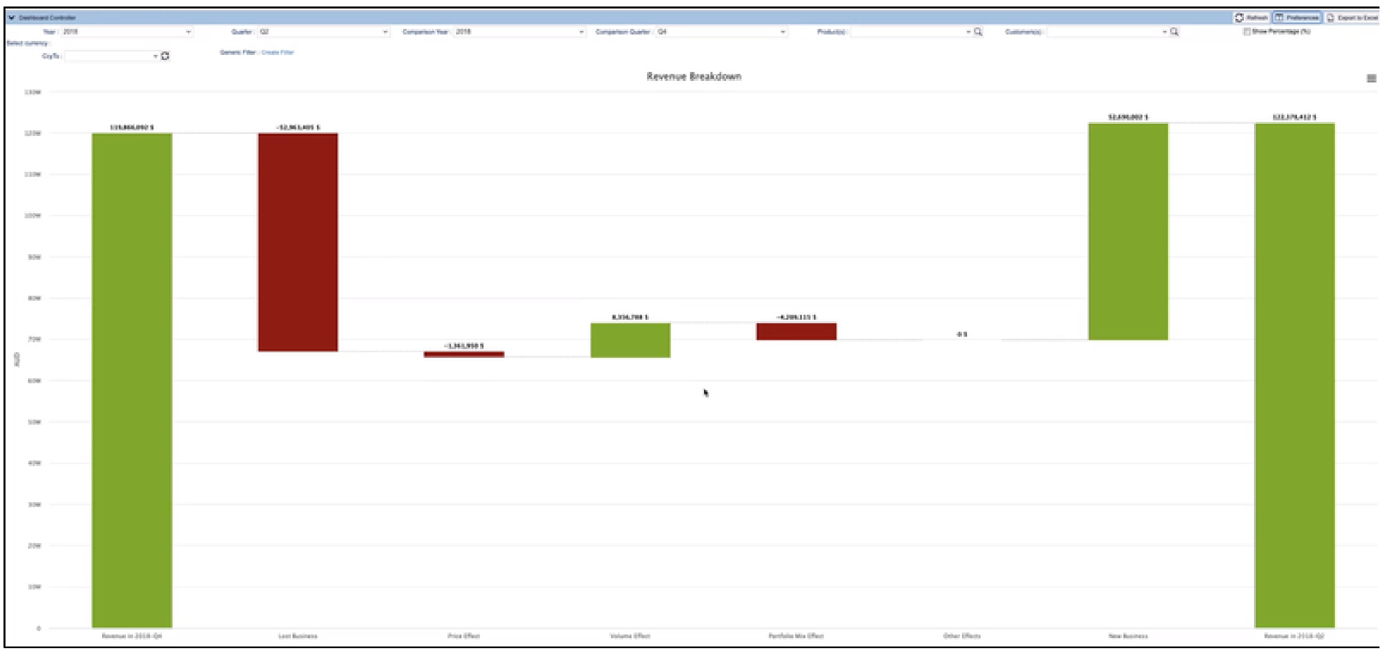
    - According to the selection of this input the relevant inputs are displayed to allow for the particular time units values definition.
    - Defaults to MAX(pricingDate) and if not found, fallbacks to the current year.
- **Year** – Allows you to select the year for the first comparison period. Data for this input are fetched from the "pricingDate" field from SIP_AdvancedConfiguration. Note: The "pricingDate" field must be marked as "Pricing Date" in Transaction DM to allow for the system year field generation.
    - Defaults to MAX(pricingDate) and if not found, fallbacks to the current year.
- Time unit definition - a relevant input according to the Period Type selection is displayed. Allows you to select the value for both comparison periods of a relevant time unit.
    - Available inputs:
        - **Quarter, Month, Week, YTD, Date From, Date To**
            - In case of no or "None" selection, the whole year is taken into comparison
            - Defaults to the current (latest available) time unit.
        - **Comparison Quarter, Comparison Month, Comparison Week, Comparison Date From, Comparison Date To**
- **Comparison Year** – Allows you to select the year for the second comparison period.
    - Defaults to MIN(pricingDate) and if not found, fallbacks to the previous year.
- **Product(s)** – Allows you to choose one of product attributes to be used for the analysis.
    - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Customer(s)** – Allows you to choose one of customer attributes to be used for the analysis.
    - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
    - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Product Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the product data. The product dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.
- **Customer Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the customer data. The customer dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.
    - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
- **Show Percentage (%)** – Allows you to select whether the values should be displayed as percentage.
    - Defaults to false.
- **Select currency** – Allows you to choose the currency used in the dashboard. The exchange rate for the selected currency is fetched from the system "ccy" Data Source, the currency symbol is fetched from the "CurrencySymbols" PP.
- **Generic Filter** – Allows you to set up a generic transaction data filter. For example: display only data from Europe, or Asia.

Revenue Breakdown Dashboard - Analyze Results

This chart shows revenue in two periods and tries to associate the difference to categories such as volume, price, new/lost business. For better guidance, loss is shown in red, gain in green. For example, the second column Lost Business shows what amount in revenue was lost due to customers not buying particular products in the first period. But what is clearly the main reason for a smaller revenue in the second period is the significant decrease in volume sold.



Another example illustrates nicely what is typically expected: when the price is decreased (lost revenue shown in 3rd column), the volume goes up (4th column).



Revenue Breakdown Dashboard - Details on Configuration

- Revenue Breakdown Dashboard - Fields Definition
- Revenue Breakdown Dashboard - Used Advanced Configuration Fields

Revenue Breakdown Dashboard - Fields Definition

In the tables below the following nomenclature is used (field definitions taken from SIP_AdvancedConfiguration):

- **T1** – First period data
- **T2** – Second period data
- **InvoicePrice** – SUM(invoicePrice)
- **Volume** – SUM(quantity)
- **InvoicePricePerUnit** – SUM(invoicePrice) / SUM(quantity)
- **T1Volume** – Total Volume for T1
- **T2Volume** – Total Volume for T2

There are 8 columns displayed in the dashboard:

1. **Revenue in {T1}** – Provides a revenue summary from the first period.
2. **Volume Effect** – Difference in revenue between T1 and T2 is attributed to a difference in volume only (the impact of changes in volume). Total change in volume multiplied by the difference of the inter-period weighted average price and cost. This can be positive or negative.
3. **Price Effect** – Difference in revenue between the T1 and T2 that can be attributed solely to changes in price (the impact of changes in specific prices). The average volume multiplied by the weighted average change in prices where the weighting uses the average volume weighting across the two periods. The result can be negative or positive.
4. **Portfolio Mix Effect** – Difference in revenue between T2 and T1 for transactions for customers that appear in both T1 and T2 but are not yet included in the Price Effect nor Volume Effect categories (impact of changes in the product portfolio mix). It is defined by the average volume and the sum of the differences in individual products of their average price across the two periods multiplied by their change in portfolio mix contribution between the two periods.
5. **New Business** – Total revenue from transactions in T2 from customers that did not buy anything in the T1, expressed as a positive number. Always positive.
6. **Lost Business** – Total revenue from transactions in T1 from customers that did not buy anything in the T2, expressed as a negative number. Always negative.
7. **Other Effects** – Other effects that may influence the revenue that are none of the above.
8. **Revenue in {T2}** – Provides a summary of revenue from the second period.

Effects are calculated in the following way:

Effect	Calculation
Volume	SUM(T2.Volume - T1.Volume) * SUM((T2.Mix * T2.InvoicePricePerUnit + T1.Mix * T1. InvoicePricePerUnit) / 2)
Price	SUM((T2.Volume + T1.Volume) / 2) * SUM((T2.Mix + T1.Mix) / 2 * (T2.InvoicePerUnit - T1. InvoicePerUnit)
Portfolio Mix	SUM((T2.Volume + T1.Volume) / 2) * SUM((T2.Mix - T1.Mix) * (T2.InvoicePerUnit + T1. InvoicePricePerUnit) / 2)
Other	T2.InvoicePrice - (T1.InvoicePrice + lostBusinessEffect + priceEffect + volumeEffect + mixEffect + newBusinessEffect)

Mix defintion:

- the ratio of volume for the particular product in the scope of all products volume within the period = volume per product / volume per all products
- T1.Mix = T1.Volume/T1Volume
- T2.Mix = T2.Volume/T2Volume

With the 1.7.0 version, the effects calculation formulas has been changed to address the business point of view more adequatelly. The previous formulas are referred to as "Legacy" while the new ones are referred to as "Standard" (default) in configuration.

For the "Legacy" formulas you can refer to the archived documentation of the previous versions - the latest of these: https://pricefx.atlassian.net/wiki/download/attachments/3907062629/Accelerate_Sales_Insights_Package-1.6.1.pdf?api=v2 (*Revenue Breakdown Dashboard - Fields Definition* chapter).

To switch between these two (if needed) follow the configuration guide in the Installation (SIP) page: Installation (SIP)#[hardBreak]Revenue/Margin-Breakdowns-Definition.

Default filters

There are some default filters put on various fields to ensure proper calculations. These are:

- Only entries with **not null invoicePrice** are considered.
- Only entries with **not null quantity** are considered.
- Only entry sets with **SUM(quantity) > 0** are considered (aggregation "having" filter is applied).
- Only entry sets with **SUM(invoicePrice) > 0** are considered (aggregation "having" filter is applied).

Some of the definitions on this page were taken from the web article Normative decomposition of the profit bridge into the impact of changes in marketing variables.

Revenue Breakdown Dashboard - Used Advanced Configuration Fields

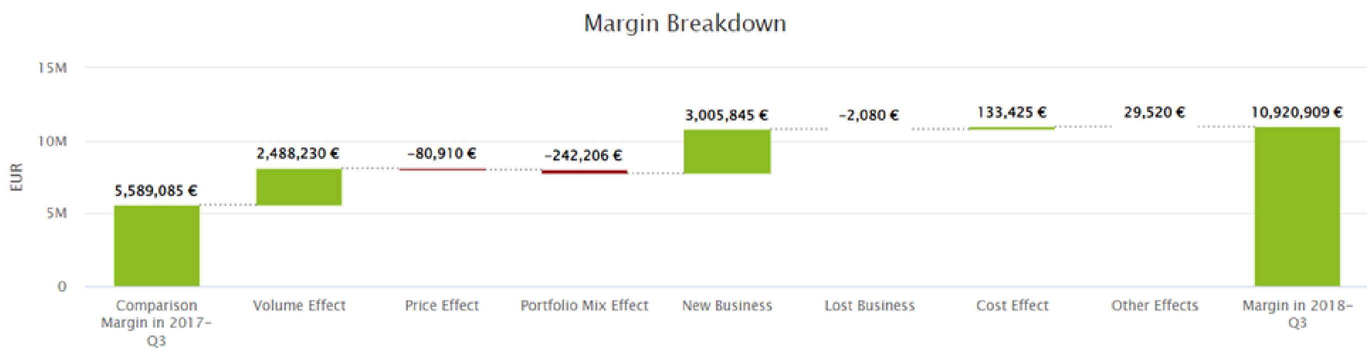
Revenue Breakdown Dashboard uses the following fields from SIP_AdvancedConfiguration:

- datamartName
- pricingDate
- productId
- customerId (optional)
- quantity
- invoicePrice
- productDimensions
- customerDimensions (optional)
- breakdownMode

Margin Breakdown Dashboard

From version 1.7.0, the calculation formula has been changed to show more clarity and accuracy of measurement for business decision-making. The old formula is referred to as Legacy and the new one is referred to as Standard. Standard is also the default formula when deploying the package since 1.7.0.

The Margin Breakdown dashboard shows you what the difference in margin between two periods can be attributed to. It allows you to compare two years or quarters and optionally filter for only certain products and/or customers. It includes different calculation options ("models").



In this section:

- Margin Breakdown Dashboard - Set Up Data and Filters
- Margin Breakdown Dashboard - Analyze Results
- Margin Breakdown Dashboard - Details on Configuration

Margin Breakdown Dashboard - Set Up Data and Filters

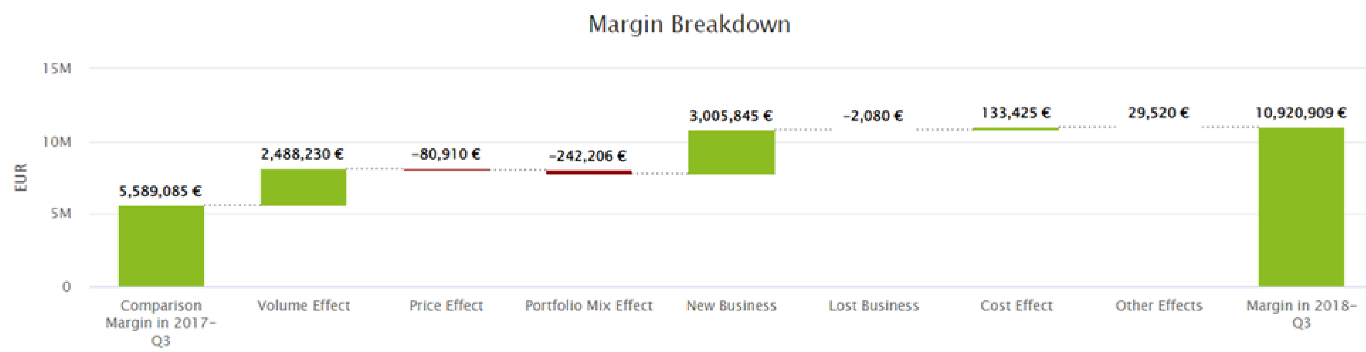
For this dashboard you can set the following inputs:

- **Period Type** – Allows you to select the period type for both comparison periods.
  - Available time units: Week, Quarter, Month, YTD, Custom
  - According to the selection of this input the relevant inputs are displayed to allow for the particular time units values definition.
- **Year** – Allows you to select the year for the first comparison period. Data for this input are fetched from the "pricingDate" field from SIP_AdvancedConfiguration. Note: The "pricingDate" field must be marked as a "Pricing Date" in Transaction DM to allow for the system year field generation.
- **Time unit definition** – Relevant input according to the **Period Type** selection is displayed. Allows you to select a value for the first comparison period of a relevant time unit.
  - Available inputs:
    - **Quarter, Month, Week, YTD, Date From, Date To**
      - In case of no or "None" selection, the whole year is taken into comparison.
      - Defaults to the current (latest available) time unit.
    - **Comparison Quarter, Comparison Month, Comparison Week, Comparison Date From, Comparison Date To**
- **Comparison Year** – Allows you to select the year for the second comparison period.
- **Product(s)** – Allows you to choose one of product attributes to be used for the analysis.
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Customer(s)** – Allows you to choose one of customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Product Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the product data. The product dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.
- **Customer Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the customer data. The customer dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).

- **Calculation Type** – Allows you to select the calculation type to be used for the dashboard. Available values are:
  - Net
  - Gross
  - Averages
  - Most Used
- **Show Percentage (%)** – Allows you to select whether the values should be displayed as percentage.
- **Select currency** – Allows you to choose the currency to use in the dashboard. The exchange rate for the selected currency is fetched from system "ccy" DS, the currency symbol is fetched from "CurrencySymbols" PP.
- **Generic Filter** – Allows you to set up a generic transaction data filter. For example: display only data from Europe, or Asia.

Margin Breakdown Dashboard - Analyze Results

Margin Breakdown Models refer to the way the chart columns are calculated – which driver they emphasize. See the details in Margin Breakdown Dashboard - Fields Definition. For better guidance, loss is shown in red, gain in green.



Margin Breakdown Dashboard - Details on Configuration

- Margin Breakdown Dashboard - Fields Definition
- Margin Breakdown Dashboard - Used Advanced Configuration Fields

Margin Breakdown Dashboard - Fields Definition

In the tables below the following terminology is used (field definitions taken from SIP_AdvancedConfiguration):

- **T1** – First period data
- **T2** – Second period data
- **Margin** – SUM(grossMargin)
- **Volume** – SUM(quantity)
- **InvoicePricePerUnit** – SUM(invoicePrice) / SUM(quantity)
- **MarginPerUnit** – SUM(grossMargin) / SUM(quantity)
- **CostPerUnit** – SUM(InvoicePrice - GrossMargin) / SUM(quantity)
  "Cost" for the purpose of this dashboard is defined as the gap between Revenues and Gross Margin; it would be cumbersome to declare another column or parameter summing up all "waterfall cost components".
- **T1Volume** – Total Volume for T1

- **T2Volume** – Total Volume for T2

There are 9 columns displayed in the dashboard:

1. **Margin in { T1 }** – Provides a margin summary from the first period.
2. **Volume Effect** – Difference in margin between T1 and T2 is attributed to a difference in volume only (the impact of changes in volume). Total change in volume multiplied by the difference of the inter-period weighted average margin. This can be positive or negative.
3. **Price Effect** – Difference in margin between the T2 and T1 that can be attributed solely to changes in price (the impact of changes in specific prices). The average volume multiplied by the weighted average change in prices where the weighting uses the average quantity weighting across the two periods. The result can be negative or positive.
4. **Portfolio Mix Effect** – Difference in margin between T2 and T1 for transactions for customers that appear in both T1 and T2 but are not yet included in the Price Effect nor Volume Effect categories (i mpact of changes in the product portfolio mix). It is defined by the average volume and the sum of the differences in individual products of their average price and cost across the two periods multiplied by their change in portfolio mix contribution between the two periods.
5. **New Business** – Total margin from transactions in T2 from customers that did not buy anything in the T1, expressed as a positive number. Always positive.
6. **Lost Business** – Total margin from transactions in T1 from customers that did not buy anything in the T2, expressed as a negative number. Always negative.
7. **Cost Effect** – Difference in margin between T1 and T2 is attributed to a difference in cost only (the impact of changes in specific costs). The average volume multiplied by weighted average change in costs where the weighting uses the average quantity weighting across the two periods.
8. **Other Effects** – This value should always be zero. If it is not, the relationship "Invoice - Cost = Gross Margin" is not fulfilled. Hence this component does not need a bar to be represented.
9. **Margin in { T2 }** – Provides a margin summary from the second period.

Effects are calculated in the following way:

Effects	Calculation
Volume	SUM(T2.Volume - T1.Volume) * SUM((T2.Mix * T2.MarginPerUnit + T1.Mix * T1.MarginPerUnit) / 2)
Price	SUM(T2.Volume + T1.Volume) / 2) * SUM((T2.Mix + T1.Mix) / 2 * (T2.InvoicePerUnit - T1.InvoicePerUnit)
Portfolio Mix	SUM((T2.Volume + T1.Volume) / 2) * SUM((T2.Mix - T1.Mix) * (T2.MarginPerUnit + T1.MarginPerUnit) / 2)
Cost	SUM(T2.Volume + T1.Volume) / 2) * SUM((T2.Mix + T1.Mix) / 2 * (T2.CostPerUnit - T1.CostPerUnit)))

Mix definition:

- Quantity ratio for the particular product in the scope of all products quantity within the period = quantity per product / quantity per all products
- T1.Mix = T1.Volume/T1Volume
- T2.Mix = T2.Volume/T2Volume

With the 1.7.0 version, the effects calculation formulas have been changed to address the business point of view more adequately. The previous formulas are referred to as "Legacy", while the new ones are referred to as "Standard" (default) in the configuration.

For more information on the Legacy formulas see the archived documentation of the previous versions (*Margin Breakdown Dashboard - Fields Definition* chapter).

To switch between these two (if needed), follow the configuration guide in the Installation (SIP) page.

Default Filters

There are some default filters put on various fields to ensure proper calculations. These are:

- Only entries with **not null grossMargin** are considered.
- Only entries with **not null invoicePrice** are considered.
- Only entries with **not null quantity** are considered.
- Only entry sets with **SUM(quantity) > 0** are considered (aggregation "having" filter is applied).

Some of the definitions on this page were taken from the web article Normative decomposition of the profit bridge into the impact of changes in marketing variables.

Margin Breakdown Dashboard - Used Advanced Configuration Fields

Margin Breakdown Dashboard uses the following fields from SIP_AdvancedConfiguration:

- datamartName
- pricingDate
- productId
- customerId (optional)
- grossMargin
- quantity
- invoicePrice
- costs
- productDimensions
- customerDimensions (optional)
- breakdownMode

Outliers Dashboard

Outliers Dashboard helps you analyse the best and worst performing products and customers based on different KPIs and a selected filter.

Best & Worst Products Performance

Name	Number	Revenue (€)	Margin (€)	Margin %	Margin Contribution %	Revenue Contribution %	Volume
Summary		28,393,147.26	9,068,819.82	31.94 %			9,333,893
▲ Meatball LM	MB-0008	621,970.02	199,005.65	32.00 %	6.86 %	2.19 %	203,318
▲ Meatball MS BxP	MB-0013	617,118.74	197,754.64	32.04 %	6.80 %	2.17 %	204,336
▲ Meatball PS	MB-0004	612,378.83	195,854.44	31.98 %	6.75 %	2.16 %	200,616
▲ Meatball MS 80Bx20P	MB-0022	611,853.50	195,996.38	32.03 %	6.75 %	2.15 %	200,253
▲ Meatball MI 80Bx20P	MB-0024	611,005.35	194,908.19	31.90 %	6.74 %	2.15 %	199,566
▼ Still Water	BV-0006	97,417.30	31,160.67	31.99 %	1.07 %	0.34 %	32,223
▼ Meatball MM Beef+Cheese+Bacon	MB-0027	97,045.25	30,867.34	31.81 %	1.07 %	0.34 %	31,923
▼ ToughTray 2000	NC-P-0002	46,904.23	14,749.25	31.45 %	0.52 %	0.17 %	15,147
▼ NyChem 075	NC-0075	42,608.89	13,598.66	31.92 %	0.47 %	0.15 %	13,894
▼ ToughTray	NC-P-0001	38,796.97	12,424.32	32.02 %	0.43 %	0.14 %	12,923

In this section:

- Outliers Dashboard - Set Up Data and Filters
- Outliers Dashboard - Analyze Results
- Outliers Dashboard - Details on Configuration

Outliers Dashboard - Set Up Data and Filters

For this dashboard you can set the following inputs:

- **Product(s)** – Allows you to choose one of the product attributes to be used for the analysis.
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
  - ⚠ This input is not taken into account for the summary data.
- **Customer(s)** – Allows you to choose one of the customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
  - ⚠ This input is not taken into account for the summary data.
- **Date From/To** – Filters data for the analysis according to the given time range.
  - By default, Date From is set to one year back.
  - By default, Date To is set to today’s date.
- **Product Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the product data. The product dimensions available in this input are defined in Advanced Configuration. The fields must come from the Product Master table.
- **Customer Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the customer data. The customer dimensions available in this input are defined in Advanced Configuration. The fields must come from the Customer Master table.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
- **Calculation Model** – Allows you to select the calculation model for Outliers.
  - Currently available models are:
    - (Max - Min) Split (default)
    - Split Equally
    - Contribution
- **KPI** – Stands for Key Performance Indicator, a measure which is used to determine the Best/Worst performers. You can choose from the following values (may vary depending on the model selected):
  - Revenue
  - Revenue Contribution %
  - Margin
  - Margin %
  - Margin Contribution %
- **Top Product(s)/Customer(s)** – Allows you to choose from a predefined list of values how many products /customers should be displayed in Best & Worst performance tables.
  In case there is not enough products to display, the results are trimmed and ”Best” is favored (in case of only 5 products the division will be 3/2). The default value is 5.

Outliers Dashboard - Analyze Results

The dashboard provides the following summaries:

- Best & Worst Products/Customers Performance
- Products/Customers Performance Chart

Best & Worst Products/Customers Performance

> Customer Performance Table is displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).

There are separate tables for products and customers showing different KPIs of the best and worst performing products or customers based on the selected filters.

Best & Worst Products Performance

Name	Number	Revenue (€)	Margin (€)	Margin %	Margin Contribution %	Revenue Contribution %	Volume
Summary		28,393,147.26	9,068,819.82	31.94 %			9,333,893
▲ Meatball LM	MB-0008	621,970.02	199,005.65	32.00 %	6.86 %	2.19 %	203,318
▲ Meatball MS BxP	MB-0013	617,118.74	197,754.64	32.04 %	6.80 %	2.17 %	204,336
▲ Meatball PS	MB-0004	612,378.83	195,854.44	31.98 %	6.75 %	2.16 %	200,616
▲ Meatball MS 80Bx20P	MB-0022	611,853.50	195,996.38	32.03 %	6.75 %	2.15 %	200,253
▲ Meatball MI 80Bx20P	MB-0024	611,005.35	194,908.19	31.90 %	6.74 %	2.15 %	199,566
▼ Still Water	BV-0006	97,417.30	31,160.67	31.99 %	1.07 %	0.34 %	32,223
▼ Meatball MM Beef+Cheese+Bacon	MB-0027	97,045.25	30,867.34	31.81 %	1.07 %	0.34 %	31,923
▼ ToughTray 2000	NC-P-0002	46,904.23	14,749.25	31.45 %	0.52 %	0.17 %	15,147
▼ NyChem 075	NC-0075	42,608.89	13,598.66	31.92 %	0.47 %	0.15 %	13,894
▼ ToughTray	NC-P-0001	38,796.97	12,424.32	32.02 %	0.43 %	0.14 %	12,923

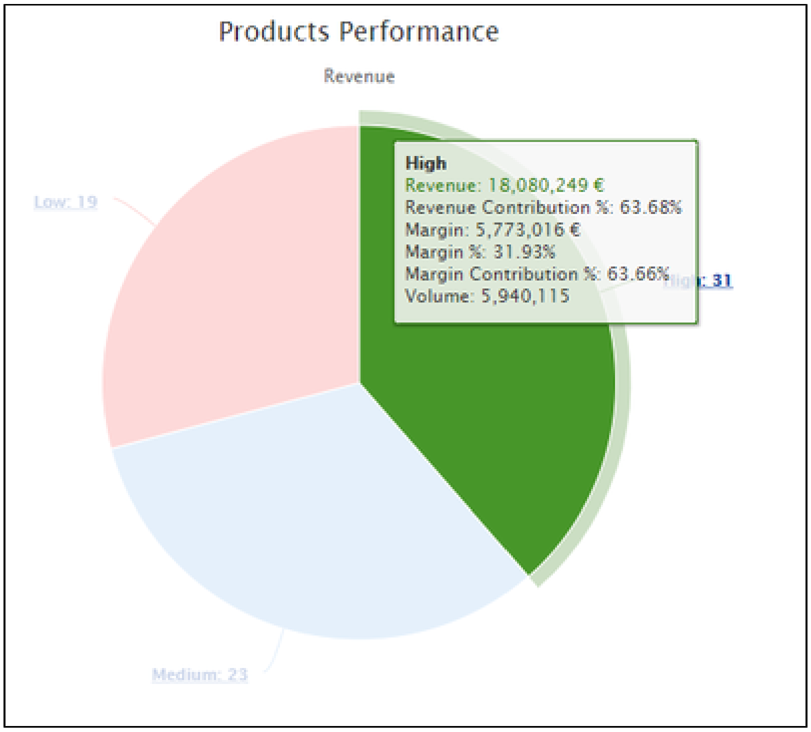
Best & Worst Customers Performance

Name	Number	Revenue (€)	Margin (€)	Margin %	Margin Contribution %	Revenue Contribution %
Summary		28,393,147.26	9,068,819.82	31.94 %		
▲ Soupo AG	CD-00006	561,833.55	179,390.84	31.93 %	6.20 %	1.98 %
▲ M. Müller	CD-00003	552,873.86	177,294.29	32.07 %	6.10 %	1.95 %
▲ Soupo DE	CD-00012	545,722.27	174,626.57	32.00 %	6.02 %	1.92 %
▲ M. Becker	CD-00005	544,791.23	173,504.50	31.85 %	6.01 %	1.92 %
▲ E. Fuller	CD-00009	542,027.54	173,390.60	31.99 %	5.98 %	1.91 %
▼ Martin Johann	CD-00131	27,649.42	8,813.92	31.88 %	0.30 %	0.10 %
▼ MX Meat Inc.	CD-00146	26,530.59	8,391.35	31.63 %	0.29 %	0.09 %
▼ South Chickem	CD-00132	26,393.18	8,834.00	33.47 %	0.29 %	0.09 %
▼ Stomach	CD-00129	25,502.82	8,279.86	32.47 %	0.28 %	0.09 %
▼ Very Good Meat	CD-00139	24,395.29	7,891.56	32.35 %	0.27 %	0.09 %

Products/Customers Performance Chart

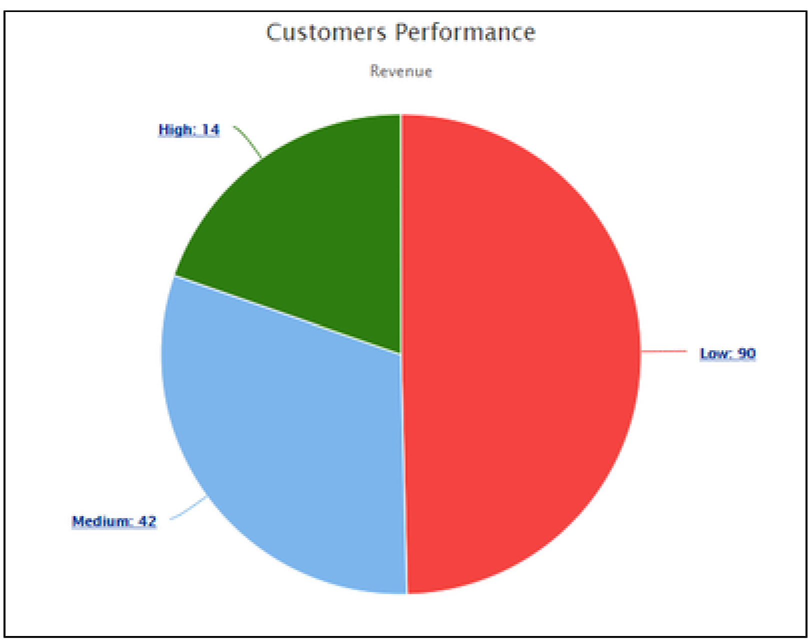
> Customer Chart is displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).

The pie chart displays the count of products/customers in each group, the selected KPI value is highlighted.

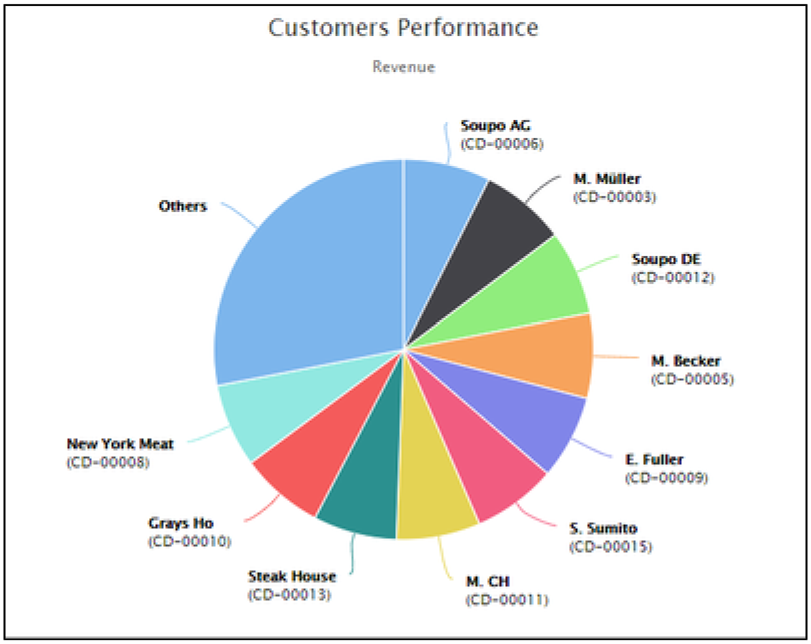


What to look out for:

- If you ever get here products with a negative margin, these are definitely candidates for review. Often, these can be gifts, warranties or other justifiable items but in other cases it may highlight a potential issue.
- Customers with negative performance are even more questionable (unless they represent internal units or similar cases).
- Also, this chart allows you to review your strategy when comes to a target customer size – whether to focus on large, medium or small customer; especially if you can support it with data on the total cost of ownership of each customer.



There is also an option to drill down into each category (by clicking the category in the chart or legend) and display additional details. For the High and Medium categories the detailed chart will display 10 best performing items and for Low and Negative 10 worst. The rest will be grouped into the "Others" group.



Outliers Dashboard - Details on Configuration

- Outliers Dashboard - Calculation Models
- Outliers Dashboard - Used Advanced Configuration Fields
- Outliers Dashboard - Used Price Parameters

Outliers Dashboard - Calculation Models

The current implementation provides three calculation models. These models differ in how items are distributed to buckets.

There are always 4 buckets: High, Medium, Low, Negative. The threshold calculations assign each item to a proper bucket based on the selected KPI value.

The following rules apply for all models when placing an item into one of these 4 buckets. Each item whose running total KPI value is:

- negative – gets assigned to the Negative bucket.
- below the Low threshold – gets assigned to the Low bucket.
- above the High threshold – gets assigned to the High bucket.
- in neither of previous buckets – gets assigned to the Medium bucket.

The models are:

- (Max - Min) Split Model
- Split Equally Model (Placeholder name)
- Contribution Model (Placeholder name)

(Max - Min) Split Model

Allowed KPI values:

- Revenue (selected by default)
- Revenue Contribution %
- Margin
- Margin %
- Margin Contribution %

Thresholds are calculated in the following manner:

- High = MAX(KPI) - ((MAX(KPI) - MIN(KPI)) / 3)
- Low = MIN(KPI) + ((MAX(KPI) - MIN(KPI)) / 3)

Split Equally Model (Placeholder name)

Allowed KPI values:

- Revenue (selected by default)
- Margin

This model uses the running total for bucket assignment. All items are sorted descending depending on the selected KPI. A running total is calculated along with each item assignment.

Thresholds are calculated in the following manner:

- High = SUM(KPI) / 3
- Low = SUM(KPI) / 3 * 2

Contribution Model (Placeholder name)

Allowed KPI values:

- Revenue Contribution % (selected by default)
- Margin Contribution %

This model also uses the running total for bucket assignment. Again, all items are sorted descending depending on the selected KPI. A running total is calculated along with each item assignment.

Thresholds are fetched from the OutliersContributionModelThresholds PP.

Default Filters

There are some default filters put on various fields to ensure proper calculations. These are:

- Only entries with **not null grossMargin** are considered.
- Only entries with **not null invoicePrice** are considered.
- Only entries with **not null quantity** are considered.
- Only entries with **SUM(invoicePrice) > 0** are considered.
- Only entries with **SUM(quantity) > 0** are considered.

Outliers Dashboard - Used Advanced Configuration Fields

Outliers Dashboard uses the following fields from SIP_AdvancedConfiguration:

- datamartName
- pricingDate
- productId
- productName
- customerId (optional)

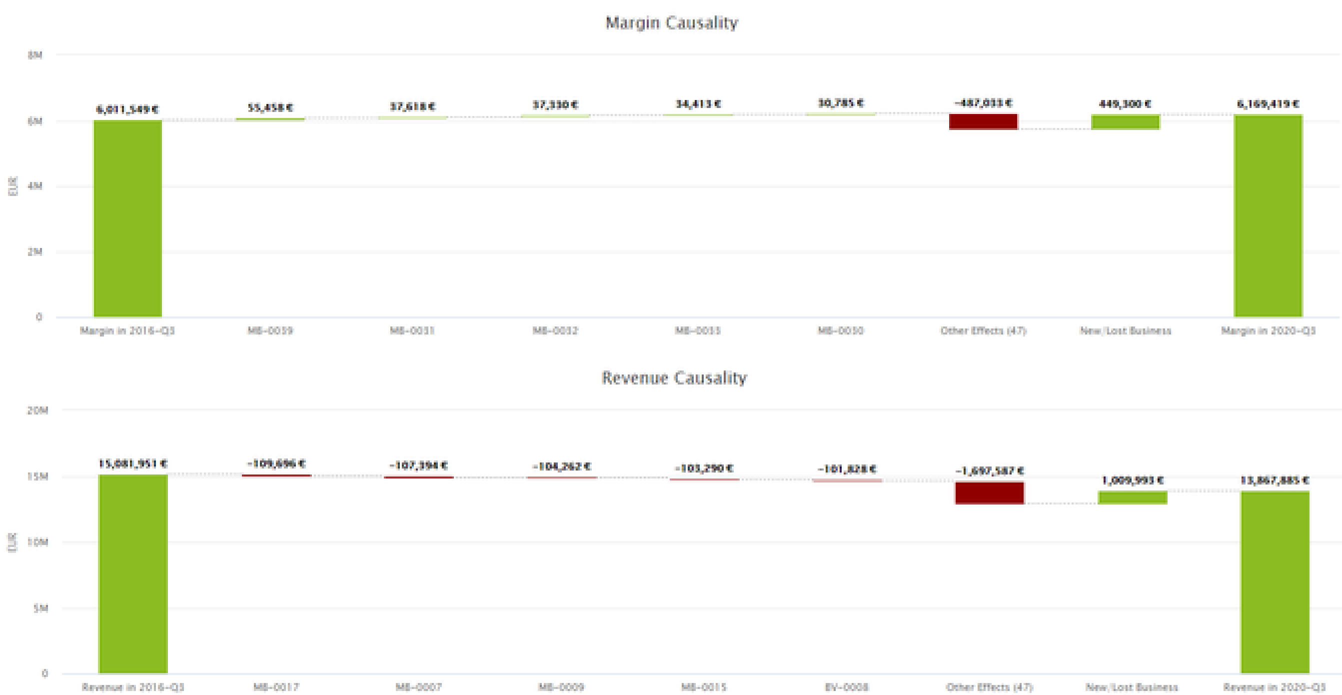
- customerName (optional)
- grossMargin
- quantity
- invoicePrice
- productDimensions
- customerDimensions (optional)

Outliers Dashboard - Used Price Parameters

OutliersContributionModelThresholds		
Column name	Name	Value
Values	{High/Low}	{Percentage value}
Description	Determines which threshold bracket for the calculation to define.	E.g. 30, 60

Causality Dashboard

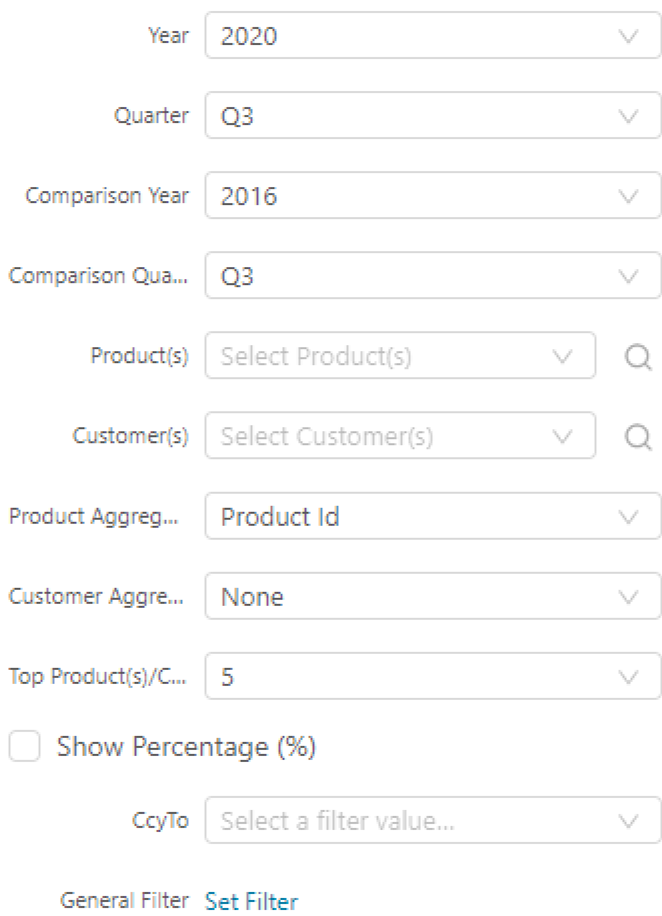
The Causality Dashboard allows you to identify the change in contribution of Product/Customer groups to Total Revenue or Margin between two periods, so you can easily identify problematic parts of the business.



In this section:

- Causality Dashboard - Set Up Data and Filters
- Causality Dashboard - Analyze Results
- Causality Dashboard - Details on Configuration

Causality Dashboard - Set Up Data and Filters



For this dashboard you can set the following inputs:

- **Year** – Allows you to select the year for the first comparison period. Data for this input are fetched from the ”pricingDate” field from SIP_AdvancedConfiguration.
  - Note: The ”pricingDate” field must be marked as ”Pricing Date” in Transaction DM to allow for the system year field generation.
  - Defaults to MAX(pricingDate) and if not found, fallbacks to the current year.
- **Quarter** – Allows you to select the quarter for the first comparison period. In case of no or ”None” selection, the whole year is taken into comparison.
  - Defaults to the current quarter.
- **Comparison Year** – Allows you to select the year for the second comparison period.
  - Defaults to MIN(pricingDate) and if not found, fallbacks to the previous year.
- **Comparison Quarter** – Allows you to select the quarter for second comparison period.
  - If neither year nor quarter are selected but the first comparison period is selected, the year before that period is selected.
  - If only Comparison Quarter is selected but Comparison Year is empty, the quarter of the year before the first period is selected.
- **Product(s)** – Allows you to choose one of product attributes to be used for the analysis.
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Customer(s)** – Allows you to choose one of customer attributes to be used for the analysis.

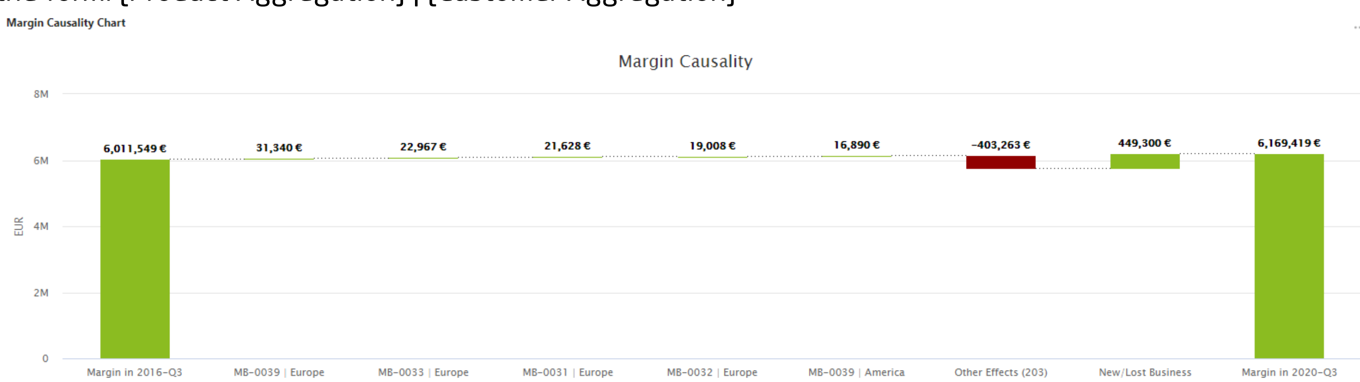
- Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
- Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.

- **Product Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the product data. The product dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.
- **Customer Aggregation** – Allows you to define a custom grouping dimension to reduce the granularity of the customer data. The customer dimensions available in this input are defined in Advanced Configuration. Fields must come from the Datamart used for the package.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
- **Top Product(s)/Customer(s)** – Allows you to choose from a predefined list of values how many product /customer groups should be displayed in between the periods.
- **Show Percentage (%)** – Allows you to select whether the values should be displayed as percentage.
  - Defaults to false.
- **Select currency** – Allows you to choose the currency used in the dashboard. The exchange rate for the selected currency is fetched from the system "ccy" Data Source, the currency symbol is fetched from the "CurrencySymbols" PP.
- **Generic Filter** – Allows you to set up a generic transaction data filter. For example: display only data from Europe, or Asia.

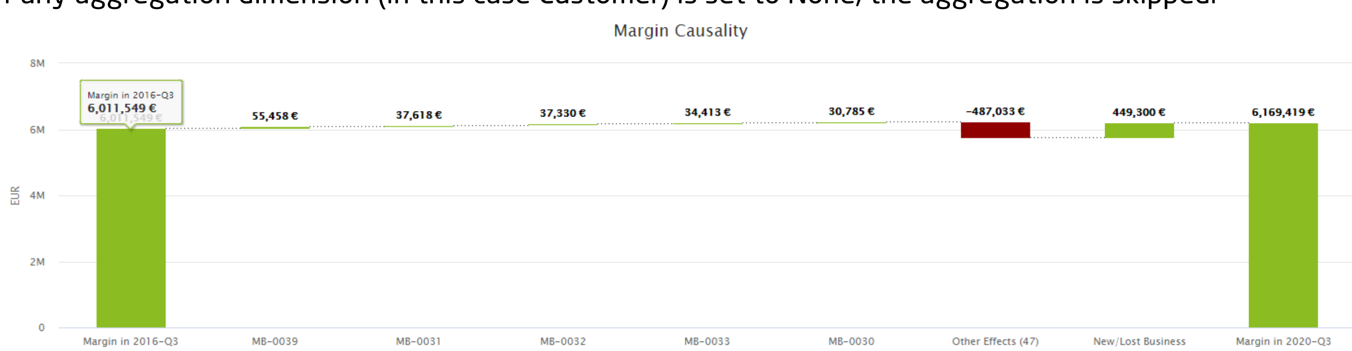
Causality Dashboard - Analyze Results

The Margin/Revenue Causality chart displays top X product/customer groups contribution to the total margin when comparing two periods.

When both Product and Customer aggregations are set, the dashboard displays the aggregated entries in the form: {Product Aggregation} | {Customer Aggregation}



If any aggregation dimension (in this case Customer) is set to None, the aggregation is skipped.



The entries displayed are taken from common business, so the product/customer groups are present in both periods.

Any product/customer groups that are not in the common business are grouped up in the New/Lost Business column.

Any product/customer groups that are not in top X are displayed as the Other effects column with the number of entries in that group in brackets.

Causality Dashboard - Details on Configuration

- Causality Dashboard - Fields Definition
- Causality Dashboard - Used Advanced Configuration Fields

Causality Dashboard - Fields Definition

In the tables below the following abbreviations are used (field definitions taken from SIP_AdvancedConfiguration):

- **T1** – First period data
- **T2** – Second period data

There are several columns displayed on the dashboard:

1. **Revenue/Margin in {T1}** – Provides a revenue/margin summary from the first period.
2. **User selected product aggregation | User selected customer aggregation** – Total revenue/margin of a given product/customer group.
3. **Other effects (number of entries)** – Total revenue/margin contribution of all the other groups that are not displayed in the top X groups.
4. **New/Lost Business** – Total contribution of entries that are not in the common business for given periods.
5. **Revenue/Margin in {T2}** – Provides a revenue/margin summary from the second period.

The fields are calculated in the following way:

- Revenue/Margin in {T1}/{T2} = SUM(invoicePrice)/SUM(grossMargin)
- Product/Customer group entries = SELECT {productIdField}, {customerIdField}, SUM(T2.{measure} - T1.{measure}) AS 'Delta' FROM T2 INNER JOIN T1 ON {joinFields} {groupBy} ORDER BY SUM(T2.{measure} - T1.{measure}) {orderStyle}
- New/Lost Business = T2 - T1 - {top elements measure summed up} - {common business}
    - Common business = All entries - Top entries summed up

There are some default filters put on various fields to ensure proper calculations. These are:

- Only entries with **not null grossMargin** are considered.
- Only entries with **not null invoicePrice** are considered.
- Only entries with **SUM(invoicePrice) > 0** are considered.
- Only entries with **SUM(grossMargin) > 0** are considered.

Causality Dashboard - Used Advanced Configuration Fields

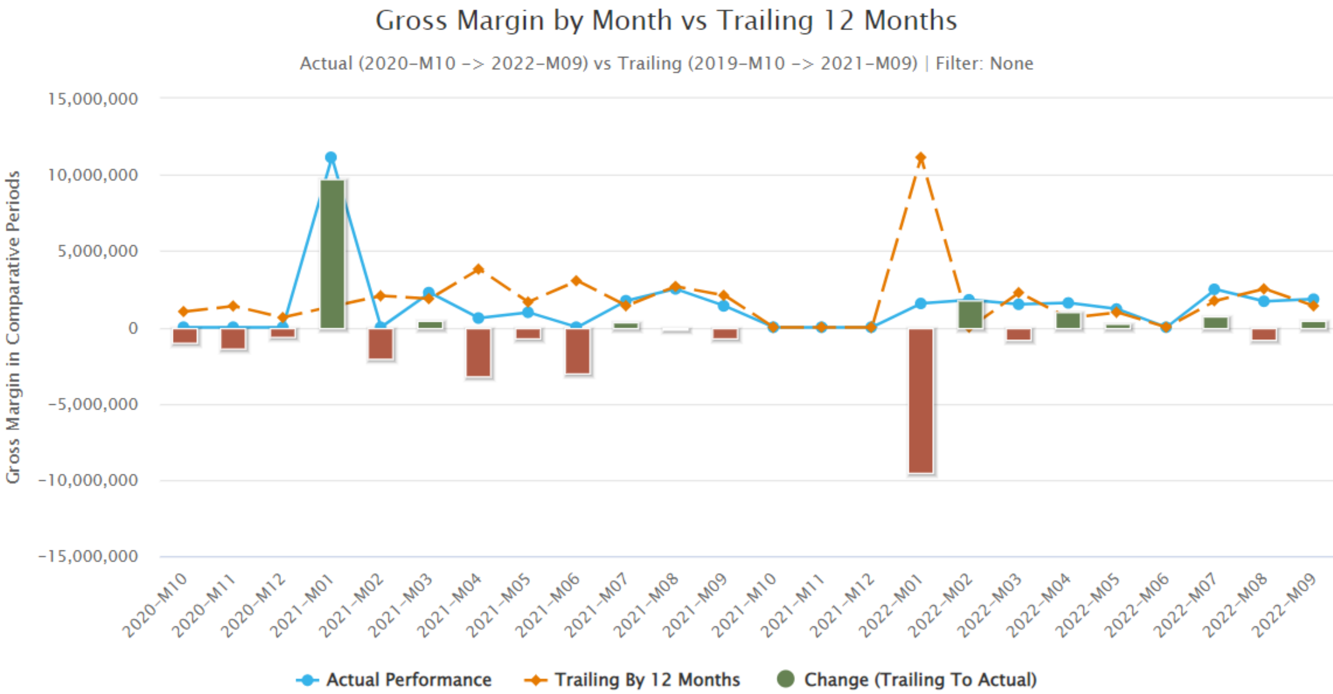
Causality Dashboard uses the following fields from SIP_AdvancedConfiguration:

- datamartName
- pricingDate
- productId
- customerId (optional)
- invoicePrice
- grossMargin

- productDimensions
- customerDimensions (optional)

Period Over Period Dashboard

The Period Over Period Dashboard shows the difference in a selected measure between two periods to assess the most recent status of any financial or volume measure and compare its performance to the same time period in the past.



In this section:

- Period Over Period Dashboard - Set Up Data and Filters
- Period Over Period Dashboard - Analyze Results
- Period Over Period Dashboard - Details on Configuration

Period Over Period Dashboard - Set Up Data and Filters

For this dashboard you can set the following inputs:

- **Customer(s)** – Allows you to choose one of customer attributes to be used for the analysis.
  - Displayed only when Customer data is used in the package (customerId must be mapped in the SIP_AdvancedConfiguration).
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Product(s)** – Allows you to choose one of product attributes to be used for the analysis.
  - Note: Keep in mind that only columns present in the Transaction Datamart can be used for filtering.
- **Measure Type** – Allows you to define the measure type for further measure selection.
  - Available values:
    - **Single Column** – Allows you to select a Datamart field containing a metric.
      If selected, these new inputs are available:
      - **Measure Column** – Measure (presented in the Datamart) which is used for the comparison.

- **Ratio** – The output measure is calculated by a formula using two input values (measures) defined in further selection.
  If selected, these new inputs are available:
  - **Ratio Type**
    - Available values:
      - Gross Margin %
      - List-to-Invoice Realization %
      - Incentive %
      - Price Realization %
      - Price Leakage %
      - Average Price Per Unit
      - Average Profit Per Unit
      - Custom
  - (1st formula input), labeled according to the Ratio Type selection, typically the numerator.
  - (2nd formula input), labeled according to the Ratio Type selection, typically the denominator.
- **Display Delta as Percent** – Affects whether the Change series in the chart are displayed as an absolute value or as a relative one (Actual Performance as % of Trailing period).
- **Display Z Axis** – Affects whether the Change series in the chart are equipped with a separate (Z) axis using its own scale or whether it uses a common (Y) axis shared with the Actual Performance and Trailing period series.
- **Measure Aggregation** – Defines how the measure is aggregated.
  - Available values:
    - SUM
    - AVG
- **Interval Size** – Defines the time granularity of the displayed output.
  - Available values:
    - Day
    - Week
    - QuadWeek
    - Month
    - Quarter
    - Year
  - When the interval size changes, values of Number Of Intervals and Trailing Offset input are automatically converted to respect the scope of the original interval size (the number of intervals is first converted from the original interval size to days and then back to the new interval size using basic coefficients).
- **Number of Intervals** – Allows you to set the length of the period by defining the number of intervals included.
- **Trailing Offset By *[X Intervals]*** – Allows you to set an offset of the trailing period from the Final Interval backwards.
- **Final Interval** – Definition of the final interval of the Actual (most recent) period.
  - Available values:
    - Last Whole Interval
    - X Whole Intervals Ago
      - If selected, this additional input is displayed:
        - **Final Interval: X Whole Intervals Ago** – Allows you the set the final interval by the number of whole intervals ago.
    - Manual Entry
      - If selected, this additional input is displayed:

- **Final Interval: Manual Entry –** Allows you to set the final interval manually by the exact name of the period relevant to the interval size. E.g. "2022-W10", "2021-Q1", "2020-QW3",...
  Format:
  - Interval Size = Day YYYY-DXXX (E.g. 2020-D123)
  - IntervalSize = Week YYYY-WXX (E.g. 2020-W30)
  - IntervalSize = QuadWeek YYYY-QWXX (E.g. 2020-QW3)
  - IntervalSize = Month YYYY-MXX (E.g. 2020-M12)
  - IntervalSize = Quarter YYYY-QX (E.g. 2020-Q3)
  - IntervalSize = Year YXXXX (E.g. Y2020)

Period Over Period Dashboard - Analyze Results

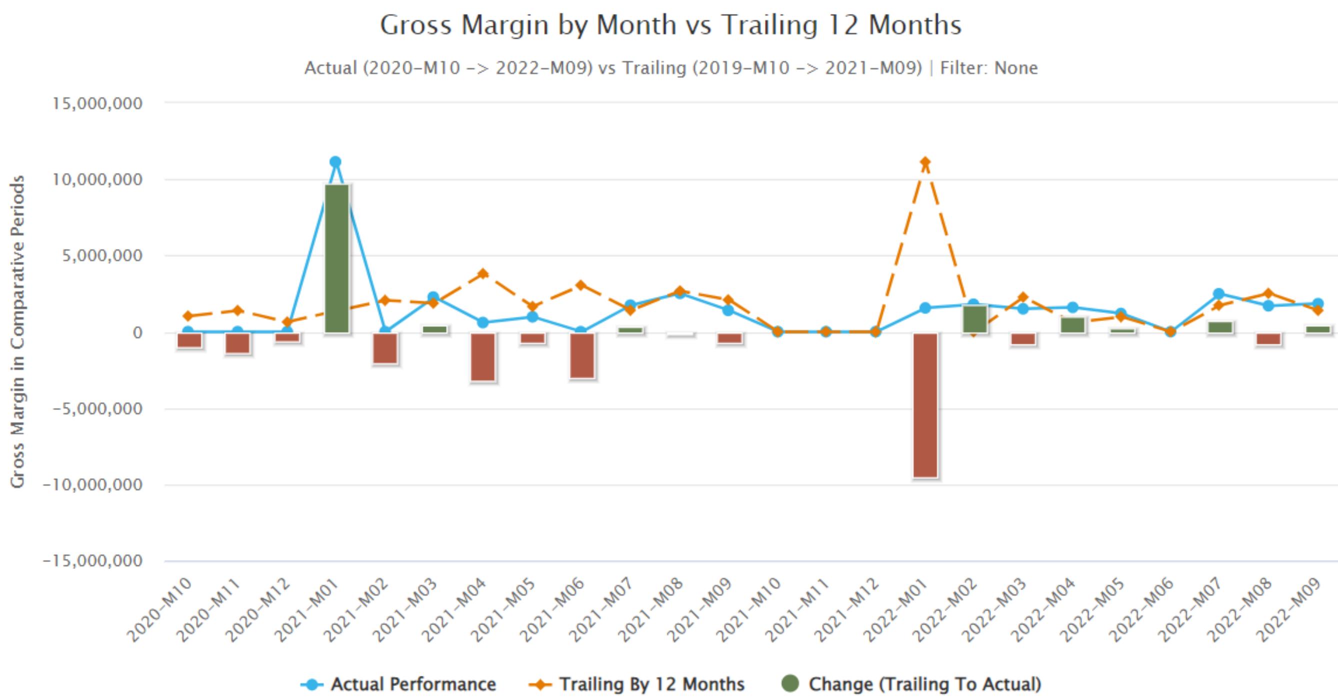
This chart shows the difference in a selected measure between two periods to assess the most recent status of any financial or volume measure and compare its performance to the same time period in the past.

The comparison subjects are the Actual Performance and Trailing Period (both of the same length) supplemented with Change (delta) defining the value of difference between these two.

The granularity of the periods (displayed calendar units) is defined by the Interval Size.

Chart series:

- **Actual Performance** – Trailing period whose end is defined by the Final Interval input (typical the last whole/finished interval), while its length is defined by the Number Of Intervals counted backwards from the Final Interval.
  - Start: (Final Interval) – ((Number Of Intervals) * Interval Size)
  - End: calendar unit defined by Final Interval
- **Trailing period** – The latest period whose end is defined by an offset from the Final Interval specified in the Trailing Offset input, while its length is defined by the Number Of Intervals counted backwards from this offset.
  - Start: (Final Interval – Trailing Offset) – ((Number Of Intervals) * Interval Size)
  - End: calendar unit defined by (Final Interval – Trailing Offset)
- **Change** – Difference between Actual Performance and Trailing period showing the progress of the measure from Trailing to Actual.



In the example above it is clearly visible that the most positive progress took place in January 2021 while the opposite happened in January 2022.

Period Over Period Dashboard - Details on Configuration

- Period Over Period Dashboard - Fields Definition
- Period Over Period Dasboard - Used Advanced Configuration Fields

Period Over Period Dashboard - Fields Definition

Ratio Types and formulas used (by default) to calculate the output measure:

- Gross Margin % = Gross Margin / Invoice Price
- Price Leakage % = (Local List Price - Net Price) / Local List Price
- Price Realization % = Invoice Price / Global List Price
- Incentive % = Net Sales Column / Local List Price Column
- Average Price Per Unit = Invoice Price / Quantity
- Average Profit Per Unit = Gross Margin / Quantity
- Custom = input values are provided manually as numerator and denominator in the formula

Period Over Period Dasboard - Used Advanced Configuration Fields

Period Over Period Dasboard uses the following fields from SIP_AdvancedConfiguration:

- datamartName
- pricingDate
- productId
- customerId
- grossMargin
- quantity
- invoicePrice
- firstDayOfWeek - Defines the day which is considered a starting day of a week (typically Sunday or Monday).

- localListPrice
- globalListPrice
- netPrice

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Sales Insights Package 1.9.0

Bugs

PFPCS-5545: Error in Revenue Breakdown dashboard column

PFPCS-5555: Data tab: Number formatting issue

PFPCS-5975: CustomerName field cannot be found after deployment

PFPCS-6257: Error when a group of Customers or Products is entered

PFPCS-6455: Outliers dashboard: Error when opening dashboard

PFPCS-6494: SI Revenue and Margin: Contribution charts do not show revenue column in drill down mode

PFPCS-6504: SI Revenue and Margin: missing number format

PFPCS-6521: Comparison Waterfall dashboard: Injecting drilldown data causes logic to fail when drilldowns are not configured

PFPCS-6163: Dashboard does not load when setting is applied

Improvements

PFPCS-5698: Chart series names enhanced

Tasks

PFPCS-5637: Add data label suffix to Outlier pie charts

PFPCS-6137: Adjust Trailing dashboard filter

Stories

PFPCS-6326: Sales Insights Margin Breakdown: order of Margin vs. Revenue breakdown waterfall elements changed

Sales Insights Package 1.8.0

Stories

PFPCS-5851 Period Over Period Dashboard

Tasks

PFPCS-6233 Exclude CSS definition from the step type's specified fields

Sub-tasks

PFPCS-6256 Period Over Period Dashboard - set default chart size

PFPCS-6248 Inputs adjustments 2

PFPCS-6223 Ratio formula inputs displayed in Data tab

PFPCS-6222 Number of intervals always converted respecting the original scope and interval size

PFPCS-6220 Introduce a checkbox to switch between 1 axis or 2 axes

PFPCS-6219 Add the "Incentive %" Ratio Type

PFPCS-6218 Labels changes

PFPCS-6215 Deployment step: default week's starting day must be Sunday

PFPCS-6200 Hide Highcharts credits in portlet

PFPCS-6192 Period Over Period dashboard properties

PFPCS-6176 Enable the original version of Trailing Period Comparison dashboard in QA

PFPCS-6169 Align the series order in hint and legend

PFPCS-6162 Chart title

PFPCS-6155 Final Interval: Manual Entry input - info icon

PFPCS-6152 Trailing dashboard: Final Interval Manual Entry: should load value format compliant with Interval Size value

PFPCS-6140 Pluralize the interval size in labels

PFPCS-6139 Filters default values

PFPCS-6133 Deployment steps extension

PFPCS-6125 Labels adjustments

PFPCS-6124 Documentation adjustments

PFPCS-6123 Configuration of a period's starting day

PFPCS-5945 Inputs adjustments

PFPCS-5944 Inputs adjustments for the package (SI) consistency

PFPCS-5939 Performance improvements

PFPCS-5934 Refactor the Trailing Period Comparison Dashboard

PFPCS-5925 Trailing Period Comparison: Technical Analysis

PFPCS-5849 Trailing periods definition

PFPCS-5848 Ratio-based metrics

Bugs

PFPCS-6264 PoP: Missing corner condition for deltas

PFPCS-6263 Label hasn't been changed in data lab

PFPCS-6252 Remove redundant label "column" when ratio type = Incentive %

PFPCS-6230 Number of Intervals: Should check invalid values

PFPCS-6210 Incorrect counting QuadWeek

PFPCS-6208 Trailing dashboard: does not aggregate with interval size = year

PFPCS-6188 Change label: General Filter

PFPCS-6187 Ratio-based metrics: not reload formula input values when changing Ratio type

PFPCS-6179 Ratio-based metrics value: should show label instead of name

PFPCS-6166 Redundant columns in the Data tab

PFPCS-6165 Trailing dashboard: Chart label is incorrect

PFPCS-6161 Error when open dashboard

PFPCS-6160 Trailing dashboard: chart: column title is incorrect

PFPCS-6150 Trailing dashboard : Final Interval Manual Entry: Error after input value

PFPCS-6148 Trailing dashboard: legends order is incorrect

PFPCS-6131 Trailing chart timeout

PFPCS-6126 Update Interval size and Trailing size when changing Interval type

PFPCS-6097 Error when the year input is blank

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Bugs

PFPCS-5981 Revenue and Margin dashboard - TurboThreshold definition in wrong place

PFPCS-5974 Optional Customer fields and Breakdown Mode setup not included in Dashboards Only package

PFPCS-5973 Dashboards Only package - WaterfallConfiguration should not be deployed

Sales Insights Package 1.7.0

- Bugs
- Improvements
- New Features
- Stories
- Tasks

Bugs

PFPCS-5665 Error when opening dashboards

PFPCS-5662 Comparison Waterfall: Incorrect tooltip

PFPCS-5659 SI deployment: Customer Id and Customer Name are still visible while user skips Customer in the previous step

PFPCS-5655 Comparison Waterfall: Incorrect delta when values are too small

PFPCS-5653 Comparison Waterfall: Delta is shown if Waterfall Model is Percentage

PFPCS-5650 Comparison Waterfall: Incorrect delta when Waterfall Model is By Absolute Unit

PFPCS-5649 Causality Dashboard: incorrect last bar position

PFPCS-5648 Margin Breakdown: incorrect last bar position

PFPCS-5647 Revenue Breakdown: incorrect last bar position

PFPCS-5643 Comparison Waterfall: the delta is displayed on "one period" view

PFPCS-5640 Comparison Waterfall: Improper value is displayed for delta

PFPCS-5639 Comparison Waterfall: Legend name in drill down is displayed improperly

PFPCS-5638 Comparison Waterfall: error thrown when the first period is null data

PFPCS-5635 Comparison Waterfall: Missing subtract 1 from variation formula

PFPCS-5631 Outliers: Values are not displayed correctly in Data tab

PFPCS-5630 Causality: Duplicate revenue/margin value in T1 if we have the same time period inputs

PFPCS-5627 Causality: Missing New/Lost Business column

PFPCS-5622 Breakdowns and Causality: The format DD/MM/YYYY is not same with time inputs

PFPCS-5621 Breakdown and Causality: Missing last column value in Data tab

PFPCS-5620 Breakdown and Causality dashboard: Hide PeriodConfigurator in Add Portlet

PFPCS-5619 Missing Comparison label for Week input when Period Type is Week

PFPCS-5609 Revenue/Margin Breakdowns, Causality Dashboards: Handle the null values for time-definition filters

PFPCS-5559 MixpanelTracking [via MixpanelTrackingUtils] : ERROR(@9): Cannot invoke method track() on null object

PFPCS-5547 Breakdown and Causality: null is being displayed in the chart

PFPCS-5540 Remove PP SIP_DefaultFilterValues

PFPCS-5539 Currency conversion works improperly in SI dashboards

PFPCS-5538 Margin Breakdown: Remove Standard from chart title

PFPCS-5537 Duplicate GBP in Currency input

PFPCS-5524 Error thrown when opening SIP Default Filter Wizard

PFPCS-5459 Deselecting Outliers Dashboard doesn't filter out all necessary logics

Improvements

PFPCS-5383 Remove the Default Filters functionality duplicity

PFPCS-5182 Revenue/Margin Breakdown - unify the waterfall elements names

PFPCS-5167 Month-to-Month comparison in Revenue/Margin Breakdown and Causality charts

PFPCS-5156 Cover all the countries in the Highcharts map

PFPCS-4502 Introduce stepLabel for deployment steps

New Features

PFPCS-4350 Ability to download data behind charts

Stories

PFPCS-5548 Revenue and Margin Breakdown, Causality: additional time definition options

PFPCS-5445 Two approaches for Revenue and Margin Breakdowns definitions

PFPCS-5444 Margin Breakdown - new formulas

PFPCS-5181 Revenue Breakdown - new formulas

PFPCS-5119 Adding variation in Comparison waterfall

PFPCS-4417 Mixpanel tracking for SIP- dashboard was opened

Tasks

PFPCS-5607 Hide warnings for all the portlets

PFPCS-5446 Margin Breakdown: only one Calculation Type available

PFPCS-5440 Revenue and Margin dashboard - increase the timeout

PFPCS-4152 Cleanup PFXTemplate_DB_RevenueAndMargin PP definition

PFPCS-3668 Exclude deployment of WaterfallConfiguration AC

PFPCS-3249 Move ChartConfiguration element to ConstConfig in Revenue and Margin dashboard

Upgrade Instructions 1.6.2 -> 1.7.0

New Revenue/Margin Breakdowns Definition

With the 1.7.0 version, the Revenue/Margin Breakdown effects calculation formulas have been changed to address the business point of view more adequately. The previous formulas are referred to as "Legacy", while the new ones are referred to as "Standard" (default) in the configuration.

For the "Legacy" formulas you can refer to the archived documentation of the previous versions: https://pricefx.atlassian.net/wiki/download/attachments/3907062629/Accelerate_Sales_Insights_Package-1.6.1.pdf?api=v2 (*Margin Breakdown Dashboard - Fields Definition* chapter).

To switch between these two types of formula (if needed), follow the configuration guide in the Installation page: https://pricefx.atlassian.net/wiki/spaces/ACCDEV/pages/4057366561/Installation+SIP#%5BhardBreak%5DRevenue%2FMargin-Breakdowns-Definition.

Default Filters

This feature is deprecated from version 1.7.0. It is replaced with the Save Inputs Preference feature provided by Pricefx.

These objects will become unusable and should be removed from the partition after upgrading to SIP version 1.7.0:

- ConfigurationWizard/SIPDefaultFilterManagementWizard
- PricingParameter/SIP_DefaultFilterValues
- CalculationLogic/SIP_DefaultFilterConfiguratorExecutor
- CalculationLogic/SIP_DefaultFilterConfiguratorInput